

From: Eamonn Keogh [E.Keogh@oneill-associates.co.uk]
Sent: 04 April 2018 15:28
To: localplan@york.gov.uk
Cc: Sheldon, Kennedy
Subject: Publicatoin Draft Local Plan - Representations on behalf of Galtres Village Development Company - Site ref. 964
Attachments: 180402 Galtres Reps Text SUBMIT.pdf; Galtres Comments_form_H1 submit.pdf; Galtres Comments_form_GB FINAL.pdf
Follow Up Flag: Follow up
Flag Status: Flagged
Categories: Purple Category, Site submission

Dear Sirs,

Please find attached representations on the Publication Draft Local Plan on behalf of Galtres Village Development Company. The appendices to the representations (along with a copy of these documents) will be submitted via your dropbox link.

Yours sincerely

Eamonn Keogh

 Chartered Town Planning Consultants	Eamonn Keogh 07910 173788	www.oneill-associates.co.uk	Lancaster House James Nicolson Link Clifton Moor York YO304GR 01904 692313
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City of York Local Plan Publication Draft 2018 Consultation response form 21 February – 4 April 2018

OFFICE USE ONLY:

ID reference:

This form has three parts: **Part A** Personal Details, **Part B** Your Representation and **Part C** How we will use your Personal Information

To help present your comments in the best way for the inspector to consider them, the Planning Inspectorate has produced this standard comment form for you to complete and return. We ask that you use this form because it structures your response in the way in which the inspector will consider comments at the Public Examination. Using the form to submit your comments also means that you can register your interest in speaking at the Examination.

Please read the guidance notes and Part C carefully before completing the form. Please ensure you sign the form on page 6.

Please fill in a separate part B for each issue/representation you wish to make. Any additional sheets must be clearly referenced. If hand writing, please write clearly in blue or black ink.

Part A - Personal Details

Please complete in full; in order for the Inspector to consider your representations you must provide your name and postal address).

1. Personal Details		2. Agent's Details (if applicable)
Title		Mr
First Name		Eamonn
Last Name		Keogh
Organisation (where relevant)	Galtres Village Development Company	O'Neill Associates
Representing (if applicable)		
Address – line 1	C/O Agent	Lancaster House
Address – line 2		James Nicolson Link
Address – line 3		Clifton Moor
Address – line 4		York
Address – line 5		
Postcode		YO30 4GR
E-mail Address		e.keogh@oneill-associates.co.uk
Telephone Number		01904 692313

Guidance note

Where do I send my completed form?

Please return the completed form **by Wednesday 4 April 2018, up until midnight**

- To: FREEPOST RTEG-TYYU-KLTZ Local Plan, City of York Council, West Offices, Station Rise, York, YO1 6GA
- By email to: localplan@york.gov.uk

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Do I need to attend the Public Examination?

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Part B - Your Representation

(Please use a separate Part B form for **each** issue to you want to raise)



3. To which document does your response relate? (Please tick one)

City of York Local Plan Publication Draft

Policies Map

Sustainability Appraisal/Strategic Environmental Assessment

✓
✓

What does 'legally compliant' mean?

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4. (1) Do you consider the document is Legally compliant?

Yes

No

4.(2) Do you consider that the document complies with the Duty to Cooperate?

Yes

No

4.(3) Please justify your answer to question 4.(1) and 4.(2)

With regard to the duty to co-operate it may be the case the Council has consulted with neighboring authorities, but some of those authorities have expressed concerns that have not been fully resolved. Annex B to Agenda item 11 on the report of the Local Plan to the Council's Executive on the 25th January reported:

Hambleton Council: *"...It [the Draft Plan] does not safeguard land for development and recognises the build out time of the Strategic sites will extend beyond the plan period. The proposed detailed boundaries of the Green Belt offer little opportunity to accommodate the increased level of growth proposed. If the City of York does not ensure that its longer-term development needs are met this will place pressure on area in neighbouring authorities"*

Leeds city region LEP: *"York has not applied the 10% market signals adjustment as recommended in the York 2017 Strategic Housing Market Assessment"*.

Ryedale Council: Discussions ongoing

Harrogate Council: Discussion ongoing

Selby District Council: *"Having read the SHMA Addendum, it is noted that this figure does not take into account the level of employment growth proposed by the Local Plan..... Whilst you are confident that you can realise the growth aspirations detailed within the Pre-Publication Local Plan within the City of York Boundary, Selby District Council is concerned that any increases to this figure could raise significant cross-boundary issues"*.

Selby Council requested additional information on Strategic site ST15 and the university site ST27 before providing any further comments on the potential impact these allocations may have on Selby.

What these comments demonstrate is that whilst the Council may have engaged in a process of dialogue with neighbouring authorities, it has not produced outcomes that have addressed some significant concerns of neighbouring authorities. Indeed at this stage the views of some adjoining Authorities are not known and it is difficult to see how, in these circumstances, the Duty to Co-Operate has been complied with.

What does ‘Sound’ mean?

Soundness may be considered in this context within its ordinary meaning of ‘fit for purpose’ and ‘showing good judgement’. The Inspector will use the Public Examination process to explore and investigate the plan against the National Planning Policy Framework’s four ‘tests of soundness’ listed below. The scope of the Public Examination will be set by the key issues raised by responses received and other matters the Inspector considers to be relevant.

What makes a Local Plan “sound”?

Positively prepared - the plan should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development.

Justified – the plan should be the most appropriate strategy, when considered against the reasonable alternatives, based on proportionate evidence.

Effective – the plan should be deliverable over its period and based on effective joint working on cross-boundary strategic priorities

Consistent with national policy – the plan should enable the delivery of sustainable development in accordance with the policies in the Framework

5.(1) Do you consider the document is Sound?

Yes No

If yes, go to question 5.(4). If no, go to question 5.(2).

5.(2) Please tell us which tests of soundness the document fails to meet: (tick all that apply)

Positively prepared	<input checked="" type="checkbox"/>	Justified	<input checked="" type="checkbox"/>
Effective	<input checked="" type="checkbox"/>	Consistent with national policy	<input checked="" type="checkbox"/>

5.(3) If you are making comments on whether the document is unsound, to which part of the document do they relate?

(Complete any that apply)

Paragraph no.	<input type="text" value="Paragraphs 5.1 to 5.20"/>	Policy Ref.	<input type="text" value="Policy H1"/>	Site Ref.	<input type="text" value="964"/>
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5.(4) Please give reasons for your answers to questions 5.(1) and 5.(2)

You can attach additional information but please make sure it is securely attached and clearly referenced to this question.

See attached representation statement ref: ygv.l804.0004.lpreps.ek

6. (1) Please set out what change(s) you consider necessary to make the City of York Local Plan legally compliant or sound, having regard to the tests you have identified at question 5 where this relates to soundness.

You will need to say why this modification will make the plan legally compliant or sound. It will be helpful if you could put forward your suggested revised wording of any policy or text.

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage.

After this stage, further representations will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.

(If you are suggesting that the plan is legally compliant or sound please write N/A)

See attached representation statement ref: ygv.l804.0004.lpreps.ek

7.(1). If your representation is seeking a change at question 6.(1), do you consider it necessary to participate at the hearing sessions of the Public Examination? (tick one box only)

No, I do not wish to participate at the hearing session at the examination. I would like my representation to be dealt with by written representation

Yes, I wish to appear at the Examination

If you have selected **No**, your representation(s) will still be considered by the independent Planning Inspector by way of written representations.

7.(2). If you wish to participate at the oral part of the examination, please outline why you consider this to be necessary:

There are significant matters relating to housing requirement and supply that we wish to explore in more detail with the inspector. We believe we can make a positive and constructive contribution to the discussion.

Please note: the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the hearing session of the examination.

Part C - How we will use your Personal Information

We will only use the personal information you give us on this form in accordance with the Data Protection Act 1998 (and any successor legislation) to inform the Local Plan process.

We only ask for what personal information is necessary for the purposes set out in this privacy notice and we will protect it and make sure nobody has access to it who shouldn't.

City of York Council does not pass personal data to third parties for marketing, sales or any other commercial purposes without your prior explicit consent.

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Signature

Date

¹ Section 20(3) Planning & Compulsory Purchase Act 2004 Regulations 17,22, 35 & 36 Town and Country Planning (Local Planning) England) Regulations 2012

² Regulation 19 Town and Country Planning (Local Planning) England) Regulations 2012

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✓
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Yes No

If yes, go to question 5.(4). If no, go to question 5.(2).

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Positively prepared	<input checked="" type="checkbox"/>	Justified	<input checked="" type="checkbox"/>
Effective	<input checked="" type="checkbox"/>	Consistent with national policy	<input checked="" type="checkbox"/>

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(Complete any that apply)

Paragraph no.	<input type="text" value="3.13 to 3.15"/>	Policy Ref.	<input type="text" value="Policy SS2"/>	Site Ref.	<input type="text" value="964"/>
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There are significant matters relating to the setting of Green Belt boundaries that we wish to discuss in more detail with the inspector

Please note: the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the hearing session of the examination.

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Signature

Date

¹ Section 20(3) Planning & Compulsory Purchase Act 2004 Regulations 17,22, 35 & 36 Town and Country Planning (Local Planning) England) Regulations 2012

² Regulation 19 Town and Country Planning (Local Planning) England) Regulations 2012

³ Regulation 35 Town and Country Planning (Local Planning) England) Regulations 2012

CITY OF YORK LOCAL PLAN

PUBLICATION DRAFT REGULATION 19
CONSULTATION

GALTRES GARDEN VILLAGE
(LAND NORTH EAST OF HUNTINGTON)

SUBMISSION ON BEHALF OF:

Galtres Village Development Company

REPRESENTATIONS IN SUPPORT OF
AN ALLOCATION FOR A NEW SETTLEMENT

April 2018



Chartered Town Planning Consultants

EXECUTIVE SUMMARY

- i. The Galtres Garden Village Promoters wish to create a new settlement for York which echoes the “garden village” ethos of New Earswick and Derwenthorpe, with housing set in well landscaped surroundings with local facilities as part of a low-carbon development. The Garden Village proposed in these representations will deliver that vision - a high quality, sustainable residential environment that will provide a minimum of 30% of its dwellings as affordable housing.
- ii. A proposal was submitted to the Council in September 2016 as a representation to the Further Sites Consultation document. That proposal was for a settlement of just under 900 residential units that included a 60-bed care home on a site of approximately 44 hectares. Following comments received from the Council in early 2017, the proposal was updated in March 2017 to a scheme of 1,500 dwellings on 78.84 hectares of land. The Council decided not to support the proposals in the Pre-Publication version of the Local Plan due to perceived shortcomings with the site.
- iii. One of the issues raised by the Council was the degree of separation between the proposed development and main urban area. To address those concerns, further amendments were made to the scheme, primarily to increase the separation between the built element of the new settlement and the urban area.
- iv. The revised scheme was presented in representations to the Pre-Publication stage of the Local Plan in October 2017 and reported to the Local Plan Working Group on January 23rd 2017. Although there were some minor residual concerns, the officer conclusion was that the site could **now be considered as a potential new housing allocation.**
- v. This representation has been updated to address the latest comment from the Council officers and to incorporate the proposes a new settlement that will deliver houses for local people, a care home, a scheme of retirement living that will include bungalows, and a village hub that will include a primary school, local shops and community hall.
- vi. Our proposal addresses the three biggest housing issues facing the City of York:

- a. The shortage of housing
 - b. The shortage of affordable housing
 - c. The shortage housing and care homes for the elderly
- vii. There is a chronic shortage of market and affordable housing in York. Housing completions have failed to meet housing need for 10 years in a row. In addition, the Council has identified a requirement for over 900 care home bed spaces for the period to 2030.
- viii. Our analysis demonstrates that the Draft Local Plan housing allocations are inadequate to meet anticipated housing needs and Green Belt boundaries are not defensible because insufficient land has been excluded from the Green Belt to meet development needs beyond the 15-year Plan period.
- ix. An opinion survey carried out for this representation has clearly established that residents of York overwhelmingly believe that there is a need for new homes in and around York, mainly to serve the needs of the existing population but also to provide housing for those who wish to move into the area to live or work. In total, eight-in-ten agree that affordable housing should be *'a top priority for the Council'*. The survey also established a high level of support for the Galtres Scheme.
- x. The scale of the deficit in housing land supply is significant as explained in the body of our representations. The table below summarises our conclusions on housing land supply.

	Estimate based on Council's figures	Galtres Village Development Company Estimate
Housing Requirement 2017 to 2033	8,993	16,452
Local Plan 5-year land supply	6.28	3.25

- xi. The plan is seriously flawed in that it does not make adequate provision for housing land supply in the 16-year plan period or for the subsequent 5 year period. The Green Belt boundaries will therefore not endure beyond the Plan period and the Plan is therefore not compliant with the NPPF.
- xii. The Galtres Village scheme will address these shortcomings. It proposes a new settlement of 1,753 units of which 1,403 will be market and affordable dwellings, 286 retirement dwellings in a mixture of houses, bungalows and extra care apartments and a 64-bed care home. The development area comprises 77.37 hectares with an additional 15.6 hectares available for a country park (See masterplan at Appendix 1).
- xiii. In keeping with the Garden Village ethos, the new settlement will be set within a landscaped environment that will include generous planning around the boundaries of the settlement and large areas of open space through its core.
- xiv. The Galtres Development Company will deliver affordable housing in an innovative way that will provide significant benefits for the City. The development company proposes to work in partnership with the Councils recently established development company to deliver major tranches of affordable housing directly to the Council's housing stock in the early years of the scheme. Alternatively, GVDC will work with a registered social housing provider. The scheme will also facilitate an element of self and custom build housing.
- xv. Our objective is to provide affordable housing at a cost to the Council that makes early and significant delivery of units feasible.
- xvi. The proposed vehicular accesses off North Lane to the site can be delivered in such a way that the highway network is not compromised. The scheme will be designed to provide easy access for public transport early in the scheme development.
- xvii. Community facilities such as a primary school, retail and other outlets will provide a significant benefit to the residents of the development and to local population who access the site. Generous provision of public open space, including a sports field, will also increase the benefit to the locality.

- xviii. The land is available, the development is achievable, and the scheme can deliver 1,753 residential units in a range of affordable and market housing and retirement units that will make a significant contribution to addressing the three major housing issues facing the City of York for the foreseeable future.
- xix. Without additional major sustainable housing allocations such as Galtres Village these requirements will continue to go unmet and the housing needs of the people of York and their children will not be served.

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I.0 INTRODUCTION

- I.1 This submission is made in support of a potential housing allocation of land to the north east of Huntington in response to the Publication Draft Local Plan (**the Draft Plan**) issued by the Council as part of the ongoing preparation of the Local Plan. The site will accommodate 1,753 residential units which includes a 64-person care home.
- I.2 This is the third iteration of the scheme first put forward in representations to the Preferred Sites Consultation in September 2016. That scheme proposed approximately 900 units at that time. Following comments from officers that the scheme would not be viable to support necessary community facilities, the scheme was enlarged to 1,500 units in a revised scheme submitted to the Council in March 2017.
- I.3 Officers commented that the site was neither an urban extension or a separate settlement 'garden village'. The site was considered to be too close to the urban area. General concerns were also expressed about the proposed access and impact on the highways network although no further detail was provided to explain those concerns.
- I.4 To address those concerns the scheme was revised again and a representation seeking its allocation was submitted to the Pre-Publication Stage of the Local Plan in October 2017. The response of officers to that scheme are set out in the Appendix 1 of Annex a of the report to the Local Plan Working Group on 23rd January 2018, reproduced at Appendix 2 of this representation. The officer's response raised some relatively minor residual technical issues that can be summarised as:
- The site fails the sustainable access criteria (4a and 4b) not meeting the minimum scoring threshold for residential sites
 - At a strategic level there is currently no evidence that transport should be considered a 'show stopper'. The proximity of the development to the Strategic Road Network in particular the North Lane Junction with the A64 would need to be addressed. Some concerns with the proposed width of North Lane.

- In relation to ecology the main issues to consider are potential impacts on Strensall Common SAC

1.5 The officer's overall conclusion however was that the site could be considered **as a potential new housing allocation**. This submission has been updated to address the latest comments from the Council officers and to incorporate new and updated technical information. It describes the site; sets out the key principles underlying the suggestion for the allocation; addresses the key technical and planning issues raised by the proposals and sets out the justification for the allocation.

1.6 The principles supporting this proposed allocation are that:

- the development should echo the "garden village" ethos of New Earswick and Derwenthorpe, with housing set in well landscaped surroundings;
- community facilities should be provided as an integral part of the development as early as possible, to serve both the new and existing residents;
- A significant element of affordable housing will be provided;
- Non-car modes of transport including bus, pedestrian and cycle links to the surrounding areas and to the city centre and employment locations are maximised.

1.7 The submission sets out how this is to be achieved.

1.8 In addition, the following background reports and documents are included with the application:

Report	Author
Masterplan	ID Partnership
Transport Technical Note	Bryan G Hall
Landscape Capacity Report	TGP Landscape Architects
Ecology Report	Wold Ecology
Archaeological Assessment	York Archaeological Trust

FRA and Drainage	Mason Clark Associates
Prospectus for Delivery	Bright Ideas
Heritage Appraisal	Humble Heritage
Market Research Findings	Qa Research
Assessment of Housing Requirement	NLP
Infrastructure Delivery and Phasing Strategy	Bright Ideas

2.0 PROPOSED ALLOCATION – SITE AND SCHEME DESCRIPTION

- 2.1 This section of the Representations provides a general description of the site and the surrounding context followed by a description of the proposed garden village

Site Location and Description

- 2.2 The Site is located immediately north of the North Lane, north of Monks Cross roundabout and north east of the strategic housing allocation ST8. The development area is 77.37 ha in size with an addition 15.6 ha provided as a country park. It is roughly rectangular in shape and is broken up within the site boundary by a number of hedged field boundaries.
- 2.3 It is bounded to the north, east and south, by open countryside, with Strensall Road and the suburbs of Earswick and Huntingdon further to the west. The hedgerows that demark and enclose the site boundary and surrounding field pattern are populated mainly with Ash, Acer, Oak, Elder, Hawthorn and Guelder Rose species. Minor watercourses (ditches and streams) thread through the Site and the open countryside beyond.
- 2.4 The Site and surrounding countryside between the local settlements have an open and flat character, an essential characteristic of the local landscape type. The River Foss and layout of Earswick suburb and the surrounding linear settlement patterns which follow the local road patterns also prevent any unrestricted lateral sprawl of the Site and Earswick itself.
- 2.5 The Site is generally at 15m AOD, towards the eastern boundary rising to 17m AOD towards the western boundary, which is fairly consistent with the suburb of Earswick and the River Foss beyond. The land rises very gently to the north and east of the Site into the distance.
- 2.6 The Site is predominantly a mixture of arable farmland, pasture and woodland.
- 2.7 The site is well located in terms of proximity to retail and leisure facilities at Monks Cross Park which is approximately 2 km to the south of the site and can be directly

accessed via Monks Cross Link which connects with the Outer Ring Road. A more detailed description of the site and surrounding context is provided in the Landscape Capacity Assessment (Appendix 3) and Masterplan document, (Appendix 4).

Proposed Garden Village

- 2.8 A character appraisal has been carried out on a number of adjacent residential areas in accordance with best practice guidance. This analysis has informed guiding masterplan principles, layout and architectural approach for the proposed housing site and to identify any threads of regional and local design features that instil “elements of character”.
- 2.9 The scheme has been designed having regard to the original principles of the Garden Village as proposed by Ebenezer Howard, updated to reflect current circumstances and the context of the historic City of York.
- 2.10 The current scheme is the third iteration of the proposals first put forward in September 2016. At that point the scheme comprised a settlement of approximately 900 dwellings. The proposed developed area was further west and in close proximity to the ring road.
- 2.11 Following previous comments from officers that the scheme was neither a standalone settlement nor an urban extension and would not have the capacity to support essential community facilities, the scheme was enlarged to 1,500 dwellings and an increased separation buffer was proposed between the ring road and the scheme. However officers maintained their comments that the scheme was essentially too close to the urban area.
- 2.12 The current scheme responds substantially to those concerns. In the latest iteration of the scheme the developed area is moved much further east, away from the urban area. There is not a much greater degree of separation, not dissimilar to other proposals which are proposed as allocations in the draft plan.

Vision

2.13 The key features of the design philosophy adopted for Galtres Garden Village East of Huntington are as follows

- A landscape led masterplan which seeks to incorporate existing landscape features and landscape buffers and large areas of country park to the edge of the development
- A clear distinction between public and private realm
- Active frontage onto streets, pedestrian routes and open spaces
- Integrated movement for pedestrians, cyclists and vehicles, including safe links to and from Huntington
- A public realm which is well overlooked and supervised, following 'Secured by Design' principles to promote security for all residents and visitors
- Recognisable built forms and features to enhance legibility throughout the scheme, including feature spaces, landmark buildings, co-ordinated building materials and high-quality landscaping to help define the streetscene
- Incorporating the existing hedgerows, other landscape assets and water courses to form a green and blue grid throughout the design

2.14 The masterplan team have considered in detail the site and the wider area, in particular the landscape character and setting of the site, its topography and its relationship with Huntington.

2.15 The design principles for the proposals have been developed following a rigorous site appraisal, review of relevant policy guidance and a landscape led approach and design ethos which underpins the masterplan. The main design objectives for the site can be summarised as follows:

- The creation of an attractive community within a landscape setting with a series of east west green routes including a cycle route to the Strensall Road/ Ring Road

roundabout connecting the Galtres Garden village with Huntington and the wider urban area

- Utilise the existing field drainage patterns and watercourses to incorporate SuDS
- Provision of a care home with potential of other specialist housing providing extra care and a range of services for the elderly and retired
- A community hub within space for smaller village shops

2.16 The sketch masterplan concept diagram shows the intention to create the village hub accessible to all providing core facilities that will reduce the need to travel by car.

Housing Strategy

2.17 The garden village proposals will enable a variety of house types and tenures to be provided that respond directly to the City's housing needs. The starting point for housing mix is the data provided in the Council's Strategic Housing Market Assessment. That is considered against local market requirements, the quantum and type of affordable housing that might be provided and the viability considerations.

2.18 For now, the proposal assumes the provision of 30% affordable housing in accordance with the Council's Interim Policy in operation at the time of this representation and the affordable housing requirement set out in Policy H10 of the Draft Plan. Having regard to both the SHMA and local market considerations the proposed housing mix at this stage is:

	1 bed	2 bed	3 bed	4 + bed
Market %	8%	37%	37%	18%
Affordable %	37%	32%	23%	8%

2.19 The site has the potential to accommodate a new settlement of 1,753 units at a density of 32 dwellings per hectare of which 1,403 will be market and affordable dwellings, 286

retirement dwellings in a mixture of houses, bungalows and extra care apartments and a 64-bed care home. Responding to Draft Local Plan policy, the scheme will also facilitate and promote self and custom house building. The development area comprises 77.37 hectares with an additional 15.6 hectares available for a country park.

3.0 THE IMPERATIVE FOR ADDITIONAL HOUSING ALLOCATIONS – POLICY CONTEXT

"For 30 or 40 years we simply haven't built enough homes. As a result, prices have risen so much that the average home now costs almost 8 times average earnings. And that's been a disaster for young people in particular. We have begun to put this right. "

Theresa May 2017 Conservative Party conference speech. 4 October 2017

"For years politicians have waffled about house building while tinkering at the edges of the market. I want to recapture the pioneering spirit that in the mid-20th century brought about developments like Milton Keynes and the new towns... I want to see a new generation of garden cities and garden villages spring up in places where demand presently outstrips supply."

Vince Cable 2017 Liberal Democrat Party Conference Speech, 19 September 2017

"The next Labour government will tackle the housing crisis.

"We will create a new Department for Housing and build 100,000 homes a year by the end of the next Parliament.

"Housing should be about homes for the many, not investment opportunities for the few."

Jeremy Corbyn, Milton Keynes rally 14th August 2017

- 3.1 The NPPF was published in March 2012 and replaces all previous Planning Policy Guidance notes and some circulars. The Framework sets out the Governments clear intention to facilitate economic growth through sustainable development. In the introduction to the framework, the Minister for State says:

The purpose of planning is to help achieve sustainable development.

Sustainable means ensuring that better lives for ourselves don't mean worse lives for future generations.

Development means growth. We must accommodate the new ways by which we will earn our living in a competitive world. We must house a rising population, which is living longer and wants to make new choices.....

- 3.2 At the heart of the NPPF is a presumption in favour of sustainable development which should be seen as a golden thread running through both plan-making and decision-taking. The NPPF explains that for plan making taking this means:

- *local planning authorities should positively seek opportunities to meet the development needs of their area;*
- *Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:*
 - *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole;*
or
 - *specific policies in this Framework indicate development should be restricted*

3.3 On the issue of housing the NPPF is clear about the need for a significant increase in housebuilding to address existing backlog and meet future needs. Local authorities are encouraged to “...boost significantly...” the supply of housing. Paragraph 47 of the NPPF states:

To boost significantly the supply of housing, local planning authorities should:

- *use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area*
- *identify and update annually a supply of specific deliverable sites sufficient to provide five years’ worth of housing against their housing requirements with an additional buffer of 5% (moved forward from later in the plan period) to ensure choice and competition in the market for land. Where there has been a record of persistent under delivery of housing, local planning authorities should increase the buffer to 20% (moved forward from later in the plan period) to provide a realistic prospect of achieving the planned supply and to ensure choice and competition in the market for land;.....*

3.4 With regard to affordable housing, paragraph 50 of the NPPF advises that where LPA’s have identified that affordable housing is needed, they should, preferably, set policies for meeting this need on site.

3.5 However, in setting the requirement for affordable housing, regard must be had to the viability of development. Paragraph 173 advises that plan making requires careful attention to viability:

Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened.

- 3.6 Paragraph 174 goes on to say that the cumulative cost of policy and local standards imposed on development, including affordable housing.

...should not put implementation of the plan at serious risk, and should facilitate development throughout the economic cycle."

NPPF and Design

- 3.7 The Government's commitment to the importance of good design is set out in paragraph 56 of the NPPF which states:

...Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people.

- 3.8 The Framework sets out guidance for local planning authorities to plan positively for the achievement of high quality and inclusive design. On the issue of detailed design matters paragraph 60 of the Framework states that planning policies and decisions should not attempt to impose architectural styles or particular tastes and they should not stifle innovation, originality or initiative.

NPPF and Green Belt

- 3.9 Under the heading Protecting the Green Belt the NPPF reaffirms the longstanding aim of Green Belt policy which is to:

Prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.

- 3.10 The NPPF restates the purposes of including land in the Green Belt which are:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns merging into one another;
- to assist in safeguarding the countryside from encroachment;

- to preserve the setting and special character of historic towns; and
 - to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.
- 3.11 The NPPF also reaffirms previous Green Belt policy that inappropriate development is, by definition, harmful to the Green Belt. Paragraph 89 of the Framework reminds Local Planning Authorities that new buildings should be regarded as inappropriate in Green Belt.
- 3.12 When considering any planning application in Green Belt, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. 'Very Special Circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations (para.88).

NPPF – the Natural Environment

- 3.13 Paragraph 109 of the NPPF says the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible.
- 3.14 Paragraph 118 of the NPPF says local Planning Authorities should refuse permission if significant harm resulting from a development cannot be avoided, adequately mitigated or compensated for. Opportunities to incorporate biodiversity in and around developments should be encouraged.

Regional Policy

- 3.15 The saved policies YH9 and Y1 of the RSS relating to Green Belt remain extant and therefore carry weight. They state:

Policy YH9, Green Belts

“C The detailed inner boundaries of the green belt around York should be defined in order to establish long term development limits that safeguard the special character and setting of the historic city.”

Policy Y1, York Sub-Area Policy

Plans, strategies, investment decisions and programmes for the York sub area should:

C Environment

- 1. In the city of York LDF, define the detailed boundaries of the outstanding sections of the outer boundary of the York Green Belt about 6 miles from York City Centre and the inner boundary in line with Policy YH9C”*
- 2. Protect and enhance the nationally significant historical and environmental character of York, including its historic setting, views of the Minster and important open areas.*

Draft Local Plan Evidence Base

3.16 In the course of preparing the various iterations of the Local plan in the past 20 years, the Council has produced a number of evidence documents to justify the approach to defining the Green Belt Boundary. The following documents have informed the approach to the definition of the Green Belt.

- City of York Local Plan – The Approach to the Green Belt Appraisal (February 2003);
- City of York Local Development Framework – Green Corridors (January 2011)
- City of York Local Development Framework – Historic Character and Setting (January 2011) and Technical Paper Update (June 2013)
- City of York Heritage Topic Paper Update (June 2013)
- Heritage Impact Assessment September 2017

3.17 Whilst these documents may provide useful technical analysis, they are of course the evidence base for an un-adopted draft plan and like the draft plan they have not been subject to public examination. Consequently, they have no statutory basis.

4.0 THE IMPERATIVE FOR ADDITIONAL HOUSING ALLOCATIONS – HOUSING NEED

4.1 This section will:

- assess whether the Council's approach to housing provision will address the housing needs of the City during and beyond the Plan period;
- assess whether the approach to estimating the quantity of housing is accurate;
- Put forward an alternative housing requirement;
- Identify a more realistic housing land requirement

Local plan Working Group July 2017

4.2 To quote the Inspector who recently carried out an examination of the Poppleton Neighbourhood Plan

...the planning policy position in York City Council is complex. The general extent of the Green Belt is particularly complex. This has generated a challenging context within which the Plan has been prepared.

4.3 In order to address the complex context for the assessment of the housing need for the City this section is set out in 4 stages:

- Stage 1 summaries the political decisions taken at the Local Plan Working Group that decided the final content of the Publication Draft Plan;
- Stage 2 sets out our assessment of the Housing Requirement;
- Stage 3 includes our critique of the housing delivery proposed in the Local Plan;
- Stage 4 sets out our assessment of 5-year housing land supply position as at the time of the representation;
- Stage 5 sets out a summary fo the need for housing for the elderly and care homes

Stage I – The Political Context

Local Plan Working Group July 2017

- 4.4 The updated housing requirement for the City was reported to the Local Plan Working Group (LPWG) on the 10th July 2017. (There was no equivalent update provided for the 23 January 2018 LPWG). The report identified an annual housing requirement of 953 dwellings per annum based on evidence provided by the Council's own consultants G L Hearn in the Draft Strategic Housing Market Assessment. The 953 is composed of a demographic baseline of 867 dwellings; and an upward adjustment, for 'market signals', of 10%.
- 4.5 The LPWG report stated that the Plan period runs from 2012 to 2033. The Council acknowledge in the LPWG report that as York is setting detailed Green Belt Boundaries for the first time, it is also necessary to consider the period beyond the end date of the plan to 2038 to provide an enduring Green Belt.
- 4.6 On the basis of the LPWG report, the housing requirement for the Plan period 2012 to 2033 was therefore 20,013 (21×953). The housing requirement need calculation for the period 2033 to 2037 would be 4,765 (5×953).
- 4.7 In calculating the land required to meet the housing requirement for the LPWG report, the Council had regard to completions to date and unimplemented permissions. The Council also assumed a windfall completion rate of 169 from year 4 of the plan 2020/21. Having regard to completions, commitments and windfalls, the Council's estimate of the remaining housing requirement for the Plan Period presented to the July 2017 LPWG is set out in Table 1:

Table 1: Council's Estimate of Housing Requirement as presented to Local Plan Working Group on 10th July 2017

Plan period 1st April 2012 to 31 st March 2033	
Total Need 2012 -2033 (based on 953)	20,013
Completions 1st April 2012 to 31st March 2017	3,432
Unimplemented Permissions @ 1st April 2017	3,758*
Windfalls (from Year 4) @ 169 pa	2,197**
Requirement Remaining	10,626

Source: Local Plan Working Group 10 July 2017

* We believe this to be a misprint and should be 3,578

** For period 2020/21 to 2332/33

4.8 At the Local Plan Working Group, members did not agree with the assessment of the housing requirement presented by officers. Members instead set the housing requirement at 867 dwellings per annum and that was the figure used for consultation in the Pre-Publication Draft Local Plan in September 2017.

Local Plan Working Group January 23rd 2018

4.9 The LPWG on the 23 January 2018 considered the representations made on the Pre-Publication draft plan. The Officers report presented a number of options for the housing requirement based on the degree of risk for each option. The report reminded members that they had previously been advised that the Council's independent consultants had estimated the annual housing requirement to be figure of 867 rising to 953 to allow for a 10% market signals uplift. Members had accepted the 867-baseline figure for consultation in the Pre-Consultation Draft Plan but not the figure of 953.

4.10 Members were also informed that using the draft methodology for assessing housing requirement that the Government had consulted on in late 2017, the housing requirement for the City was estimated to be 1,070 dwellings. Members were advised

that although this figure was an estimate produced by the draft methodology it nevertheless indicated the direction of travel anticipated for national policy.

- 4.11 Members were advised of their statutory duty to ensure the Submission Draft Plan meets the test of “soundness”. Officer advice was that the direction of travel in national policy indicated that if the site proposals previously consulted on were increased this would be a more robust position. Members were clearly advised that an increase in the supply of housing would place the Council in a better position to defend the Plan proposals at the Local Plan Examination process.
- 4.12 Members were also advised of the options for increasing the housing supply that were set out in four tables in the LPWG report. Those options ranged from:
- inclusion of MOD sites (table 1);
 - the enlargement of allocated strategic sites (table 2);
 - the inclusion of previously rejected sites that following further work Officers feel should be reconsidered (table 3); and
 - new sites emerging in response to the consultation on the Pre-Publication draft plan.
- 4.13 Appendix A to the LPWG report set out the Officers response to representations received on the Pre-Publication draft. The Officers assessment of the representations submitted in respect fo the Galtres site raised only minor points such that the conclusion of the officers was that this previously rejected site could now be considered as a *“Potential new housing site allocation”* (See Appendix 2 of this representation)
- 4.14 Consequently, the site was included in the list of sites in Table3 of the LPWG report as a site that could potentially be included as a housing allocation to increase the housing provision to make the Plan more robust.

- 4.15 However, despite the advice set out in the LPWG report, Members rejected any proposal to increase the housing requirement in the Draft Plan and approved only the inclusion of the MoD sites in Table I of the report.

Council Executive 25th January 2018

- 4.16 The recommendations of the LPWG were reported to the Councils Executive on the 25th January 2018. Representatives of the promoters of the three largest strategic housing sites addressed the Executive ((Site ST 7 Land East of Metcalf Lane (845 units); Sites ST14 Land West of Wigginton Road (1,348 units); and ST15 Land West of Elvington Lane (3,339 units)). They informed members that, as proposed in the Publication Draft Local Plan, the sites were not viable or deliverable without additional land and some increase in the number of dwellings proposed for each site. The representative requested that change be made to the Draft Publication Local Plan before it went to consultation but these requests were ignored by members.

Publication Regulation 19 Consultation Draft Local Plan February 2018

- 4.17 The Publication Draft Plan proposes a 16-year plan period with a start date of 1st April 2017. This is a change from the report to the July 2017 LPWG that assumed a plan start date of 2012. This changes the basis of the calculation of the housing requirement. Completions are not included in the calculation of the housing requirement as the plan start date (2017/18) is essentially year zero in the calculation. Instead the Council include an allowance for backlog (or under-provision) for the period 2012 to 2017. This has implications for the Green Belt boundary discussed later in this representation.
- 4.18 The housing requirement in the Draft Plan is therefore based on an annual base requirement of 867 dwellings to which the Council has added an additional 56 units per annum to account for undersupply in the period 2012 to 2017 giving a total requirement of 923 dwellings per annum
- 4.19 Taking account of these changes, the housing requirement as now proposed in the Draft Plan is:

Table 2 Publication Draft Regulation 19 Consultation Plan

Plan period 1st April 2017 to 31 st March 2033	
Total Need 2017 -2032/33 (based on 923 dwellings per annum 867 + 56))	14,768
Unimplemented Permissions @ 1st April 2017	3,578
Windfalls (from Year 4) @ 169 pa	2,197
Requirement to be provided through allocations	8,993

4.20 In addition, to ensure what the Draft Plan considers to be enduring Green Belt Boundaries, additional land is allocated to meet the annual base requirement of 867 dwellings per annum for the 5-year period of 2033 to 2038 which effectively increases the housing requirement to be provided through housing allocations to 13,328 ((8,993+(867x5)). We consider this (Council) assessment of the requirement remaining and the housing allocations set out in the Draft Plan to be inadequate for the following reasons:

- (i) The housing requirement is too low;
- (ii) The calculation of completions since 2012 is too high (i.e. the Councils estimate of backlog is too low)
- (iii) Outstanding commitments include student housing that should be excluded
- (iv) The assumptions on windfalls are questionable and should not be treated as a component of the Plan

Stage 2 -The Housing Requirement

4.21 In our representations on the Preferred Sites Consultation September 2016, we included an Assessment of Housing Need prepared By Nathaniel Lichfield and Partners. That Assessment established the scale of need for housing in the City of York based upon a range of housing, economic and demographic factors, trends and forecasts,

based on the application of NLP's HEaDROOM framework (For information the NLP Assessment is included at Appendix 5)

- 4.22 The Assessment found that that the OAHN for the City of York was in the range of between 1,125 dpa and 1,255 dpa. The approach allowed for the improvement of negatively performing market signals through the provision of additional supply, as well as helping to deliver affordable housing and support economic growth. Using this range would have ensured compliance with paragraph 47 of the Framework by significantly boosting the supply of housing. It would also have reflected paragraph 19 of the Framework, which seeks to ensure the planning system does everything it can to support sustainable development.
- 4.23 In the 5-month period since our previous representations, the Government has published a consultation document on a methodology for assessing housing need that every Local Planning Authority would have to use when preparing a Local Plan. The methodology uses the projections of household growth as the demographic baseline for every local authority area. To this is added an adjustment to take account of market signals in house prices. Along with the Consultation Paper the Government included a calculation of the housing requirement for each local authority in the country. The calculation for York was a housing requirement of 1,070 dwellings per annum. The consultation paper explains that this should be treated as the starting point for assessing the housing requirement.
- 4.24 Taking a robust and conservative approach, the Government's figure of 1,070 dwellings per annum is therefore used in our assessment of the housing requirement for the Local Plan period.

(i) Calculation of completions - Backlog

- 4.25 The Council has underestimated the scale of the backlog and their annual allowance of 56 dwellings per annum included for backlog, amounting to 896 over the 16-year plan Period, is too low. To calculate the backlog, our assessment uses the figure of 953. This is the housing requirement figure recommended by the Council's independent Consultants, G L Hearn for the period from 2012 in the report to the

July 2017 LPWG. We then subtract completions in each year for from 2012/13 to 2016/17 to obtain the backlog.

- 4.26 The Local Plan must demonstrate it can provide deliverable sites for the 5-year tranches within the plan period. Government guidance advises that the calculation of the 5-year supply must take account of any shortfall from previous years. How far back the shortfall should be included is a matter of judgement. There is a point at which unformed households from previous years have been permanently displaced and therefore the need to accommodate them has passed. For the purpose of this calculation, and for some degree of convenience, the period from 2012 will be used as the basis of calculating the backlog. (However, using the RSS requirement 850 dwellings per annum for the period 2008 to 2012 the backlog for that period was 1,607 dwellings which is essentially 'written off')
- 4.27 In order to calculate the backlog, it is necessary to analyse housing completion data contained within the Council's Annual Housing Monitoring Updates revealed that after many years of under provision, completion figures for the year 2015/16 suggested a surplus. However, the completion figure of 1,121 for 2015/16 must be treated with some caution as it includes 579 purpose-built student accommodation units (Source: Councils Housing Monitoring Update for Monitoring Year 2015/16). Likewise, the completions figure of 977 for 2016/17 must be adjusted to exclude 152 student units.
- 4.28 The Council have included the student units in their completion and commitments figures based on the definition of dwelling units used in the DCLG General Definition of Housing Terms. However, this is a misreading of the definition which excludes communal establishments from being counted in the **overall housing supply statistics** but adds that all student accommodation whether it consists of communal halls of residence or self-contained dwellings, on or off campus, can be included towards the **housing provision** in local development plans. Government guidance (which is more recent than the DCLG dwelling definition) is that student accommodation units can only be included within the housing supply "...based on the amount of accommodation it releases in the housing market." (Planning Practice Guidance Reference ID: 3-038-20140306).

4.29 The Council have not produced any evidence to demonstrate how market housing supply has been increased by students transferring from traditional private sector shared housing. Indeed, the available evidence presented in the City of York Council Strategic Housing Market Assessment June 2016 is that new purpose-built student accommodation has not displaced students from market or family housing. Paragraph 10.67 of the SHMA states:

We have undertaken some qualitative research on the student housing market. This revealed there was an increase in capacity as new purpose-built accommodation has been built on and off campus. However, it was discovered that this did not reduce demand for traditional private sector shared housing.

4.30 In addition, the Council has not demonstrated that students form part of the objectively assessed housing need nor demonstrated that new student housing accommodation would contribute towards meeting the housing requirement.

4.31 Furthermore, case law has established that in these circumstances purpose-built student accommodation cannot count towards the housing supply *Exeter City Council v Secretary of State for Communities and Local Government, Waddeton Park Limited, The R B Nelder Trust. Case No: CO/5738/2104.*

4.32 Removing these 579 student units from the completions data reduces the completions for 2015/16 to 542. Likewise removing the 152 student units from 2016/17 data reduces the completions for that year to 825. These are the figures used in our calculation of the backlog in Table 3 below.

Table 3 Housing completion backlog for the period 2012-2017

Year	Net Dwellings Added (Council Figures)	Less student units	Net C3 Dwelling units	SHMA recommended figure	Backlog/ Surplus
2012/13	482	0	482	953	-471
2013/14	345	0	345	953	-608
2014/15	507	0	507	953	-446
2015/16	1121	579	542	953	-411
2016/17	977	152	825	953	-128
Total	3,432	731	2,701	4,765	-2,064

(iii) **Commitments**

4.33 We have obtained a list of the planning permissions that make up the Council's estimate of un-implemented planning permissions. The figure of 3,578 includes 542 student units which, for the reasons stated above should not be included in the housing provision figures. This reduces the commitments figure to 3,036. A further discount of 10% should be applied to account for non-implementation of a proportion of these commitments, giving a more robust figure of 2,732 dwellings for outstanding commitments.

(iv) **Windfalls**

4.34 The Council's assessment of housing provision includes an allowance for 169 windfalls per annum from year 4 of the plan – 2,197 units in total. Guidance in paragraph 48 of the NPPF is that windfalls can be included in the calculation of five-year supply, i.e. not as a source of housing supply across the plan period. This is because the supply of windfalls is variable and including it across the plan period does not provide the certainty of delivery compared with actual allocations. In addition, once the plan is adopted and housing allocations confirmed, the pressure to deliver housing through windfalls should decrease. Other Authorities, most recently Scarborough Borough Council, have adopted this approach whereby a windfall allowance is identified across the plan period but treated as a flexibility allowance to the allocations and not included

in the housing provision. The Scarborough Local Plan Inspector has endorsed this approach and the plan has now been adopted.

Stage 3 – Critique of housing delivery

Meeting housing demand and delivery targets

- 4.35 It is envisaged that a high proportion of the total number of dwellings to be delivered over the plan period will be derived from the 19 strategic sites identified within the Consultation Draft. However, there is no real certainty over the rate of delivery that can be achieved on some of these sites.
- 4.36 For example, Strategic Site ST1 (British Sugar) remains undeveloped despite having lain vacant and derelict since 2006. A planning application for a scheme of 1,100 dwellings was refused in October 2017. Development can only commence following a 3-year scheme of remediation. Allowing a for a 2-year lead in following remediation, the first completions on this site are not likely until 2023. The difficulty in bringing forward Strategic Site ST5 (York Central) is also well documented. The draft plan envisages 1,700 new houses being built on this site within in the period 1 to 21 years and at a projected density which ranges between 95 – 125 homes to the hectare. In line with the consultation document prepared for this site in early 2016, the projected densities are to be achieved through the provision of high rise (up to 8 storeys) apartment blocks.
- 4.37 With the Plan placing such a reliance on the capability of York Central to deliver high density development, the impact of high rise blocks on the historic setting of the city is an important consideration at this consultation stage. Paragraph 154 of the NPPF advises that Local Plans should be aspirational but realistic. They should set out the opportunities for development and clear policies on what will or will not be permitted and where. Only policies that provide a clear indication of how a decision maker should react to a development proposal should be included in the plan. Therefore, until the allocation at York Central is supported by this level analysis, the projected housing yields for the site are considered to be purely aspirational.

- 4.38 There is also a question over how the supply of new homes at York Central will be matched with (the existing) housing demand. The 2016 SHMA for York reveals that the highest level of demand for market housing in the city is for 2 and 3-bedroom family homes. There is also significant unmet demand for bungalows amongst retirees seeking to downsize.
- 4.39 According to local letting agents surveyed for the SHMA, the crucial gap in supply is for good quality family homes. However, there is no perceived shortage of flats or apartments. Based on projections of additional households between the years of 2017 and 2032, the SHMA also indicates that greatest need for market dwellings is for 3-bedroom homes, at 39.2% of additional dwellings. This is followed by two-bedroom homes (37.7%) and 4-bedroom homes (16.5%). The need for 1-bedroom dwellings is comparatively low at 6.6%.
- 4.40 Whereas the Plan appears to be reliant on the higher densities provided by apartment living to make a significant contribution to the overall supply of housing, the evidence presented in the SHMA suggests that this is not where the main area of demand lies.
- 4.41 To deliver a wide choice of high quality homes, widen opportunities for home ownership and create sustainable, inclusive and mixed communities, the advice contained within paragraph 50 of the NPPF is that local planning authorities should:
- plan for a mix of housing based on current and future demographic trends, market trends and the needs of different groups in the community (such as, but not limited to, families with children, older people, people with disabilities, service families and people wishing to build their own homes);
 - identify the size, type, tenure and range of housing that is required in particular locations, reflecting local demand
- 4.42 In its current form, it is not clear how the Preferred Sites and their associated yields will address this requirement. In addition, the Council powers to secure the proposed densities are weak.

Conclusion on Housing requirement

4.43 Taking all the above factors into account, our estimate of the housing requirement compared with the Councils estimate as set out in paragraph 4.5 above is:

Table 4 Galtres Garden Village Estimate of Housing Requirement 2017-2033

Plan period 1st April 2017 to 31 st March 2033	Councils Estimate	Our Estimate
Total Need 2017-2033	13,872 (based on 867per annum)	17,120 (based on 1,070 per annum)
Backlog 2012 to 2017	896	2,064
Gross Requirement	14,768	19,184
Unimplemented Permissions @ 1st April 2017*	3,578	2,732
Windfalls (from Year 4) @ 169pa	2,197	0
Net Requirement	8,993	16,452

4.44 It is evident from this analysis that the Council's estimate of the housing requirement is significantly flawed and consequently significant additional allocations are required to address that shortfall.

4.45 In addition to meeting housing land requirement during the plan period, the Council also have to exclude land from the Green Belt for development beyond the plan period to ensure green belt boundaries will endure for some time beyond the Plan Period. The Council propose to meet this objective by allocating housing land for the period 2033 to 2038. Using the Councils baseline requirement figure of 867, the requirement for the 5-year period beyond 2033 would be 4,335 dwellings. Using the Government's figure of 1,070 the requirement would be 5,350

4.46 We have taken the table of proposed allocations from table 5.1 of the Draft Plan. From that we have applied what we believe to be reasonable assumptions about the

potential delivery trajectory from each site based on the information provided in the table and other sources (Appendix 6). For example, we assume no delivery from the British Sugar site in the first 5 years of the plan for the reasons outlined in paragraph 4.36 above.

- 4.47 The allocations in table 5.1 of the Draft Plan amount to 14,985 dwellings for the 20-year period 2017 to 2038. Our analysis of the allocations indicates the following rates of delivery.

Table 5 Anticipated rates of housing delivery from Proposed Allocations

Timescale	Units	Units
Years 1-5	3,054	
Years 6-10	4,807	
Years 11 to 16	4,168	
Sub-total 16-year plan period		12,029
Years 17 to 21		2,617
Total 21-year period		14,646*

* Does not add to 14,985 as some sites delivery extends beyond 2038

- 4.48 This simple analysis demonstrates that for the 16-year Plan period (2017/18 to 2032/33) the housing provision is 4,423 dwellings short of our estimate of the housing requirement of 16,452 dwellings ($16,452 - 12,029 = 4,423$). For the 5-year period following the Plan period, the shortfall is 1,998 using the Councils figures or 2,733 short using our figures.
- 4.49 What this illustrates is that not enough land had been allocated for development beyond the Plan period and consequently the Council cannot demonstrate that Green Belt boundaries will endure beyond the Plan period thus failing one of the fundamental objectives of Green Belt Policy in the NPPF. Without additional housing land allocations, the Green Belt boundaries cannot be confirmed.

4.50 On the previous occasions that Planning Inspectors have considered the Council's Draft Development Plan for the city in 2000 and 2010, each Inspector has concluded that the Green Belt could not be confirmed due to inadequate development land being identified and there is a risk the current Draft Plan reaching a similar fate.

Stage 4 - 5 Year Supply

4.51 Our analysis above demonstrates that the housing land requirement in the for the 16-year plan period is significantly flawed. Of equal concern is the lack of supply in the early years of the plan required to "...*significantly boost the supply of housing...*".

4.52 Our assessment of the 5-year supply is set out in Table 5 below and is in line with generally accepted practice. The steps in our assessment are:

- I. To provide a fair indication of the range of what the 5-year housing land supply position might be, we use both the Council's housing requirement figure of 867 dwellings per annum and our assessment of the annual requirement of 1,070 dwellings per annum to arrive at a five-year requirement.
- II. We then add the undersupply assessed against each of the housing requirement figures for the period of 2012 to 2017. This is known as the "Sedgefield Method" of calculating the 5-year supply and assumes any undersupply is made up in the 5-year calculation period and not spread over the remaining years of the Local Plan. This is the approach favoured by National Planning Guidance which recommends:

Local planning authorities should aim to deal with any undersupply within the first 5 years of the plan period where possible.

(NPPG Paragraph: 035 Reference ID: 3-035-20140306)

- III. As there has, by any measure, been a period of persistent under-delivery of housing in York for the past 10 years, we add the 20% buffer recommended in paragraph 47 of the NPPF.
- IV. We take our adjusted calculation of unimplemented permissions of 2,732 (Paragraph 4.33 above) above.

4.53 Our assessment of 5-year supply is set out in Table 5 below. We provide 2 variants of the 5-year supply:

- In the first calculation, our assessment assumes the supply comprises just the existing commitments. That gives a five-year supply of 1.53 years based on the Government's estimate of an annual housing requirement need of 1,070 dwellings per annum and our assumptions on backlog and commitments.
- The 5-year supply using the Council's housing requirement of 867 and their assumption on backlog, commitments and windfall is 3.53 years.

4.54 In the second calculation we have included our estimate of supply arising from the proposed allocations from Table 5 above:

- Our estimate of supply from allocated sites in the first 5 years of the Plan is 3,045 dwellings. When this is added to the assumptions about the supply from existing commitments (3,578 dwellings) and windfalls the five years supply using the Council figures is 6.28 years and using our figure for commitments (2,732 dwellings), 3.25 years.
- The scale of the deficit in land supply identified by the 5-year calculation is significant not only in terms of the need to identify more land but also in terms of the longevity of undersupply. By any reasonable assessment, there has been a significant shortfall in the provision of housing every year since 2007/08 – 11 years in all.

Table 6: Assessment of 5-year land supply

		Assessment using Councils Housing requirement of 867		Assessment using Government Housing requirement of 1,070	
A	Requirement	(5x867)	4,335	(5x1070)	5,350
B	Plus Shortfall 2012-2017	(5x56)	280		2,064
C	Sub total		4,615		7,414
D	20% buffer	(C x .2)	923	(C x .2)	1,482
E	Total 5-year Requirement	C+D	5,538	C+D	8,896
F	Annual requirement	(E ÷ 5)	1,108	(E ÷ 5)	1,779
G	Supply (Commitments)		3,578		2,732
H	Windfall		338		0
I	5-year supply	(G+H) ÷ F	3.53 years		1.53 years
J	Allocations Years 1 to 5		3,045		3,045
K	Potential supply	G+H+J	6,961		5,777
L	Potential 5-year supply	(K ÷ F)	6.28 years		3.25 years

4.55 The calculation above demonstrates the high level of latent and unmet demand in York and the precarious nature of the housing supply. In order to achieve a balance between the housing requirement and housing supply the requirement would have to fall significantly. On the basis of the background evidence prepared for the Local Plan, this scenario is highly unlikely.

4.56 Alternatively, the requirement / supply balance could be achieved by increasing the supply on the existing allocated sites in the 5-year period. Again, on the basis of the evidence available this is less likely. This is because a significant proportion of the draft

housing allocations are large sites that will take several years before they deliver a significant increase in housing supply and our assumptions already assume a realistic rate of delivery from each site. There is only so much delivery the market can take or accept from each site. Increasing the amount of housing on the large strategic sites is likely to mean that more housing is delivered later in, or even after, the plan period and not in the early years of the plan. That rate of delivery is unlikely to increase without a fundamental adjustment to the business model of housebuilders and developers. Providing additional allocations that include sites such as the Galtres site that can deliver houses in the first 5 years of the plan period will greatly assist in addressing that shortfall.

Stage 5 - The Need for Care Homes

- 4.57 Planning policy in York is generally favourable towards the development of new care homes. The 2005 York Development Control Local Plan acknowledges the rising demand for private care homes and encourages the development of new residential care facilities to meet local need (Policy H17). The 2014 York Publication Draft Local Plan indicates that proposals for residential care facilities and nursing homes will be supported where they provide suitable high-quality accommodation (Policy H3).
- 4.58 A report to the Council's Executive Committee on the 30th July 2015 set out the scale of the problem facing the Council in seeking to provide new accommodation for the elderly. The report set out the Business Case for the Older Persons' Accommodation Programme which amongst other measures sought to:

encourage the development of additional residential care capacity in York including block-purchase of beds to meet the Council's needs.

- 4.59 The Report indicates that the context for the Programme is that there is a shortage in York of suitable accommodation with care for older people. This is caused by historic under-investment and expected growth in the size of the over-75 population of the city. The 75+ population is expected to increase by 50% over the next fifteen years, from 17,200 to 25,800. Eighty one percent of York's 75+ population own their own home.

4.60 The Older Persons' Accommodation Programme seeks to begin to address this short-fall over the next three years, while also facilitating the replacement of Council-run older persons' homes (225 beds) which are no longer fit for purpose. Over 465 units of new accommodation will be achieved through the construction of new Extra Care and Residential accommodation and the upgrading of existing Council-run facilities. The Programme has identified a need for larger bedrooms, en-suite facilities, wider corridors and more social space within residential care homes.

4.61 The Report goes on to say that more is needed to meet the demand generated by population growth. By 2030 there will be a deficit of 975 units if further provision is not procured.

4.62 Working with the independent sector is a key component of the Council's Strategy to provide additional extra care and residential care accommodation. The 30th July 2015 Executive Committee Report states:

Third sector and independent care providers will need to be encouraged and supported to increase their supply of residential care facilities with high dementia and/or physical dependency care needs in York. The Council will need to identify and address any legal and procurement issues surrounding its use of appropriate grants.

4.63 In the context of rapid growth in the local elderly population, the Galtres village retirement village would make a significant contribution towards meeting the aims of the Council's Older Person's Accommodation Programme.

5.0 CONSULTATOIN

- 5.1 The present iteration of the Galtres New Settlement grew out of a proposal first considered in the Preferred Options Draft Local Plan in 2013. That proposal was for a community of 1,000 homes on a site to the north west of the present scheme. The site was identified as safeguarded land in the 2013 Plan. That proposal attracted considerable objection from residents in Earswick and following this, the promoters of the scheme came forward with an alternative proposal on the Galtres site that was submitted as proposed allocation to the 2016 Preferred Sites Consultation.
- 5.2 As has been explained earlier in this document, the Council has not accepted our suggestion that the Galtres scheme be included as a housing allocation in the Local Plan. Consequently, it has not been possible to gauge public reaction to the proposal through the various stages Local Plan Consultation.
- 5.3 In order to make the Galtres scheme more widely known, a press release was issued in December 2017 that attracted considerable coverage in the Local printed press (see Appendix 7) and on radio and local television news reports.
- 5.4 In order to gain further of the public reaction to the proposals, the promoters commissioned Qa Research to carry out an independent survey of residents in York. Qa are a York based consultancy providing a range of consultation techniques including resident surveys and events on behalf of public, private and voluntary sector organisations.
- 5.5 As well as gauging resident's reaction to the Galtres scheme, the survey also set out to establish what other issues were influencing people's behaviour in the housing market and to identify the barriers that were preventing people from buying or renting a home in York. The survey also sought to confirm that the type of housing proposed at Galtres Village was what people required and wanted.
- 5.6 The methodology and survey results are set out in more detail in the Survey report at Appendix 8. The survey comprised 800 interviews. The survey sought to elicit not just an opinion of the Galtres scheme but, more generally, people views on housing

development in the City. For an exercise of this nature, a survey sample of 800 in a city the size of York is considered robust and representative’.

- 5.7 In addition to the telephone interviews Qa also carried out 83 commuter surveys carried out by face to face survey and telephone interviews. This part of the survey wanted to pick people who commute to York but do not live here to ascertain how issues around housing provision and affordability were contributing to commuting patterns.
- 5.8 A key point of the survey is that it obtained responses from residents in every ward in the City, which is important when gauging the level of support for a strategic housing site that will serve the needs of the whole City.
- 5.9 The research outlines the views of a representative sample of residents living the City of York Council area and the findings can therefore be seen as reflecting the views of the population as a whole.
- 5.10 Residents overwhelmingly believe that there is a need for new homes in and around York, mainly to serve the needs of the existing population but also to provide housing for those who wish to move into the area to live or work. In total, eight-in-ten agree that affordable housing should be *‘a top priority for the Council’*
- 5.11 It’s also clear that the desire for new housing is driven by a need for affordable housing (both to buy and to rent), particularly smaller houses of 1-3 bedrooms. In contrast, less support exists for apartments and larger houses with 4 or more bedrooms.
- 5.12 Reflecting this, a third of York residents feel that they know someone who has had to move out of York and commute back in, but who would actually prefer to live in and around the City if they could and this situation was felt to be driven by housing being too expensive to buy or rent.
- 5.13 It is evident that the proposed Galtres Garden Village development has gained some awareness amongst York residents, as one-in-four (24%) indicated that they had heard of the proposal before the interview. Respondents were provided with plans and / or a description indicating the location of the scheme.

- 5.14 When asked how far they support the scheme, there was generally support, with 30% giving the top scores of 9-10 out of 10 and a further 35% giving scores of 7-8 and an overall mean score of 7.1 out of 10. Younger respondents in particular (aged under 35) offered the strongest support, perhaps reflecting the fact that this age group faces the biggest housing challenges (for example, the majority rent their home).
- 5.15 However, perhaps the most revealing finding in this survey is that 76% would like to see the proposed development included in the City of York Council Local Plan and only 7% said with certainty that they would not.
- 5.16 This is despite the fact that when asked to consider the planned location, the research recorded mixed views on how appropriate this was for housing development. That said, the majority of respondents (55%) indicated that they felt it was *'appropriate'*, a significantly higher proportion than felt it was *'not appropriate'* (15%).
- 5.17 Notably, although the site wasn't universally seen as being suitable for housing development, there is evidence that some who feel that it isn't appropriate would actually support the GGV nonetheless and respondents who said it was *'not appropriate'* were actually more like to say they would like to see it included in the CYC Local Plan than not see it in there.
- 5.18 Based on the descriptions included in the survey, respondents could readily identify aspects of the scheme that they 'liked' and a range of different things were chosen. Specifically, this included individual amenities such as the primary school, doctor's surgery, care home and leisure facilities as well as the inclusion of affordable housing. However, in a more general way respondents made comments relating to the development and creation of a community and referenced these individual facilities as an integral part of this.
- 5.19 Based on the detail included in the survey, respondents identified fewer elements that they *'disliked'*, focussing mainly on concerns around traffic and congestion.
- 5.20 The results of the surveys show a high level of agreement that more housing is needed in the City, particularly affordable housing and that the lack of suitable houses coupled

with high house prices is forcing people from York to live elsewhere. There was general support for the Galtres scheme and support for it to be included in the Local Plan.

6.0 GALTRES GARDEN VILLAGE - ASSESSMENT OF TECHNICAL ISSUES

Green Belt

- 6.1 The calculation of the housing requirement in the previous section above demonstrates the high level of latent and unmet demand in York and the precarious nature of the housing supply in York. In order to achieve a balance between the housing requirement and housing supply the requirement would have to fall significantly. On the basis of the background evidence prepared for the Local Plan, this scenario is highly unlikely. In the absence of an adopted Local Plan, some considerable confusion surrounds the status of the Green Belt.
- 6.2 Much of the commentary relating to the Green Belt speaks from a position that assumes the Green Belt boundaries are fixed in an adopted plan and that any suggestion that sites should be allocated for development will result in land being taken out of the Green Belt (in which case the second sentence of paragraph 83 of the NPPF would apply i.e. Green Belt boundaries should only be altered in exceptional circumstances).
- 6.3 This is, however, an erroneous assumption because the Green Belt boundaries around York are being defined (or established) for the first time. They are not being altered. In this case, paragraph 85 of the NPPF is therefore the Key advice to be considered. In defining/ establishing boundaries the Council must meet the identified requirement for sustainable development i.e. it must allocate land to meet identified needs for housing, employment, leisure etc... and other needs.
- 6.4 In other words, it is not a question of what land should be taken out of the Green Belt. The Council is at the point of deciding what land should not be included in the Green Belt in order to meet the identified requirements for sustainable development.

The purposes of Green Belt

- 6.5 In order to determine whether it is appropriate to allocate the site to meet the development needs of the City and exclude the site from the Green Belt, the site is assessed against the 5 purposes of the Green Belt:

1. To check the unrestricted sprawl of large built-up areas

- 6.6 The allocation of the site will assist in meeting identified requirement for sustainable development. The allocation of the site will enable the Council to define Green Belt boundaries that will endure beyond the plan period and therefore check the unrestricted sprawl of the larger urban area.

2. To prevent neighbouring towns merging into one another

- 6.7 The Council Green Belt appraisal indicates that the site does not perform an important role in preventing neighbouring town merging into one another.

3. To assist in safeguarding the countryside from encroachment

- 6.8 The allocation of the site will assist in meeting an identified requirement for sustainable development. The allocation of the site will enable the Council to define Green Belt boundaries that will endure beyond the plan period and therefore safeguard the countryside from encroachment.

4. To preserve the setting and special character of historic towns

- 6.9 In the Council's Green Belt Appraisal, the site is not identified as being important to the setting or special character of the City (confirmed by our Heritage Appraisal). It is not Stray Land, Green Wedge, an area preventing coalescence, a river corridor or as an area retaining the rural character of the city. This is also confirmed by the landscape appraisal submitted with the representation which confirms that there will be no significant effects on views of the York Historic Core and its context, nor significant effects on views from the Historic Core. Therefore, there is no risk to the setting and special character of York as a historic city.

5. To assist in urban regeneration by encouraging the recycling of derelict and other urban land

- 6.10 There are few areas of York in need of regeneration. Most, if not all, of the few remaining brownfield sites have planning applications pending or redevelopment proposals outstanding. In view of the scale of additional house allocation required to meet the objectively assessed housing needs of the City, significant additional housing

allocations are required. In this context the development of the site will have no impact on the viability of remaining brownfield sites in the City.

Safeguarded Land

- 6.11 Paragraph 85 of the NPPF advises that when defining Green Belt boundaries for the first time, local planning authorities should identify areas of 'safeguarded land' between the urban area and the Green Belt, to meet longer-term development needs beyond the plan period and make clear that the safeguarded land is not allocated for development at the present time;
- 6.12 As has already been stated, the Green Belt boundaries around York are being defined (or established) for the first time. They are not being altered. The Council is at the point of deciding what land should not be included in the Green Belt in order to meet the identified requirements for sustainable development.
- 6.13 Critically, the Council will have to demonstrate to a Local Plan Inspector that the Green Belt boundaries will not have to be altered at the end of the plan period. It can do this by including in areas of safeguarded to meet development need beyond the plan period. The 2013 Preferred Options Draft Local Plan sensibly included a reasonable amount of safeguarded land to ensure the proposed Green Belt Boundaries would remain permanent beyond the Plan period. Unfortunately, this sensibility appears to have been abandoned in the latest further site consultation document.
- 6.14 The previous two Planning Inspectors in 2000 and 2010 both dismissed the draft Development Plan due to a lack of evidence confirming that Green Belt boundaries would endure beyond the Plan period. Questions about the permanence of the Green Belt boundary beyond the plan period have also been raised by Selby District Council.
- 6.15 The omission of this key component of the Local Plan spatial strategy is a serious weakness and may well result in the Plan being found unsound, particularly as the Plan period is only up to 2033 and from the point of anticipated adoption in 2019 will only be a 14-year plan.

Highway Impact and Access

- 6.16 A transport statement (Appendix 9) sets out the transportation strategy for the proposed new village. The proposed vehicular access strategy provides access directly from North Lane via two new roundabout junctions, one approximately 800m and 1,100m east of the North Lane/A1237 roundabout junction.
- 6.17 In addition to all modes of travel access via the proposed reconfiguration of the A1237/North Lane roundabout junction, a further site access solely for cyclists/pedestrians is proposed via a Right of Way of Strensall Road to the west of the site, linking to the north-west corner of the site.
- 6.18 Within the site, connectivity will be provided for all modes of travel in line with good design principles of Manual for Streets and Manual for Streets 2.
- 6.19 A Strategy has been defined that identifies possible measures and features that could enhance the provision for modes other than the private car such as walking, cycling and public transport. The site is located with employment, leisure and educational facilities nearby to again minimise journey lengths. Furthermore, by providing a development with a mix of both residential and employment land uses it will assist in minimising the need to travel by the private car.
- 6.20 Following our representation to the Pre-Publication Local Plan, the Council re-assessed the transportation aspects of the scheme and concluded that:
- At a strategic level there is currently no evidence that transport should be considered to be a 'show stopper' for this site – provided that effective measures to both to reduce car trip generation and to mitigate against the impact of the residual car trips are put in place.*
- 6.21 The Council draw attention to the need for discussion with Highways England to clarify the arrangements of the North Lane junction with the A64.
- 6.22 The Transport statement has been updated to respond to the comments raised by the Council. With regard to the suggestion of discussion with Highways England, proposals for the dualling of the A64 are currently at an early stage and the HE are not

in a position to advise what the implications are for the junctions of North Lane with the A64.

- 6.23 With regard to the query about the width of North Lane, the carriageway varies in width, however, it has a general width of 6.0 metres. There are wide verges either side of the carriageway both of which are adopted, therefore if the Council deem that North Lane needs to be widened then this would be possible.
- 6.24 The transport report has comprehensively addressed all the technical issues raised in the Technical Officer Assessment of the site and it can therefore be concluded the site access arrangements are feasible and deliverable and accord with National and emerging Local Plan policies. The Report has demonstrated that suitable safe access can be provided and that the site would be able to provide local services on site including a new primary school and local shops that will promote sustainable travel choices.

Landscape

- 6.25 A Landscape Capacity Study (Appendix 3) has been prepared to consider the capacity of the site and surrounding landscape to accommodate the proposed development.
- 6.26 The findings of this study indicate that the Site and its landscape has the capacity to be integrated with the existing mosaic of settlements and intervening landscape structure locally for a potential housing development. This is because:
- The Site is well contained by mature hedgerows and has limited openness, one of the essential characteristics determined by the NPPF for Green Belts. This is due to the existing boundaries enclosing the site and internal field patterns surrounding and compartmentally breaking the external and internal views of the site. These landscape elements consist of mature (high) outgrown hedgerows and hedgerow trees and mature solitary trees spread in an east to west alignment.
 - Due to the enclosed nature of the site and existing permanent roadside boundaries and linear, existing open landscape corridors free of development and settlement

coalescence, there is little current risk of unrestricted sprawl of existing adjacent settlements or expansion of the proposed development in the future.

- Proposed boundary treatments around the site will assist in safeguarding the countryside from further encroachment.
- The findings of the ZVI, and subsequent survey and analysis of selected viewpoints surrounding the site, indicate that the Site is very well contained and any potential housing development here will only be seen when in close proximity to the western and southern boundaries of the site and from along the A1237 road corridor.
- In particular, there will be no significant effects on views of the York Historic Core and its context, nor significant effects on views from the Historic Core. Therefore there is no risk to the setting and special character of York as a historic city, the Minster and its Castle Tower.
- The ZVI also indicates there will be views of the Site from the eastern fringe of Earswick and Huntington and Willow Grove to the north, although this would be from the rear of properties that are located on the eastern side of Strensall Road and also the southern side of Willow Road. This is due to the flat nature of the landform so views are reliant on the form and structure of the local landscape features. Consequently there will be limited impacts on the setting of Earswick and Huntington as a whole, or their setting and local character.
- The new development will embrace the principal of Green Infrastructure with the creation of a Village Heart, linking to existing retained hedgerows, green corridors, water features/habitats and proposed open space and garden areas.

6.27 The officer assessment of the scheme presented to the 23 January 2018 LPWG (Appendix 2) acknowledged that the scheme had been moved eastwards to address concerns that it could be perceived as an urban extension rather than a separate village. However, the scheme has similar characteristics of the site north of Clifton Moor that the Council consider to be a separate settlement. The perception of separation between Galtres Village and the built up area beyond the ring road, including the

proposed ST8 allocation, is real and strengthened by the proposed landscaping on the boundaries of the scheme. Furthermore, as the Officer assessment acknowledges, the A1237 ring road is on a southwest trajectory at this point, thus rapidly pulling it away from the proposed allocation.

Ecology

6.28 The local ecology context is assessed in the Ecology report at Appendix 10. The habitats within the Application Site comprise a farm yard, arable and pastoral agricultural land bounded by hedgerows and young plantations. There are no statutory or non-statutory sites within the site boundary.

6.29 The surrounding habitat is potentially important and the proposed development may impact upon mobile species. Consequently, the extended phase I assessment also targeted the following species relevant to the Application Site and proposed development:

- Bats
- Great crested newts
- Badger
- Birds
- Reptiles
- Hedgehogs

6.30 The extended phase I survey and ecological assessment recommends the following phase 2 surveys to ensure that a comprehensive study is undertaken:

- **Bats**
 - It is not possible to predict the full pre-, mid-development and long term impacts on bat populations based on daytime surveys conducted in July. In order to prevent any potential impacts occurring to bats present, it is recommended that an activity survey (emergence and dawn) are completed in spring/summer (May to August) period. This will provide

further information on bats at the site and must target any buildings or trees which are to be demolished or felled which have potential to support roosting bats.

- o Boundary features, woodlands, scattered trees and rough grassland habitats is suitable for foraging and commuting habitat. In order to determine the value of this habitat to commuting and foraging bats, bat transect surveys should be undertaken between April and October. This will enable targeted management on site, retention of optimum bat habitats including dark corridors and enhanced foraging and dispersal routes.

- **Birds**

- o The Phase I survey recorded habitats potentially valuable to protected and/or birds of conservation concern. Wold Ecology recommends a breeding and winter bird survey is undertaken to establish the breeding status of Protected Schedule I species and Species of Conservation Concern/BAP species within the Application Site.

- **Great crested newts**

- o A great crested newt survey was undertaken during 2014 and no great crested newts were recorded within the ponds on site. As the report is valid until spring 2017, it is recommended that the presence absence survey is undertaken to provide current survey data for the site.

- **Badgers**

- o A badger survey was undertaken during 2014 on adjacent land and no badgers were recorded. As the report is valid until spring 2017, it is recommended that additional badger surveys are undertaken to provide current survey data for the site.

In addition:

- Any trees, shrubs, buildings and vegetation to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged.

6.31 Following our representation to the Pre-Publication Local Plan, the Council re-assessed the ecology aspects of the scheme and commented. The Officer assessment was that the main issue to consider was the potential impact on Strensall Common SAC, which although to the north, may receive adverse effects as a result of increased recreational pressure.

6.32 However, Strensall common is some 1.6km to the north of the site and accessible via a public footpath that would run through Galtres Village. The potential impact is therefore considered to be limited, particularly as the scheme will provide recreational space and playing fields within the scheme and, more particularly in the form of a Country Park that will provide opportunities for recreation. An updated habitat regulation assessment is provided with the representation.

Archaeology

6.33 An initial desktop appraisal (Appendix 11) has identified records indicating prehistoric and Roman remains within the landscape surrounding the site. There is no evidence for modern activity within the site (e.g. quarrying or large-scale industrial works) that would preclude the presence of archaeological remains. As such, there is the potential for as yet unknown archaeological remains to be present on the site, most likely relating to the prehistoric or Roman periods. In order to further inform the assessment of the archaeological potential of the site and to support any future planning application the following staged approach is recommended:

- Desk Based Research in order to provide a detailed analysis of the historical development of the Galtres Farm site, and to identify the extent to which the new development may impact on any below ground archaeological potential.
- Geophysical survey following the desk-based assessment.
- Trial trench evaluation would then be carried out in order to target any anomalies of an archaeological nature indicated by the geophysics and to test any 'blank' areas to ensure that they contain no archaeology.

6.34 Subsequent to evaluation and planning permission, if archaeological remains were found to be present, the impact of the development on them would need to be mitigated through excavation, watching brief or preservation in situ. The above staged approach would be carried out and the scope defined in consultation with the City of York Archaeologist.

Heritage – Setting of the City

6.35 A Heritage Assessment produced by Humble Heritage to assess the impact of the Galtres Village scheme on the setting and character of the city is included at Appendix 12.

6.36 The assessment followed the same methodology that City of York Council have employed to assess other potential development sites. This methodology is based on the Heritage Topic Paper produced as part of the local plan process (revised in 2014) which summarises the heritage significance of the City of York and the many thousands of designated and non-designated heritage assets within its boundary.

6.37 The Heritage Topic Paper identified six '*principal characteristics*' of the City of York's historic environment, further broken down into a variable number of '*character elements*'. The City of York Council have assessed other local plan sites according to a tabulated list of six principal characteristics and their character elements, and this methodology has been followed for the Galtres site.

- 6.38 The heritage Assessment concludes the proposed development will have no impact on the majority of character area elements, and for the four character elements on which there will be an impact this will be at the lower end of the scale, with mitigation possible. This compares very favourably with the other sites assessed by City of York Council in their Heritage Impact Assessment Annexes published in September 2017.

Flood Risk and Drainage

Surface Water

- 6.39 A drainage assessment is provided at Appendix 13 of this submission. The EA Flood Map shows that the site is located in Flood Zone 1, which is land that is not liable to flooding in a 1 in 1000 year flood event. Flood Zones refer to the probability of only sea and river flooding, ignoring the presence of existing defences.
- 6.40 The surface water drainage scheme will aim to reduce the potential for increased flood risk in the area and beyond through the layout and form of the development, and the appropriate application of sustainable drainage systems.
- 6.41 Preliminary desk top investigations suggest that the natural soils in the area of the site are predominantly clay and are unlikely to be suitable for the design of point soakaway drainage systems.
- 6.42 Sustainable drainage systems will cover the whole range of sustainable approaches to surface drainage management. They will be designed to control surface water runoff close to where it falls and mimic natural drainage as closely as possible.
- 6.43 Consideration will be given to the existing natural land drainage systems on site and beyond, the indicative site layout indicates that extensive areas of open spaces are available around the development for on-site surface water balancing features such as swales and attenuation lagoons prior to controlled discharge to the existing points of discharge to the River Foss.
- 6.44 Surface water can therefore be attenuated and controlled on site to discharge from the development at existing run off rates.

- 6.45 Strategic and site-specific flood risk assessments, and design to manage residual flood risk, will be undertaken in the future at relevant planning application stages.
- 6.46 Surface water sewerage systems will be offered for adoption by Yorkshire Water Services.

Foul Drainage

- 6.47 Existing foul water sewers are shown on the Yorkshire Water sewer network plan. The foul water drainage is likely to comprise local gravity drainage to a pumping station to lift and transfer flows to an existing foul outfall offsite.
- 6.48 It is proposed that foul water drainage will be discharged to adopted sewerage systems in or adjacent to Earswick Village, together with any necessary enhancement in capacity of existing sewerage systems.
- 6.49 A strategic approach will be undertaken to foul water drainage for the site in conjunction with other possible residential development in the adjacent Earswick and Huntingdon areas.

Proposed dualling of the A64

- 6.50 Highways England are developing a scheme to dual the A64 from the Hopgrove roundabout to the duelled A64 at Barton Le Willow. The Agency has issued a plan for consultation showing the extent of land that may be required for easements during construction or for the actual dualled carriageway. The outer edge of the consultation area includes a small area at the eastern end of the proposed Galtres settlement.
- 6.51 At present it is considered unlikely that this land will be required in perpetuity for the dualled A64. However, in the event this land was required, the Galtres scheme can be amended to include some additional land to the north to maintain the size of the settlement. This is shown on the plan at Appendix I4.
- 6.52 The need for any update of the technical reports cannot be determined until the proposals for the A64 dualling are confirmed. However, an initial view was sought from the technical consultants on the potential impact of this amendment to the

scheme. The conclusion from all the technical consultants is that this amendment is unlikely to fundamentally alter the conclusions in their technical reports. The responses are included with the Plan at Appendix 14.

7.0 SUSTAINABILITY ASSESSMENT

7.1 This section of the report assesses the proposed site's suitability in relation to sustainable access to facilities and services. It covers the criteria outlined in Criteria 4a of the site selection methodology used by the Council for the aborted Publication Draft Local Plan (2014). Also included are comments in relation to water, electricity and gas infrastructure.

7.2 The population of the proposed development would be in the region of 4,117 residents, based a standard 2.4 residents for the 1,689 dwellings plus 60 occupants for the extra care accommodation. This figure is assumed to be an average amount given the mix of housing and retirement living.

Nursery Care Provision and Primary School

7.3 The site lies within the catchment of Huntington Primary School, located on North Moor Road approximately 1km to the south west of the site. There is very limited existing capacity at the Primary School to accommodate more pupils and little scope for expansion of existing facilities (although extant planning permissions in the area have included requirements for Section 106 contributions for a 2-to-3 classroom expansion at the school).

7.4 The nearest children's nursery is Huntington Pre-School, based at Huntington Memorial Hall on Strensall Road approximately 650m to the west of the site. Other nurseries are located in New Earswick at Hartrigg Oaks ('Little Acorns', approximately 1.8km away) and at Huntington Road ('Sunshine Day Nursery', approximately 2.2km), and at Calf Close in Haxby ('Theresa's', approximately 1.75km).

7.5 The proposed development would allow for a new primary school to be provided on-site, and the Masterplan illustrates a two-form entry primary school located within the western boundary. The entirety of the proposed site would lie within 800m of the new school boundary, and the vast majority of the Garden Village dwellings would be within a 400m radius. Safe access to and from these areas would be secured through appropriate pedestrian/cycle links.

- 7.6 There is scope for nursery care provision to be provided on-site, and this could be provided as part of the new primary school development. Provision for nursery education could otherwise be made through developer contributions in accordance with Council toward foundation stage education in accordance with Council guidance and need in the area.

Secondary School

- 7.7 The site lies within the catchment of Huntington Secondary School, which is located on Huntington Road approximately 1.6km away, and to the south of the A1237. The school has limited capacity to accommodate the demand for places generated by new housing development. It is recognised by the Council that delivery of the level of housing proposed at Strategic Sites ST8 (Land north of Monks Cross) and ST7 (Land east of Metcalfe Lane) would together require contributions toward a new secondary school serving this sector of the city.
- 7.8 The provision and location of a new secondary school will be subject of further detailed assessments and viability work as the Local Plan progresses. However, Galtres Garden Village would clearly provide further critical mass and significant additional developer contributions to assist in delivering the new facility, which will be vital to ensuring the viability and sustainability of growth proposed for the area.
- 7.9 Children attending Huntington Secondary from the Garden Village could be transported to and from the school using the existing contracted bus system which serves Strensall. While it would be subject to further detailed viability work, the location of a new secondary school would be expected to be in a sustainable location within or in close proximity to one of the strategic sites in this area, and that the school would also be served by a contracted bus service.

Higher and Further Education

- 7.10 The principal tertiary education sites – York College, York St John University and University of York – can all be reached by service bus. Strensall Road is served by bus services which run at a 20-minute frequency to and from the city centre, and a bus

stop is located 700m from the proposed pedestrian access route over the A1237. From the city centre, York St John University is within easy walking distance and onward links are available to the University of York campuses at Heslington and to York College. A “college coach” from Kirkbymoorside calls at Strensall to pick up passengers for York College, providing an alternative to service buses.

Neighbourhood Parade

- 7.11 There is a very limited range of shops and community facilities within Huntington and Earswick. Huntington has a Post Office, small convenience store, pharmacy, public house, library and two community halls. There are no shops or other community facilities in Earswick. A full range of retail facilities are provided at Monks Cross shopping centre approximately 2km to the south of the site.
- 7.12 The masterplan for Galtres Garden Village includes a 3.49ha plot which would provide retail and community facilities and could include a convenience store, newsagents, hairdressers, etc., depending on the commercial uses that come forward. Our assumption is that there will be demand for these units by businesses that see opportunities not only to provide a service for the Garden Village but also for the existing residents of Earswick village / occupants of adjacent developments. It is considered that the site is sufficiently large to enable a range of potential community facilities and uses to be provided, and viable commercial floor space can be provided to accommodate the uses.

Supermarket / Range of Services Within Parade

- 7.13 The layout and positioning of the retail units on the site will be designed so that it will be relatively straightforward to combine individual units to create a larger convenience store if necessary. There will be sufficient flexibility to ensure that a good mix of services will be available, whether as part of one larger retail unit or alternatively as self-contained specialist uses within the remaining retail units.

Doctors and Dentist Surgeries

- 7.14 Huntington has two doctors surgeries located. The nearest dentist is located on Huntington Road approximately 2.5 km from the site.
- 7.15 The cumulative impact of approved and proposed residential development in the locality may result in the need for further local health services. Additional capacity can be provided in a range of ways, including expansions of existing surgeries, branch surgeries, extended opening or alternative services. These may also be combined with other primary care and community services provision. Within the proposed development, one or more of the proposed retail units could be provided as a doctor's surgery and/or a dentist's surgery. Should a requirement for new health facilities within the site come forward through further discussion, it would be the intention of the developers to incorporate suitable floor space for a surgery or other appropriate health service into the layout.

Open Space and Type

- 7.16 The nearest existing open space provision is located 650m from the site in Earswick, and comprises significant areas of open space adjacent to the Earswick Chase development which include football pitch, tennis courts, a children's play area, exercise equipment and a scented garden. The Huntington Sports Club playing fields are approximately 750m to the western boundary of the site. The Huntington Draft Parish Neighbourhood Plan identified provision of additional recreation facilities as a priority.
- 7.17 A range of open space types will be provided within the proposed site boundaries. The principle governing the development of the site is that it should be a landscaped sustainable community, following the example of New Earswick and, more recently, Derwenthorpe. The masterplan incorporates extensive amenity space including provision of east-west green links ensuring retention of hedgerows which could also provide opportunities for children's play areas in accessible and safe locations, as well as significant area for a potential country park to the west of the development area. In addition, the masterplan includes a new village green/sports pitch linked to the new primary school.

- 7.18 It is considered that the development would be capable of meeting the Council's open space standards for residential developments through on-site provision, which would provide a significant level of greenspace/open space for existing and new residents. It is also recognised that the Huntington and New Earswick ward is currently deficient in a number of open space typologies, and that the development would provide opportunities to improve facilities in the area.

Water Supply

- 7.19 Yorkshire Water is responsible for the water utilities infrastructure for the York area, and has a duty to provide water supply to development identified in adopted development plans. The proposed site is located close to established water supply infrastructure serving existing development. In previous consultation for the Local Plan, Yorkshire Water indicated that potential requirements for new on- and off-site water mains or localised reinforcement of existing infrastructure to serve housing at site allocation level would not represent a significant constraint to development.

Electricity

- 7.20 Northern Powergrid is the distribution network operator for the York area, responsible for the distribution system that delivers electricity from the National Grid transmission network to homes and businesses. Northern Powergrid will meet demand from requests for new connections, and will plan for growth considering published local plans. Previous consultations for the Local Plan did not identify any major capacity constraints, and while the level of individual site allocations may require some reinforcement of the distribution network systems, this would not provide a barrier to development.

Gas

- 7.21 The gas distribution operator for the York area is Northern Gas Networks (NGN), which has a statutory duty to supply new customers. NGN has indicated that gas supply and connection are not constrained in York, and that its systems are robust enough to be able to supply future development. The proposed site would connect

to existing low-pressure network, and while exact connection points would be established through the development process, no issues are anticipated in supply or connection. In earlier Local Plan consultations with the Council, NGN identified a potential need to reinforce the network to the north east of the York area (i.e. the supply which feeds up to the Strensall area). However, this was not considered a significant constraint by NGN as any required upgrade would be achieved as part of its ongoing development and maintenance of the network.

8.0 VIABILITY AND DELIVERY

- 8.1 In view of the persistent under delivery of housing in York for almost a decade, certainty about the delivery of new housing allocation is paramount. In particular, the delivery of affordable housing has become a pressing priority as low rates of market housing completions over the past 10 years has significantly reduced the supply of affordable homes secured through Section 106 agreements.
- 8.2 The viability of the scheme has been appraised using the methodology set out in the Council's Viability appraisal prepared by Peter Brett. The scheme is viable and can deliver the Council's aspiration of 30% affordable housing. The viability appraisal will be made available to the Council and Inspector upon request.
- 8.3 The Galtres Village Development Company (GVDC) is making a unique offer to the Council for the delivery of the scheme and in particular the delivery of a significant tranche of affordable housing in the early years of the scheme. This offer is set out in detail in the Prospectus for Delivery at Appendix 15.
- 8.4 This is an offer to secure a powerful partnership between a substantial land owner, Galtres Village Development Company (GVDC) with the council and the Homes and Communities Agency (HCA).
- We are offering to deliver all the affordable homes to the council or its newly formed development company and not sell to another housing provider. We invite the council to participate in the design, specification and delivery of these homes at a price which will be affordable, creates an asset for the future and will deliver new homes for the people of York in a comparatively short timeframe. In the event the Council are not able to take up this offer, GVDC will partner with a registered social housing provider to deliver the affordable housing.
 - Secondly to invite the council to actively participate in the design of their new homes and will invite a representative to be an active participant in the GVDC board.

- Thirdly we wish to see the new homes become a long-term asset for the council or its development company, providing much needed revenue and reducing housing and care costs elsewhere in the city.
- We can provide homes for low-paid families at a size and price point which suits them.
- Finally, we will be able to fast track this development if we were to enter into a separate contract to build the homes.
- Working with the CITB, local educational establishments and others we can together tailor a training and employment program which meets the needs of local people.
- We will work in partnership to maximise the learning experience this scheme will offer and will encourage apprenticeships in other elements of construction too such as project management, property development, architecture, civil engineering, marketing etc.
- working together we will want them to continue on the working / learning road so that higher educational qualifications and degrees should become available to those who thought this level of education was unaffordable.

8.5 An Infrastructure Delivery and Phasing strategy at Appendix 16 has been prepared to outline how the scheme will be delivered over time. It describes how and when infrastructure will be delivered and how the construction process will be managed. The strategy is in draft and will essentially be a travelling document that can be updated as the delivery of the scheme evolves. The document reinforces the point that the scheme can be delivered and is viable.

9.0 CONCLUSIONS

- 9.1 There is a clear imperative for the Council to “...**significantly boost the supply of housing...**” as required by the NPPF. The draft Local plan does not achieve this objective. More recent Government housing requirement figures for York and our analysis demonstrates that the Draft Plan will have to allocate land for more than over 4,400 additional houses in the Plan period to 2033 ((Our estimate of house requirement of 16,452 (Table 4) less our estimate of delivery 12,029 (Table 5))
- 9.2 The draft plan has not demonstrated that the proposed Green Belt boundaries will endure beyond the plan period. Additional land will have to be excluded from the Green Belt either through allocations and/ or safeguarded land to provide robust Green Belt boundaries for at least 10 years beyond the Plan period.
- 9.3 The proposed new settlement – Galtres Village - can address both these shortcomings of the Plan. An opinion survey has clearly established that residents of York overwhelmingly believe that there is a need for new homes in and around York, mainly to serve the needs of the existing population but also to provide housing for those who wish to move into the area to live or work. In total, eight-in-ten agree that affordable housing should be *‘a top priority for the Council’*
- 9.4 The survey also established general support for the Galtres scheme, with 30% of respondents giving the top scores of 9-10 out of 10 and a further 35% giving scores of 7-8 and an overall mean score of 7.1 out of 10. Younger respondents in particular (aged under 35) offered the strongest support, perhaps reflecting the fact that this age group faces the biggest housing challenges (for example, the majority rent their home).
- 9.5 However, perhaps the most revealing finding in this survey is that 76% would like to see the proposed development included in the City of York Council Local Plan and only 7% said with certainty that they would not.
- 9.6 The Galtres Garden Village will be an urban extension to York which echoes the “garden village” ethos of New Earswick and Derwenthorpe, with housing set in well landscaped surroundings as part of a low-carbon development. The proposed

allocation will deliver a high quality, sustainable residential environment that will provide a minimum of 30% of its dwellings as affordable housing.

- 9.7 It is considered that the proposed vehicular accesses to the site can be delivered in such a way that the highway network is not compromised. A dedicated cycle route through a proposed linear park to the west of the site will provide direct access to Huntington. The development will not harm the City's historic character or setting nor adversely affect other interests of acknowledged importance.
- 9.8 The Galtres Development Company will deliver affordable housing in an innovative way that will provide significant benefits form the City. The development company proposes to work in partnership with the Councils recently established development company to deliver major tranches of affordable housing directly to the Council's housing stock in the early years of the scheme. Our objective is to provide affordable housing at a cost to the Council.
- 9.9 Community facilities can be provided early in the development programme, thus creating a primary school, retail and other outlets which will constitute a significant benefit to the development's residents and to local population who access the site.
- 9.10 The land is available, the development is achievable, and the scheme can deliver almost 1,753 dwellings and in a range of affordable and market housing and retirement living that will make a significant contribution to address the three major housing issues facing the City of York for the foreseeable future
- The Shortage of housing
 - The shortage of affordable housing
 - The shortage of elderly persons accommodation
- 9.11 Without additional major sustainable housing allocations such as Galtres village these requirements will continue to go unmet and the housing needs of the people of York and their children will not be served.

APPENDICES

Provided as Separate documents

Galtres Garden Village

Potential Straw Bale Construction for Feature Community Buildings



Trim Trails



Green Routes and Public Rights of Way



Sustainable Drainage Systems (SuDS)



Local Centre



DO NOT SCALE
All dimensions to be checked on site and Architect to be notified of any discrepancies prior to commencement

DESIGNER'S RISK ASSESSMENT
Construction Design and Management Regulations 2015

RESIDUAL RISKS:

REF: DESCRIPTION DATE:

Biodiversity Habitat Information Pavilion



Allotment Gardens



Outdoor Classrooms



Biodiversity Enhancement



Retirement Living



Community Courtyards



Community Orchards



Natural Greenspace



Forrest School



Zone	Area (Hectares)
A	8.99
B	16.86
C	18.00
Development Cell Sub-total	43.85
Continuing Care Retirement Community	2.64
School	1.30
Community Buildings	3.49
Total Site Area	92.97

Capacity

43.85 Ha of Development Area at 32dph = 1403 units
Retirement Community = 350 units
Total Proposed Development = 1753 units

Potential Features

1. Pedestrian and cycle link towards Earswick and Huntington
2. Green buffer around perimeter of the site to visually contain the development
3. Recreational routes / Trim Track
4. Galtres Garden Village Country Park
5. New roundabout to provide access from North Lane
6. Multifunctional green spine running through the middle of the site to incorporate SuDS and buffer to housing
7. Formalised green space for recreation
8. Village Hub, including: school, community buildings and village green
9. Continuing Care Retirement Village
10. Green corridors running north to south forming a green grid throughout the design

Key



REVISION DATE DESCRIPTION CHECKED

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JOB / CLIENT
Galtres Garden Village
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Local Plan Working Group

23rd January 2018

Report of the Assistant Director of Planning and Public Protection
(The Local Plan is the portfolio of the Leader and Deputy Leader)

City of York Local Plan

Summary

1. This purpose of the report is:
 - (i) To provide a background summary of the previous iterations of draft policies and the circumstances which led to the rationale of the Executive decision to approve the Pre-Publication Draft Local Plan for consultation;
 - (ii) To provide a summary of the present national policy and legislative context, including the “soundness” requirement and potential for Government intervention;
 - (iii) To report responses to the Autumn 2017 Pre Publication Draft Local Plan Consultation;
 - (iv) To provide Officers’ advice regarding appropriate responses to the Consultation outcomes; and
 - (v) To seek Member approval of the next steps in the York Local Plan making process.

Recommendations

2. The LPWG request Members of Executive to:
 - (i) Consider any potential changes to the pre publication draft Local Plan (Regulation 18) based on the information included within this report and associated annexes and confirm the basis on which the

Local Plan should be progressed to the Regulation 19 stage including a city wide consultation.

Reason: So that an NPPF compliant Local Plan can be progressed.

- (ii) Following decisions on the matters referred to in (i) above authority be delegated to the Assistant Director of Planning and Public Protection in consultation with the Leader and Deputy Leader to approve all policies necessary for the production of a composite Local Plan for the purposes of public consultation.

The Leader and Deputy Leader to keep Group Leaders informed through Group Leaders meetings.

Reason: So that an NPPF compliant Local Plan can be progressed

- (iii) Delegate to the Assistant Director of Planning and Public Protection in consultation with the Leader and Deputy Leader the consideration and approval of further technical reports and assessments to support the Local Plan including, but not limited to the SA/ SEA, HRA, Viability Study and Transport Assessment.

The Leader and Deputy Leader to keep Group Leaders informed through Group Leaders meetings.

Reason: So that an NPPF compliant Local Plan can be progressed.

- (iv) Delegate authority to the Assistant Director of Planning and Public Protection in consultation with the Leader and Deputy Leader to approve a consultation strategy and associated material for the purposes of a city wide consultation and to undertake consultation on a composite plan in accordance with that agreed strategy.

The Leader and Deputy Leader to keep Group Leaders informed through Group Leaders meetings.

Reason: So that an NPPF compliant Local Plan can be progressed.

Background

3. Officers produced a publication draft Local Plan in Autumn 2014. This process, however, was halted by Council resolution on the 9th October

21. Given the historical and national policy context associated with the development of the City of York Local Plan Members' attention is particularly drawn to the following key issues :

- Housing Need and Land Supply; and
- Employment Land Supply.

Housing Need and Land Supply

22. The historical approach taken to housing need and the related changing national policy context is detailed above. In addition comments received during consultation on this matter are included in Annex A and provided in summary below.

- Support was received for the principle of council meeting their entire objectively assessment housing need (OAHN).
- Some parish representations supported the 867 dwellings per annum figure particularly in comparison to the Government's proposed standardised methodology.
- In respect of housing numbers responses, particularly planning agents and developers, objected to using 867 dwellings per annum; the reasons for this included: the failure to comply with the Strategic Housing Market Assessment (2017) and the lack of conformity with both existing and emerging national policy.
- Some respondents objected to the approach taken to backlog, student housing and windfalls.
- The majority of responses from the public were in objection to proposed sites.

23. It is important to recognise that the proposed methodology included in the document produced by DCLG was for the purposes of consultation and may be subject to change (although at present it indicates the direction of travel anticipated for national policy). The methodology differs from that applied by the Council in reaching the housing need figures, and thus cannot be compared without further analysis. The reasons for this are outlined below.

24. As previously highlighted the Government's proposed methodology is forward looking and unlike the Council's methodology, does not add in any additional amounts for previously unmet demand. The City of York Local Plan has an effective start date of the 1st April 2012 in terms of population and housing. This is to fit with the position taken by Government in terms of their demographic projections. Using the Council's methodology, any under delivery against the housing target between 2012 – 2017 is accommodated over the life time of the plan.
25. In July the Executive agreed a figure of 867 dwellings per annum for the duration of the City of York Local Plan and Green Belt (until 2033 and 2038 respectively). As the Council's methodology includes provision to meet previous under supply within the 2012 to 2017 period, this means the plan as produced for the autumn 2017 consultation includes a sufficient overall supply to meet both these requirement.
26. Members must be satisfied that they consider the Submission Draft Plan meets the test of "soundness". This is a statutory duty. Officer's advice is that the direction of travel in national policy indicates that if the site proposals previously consulted on were increased this would be a more robust position. However, this is not to say that the proposals previously consulted on would be unreasonable; It is a matter for Members to determine the degree of risk they wish to take.
27. In Officer's opinion, an increase in the supply of housing would place the Council in a better position for defending the Plan proposals through the Examination process. However, Members will be aware of the counter arguments in particular the community responses to consultation. In addition in potentially increasing supply Members will also be mindful of the time required for achieving this more robust position in line with legislative requirements. An important issue to consider is whether changes can be made to the plan without undertaking additional consultation. This is a critical issue if the Council is to meet the May 2018 deadline for submission.
28. In response to developer proposals submitted during the Pre Publication Draft Local Plan Consultation (details of which are included in Annex A),

potential options for increasing the housing supply are set out in tables 1 to 4 below along with the potential risk in terms of the need for additional consultation. The table also highlights a small reduction on the Queen Elizabeth Barracks Site. This reflects outcomes from the Habitats Regulation Assessment.

Table 1: Potential changes to housing sites allocated in the Pre Publication Draft Local Plan in response to developer proposals (With minor or no boundary changes)

Allocation Reference	Site Name	No. Included in PPLP	Potential Revised Figure
ST5	York Central	1500	1700 - 2500
ST35	Queen Elizabeth Barracks, Strensall	578	500

29. Following consultation discussions have been held with representatives from the York Central Partnership. This has indicated that York Central is capable of accommodating between 1700 – 2400 residential units and that the higher figure of 2500 units could be achieved through detailed applications by developers for individual plots and / or flexibility to increase residential at the margins of the commercial core. The figure of 1700 reflects land currently under the partnerships control; the higher figure includes land in private ownership or currently used for rail operations.
30. The higher number is proposed to be part of the partnerships planning application anticipated in summer 2018.

Table 2: Potential changes to housing sites allocated in the Pre Publication Draft Local Plan in response to developer proposals (With boundary changes)

Allocation Reference	Site Name	No. Included in PPLP	Potential Revised Figure
ST 7	Land East of Metcalfe Lane	845	975
ST 14	Land West of Wiggington Road	1348	1,672
ST 15	Land West of Elvington Lane	3,339	3,901

31. Table 1 & 2 relates to increasing the capacity and extending existing site allocations. It is a matter of judgment as to whether the changes to the existing sites are “material”. However, in the context of the large strategic allocations, it is considered arguable by your officers that the additional land is not a material change. However, this is a matter of judgment, and there is a residual risk that the Examiner will take a different view and require the Council to undertake further consultation on this issue following submission.

Table 3: Potential new housing site allocations, in response to developer proposals (previously rejected housing sites)

Site Reference	Site Name	Potential Revised Figure
H28	Land North of North Lane, Wheldrake	88 dwellings / 3.15 ha
H2b (132)	Land at Cherry Lane	18 dwellings / 0.44 ha
H37 (6)	Land at Greystone Court Haxby	34 dwellings / 3.47 ha
SF10 (874)	Land North of Riverside Gardens Elvington	102 dwellings / 4.15 ha
H2a (33)	Racecourse stables off Tadcaster Road	98 dwellings / 2.44 ha (years 16-21)
964	Galtres Farm	1575 dwellings / 75 ha (years 16-21)

32. Table 3 includes sites that have in the past been assessed against the site selection criteria and rejected, but now given further work Officers feel should be considered. These could potentially be included in the Publication Draft without the need for a further additional consultation, as they have already been the subject of public scrutiny through previously published Local Plan evidence or SA/ SEA. There is however a higher risk than tables 1 & 2 that the Examiner may find further consultation is needed.

Table 4: Potential completely new housing site allocations in response to developer proposals

Site Reference	Site Name	No. Included in PPLP	Potential Revised Figure
956	Milestone Avenue, Rufforth	n/a	9 dwellings / 0.37 ha
959	Land at Kettlestring Lane, Clifton Moor	n/a	92 dwellings / 3.2 ha (years 16-21)

33. Table 4 includes new sites that have emerged during the Autumn 2017 Consultation. Although they do meet the requirements of the site selection methodology and therefore potentially represent reasonable alternative, they have not been included in any previous consultation. If any of these sites were to be included in the next stage of the Local Plan the lack of consultation creates a risk to process and the Examiner could require further consultation before the Examination could proceed. Carrying out further consultation now about proposing to include these new sites would mean that the May 2018 date for submission could not be met.

Employment Land Supply

34. The Employment Land Review (ELR) July 2016 published as part of the Preferred Sites Consultation used projections by Oxford Economics (OE) dated May 2015 as the forecast for employment land demand over the Local Plan period. These forecasts provided the starting point for determining the amount and type of employment land required to be identified in the Plan. The projections by Oxford Economics presented a baseline scenario for York forecasting a job growth of 10,500 jobs over the period 2014-2031. Two further scenarios were considered by OE; scenario 1 – higher migration and faster UK recovery, which identified an additional 4,900 jobs above the baseline over the same period and scenario 2 – re-profiled sector growth which identified 500 additional jobs above the baseline. Scenario 2 was endorsed as it reflected the economic policy priorities of the Council to drive up the skills of the workforce and encourage growth in businesses which use higher skilled staff.
35. To sensitivity test the original 2015 OE projections, the latest Experian economic forecasts within the Regional Econometric Model (REM) were used. The conclusion was that the original forecasts were still robust. At the Executive in July 2017 Members endorsed this position.
36. During the consultation a range of points were raised. These are provided in summary below:

Galtres Garden Village

Submitted for:

residential



Pre Publication Consultation Responses

PPC Response From: ID 13099 O'Neill Associates OBO Galtres Village Development Com

Summary of Response Received: Galtres Village Development Comapnay object to the rejection of thier previously submitted boudnaries and propose a revised boundary of 77.37 ha for 1753 dwellings of which 1403 would be market and affordable dwellings, 286 for retirement dwellings and a 64 bed care-home (4117 residents in total) as well as 15.6 ha new country park and 3.49 ha for community facilities, including a primary school. Indicative site density would be 32 dph. The revised boundary reflects consideration of officer's previous comments on the site; the boundary has been pushed back setting the development away from the ring-road (similarly to other allocated sites) with improved access off North Lane to be a standalone site. Site is landscape-led to and responds to location and evidence base undertaken. Able to deliver 30% affordable housing on site in an innovative way and would support self and custom house building. With financial support from HCA and Council there is also the ability to deliver affordable housing through accelerated delivery in the first 5 years. Consider that the site is suitable, deliverable and viable (using PBA Viability methodology). The site is predominantly a mixture of arable farmland, pasture and woodland. It is considered that the land does not meet green belt purposes. Evidence base underpinning the site submitted includes: Indicative masterplan, Transport Technical Note, Landscape Capacity Report, Ecology Report, Heritage Report, Flood Risk Assessment and Drainage statement, Phase 1 habitat report and Heritage Appraisal as well as a prospectus for delivery.

Officer Analysis: The revised boundary submitted for Galtres Garden village has a total site area is 92.97 hectares and the proposed development area approximately 77.37 hectares. Whilst the site passes the first 3 site selection criteria but fails the sustainable access criteria (4a and 4b) not meeting the minimum scoring threshold for residential sites. Given the size of the development and its location, it would be expected to provide commensurate facilities within walking distance of new residential development. It is noted that the revised masterplan includes the provision of a 'village hub' which it is proposed would include a primary school, playing pitches and retail/community facilities (circa 0.15ha). Provision of a village centre including an appropriate range of shops and community facilities would be

essential to make this site function as a sustainable settlement. This provision would need to be taken into account in considering the overall viability of the site.

Amber - In terms of access, the primary access points are proposed off North Lane with a new roundabout junction leading into the site. At a strategic level there is currently no evidence that transport should be considered to be a 'show stopper' for this site - provided that effective measures to both to reduce car trip generation and to mitigate against the impact of the residual car trips are put in place. However, the proximity of the development to the Strategic Road Network, in particular issues with the North Lane junction with the A64, would need to be addressed with Highways England. Furthermore, there are some concerns with the proposed width of North Lane leading up to the two roundabouts as the new local distributor road for Galtres Village as this is considered to be narrow.

Amber - In relation to ecology, the main issue to consider are potential impacts on Strensall Common SAC, which although to the north, may receive adverse effects as a result of increased recreational pressure. In their previous 2016 Habitat Regulations Screening submission this concludes Likely Significant Effects from recreation. This scheme is significantly different in scale and has also increased the amount of open space provision (including dedicated Country Park) but would still need to be considered in the Council's HRA process for recreational impacts and air quality. There is a clear intent to include significant open space but further work is necessary to understand whether likely significant effects can be excluded.

The Phase 1 Habitat Survey undertaken in September 2017 identified the need for a number of surveys and therefore there are other potential ecological issues e.g. presence of barn owls, hedgerows, breeding/wintering birds, great crested newts, water vole, bats etc. We note that bird species recorded in 2013/2014 (on the previous boundary but provided as information for the new boundary) includes lapwing, curlew and golden plover, which are birds associated with the Lower Derwent Valley SPA. Further work is necessary to understand any functional links to the LDV and requirements to avoid, mitigate or compensate for ecology.

Amber – In comparison to previous boundaries considered for this site, it is recognised that the extent of the proposed garden village has been moved away from the A64. Notwithstanding that however, it is still likely to be perceived as an urban extension rather than a separate outlying village and therefore goes against the grain of the inherited pattern of settlements around York. Whilst North Lane lends itself to the creation of a rural context for the proposed Galtres Village (although highway engineering would result in significant change to the character of this route) the distance between this site and proposed allocation ST8 is very short. Consequently, as the viewer travels along the road network in this area, the proximity of Galtres village would be so close to Monks Cross (a significant extension) that it could read as a further urban extension and encroachment into the countryside, rather than a separate village within a rural setting. This compounded especially as North Lane would be used as a direct link between the A64 and the outer ring road. For other sites considered, we have sought to retain the rural character along the lane and protect the countryside setting. North Lane continues east of the ring road and is currently still rural in character. The illustrative master plan places considerable reliance on woodland planting around the perimeter to screen and contain the development but the A1237 is on a southwest

trajectory at this point, thus rapidly pulling it away from the proposed allocation and its influence on the setting of the city as experienced from the ring road.

The scheme includes a country park and a cycle route to Earswick. This would be of great value to the development and provide green links between the settlements of Earswick and Galtres, which would also be available to the residents of Earswick. It would provide wider access to the countryside although it is relatively small, so would only provide for the most immediate population.

Potential new housing site allocation (previously rejected housing site)



Galtres Garden Village
Landscape Capacity Assessment

For

Galtres Village Development Company

Ref: D156/AG/V6/Oct2017

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Galtres Garden Village

Landscape Capacity Assessment

1.0 Introduction

1.1 This report has been prepared on behalf of Galtres Village Development Company by TGP Landscape Architects (North) Ltd and reviews the capacity of the landscape at a proposed development (Site) on land to the north of North Lane, Huntington. The proposed development is located 5.0km north of the historic city of York and lies adjacent to the A1237/North Lane cross road junction. The site occupies a gross site area of 67.4 hectares.

1.2 Earswick village is located 5.5km to the north of the centre of York. (refer to Figure 1: Location Plan). The Site is located to the south-east of Earswick village and the north-east of Huntington village, and is bounded by the A1237 (Outer) Ring Road along its western boundary, North Lane along its southern boundary and open farmland to the north and east. Rectilinear fields, isolated farms, wooded copses and mature hedgerows and hedgerow trees make up the principal landscape pattern of the site and surrounding area. The east coast main line is due west (1.5km) of the site, as is the larger settlement of Haxby. The course of the River Foss runs just beyond the western fringe of Earswick village and its surrounding settlements. A minor network of ditches and ponds also navigate through and around part of the northern and eastern boundaries of the Site, whose confluence help form Sow Dike, a minor tributary of the River Foss. The A64 is approximately 0.75km to the east of the eastern boundary of the site. Several transmission lines and pylons navigate through the west of the centre of the Site, in a north, south alignment.

1.3 The following chapters describe:

- The methodology and approach.
- Policy context.
- Summary of findings.
- Assessment of specific viewpoints.
- Landscape principles for potential housing development
- Conclusions

2.0 Methodology and Approach

Approach

- 2.1 Our approach considers the capacity of the landscape of the Site and the effects of a potential housing development on the landscape and visual amenity. Views from key strategic viewpoints within Earswick and the surrounding area have been considered based on the findings of the Zone of Theoretical Visibility (ZTV).

Guidance

- 2.2 In general the methodology follows the approach used for Landscape and Visual Impact Assessment and the guidance, Guidelines for Landscape and Visual Impact Assessment, Third Edition April 2013 (Landscape Institute and Institute of Environmental Management & Assessment).

Methodology

- 2.3 Following an initial desktop study, a review of the planning policy context and landscape character was undertaken. A ZTV and ZVI were run based on 2 storey housing at 8m high to determine the study area, key receptors to views and strategic key viewpoints.
- 2.4 Site survey and analysis was undertaken on the following dates:
- 12th July 2016
 - 26th September 2017
- 2.5 An assessment of the landscape, key views and the suitability of the Site was undertaken. This considered:
- Landscape and historic designations, including City of York: Historic Character and Setting Technical Paper Update (June 2013).
 - Policy context.
 - Natural England's National Character Assessment and the findings of the City of York Local Plan; Historic Character and Setting Update and Heritage Impact Appraisal (December 1996).

Galtres Garden Village

Landscape Capacity Assessment

2.0 Methodology and Approach

- Existing situation of Earswick and its surrounds, including land use, landscape structure, accessibility and movement.
- The existing situation of the Site in detail, including analysis of footpath networks, vegetation, relationship with the existing urban built form and boundary treatments to properties on the eastern boundary of Earswick and Huntington.
- Impacts on views from key receptors, using the ZTV as guidance.

2.6 The assessment of visual impact from key receptors compares the quality of the existing situation (i.e. without the potential development) to that which would result if the development was constructed, and the degree of change. The significance of the effect on visual amenity is determined by a correlation of the combined effects of sensitivity of the receptor and the magnitude of change. Effects may be beneficial, neutral or adverse. The combined effects that are moderate, major/moderate or major are considered to be significant effects under the EIA Regulations 2011 (see Table 2 overleaf).

Definitions

- 2.7 Sensitivity – A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change of development proposed and the value related to that receptor.
- 2.8 Magnitude – A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible, and whether it is short or long term in duration.
- 2.9 Significance – A measure of the importance or gravity of the environmental effect, defined by significance criteria specified to the environmental topic.
- 2.10 The assessment and weighting of the sensitivity of visual receptors is based on professional interpretation of a series of factors, namely location of viewpoint, context of view, type and activity of receptor and frequency and duration of the view. Visual sensitivity is defined as high, medium, low or negligible (refer to Table 1).

2.0 Methodology and Approach

Table 1 Definition of Visual Receptor Sensitivity

High	<ul style="list-style-type: none"> - Residential properties with principal views from living rooms and gardens - Important landscape features with physical, cultural or historic attributes - Beauty spots, public viewing areas and picnic areas - Users of strategic footpaths, cycle routes or rights of way, where attention is focused on the landscape
Medium	<ul style="list-style-type: none"> - Residential properties with less significant views from living rooms/gardens - Walkers using local networks of footpaths and tracks - Transport users of local roads, train lines, rivers and canals
Low	<ul style="list-style-type: none"> - Those engaged in outdoor sports or recreation, other than for viewing - Those using major roads and motorways in the region - Those engaged in commercial activity and transport or in education, whose attention is focussed on their work or activity rather than the wider landscape
Negligible	<ul style="list-style-type: none"> - Views from towns, conurbations and heavily industrialised areas

2.11 The magnitude of change arising from the proposed development from any particular location is classified as substantial, moderate, slight or negligible. This is dependent on the interpretation of a number of largely quantifiable factors:

- Distance of viewpoint from development.
- Proportion of the field of view occupied by development.
- Orientation or angle of view to the centre of development.
- Background to the development.
- Extent of other built development, especially built elements.

2.0 Methodology and Approach

Table 2 Correlation of Sensitivity & Magnitude to determine Significance of Effects

Visual Sensitivity	High	Moderate/ Minor	Moderate	Major/ Moderate	Major
	Medium	Minor	Moderate/ Minor	Moderate	Major/ Moderate
	Low	Minor/ None	Minor	Moderate/ Minor	Moderate
	Negligible	None	Minor/ None	Minor	Moderate/ Minor
		Negligible	Slight	Moderate	Substantial
	Magnitude of Change				

2.12 Finally, landscape principles have been suggested to mitigate any potential impact from housing development on this site.

3.0 Policy Context

Landscape and Historic Designations

References: City of York Local Plan; Historic Character and Setting Update and Heritage Impact Appraisal. Refer also to Figure 2 Landscape and Historic Designations.

- 3.1 The nearest landscape and historic designations to the Site are as follows; Strensall Common, a lowland heath, which lies about 2km from the northern boundary. This area is designated a Special Area of Conservation (SAC) and also includes a Site of Special Scientific Interest (SSSI) and a Ramsar Site. An area of Deciduous Woodland BAP Priority Habitat (England) runs adjacent to the Strensall Road for 300m, approximately 0.5km north-west of the site. There is a small area of Woodland towards the centre of the site, the field to the south of this is designated a Site of Local Interest to Nature Conservation (SLINC) and Huntington Wood to the east of the site is also designated a SLINC. To the north-west corner of the site, running along the north of the Fire Station boundary, is an area designated a Site of Importance to Nature Conservation (SINC). This runs along the northern boundary of the site for approximately 75m. There is a further SINC adjacent to the A1237 (Outer) Ring Road, to the south-west of the site. An area of land to the east of the village of Huntington designated as Strategic Housing, has areas defined as Proposed New Openspace along its eastern boundary, providing a buffer of green space around the housing. There are a number of informal village green and recreational green open spaces near the Site area, to the north and west of Earswick, at Towthorpe (Strensall Park), Haxby (Ethel Ward and Churchfield), Huntington (Huntington Sports and Social Club and Huntington (Huntington Road Sports Field). There are also informal recreation areas and walks along the banks of the nearby River Foss to the west of Earswick and Huntington and east of Haxby.
- 3.2 The closest Conservation Area to the Site is in Haxby (22), with others further afield in New Earswick (20), Strensall (23 & 31) and Towthorpe (32). The Site is located approximately 4.75km away from York Minster and 5.5km to Clifford's Tower, a 13th Century remnant of York Castle. The nearest listed building is in Earswick village with a further 8 no. in the settlement of Huntington to the south and 3 no. in Haxby to the

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3.0 Policy Context

northwest. There are a large number of listed buildings in New Earswick inhabiting The Joseph Rowntree Village Trust area and the City of York itself.

Planning Context

Refer to Figure 3 Planning Context: City of York Local Plan Designations.

3.3 The development proposals for the Site have been considered in light of the guidance within the following core documents:

National Planning Policy Framework (NPPF- March 2012);

City of York Local Plan (Pre-Publication Draft, Regulation 18 Consultation Sept 2017)

City of York Historic Character and Setting - Technical Paper Update (June 2013)

The Local Heritage List for York Supplementary Planning Document (Draft Jan 2013), states that the 'Local Heritage' assets contribute to York's special character, significance and sense of place as defined in the Heritage Topic Paper and Heritage Impact Appraisal, City of York Council, 2011.

The aims and objectives of the Local Heritage List for York are to:

- recognise the contribution of locally important buildings, monuments, sites, places, areas and landscapes to York's special character and significance.
- add to the local community's knowledge and enjoyment of their historic environment.
- promote the conservation, repair and enhancement of local heritage assets.
- encourage owners and the wider community to take pride in the care and conservation of local heritage assets for the benefit of present and future generations.
- promote good design for development affecting local heritage assets that is appropriate to their special character and local significance.

3.4 The Council undertook a 'Call For Sites' exercise in Autumn 2012, which asked developers, landowners, agents and the public to submit land which they thought had potential for development over the next 15-20 years. It aimed to ensure that through the site selection process the following was achieved by the Local Plan for York:

- The City's unique heritage is protected

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Landscape Capacity Assessment

3.0 Policy Context

- The protection of environmental assets.
- Flood risk is appropriately managed.
- Achieving accessibility to sustainable modes of transport and a range of services.

The landscape and historic flavour of the Site area at Huntington was considered within the context of the City of York Local Plan with reference to the *Heritage Impact Appraisal* documents to develop a sound basis for informed decision making and to assess whether the strategic sites and policies of the City of York Local Plan (Pre-Publication Draft, Regulation 18 Consultation Sept 2017) will conserve or enhance the special characteristics of the city. The *Heritage Topic Paper (April 2013)* also considers existing evidence relating to the City of York's historic environment and how the evidence is translated into the Council's understanding of the city's special qualities and its complex 2000 year history, comprising Strategic Framework, Spatial Portrait and Spatial Visions and Outcomes.

- 3.6 The area of the Site is identified as *Green Belt* and is currently under review as part of the City of York Council's Local Plan and also Local Plan *Pre-Publication Draft, Regulation 18 Consultation Sept 2017*. Notice is also taken of ST8 - Land North of Monks Cross just south of the proposed development. An area of Deciduous Woodland BAP Priority Habitat (England) runs adjacent to the Strensall Road for 300m, approximately 0.5km north-west of the site. The nearest Public Rights of Way (Footpaths) are directly to the south of the site running from North Lane (at Galtres Farm) south towards the A1237 and to the eastern boundary of the Site on Turbary Lane. An existing cycle route, part of the York City Link Cycleway, runs in an east to west alignment, following the course of Towthorpe Moor Lane about 1km to the north of the proposed site boundary. A Local Green Corridor, as identified in the Green Corridors, City of York Council (Jan 2011) study follows the course of the A1237 Ring Road, which runs adjacent to the (SW) Site boundary, and there is also a District Green Corridor, which is around 0.5km to the west of the site. These local corridors link with the larger strategic Green Corridor infrastructure network of the local York area. A small compartment of land falling under the Woodland Grant Scheme sits to the south of the proposed Country Park area of the site. There is also ridge and furrow within its boundary. A Site of Local Interest to Nature Conservation is designated across the fields to the south of the Woodland Grant Scheme area.

3.0 Policy Context

Landscape Character Assessment

Refer to Figure 4 Landscape Character Areas.

3.7 Natural England's National Character Assessment 28: Vale of York (NCA), North Yorkshire and York Landscape Characterisation Project Area 28 and the York Landscape Appraisal: Summary Document – Type(s) 8, 10 & 12 (ECUS Jan 1997) classify the area of the Site as:

- National Character Area – Vale of York
- County Character Area – Vale Farmland with Plantation Woodland and Heathland.
- Broad Landscape Type – Lowland Vale Landscape.
- Broad Landscape Area – Valley Plain.
- Local Landscape Type – Flat/Open Diverse Arable Farmland (Type 8), Mixed Fringe Farmland (Type 10) and River Foss Corridor (Type 12).
- Sub type – Old enclosure.

3.8 The Vale of York is a transitional landscape marking the change from the more varied topography and mixed farming of the Vale of Mowbray to the north to the flat, open land of the Humberhead Levels to the south. It is generally low lying and flat in character with any small variation in height provided by areas of lowland heath, the river plain areas and small ponds and ditches. The sense of place is dominated by the arable landscape and the major rivers that dissect the flat, open landscape. Semi-natural features such as remnant heathlands, ponds, wetlands, grasslands, hedges, hedgerow trees, copses, shelterbelts, remnants of ancient semi-natural woodlands and commons are scattered through the area. Field sizes and shapes vary, creating a mix of irregular and geometric patterns; with the latter being the most likely effect of old enclosure farming and agricultural methods. The local hedgerows make a strong presence throughout the landscape, principally because of their alignment following many historical lanes and field patterns. They are predominantly made up of Hawthorn but can be very species diverse, with some of the oldest hedgerows containing Field Maple, Hazel, Holly and Guelder Rose. A lack of upkeep of these traditional boundaries means that today the hedgerows are developing gaps and outgrowing in terms of scale and management issues, requiring replanting sections and protection measures to preserve their integrity. There are moderate but

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3.0 Policy Context

scattered clusters of woodland cover mainly restricted to small copses and mature individual trees, which occasionally occupy predominant locations in the central and peripheral areas of fields.

- 3.9 The rural scene and sense of place is added to by small streams and more recently planted avenues of Lombardy Poplars which together with overhead transmission lines and pylons, provide the main vertical elements in the local landscape. Main roads have been restricted to field boundaries in the main and in terms of noise and presence, remain an intrusive element of habitation throughout the local area. Many of the villages and larger settlement patterns in the Vale of York are generally linear in nature and run the length of the local main roads emanating from the historic city centre of York. These settlements are linked to large tracts of agricultural land, with limited access opportunities for recreational purposes. The study area includes a number of isolated farmsteads and former medieval grange farms, which help break up the local rigid landscape pattern. This pattern and complexity is also added to by plantations, woodlands and heaths, which give a different occasional localised character to these parts of the Vale, with the woodland edges creating a greater feeling of enclosure and forming wooded horizons.

4.0 Summary of Findings

Earswick and Huntington: Local Context

Refer to Figure 1: Location Plan and Figure 5: Existing Situation – Earswick and Huntington.

- 4.1 The residential developments of Earswick and Huntington are accessible via the A1237 and Strensall Road, linking to York to the south and Strensall village and other outlying settlements to the north. Earswick and Huntington are well serviced by the local bus network, although buses do not fully enter Earswick village. It is also linked by local informal paths to several Public Rights of Way (including both footpaths and bridleways) to the east and west at Haxby. There is also Foss Walk to the west, following the course of the River Foss, along with Centenary Way and Ebor Way which form part of a National Trail.
- 4.2 There is an area of open green space to the western margin of the village adjacent to the River Foss with a newer housing development adjoining Earswick Village to the north. The settlement of Huntington, separated by the A1237 Ring Road, lies close by to the south. The nearest school (1.4km) is Joseph Rowntree School in New Earswick, to the south-west. There is a good mix of large garden areas with small green spaces and mature trees interspersed throughout Earswick and Huntington, with connecting footpaths linking the different streets. The housing stock of the villages consists predominantly of detached and semi-detached properties of varying architectural styles and ages, all of which are a maximum of 2 storeys high, with some bungalows in places. The village layout links easily to the surrounding countryside although access to the public to surrounding farmland is limited. There is a cluster of more recently built properties to the north of Earswick, which includes an open village green style recreational area at its centre.
- 4.3 There is a Fire Station complex, to the west of the site, close to the roundabout linking Strensall Road to the A1237 and the nearest business is a Veterinary Surgery sitting on the corner of the junction of Strensall Road and Willow Grove. The nearest shopping areas and Petrol Station are 3km distant and accessible via the A1237 Ring Road.

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4.0 Summary of Findings

- 4.4 Earswick and Huntington Villages are surrounded by flat open farmland (a mixture of arable and pasture) with rectilinear fields, hedgerows and woodland shelter belts forming the landscape pattern of the area.

The Site

Refer to Figure 6: Landscape Constraints.

- 4.5 The Site is located immediately adjacent to the A1237 (Outer) Ring Road and north of North Lane halfway between the eastern edges of Earswick and Huntington Villages and is approximately 67.4ha in size. It is roughly rectilinear in shape with a linear section running eastwards from the Fire Station, and is broken up within the Site boundary by a number of hedged field boundaries. It is bounded to the north, east and south, beyond the A1237 (Outer) Ring Road by open countryside, with Strensall Road and Earswick and Huntington Villages to the west and the A64 0.75km to the east. The Fire Station and adjacent A1237 Ring Road form the western and north western boundary of the Site, North Lane forms the southern boundary of the Site, while Turbary Lane forms the eastern boundary. The hedgerows that demark and enclose the site boundary and surrounding field pattern are populated mainly with Ash, Acer, Oak, Elder, Hawthorn and Guelder Rose species. Minor watercourses (ditches and streams) thread through the Site and the open countryside beyond.
- 4.6 The Site and surrounding countryside between the local settlements has an open and flat character, an essential characteristic of the local landscape type. The River Foss and layout of Earswick Village and the surrounding linear settlement patterns which follow the local road patterns also prevent any unrestricted lateral sprawl of the Site and the village of Earswick.
- 4.7 The Site is generally at 15m AOD, towards the eastern boundary rising to 17m AOD towards the western boundary, which is fairly consistent with the village of Earswick and its adjoining settlements and the River Foss beyond. The land rises very gently to the north and east of the Site into the distance.
- 4.8 The Site is arable farmland, to its northern and southern thirds, with a central third of pasture and emerging woodland to the west of Whisker Lane. To the east of Whisker Lane, the land is predominantly pasture land. The field boundaries within the site are defined by mature native hedgerows and trees with occasional sections of timber

Galtres Garden Village

Landscape Capacity Assessment

4.0 Summary of Findings

post and wire fence. The Site contains an historic hedgerow which is adjacent to an area of ridge and furrow in the field directly to the south of the area of new plantation woodland. This area is designated as a Site of Local Interest to Nature Conservation.

4.9 No residential properties back onto the boundaries of the site although the local Fire Station and A1237 Ring Road do directly abut the site. North Lane runs along the southern boundary of the site and Turbary Lane along the east.

4.10 The nearest properties are some 150m to the north west (Earswick) and south west (Huntington) of the proposed development. The majority of boundary treatments to the rear gardens of properties on Strensall Road, Willow Grove and Laurel Grove and along the eastern boundary of Huntington are timber close board fencing, hedging and informal and ornamental shrub and tree plantings within garden areas. In places this screening is further strengthened by the vegetation and mature trees occupying the adjacent farmland and linear field boundary patterns, helping obscure from view parts of the site area. The buffer vegetation and mature trees associated with, and adjacent to, the southern boundary of the Site and the Fire Station provide additional substantial screening at this point. This vegetation reduces views from ground floor windows of properties on Strensall Road and allows glimpse views of the Site, in places, from those windows on the first floor.

5.0 Assessment of Key Viewpoints

Refer to Figure 7: Zone of Theoretical Visibility, Figure 8: Zone of Visual Influence, Figure 9: Viewpoint Location Plan, Figure 10: Key Viewpoints Sheet 1 of 3, Figure 11: Key Viewpoints Sheet 2 of 3 and Figure 12: Key Viewpoints Sheet 3 of 3.

- 5.1 A Zone of Theoretical Visibility (ZTV) was run based on 2 storey housing at 8m high to determine the study area, key receptors to views and strategic key viewpoints. This revealed potential views from the north, east, west and south of the site, with a fairly even blanket of visibility. The ZTV is based entirely on topography and does not take into account the screening effects of vegetation. It is apparent from the site evaluation and subsequent Zone of Visual Influence (ZVI), that strong hedgerows and hedgerow trees together with local features such as Lombardy Poplars generally prevent views to and from the site, particularly in summer conditions.
- 5.2 8 no. key viewpoints (refer to Figure 9: Viewpoint Location Plan) were surveyed and assessed in relation to the boundary and potential development on the Site. These were views from:
- Towthorpe Moor Lane.
 - Footpath between Towthorpe Moor Lane and North Lane.
 - White House Farm, Huntington.
 - The Foss Walk at Towthorpe Bridge.
 - Footpath between North Lane and A1237.
 - Footpath on Turbary Lane to east of site.
 - North western boundary of site, looking south east towards Galtres Farm.
 - Western boundary of site looking to north east.

Viewpoint 1: Towthorpe Moor Lane

- 5.3 This location represents views from the road corridor of Towthorpe Moor Lane and environs of the SSSI at Towthorpe Common and Strensall Common looking south west. Mature trees and hedgerows sit on the horizon and in the middle distance and help break up the views. The flat nature of the landscape and intervening vegetation means there are no distant views and no views of the Site. The viewpoint is from 1.7km north of the boundary of the site.

Sensitivity - High

5.0 Assessment of Key Viewpoints

Magnitude – Negligible

Rating – **No change**

This is not considered to be a significant effect under the EIA Regulations.

Viewpoint 2: Footpath linking Towthorpe Moor Lane and North Lane.

- 5.4 Views from footpath over flat, pasture broken by mature hedgerows and trees. Views of the west of the site are screened by woodland in the middle distance but there would be glimpse views of the eastern part. There are transmission lines/pylons which run through the site visible on the horizon in this viewpoint. The Site boundary is approximately 1.4km from this viewpoint.

Sensitivity – Medium

Magnitude – Slight

Rating – **Moderate / Minor adverse**

This is not considered to be a significant effect under the EIA Regulations.

Viewpoint 3: White House Farm, Huntington.

- 5.5 Slightly enclosed close views towards the Site over arable farmland and the A1237. The mature trees within the site boundary are visible behind the 3m high hedgerow to the western boundary of the site along with the pylon line which runs north to south through the site. The hedgerow screens direct views into the site but there would be views of upper floors of any housing near to the western boundary of the site. The Site is approximately 400m from this viewpoint. The proposed Country Park would help to reduce the impact over the following ten years as the planting matured.

Sensitivity – Medium

Magnitude – Slight

Rating – **Moderate / Minor adverse**

This is not considered to be a significant effect under the EIA Regulations.

5.0 Assessment of Key Viewpoints

Viewpoint 4: Foss Walk at Towthorpe Bridge.

- 5.6 This viewpoint is located on the Foss Walk national trail, at Towthorpe Bridge to the north west of the site. Local landform helps to screen views of the site along with intervening mature hedgerows and trees which break up the horizon. The Viewpoint location is 2.3km from to northern boundary of the site.

Sensitivity – High

Magnitude – Negligible

Rating- **No change**

This is not considered to be a significant effect under the EIA Regulations.

Viewpoint 5: View looking north towards the site from footpath between North Lane and A1237.

- 5.7 Views across pasture farmland, 0.4km to the south of the proposed development site, from the footpath that runs from North Lane, along the A1237 to the A1036. The mature trees and hedgerows along North Lane help to screen views into the site although there are some gaps which would allow glimpse views into the proposed development. The proposed buffer planting along the southern boundary of the site would reduce these glimpse views over time as it matured over the following ten years.

Sensitivity – Medium

Magnitude – Negligible

Rating – **Minor adverse**

This is not considered to be a significant effect under the EIA Regulations.

Viewpoint 6: View looking west towards the site from Turbary Lane.

- 5.8 Views across pasture farmland, from the eastern boundary of the site, on the public footpath on Turbary Lane. Beyond a small buffer zone there will be views through the existing and proposed vegetation of the housing to the eastern boundary of the development along the whole length of Turbary Lane where it is adjacent to the proposed development. The proposed wooded boundary east of the housing would

Galtres Garden Village

Landscape Capacity Assessment

5.0 Assessment of Key Viewpoints

reduce these views as it matured over the following ten years. Distant views are contained by boundary hedgerows and hedgerow trees.

Sensitivity – Medium

Magnitude – Substantial

Rating – **Major / Moderate adverse**

This is considered a significant effect under the EIA Regulations. Once the boundary planting reaches maturity the magnitude of change would reduce to **Moderate**, giving a **Moderate** effect.

Viewpoint 7: View looking south east across the site towards Galtres Farm from the Fire Station.

5.9 The views across the site from the north western boundary are largely contained by the mature hedgerows and hedgerow trees to the northern boundary of the site and the southern boundary with the A1237. There are some glimpsed distant views towards the higher ground of Sand Hutton and of mature hedgerows and hedgerow trees along the horizon to the eastern boundary of the site. The A1237 is largely screened by the mature hedgerow boundary planting although there is a glimpse view through a field access adjacent to the viewpoint. The pylon lines that run through the site from north to south are visible in the middle distance. There would be glimpse views of the roof lines of the proposed housing in the middle distance beyond the proposed Country Park and associated planting. Over the following ten years this planting would mature and reduce the impact of the housing.

Sensitivity – Low

Magnitude – Slight

Rating – **Minor adverse**

This is not considered to be a significant effect under the EIA Regulations.

Viewpoint 8: View looking north east across the site from the boundary with the A1237.

5.10 Views across arable farmland, within the site boundary, from the southern boundary of the site, adjacent to the A1237. Views are well contained by the boundary and

Galtres Garden Village

Landscape Capacity Assessment

5.0 Assessment of Key Viewpoints

internal hedgerows and hedgerow trees. A copse of trees surrounding a pond is visible in the foreground and the pylon lines that run through the site from north to south are visible in the middle distance. The A1237 is screened by the 3m high mature boundary hedgerow. There would be views of the proposed housing in the middle ground. Over the following ten years the new boundary planting would reduce the visibility of the housing from this viewpoint.

Sensitivity – Low

Magnitude – Moderate

Rating – **Moderate / Minor adverse**

This is not considered to be a significant effect under the EIA Regulations. Once the new boundary planting matures the magnitude of change would reduce to **Slight**, which would result in a **Minor** effect.

- 5.11 Site survey work and analysis from the 8 no. viewpoints confirmed that the majority of the Site is well contained and views of the potential housing development on the proposed Site will be limited to nearby properties on the eastern boundaries of Huntington and Earswick, those using the A1237 road corridor directly to the south of the site and users of the footpath along Turbary Lane. The mix of mature hedgerows, solitary trees and tree groupings within and around the site help to break up many views of the site, reducing them to glimpses of the upper storeys of the buildings. In particular, there will be no significant effects on views of the York Minster tower and its historical context, with the proposed development falling within the existing pattern and texture of existing settlements and landscape structure. The proposed Country Park to the west of the site, recreation area to the north east and landscape buffers to the northern, eastern and southern boundaries will further reduce any visual impacts over time and help to provide a buffer for the development as well as valuable recreation space for the residents.
- 5.12 Therefore the findings of this study indicate that any potential development for housing will not have any significant adverse effects on the views and landscape character in the wider context of the study area, although there will be a significant effect on the landscape character and views in the close proximity of the site. As well as the existing landscape features, predominantly hedgerows and hedgerow trees, future mitigation measures associated with the proposed development will help to reduce views from Earswick and Huntington.

Galtres Garden Village

Landscape Capacity Assessment

6.0 Landscape Principles for Potential Housing Development

Refer to Figure 13: Masterplan.

6.1 The design principles for the site should acknowledge all significant and realistic issues and appropriate options in relation to mitigating the effects of the development and we refer to recent guidance by the Landscape Institute and the document: Green Infrastructure - An integrated approach to land use (March 2013).

- That the development embraces an integrated approach to land use following the design principles in recent guidance issued by the Landscape Institute and the document: Green Infrastructure - An integrated approach to land use (March 2013).
- Creation of a landscape led masterplan, embracing and enhancing the existing features of the site. Potential for over 40ha of open space provision.
- Retention, restoration and widening of site boundaries with structure planting consisting of native hedgerow and tree species consistent with the species mix of the area (note – this includes Ash within its species mix and therefore may need replacing).
- Creation of an area of open space running east to west as a central spine to the site, for informal recreation, habitat creation and sustainable drainage systems, as well as a Country Park to the west of the development areas and further recreation space to the north and east.
- Replacement policy for Ash that may be affected by Chalara (Ash Dieback Disease).
- Retain ditches and restore and/or enlarge as appropriate, linking to a potential Sustainable Drainage System (SUDs) for the development.
- Link with existing green spaces and Footpaths, Cycleways and Bridlepaths connecting the proposed site to Huntington and surrounding settlements.
- Creation of a 'Village Heart' to the development, utilising open green space consistent with surrounding villages in area and existing hedgerow pattern.
- Provide informal pedestrian connections for local residents across the Site including access to potential structure woodland and water feature areas incorporating wetland habitats for wildlife / SUDs.
- Enhance roadside planting to north side of A1237 and north of North Lane.

Galtres Garden Village Landscape Capacity Assessment

6.0 Landscape Principles for Potential Housing Development

- Utilise native tree, hedgerow and groundcover species where possible, reflecting local species mix.
- Maximise solar gain with south-facing properties.
- Generally protect, restore and enhance habitats and landscape features and individual mature trees.
- Creation of east / west Green Corridors linking with existing historic hedgerows within the site.
- Use of characteristic tree species (Lombardy Poplar) individually grouped and in/or avenue form.

Galtres Garden Village

Landscape Capacity Assessment

7.0 Conclusions

7.1 The findings of this study indicate that the Site and its landscape has the capacity to be integrated with the existing mosaic of settlements and intervening landscape structure locally for a potential housing development. This is because:

- The Site is well contained by mature hedgerows and has limited openness, one of the essential characteristics determined by the NPPF for Green Belts. This is due to the existing boundaries enclosing the site and internal field patterns surrounding and compartmentally breaking the external and internal views of the site. These landscape elements consist of mature (high) outgrown hedgerows and hedgerow trees and mature solitary trees spread in an east to west alignment.
- Due to the enclosed nature of the site and existing permanent roadside boundaries and linear, existing open landscape corridors free of development and settlement coalescence, there is little current risk of unrestricted sprawl of existing adjacent settlements or expansion of the proposed development in the future.
- Proposed boundary treatments around the site and Country Park and recreation area will assist in safeguarding the countryside from further encroachment.
- The findings of the ZVI, and subsequent survey and analysis of selected viewpoints surrounding the site, indicate that the Site is very well contained and any potential housing development here will only be seen when in close proximity to the eastern and southern boundaries of the site and from along the A1237 road corridor.
- In particular, there will be no significant effects on views of the York Historic Core and its context, nor significant effects on views from the Historic Core. Therefore there is no risk to the setting and special character of York as a historic city, and its Castle Tower.
- The ZVI also indicates there will be views of the Site from the eastern fringe of Earswick and Huntington villages and Willow Grove to the north, although this would be from the rear of properties that are located on the eastern side of Strensall Road and also the southern side of Willow Road. This is due to the flat nature of the landform so views are reliant on the form and structure of the local

Galtres Garden Village

Landscape Capacity Assessment

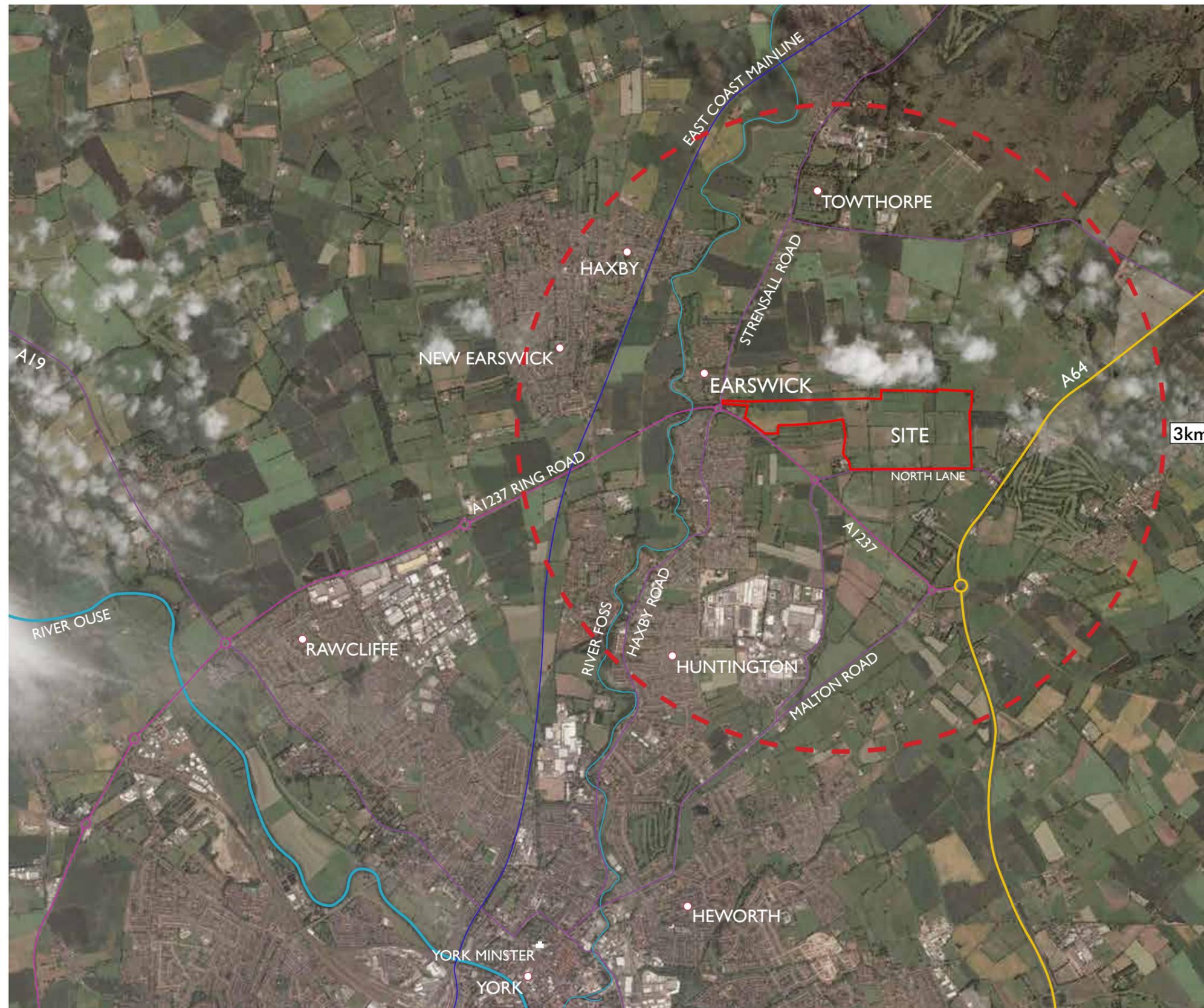
7.0 Conclusions

landscape features. Consequently there will be limited impacts on the setting of Earswick and Huntington villages as a whole, or their setting and local character.

- The new development will embrace the principal of Green Infrastructure with the creation of a Village Heart, linking to existing retained hedgerows, green corridors, water features/habitats and proposed Country Park, open space and garden areas.

FIGURES

Figure 1 Location Plan



KEY

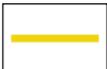
-  Study Area Boundary
-  Site Boundary
-  A1237 Ring Road
-  A64
-  Minor Roads/ Lanes
-  River Foss
-  River Ouse



Figure 2 Landscape and Historic Designations

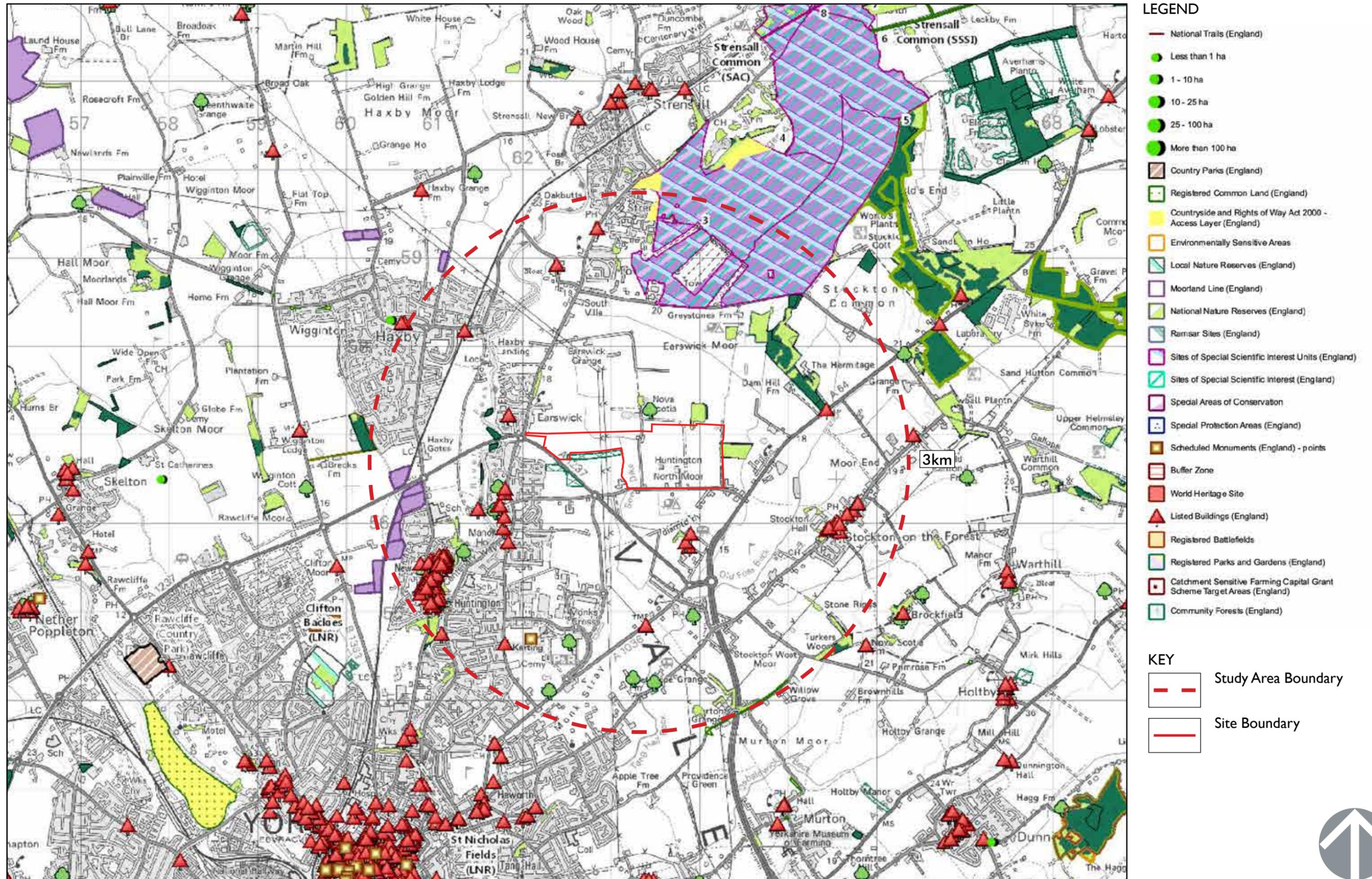
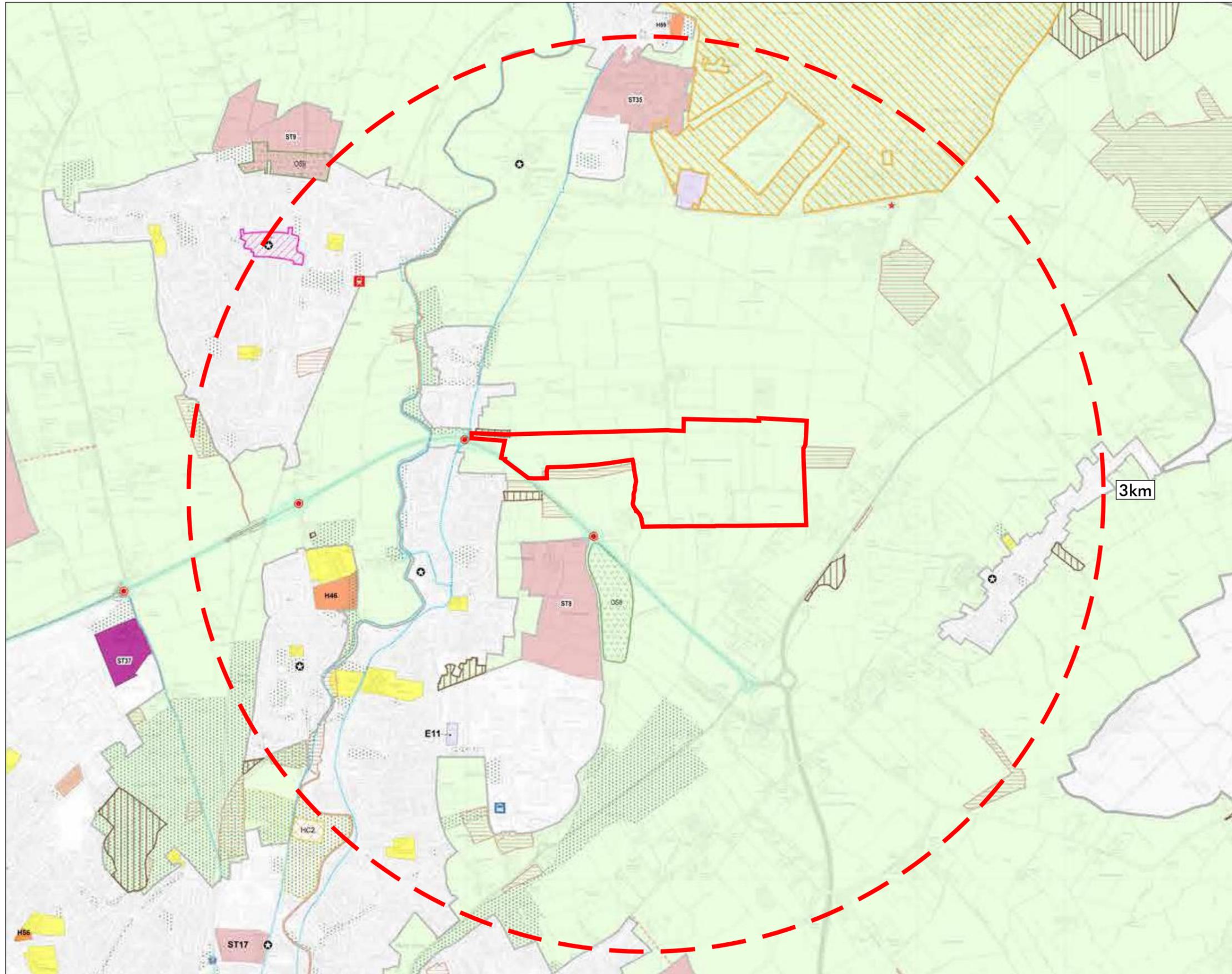


Figure 3 Planning Context - City of York Council Local Plan Designations



KEY

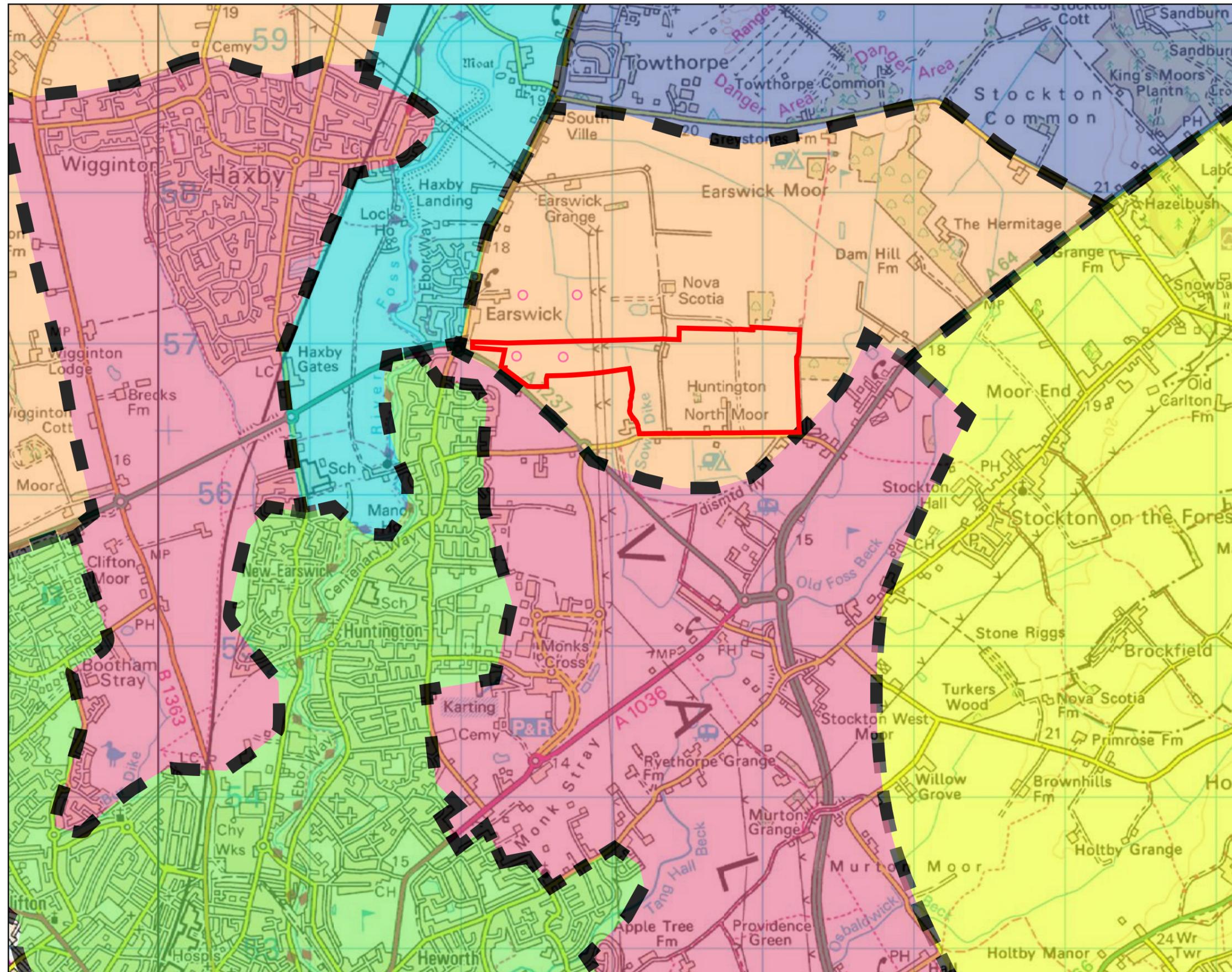
- Study Area Boundary
- Site Boundary

Key to Proposals Map

- City of York Boundary
- City Centre Boundary
- Site Separates Inset Map
- Spatial Strategy**
 - Indicative Strategic Site Access
- Economy and Retail (Section 4)**
 - District Retail Centre
 - Strategic Employment
 - General Employment
 - Mixed Use
- Housing (Section 5)**
 - Strategic Housing
 - General Housing
 - Student Housing
 - Residential Extra Care (RCs)
 - Existing Gypsy and Traveller Site
 - Proposed Travelling Showpeople Site
- Health and Wellbeing (Section 6)**
 - Existing Health Care Facilities
 - Proposed Health Care Facilities
- Education (Section 7)**
 - Educational Establishment (including Playing Fields)
 - Ashham Bryan and York Colleges
 - Existing University Campuses
- Placemaking, Heritage, Design and Culture (Section 8)**
 - Conservation Areas
 - Area of Archaeological Importance
 - Historic Parks and Gardens
- Green Infrastructure (Section 9)**
 - Existing Open Space
 - Proposed New Open Space
 - Sites of Importance to Nature Conservation
 - Sites of Local Interest to Nature Conservation
 - Nationally Significant Nature Conservation Sites
- Managing Appropriate Development in the Green Belt (Section 11)**
 - Greenbelt
- Waste and Minerals (Section 12)**
 - Household Waste and Recycling Sites
- Transport and Communication (Section 14)**
 - Proposed New Railway Stations
 - Existing Park and Ride
 - Existing Park and Ride with Potential for Relocation
 - Existing Park and Ride with Potential for Expansion
 - Potential New Bridge/Enhancement
 - Proposed Roundabout/Junction Improvements
 - Proposed Strategic Junction Improvements
 - Land Safeguarded for Potential Future Transport Schemes
 - Strategic Pedestrian/Cycle Corridor Improvements



Figure 4 Landscape Character Areas



NATIONAL CHARACTER AREA
Site sites within NCA 28 - Vale of York

KEY

 Site Boundary

LOCAL CHARACTER AREAS

-  Undulating Arable Farmland
-  Semi Enclosed Heathland
-  Flat Diverse Arable Farmland
-  Mixed Fringe Farmland
-  River Foss Corridor
-  York



Figure 5 Existing Situation - Earswick

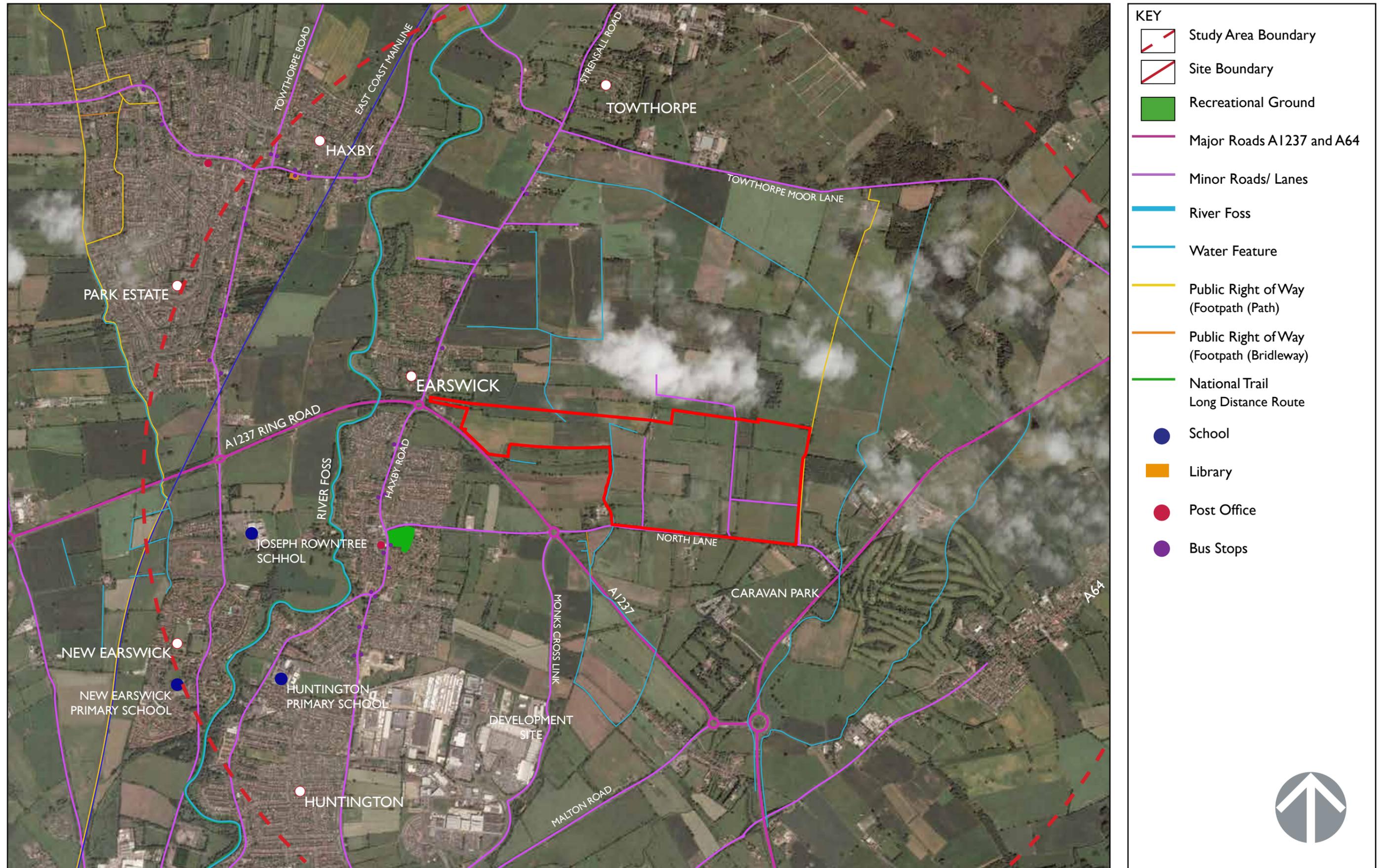


Figure 6 Landscape Constraints

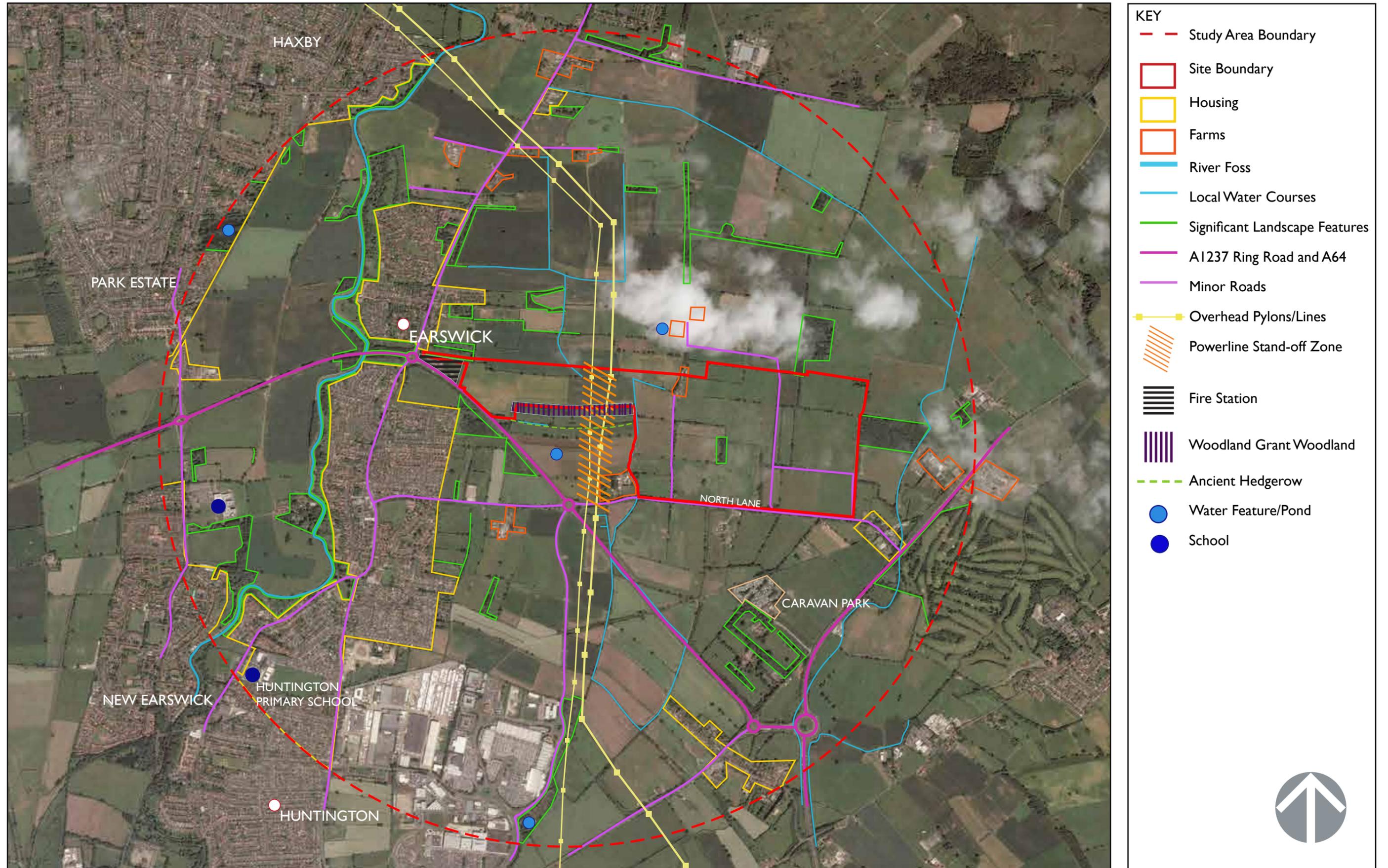


Figure 7 Zone of Theoretical Visibility

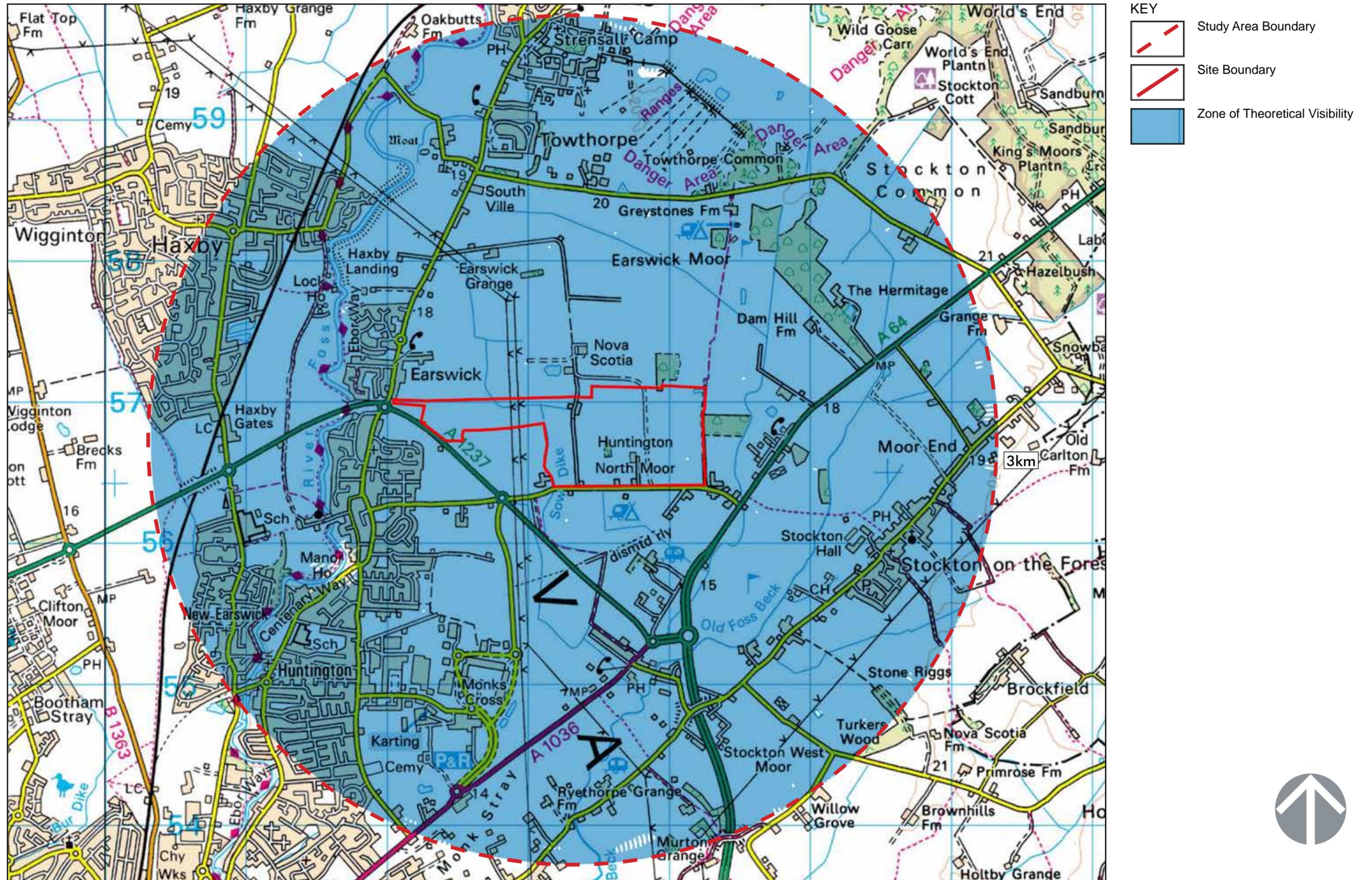


Figure 9 Viewpoint Location Plan

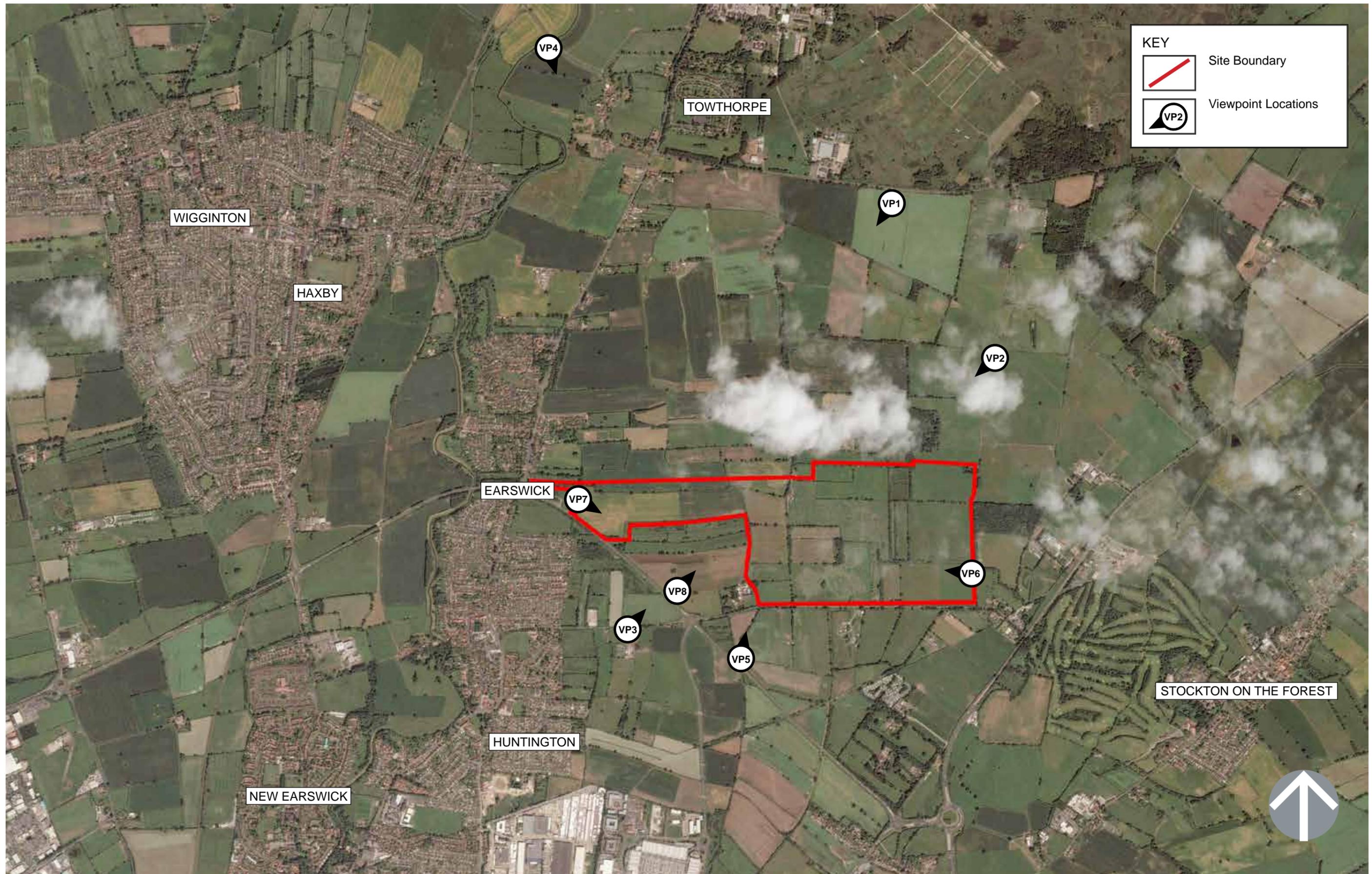


Figure 10 Key Viewpoint Sheet 1 of 3



Viewpoint 1- View looking South West towards site from Towthorpe Moor Lane.



Viewpoint 2- View looking South West towards site from footpath linking Towthorpe Moor Lane and North Lane.



Viewpoint 3- View looking North towards site from White House Farm, Huntingdon.

Figure 11 Key Viewpoint Sheet 2 of 3



Viewpoint 4- View looking South towards site from the Foss Walk at Towthorpe Bridge.



Viewpoint 5- View looking North towards site from footpath between North Lane and A1237 towards site.



Viewpoint 6- View looking West from Turbary Lane.

Figure 12 Key Viewpoint Sheet 3 of 3



Viewpoint 7- View looking South East across the site towards Galtres Farm, from the Fire Station.



Viewpoint 8- View looking North East across the site from the boundary with the A1237.

Figure 13: Masterplan



Galtres Garden Village

Landscape Capacity Assessment

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Document Status and Approval Schedule

Issue	Status	Description	Prepared by Signed/Dated	Reviewed by Signed/Dated
D156/AG/V1/Aug2016	Draft	Landscape Capacity Assessment	A. Gardner 01.08.16	C. Davis 02.08.16
D156/AG/V2/Aug2016	Draft	Landscape Capacity Assessment	A. Gardner 12.08.16	C. Davis 12.08.16
D156/AG/V3/Sept2016	Final	Landscape Capacity Assessment	A. Gardner 07.09.16	C. Davis 07.09.16
D156/AG/V4/Oct 2017	Final	Landscape Capacity Assessment	A.Gardner 02.10.17	A.Gardner 02.10.17
D156/AG/V5/Oct 2017	Final	Landscape Capacity Assessment	A.Gardner 28.10.17	A.Gardner 28.10.17
D156/AG/V6/Oct 2017	Final	Landscape Capacity Assessment	A.Gardner 31.10.17	A.Gardner 31.10.17

Disclaimer

This Report was completed by TGP Landscape Architects (North) Ltd on the basis of a defined programme of work and terms and conditions agreed with the Client. We confirm that in preparing this Report we have exercised all reasonable skill and care, taking into account the project objectives, the agreed scope of works, prevailing site conditions and the degree of manpower and resources allocated to the project.

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A Masterplan for All Ages

idp PARTNERSHIP

Galtres Garden Village

October 2017

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Concept Masterplan Development

Masterplanning Development

Galtres Grange Garden Village

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Galtres Garden Village

IDPartnership have been appointed by Galtres Village Development Company to prepare a concept masterplan to illustrate how land to the North of North Lane, (East of Galtres Farm) Huntington can be successfully designed to deliver new housing as a garden village to make a significant response to the shortfall in the provision of housing in York.

This work reviews the site, it's constraints and refers to best practice local precedents in forming a response that is appropriate and specific to this site. A 'Garden Village' is proposed which reflects and draws upon current best practice guidance in relation to Garden Villages.

The masterplanning design team are working with an experienced team of consultants, who have prepared specific study work in terms of Planning Policy and Highways, which have informed the concept masterplanning process.

The Garden Village

The design principles illustrated here are intended to communicate the ethos of a Landscape-Led design process. Step 1 of the process has been to engage with land owners and stakeholders from the outset to discuss, at first hand with them, the opportunities and challenges of creating a Garden Village.

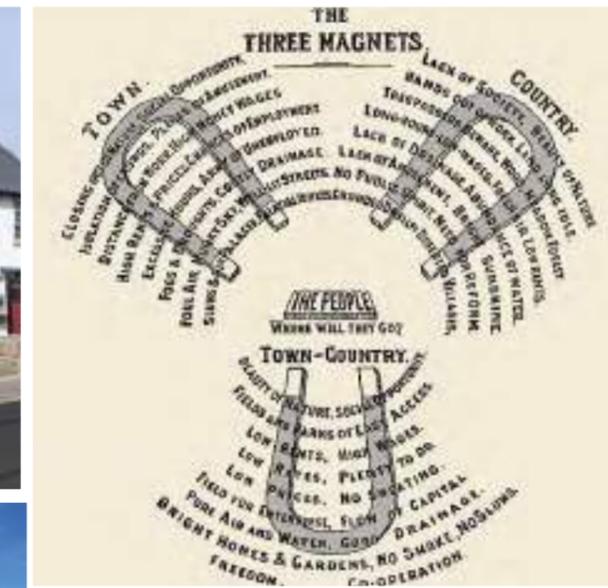
The green masterplan approach seeks answers by drawing from the Arts and Crafts movement to find again a model of harmonious living, it aims to achieve reconciliation of the classic pulls of Ebenezer Howard's twin magnets of 'Town' and 'Country'. People seek the

amenity and interactions of the town but also crave the embrace of the sylvan, rural existence. Galtres garden village offers this opportunity in terms of it's location to the north east of York between Earswick and Stockton on the Forest.

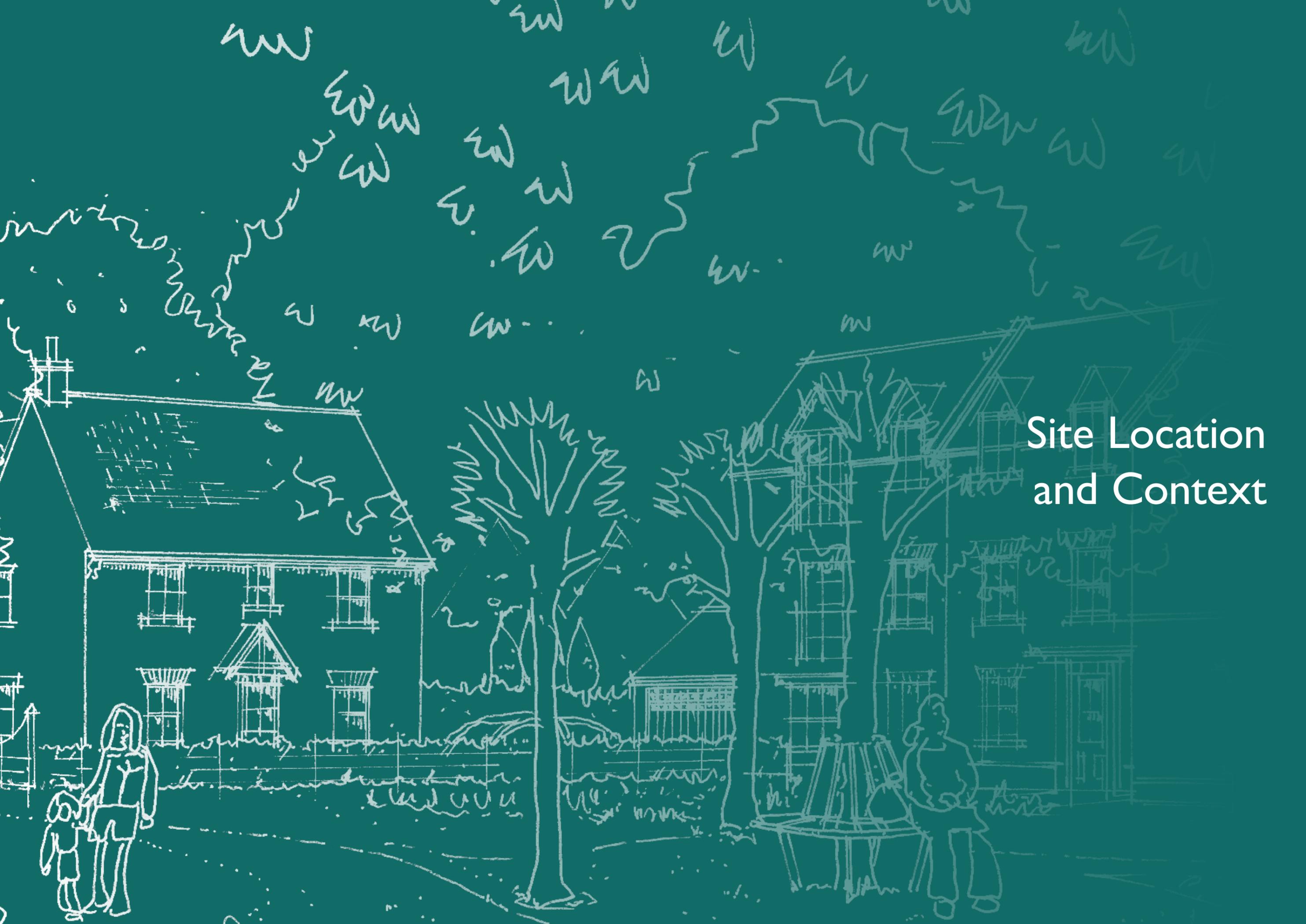
At the heart of any green masterplan is the development of holistically planned new settlements which enhance the natural environment and provide high-quality affordable housing and locally accessible jobs in beautiful, healthy and sociable communities.

Key Principles for Galtres Garden Village Masterplan include:

1. Strong vision leadership and community engagement;
2. Land value capture for the benefit of the community;
3. Mixed tenure homes that are affordable for ordinary people;
4. A strong local jobs offer in the Garden Village itself, with a variety of employment opportunities within easy commuting distances of homes;
5. High quality imaginative design(including homes with gardens), combining the very best of town and country living to create healthy homes in vibrant communities;
6. Generous green spaces linked to the wider natural environment, including a mix of public and private networks of well managed, high quality gardens, tree-lined streets and open spaces;
7. Opportunity for residents to grow their own food. Including generous allotments;
8. Access to strong local cultural, recreational and shopping facilities in walkable neighbourhoods; and
9. Integrated and accessible transport systems.







Site Location and Context

Site Location

The site is located to the east of Huntington a suburban residential neighbourhood north of York City Centre and to the south east of Earswick a village to the north of Huntington located on the York - Strensall Road. The site is bounded to the west by water course to the west of Wisker Lane beyond which are open fields and the A1237 (Outer Ring Road).

The site is well located in terms of proximity 2 retail and leisure facilities at Monks Cross Park which is approximately 2km to the south of the site and can be directly accessed via Monks Cross Link which connects with the Outer Ring Road. York's outer ring road offers access to Leeds/Scarborough A64 and Thirsk/Teesside via the A19.



Site location

Site Boundaries

The total site area is 92.97 hectares and the proposed development area approximately 77.37 hectares. The site is bound;

- to the north by a well defined and established field hedge line interspersed with several trees before running through the middle of several fields beyond this hedge line.
- to the East by Turbary Lane and an established hedge line which flanks this route beyond which is an area of woodland
- to the south by North Lane and field hedgerows
- to the west by a watercourse beyond which runs parallel with Wisker Lane before extending further west towards the over head pylons which run north to south beyond the eastern boundary of the site.



The following images are taken from within and around the site. The location at which they have been taken is identified on the plan on below. The site currently forms a series of fields which were historically related to several farms. The field pattern boundary is evident on the historic plans dating back to 1850.

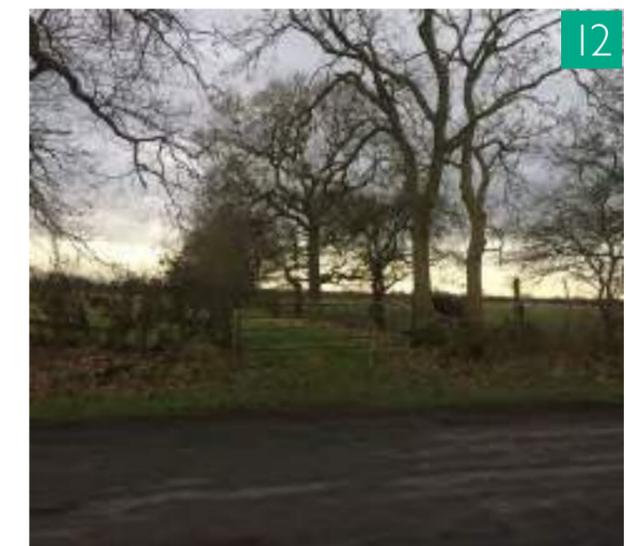
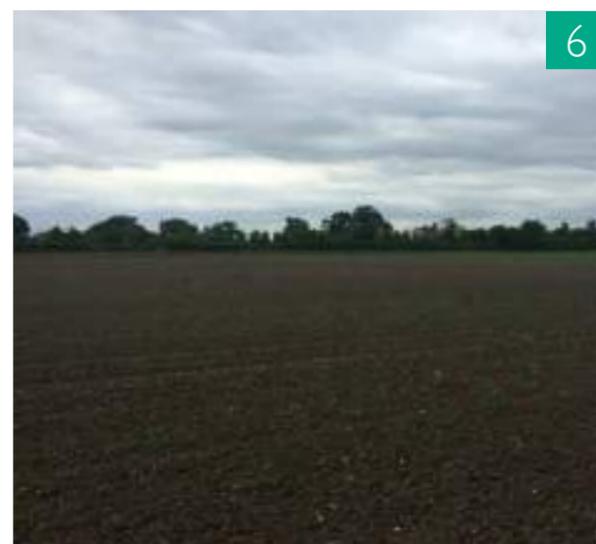
There are few trees within the site although many of the hedgerows are punctuated by trees. There is a small grouping of trees to the east of Wisker Lane and West of Turbary Lane.

Galtres Farm beyond the eastern boundary of the site is surrounded by recent non-native tree planting. Within the south western area of the site is a small copse of trees and scrub.

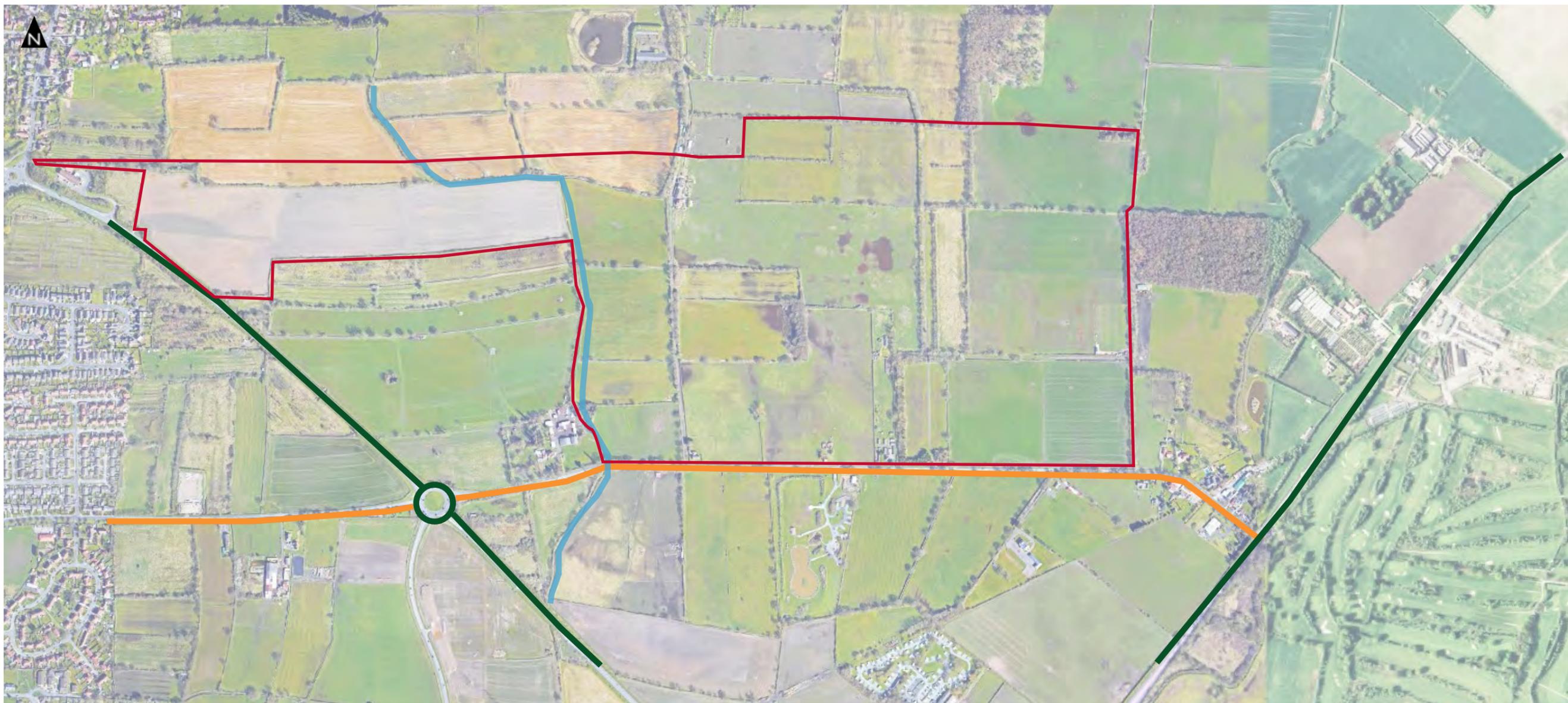
The fields west of Wisker Lane are delineated by hedgerows running east west.



Photographic Appraisal







Key

-  A Road
-  B Road
-  Minor Road
-  Site Boundary
-  Watercourse

Map showing location of the site and surrounding road network

Site Constraints

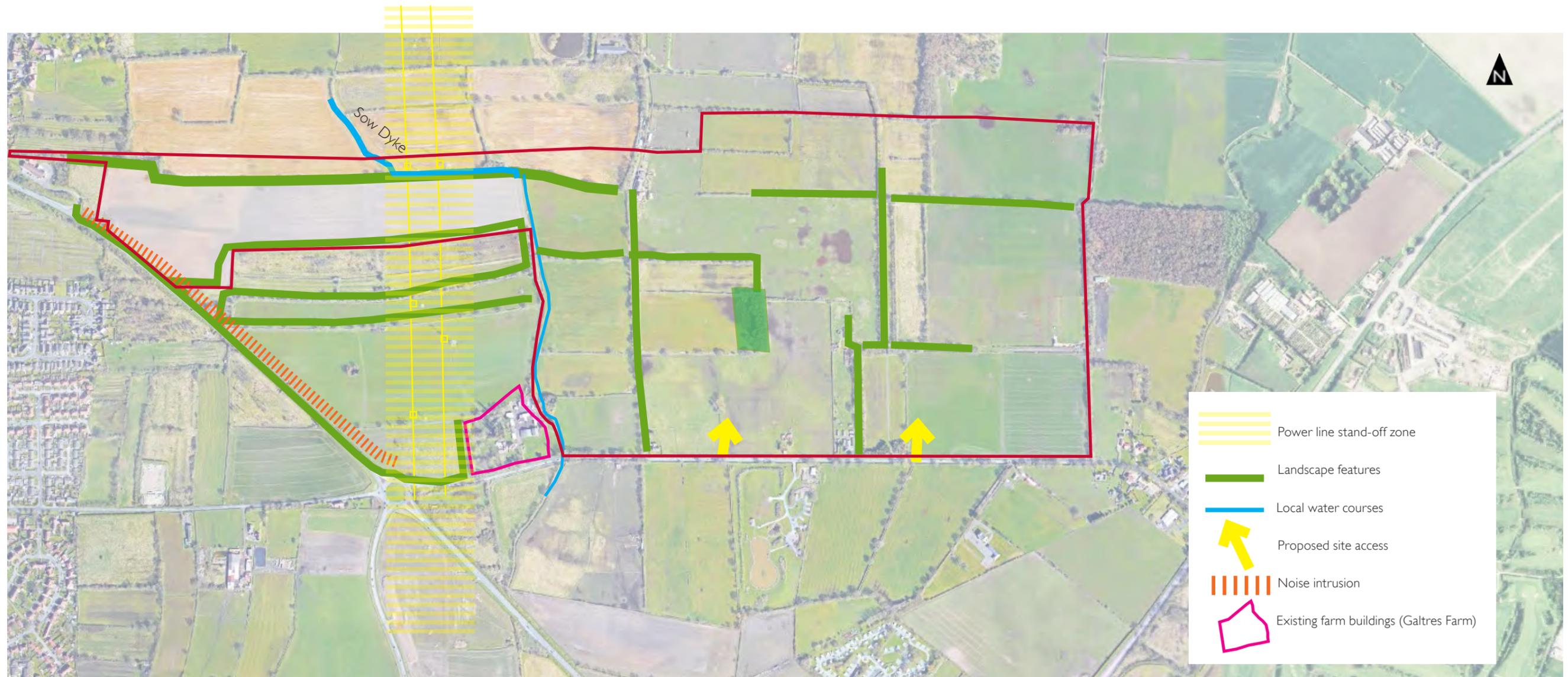
The site is flat with few landscape features other than hedgerows, occasional trees within hedges and a small wooded area to the east of Wisker Lane. The site can be accessed via North Lane which connects directly with the A1237. A strip of land to the west of the red line is within the control of Galtres Garden Village Development Company. This provides the opportunity for direct pedestrian and cycle access to Earswick and Huntington.

To the west and beyond the site boundary are two overhead power lines which run in a north south direction. The western power line is a lower voltage overhead power line. A stand off zone from any buildings to these power lines is therefore required. Design guidance provided by the National Grid, gives guidance on how through careful design and positioning of public open space and highway infrastructure housing layouts can be designed around overhead power lines. This guidance has been considered in relation to the proposal for this site and the proposed development cell within the North Western corner of the site which is adjacent to these power lines.

There are a number of hedgerows which define field boundaries running east west and following the watercourse which runs along the western edge of the site (Sow Dyke). Some of these hedge lines are important in terms of ecological interest and wildlife movement. The proposals therefore, where possible will seek to retain hedgerows and provide appropriate buffers.

North Lane is a B road and does not generate the same level of traffic as the A1237.

There are several properties and clusters of farm buildings close to North Lane including a bungalow on the corner of Wisker Lane \ North Lane and a dilapidated and vacant detached property further east. Adjacent to Turbary Lane is a bungalow and cluster of single storey buildings to the rear.



Map showing site constraints

Historic Development

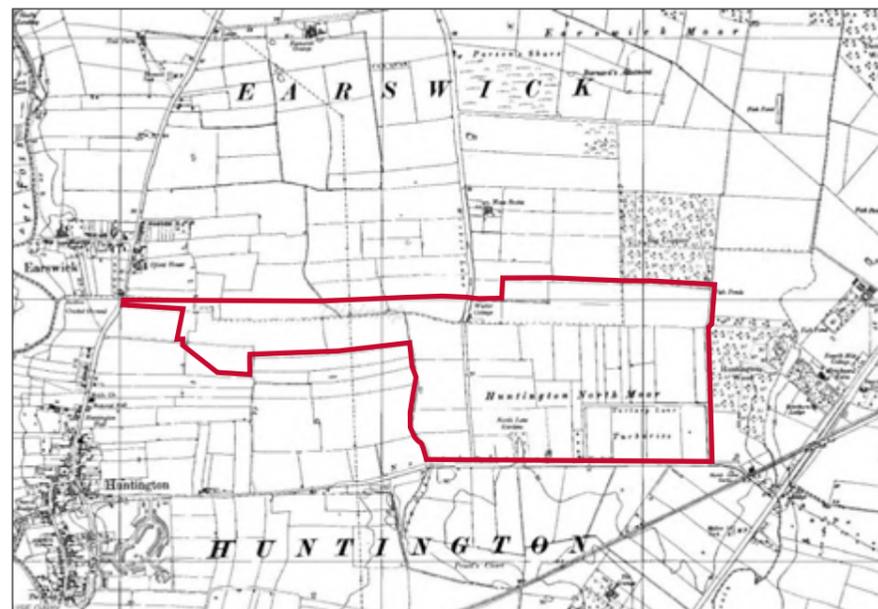
The field boundaries around and within the Huntington Lane east site date back a considerable period of time and it is clear from the historic plans that the site has been in agricultural use for a significant period of time. Huntington has extended over time from a small separate village to gradually become an extension to York. Huntington has also continued to expand northwards towards Earswick and now the A1237 forms the main physical break between the two settlements. The proposed red line is physically separate from Huntington and would form a free standing settlement reflecting the historic evolution of York and the surrounding outlying settlements.



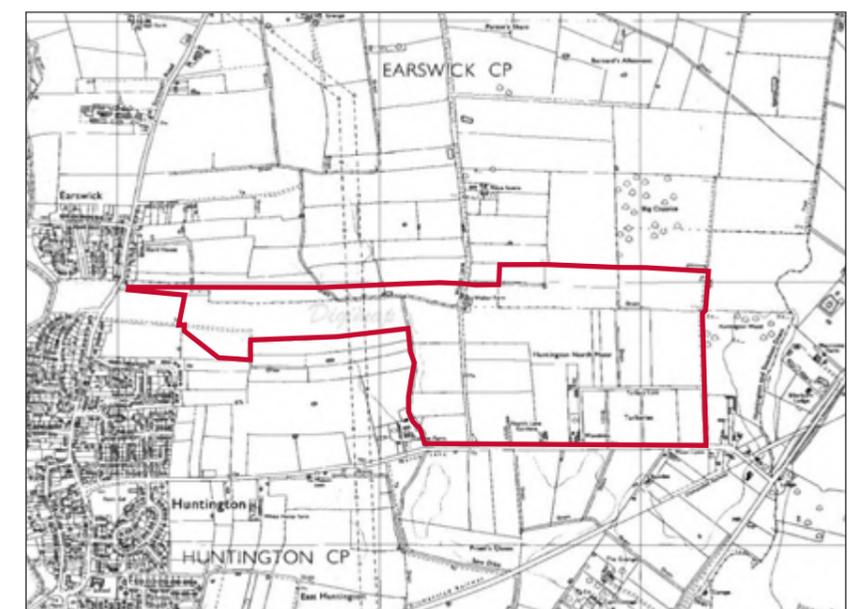
1890



1930



1950



1970



Diagram showing proposed site in relation to surrounding settlements outside York and relationship with York City Centre

Strengths and Opportunities

Provision of local centre, recreation facilities and access to open space

- Community hub area incorporating space for local shops and community buildings
- New sports pitches and recreational facilities for use of all residents and wider community
- Community allotments for wider use and new residents
- Improved public access and connections to the surrounding footpath network
- Green links around the site and to the north west to connect the site with Earswick and Huntington to the east.
- Opportunities for informal play and trim trail routes through and around the site perimeter.

Utilising the Landscape

- A landscape-led scheme embracing the existing features of the site, including hedgerows, field boundaries, water courses and mature trees within hedgerows
- Enhance landscape screening, strengthen boundaries and integrate the development within a mature landscape setting
- Use of water to create interest and to form an integral part of the drainage system and also provide a diverse habitat

Appropriate Mixture of Densities

- Create scheme 'focal points'
- Housing densities appropriate to the site's setting
- Contextual approach to dwelling design to create distinctive garden village vernacular appropriate for York

Integrated Access and Movement

- Clear hierarchy of routes, with the primary route providing generous landscape verges
- Design focus on the integration of existing routes and public footpath network
- Unique opportunity to integrate the residential development with the wider landscape and surrounding area
- Create informal areas of open space which act as a focus point and key navigation points to development sections
- Make provision for potential bus route in future by designing internal loop road sufficiently wide for buses

Strengths

- Flat and visually contained suite
- Close to local amenities
- Good transport links
- Existing hedgerows and landscaping which provides strong natural
- Visual barriers

Opportunities

- Sustainable infrastructure
- Existing hedgerows and landscape to provide landscape framework
- Provide community hub to development
- Continuing care community to provide a variety of accommodation for an ageing population
- Sports facilities, green routes, enhanced access to green space
- Multifunctional green infrastructure with SuDS which promote biodiversity and help reduce the speed at which rainwater enters into existing watercourses thereby potentially alleviating wider flooding issues.

Summary of Constraints

There are a limited number of constraints of note in particular the over head pylons to the west of the site although it should be noted that these fall outside the red line boundary. Sow Dyke is an existing watercourse which has been taken into account. The entire site is within Flood Zone 1 which means the land has been assessed as having a less than 1 in 1,000 annual probability of river flooding.

Sufficient space has been allowed for a green buffer around the perimeter to the site and a central green space to provide for SuDS and multi functional green infrastructure.

Landscape Character

The site falls within National Character Area Profile 28 for Yorkshire and the Humber

The Vale of York is an area of relatively flat, low-lying land surrounded by higher land to the north, east and west. High-quality soils across most of the National Character Area (NCA) mean that arable cultivation is the predominant land use, although some pig and dairy farming takes place in the western parts of the NCA. A key feature of the NCA is the rivers that drain surrounding higher land and run southwards through the Vale on towards the Humber basin. Land use is predominantly agricultural, with large arable fields bounded by hedgerows of varying quality and some field boundary trees.

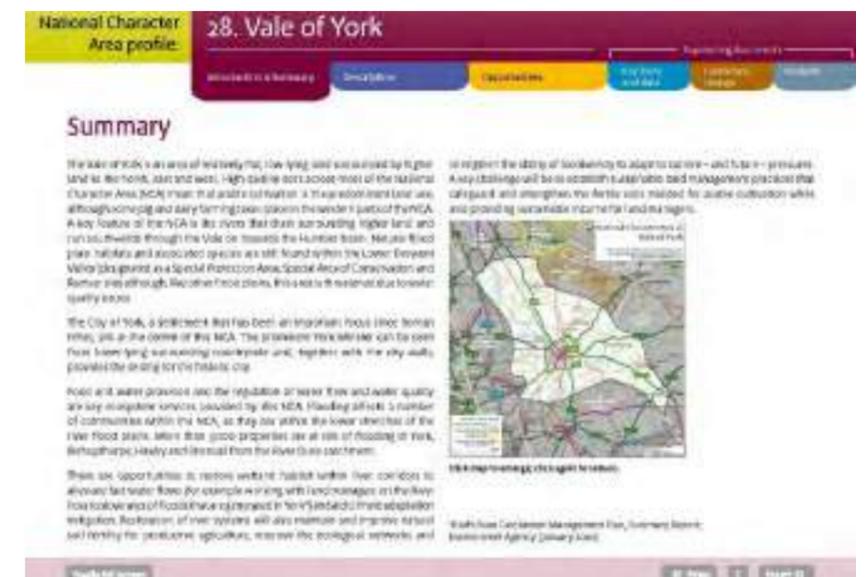
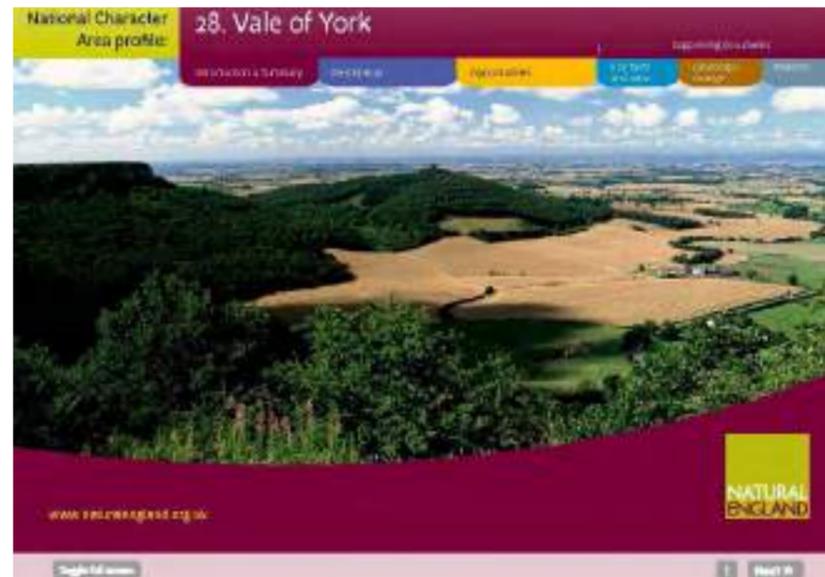
Landscape Features

A site walkover has been undertaken and important landscape features recorded and identified. The following section provides a photographic appraisal of the site.

The most significant visual impact on the study area derives from the two parallel overhead power lines, running north to south to the east of the proposed garden village site.

The eastern power line is a higher voltage line and consequently has larger pylons than the western overhead power line.

There are also a number of well established hedge lines which define field boundaries some of which include groups and individual trees that are important in terms of the skyline.



Significant and mature tree

East west hedge line defines field boundary and is punctuated by trees

Eastern edge to the site is clearly defined by small watercourse and established tree belt and hedging.



View location point

View looking north along the eastern boundary of the site



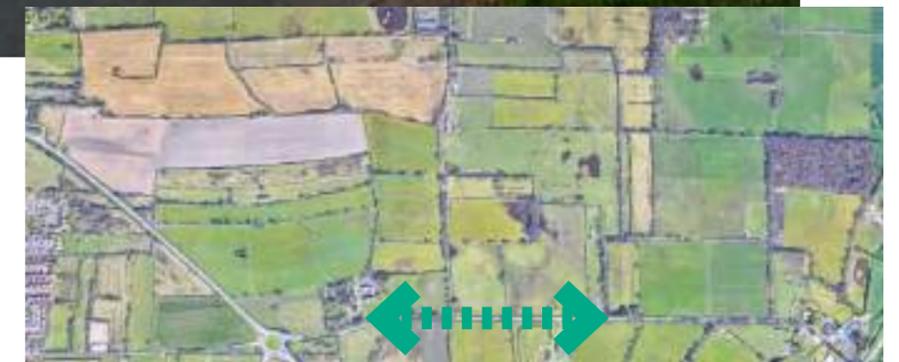
View location point

Northern edge to site define by hedge line and trees

Overhead power lines running north south across the site



North Lane



View location point

Higher voltage pylon

Well established east west hedge line



Looking northwest out of site towards the A1237.



View location point



Looking north west across the site from North Lane \ Turbary Lane



Oblique view of site

Existing hedge line defining northern extent of site

Galtres Farm buildings

Hedge line and trees flanking either side of Wisker Lane

Small area of trees within site

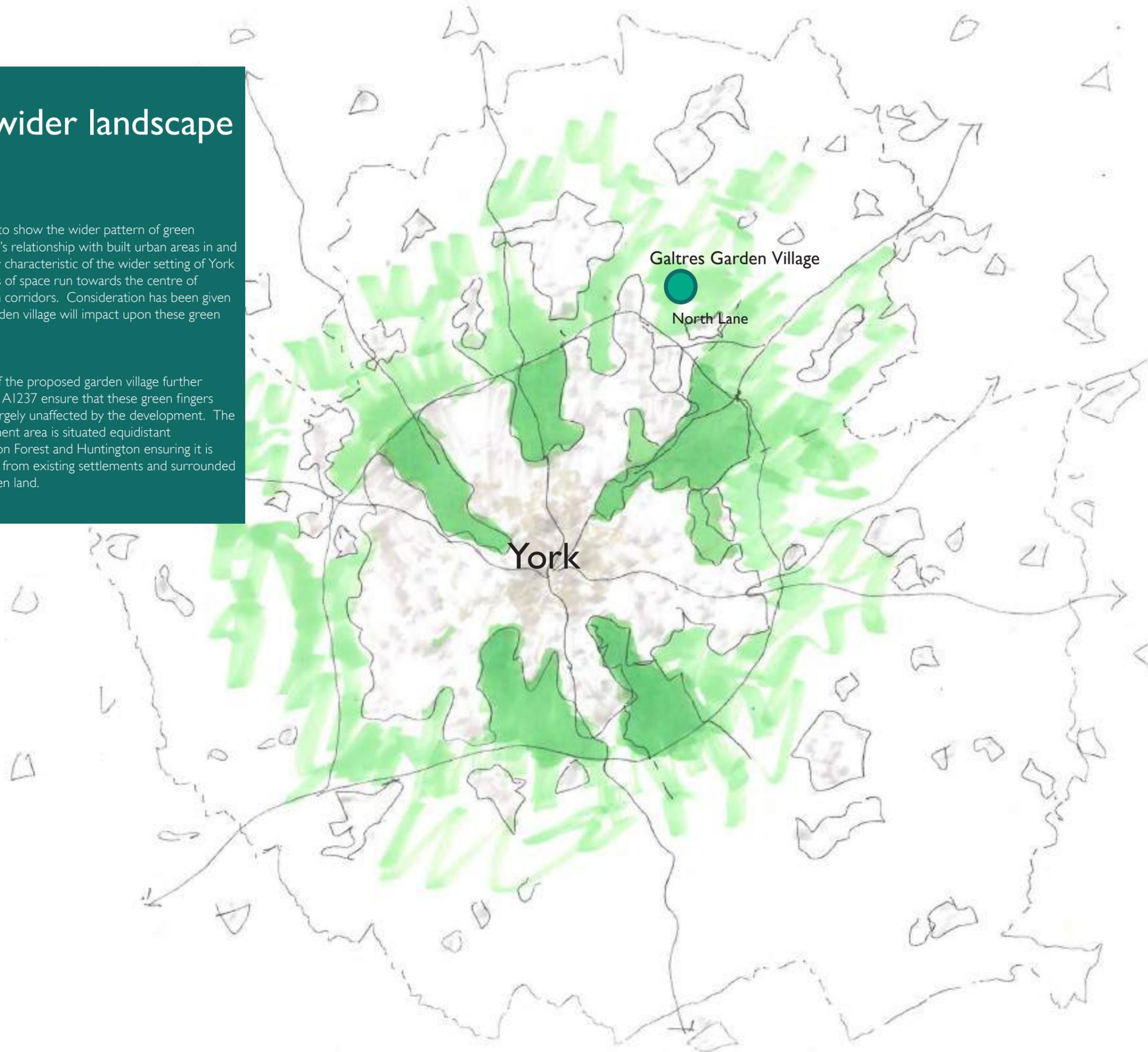
Hedge line boundaries

Woodland area beyond eastern boundary of site

York's wider landscape setting

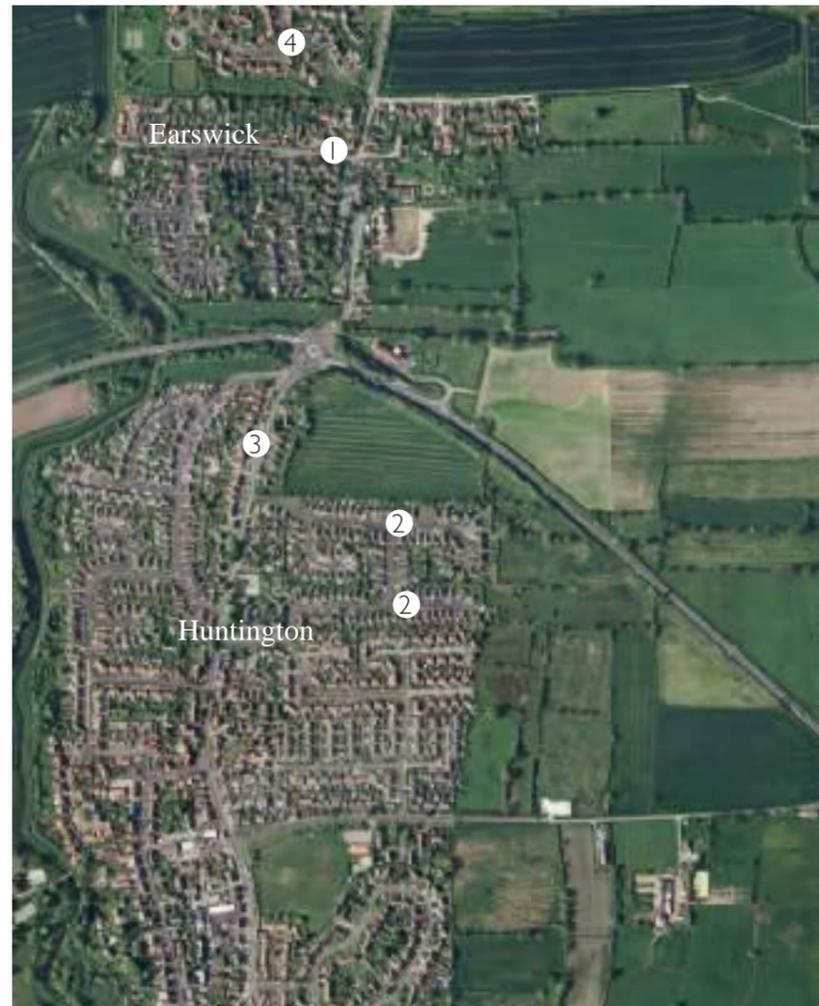
This diagram seeks to show the wider pattern of green infrastructure and its relationship with built urban areas in and around York. A key characteristic of the wider setting of York is how green fingers of space run towards the centre of York, creating green corridors. Consideration has been given to how Galtres Garden village will impact upon these green corridors.

The repositioning of the proposed garden village further eastwards from the A1237 ensure that these green fingers remain intact and largely unaffected by the development. The proposed development area is situated equidistant between Stockton on Forest and Huntington ensuring it is physically separated from existing settlements and surrounded on four sides by open land.



Character Analysis

In order to respond to the site context, it is important that the designers understand the immediate context of the surrounding area and in particular Huntington and Earswick the two closest neighbourhoods to the site. A character appraisal has been carried out on a number of adjacent residential areas in accordance with best practice guidance. This analysis is intended to inform guiding masterplan principles, layout and architectural approach for the proposed housing site and to identify any threads of regional and local design features that instil "elements of character".



Map showing location of character area



Huntington Built Character













Best Practice

Best Practice

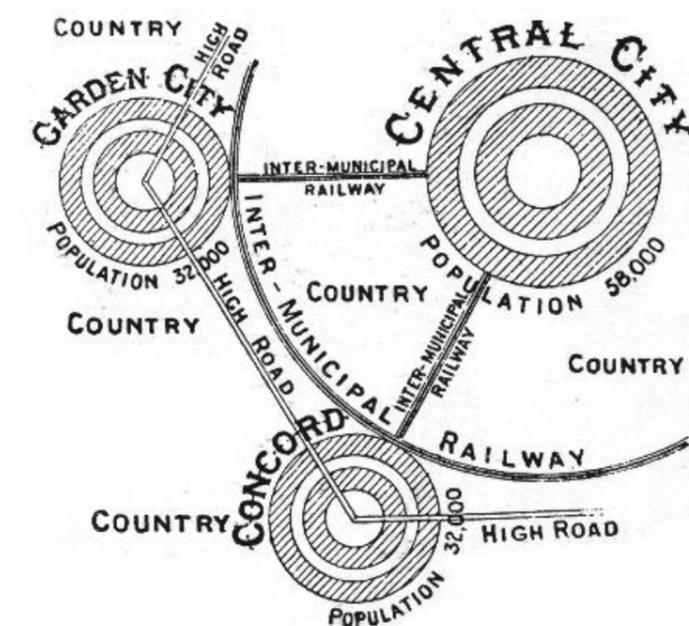
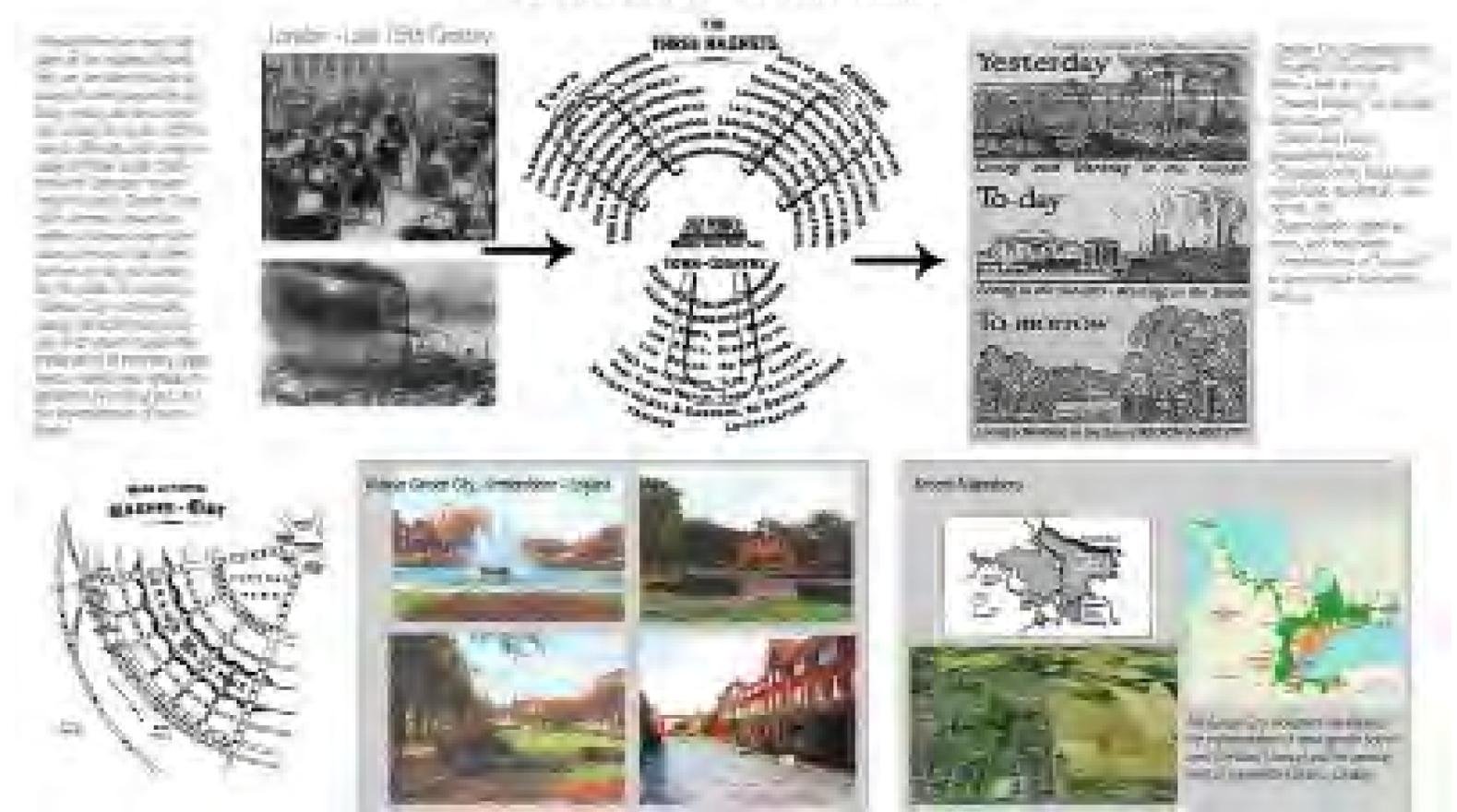
Garden Village Principles

The Garden Village Concept was pioneered by Ebenezer Howard. It sought to combine the very best of Town and Country living to create beautiful, well-planned, healthy and vibrant communities. The design philosophy we propose would be influenced by the principles enshrined in the Garden City Movement. We suggest a modern interpretation of the garden village principles to develop a landscape led masterplan that takes on board garden village principles.

1. Strong vision, leadership, and community engagement
2. Land value capture for the benefit of the community
3. Community ownership of land and the long term stewardship of assets
4. Mixed tenure homes that are affordable for ordinary people
5. A strong local jobs offer in the Garden City itself, with a variety of employment opportunities within an easy commute of all homes
6. High quality, imaginative design (including homes with gardens), combining the very best of town and country living to create healthy homes in vibrant communities
7. Generous green space linked to the wider natural environment, including a mix of public and private networks of well managed, high quality gardens, tree lined streets and open spaces
8. Opportunities for residents to grow their own food, including generous allotments
9. Access to strong local cultural, recreational and shopping facilities in walkable neighbourhoods
10. Integrated and accessible transport systems with a series of settlements linked by rapid transport providing a full range of employment opportunities

The Garden City Movement

and Influence of Ebenezer Howard





Ebenezer Howard

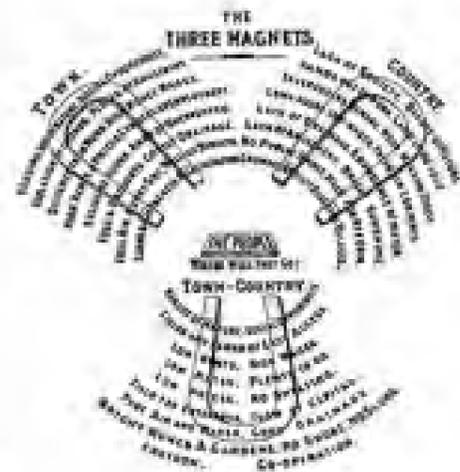


Diagrama 1



Diagrama 2

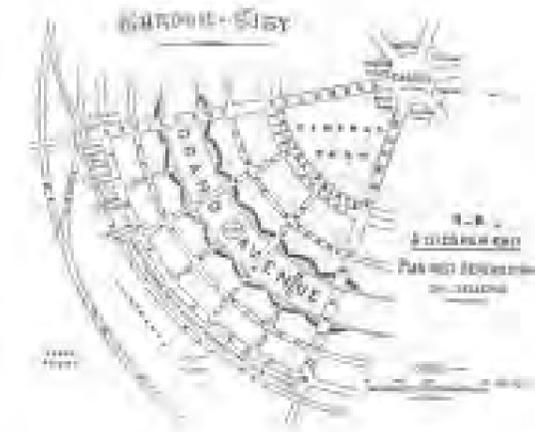
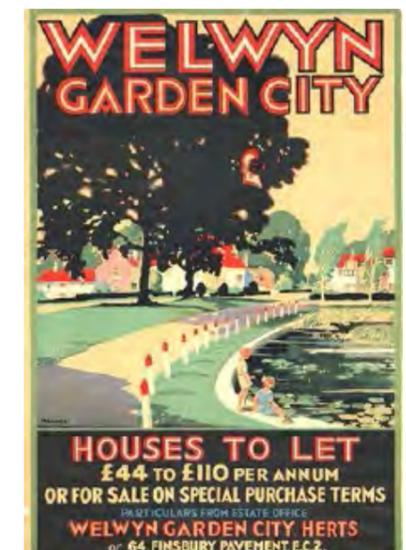
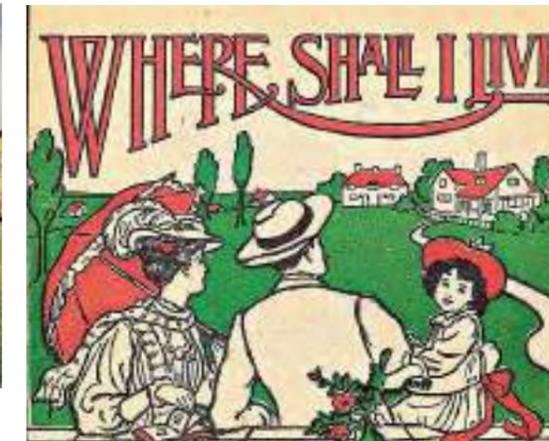
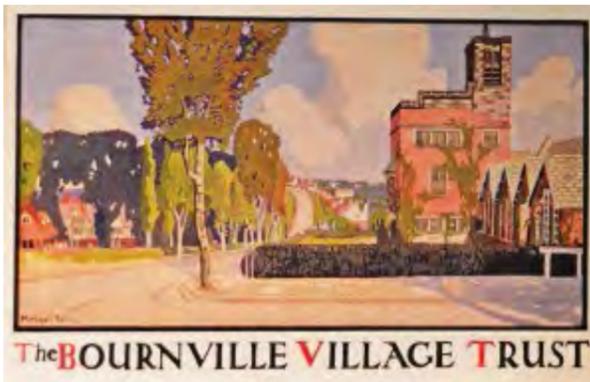
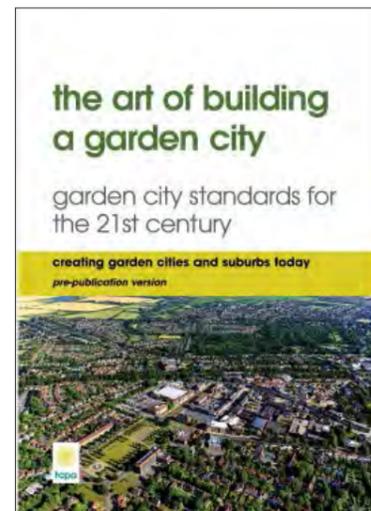
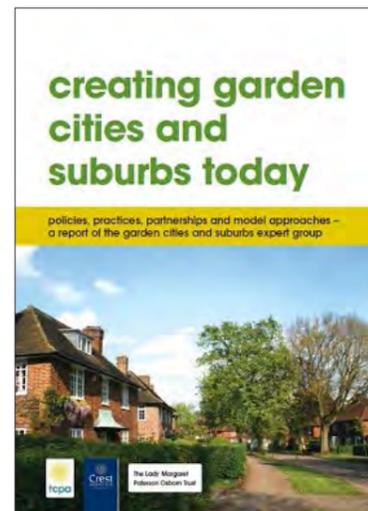
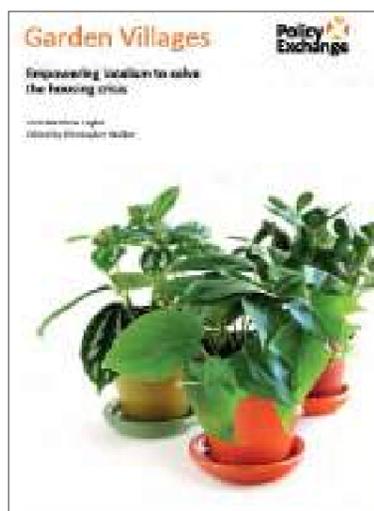


Diagrama 3



the re-birth of the garden city movement



The following sets out the key design principles which underpin the masterplan and which will ensure the "Garden Village" concept is carried through to the indicative masterplan.

1. Understanding the Landscape Assets

The design team needs to analyse and value all landscape assets within the development area. This involves coordinating services corridors within the development and promoting a "Green/ Blue Grid" landscape framework.

2. Protecting Sustainable Routeways

This element aims to protect and enhance existing pedestrian movement patterns and incorporate sustainable routes. The masterplan should nurture existing wildlife actively seeking opportunities to protect and safeguard wildlife routeways. Seasonable scrapes and watercourses can be integrated within the 'blue green grid' to sustain and encourage size specific flora and fauna.

3. Using the Landscape to give the Masterplan Cohesion

The longevity of the Garden Village will be safeguarded and underpinned by the use of landscape. The landscape setting will give cohesion and integrity to the overall masterplan. The planting and reinforcing of landscape assets on the site should from the start of the process This will ensure the landscape backdrop grows and matures as the garden village evolves. This enables year on year, the potential for a community to grow organically in perfect harmony with its environment; a classic garden city concept.

4. Providing Optimum Outdoor Space

Ensuring adequate overall land area for the Garden Village at the outset enables generous sized gardens to be provided, and facilitates a wide range of outdoor leisure and recreation opportunities, safeguarding the health and fitness of residents and highlighting the contrast in lifestyle between Garden Village and conventional development.

5. Ensure Easily Accessible Routes

Sustainable movement throughout the development is key. A comprehensive 'landscape / drainage framework' that incorporate pedestrian and cycle routes, ensuring that all neighbourhoods are interconnected is key. Every householder should be equidistant from public open space. The ease of access to recreation and leisure opportunities within the generous public open space allocation, means that residents will enjoy a healthy and active lifestyle.

6. Offering the Widest Range of Leisure opportunities for the Whole Community

Public open space is not conceived merely as 'corporation playing fields', but offers a wide range of leisure opportunities for the whole community – young, middle-aged, and elderly. 'Trim tracks' and adventure trails are incorporated within the 'Blue / Green' Framework and create interest and involvement for all members of the family.

7. Demonstrating that the development can enhance biodiversity

The Garden Village should demonstrate that the 'landscape / drainage framework' that underpins the overall design delivers a broad range of habitats and diverse opportunities for wildlife to populate and inhabit these green spaces. It will be possible to demonstrate that year on year, the evolution of these green routes delivers an increase in biodiversity when compared to the previous arable farmland.

8. Offering a Wide Range of Housing Typologies and Tenures Enhancing Sustainability

The housing development offers an opportunity for a wide range of housing typologies and tenures which respond to the housing needs of the community as a whole and ensures that the Garden Village provides every type of accommodation for residents appropriate to their stage in life, in a seamless way. This builds resilience into the community and enables members of the same family to live within accessible distances from each other, further enhancing the community's sustainability and vitality.

9. 'Feathering' the Edge of the Development

The proposed development will have a distinctive and wide 'green edge' forming its external perimeter. A substantial landscape area will 'buffer the edge of the development', and prevents development sprawling into the landscape beyond or, alternatively, will mitigate developments outside the site boundaries, merging and diluting the landscape led nature of the Garden Village



Letchworth Garden City

Character

The character of Letchworth reflects in no small part the ideals of the Garden City movement, particularly the notion of combining the best of town and country and Unwin's articulation of both formal and informal compositions. The town square surrounded by the major public buildings and radiating avenues is typical of the former.

Continuity and Enclosure

With the exception of the key retail and commercial streets in the centre of Letchworth, continuous frontages are not a key feature of the City. Terraces, where they occur tend to be expressed in short runs with semi detached and detached properties prevalent. Notwithstanding, a common building line with often subtle variations in set-back, provides enclosure to the street, reinforced in no small part by mature street trees.

Public Realm and Landscape;

Key spaces within the City tend to be focused in formal and informal parks of varying sizes, coinciding with natural features such as streams or grand vistas radiating from the centre. Building setbacks provide ample opportunity for soft landscaping within front gardens and these reinforce the perception of a green public realm to which the street trees, often planted at the back edge of the carriageway make a significant contribution to the 'Garden City' feel.

Ease of Movement

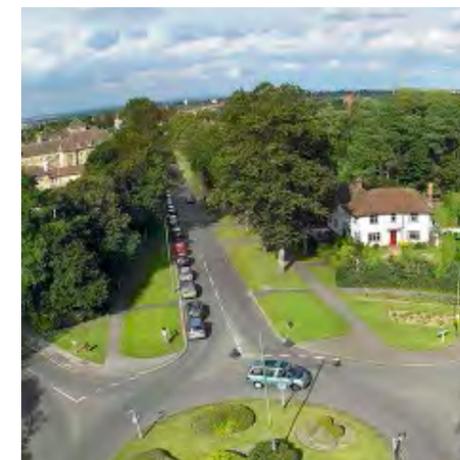
An irregular perimeter block structure prevails, sometimes incorporating cul-de-sacs within the block or allotment gardens. For the most part, this provides a permeable network of streets and spaces, with the security of the back-to-back block structure sometimes compromised by linking footpaths from the end of cul-de-sacs to adjacent streets.

Legibility

Key buildings, often churches, together with radiating avenues and punctuating green spaces provide a degree of legibility. However, and for the most part, the townscape does little to help navigate through the City.

Materials and Details

Letchworth enjoys a rich legacy of materials and detailing which provides variety and interest to streets, even when dominated by one or two building typologies. However, streets maintain a consistency and harmony through an underlying set of base materials, comprising brick or render and plain tile roofs. Stone, timber boarding and decorative timber framing provide significant elements or accents in places.



Hampstead Garden Suburb



Character

The approach taken to Parker and Unwin's early suburb layouts is well recognised for making use of the sites contours, blending gently curving streets and junctions with Lutyens grander, more formal approach, symbolised by axial views to the dome of the Free Church and the spire of St Jude's. Graduations in the scale of houses and plots to accommodate the wide social mix were also woven into the design. Less well known is the influence of continental towns, particularly hill towns on Parkers work, manifested in the gateway buildings at Temple Fortune and the 'Great Wall' demarcating the 'town' of the suburb from the 'country' of the Heath Extension.

Arts and Crafts

The influence of the Arts and Crafts philosophy within the Suburb is evident, with simple but creative detailing to many buildings reflective of the reaction against elaborate Victorian architectural decoration. Building typologies with steep tiled roofs, picturesque outlines, large chimneys and prevalence of gables feature.

The Georgian Revival (Neo-Georgian)

Lutyens promoted the Neo-Georgian approach in the major public buildings on Central Square, the houses of North Square and Erskine Hill. Later Soutar utilised the Neo-Georgian influence in mansions set within leafy streets for wealthy residents. The style features sliding sash windows, symmetrical, ordered elevations, sometimes with modest pediments, door cases and other decorative features.

Modernism and Art Deco

Examples of both modernist and art deco influences can be found in the Suburb, particularly in the later period.

Public Realm and Landscape:

The Suburb is characterised by a variety of open spaces, the Heath Extension being the single largest entity. These spaces vary from formally designed areas of open space, such as those found within Central Square, to small informal greens enclosed by individual dwellings.

Overall, the trees and hedges represent the defining landscape features within the Suburb. Coupled with the preservation of many existing trees and copses, all new streets were planted with trees, often with grass verges. Species were carefully chosen to complement the importance of the street and adjacent buildings. Larger houses and wider roads were emphasised by more dramatic street trees while more intimate closes and curving lanes were often softened. Hedges are the main boundary treatment and means of enclosure for the public and private spaces.

Ease of Movement:

The Suburb provides an intrinsically permeable layout based upon the perimeter block structure with the axial roads typically providing through routes and an informal network of roads providing the connecting streets. Vehicular and pedestrian movement routes are primarily

integrated with subtle graduations in scale denoting the importance of the route and reflecting the adjacent architectural response. Lower order streets often respond to the natural contours of the site and follow old tracks, field boundaries and the remnants of pre-existing woodlands

Legibility

The Suburb is composed of a series of long range views, framed views and glimpsed views, which in conjunction with the architectural response, create an inherent legibility. The long distance views towards the Dome of the Free Church and the spire of St Jude's provide the over arching legibility framework. Shorter vistas framed by distinctive architectural features and closed by landmark buildings aid way-finding at a more local level.



Best Practice Local Precedents: Thirsk, Stainley

Work carried out by Tempest at North Stainley, north of Ripon, is considered to be an exemplar in the provision of community uses, within an existing settlement. North Stainley provides a wide range of new housing and community benefits.

The scheme delivers a traditional Village Green concept with associated environmental improvements for SuDS and Ecology to reinforce the character of the Village, working closely with the existing grain and density of the settlement to provide a sustainable solution.

It is envisaged that the same design principles would be applied to a new development at Galtres Garden Village to create a "landscape-led sustainable community".



Best Practice Local Precedents: Derwenthorpe, York

The Joseph Rowntree backed development at New Osbaldwick east of York is widely recognised as an exemplar new housing development in terms of housing set within an attractive landscape setting and a sustainable urban extension to York. The development was a winner of the Housing Design Awards in 2013.

One hundred years ago, Joseph Rowntree Foundation built York's garden village of New Earswick to the North of York as a model community from which others might learn lessons. A century later JRF has sought to emulate this with a new community, Derwenthorpe. The JRHT will have a long-term role in the management and maintenance of the site. People living in Derwenthorpe will see the Joseph Rowntree Housing Trust actively involved in providing low carbon produced heat from the Energy Centre, managing the green and open spaces.

The Derwenthorpe development is characterised by a generosity of multifunctional green space which provides recreational opportunities and forms part of the site wide SuDS strategy.





Character

The Garden Village principles will set the over arching identity and character for the site. This will be characterised by predominantly medium and lower density family housing with front and rear gardens, on-plot parking and generous streets and public open spaces.

Within this common theme there will be local variations in character to reflect site characteristics. A strong, coherent and appropriate architectural style which reflects local materials and architectural language as well as the Garden Village aesthetic will be developed, further details of which are described in the design code section. The landscape strategy will also be developed to use locally distinctive landscape types and plant species. The majority of existing trees, hedges and water courses will be retained and used to define a spacious and green character to the development.

The development will embrace some of the original design principles of Garden Cities such as use of hedges to define front gardens, use of building and landscape to frame and terminate key views, spacious streets with grass verges and large street trees, clear building alignment which is set back within plots overlooking streets and a limited number of urban block typologies which allows a clear distinction between public and private open space.

A clear street hierarchy will provide a structure to the housing development which is easy to understand and navigate as well as allowing the design of each street to be appropriate to its intended traffic role. Where parking is provided on street it will be integrated into the street scene, this means only providing it where there is sufficient width and placing it in dedicated bays rather than informally at the side of the road.

Lifestyle

The housing, green infrastructure and sport and leisure facilities proposed can be planned to help provide a sense of community. The masterplan proposals for Galtres Garden Village have been prepared with the intention of providing a range of travel choices. There is scope for a bus service to access the site. A comprehensive network of attractive and direct pedestrians and cycle routes as well as all intended to provide a genuine alternative to the use of private car.

Significant green spaces will be provided with space for growing food in allotments, community orchards and gardens as well as space for walking, cycling, sports and play. Open spaces have been planned to reach into all areas of development so that it contributes to character of the housing but also makes open spaces immediately accessible from people's front doors.

Sustainability and Legacy

The Galtres Garden village will follow an inclusive planning process which will ensure that investment in infrastructure can be planned for with confidence and ambition to the long term benefit of the community. For instance proposals for planting large tree specimens to establish a sense of permanence at early stages of the development. It is intended that this will instil a sense of civic pride and make residents more likely to take on responsibility and interest in how their place is maintained and looked after. This has added benefits in helping reduce crime and increasing desirability as places to live.

A management plan which ensures assets will be managed in perpetuity for the benefit of new and existing communities will be prepared. Continuous engagement with the wider community and groups throughout the life of the project will ensure that the new development is sensitive to their needs and ensure the new community is well integrated into existing neighbourhoods.





Concept Masterplan Development



Original concept masterplan

Concept masterplan evolution

Concerns were raised in relation to previous masterplan proposals relating to the close proximity of development to the A1237, the impact of the pylons running north south through the site and how the development would not form a 'free standing' garden village.



Original masterplan area

Extended masterplan area

Extended masterplan area

The plan above shows an extended masterplan area which created a larger site area of 78.84 ha. The increased site area allowed for a generosity of green space and for the repositioning of the village hub in a more central location to ensure Galtres Garden village can provide the facilities to become a self sustaining settlement in the most appropriate location for all residents. However the design and client team remained concerned that this option was still too closely related to Huntington rather than a separate settlement. Taking account the further work considering the wider setting of York and the green fingers which surround and encroach into built areas a conscious decision was taken to remove development west of the pylons.



G.V v4.
19.10.17
iap skol.



This shows a revised indicative concept sketch masterplan which has been developed in further detail. The revised approach keeps all development east of the pylons and A1237. Two access points from North Lane are proposed which would take the form of roundabouts. A loop road would provide a bus route through the village hub and local centre serving Galtres Garden Village.

Concept Masterplan

The masterplan concept seeks to strengthen and safeguard the existing pattern of hedges, drainage ditches and water courses, protecting all landscape assets. The green framework is conceived as a "living grid" into which various landscape elements are interwoven.

Interconnecting green corridors of publicly accessible parkland and amenity space, incorporate footpaths and cycle ways to accommodate desire lines and give pedestrians and cyclists priority over other modes of transport.

Sustainable green routeways will create a convenient network to connect different areas and facilities within the site and beyond to the wider countryside. The masterplan proposals are conceived as offering the opportunity for individual character areas defined by the landscape framework and field boundary pattern.

The intention is for the residential development to be built out over a long period of time in an organic manner which allows the green infrastructure to grow and develop as the housing is built out thereby providing the green backdrop require to create a garden village setting.



Earswick

Galtres Garden Village

Huntington

Forest Park Golf Club

Design Principles and Objectives

The design principles for the proposals have been developed following a rigorous site appraisal, review of relevant policy guidance and a landscape led approach and design ethos which underpins the masterplan.

The Vision

Delivering approximately 1700 dwellings set within a landscaped environment. It is envisaged that medium density housing will be provided to help mitigate against over development and provide housing over a sustained period of time. Landscape character areas are a key determining factor in the design development, creating a unique and appropriate response to this attractive location.

The masterplan team have considered in detail the site and the wider area in particular the landscape character and setting of the site, its topography and its relationship with the surrounding area and its relationship with the Vale of York.

The main design objectives for the site can be summarised as follows

- The creation of attractive residential neighbourhoods within a landscape setting with a series of north south green routes through the site
- Utilise the site's existing field drainage system to incorporate SuDS
- Provision of a "continuing care retirement community", including specialist housing and a range of services for the elderly and retired
- A community hub of shops
- A new primary school

Key Design Principles

1. Protecting sustainable routeways

The intention is to protect and enhance existing pedestrian movement patterns and incorporate new sustainable routes. The concept plans show the creation of new routes and their integration within the development proposals. The aim is to ensure a landscape led framework which will nurture existing wildlife.

2. Providing optimum outdoor space

The concept proposals seek to ensure a generous amount of open space to facilitate outdoor leisure and recreation opportunities, safeguarding the health and fitness of residents. The proposed landscape framework within which the housing will be set will be capable of accommodating green routes. The introduction of a sports pitches and areas of community allotments will be a major feature of the proposals.

3. Feathering the edge of development

The proposed development will have a distinctive and wide 'green edge' forming its external perimeter. A substantial landscape area will 'buffer' the edge of the development, and prevent development sprawling into the landscape. It will also help mitigate the development outside the site boundaries, merging and diluting the hard edge of development with the surrounding landscape and providing opportunities for circular pedestrian routes.

4. Ensuring the development can enhance biodiversity

Ensuring landscape buffer around the edge and introducing green routes and a landscape / drainage framework which delivers a broad range of habitats and diverse opportunities for wildlife to populate and inhabit these spaces. It will be possible to demonstrate that year on year, the evolution of green routes delivers an increase in biodiversity when compared to the previous arable farmland.

5- Green-blue grid

Integrating the existing green and blue infrastructure within the development proposals is key. "Green blue" routes can be incorporated to ensure access to recreation and leisure opportunities within a generous public open space allocation which will mean residents enjoy a healthy and active lifestyle.

6 - Offering a wide range of housing typologies and tenures enhancing sustainability

The housing development offers an opportunity for a wide range of housing typologies and tenures which respond to the housing needs of the community as a whole and ensures that the development provides every type of accommodation for residents appropriate to their stage in life, in a seamless way. This builds resilience into the community and enables members of the same family to live within accessible distances from each other, further enhancing the community's sustainability and vitality.



Vision precedents



Design Concept and its application to the masterplan

The key features of the design philosophy adopted for Galtres Garden Village are as follows

- A landscape led masterplan which seeks to incorporate existing landscape features and landscape buffers to the edge of the development
- A clear distinction between public and private realm
- Active frontage onto streets, pedestrian routes and open spaces
- Integrated movement for pedestrians, cyclists and vehicles, including safe links to and from the existing settlement
- A public realm which is well overlooked and supervised, following 'Secured by Design' principles to promote security for all residents and visitors
- Recognisable built forms and features to enhance legibility throughout the scheme, including feature spaces, landmark buildings, co-ordinated building materials and high quality landscaping to help define the streetscene
- Incorporating the existing hedgerows, other landscape assets and water courses to form a green and blue grid throughout the design.

Green routes linking with existing country lanes to create a network of green routeways

Vehicular access to site from North Lane

Vehicular access to site from North Lane

New boundary hedgerows planted

Galtres Garden Village

Potential Straw-Bale Construction for Future Community Buildings



Tree Seats



Green Routes and Public Rights of Way



Sustainable Drainage System (SuDS)



Local Centre



DO NOT SCALE
All dimensions to be checked on site and Architects to be
aware of any discrepancies prior to commencement

DESIGNER'S RISK ASSESSMENT
RESIDUAL RISKS

Biodiversity Habitat Information Panels



Allotment Gardens



Outdoor Classrooms



Biodiversity Enhancement



Retirement Living



Community Courtyards



Community Orchards



Natural Grasslands



Forestry School



Zone	Area (hectares)
A	0.70
B	0.66
C	0.80
Development Cell Sub-area	4.181
Continuing Care Retirement Community	1.76
School	1.30
Community Buildings	1.47
Total Site Area	10.77

Capacity

4300 Total Development Area
at 120000 m² / 1100 units
Maximum Community = 1000 units
Total Proposed Development = 1100 units

Potential Features

1. Pedestrian and cycle link towards Earwick and Hurstington
2. Green buffer around perimeter of the site to visually contain the development
3. Recreational routes / Tree Track
4. Galtres Garden Village Country Park
5. New roundabout to provide access from North Lane
6. Multifunctional green spine running through the middle of the site to incorporate SuDS and buffer to housing
7. Formulated green space for recreation
8. Village Hubs including school, community buildings and village green
9. Continuing Care Retirement Village
10. Green corridors running north to south forming a green grid throughout the design

Key



Masterplan Concept

The masterplan concept seeks to strengthen and safeguard the existing pattern of hedges, drainage ditches and water courses, protecting all landscape assets. The green framework is conceived as a “living grid” into which various landscape elements are interwoven.

Interconnecting green corridors of publicly accessible parkland and amenity space, incorporate footpaths and cycle ways to accommodate desire lines and give pedestrians and cyclists priority over other modes of transport.

Sustainable green routeways will create a convenient network to connect different areas and facilities within the site and beyond to the wider countryside. The masterplan proposals are conceived as offering the opportunity for individual character areas defined by the landscape framework and field boundary pattern.

The intention is for the residential development to be built out over a long period of time in an organic manner which allows the green infrastructure to grow and develop as the housing is built out thereby providing the green backdrop require to create a garden village setting.

‘Galtres Garden Village’

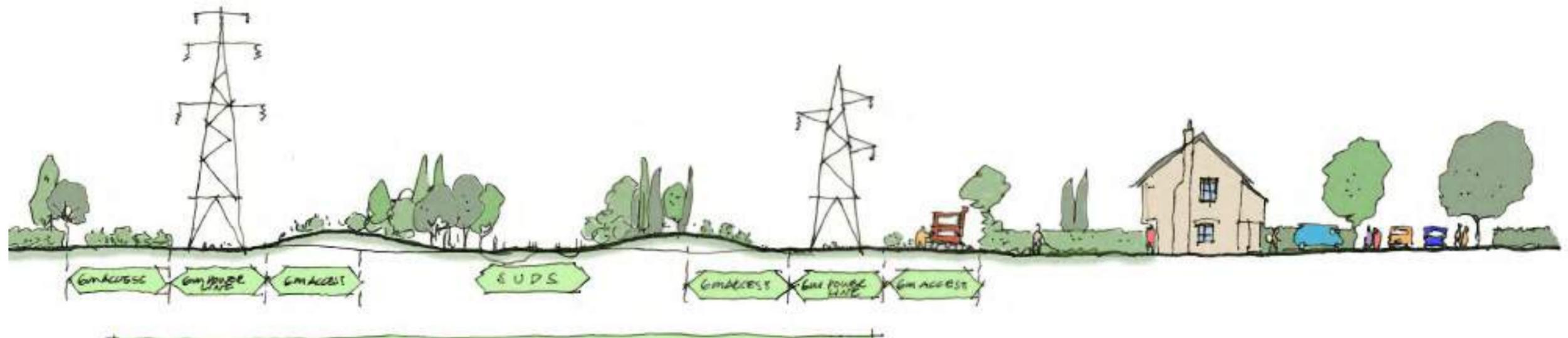
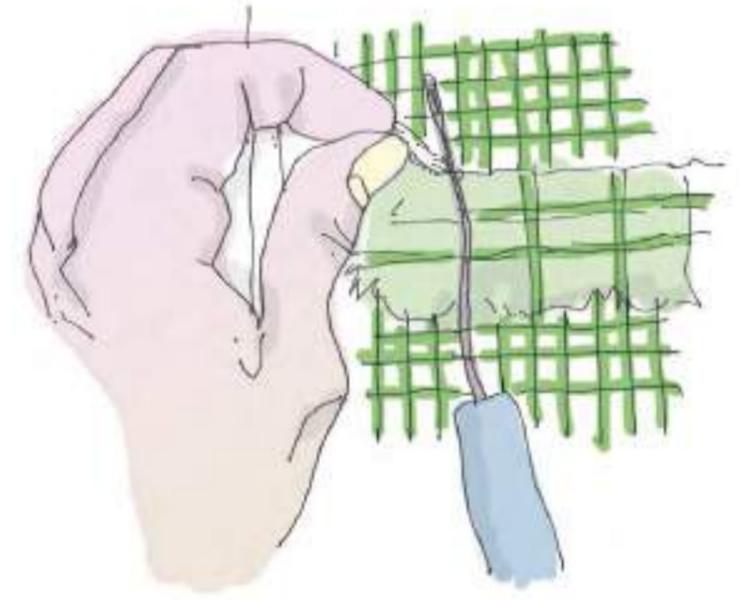
The royal forest of Galtres was established by Norman Kings to the north of York and once comprise 60 villages within 100,000 acres of land. The forest is associated with the historic growth of York and once covered the site to which this development relates. It is befitting and appropriate that the name ‘Galtres Garden Village’ is used for the development proposals given the garden village principles the development will seek to incorporate including extensive areas of landscaping and wooded areas around the site perimeter.

Revised Concept Masterplan

The concept masterplan has been revised in light of the advise received from officers at York City Council. In particular the need to ensure that the site meets criteria 4 of the selection methodology for sites being progressed through the local plan. The key points which were raised included

- The need to amend the overall site boundary for the site and the potential for additional community facilities to be provided within the site to improve access for existing and future residents
- The overall distribution of usable open space and SuDS
- Increasing the landscape buffer adjacent to the A1237
- Providing open space away from the overhead pillions

This advice has been taken on board within a revised concept masterplan which is shown on the opposite page.







Galtres Garden Village

SPECIAL IDENTITY



Distinctive contemporary high quality architecture built from the inside out, with a rural feel, which is underpinned by a understanding of the surrounding context. The village will have a vibrant and lively ambience, which will welcome residents to a landscaped environment whilst providing a safe and homely environment.

CONNECTED NEIGHBOURHOOD



Attractive and usable green spaces that have a purpose and form, a sequence of connected public realm. The green spaces will connect to provide routes for the residents to walk around the site, still being in the safe managed grounds of the neighbourhood to promote healthy living.

ACTIVE NEIGHBOURHOOD



Animated spaces and streets will encourage interaction between the residents, a space to sit and have a chat or admire the landscaping. There will also be areas designed into the landscaping to provide spaces for outdoor activities such as exercise, sport, music, gardening and leisure.

AN INCLUSIVE NEIGHBOURHOOD



A neighbourhood with communal facilities such as a cafe, restaurant and bar where the residents can meet and socialise within the comfort of their retirement village. The village will be managed making it safe and secure, where people with more greater needs know there will always be someone to watch out for them.

A SUSTAINABLE NEIGHBOURHOOD



All buildings will be energy efficient and residents will be encouraged to use the community minibus and car share scheme to promote the sustainable neighbourhood. The retirement village is designed to be inhabited by three distinct groups, the active elderly, elderly and acute elderly which will provide a broad gene pool and whose developing needs can be catered for throughout the site.

AN EXEMPLAR RETIREMENT NEIGHBOURHOOD



A neighbourhood which is exemplar for retirement care which is built with a understanding of the surrounding context

Galtres Garden Village

The following section sets out initial ideas about the housing, facilities and services which will be contained within the garden village. In particular this section explains how a new school, retirement living and community hub can be integrated within the overall garden village to provide a self contained and sustainable settlement.

Housing for all

The proposed housing development will offer an opportunity for a wide range of housing typologies and tenures which respond to the housing needs of the community as a whole and ensures that the Galtres Garden Village provides every type of accommodation for residents appropriate to their stage in life, in a seamless way. This builds resilience into the community and enables members of the same family to live within accessible distances from each other, further enhancing the community's sustainability and vitality. The village centre will provide opportunities for elderly alongside family housing.

Galtres Garden village will include affordable properties available on 'shared ownership' formats, affordable renting, private rent and properties for outright freehold purchase, all taking full advantage of Government grants and initiatives aimed at dealing with the current housing crisis. The intention is to create a new neighbourhood for all ages and with a range of tenures in a 'tenure blind' development.

Galtres Garden Village will provide a lifetime neighbourhood with a mix for younger, family and older households. This will support a well balanced and sustainable garden village neighbourhood.

Providing a range of housing densities

The garden village will have a discernible "beginning, middle and an end.". Densities will increase towards the village centre and train station and decrease towards the eastern and western edges. Around the community hub \ village centres densities will be higher reflecting the close proximity to services but across the site as a whole the densities will remain relatively low in the region of 32 dph.



Garden City streetscapes evoke the pastoral/slyvan life-style.



Creating the entry statement



Evolving simple, spacious, rural streetscapes as part of the garden City ethos



Hedges and curtilage treatment amplify the green setting created by existing trees





Concept plan showing the proposed garden village and location of key facilities within proposed settlement

Country park

Linear park

Village hub and local centre

Continuing care retirement community

Primary school

Providing a Vibrant Mixed Use Core

The community hub will accommodate the amenities and facilities for the whole community but also will specifically incorporate accommodation for the elderly and aged in close proximity, ensuring a vibrant and well utilised mixed-use core. The Garden Village takes the opportunity of increasing densities in these areas to ensure that the aged are at the centre of the community and benefit from proximity to all facilities.

Primary School Precedents:

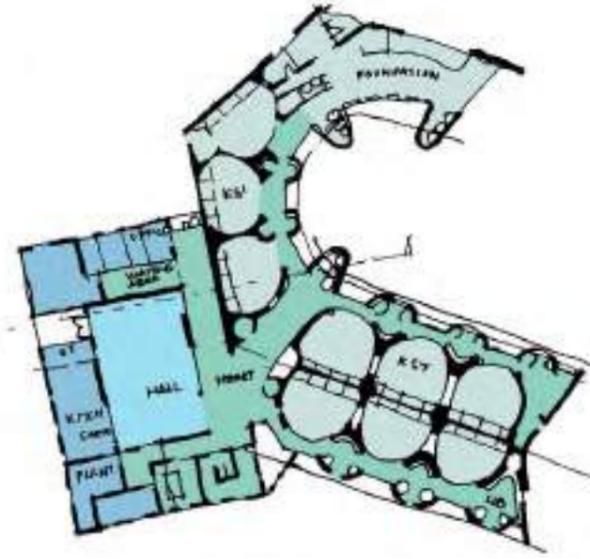


Elderly Care Precedents:



Forest School

There is an opportunity to provide a single form entry primary school on the Galtres Garden Village development. The following images show an example of a 'forest school'. The proposed development could provide a living classroom with wildlife corridors and SuDS creating opportunities for outdoors learning and providing an invaluable education resource for a new primary school.



Forest School - Floor Plan



Forest School - Floor Plan



Forest School - Cross Section



Care Village / Retirement Living

The concept masterplan identifies a development area suitable for elderly accommodation either within a care village or an extra care development. A mixed tenure Continuing Care Retirement Community (CCRC) for over 55s will ensure that the housing development is for all ages. This area of the masterplan may accommodate the following

Care cluster - For residents with either a temporary or permanent need for a higher level of care. It builds on the nursing home model but offers higher space standards. Rooms are arranged in clusters of twelve units and there are enhancements to support residents with more acute dementia needs.

Independent Living - A range of housing to offer different options for the down sizing elderly. A mix of two bed bungalows, stand alone two-storey 'Tyneside' style flats each with its own front door as well as conventional one and two bedroom flats possibly located in the hub building.

Outdoor gardening / workshop: Outdoor gardening activities provide an excellent opportunity for socialising and being active. The facility will include an area set aside of mini allotments as well as a greenhouse and workshop space.

Courtyard gardens - The independent living houses will be grouped around courtyards that provide a social and physical focus for groups of 8-10 homes. These will be intimate in scale and provide potential for sitting and socialising outdoors.

Communal gardens - Both the hub building and care cluster will have access to generous green courtyard gardens. These will provide terraces that allow amenity space to spill out and to create a visual connection with them. By using colour, texture and height more intimate spaces will be created. A 'rambling' path can create an events journey with events along the route including water features, herb gardens, bulb drifts and memory zones.



Community Hub

The concept masterplan identifies an area in the centre of the site suitable for a 'village hub' which may accommodate a small amount of retail and community facilities. Establishing the community hub at an early stage of the overall site development is important in fostering and developing community ownership and a sense of belonging.

The community hub building provides the opportunity to create a focal building within the village centre providing the opportunity for residents and visitors to meet and interact. Located close to the school and retirement accommodation an appropriate community hub of activity will can be created providing a range of facilities in a central location close to one another. This may include several small local convenience shops and retailers to meet local need.



Hub building

Community shop

Community cafe

Village bakery / artisan bakery

Village green

There will be an opportunity within the garden village for a 'village green' as part of the linear park which will be located close to the primary school and continuing care retirement community. The concept of 'village green' will help provide a space which can be used for various different activities as well as providing important amenity space for residents.

The environs of the Garden Village could also be managed as Village Green or common ground that surrounds the development as a whole adding to the sense of spaciousness before the outlying field areas with their more naturalistic vegetation and setting.



Village cricket



Village green activity



Village green croquet



Village green





Country park and link to Earswick

Retirement Living

Village Hub

Family housing

Green buffer

Sports pitches

Linear green space containing SuDS and accessible public open space

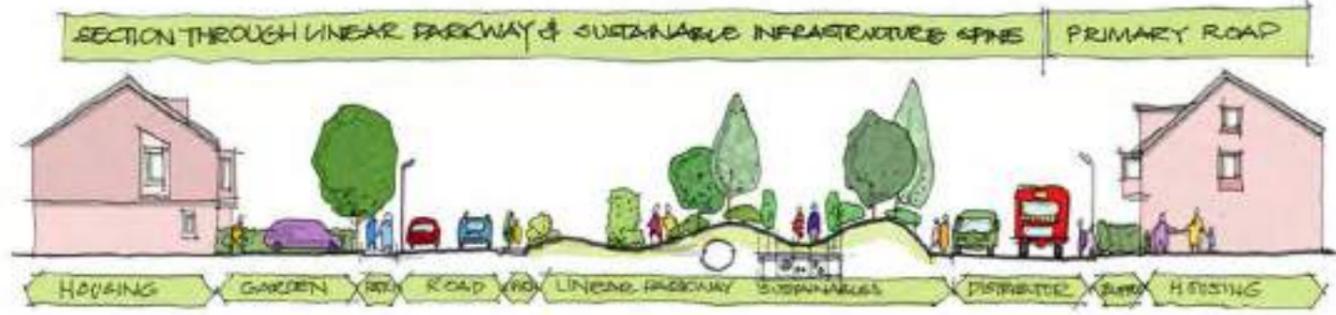
Primary School



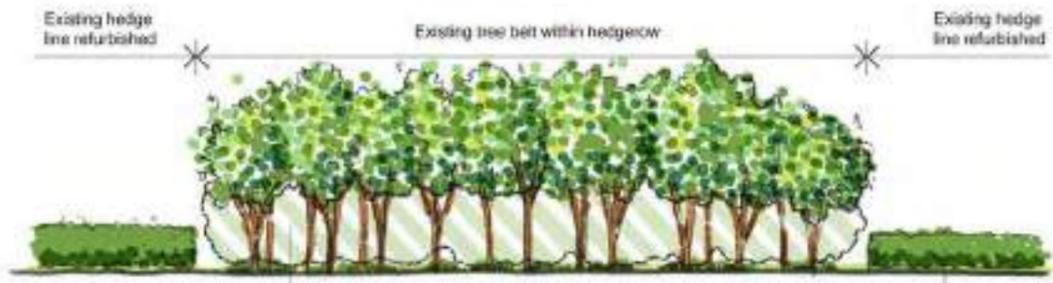


Galtres Grange Garden
Village
Design Principles

Understanding the landscape assets



Crown lifting - removal of lower branches to let views and light through



Lift crown of existing block of trees to create a more defined block of trees with lateral views through

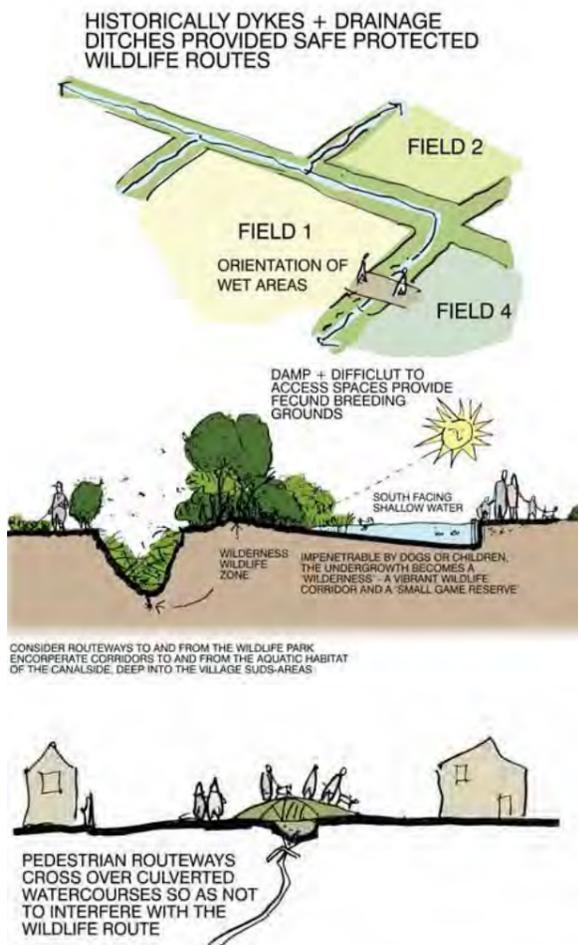


Existing hedgerow

Creating Wildlife Corridors

Galtres Garden Village will demonstrate that the 'landscape / drainage framework' that underpins the overall design delivers a broad range of habitats and diverse opportunities for wildlife to populate and inhabit these green spaces.

It will be possible to demonstrate that year on year, the evolution of these green routes delivers an increase in biodiversity when compared to the previous arable farmland. A significant area of land will remain undeveloped (30% of the site area) which will provide considerable opportunity to apply the techniques described here to enhance wildlife.



Green corridors and routes

Encouraging gardening and self-sufficiency



Galtres Garden village will have sufficient open space to provide opportunities for allotments and cultivation. This will provide an additional community resource that will help foster a sense of community and interaction between residents.

Feathering the edge of development

Feathering the edge prevents urban sprawl, but also creates a wide range of buffer landscape areas that can offer a variety of habitats and environments for flora and fauna. The "green" buffer will provide an area of land where no development will take place. Housing will be pulled away from the edge of the site to allow a green buffer and lower density housing.

Making landscape the defining expression of the sustainable settlement

Landscape takes time to mature and early phased planting will deliver dramatic "Statements of intent" in a cost effective and environmental conscious manner. The concept masterplan suggest additional planting around the perimeter of the site this will be planted at an early stage in the phasing of the development to ensure a landscape led approach. A network of landscaped buffer zones or corridors are to be provided around the perimeter of the site, providing off-road circular routes for a varied range of users, linked to proposed recreational paths crossing the site. These corridors will incorporate areas of structure planting, individual trees, native shrubs and species rich grasslands. They will also incorporate elements of natural play equipment which will form part of a trail throughout the site.



D Sustainable Drainage



- Attractive lake feature
- Wildlife enhancements

C Civic Square



- Public open space
- Recreation

G Nodes



- Series of legible spaces
- Focal areas
- Incidental recreation

Ensuring ease of accessible routes

Sustainable movement throughout the development will be key. "Green blue" routes can be incorporated to ensure access to recreation and leisure opportunities within a generous Public Open Space allocation which will mean residents enjoy a healthy and active lifestyle, unsurpassed in any comparable housing development.

Every householder will be equidistant from public open space and recreational facilities and all amenities will be easily accessed by foot, cycle or other sustainable means. The ease of access to recreation and leisure opportunities within the generous public open space allocation, means that residents will be able to enjoy a healthy and active lifestyle.



THE SYMBOLS OF THE GARDEN VILLAGE

THE SPATIAL SYNTAX OF THE PLACE DICTATES THAT ROAD HIERARCHY MOVES THROUGH PRIMARY, SECONDARY TO TERTIARY, EVOLVING THROUGH;

FORMAL PUBLIC SEMI-FORMAL SEMI-PUBLIC TO FORMAL TO PRIVATE

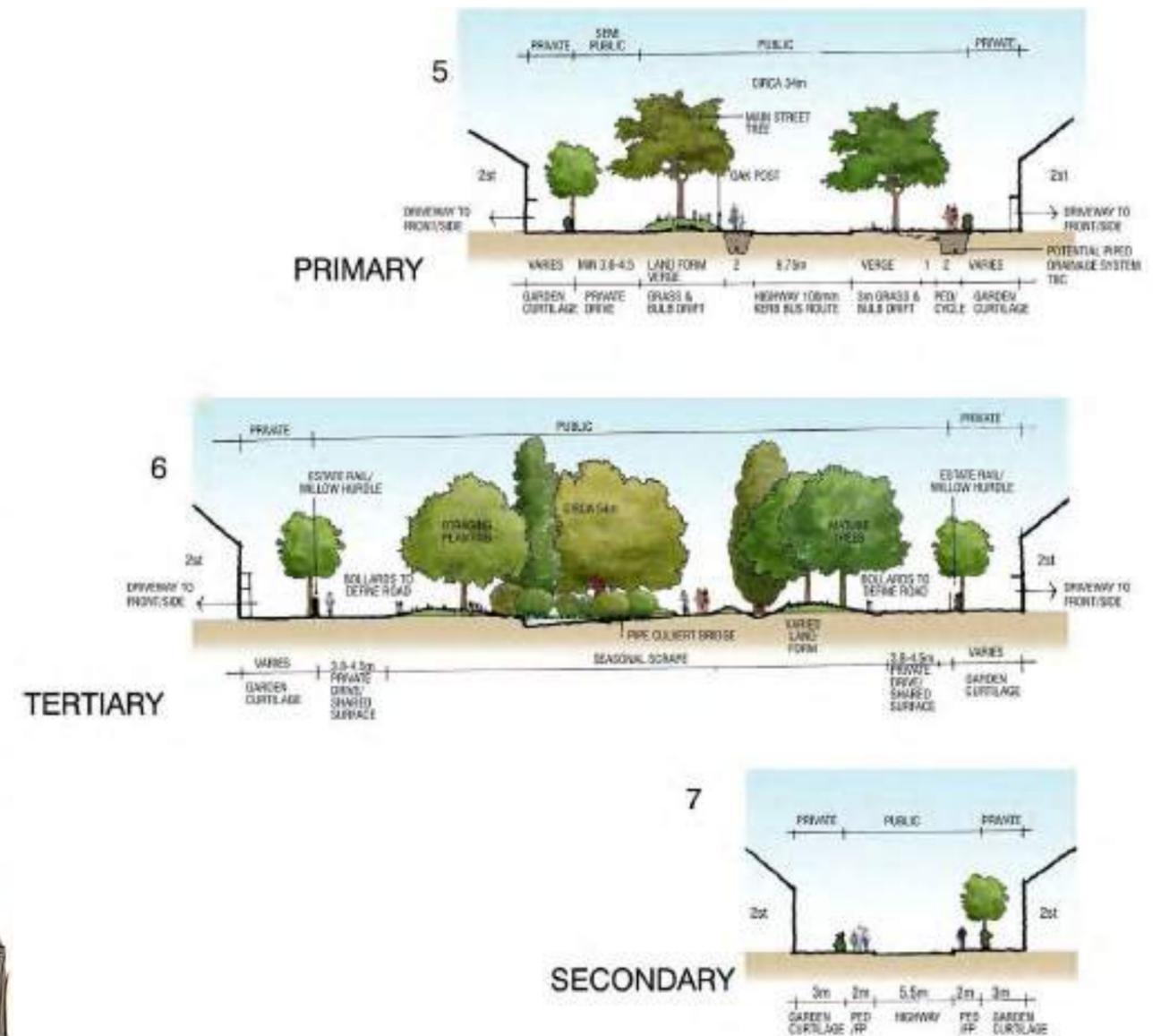
THE PLANTING, HARD + SOFT LANDSCAPE NEEDS TO THOROUGHLY UNDERPIN THIS DELINEATION



Developing a hierarchy of streets

The proposed Galtres Grange Garden Village extension will be developed with a strong hierarchy of roads. Primary roads linking the a 'Garden village hub' with the village, providing linkages between the emerging neighbourhoods.

- Primary routes will be defined in a formal way with buildings on either side which provide passive surveillance.
- Secondary routes - a network of local streets should provide access and circulation to the rest of the residential blocks
- Tertiary routes - can be designed to include a number of play streets with a shared surface.



Situating open spaces equidistant to neighbourhoods

This enables Public Open Space to be evenly spaced throughout the development and, importantly, that useful, functional, active green spaces occur on either side of the green routes making them interesting and attractive for the community to utilise.



Offering the widest range of leisure opportunities for the whole community

Public open space is not conceived merely as "corporation playing fields", but will offer a wide range of leisure opportunities for the whole community - young, middle aged, and elderly. "Trim tracks" and adventure trails can be incorporated within a "blue / green framework and create interest and involvement for all members of the family.



Providing education, fitness and well being opportunities within the green framework

The landscape framework will be capable of accommodating outdoor classrooms on 'green routes to school' and benefits from fitness areas and 'Tarzan' trails for health and well-being.





Country park, allotments and wildlife enhancement



Key Features

- Biodiversity habitat enhancement
- Forest school
- Retirement living \ extra care
- Green fingers
- Village green



Green fingers running through the site



Green buffer to around edge of site



New school and local centre



Next Steps

Galtres Garden Village site represents an exciting opportunity to deliver a landscaped garden village for approximately 1709 new homes contributing significantly to York's housing need.

In summary, the development proposals

- Can deliver direct pedestrian and cycle links with Earswick and
- Create a new village hub with village green, school, elderly accommodation and small amount of shops can be provided to create a 'garden village' centre to the proposals
- Provide a wide range of family housing with a density of 32 dph
- Integrate existing constraints
- Is deliverable in terms of land ownership and land owners who were committed to delivering a lasting legacy and the garden village concept.



idp PARTNERSHIP



**Nathaniel Lichfield
& Partners**
Planning. Design. Economics.

**City of York Objective Assessment of
Housing Needs**

Technical Report

Shirethorn Limited

8 July 2016

50644/MW/CR

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The City of York's Housing Need 92

1.0 Introduction

- 1.1 This report has been prepared by Nathaniel Lichfield & Partners (NLP) on behalf of Shirethorn Limited (“Shirethorn”). The report provides objective evidence on the local need and demand for housing in the City of York and its Housing Market Area [HMA]. This work provides housing need evidence to support a forthcoming Section 78 appeal concerning the refusal of planning permission for the development of a 0.6 ha Green Belt site in Strensall, York.
- 1.2 This report is prepared in the context of Shirethorn’s land interests in the City of York but does not consider site-specific issues. Rather, it establishes the scale of need for housing in the City of York based upon a range of housing, economic and demographic factors, trends and forecasts, based on the application of NLP’s HEaDROOM framework.
- 1.3 HEaDROOM is NLP’s bespoke framework for identifying locally generated housing needs and, since its conception in July 2010, has been applied in over one hundred and fifty studies across the country, including on behalf of a number of Local Authorities in evidence based studies (including SHMAs), to underpin their Local Plan processes.
- 1.4 This report is set out as follows:
- **Section 2.0** - This section considers the approach which needs to be taken to calculating Objectively Assessed Housing Need [OAHN] and sets out the requirements of the Framework, the Practice Guidance and relevant High Court judgments in this context;
 - **Section 3.0** - This section provides a critique of the 841 dwellings per annum [dpa] identified as the City of York’s OAHN in the June 2016 Strategic Housing Market Assessment [SHMA] for the City, and the subsequent SHMA Addendum (also June 2016) which recommended a broader OAHN range of 706 dpa to 898 dpa. This Section sets out the extent to which the two documents fulfil the necessary requirements previously discussed and whether they represent the full, objectively assessed housing need for the City of York;
 - **Section 4.0** – Sets out the approach taken by NLP to define a new OAHN for the City of York, using the latest demographic evidence and economic forecasts and affordable housing needs;
 - **Section 5.0** - provides an analysis of market signals in the City;
 - **Section 6.0** – identifies a revised OAHN for the City of York, based on NLP’s PopGroup modelling;
 - **Section 7.0** – Finally, this section summarises the key issues within the SHMA and subsequent Addendum and sets out why it is not compliant with the requirements for an OAHN calculation.

2.0 Approach to Identifying OAHN

Introduction

- 2.1 This section sets out the requirements of the Framework and the Practice Guidance in objectively assessing housing needs. This will provide the benchmark against which the SHMA and subsequent Addendum will be assessed, to ensure the necessary requirements are met. In addition, relevant High Court judgments have been referenced to set out the requirements of an OAHN calculation in a legal context.

Policy Context

The Framework

- 2.2 The Framework outlines a two-step approach to setting housing requirements in Local Plans. Firstly, to define the full objectively assessed need for development and then secondly, to set this against any adverse impacts or constraints which would mean that need might not be met. This is enshrined in the approach defined in the Framework which sets out the presumption in favour of sustainable development:

“For plan-making this means that:

- *LPAs should positively seek opportunities to meet the development needs of their area;*
- *Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:*
 - *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or*
 - *specific policies in this Framework indicate development should be restricted.”* [§14]

- 2.3 The Framework goes on to set out that in order to 'boost significantly' the supply of housing, LPAs should:

“use their evidence base to ensure that their Local Plan meets the full objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in the framework...” [§47]

- 2.4 The Framework sets out the approach to defining such evidence which is required to underpin a local housing requirement. It sets out that in evidencing housing needs:

“LPAs should have a clear understanding of housing needs in their area. They should:

- *prepare a SHMA to assess their full housing needs, working with*

neighbouring authorities where housing market areas cross administrative boundaries. The SHMA should identify the scale and mix of housing and the range of tenures that the local population is likely to need over the plan period which:

- *meets household and population projections, taking account of migration and demographic change;*
- *addresses the need for all types of housing, including affordable housing and the needs of different groups in the community...; and*
- *caters for housing demand and the scale of housing supply necessary to meet this demand...”* [§159]

2.5 Furthermore, the core planning principles set out in the Framework [§17] indicate that a planned level of housing to meet objectively assessed needs must respond positively to wider opportunities for growth and should take account of market signals, including housing affordability.

2.6 The Framework [§215] sets out that following 12-months from the publication of the Framework, only due weight should be given to relevant policies in existing plans according to their degree of consistency with the Framework. The Framework and associated Practice Guidance are explicit that plans and subsequently the policies contained within:

- should be kept up-to-date; and
- meet the objectively assessed needs of the area.

The Practice Guidance

2.7 The Framework is supplemented by the Practice Guidance which provides an overarching framework for considering housing needs, but also acknowledges that:

“There is no one methodological approach or use of a particular dataset(s) that will provide a definitive assessment of development need”¹.

2.8 The Guidance states that household projections published by CLG should provide the starting point estimate of overall housing need².

2.9 Although the Practice Guidance notes that demographic trends should be applied as a starting point when assessing the OAHN, it goes on to state that consideration should also be given to the likely change in job numbers. This supports the importance that the Framework [§158] places on the economy and the requirement to *“ensure that their assessment of and strategies for housing, employment and other uses are integrated, and that they take full account of relevant market and economic signals”*. A failure to take account of economic considerations in the determination of the OAHN would be inconsistent with this policy emphasis.

¹ 2a-005-20140306

² 2a-015-20140306

2.10 The Inspector at the Fairford Inquiry³ recognised the role of economic factors in the assessment of the OAHN for Cotswold District:

“The Council has not provided a figure for OAN which takes account of employment trends. The Council argues that the advice in the PPG does not require local planning authorities to increase their figure for OAN to reflect employment considerations, but only to consider how the location of new housing or infrastructure development could help address the problems arising from such considerations. I disagree. In my view, the PPG requires employment trends to be reflected in the OAN, as they are likely to affect the need for housing. They are not “policy on” considerations but part of the elements that go towards reaching a “policy off” OAN, before the application of policy considerations. There is no evidence that the Council’s figures reflect employment considerations” [IR. §19].

2.11 This view reflects the position expressed by the Inspector (and confirmed by the Secretary of State) in the Pulley Lane Inquiries in Droitwich Spa⁴. The Inspector’s report (which was accepted by the SoS) states that:

“The Council’s case that “unvarnished” means arriving at a figure which doesn’t take into account migration or economic considerations is neither consistent with the (Gallagher) judgment, nor is it consistent with planning practice for deriving a figure for objectively assessed need to which constraint policies are then applied. Plainly the Council’s approach is incorrect. Clearly, where the judgement refers to ‘unvarnished’ figures (paragraph 29) it means environmental or other policy constraints. There is nothing in the judgement which suggests that it is not perfectly proper to take into account migration, economic considerations, second homes and vacancies”. [IR. §8.45]

2.12 Housing need, as suggested by household projections, should be adjusted to reflect appropriate market signals, as well as other market indicators of the balance between the demand for and supply of dwellings. Relevant signals may include land prices, house prices, rents, affordability (the ratio between lower quartile house prices and the lower quartile income or earnings can be used to assess the relative affordability of housing), rate of development and, overcrowding⁵:

“Appropriate comparisons of indicators should be made. This includes comparison with longer term trends (both in absolute levels and rates of change) in the: housing market area; similar demographic and economic areas; and nationally. A worsening trend in any of these indicators will require upward adjustment to planned housing numbers compared to ones based solely on household projections.”⁶

2.13 In areas where an upward adjustment is required, plan makers should set this

³ Land South of Cirencester Road, Fairford (PINS Ref No: APP/F1610/A/14/2213318) (22 September 2014).

⁴ Land at Pulley Lane, Newland Road and Primsland Way, Droitwich Spa (APP/H1840/A/13/2199085) and Land north of Pulley Lane, Newland Road and Primsland Way, Droitwich Spa (PINS Ref No: APP/H1840/A/13/2199426) (2 July 2014).

⁵ 2a-019-20140306

⁶ 2a-020-20140306

adjustment at a level that is reasonable. The more significant the affordability constraints (as reflected in rising prices and rents, and worsening affordability ratio) and the stronger other indicators of high demand (e.g. the differential between land prices), the larger the improvement in affordability needed and, therefore, the larger the additional supply response should be⁷.

- 2.14 The Guidance recognises that market signals are affected by a number of economic factors, and plan makers should not attempt to estimate the precise impact of an increase in housing supply. Rather they should increase planned supply by an amount that, on reasonable assumptions and consistent with principles of sustainable development, could be expected to improve affordability, and monitor the response of the market over the plan period⁸.
- 2.15 The Practice Guidance concludes by suggesting that the total need for affordable housing should be identified and converted into annual flows by calculating the total net need (subtracting total available stock from total gross need) and converting total net need into an annual flow.
- 2.16 The total affordable housing need should then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, given the probable percentage of affordable housing to be delivered by market housing led developments:

“An increase in the total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes.”⁹”

Local Plan Experts Group Report to CLG (2016)

- 2.17 The Local Plan Expert Group [LPEG], in its Report to the Secretary of State for Communities and Local Government in March 2016, recommended various changes to the Practice Guidance with the remit of considering how local plan-making could be made more efficient and effective.
- 2.18 Although very limited weight can be given to the LPEG approach given that it is not policy or endorsed by Government, it is at least helpful in seeking to understand the general ‘direction of travel’ of defining OAHN and what an appropriate response might be to define the influence of market signals and affordable housing needs.
- 2.19 LPEG recommends changes to the preparation of SHMAs and determination of OAHN. It proposes the following changes in approach:
- a If they wish, plan makers should continue to be able to plan for further growth beyond FOAHN by considering a “*policy on*” alignment with job growth in setting their housing requirement where this is greater than housing need, but this should not be part of OAHN;

⁷ 2a-020-20140306

⁸ ibid

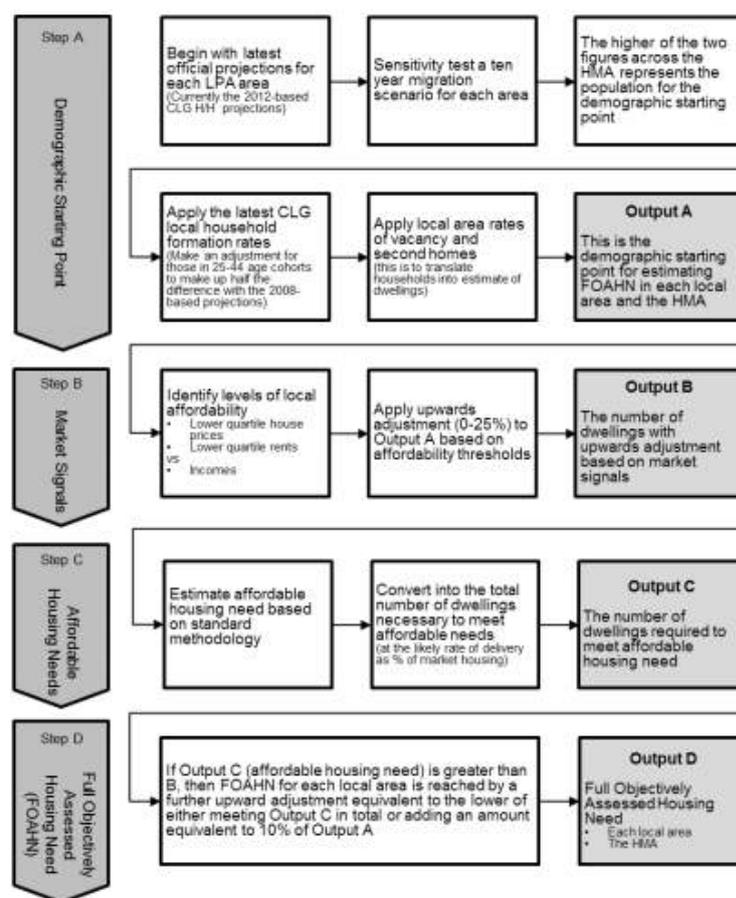
⁹ ID: 2a-029-20140306

- b It places more emphasis on market signals (concentrating on the relationship between median quartile house prices and lower quartile rental values and wages) and provides guidance on the level of uplift to apply (0-25%), based on the scale of affordability pressure;
- c It provides clear guidance on how to respond to affordable housing need – but without suggesting that the OAHN should be increased to meet the affordable housing need in full;
- d Where the total number of homes that would be necessary to meet affordable housing need is greater than the adjusted demographic-led OAHN, then this figure should be uplifted by a further 10%. The 10% uplift is intended to provide a streamline approach that removes judgement and debate from the process of setting OAHN (as opposed to what might be the most accurate under current Practice Guidance);
- e It requires consideration of both the SNPP and 10-year trends in the assessment of the starting point requirement and states that the higher figure should be applied;
- f It specifically states that Unattributable Population Change¹⁰ and other adjustments should not be applied unless there are exceptional reasons to do so; and,
- g It requires consideration to be given to an uplift in household formation rates – increasing the 25-44 cohorts to make up half the difference with the 2008-based projections.

2.20 The methodological approach proposed by the LPEG is set out Figure 2.1.

¹⁰ Unattributable Population Change (UPC) is the population change between the 2001 and 2011 Censuses which cannot be attributed to births, deaths or migration. It is either a result of the mis-recording of migration or the mis-recording of one (or both) Censuses.

Figure 2.1 Proposed methodology for determination of OAHN.



Source: LPEG Appendix 6: Revised Practice Guidance Text

2.21 Applying the LPEG approach should be treated with caution at this stage given that it is not policy nor endorsed by Government and, in of itself, it will only be justified once/if the Practice Guidance is updated. It must also be seen in the context of the whole LPEG methodology and its purpose.

Recent Legal Judgments

2.22 There have been several key recent legal judgments of relevance to the identification of OAHN for the purposes of a S.78 appeal, and which provide clarity on interpreting the Framework:

- ‘St Albans City and District Council v (1) Hunston Properties Limited and (2) Secretary of State for Communities and Local Government [2013] EWCA Civ 1610’ referred to as “Hunston”;
- ‘(1) Gallagher Homes Limited and (2) Lioncourt Homes Limited v Solihull Metropolitan Borough Council [2014] EWHC 1283’ referred to as “Solihull”;
- ‘Satnam Millennium Limited and Warrington Borough Council [2015] EWHC 370’ referred to as “Satnam”;

- ‘Kings Lynn and West Norfolk Borough Council v (i) Secretary of State for Communities and Local Government and (ii) Elm Park Holdings [2015] EWHC 1958’ referred to as “Kings Lynn”; and
- ‘West Berkshire District Council v (i) Secretary of State for Communities and Local Government and (ii) HDD Burghfield Common Ltd [2016] EWHC 267’ referred to as “Burghfield Common”.

Hunston

2.23 “Hunston” goes to the heart of the interpretation of §47 of the Framework. It relates to an appeal decision in respect of a scheme predominantly comprising housing on a Green Belt site. Its relevance is that it deals with the question of what forms the relevant benchmark for the housing requirement, when policies on the housing requirement are absent, silent or out of date as referred to in §14 of the Framework.

2.24 Hunston establishes that §47 applies to decision-taking as well as plan-making and that where policies for the supply of housing are out of date, objectively assessed needs become the relevant benchmark.

2.25 Sir David Keene in his judgment at §25 stated:

“... I am not persuaded that the inspector was entitled to use a housing requirement figure derived from a revoked plan, even as a proxy for what the local plan process may produce eventually. The words in paragraph 47(1), “as far as is consistent with the policies set out in this Framework” remind one that the Framework is to be read as a whole, but their specific role in that sub-paragraph seems to me to be related to the approach to be adopted in producing the Local Plan. If one looks at what is said in that sub-paragraph, it is advising local planning authorities:

“to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework.”

That qualification contained in the last clause quoted is not qualifying housing needs. It is qualifying the extent to which the Local Plan should go to meet those needs. The needs assessment, objectively arrived at, is not affected in advance of the production of the Local Plan, which will then set the requirement figure.”

2.26 Crucially Hunston determined that it is clear that constraints should not be applied in arriving at an objective assessment of need. Sir David Keene in Hunston goes on to set out that (§26 and §27):

“... it is not for an inspector on a Section 78 appeal to seek to carry out some sort of local plan process as part of determining the appeal, so as to arrive at a constrained housing requirement figure. An inspector in that situation is not in a position to carry out such an exercise in a proper fashion, since it is impossible for any rounded assessment similar to the local plan process to be done... It seems to me to have been mistaken to use a figure for housing requirements below the full objectively

assessed needs figure until such time as the Local Plan process came up with a constrained figure.

It follows from this that I agree with the judge below that the inspector erred by adopting such a constrained figure for housing need. It led her to find that there was no shortfall in housing land supply in the district. She should have concluded, using the correct policy approach, that there was such a shortfall. The supply fell below the objectively assessed five year requirement.”

Solihull

2.27 “Solihull” is concerned with the adoption of the Solihull Local Plan and the extent to which it was supported by a figure for objectively assessed housing need. Although related to plan-making, it again deals with §14 and §47 of the Framework and draws upon, and reiterates, the earlier Hunston judgment.

2.28 The judgment of Hickinbottom J in Solihull sets out a very useful summary of the staged approach to arriving at a housing requirement, providing some useful definitions of the concepts applied in respect of housing needs and requirements (§37):

“As a preliminary point, it will be helpful to deal briefly with the different concepts and terms in play.

*i) **Household projections:** These are demographic, trend-based projections indicating the likely number and type of future households if the underlying trends and demographic assumptions are realised. They provide useful long-term trajectories, in terms of growth averages throughout the projection period. However, they are not reliable as household growth estimates for particular years: they are subject to the uncertainties inherent in demographic behaviour, and sensitive to factors (such as changing economic and social circumstances) that may affect that behaviour...*

*ii) **Full Objective Assessment of Need for Housing:** This is the objectively assessed need for housing in an area, leaving aside policy considerations. It is therefore closely linked to the relevant household projection; but is not necessarily the same. An objective assessment of housing need may result in a different figure from that based on purely demographics if, e.g., the assessor considers that the household projection fails properly to take into account the effects of a major downturn (or upturn) in the economy that will affect future housing needs in an area. Nevertheless, where there are no such factors, objective assessment of need may be – and sometimes is – taken as being the same as the relevant household projection.*

*iii) **Housing Requirement:** This is the figure which reflects, not only the assessed need for housing, but also any policy considerations that might require that figure to be manipulated to determine the actual housing target for an area. For example, built development in an area might be constrained by the extent of land which is the subject of policy protection,*

such as Green Belt or Areas of Outstanding Natural Beauty. Or it might be decided, as a matter of policy, to encourage or discourage particular migration reflected in demographic trends. Once these policy considerations have been applied to the figure for full objectively assessed need for housing in an area, the result is a “policy on” figure for housing requirement. Subject to it being determined by a proper process, the housing requirement figure will be the target against which housing supply will normally be measured.”

2.29 Whilst this is clear that a housing requirement is a “policy on” figure and that it may be different from the full objectively assessed need, Solihull does reiterate the principles set out in Hunston, namely that where a Local Plan is out of date in respect of a housing requirement (in that there is no Framework-compliant policy for housing provision within the Development Plan) then the housing requirement for decision taking will be an objective assessment of need [§88]:

“I respectfully agree with Sir David Keene (at [4] of Hunston): the drafting of paragraph 47 is less than clear to me, and the interpretative task is therefore far from easy. However, a number of points are now, following Hunston, clear. Two relate to development control decision-taking.

i) Although the first bullet point of paragraph 47 directly concerns plan-making, it is implicit that a local planning authority must ensure that it meets the full, objectively assessed needs for market and affordable housing in the housing market, as far as consistent with the policies set out in the NPPF, even when considering development control decisions.

ii) Where there is no Local Plan, then the housing requirement for a local authority for the purposes of paragraph 47 is the full, objectively assessed need.”

2.30 Solihull also reaffirms the judgment in Hunston that full objectively assessed needs should be arrived at, and utilised, without the application of any constraining factors. At §91 of the judgment the judge sets out:

“... in the context of the first bullet point in paragraph 47, policy matters and other constraining factors qualify, not the full objectively assessed housing needs, but rather the extent to which the authority should meet those needs on the basis of other NPPF policies that may, significantly and demonstrably outweigh the benefits of such housing provision.”

Satnam

2.31 “Satnam” highlights the importance of considering affordable housing needs in concluding on full OAHN. The decision found that the adopted OAHN figure within Warrington’s Local Plan was not in compliance with policy in respect of affordable housing because (as set out in §43) the assessed need for affordable housing need was never expressed or included as part of OAHN.

2.32 The decision found that the “proper exercise” had not been undertaken, namely:

“(a) having identified the OAN for affordable housing, that should then be

considered in the context of its likely delivery as a proportion of mixed market/affordable housing development; an increase in the total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes;

(b) the Local Plan should then meet the OAN for affordable housing, subject only to the constraints referred to in NPPF, paragraphs 14 and 47.”

- 2.33 In summary, this judgment establishes that full OAHN has to include an assessment of full affordable housing needs.

Kings Lynn

- 2.34 Whilst “Satnam” establishes the fact that full OAHN must include affordable housing needs, “Kings Lynn” establishes how full affordable housing needs should be addressed as part of a full OAHN calculation. The judgment identifies that it is the function of a SHMA to address the needs for all types of housing including affordable, but not necessarily to meet these needs in full. The justification of this statement is set out below in §35 to §36 of the judgment.

“At the second stage described by the second sub-bullet point in paragraph 159, the needs for types and tenures of housing should be addressed. That includes the assessment of the need for affordable housing as well as different forms of housing required to meet the needs of all parts of the community. Again, the PPG provides guidance as to how this stage of the assessment should be conducted, including in some detail how the gross unmet need for affordable housing should be calculated. The Framework makes clear these needs should be addressed in determining the FOAN, but neither the Framework nor the PPG suggest that they have to be met in full when determining that FOAN. This is no doubt because in practice very often the calculation of unmet affordable housing need will produce a figure which the planning authority has little or no prospect of delivering in practice. That is because the vast majority of delivery will occur as a proportion of open-market schemes and is therefore dependent for its delivery upon market housing being developed. It is no doubt for this reason that the PPG observes at paragraph ID 2a-208-20140306 as follows:

i "The total affordable housing need should then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, given the probable percentage of affordable housing to be delivered by market housing led developments. An increase in total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes."

... This consideration of an increase to help deliver the required number of affordable homes, rather than an instruction that the requirement be met in total, is consistent with the policy in paragraph 159 of the

Framework requiring that the SHMA "addresses" these needs in determining the FOAN. They should have an important influence increasing the derived FOAN since they are significant factors in providing for housing needs within an area."

- 2.35 The judgment is clear that the correct method for considering the amount of housing required to meet full affordable housing needs is to consider the quantum of market housing needed to deliver full affordable housing needs (at a given percentage). However, as the judgment sets out, this can lead to a full OAHN figure which is so large that a LPA would have *"little or no prospect of delivering (it) in practice"*. Therefore, it is clear from this judgment that although it may not be reasonable and therefore should not be expected that the OAHN will include affordable housing needs in full, an uplift or similar consideration of how affordable needs can be 'addressed' is necessary as part of the full OAHN calculation. This reflects §159 of the Framework.

Burghfield Common

- 2.36 Burghfield Common relates to an allowed appeal decision for a residential development on land at Firlands Farm, Hollybush Lane, Burghfield Common, Berkshire. Its relevance is that the appellant in that appeal produced evidence on objectively assessed needs, which the Inspector concluded should be used to judge the five year land supply situation rather than the interim Core Strategy figure. The judgment essentially confirms that the Inspector was entitled to rely on the appellants evidence on OAHN concluding that the appellants:

"... had produced evidence on housing need for the purposes of this appeal which the Inspector considered to be material to his decision. That, as I have said, was in the circumstances the correct approach for him to adopt." [§49]

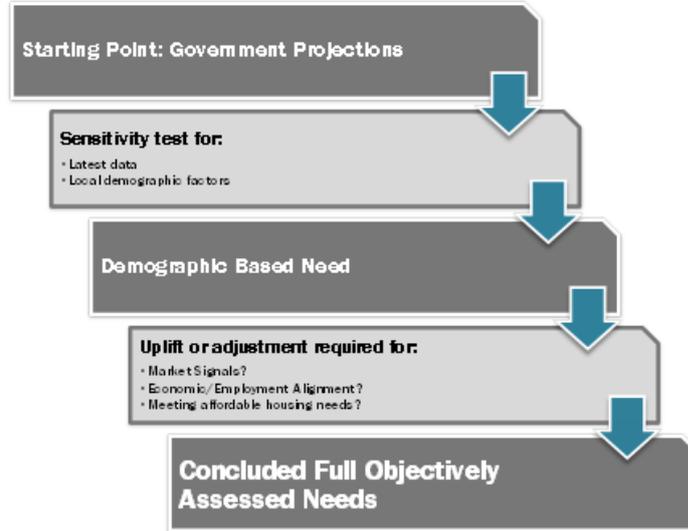
- 2.37 In considering OAHN at a s.78 appeal it is not the sole preserve of the LPA to produce evidence and calculate the appropriate OAHN. Alternative evidence material to the case, including that which would indicate a different conclusion on OAHN, should be properly had regard to, based on the reasonableness of its approach.

Conclusion

- 2.38 It is against this policy context that the housing need for the City of York must be considered. In practice, applying the Framework and Practice Guidance to arrive at a robust and evidenced OAHN is a staged and logical process. An OAHN must be a level of housing delivery which meets the needs associated with population, employment and household growth, addresses the need for all types of housing including affordable and caters for housing demand (the Framework, §159).
- 2.39 Furthermore, a planned level of housing to meet OAHN must respond positively to wider opportunities for growth and should take account of market

signals, including affordability (the Framework §17). This approach has been supported by the recent Legal Judgements summarised above. This approach is summarised in Figure 2.2.

Figure 2.2 The Framework and Practice Guidance Approach to Objectively Assessing Housing Needs



Source: NLP based upon the Framework/ Practice Guidance

3.0 City of York Council's OAHN Evidence

Introduction

- 3.1 Before setting out a critique of CYC's housing OAHN evidence base, it is important to recognise that the Council has never had an adopted Local Plan for the City (under the 1971 Act, the 1990 Act or the 2004 Act) and progress on the current draft Local Plan is glacial.
- 3.2 The development plan for York comprises two policies¹¹ and the Key Diagram of the partially revoked Yorkshire and Humber Regional Strategy (2008) [YHRS]. There is no adopted Local Plan for York that forms part of the development plan. Instead, there is a long history of failed attempts to produce an adopted Local Plan.
- 3.3 In 2013, the Council published the '*York Local Plan – Preferred Options*' document for consultation in summer 2013, followed by a 'Further Sites' consultation for six weeks in summer 2014 which included potential new sites and changes to the boundaries of some of the sites originally identified. Following these consultations, a 'Publication Draft Local Plan and Proposals Map' was considered by the Local Plan Working Group [LPWG] and by Cabinet in September 2014¹². With the intention of progressing a Framework compliant local plan, the Cabinet resolved to carry through the LPWG's recommendations and approve the Local Plan Publication Draft for public consultation, subject to amendments circulated at the Cabinet meeting and to instruct officers to report back following the consultation with a recommendation on whether it would be appropriate to submit the Publication Draft for public examination.
- 3.4 However, at the Full Council on 9 October 2014¹³ a resolution was made to halt the public consultation on the Local Plan Publication Draft in order to reassess and accurately reflect objectively assessed requirements. The resolution also instructed officers to produce a report on the housing trajectory to be brought back to the next meeting of the LPWG in November 2014 along with the relevant background reports. The intention was for the report to allow the LPWG to agree an accurate analysis of the housing trajectory that is objective, evidence based and deliverable. The analysis was to be used to "*inform housing allocations and a new proposed Local Plan to be brought back to the next LPWG for discussion and recommendation to Cabinet in November.*"

¹¹ Both relating to Green Belt, requiring its inner boundaries to be defined in a plan and confirming that the general extent is about 6 miles out from the City centre

¹² Cabinet Meeting Thursday 25 September, 2014 - Minutes

¹³ Resolutions and proceedings of the Meeting of the City of York Council held in Guildhall, York on Thursday, 9th October, 2014

- 3.5 The Council has published the following ‘further work’ on the Local Plan relating to housing needs since the Full Council resolution to halt the Publication Draft Local Plan in 2014:
- 1 In December 2014, the LPWG considered a report on ‘*Housing Requirements in York*’ which was based on two background documents produced by Arup¹⁴. The report set out four different housing requirement figures that were considered sound against the evidence base and three options for progressing the work on housing requirements. The LPWG members agreed a housing requirement figure of 926 dpa¹⁵;
 - 2 In September 2015 the LPWG considered an update on the ‘*Objective Assessment of Housing Need*’ [OAHN] report produced by Arup¹⁶ and a report on ‘*Economic Growth*’¹⁷. The Arup report concluded that the housing ‘requirement’ should be in the range of 817 dwellings per annum [dpa] to 854 dpa between 2012 and 2031. The LPWG’s recommendations were that the Executive Committee note the Arup OAHN report and endorse further work, including an evaluation of any spatial and delivery implications, on two scenarios for economic growth that would be reported back to the LPWG in due course;
 - 3 In Autumn 2015 the Council commissioned GL Hearn jointly with Ryedale, Hambleton and the North York Moors National Park Authority to undertake a Strategic Housing Market assessment [SHMA]¹⁸. This study aimed to provide a clear understanding of housing needs in the City of York area. The SHMA was published as part of a suite of documents for the LPWG meeting on 27th June 2016. It concluded that the OAHN for the City of York was in the order of 841 dpa.
 - 4 On the 25th May 2016 ONS published a new set of (2014-based) sub national population projections [SNPP]. These projections were published too late in the SHMA process to be incorporated into the main document. However in June 2016 GL Hearn produced an Addendum¹⁹ to the main SHMA report which briefly reviewed key aspects of the projections and concluded that the latest (higher) SNPP suggested a need for some 898 dpa between 2012 and 2032. However due to concerns over the historic growth within the student population, the Addendum settled on a wider OAHN range of 706 dpa – 898 dpa, and therefore the Council did not need to move away from the previous 841 dpa figure.
- 3.6 The remainder of this section provides a critique of Council’s most recent housing evidence base, specifically the 2016 SHMA and subsequent Addendum.

¹⁴ Assessment of the Evidence on Housing Requirements in York (Arup, May 2013) & Housing Requirements in York: Evidence on Housing Requirements in York: 2014 Update (Arup, September 2014)

¹⁵ Local Plan Working Group 17 December 2014 - Minutes

¹⁶ Evidence on Housing Requirements in York: 2015 Update – Arup (August 2015)

¹⁷ York Economic Forecasts – Oxford Economics (May 2015)

¹⁸ GL Hearn (June 2016): City of York Council Strategic Housing Market Assessment

¹⁹ GL Hearn (June 2016): City of York Council Strategic Housing Market Assessment - Addendum

Overview of the City of York SHMA and Addendum

3.7 As noted above, the emerging City of York Local Plan is currently underpinned by two key housing need documents:

- 1 City of York Strategic Housing Market Assessment [SHMA], prepared on behalf of CYC by GL Hearn in June 2016; and,
- 2 City of York SHMA Addendum, also prepared on behalf of CYC by GL Hearn in June 2016.

City of York SHMA (June 2016)

3.8 GL Hearn states that the SHMA was prepared ‘essentially to sensitivity check’ the Arup August 2015 Housing Requirements in York report. However, it departs significantly from the Arup approach and undertakes an entirely new set of modelling using the 2012-based SNPP and 2012-based SNHP for the period 2012-2032. The subsequent Addendum was prepared to understand the implications on the earlier SHMA analysis of the publication of the 2014-based Sub-National Population Projections [SNPP] on 25th May 2016.

3.9 The SHMA concludes (Section 2.0) that the HMA which covers the City of York also extends to include Selby. However:

“While we propose a HMA which links to Selby and York we are not considering housing need across the HMA. Selby has recently produced its own SHMA and this assessment does not seek to replicate it” [§2.106]

3.10 GL Hearn undertook a number of demographic modelling scenarios including the 2012-based SNPP; long term migration trends and 2012-based SNPP adjusted to take into account the (higher) 2014 MYE. GL Hearn concluded that the SNPP “is a sound demographic projection from a technical perspective” [page 83], although they attached greater weight to a higher figure of 833 dpa based on a projection which takes into account the 2013 and 2014 Mid-Year Population Estimates [MYE] and rolls forward the SNPP.

3.11 The SHMA concluded that one of the most noteworthy findings from the analysis was the relatively small increase in the population aged 15-29 (which includes the vast majority of students):

“Whilst over the 2001-2014 period this age group increased by 12,600, there is only projected to be a 2,500 increase over the 20-years to 2032. Such a finding is consistent with this age group not being expected to see any notable changes at a national level in the future...At the time of writing York University was not expecting significant increases in the student population, whilst St Johns was only expecting a modest increase. With this knowledge, and the age specific outputs from the SNPP we can have reasonable confidence that the SNPP is a realistic projection.” [§4.31-§4.32]

3.12 The projections are set out in Table 3.1.

Table 3.1 Summary of the City of York SHMA (June 2016) Range of Scenarios (2012-2032)

	Change in Households	Dwellings per annum (2012-2032)	Job growth per annum (2012-2032)
2012-based SNPP	15,093	783 dpa	(not provided)
2014-based	18,458	958 dpa	
UPC adjusted	12,676	658 dpa	
10-year migration	13,660	709 dpa	
2012-based SNPP (as updated)	16,056	833 dpa	
OE Baseline	15,019	780 dpa	609
OE Re-profiling			635
OE – higher migration	15,685	814 dpa	868
YHREM	15,356	797 dpa	789

Source: City of York SHMA (June 2016)

- 3.13 The analysis also considered future economic growth performance by accessing forecasts from Oxford Economics [OE] and Experian (via the Yorkshire and the Humber Regional Economic Modelling [YHREM]). The forecasts range from 609 jobs per annum (OE baseline) to 868 (OE higher migration).
- 3.14 The GL Hearn modelling concluded that this would support a level of population growth broadly in line with the 2012-based SNPP generating between 780-814 dpa, which it considered to be below the level of need identified from the most recent MYE data:
- “On balance there is no justification for an uplift to housing numbers in the City to support expected growth in employment” [page 87].*
- 3.15 The SHMA proceeds to identify a relatively high level of affordable housing need, of 573 dpa, above the 486 dpa need identified by GVA in the 2011 SHMA. It states:
- “The analysis undertaken arguably provides some evidence to justify considering an adjustment to the assessed housing need to address the needs of concealed households, and support improvements [sic] household formation for younger households; although any adjustment will also need to take account of any future changes already within the household projections (e.g. in terms of improving household formation). The issue of a need for any uplift is considered alongside the analysis of market signals which follows.” [§6.112]*
- 3.16 However, the SHMA concludes that whilst the affordable housing need represents 69% of the need identified in the demographic-led projections, it is not appropriate to directly compare the need as they are calculated in different ways:
- *“The analysis does not suggest that there is any strong evidence of a need to consider housing delivery higher than that suggested by demographic projections to help deliver more affordable homes to meet the affordable housing need.*

- *However, in combination with the market signals evidence some additional housing might be considered appropriate to help improve access to housing for younger people. A modest uplift would not be expected to generate any significant population growth (over and above that shown by demographic projections) but would contribute to reducing concealed households and increasing new household formation. The additional uplift would also provide some additional affordable housing.” [page 115]*

- 3.17 GL Hearn’s market signals analysis in the SHMA indicates that there are affordability pressures in the City of York:
- 1 Lower quartile to median income ratio is around 7.89 (compared to 6.45 nationally);
 - 2 House prices are also very high and tripled in the pre-recession decade. Private rental levels in York, at £675 pcm, which are higher than comparator areas and nationally (£600 pcm in England);
 - 3 Over-occupied dwellings increased by 52% between 2001 and 2011: *“which is high relative to that seen at a regional or national level”* [§8.34].
 - 4 Housing delivery in York: *“...has missed the target each year since 2007”* [§8.38].
- 3.18 In this regard, GL Hearn concludes that:
- “It would therefore be appropriate to consider a modest upward adjustment to the demographic assessment of housing need to improve affordability over time.”* [§8.99]
- 3.19 To consider what level of uplift might be appropriate, GL Hearn sought to assess the degree to which household formation levels had been constrained for younger age groups, and what scale of adjustment to housing provision would be necessary for these to improve. This was derived on the assumption that household formation rates of the 25-34 age group would return to 2001 levels by 2025 (from 2015). This resulted in an increase in the annual housing provision of 8 homes per annum across the City for each of the aforementioned scenarios.
- 3.20 The SHMA confirms that this sensitivity analysis represents *“the market signals adjustment”* [§8.111], although in the light of GL Hearn’s conclusions concerning affordable housing needs (see above), this 8 dpa uplift would also appear to be geared towards improving access to housing for younger people in the City.
- 3.21 The SHMA therefore concludes that applying an 8 dwelling uplift to the 833 dpa preferred demographic scenario results in an **overall housing OAHN of 841 dpa over the 2012-2032 period.**

SHMA Addendum (June 2016)

- 3.22 The Addendum revisits parts of the earlier City of York SHMA analysis following the publication of the 2014-based SNPP by ONS on 25th May 2016. The report found that the latest projections suggest a higher level of population growth, at levels around 28% higher than in the 2012-based SNPP.
- 3.23 GL Hearn’s analysis states that the difference between the 2014-based SNPP and the 2012-based SNPP “*is around 4,000 people, with around the same number being an additional increase in the 15-29 age group (4,200 of the difference)*” [§1.10].
- 3.24 GL Hearn considers that the growth in the younger age group is likely to reflect the strong growth in the student population in the City between 2008 and 2014 as a result of a new campus opening (the University of York expanded by 3,500 students over the period). The Update quotes an ONS response to CYC during the consultation to the latest projections, which suggests that some locally specific issues (such as the recorded outflow of male students from the city of York) may be under-estimated and should be treated with care.
- 3.25 This is in contrast to GL Hearn’s previous conclusions on the 2012-based SNPP (as set out in the earlier 2016 SHMA), where they considered that the 2012-based SNPP was a realistic projection because it forecast limited growth in the 15-29 age group going forward.
- 3.26 GL Hearn revisited the modelling using a revised long term migration trend and the 2014-based SNPP (Table 3.2).

Table 3.2 Summary of the City of York SHMA Addendum (June 2016) Range of Scenarios (2012-2032)

	2012-based SNHP Headship Rates		+ uplift to the 25-34 age group headship rates
	Change in Households	Dwellings per Annum	
2012-based SNPP	15,093	783	792
2012-based SNPP (updated)	16,056	833	841
2014-based SNPP	17,134	889	898
10-year Migration Trend	13,457	698	706

Source: City of York SHMA Addendum (June 2016)

- 3.27 Using the latest available data and including a “*market signals adjustment*” [1.32] of 8 dpa as contained in the SHMA “*and recognising concerns around the impact of historic student growth, this addendum identifies an overall housing need of up to 898 dpa*”. [§1.20].
- 3.28 An update to the affordable housing need model increases the ‘*bottom line estimate of affordable housing need*’ from 573 dpa to 627 dpa.
- 3.29 The Addendum draws the following conclusions on OAHN:
“There are concerns relating to historic growth within the student population and how this translates into the SNPP projections. This looks to be a particular concern in relation to the 2014-based SNPP where there is a relatively strong growth in some student age groups when

compared with the 2012-based version (which looks to be sound for those particular age groups). Some consideration could be given to longer term dynamics although this does need to recognise that the evidence suggests some shift in migration patterns over the more recent years – a 10 year migration trend using the latest available evidence calculates a need for 706 dpa, although as noted this will not fully reflect some of the more recent trends. This projection is therefore not considered to be an appropriate starting point for which to assess housing need although it can be used to help identify the bottom end of a reasonable range.

”Given that the full SHMA document identifies an OAN for 841dpa which sits comfortably within this range set out in this addendum (706 dpa – 898 dpa) it is suggested that the Council do not need to move away from this number on the basis of the newly available evidence – particularly given the potential concerns about the impact of student growth in the 2014-based SNPP and also longer term trends not reflecting the most recent trends.” [§1.33-§1.34].

NLP Critique

The Starting Point and Demographic-led Needs

Population Change

- 3.30 The Practice Guidance sets out that in assessing demographic-led housing needs, the CLG Household Projections form the overall starting point for the estimate of housing need, but these may require adjustments to reflect future changes and local demographic factors which are not captured within the projections, given projections are trend based²⁰. In addition, it states that account should also be taken of ONS’ latest Mid-Year Estimates [MYEs]²¹.
- 3.31 The City of York SHMA (June 2016) considers housing need based on the latest CLG 2012-based household projections over the period 2012 to 2032. It adjusts the projections to take into account the 2013 and 2014 MYEs to arrive at projected household growth of 803 within the City over the plan period as a preferred scenario. A dwelling vacancy rate based on the 2011 Census has been applied to arrive at a dwelling need of 833 dpa. Understandably the SHMA uses information available at the time of writing, however it should be noted that further data has now been published in the form of the 2015 MYEs.
- 3.32 The subsequent SHMA Addendum rightly updates this analysis through the use of the 2014-based SNPP, which suggests a higher level of population growth (+15%) when compared to the 2012-based equivalents for the City of York. As this growth is predominantly concentrated within the younger age categories, this results in an increase of around 7% for the main demographic-based dwelling projection, from 833 dpa to 889 dpa. GL Hearn suggest that

²⁰ ID 2a-015-20140306

²¹ ID 2a-017-20140306

due to the higher growth in the younger age groups under the 2014-based SNPP than before, and as there are concerns around the impact of historic student growth and how these have been reflected in the 2014-based SNPP for York, *“some consideration could be given to longer term dynamics”* [§1.33].

- 3.33 In this regard, the Addendum re-introduces the 10-year migration trend scenario, which indicates a much lower level of housing need in the order of 698 dpa. Whilst recognising that this is not an appropriate starting point for which to assess housing need, *“it can be used to help identify the bottom end of a reasonable range”* [§1.33].
- 3.34 This is an important conclusion, because GL Hearn then use this lower end of the range to justify CYC pursuing an OAHN [841 dpa] that is significantly lower than the 2014-based SNPP demographic starting point (898 dpa including uplift).
- 3.35 NLP considers the Addendum’s approach to this scenario to be inappropriate for a number of reasons:
- 1 GL Hearn repeatedly downplays the veracity of the long term trend scenario as a robust OAHN for the City of York:
 - i *“Looking first at the (2012-based) SNPP It has been observed that the projected level of population growth under this scenario is expected to be lower than seen in past trends (regardless of whether or not a short or long-term period is used. That finding in itself does not mean that there is necessarily any issue with the SNPP, the ONS projection method is complex with levels of migration in particular being sensitive to the age structure and how this is likely to change. However it is notable in the two years since the base date of the SNPP (i.e. mid-2012) that population growth has been stronger than previously projected; [SHMA §4.49]*
 - ii *“The SNPP is not just based on overall migration levels but also takes account of the age structure of migration and how this changes over time. Additionally, the SNPP is constrained to national population projections and therefore assumptions about international migration at a national level can influence the assumptions at a local level...Given the uncertainties about how more recent migration data will manifest itself in the next round of ONS projections it is not considered that this alternative can robustly be taken forward as a projection against which the need for housing can be assessed”. [SHMA §4.50]*
 - iii *“Whilst the 10-year migration trend calculations are sound from a technical perspective, they do not represent official projections”; [Addendum, [§1.21]*
 - iv *“The evidence does suggest a general trend of increasing migration over time and the longer term projections will not fully reflect this”; [Addendum §1.21]*

- v *“Whilst there is merit in considering the 10-year trend projection, it should not be given any greater weight than the figures emerging from official statistics” [Addendum §1.21]*
 - vi *“This [the 10-year migration] projection is therefore not considered to be an appropriate starting point for which to assess housing need”. [Addendum §1.33]*
- 2 Whilst long term migration rates suggest a lower level of growth (698 dpa), this would sustain far fewer jobs. Using GL Hearn’s approach, a preferable approach would be to apply the 2014-based SNPP-led figure, which generates the higher level of housing need. This reflects the starting point for the assessment of OAHN as required by the Practice Guidance. The long term migration scenario is essentially a sensitivity of this starting point that is undertaken to ascertain whether an adjustment to the SNPP-based figure is required. Therefore whilst it might be appropriate to apply an upwards adjustment to reflect long term trends, it would not be appropriate to apply a reduction from the SNPP. This accords with the approach suggested by LPEG and would help ensure that adequate provision can be made to reflect the expected needs of the City of York’s population;
 - 3 As set out below, the latest 2015 MYE indicates that the City of York’s population is currently 206,856, slightly higher than the 206,808 projected for 2015 in the 2014-based SNPP and significantly higher than forecast in GL Hearn’s 10-year Migration Trend;
 - 4 This is relevant, because the SHMA Addendum has sought to cast doubt on the 2014-based SNPP on the grounds that it has under-estimated domestic out-migration due to the delayed re-registration of males once they leave University. However, between 2014 and 2015, the 2014-based SNPP suggested that domestic out-migration would total c.12,600 residents; the 2015 MYE records the actual out-migration levels as being in the order of 12,558 – which is actually lower than the projections, not higher. Furthermore, the key 20-29 age cohort, which GL Hearn raise concerns about due to its stronger growth levels in the 2014-based SNPP, is recorded as having 38,517 residents living in the City of York in the 2015 MYE, which is actually 764 residents higher than forecast for this year in the 2014-based SNPP;

3.36

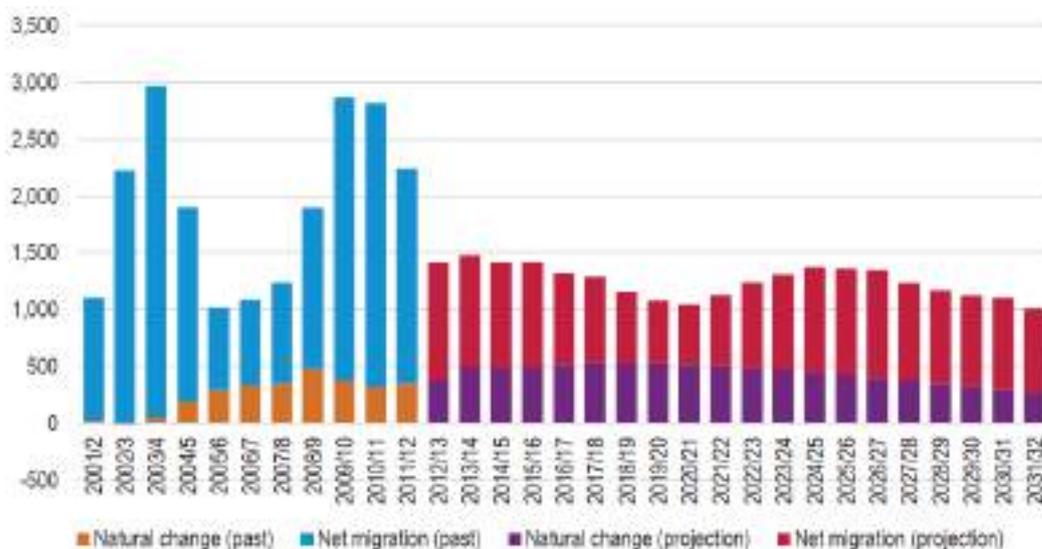
In particular, as set out in detail in Section 5.0, NLP is unclear how GL Hearn has generated a much lower level of population growth (and by extension housing need) based on a long term migration trend, when compared to either the 2012-based SNPP or the 2014-based SNPP. Whilst it is certainly true that the short term net migration figures for the City of York are higher than the longer term figures, this higher level of growth has not materialised in either of the two SNPPs. The SNPPs actually project much lower rates of population growth to 2032 due to lower levels of net internal and international migration going forward (+812 annually in the 2012-based SNPP; +1,096 annually in the 2014-based SNPP).

3.37 GL Hearn recognises this repeatedly in the SHMA. For example, the following text debates the low level of migration projected by the 2012-based SNPP, with the higher past trends data:

“When compared with the past trends, the migration the figures look to be relatively low. For the whole of the projection period (2012-32) the average level of migration is expected to be around 811 people (net) per annum. This figure compares with 1,691 per annum on average from 2001 to 2012 and 1,840 per annum for the five years to 2012 (the start point of the projections). However, again these figures need to be understood in the context of past changes to the student population; growth in the number of students has typically averaged around 700 people per annum since 2001.” [4.26]

3.38 The high level of past (net) migration into York is graphically illustrated in Figure 22 in the SHMA, reproduced below. Whilst recognising the complexity of the ONS future assumptions concerning migration, it would be helpful if GL Hearn could provide further evidence as to how their model has generated lower population growth levels, from ostensibly higher (net) long term migration figures, than are reported in either the 2012-based or 2014-based SNPPs

Figure 3.1 Components of Population change, mid-2001 to mid-2032 - York



Source: GL Hearn (June 2016): City of York SHMA, Figure 22

Household Formation Rates

3.39 The Practice Guidance²² indicates that in respect of household projections:

“The household projections are trend based, i.e. they provide the household levels and structures that would result if the assumptions based on previous demographic trends in the population and rates of household formation were to be realised in practice...

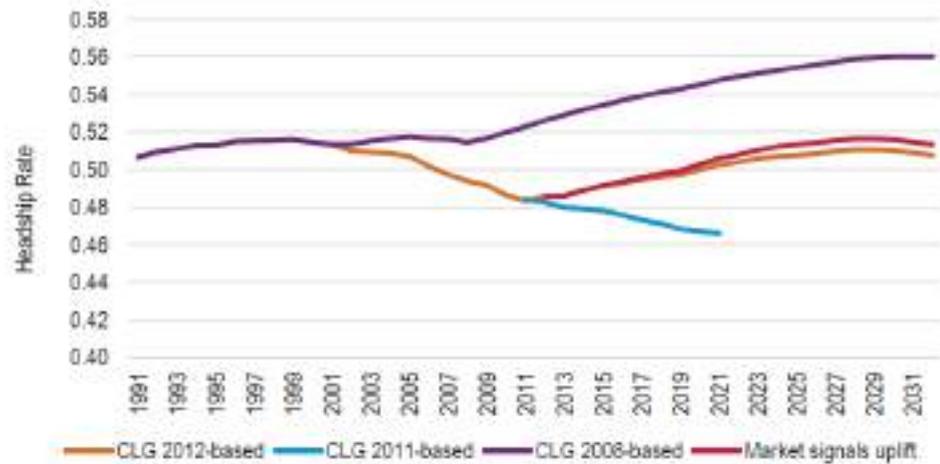
...The household projection-based estimate of housing need may require

²² ID 2a-015-20140306

adjustment to reflect factors affecting local demographic and household formation which are not captured in past trends...rates may have been suppressed historically by under-supply and worsening affordability of housing..."

- 3.40 The City of York SHMA notes that, household formation amongst households in their late 20s and early 30s fell over the 2001-2011 decade [§4.64]. It also shows (in Figure 24) that the 2012-based SNHP project headship rates to increase gradually from the low point of 2011, but not to such a point that they were consistently at prior to 2005. There is a very significant deviation between the 2012-based SNHP headship rates for the 25-34 age cohorts and the 2008-based equivalents. Household formation suppression in the 2012-based SNHP is likely to be related to the affordability issues within the HMA, as well as low levels of housing provision.
- 3.41 Allowing for an increase in household formation within this age group to release the 'pent-up' demand within the population (i.e. the household formation which is not currently accounted for in the 2012-based projections) would help to cater for the true level of housing demand within the population, making appropriate adjustments to trend-based projections given their nature to be influenced by recent trends and the prevailing economic conditions. Such an adjustment would form part of the demographic-led housing needs, given the level of provision would be required to cater for household growth within the population.
- 3.42 The SHMA (and subsequent Addendum) considers this headship rate adjustment as part of the 'Market Signals' analysis, by modelling the housing need based on returning household formation in the 25-34 age group to 2001 levels by 2025 (from 2015). This results in an uplift to the demographic baseline of just 8 dpa, which increases the OAHN in the SHMA from 889 dpa to 898 dpa. This comparatively small uplift is acknowledged by GL Hearn:
- "The increase (8dpa) is fairly modest (just 1%) although it needs to be remembered that this uplift is from the 2012-based CLG projections, which are already building in improvements to household formation amongst the population aged 25-34 from the position seen in 2012. In addition, by taking into account the latest MYE within our demographic analysis we have already built in an increase above the 'starting-point' which is where any market signals uplift should be applied against."*
[SHMA, §8.114-§8.115]
- 3.43 The approach adopted by GL Hearn departs from a widely accepted methodology and overlooks the reality that the 2008-based headship rates reflect the long term position. The effect, as effectively illustrated in the SHMA (reproduced below), is almost imperceptible and completely at odds with the 2008-based SNHP projection.

Figure 3.2 Projected Household Formation Rates for those aged 25-34 – York, from 2016 SHMA



Source: GL Hearn (June 2016): City of York SHMA, Figure 45

3.44

Whilst NLP does not dispute that adjustments to the headship rates of younger age groups forms a reasonable and policy-compliant adjustment, how this has been incorporated into the overall conclusion on objectively assessed needs is highly problematic. This is explored in further detail in the Market Signals section.

Conclusion – Demographic-led Needs

The SHMA makes an appropriate initial assessment of household growth, based on the most recent government projections (at the time of writing) whilst also taking into account the more recent 2013 and 2014 MYEs to arrive at a starting point of 833 dpa across the HMA. The inclusion on the 2015 MYE would also help improve the demographic modelling by bring the analysis up-to-date.

However, there are fundamental issues regarding how the Addendum has sought to attach greater weight to the longer term migration trend than in the 2016 SHMA, which is then used to support an artificially-low OAHN range; and also how demographic-led needs have been distinguished from the ‘Market Signals uplift’.

Market Signals

3.45

The Practice Guidance requires that the housing need figure as derived by the household projections be adjusted to take into account market signals. It indicates that comparisons should be made against the national average, the housing market area and other similar areas, in terms of both absolute levels and rates of change. Worsening trends in any market signal would justify an

uplift on the demographic-led needs²³. In addition, the Practice Guidance highlights the need to look at longer terms trends and the potentially volatility in some indicators²⁴.

3.46 The Practice Guidance also sets out that:

“...plan-makers should not attempt to estimate the precise impact of an increase...rather they should increase planning supply by an amount that, on reasonable assumptions...could be expected to improve affordability...”²⁵.

3.47 **This clearly distinguishes between the demographic-led need for housing (generated by population and household growth) and the market signals uplift which is primarily a supply response over and above the level of demographic need to help address negatively performing market signals, such as worsening affordability.**

3.48 The City of York SHMA (Section 8.0) examines a range of market signals as set out in the Practice Guidance, comparing the City of York to Ryedale, Hambleton, Yorkshire and the Humber region and England and Wales. This can be summarised (and the potential shortcoming noted) as follows:

- 1 **Land Prices** – no analysis has been presented;
- 2 **House Prices** – the SHMA compares median house prices over the period 1998-2007 (Figure 32) and secondly over the period 2008-2013 (Figure 33). The SHMA states that over the first pre-recession period, median house prices in York more than tripled, a £127,050 increase (+309%). This compares to a national increase of £90,000, or 290%, over this same period. Based on 2013/14 data, the average (median) house price in York was £192,000, compared to £138,000 across the Yorkshire and the Humber region;
- 3 **Rents** – the SHMA presents rental costs between 2011 and 2015 and given the limitations on data this is a reasonable assessment. York has considerably higher current median rents (£675 pcm) than any of the comparator areas, including Yorkshire and the Humber (£495 pcm) and England (£600 pcm), although it notes that in contrast to growth elsewhere, York’s rental growth is currently at 2011 levels;
- 4 **Affordability** – the SHMA acknowledges (in paragraph 6.20) the affordability issues faced within the HMA, particularly at the lower end of the market, with the Median Ratio being 7.5-times earnings in 2015 (compared to 7.2 nationally), whilst the Lower Quartile [LQ] ratio is 8.4-times earnings (compared to 6.9 nationally). However the SHMA does not discuss this stark indicator of supply/demand imbalance, preferring to note instead that much of the growth in (un)affordability took place prior to 2005, with limited changes to affordability in the past decade [§8.27];

²³ ID 2a-019-20140306

²⁴ ID 2a-020-20140306

²⁵ *ibid*

- 5 **Rates of Development** – the Practice Guidance is clear that historic rates of development should be benchmarked against the planned level of supply over a meaningful period. In this instance, it is evident that the target across the City of York (640 dpa / 850 dpa as set out in the Yorkshire and the Humber RSS, adopted in 2008) has been missed each year since 2007. *“the overall target for these years was missed by almost 23%, which equals 1,979 units below the target level”* [§8.38];
- 6 **Overcrowding** – the Practice Guidance indicates that a range of signals demonstrate unmet need for housing in an area, including indicators on overcrowding, concealed/sharing households and homelessness²⁶. The SHMA market signals analysis is limited in that it does not consider any homelessness indicators. The SHMA suggests that there was a 52% increase in household spaces which were classified as being over-occupied between 2001 and 2011, which is recognised as being *“high relative to that seen at a regional or national level, and indeed overcrowding on this measure in Ryedale and Hambleton are also significantly lower”* [§8.34]. The York homelessness figure is relatively low when compared to the national figure.

3.49 The SHMA then analyses ‘Qualitative Evidence’, based on consultation with estate and letting agents as well as other stakeholders. This analysis found that the housing market was highly self-contained, with the City of York being *“a price hotspot where prices had exceeded their 2006 peak levels...The inner city of the City of York was described as a high pressure housing market.”* [§8.52-§8.53] The following excerpt from the SHMA provides a further insight into the high demand for new homes in the City of York:

“Barratt Homes is developing the Meadows at Huntingdon to the north of the city. This development currently offers 3 and 4 bedroom homes for sale. The 3-bedroom product is proving very popular and sells quickly. Nearly all sales are to households currently living in York and a high proportion is from the surrounding area. First time buyers account for a small number of sales but most are to first time movers. The sales agent told us that demand exceeded the capacity of the site and that feedback from the public was that these new homes were badly needed.” [§8.68]

3.50 The SHMA concludes that:

“Overall the analysis of market signals clearly points towards some affordability pressures, with lower quartile to median income ratio around 7.89 in York; this is much more than the results at the national level (6.45 in England). It would therefore be appropriate to consider a modest upward adjustment to the demographic assessment of housing need to improve affordability over time, in line with the approach outlined in the Practice Guidance.” [§8.99]

3.51 NLP agrees that based on the market signals analysis there are market signals pressures particularly with affordability within the HMA. The Practice

²⁶ ID 2a-019-20140306

Guidance²⁷ is clear that any market signals uplift should be added to the demographic-led *needs* as an additional *supply* response which could help improve affordability, and further goes on to clarify that:

“...plan makers should not attempt to estimate the precise impact of an increase in housing supply. Rather they should increase planned supply by an amount that, on reasonable assumptions...could be expected to improve affordability...” [NLP Emphasis].

3.52 However, the SHMA instead considers that by making an adjustment to the headship rates of younger cohorts, that this then forms the ‘market signals uplift’ (stated in §8.113). This uplift figure (totalling 8 dpa) represents a negligible 1% uplift on the starting point identified.

3.53 The SHMA accepts that this increase is ‘fairly modest’ , but that it is justified on the basis that the 2012-based SNHP already build in improvements to household formation amongst 25-34 year olds, whilst by taking into account the latest MYE GL Hearn has already “*built in an increase above the starting point which is where any market signals uplift should be applied against*” [§8.115]

3.54 The approach adopted in the SHMA is contrary to the Practice Guidance in a number of ways. The Practice Guidance is clear that the precise impacts of market signals uplift should not be explored; however the SHMA has attempted to estimate the precise impact of improving affordability through modelling increased household formation rates in younger age groups. In doing so, the SHMA fails to distinguish between the demographic-led needs of the HMA and the supply response which is represented by a market signals uplift. By encompassing the two aspects together, the market signals uplift is conflated. The approach utilised in the SHMA is set out in Figure 3.3.

Figure 3.3 GL Hearn Approach to Account for Market Signals



Source: NLP based on GL Hearn, using figures from GL Hearn City of York SHMA (June 2016)

3.55 NLP considers that a suitable adjustment for headship rates in the younger age cohorts should be part of the normal adjustment to the demographic starting point before the market signals analysis is undertaken.

3.56 The Practice Guidance²⁸ is also clear that:

“...the more significant the affordability constraints...and the stronger the other indicators of high demand... the larger the improvement in affordability needed and, therefore the larger the additional supply

²⁷ 2a-020-20140306

²⁸ 2a-020-20140306

response should be.”

- 3.57 Whilst it is not clear cut from the Practice Guidance how an upwards adjustment should be calculated, some recent Local Plan Inspector’s findings have provided an indication as to what might be an appropriate uplift. The Inspector’s Report into the Eastleigh Borough Local Plan (11th February 2015)²⁹ provide interpretation of the Practice Guidance in terms of a reasonable uplift on demographic-led needs in light of market signals:
- “It is very difficult to judge the appropriate scale of such an uplift. I consider a cautious approach is reasonable bearing in mind that any practical benefit is likely to be very limited because Eastleigh is only a part of a much larger HMA. Exploration of an uplift of, say, 10% would be compatible with the “modest” pressure of market signals recognised in the SHMA itself.” [§40 to §41].*
- 3.58 The Eastleigh Inspector ultimately concluded that a modest uplift of 10% is a reasonable proxy for quantifying an increase from purely demographic based needs to take account of ‘modest’ negatively performing market signals.
- 3.59 Furthermore, Inspectors have used figures of up to 20% for ‘more than modest’ market signal indicators, notably in the case of Canterbury, where the Inspector concluded that:
- “Taking these factors in the round it seems to me that 803 dpa would achieve an uplift that took reasonable account of market signals, economic factors, a return to higher rates of household formation and affordable housing needs.”³⁰*
- 3.60 From the indicators set out by NLP below, and from the commentary and analysis undertaken by GL Hearn, we consider that the current levels of market stress should be considered more severe than the ‘modest’ uplift the SHMA suggests. An application of other approaches (discussed below) would suggest an uplift of 20% could be appropriate for the City of York.
- 3.61 In any case, it is hard to accept that an adjustment of less than 1%, or a pitiful 8 dpa, can do anything to rectify the clear signs of market stress exhibited in the City of York. Adjustments to the headship rates of younger age groups should be made to the demographic modelling as a separate exercise to the market signals uplift.

²⁹ http://www.eastleigh.gov.uk/pdf/ppi_Inspectorsreport12Feb15.pdf

³⁰ Canterbury District Council Local Plan Examination August 2015, Inspector’s Letter and Note on main outcomes of Stage 1 Hearings, paragraph 26.

Conclusion on Market Signals

The SHMA approach fundamentally fails to address market signals in any proper manner, nor in the way advocated by the Practice Guidance or recent Inspectors. The SHMA underplays the market signals pressures within the HMA and does not make a meaningful uplift to help address the clear affordability issues.

Overall, the SHMA fails to distinguish between the demographic-led **needs** of the City of York, and the supply increase needed to address market signals to help address **demand**. Instead the SHMA blends the two elements within the same figure resulting in a conflated figure which is lower than the level of uplift deemed reasonable by the Eastleigh and Canterbury Inspectors, despite the fact that market signals pressures in York indicate signs of considerable stress and unaffordability. The Practice Guidance is clear that the worse affordability issues, the larger the additional supply response should be to help address these.

Economic Alignment

- 3.62 With regards to considering the need to uplift a housing figure to take account of the economic potential of the local authority, the Framework sets out the following:
- “The Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth. Planning should operate to encourage and not act as an impediment to sustainable growth. Therefore significant weight should be placed on the need to support economic growth through the planning system.” [§19]*
- 3.63 The Practice Guidance requires that assessments of likely job growth are made, looking at past trends in job growth and/or economic forecasts, whilst also considering the growth in working age population. The potential job growth should be considered in the context of potential unsustainable commuting patterns and as such plan-makers should consider how the location of new housing could help address this³¹.
- 3.64 The SHMA assesses four different forecasts for job growth (three from Oxford Economics and one from Experian). These forecasts suggest an annual job growth of between 609 and 868 per annum. Without providing further detail on how it has translated the economic projections into its model through the integration of commuting ratios, unemployment or economic activity rates, the SHMA concludes that *“all of the economic forecasts are expecting population growth to be broadly the same and at a level which is slightly higher than is shown in the 2012-based SNPP.”* [SHMA, §5.7]

³¹ 2a-018-20140306

“Overall, whilst it would be possible to do additional modelling to estimate what level of housing might be needed when set against the forecasts it is not considered that this would be an appropriate approach in the case of York. The population estimates from each of the scenarios are very similar and in all cases support a level of population growth which is only marginally above the level shown in the most recent ‘official’ projections.”
[SHMA, §5.9]

- 3.65 Despite this caveat, the SHMA then reports that the range of needs from the economic forecasts is between 780 dpa and 814 dpa and therefore there is no requirement to uplift the OAHN to meet economic needs for the City of York [§5.12].
- 3.66 It is difficult to comment on the veracity of this conclusion given that the evidence we have so far been provided by GL Hearn in its SHMA does not extend to its detailed assumptions concerning the aforementioned commuting ratio, unemployment rates or economic activity rates. Furthermore the SHMA unhelpfully does not set out the job growth likely to result from any of the demographic projections. The job growth projections in themselves do not appear unreasonable and as we will set out in Section 4.0 we have sought to include a ‘blended average’ of the 4 econometric projections in our own modelling (equal to 725 jobs per annum 2012-2032), plus a past trends scenario and the latest Experian June 2016 projection (at 620 jobs annually).
- 3.67 We are also unclear from the information provided in the 2016 SHMA whether GL Hearn has used consistent data inputs across the four job projections to relate the jobs into dwellings, or whether they have simply incorporated the independent assumptions of Experian and OE.
- 3.68 If the latter, then NLP considers that the economic activity rates assumed within the forecasts should not be preferred over equivalent approaches, notably those from the Office for Budget Responsibility [OBR]. The economic activity rates derived within the forecasting houses econometric models are often more positive than existing levels or projected trends and it is understood that this is because they do not apply economic activity strictly as an input or constraint within the econometric models but as a variable, which assumes people act economically rationally (e.g. if there is employment available then individuals will make the choice to become economically active).
- 3.69 The issue of the use of OBR economic activity rates (or similar) versus the use of forecasting houses own economic activity rates has been comprehensively covered in a recent appeal decision at Longbank Farm, Ormesby in Redcar & Cleveland Borough³². In summary the Inspector there concluded:
- “I attach greater weight to the OBR projections. They give me cause to seriously doubt the markedly higher activity rates assumed by Experian”.*
[§21]

³² Longbank Farm, Ormesby, Middlesbrough (APP/V0728/W/15/3018546) 9 March 2016

- 3.70 Whilst it is acknowledged that this was based on the evidence before that Inspector and at least in part relating to the specific position in Redcar & Cleveland, it is considered the general principles can equally be read across to the rest of the country (particularly as the OBR forecasts are national). The degree of implication for York is less clear, but given recent Inspectors' findings on this issue, it is considered that care must be applied in interpreting the outcomes of the SHMA's economic scenarios.
- 3.71 We reserve the right to provide further commentary if/when further details on GL Hearn's approach to incorporating the job forecasts within the PopGroup modelling are provided.

Conclusion on Economic-led Projections

The SHMA presents a suppressed picture of likely economic growth, drawing upon economic forecasts produced in 2014, which are outdated. We can only provide a limited analysis on the robustness of GL Hearn's assessment of the implications of the job forecasts as they have not set out their assumptions in detail. We reserve the right to review these assumptions if/when they are provided by GL Hearn.

Affordable Housing Needs

- 3.72 In line with the Framework³³, LPAs should;
- "...use their evidence based to ensure their Local Plan meets the full, objectively assessed needs for market and affordable housing..."*
- "...prepare a SHMA which...addresses the need for all types of housing, including affordable."*
- 3.73 The Practice Guidance³⁴ sets out a staged approach to identifying affordable housing needs, and states that affordable housing need should be:
- "...considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments...an increase in the total housing figures included in the plan should be considered where it could help deliver the required number of affordable homes."*
- 3.74 As set out in Section 2.0, two High Court Judgements go to the heart of addressing affordable housing within the identification of OAHN. 'Satnam' establishes that affordable housing needs are a component part of OAHN, indicating that the 'proper exercise' is to identify the full affordable housing needs and then ensure that this is considered in the context of its likely delivery as a proportion of mixed market/affordable housing development. 'Kings Lynn' builds on 'Satnam', identifying that affordable housing needs "*should have an*

³³ paragraphs 47 and 159

³⁴ 2a-022-20140306 to 2a-029-20140306

important influence increasing the derived FOAHN since they are significant factors in providing for housing needs within an area.” [§36] This is clear that affordable housing needs are a substantive and highly material driver of any conclusion on full OAHN.

3.75 In this regard, the 2016 SHMA concludes that there is an estimated need for 573 affordable homes to be provided, or 11,462 dwellings over the 2012-2032 period. The subsequent Addendum, using the higher 2014-based SNPP, increases this figure to 627 dpa over the same time period. Both figures suggest a worsening situation when compared with the previous figure of 486 affordable homes per annum needed in the previous 2011 SHMA, produced by GVA.

3.76 The SHMA ultimately concludes that the identified affordable housing need (at 573 dpa) represents 69%-73% of the need arising through the demographic projections. However:

“In considering this relationship, it is important to bear in mind that the affordable housing needs model includes existing households who require a different size or tenure of accommodation rather than new accommodation per se. Furthermore, many households secure suitable housing within the Private Rented Sector, supported by housing benefit.

Once account is taken of the range of outputs with the modelling (for different affordability thresholds) and the fact that many of the households in need are already living in accommodation (existing households) and the role played by the private rented sector, the analysis does not suggest that there is any strong evidence of a need to consider housing delivery higher than that suggested by demographic projections to help deliver more affordable homes to meet the affordable housing need.

*However, in combination with the market signals evidence some additional housing might be considered appropriate to help improve access to housing for younger people. A modest uplift would not be expected to generate any significant population growth (over and above that shown by demographic projections) but would contribute to reducing concealed households and increasing new household formation. The additional uplift would also provide some additional affordable housing. Such an uplift will however also need to consider the extent to which improved access to housing is already built into the CLG projections.”
[page 115]*

3.77 NLP has not analysed in detail the figures forming the assessment of affordable housing needs, due in part to limitations on access to the underlying data; instead, NLP has focused on how this need has formed part of the conclusion on OAHN.

Addressing Affordable Housing Needs

- 3.78 Having identified the affordable housing needs, the Practice Guidance requires an assessment of its likely delivery to consider whether there is a need to uplift or adjust the OAHN and planned housing supply in order to address affordable housing needs. This is what the 'Satnam' judgment calls the 'proper exercise' and is undertaken by the SHMA within Figure 30. This concludes that to meet affordable housing need in full the City of York would need to deliver 573 dpa.
- 3.79 Taking into account affordable need within the calculation of OAHN does not necessarily involve a mechanistic uplift, or an indication that such identified needs must be met in full. It has to be a scenario which, on a reasonable basis, could be expected to occur. This is set out in the Kings Lynn judgment which concluded: "*This is no doubt because in practice very often the calculation of unmet affordable housing need will produce a figure which the planning authority has little or no prospect of delivering in practice.*" and is also consistent with the Practice Guidance³⁵ which sets out the assessment of need "*does not require local councils to consider purely hypothetical future scenarios, only future scenarios that could be reasonably expected to occur*" [§35].
- 3.80 However, in line with the High Court Judgments, this still needs to be an uplift of consequence, insofar as it can reasonably be expected to occur. This will inevitably need to involve judgement, based on relevant evidence, as to the extent to which any scale of uplift could be reasonably expected to occur.
- 3.81 The SHMA, in place of looking at whether any scale of uplift could help to better address full affordable housing needs within the conclusion of OAHN, seeks to downplay the level of housing required to meet affordable housing needs by reference to:
- a A suggestion that many households simply require a different size or tenure of accommodation rather than new accommodation per se [§6.108- §6.110];
 - b Alternative forms of delivering new affordable housing besides new-build development on market-led housing [§6.116];
 - c The Private Rented Sector (PRS) supported by Local Housing Allowance [§6.102 - §6.107];
 - d Households already in housing not generating a net additional need [§6.108 - §6.112].
- 3.82 Ultimately the combination of the above leads to the SHMA conclusion that there is not any "*strong evidence of a need to consider housing delivery higher than that suggested by the demographic projections to help deliver more affordable homes to meet the affordable housing need*" [page 115].

³⁵ 2a-003-20140306

3.83 **Instead, the SHMA makes an upward adjustment of 8 dpa, which GL Hearn refer to as a ‘market signals’ adjustment. NLP considers that this approach is incorrect as (aside from the fact it is woefully inadequate to meet its intended purpose) it involves GL Hearn conflating a demographic adjustment to headship rates with a market signals adjustment to help address demand.**

3.84 The SHMA ultimately does not use the identified acute affordable housing needs in a way in which it has “*an important influence in increasing the derived F[ull] OAN*” as per the Kings Lynn judgment. It simply downplays them to the extent which the authors consider they can be overlooked in concluding on OAHN. We review the main points above as follows.

Alternative Forms of Delivering Affordable Housing Supply

3.85 The SHMA sets out in paragraphs 6.96-6.99 that other ways of delivering new affordable housing are available, appearing to suggest that not all new housing will need to be delivered by new-build development (as a proportion of mixed market and affordable schemes, as indicated by the Practice Guidance).

3.86 Whilst there may be other forms of affordable housing delivery available to the Councils it is considered, for the purposes of the SHMA, this is fundamentally unlikely to help boost likely supply against that identified in Figure 30 of the SHMA. Underlining this is the fact that the West Berkshire Court of Appeal judgment³⁶ has been made and effectively reinstates the Secretary of State’s Written Ministerial Statement of 29 November 2014 seeking to exempt small sites (10 units or under) from affordable housing contributions. Any practical gain from other forms of affordable housing delivery is likely to be more than offset by the loss of affordable housing delivery associated with the imposition of this national threshold.

3.87 Furthermore, the SHMA does not actually seek to quantify the degree of contribution towards meeting affordable housing needs these sources of supply might have; it is a wholly un-evidenced proposition. This narrative within the SHMA does nothing to indicate the acute affordable housing needs will be met by reference to the alternative forms of delivery.

Private Rented Sector

3.88 The SHMA at §6.102–§6.107 sets out the potential role of the Private Rented Sector [PRS] in supporting the meeting of affordable housing needs. Although the conclusion correctly identified at paragraphs 6.103 and 6.107 that it is not Government’s policy to meet affordable needs through the PRS, the SHMA’s inclusion of analysis around the PRS may be seen to suggest that the need is somehow reduced by reference to the PRS (for example see page 115). Such considerations should not have any affect upon objectively assessed needs,

³⁶ Secretary of State for Communities and Local Government v West Berkshire District Council and Reading Borough Council [2016] EWCA Civ 441

and this has been highlighted in the Oadby and Wigston High Court Judgment³⁷.

- 3.89 In the case of the Oadby and Wigston the Council had a pre-Framework plan, and relied on objectively assessed needs which had been identified through the Leicester and Leicestershire SHMA. However, in concluding on objectively assessed need, the SHMA had considered that only a modest adjustment should be made to the housing numbers due to fact that the PRS would make up the shortfall. However, the Court's decision clarified that:

"...the justification provided for keeping the true affordable housing requirements of the account is inadequate... the benefit-subsidised private rented sector is not affordable housing...it remains policy intervention even if the private sector market would accommodate those who would otherwise require affordable housing, without any positive policy decision by the Council that they should do so: it becomes policy on as soon as the Council takes a course of not providing sufficient affordable housing to satisfy the FOAN for that type of housing and allowing the private sector market to make up the shortfall." [§4.i]

- 3.90 The High Court Judgment suggests that it is not for the objectively assessed housing needs calculation to apply any constraints in respect of overall and affordable housing needs. It is for the next stage of the process, having identified full OAHN, to assess whether policy choices or other constraints might result in the final housing requirement being lower, if it can be demonstrated that this is in line with the Framework. Regardless of the final housing requirement to go forward within any Plan, full, objectively assessed housing needs for market and affordable housing should be set out and identified in line with the necessary policy and guidance. Failure to do so would be an unsound approach.

- 3.91 Whilst it is an accepted fact that the PRS does support a number of households in receipt of housing benefit, the Eastleigh Local Plan Inspector³⁸ highlighted (§34):

"...there is no justification in the Framework or Guidance for reducing the identified need for affordable housing by the assumed continued role of the PRS with LHA. This category of housing does not come within the definition of affordable housing in the Framework. There is not the same security of tenure..."

Households Already in Housing

- 3.92 The SHMA sets out (§6.109-§6.112) that those households who move into affordable housing who are already in a house will free up a dwelling and that this should be considered in the calculation. The SHMA goes on to identify that these elements of the affordable housing need are therefore *"not directly*

³⁷ Oadby and Wigston Borough Council v Secretary of State for Communities and Local Government and Bloor Homes Ltd (2015). EWHC 1879

³⁸ Inspector's Report into the East Hampshire Joint Local Plan Core Strategy (15th April 2014) - <http://www.easthants.gov.uk/inspectors-report-164-kb>

relevant to considering overall housing need" (SHMA §6.110). However, it is considered this fails to reflect the approach set out in the Practice Guidance and what the consideration of affordable housing needs seeks to achieve.

- 3.93 Households who are currently within a market dwelling, but are in need of an affordable dwelling because they cannot afford to meet their needs within the market, still require an affordable dwelling to be provided in order to be able to move tenure. They will only release that house back onto the market if, and only if, their affordable housing needs are met. There is still a net additional requirement for an affordable dwelling (despite there not necessarily being a net additional household). If the purpose of the OAHN methodology within the Practice Guidance was to simply limit the OAHN to the demographics-led need or the number of households (irrespective of what tenure of house they may require) it would not include the requirement to assess and address full affordable housing needs within the OAHN.
- 3.94 This approach would not result in a full objective assessment of affordable housing need. Although the Practice Guidance³⁹ does indicate that *affordable* dwellings currently occupied by households in need can be included as part of the assessment of the total affordable housing stock available (since these households will free up an affordable dwelling), it does not advocate removing all current households in need and future households falling into need from the affordable housing needs calculation on the basis they free up a dwelling (regardless of tenure).
- 3.95 The Practice Guidance approach to OAHN is seeking to identify and plan towards meeting the need for a specific tenure of housing - in this case affordable - the need and demand for which still stands regardless of whether a market dwelling may be being freed up. It remains the case that those in market housing who are in need of an affordable dwelling remain in need of an affordable dwelling; ultimately the affordable dwelling must still be delivered. In most instances it will be necessary to deliver market housing to fund the development of affordable housing, as such there is still a need to build market housing to deliver the affordable unit, i.e. the delivery of one affordable house comes as a result of the delivery of several market dwellings.
- 3.96 Therefore, the assertion that a market house could be freed up when a household moves to an affordable house has a logic, but market housing needs to be delivered to build the affordable house in the first instance. There is no evidence in the SHMA to suggest that there is any other policy in place for the delivery of affordable housing in the Boroughs to meet full affordable housing need without delivery of new market and affordable housing.
- 3.97 Therefore, netting off affordable housing needs on the basis that these free up market dwellings does not meet those households' need for an affordable dwelling and as such the assessment does **not** fully and objectively identify the need for affordable housing, in line with the Practice Guidance.

³⁹ 2a-025-20140306

- 3.98 It might be a legitimate policy choice for the Council to choose not to meet full objectively assessed housing need for affordable housing at the rate of delivery (and for the evidence to describe the current and possible future role of the private rented sector), but that is a policy matter for the Council in setting the requirement, not for the evidence base in concluding on objectively assessed housing need.
- 3.99 These considerations do have an influence on the OAHN, but have not been taken into account in the 2016 SHMA.

Summary on Affordable Housing Need

Having identified an affordable housing need of 573 affordable dpa (subsequently increased to 627 dpa in the Addendum), the SHMA does not then indicate how that would be specifically addressed as part of its conclusion on OAHN.

The SHMA seeks to downplay affordable housing need by reference to alternative forms of delivery, the Private Rented Sector and there not being net additional need for homes. However, none of these reflect the '*proper exercise*' set out in the Practice Guidance for considering affordable housing needs and ultimately the affordable housing needs go unaddressed within the conclusion on OAN.

These considerations do not have any influence in increasing the OAHN, let alone an important influence as indicated is necessary within the Kings Lynn High Court judgment. This is a fundamental shortcoming of the SHMA's concluded OAHN, resulting in it failing to address affordable housing needs as required by para 47 and 159 of the Framework.

Overall Summary

- 3.100 The approach taken by GL Hearn to calculating OAHN for the City of York has a number of significant shortcomings and flaws. This means that the SHMA and subsequent Addendum ultimately seek to suppress the likely true level of housing need in the City. The key shortcomings include:
- 1 The demographic modelling downplays the robustness of the 2014-based SNPP, an approach which is not supported by the evidence in other aspects of the document. On its own, this would suggest a starting point of 889 dpa;
 - 2 Adjustments to headship rates have been conflated with the uplift for market signals. The SHMA does not apply a separate uplift for market signals, but instead makes an adjustment to the demographic modelling based on changes to headship rates which should be part of a normal

adjustment to the demographic starting point before market signals are considered. As a result, there is no adjustment for market signals at all despite the significant and severe market signal indicators apparent across the City of York;

- 3 A 'black-box' approach has been taken to the economic-led modelling, with key evidence relating to how the job projections have been factored into any PopGroup model being unpublished;
- 4 No explicit consideration or uplift applied in respect of delivering more homes to meet the needs of households in affordable housing need. This is despite the SHMA and Addendum indicating a level of affordable housing need (of 573 dpa and 627 dpa respectively) which would only be met well in excess of the concluded OAHN.

3.101

In combination, the judgements and assumptions applied within the SHMA seek to dampen the level of OAHN across the City of York. Fundamentally, it is considered that the OAHN(s) identified in the SHMA and Addendum fails to properly address market signals, economic or affordable housing needs, as envisaged by the Framework and Practice Guidance as clarified by High Court and Court of Appeal judgements.

4.0 **The OAHN for the City of York**

Introduction

- 4.1 NLP has modelled a number of scenarios to establish the need for housing across the City of York in line with the HEaDROOM framework. This is based on different demographic, economic and housing related factors which draw upon analysis of context and past trends. The assumptions underpinning the assessment are explained below, before the outputs of the PopGroup modelling are discussed.

Demographic Context

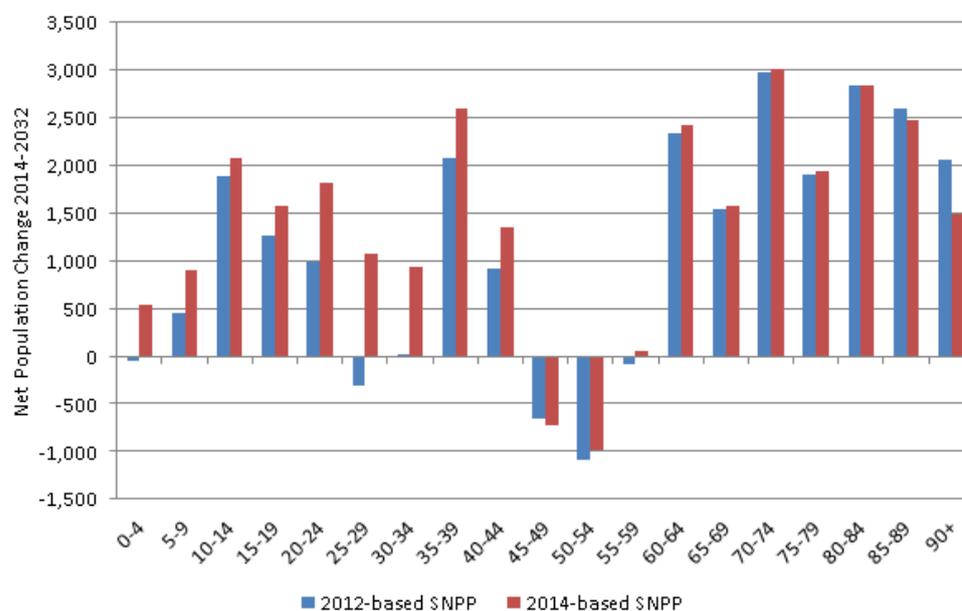
ONS 2014-based SNPP

- 4.2 The 2014-based SNPP project the population of all local authorities in England over the period from 2014 to 2039 and are based on the assumption that the demographic trends (births, deaths and in/out migration) that were experienced between 2009 and 2014 will continue in the future⁴⁰. As such, they draw upon trends that were experienced partly during a time of economic downturn.
- 4.3 The projections do not take account of planned and emerging policies that are yet to take place and no allowance is made for potential future improvements / deterioration in the national or local economy.
- 4.4 The 2014-based SNPP represent a “full” set of projections, which draw upon an updated set of underlying fertility, mortality and migration trends. The SNPP are consistent with the 2014-based national population projections and take account of information from the 2011 Census.
- 4.5 The 2014-based SNPP anticipate that the population of the City of York will increase by 26,935 between 2014 and 2032 (13.2%), equivalent to 1,496 persons per annum. This is higher than the previous 2012-based SNPP, which projected growth of around 21,365 (+10.7%) over the same time period.
- 4.6 Figure 4.1 indicates that the pattern of growth for individual age cohorts is quite different between the two projections – hence the 2014-based SNPP suggests that the number of residents aged between 20 and 39 will increase by 6,416 over the next 18 years, whereas the 2012-based SNPP suggests a comparable level of growth of just 2,760 over the same time period. Furthermore, the 2014-based SNPP projects a much lower level of growth in the number of York residents aged over 90, of 1,492, compared to 2,057 in the previous set of projections.
- 4.7 As set out in the Addendum, this is likely to have a disproportionate impact on the number of households generated by the growth in population, as the

⁴⁰ The international migration component of change is based upon past trends between 2008 and 2014.

younger age cohorts are less likely to be a head of a household than older residents.

Figure 4.1 Components of population change in the City of York, 2014-2032



Source: 2012-based SNPP vs. 2014-based

4.8 The population change in the City of York over the Local Plan period in the 2014-based SNPP is expected to be driven almost entirely by net migration from elsewhere in England. Overall net inward migration is forecast to average 1,910 residents annually between 2014 and 2033, of which around 1,100 is likely to relate to international immigration, whilst natural change is forecast to be negligible at just 170 residents annually.

Potential Implications of Brexit on the 2014-based SNPP

4.9 The full effect of Brexit is impossible to gauge at present as the UK will most likely remain a member of the EU for at least the next two years whilst the terms of any exit are negotiated. However, it is suggested that there is currently no evidence base for arriving at an alternative set of assumptions about future expected migration until the terms of withdrawal are settled, and indeed it might even be that Brexit simply results in an agreement that links UK access to the Single Market with continuation of the free movement of labour.

4.10 Furthermore, the ONS 2014-based National Population Projections, upon which the equivalent SNPP is derived, already assumes that net in-migration will reduce from current levels to 185,000 by 2021 and kept constant from then until 2037. According to ONS, net international migration to the UK in 2014/15 (at 336,000) had a virtual 50:50 split between EU and non-EU migration. Given that the share of net in-flows from non-EU countries is already capable of being controlled by the Government’s migration policy (which since 2010 has sought to reduce it) it seems reasonable to assume no reduction to non-EU migration (i.e. c.168,000 net in-migration annually) post Brexit.

- 4.11 In theory therefore, in order for the ONS 2014-based National Population Projections' long term migration estimate (+185,000 net per annum) to be achieved, net flows from within the EU would have to fall to just 17,000 per annum, a reduction of 90%.
- 4.12 This supports the notion that the ONS National Population Projections, and by extension the 2014-based SNPP, have already adopted very cautious estimates of international migration. It is considered that there is limited evidence to support a notion that leaving the EU would see a reduction in migration of a scale that would be necessary for population estimates to fall below the 2014-based SNPP levels.

2015 Mid-Year Population Estimates

- 4.13 The 2015 MYE were published by ONS on 30th June 2016. They indicate that for the City of York, the 2015 resident population was 206,856, an increase of 2,417 residents (+1.2%) on the 2014 figure (204,439). This growth is predominantly due to net internal migration from both domestic (+637 net) and particularly international (+1,643) sources, with natural change being more modest over the course of the year (+147 residents).
- 4.14 The 2015 MYE population figure for York is slightly higher than was projected under the 2014 SNPP (206,809), although at only +47 this represents 0.02% of the total resident population and is unlikely to have any significant effects on the results of the data modelling.

Migration

- 4.15 ONS' most recent estimates of past migration are contained within the Mid-Year Estimates (MYE) Series 2001-2011 (revised following Census 2011) and the subsequent 2012, 2013, 2014 and 2015 MYE releases. These show that over the ten-year period to 2015, York saw average annual net in migration of 1,673 people, consisting of 557 internal in migrants and 1,116 international in migrants. The five year average is higher, at 2,090 people per annum, of which net internal migration was higher at 718 in migrants per annum, and net international migration was also higher, at 1,372 annually.
- 4.16 The migration patterns for the City of York over the last 10 years (along with five and ten year averages) are shown in Figure 4.2. Internal migration has fluctuated in recent years, although with the exception of 2007 and 2008 there has generally been a net influx of UK residents to the City. Net international migration has also been consistently positive albeit this has ranged from 127 in 2006 to 1,659 in 2011.
- 4.17 Overall, net migration to the City of York has been steadily increasing since 2006, as indicated by the five and ten year averages. As the 2012-based SNPP incorporated past internal migration trends for the five years to 2012, it is unsurprising that it resulted in lower projections than the 2014-based SNPP, which included stronger net migration trends in the five years to 2014.

Figure 4.2 Migration in the City of York, 2003/04-2012/13



Source: ONS Mid-Year Estimates

- 4.18 As set out in Section 3.0, the City of York SHMA and the subsequent Addendum raise concerns relating to historic growth within the student population and how this translates into the SNPP projections, suggesting that the 2014-based SNPP may be over-estimating internal net migration for younger age groups. However, the only available evidence to test this supposition, the 2015 MYE, suggests that far from weakening, net migration is actually increasing from previous years and is actually growing at a slightly higher rate than was initially projected by the 2014-based SNPP.
- 4.19 As noted above, between 2014 and 2015, the 2014-based SNPP suggested that domestic out-migration would total c.12,600 residents; the 2015 MYE records the actual out-migration levels as being in the order of 12,558 – which is actually lower than the projections, not higher. Furthermore, the key 20-29 age cohort, which GL Hearn raise concerns about due to its stronger growth levels in the 2014-based SNPP, is recorded as having 38,517 residents living in the City of York in the 2015 MYE, which is actually 755 residents higher than forecast for this year in the 2014-based SNPP.
- 4.20 Whilst we accept that limited conclusions can be drawn from just one years' worth of data, it lends weight to the argument that, for the City of York, the 2014-based SNPP is a more accurate OAHN starting point than GL Hearn's 10-year migration trend scenario.

4.21 As set out in Section 3.0, NLP is unclear how GL Hearn has generated a much lower level of population growth (and by extension housing need) based on a long term migration trend, when compared to either the 2012-based SNPP or the 2014-based SNPP.

4.22 Table 4.1 presents the actual internal/international net migration flows into / out of the City of York over the period 2004/05 to 2014/15 as reported in the ONS Mid-Year Population Estimates series for those years. It then compares the figures with the 5 and 6 year averages (for internal and international migration respectively) to correspond with the evidence bases used for both the 2012-based SNPP and 2014-based SNPP. This replicates the overview provided by GL Hearn in Table 19 of their 2016 SHMA. Table 4.1 then reports the actual average net migration flows for the City of York in the two population projections over the course of the plan period.

4.23 Table 4.1 illustrates that the net migration figures which emerge from both the 2012-based and 2014-based SNPPs are actually considerably lower than has actually been experienced in York in recent years. This holds true over both the short (past 5 years) and long (10 years) term. Hence when NLP has taken a 10-year average net migration (+1,616 for internal and international migration combined), this is significantly higher than the projected net migration averages to 2032 for both the 2012-based SNPP (+812) and even the 2014-based SNPP (+1,096).

Table 4.1 Long Term Migration Overview

	Internal Net Migration	International Net Migration	TOTAL Net Migration
2004/05	236	1,471	1,707
2005/06	594	127	721
2006/07	-19	774	755
2007/08	-186	1,073	887
2008/09	636	787	1,423
2009/10	951	1,543	2,494
2010/11	845	1,659	2,504
2011/12	690	1,202	1,892
2012/13	1,056	1,078	2,134
2013/14	363	1,277	1,640
2014/15	637	1,643	2,280
2012-based SNPP evidence base (average of 2007/08 to 2011/12 internal, 2006/07 to 2011/12 international)	587	1,173	1,760
Actual 2012-based SNPP Average 2013-2032	-164	976	812
2014-based SNPP evidence base (average of 2009/10 to 2013/14 internal, 2008/09 to 2013/14 international)	781	1,258	2,039
Actual 2014-based SNPP Average 2015-2032	-123	1,219	1,096
NLP 10-year migration (2004/05 – 2013/14)	517	1,099	1,616

Source: ONS / City of York 2016 SHMA Table 19

- 4.24 As GL Hearn rightly recognise in paragraph 4.28 of the SHMA, the SNPP are developed to a complex methodology by ONS which takes account of age-specific prevalence rates for migration and does not look directly at the actual levels of migration seen in the past. Furthermore, the SNPP is constrained to national population projections which can have a notable impact on estimated levels of international migration in the future when compared with past trends.
- 4.25 Nevertheless, it would be helpful if GL Hearn could provide further evidence as to how their model has generated lower population growth levels, from ostensibly higher (net) long term migration figures, than are reported in either the 2012-based or 2014-based SNPPs.

Household Projections

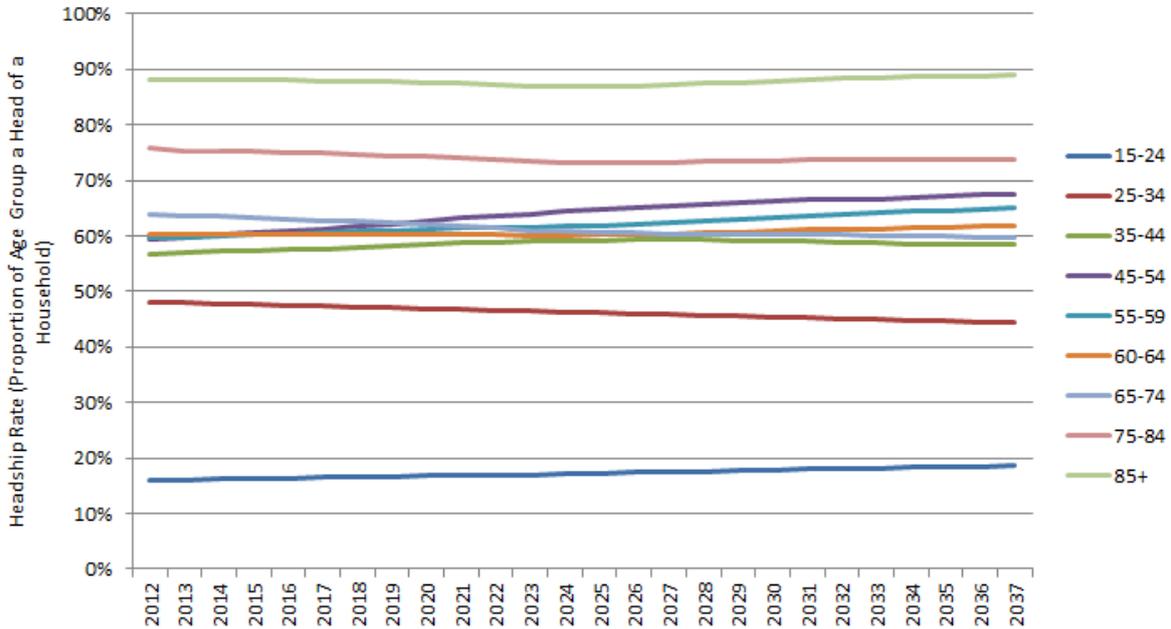
- 4.26 The Practice Guidance states that up-to-date household projections published by CLG should provide the starting point estimate of overall housing need. The Practice Guidance goes on to state that “*plan makers may consider sensitivity testing, specific to their local circumstances, based on alternative assumptions in relation to the underlying demographic projections and household formation rates*”⁴¹.
- 4.27 It is understood that CLG are intending to publish the 2014-based SNHP on 12th July 2016. NLP has only been able to take account of existing information (i.e. the 2012-based SNHP) available at the time of writing (8th July 2016), but reserve the right to update this modelling evidence in the light of the updated information following its release (if necessary).
- 4.28 The 2012-based SNHP draws upon longer term trends since 1971 but the methodology applied by CLG means that they have a greater reliance upon trends experienced over the last 10 years. The implication of this ‘recency bias’ is that the latest household projections continue to be affected by recently observed trends during the period of suppressed household formation associated with the impacts of the economic downturn, constrained mortgage finance and past housing under-supply, as well as the preceding time of increasing unaffordability which also served to suppress household formation⁴². They do not take any account of the impact of future government or local policies, changing economic conditions or other factors that might have an impact upon demographic behaviour or household consumption.
- 4.29 The 2012-based SNHP anticipates an additional 15,093 households in the City of York between 2012 and 2032. This represents a 17.9% increase, equivalent to 755 households per annum.
- 4.30 The household projections project forwards constrained levels of household formation. In order to assess how many new houses will actually be required in the City of York over the Local Plan period (2012-2032), it is appropriate to consider the extent to which household formation rates might be expected to

⁴¹ 2a-015-20140306

⁴² This is explained on Page 19 of the *Household Projections 2012-based: Methodological Report*. Appendix 6

increase in the future. The 2012-based SNHP anticipate a different level of change in headship rates for different age cohorts, as set out in Figure 4.3.

Figure 4.3 Change in headship rate by age cohort



Source: CLG 2012-based Sub-National Household Projections for the City of York

4.31 The different household formation rates by age cohort reflects the fact that very few people aged between 15 and 24 are likely to be able to establish their own households and that the 25 to 34 age cohort is similarly (and increasingly) likely to face pressures in establishing households. The 2012-based SNHP suggests that headship rates amongst 25-34 year olds is likely to decrease significantly over the plan period. By contrast, the headship rate is likely to be very high amongst older people (noting that these figures do not include those that live within institutions such as nursing homes).

4.32 In accordance with the Practice Guidance, NLP have sought to test sensitivities to the 2012-based SNHP where local circumstances allow. To help rectify the impacts of suppressed household formation, NLP have devised a sensitivity to the 2012 based household projections. For the purposes of the OAHN, NLP has modelled a 'Partial Catch Up' scenario. Because young people have been disproportionately impacted by suppressed household formation in recent years, the sensitivity focuses around those aged 15-34. Young people are having to live with parents for longer than seen historically or pay a significantly greater proportion of their earnings to rent, which leaves them unable to save for a deposit for a house.

4.33 The sensitivity test is based on the assumption that, post 2017 (to allow for the full return to pre-recession trends) headship rates in the 15-34 age groups will return to an increase in line with longer term trends, such that by 2033, half of the difference between the 2012-based and 2008-based projections is made up. This results in an average household size declining at a slightly faster rate

than the baseline 2012 projection as a higher percent of young people form households.

- 4.34 Research by NHPAU (CD.12.21)⁴³ found that cohorts who are less able to access home ownership earlier in their housing career due to 'boom' or 'recession' factors impacting on affordability are nevertheless able to 'catch-up' – 80% of the gap at the age of 30 is 'caught-up' by the age of 40. There is every reason to believe this finding is broadly analogous to household formation, and supports the resumption of long term trends.

Other Inputs and Assumptions

- 4.35 In addition to the more detailed inputs discussed, the following inputs have been used in the PopGroup demographic modelling undertaken by NLP. The sources of the data used for each input are listed below. In all scenarios (with the exception of Scenario A) the mid-year estimates for 2012-15 are taken into account to bring the population in line with the latest available data.
- a **Fertility rates** are drawn from the ONS 2014-based Sub-National Population Projections (SNPP) for the City of York;
 - b **Mortality rates** are drawn from the ONS 2014-based SNPP for the City of York;
 - c **Population not in households** (i.e. in institutional accommodation) is taken from the CLG 2012-based SNHP;
 - d **Headship Rates** are derived from the 2012-based SNHP with the exception of the Partial Catch Up Rate scenarios. These apply the 2012 SNHP household formation rates until 2017 and then assume that headship rates in the 15-34 age cohorts will return to a level in line with longer term trends, such that by 2033, half of the difference between the 2008-based and 2012-based projections is made up;
 - e **Vacant and second homes** data is drawn from the CLG Council Tax Base data between 2014 (1.55%) and 2015 (1.47%), which averages at 1.51%. This has been held constant over the plan period;
 - f **Labour force ratio** – Annual Population Survey (APS) and Experian job growth data, held constant at the 2015 figure to 2032;
 - g **Economic activity rates** are projected age and gender specific economic activity rates, based upon the projections that were published by the Office for Budget Responsibility (OBR) in November 2015 and adjusted for the City of York using 2011 Census and the 2011, 2012, 2013 and 2014 Annual Population Surveys for the City; and,
 - h **Unemployment** data is drawn from the ONS Annual Population Survey model-based estimate. We have assumed that by 2020, the unemployment rate will have fallen back to its pre-recession average (3.78% for the City of York) on the basis that this better reflects the likely rate of unemployment in the area. Post 2020 this rate is held constant.

⁴³ NHPAU (2010) How do Housing Price Booms and Busts Affect Home Ownership for Different Birth Cohorts?

Demographic Starting Point

4.36

Using the data inputs and assumptions above, four demographic scenarios have been assessed. The scenarios are modelled over the period 2012-2032. The scenarios modelled are as follows:

- a **Scenario A: 2014-based SNPP** – based on the 2014-based SNPP, incorporating headship rates from the 2012-based SNHP, plus an allowance for vacant/second homes and incorporating the 2015 MYE;
Scenario Aii: 2014-based SNPP / 2015 MYE - Applying the same assumptions as for Scenario A; however, it fixes the 2015 residential population to the 2015 MYE and re-bases the 2014-based SNPP from this point;
Scenario Aii: 2014-based SNPP / 2015 MYE / PCU - Applying the same assumptions as for Scenario A; however, starting post-2017, headship rates amongst 15-34 year olds are projected to make up 50% of the difference between the 2012-based and 2008-based household projections by 2033;
- b **Scenario B: Long Term Migration Trends** – based on past migration trends as observed over the last 10 years (to 2014) in the City of York;
Scenario Bi: Long Term Migration Trends PCU – as above, but applying accelerated headship rates to the 15-34 age cohorts;

Economic Scenarios

- c **Scenario C: Experian Jobs Growth** – based on forecasts of annual job growth (620 jobs p.a. between 2012 and 2032, 0.5% average growth rate) for the City of York prepared by Experian Business Strategies in June 2016;
- d **Scenario D: Average (Blended) Jobs Growth** – based on the average job growth as projected by Experian and Oxford Economics [OE] as reported in CYC's SHMA (June 2016) (725 jobs p.a. averaged across 4 scenarios between 2012 and 2032 at an average growth rate of 0.6%);
- e **Scenario E: Past Trend Job Growth** – Taking into account the average net job growth rate of -0.2% annually between 1999 and 2014 (as recorded by Experian), this scenario assumes this will continue over the plan period (-181 jobs annually);

Affordable Housing Needs

- f We have also considered the housing delivery that would be required to achieve the level of affordable housing need in the City of York, of **627 dpa** (as set out in the June 2016 SHMA Addendum).

Demographic Led Scenarios

Scenario A: 2014-based SNPP/2012-based SNHP (Baseline)

- 4.37 This scenario models the 2014-based SNPP and the 2012-based SNHP. Under this scenario, over the period 2012-32, there would be an overall population growth of 31,356. This is due to net in-migration of 23,171, which exceeds positive natural change (i.e. more births than deaths) of 8,185. Due to this strong population growth, the number of households in the City would increase by 17,134 over the projection period; this is due to a combination of new household formation of younger cohorts, and a decline in average household size associated with an ageing population. To accommodate this level of growth, there is a need for 17,396 dwellings, or **870 dpa**. Whilst the projected household growth is identical to that proposed for the 2014-based SNPP scenario in GL Hearn's SHMA Addendum (June 2016), the dwelling need is slightly lower than GL Hearn's 889 dpa figure due to a lower vacancy/second homes rate used by NLP.
- 4.38 Based on the change in population age structure, and the suitable application of commuting patterns and adjustments to unemployment, this would accommodate an increase of 12,595 jobs (net) in the City.

Scenario Ai: 2014-based SNPP with 2015 MYE

- 4.39 Under this sensitivity test scenario, the latest 2015 MYE are included in the modelling, with the subsequent 2014-based SNPP re-based off a slightly higher (206,856 compared to 206,809) City of York resident population in 2015. This would accommodate an increase in the overall population growth of 32,273, job growth of 12,842, and an increase in dwellings of 17,579 (or **879 dpa**).

Scenario Aii: 2014-based SNPP with Partial Catch Up Rates and 2015 MYE

- 4.40 The 2012-based SNHP show lower rates of household formation than their 2008-based predecessors, particularly in the youngest age groups. Since the projections take into account recent trends, this is likely to be a result of the reduced rates of household formation seen throughout the economic downturn as a result of factors such as constrained supply of housing, affordability issues and lack of mortgage availability. To simply trend this forward might result in the true housing need of the population being suppressed further, by not providing sufficient housing for the needs of local residents.
- 4.41 Therefore, in addition to modelling the 2012 Headship Rates (Scenario A / Ai), NLP has also modelled a 'Partial Catch-up' Headship Rate scenario (Scenario Aii). This still incorporates the 2014 SNPP / 2015 MYE, hence the population and economic outputs are the same as Scenario Ai. However, it assumes that by 2033, half of the difference between the 2008-based and 2012-based headship rates for those ages 15-34 is made up (with this change taking effect from 2017 onwards, to allow for the economy to return to true, pre-recession

trends). This is because the 2008-based SNHP were generated before the recession, and therefore represent household formation rates more in line with longer term trends. By modelling a 'Partial Catch-Up' [PCU] scenario, it is assumed that any pent-up demand within the population will be released, resulting in higher rates of household formation than projected by the 2012 SNHP, with household formation returning to a trend more in line with (but not the same as) the higher rates in the 2008-based projections.

4.42 By adopting higher household formation rates amongst younger adults, household growth would equate to 18,480 over the period to 2032 (8% higher than Scenario A). This would generate a need for 18,763 dwellings, or **938 dpa**.

4.43 The key outputs for these three scenarios are presented in Table 4.2.

Table 4.2 Key Model Outputs - Scenarios A, Ai and Aii: 2014-based SNPP / 2015 MYE / PCU

Scenario	Population			Change in Jobs	Change in Households	Dwellings 2012-2032	
	2012	2032	Change			Total Change	DPA
A. 2014-based SNPP	200,018	231,374	+31,356	+12,595	+17,134	+17,396	870
Ai. 2014-based SNPP + 2015 MYE	200,018	232,291	+32,273	+12,842	+17,314	+17,579	879
Aii. 2014 SNPP +MYE / PCU	200,018	232,291	+32,273	+12,842	+18,480	+18,763	938

Source: NLP using PopGroup

Scenario B: Long Term Migration Trends

4.44 Scenario B models future migration on the basis of long term trends taken from the last ten years (2004/05 to 2013/14)⁴⁴. This shows that total net migration has averaged 1,616 per annum, i.e. 1,616 more people arriving at the City of York than leaving. Of this figure, 517 relate to net domestic migration, whilst 1,099 relates to net international migration. Natural change is positive at 11,217 over the period 2012-2032, therefore the population of the City increases substantially overall, by 44,757 residents.

4.45 Under this scenario the level of household growth would be higher than Baseline Scenario A, at 22,015, equating to a housing need of 22,352, or **1,118 dpa**. The number of jobs that could be sustained would increase by 20,809, or 1,040 annually.

Scenario Bi: Long Term Migration Trends with Partial Catch Up Rates

4.46 Under this further sensitivity test scenario, population growth and labour force outcomes are the same as for Scenario B; the only input which has been changed is the household formation rates, which dictate household growth and

⁴⁴ Please note that due to the availability of data when the modelling was undertaken, we were not able to take into account the migration rates for the year 2014-2015. However, given that the 2015 MYE data suggests that this resulted in a net increase of 2,280 residents net (637 internal, 1,643 international) for that year, it is possible that this could actually increase the overall level of housing need were it to be included in the model, as the 10-year average would increase to 1,673 (net) overall, from 1,616.

dwelling need.

4.47 By adopting higher household formation rates amongst younger adults, household growth would equate to 23,304 over the period to 2032 (6% higher than Scenario B). This would generate a need for 23,661 dwellings, or **1,183 dpa**.

4.48 The key outputs are presented in Table 4.3.

Table 4.3 Key Outputs – Scenarios B and Bi: Long Term Migration Trends / PCU

Scenario	Population			Change in Jobs	Change in Households	Dwellings 2012-2032	
	2012	2032	Change			Total Change	DPA
B. Long Term Migration	200,018	244,775	+44,757	+20,809	+22,015	+22,352	1,118
Bi. Long Term Migration PCU	200,018	244,775	+44,757	+20,809	+23,304	+23,661	1,183

Source: NLP using PopGroup

Employment-led Scenarios

4.49 The second component of the HEaDROOM framework is based on an understanding of the relationship between housing and employment. Although there are a complex set of issues involved in matching labour markets and housing markets (with different occupational groups having a greater or lesser propensity to travel to work), there are some simple metrics that can explore the basic alignment of employment, demographic and housing change, notably the amount of housing needed to sustain a given labour force assuming certain characteristics of commuting and employment levels.

4.50 Ensuring a sufficient supply of homes within easy access of employment opportunities represents a central facet of an efficiently functioning economy and can help to minimise housing market pressures and unsustainable levels of commuting (and therefore congestion and carbon emissions). If the objective of employment growth is to be realised, then it will generally need to be supported by an adequate supply of suitable housing. The challenge of meeting employment needs is clearly given a heightened importance as a result of the need to secure economic growth out of recession, and the Framework highlights this by stating that planning should "*do everything it can*" to support economic growth.

4.51 The Practice Guidance further clarifies that:

"Where the... labour force supply is less than the projected job growth, this could result in unsustainable commuting patterns... and could reduce the resilience of local businesses. In such circumstances, plan makers will need to consider how the location of new housing... could help address these problems."

4.52 To model this demographically, the PopGroup model constrains/inflates migration to a level (reflecting the age profile specific to the City of York) which,

alongside natural change within the population, produces an indigenous labour force sufficient to support the given level of employment taking account of commuting. Within the modelling, NLP has made allowance for increases in age specific economic activity rates associated with changes to pension ages, but has assumed the relative balance of commuting will continue as observed currently.

- 4.53 Ensuring a sufficient supply of homes within easy access of employment generators represents a central facet of an efficiently functioning economy and can help minimise housing market pressures and unsustainable levels of commuting (and therefore congestion and carbon emissions).

Scenario C: Experian Job Growth

- 4.54 The latest Experian forecasts (June 2016) project job growth of 12,400 over the period 2012-32 in the City of York, equivalent to 620 net additional workforce jobs annually.
- 4.55 To support this level of job growth, taking into account current commuting patterns and projected changes in economic activity rates (as well as unemployment), there would need to be an increase in the size of the labour force by 3,219 (as the City of York is a significant net importer of workers). This would require population growth of 31,294, of which 23,233 would be through net in-migration. This takes into account the age profile of people who move into and out of the City. This growth would result in an additional 16,965 households, generating a need for 17,225 dwellings, equivalent to **861 dpa**. This is lower than the level generated by the 2014-based SNPP.
- 4.56 The key outputs are shown in Table 4.4.

Table 4.4 Key Outputs - Scenario C: Experian Job Growth

Scenario	Population			Change in Jobs	Change in Households	Dwellings 2012-2032	
	2012	2032	Change			Total Change	DPA
C. Experian Jobs Growth	200,018	231,312	+31,294	+12,400	+16,965	+17,225	861

Source: NLP using PopGroup

Scenario D: Blended Job Growth

- 4.57 The City of York SHMA (June 2016) explores the implications of York’s housing need referring to a number of econometric models (Section 5.0). This identifies four models – three from Oxford Economics (with job growth of 609,635 and 868 annually, depending upon the assumptions used) and one from Experian (via the Yorkshire and Humber Regional Economic Model YHREM), which forecasts annual job growth of 789. Together, the combined average is for job growth in the order of 725 annually. This Scenario therefore triangulates a number of econometric forecasting models and replicates the evidence underpinning the Council’s own housing evidence base.
- 4.58 To support this level of job growth, taking into account current commuting

patterns and projected changes in economic activity rates (as well as unemployment), there would need to be an increase in the size of the labour force by 5,068 and would require population growth of 34,588, of which 25,966 would be through net in-migration. This takes into account the age profile of people who move into and out of the City. This growth would result in an additional 18,184 households, generating a need for 18,463 dwellings, equivalent to **923 dpa**. This is lower than the level generated by the 2014-based SNPP with adjustments for PCU and the 2015 MYE.

4.59 The key outputs are shown in Table 4.4.

Table 4.5 Key Outputs - Scenario D: Blended Job Growth

Scenario	Population			Change in Jobs	Change in Households	Dwellings 2012-2032	
	2012	2032	Change			Total Change	DPA
D. Blended Jobs Growth	200,018	234,606	+34,588	+14,500	+18,184	+18,463	923

Source: NLP using PopGroup

Scenario E: Past Trends Job Growth

4.60 Between 1999 and 2014, the City of York actually lost around 3,700 workers, at an average rate of around 0.2% annually.

4.61 This scenario sets out the level of growth required were past trends to continue at this (negative) rate.

4.62 Under this scenario, there would be a decline of 3,625 jobs over the period 2012-2032. As the population is ageing, more people are required to sustain the workforce, hence even though the number of jobs declines under this scenario, the City's overall housing need would increase to compensate for the fact that comparatively more people would be leaving the workforce to retire. This equates to an overall population growth of 6,177, household growth of 7,664 and a dwelling need of 7,782, or 389 dpa.

4.63 It is considered that very limited weight can be attached to this Scenario given that it generates a (negative) level of employment change in the City that is very much at odds with all of the econometric forecasting models. It is also substantively lower than the level of job growth that could be sustained via any of the demographic modelling scenarios.

4.64 The key outputs are shown in Table 4.4.

Table 4.6 Key Outputs - Scenario E: Past Trends Job Growth

Scenario	Population			Change in Jobs	Change in Households	Dwellings 2012-2032	
	2012	2032	Change			Total Change	DPA
E. Past Trends Job Growth	200,018	206,195	+6,177	-3,625	+7,664	+7,782	389

Source: NLP using PopGroup

Affordable Housing Needs

Scenario F: Affordable Housing Needs

4.65 The Practice Guidance states that, with regard to taking into account affordable housing needs:

“The total affordable housing need should then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, given the probable percentage of affordable housing to be delivered by market housing led developments. An increase in the total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes.”⁴⁵

4.66 The inclusion of affordable housing needs in OAHN calculations has also been established in the High Court Decision between Satnam Millennium Ltd vs Warrington Borough Council⁴⁶ which sets out the requirements of an OAHN to cater for affordable housing needs in its calculation. The decision found that the adopted OAHN figure proposed in Warrington’s Local Plan was not in compliance with policy because “*the assessed need was never expressed or included as part of the OAHN*” [§43]. The decision found that the “proper exercise” had not been undertaken, namely:

“(a) having identified the OAN for affordable housing, that should then be considered in the context of its likely delivery as a proportion of mixed market/affordable housing development; an increase in the total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes;

(b) the Local Plan should then meet the OAN for affordable housing, subject only to the constraints referred to in NPPF, paragraphs 14 and 47.” NLP emphasis

4.67 As such, the below calculations of affordable housing need must be considered in the conclusions of objectively assessed housing needs for the City of York.

4.68 The evidence contained in the City of York SHMA (June 2016) indicates a net affordable housing need totalling 573 dpa. Furthermore, the subsequent SHMA Addendum (June 2016) states that, holding all other parts of the model constant, the bottom-line estimate of affordable need rises from to **627 dpa** (a 9% increase).

4.69 Over the period 2007/08 – 2014/15, CYC delivered a total of 1,100 affordable units, at an average of 137.5 annually⁴⁷. On the basis that CYC generally pursues an affordable housing requirement of 50%⁴⁸ on all suitable allocated

⁴⁵ 2a-029-20140306

⁴⁶ [2015] EWHC 370 (Admin) Case No: CO/4055/2014 <http://www.bailii.org/ew/cases/EWHC/Admin/2015/370.html>

⁴⁷ https://www.york.gov.uk/info/20012/housing/1132/affordable_housing_completions

⁴⁸ Although not formally adopted, the ‘City of York Draft Local Plan (incorporating the Fourth Set of Changes)’ (April 2005) is still used as the basis for development management decisions. Policy H2a of that document states that, subject to viability, “*In order to achieve the maximum reasonable proportion of affordable housing, the following targets have been set on all suitable*

and windfall sites over a set site threshold (subject to viability), then York would need to deliver **1,254 dpa** of market housing overall to deliver 627 affordable dpa.

- 4.70 As set out in the Kings Lynn judgment, the correct method for considering the amount of housing required to meet full affordable housing needs is to consider the quantum of market housing needed to deliver full affordable housing needs (i.e. 1,254 dpa). However, as the judgment sets out, this can lead to a full OAHN figure which is so large that a LPA would have *“little or no prospect of delivering (it) in practice”*. Therefore, although it may not be reasonable and therefore should not be expected that the OAHN will include affordable housing needs in full, an uplift or similar consideration of how affordable needs can be ‘addressed’ is necessary as part of the full OAHN calculation. This approach has not been undertaken in the 2016 SHMA.

Summary

- 4.71 The scenarios present a range of housing needs for the period 2012 to 2032 based on different drivers of growth, as set out in Table 4.7. These range from a low of 389 based on the (negative) past trends job growth scenario (E), all the way up to a high of 1,254 based on meeting the SHMA Affordable Housing Needs in full.
- 4.72 In between, the 2014-based SNPP suggests a need for around 870 dpa, although if a suitable adjustment is made to take into account the latest 2015 MYE and accelerated headship rates amongst the younger age groups, this would increase to 938 dpa. As the (10-year) long term migration figures are actually higher than are projected in the 2014-based SNPP going forward, then all other data inputs being equal, the dwelling need would increase, to between 1,118 dpa (Scenario B) and 1,183 dpa (Bi) depending upon the approach taken towards headship rates.
- 4.73 In this instance, it is considered that greater weight should be attached to the 938 dpa (Scenario Aii) figure, as it uses the most recently available data and makes suitable adjustments to headship rates for the younger age cohorts. Whilst the long term migration trend suggests a higher level of housing need, it is considered that for the City of York it relies upon very high levels of net international migration which, given the uncertainties concerning Brexit, may be difficult to sustain.
- 4.74 The employment-led projections are generally lower, at just 389 dpa based on past trends, 861 dpa based on the latest Experian projections, and 923 dpa based on a triangulation of various econometric projections as taken from the 2016 SHMA. As noted above, it is considered that limited, if any, weight should be attached to the past trends job growth scenario in this instance given that it projects job losses at odds with the other employment and demographic-led projections.

allocated and windfall sites in York: 45% for affordable rent, plus 5% for discounted sale, to address priority housing needs in the City.”

4.75

Some of the outputs are different from the 2016 SHMA and subsequent Addendum for a number of reasons including higher headship rates, lower vacancy/second home rates, the use of the 2015 MYE and variable job growth projections.

Table 4.7 Summary of York Modelling Scenarios 2012-2032

Scenario	Population			Change in Jobs	Change in Households	Dwellings 2012-2032	
	2012	2032	Change			Total Change	DPA
A. 2014-based SNPP	200,018	231,374	+31,356	+12,595	+17,134	+17,396	870
Ai. 2014-based SNPP + 2015 MYE	200,018	232,291	+32,273	+12,842	+17,314	+17,579	879
Aii. 2014 SNPP +MYE / PCU	200,018	232,291	+32,273	+12,842	+18,480	+18,763	938
B. Long Term Migration	200,018	244,775	+44,757	+20,809	+22,015	+22,352	1,118
Bi. Long Term Migration PCU	200,018	244,775	+44,757	+20,809	+23,304	+23,661	1,183
C. Experian Jobs Growth	200,018	231,312	+31,294	+12,400	+16,965	+17,225	861
D. Blended Jobs Growth	200,018	234,606	+34,588	+14,500	+18,184	+18,463	923
E. Past Trends Job Growth	200,018	206,195	+6,177	-3,625	+7,664	+7,782	389
F. SHMA Affordable Housing Needs	-	-	-	-	-	+25,080	1,254

Source: NLP using PopGroup

5.0 Market Signals

5.1 The Framework sets out the central land-use planning principles that should underpin both plan-making and decision-taking. It outlines twelve core principles of planning that should be taken account of, including the role of market signals in effectively informing planning decisions:

“Plans should take account of market signals, such as land prices and housing affordability, and set out a clear strategy for allocating sufficient land which is suitable for development in their area, taking account of the needs of the residential and business communities.” [§17]

5.2 The Practice Guidance requires market signals to be assessed against comparator locations⁴⁹. The analysis in the following sections focuses on comparing the City of York and other Local Authorities and England to benchmark their performance against trends both across the wider region and nationally.

5.3 The Guidance sets out six key market signals⁵⁰:

- 1 land prices;
- 2 house prices;
- 3 rents;
- 4 affordability;
- 5 rate of development; and,
- 6 overcrowding.

5.4 It goes on to indicate that appropriate comparison of these should be made with upward adjustment made where such market signals indicate an imbalance in supply and demand, and the need to increase housing supply to meet demand and tackle affordability issues:

“This includes comparison with longer term trends (both in absolute levels and rates of change) in the housing market area; similar demographic and economic areas; and nationally. Divergence under any of these circumstances will require upwards adjustment to planned housing numbers compared to ones based solely on household projections”.

“In areas where an upward adjustment is required, plan makers should set this adjustment at a level that is reasonable. The more significant the affordability constraints (as reflected in rising prices and rents, and worsening affordability ratio) and the stronger other indicators of high demand (e.g. the differential between land prices), the larger the improvement in affordability needed and, therefore, the larger the additional supply response should be.”⁵¹

⁴⁹ 2a-020-20140306

⁵⁰ 2a-019-20140306

⁵¹ 2a-020-20140306

- 5.5 The Practice Guidance sets out a clear and logical ‘test’ for the circumstances in which objectively assessed needs (including meeting housing demand) will be in excess of demographic-led projections. In the context of the Framework and the Practice Guidance, the housing market signals have been reviewed to assess the extent to which they indicate a supply and demand imbalance in the City of York and other comparable local authorities and therefore indicate that an upwards adjustment should be made over the demographic-led baseline already identified.
- 5.6 The **Local Plan Expert Group [LPEG]**, in its Report to the Communities Secretary and to the Minister of Housing and Planning (March 2016), recommended various changes to the Practice Guidance concerning the assessment of housing market signals. Instead of analysing six key market signals and considering whether an uplift is justified as the current Practice Guidance states (and which this Section will examine), the LPEG recommends examining just two indicators:
- 1 **House price affordability** – the ratio of median quartile house prices to median earnings (‘The House Price Ratio’); and,
 - 2 **Rental affordability** – lower quartile rental costs as a percent of lower quartile earnings (The Rental Affordability Ratio’).
- 5.7 Whilst the LPEG report remains at the consultation stage and has no formal weight, it is a useful indicator of the general direction of travel this area of debate is likely to take. NLP has therefore applied the HPR/RAR tests to York towards the end of this Section.

Housing Market Indicators

- 5.8 In the context of The Framework and the Practice Guidance, each of the housing market signals have been reviewed to assess the extent to which they indicate an imbalance between supply and demand in the City of York.

Land Prices

- 5.9 CLG has published a document entitled ‘*Land value estimates for policy appraisal*’ (February 2015) which contains post permission residential land value estimates, per hectare for each Local Authority. For York this figure is £2,469,000 per hectare, well above the equivalent figure for England (excluding London) of £1,958,000.

House Prices

- 5.10 The Practice Guidance⁵² identifies that longer term changes in house prices may indicate an imbalance between the demand for and supply of housing. Although it suggests using mix-adjusted prices and/or House Price Indices, these are not available at local authority level on a consistent basis, and

⁵² 2a-019-20140306

therefore for considering market signals in York, price paid data is the most reasonable indicator.

- 5.11 Land Registry price paid data displays the median prices in York, alongside North Yorkshire and England as of 2014 (Table 5.1). These median prices illustrate lower prices in York compared to national rates, but higher prices than in the surrounding sub-region.

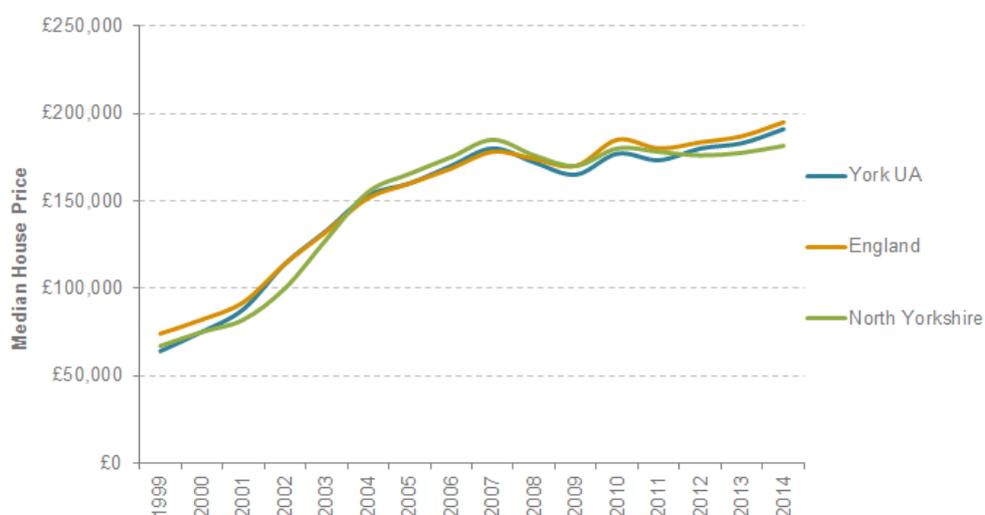
Table 5.1 Median Dwelling Price, York (2014)

	Median Dwelling Price 2014
York	£191,000
North Yorkshire	£181,500
England	£195,000

Source: Land Registry Price Paid Data

- 5.12 CLG publishes series data on median house prices based on the same Land Registry price paid data series. This currently runs from 1996 to 2014. This longitudinal analysis is illustrated in Figure 5.1, which indicates that the City of York has seen virtually identical levels of house price growth to the national average since 1999. The figure remains slightly below the England average at present, but is above the North Yorkshire median.

Figure 5.1 Median House Prices



Source: CLG Live Table 586

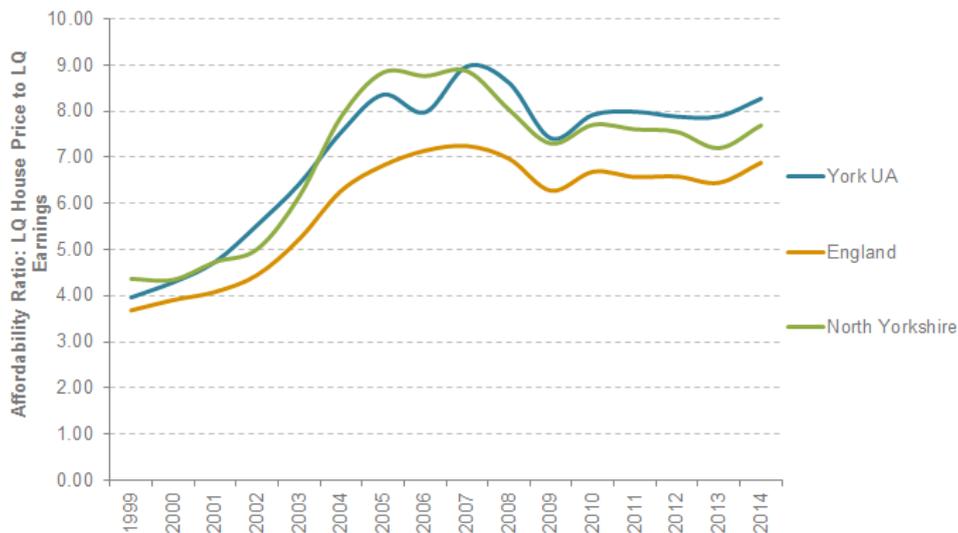
- 5.13 In 2014 median house prices in York were just 2% lower than the national average, whilst the City ranked as being the 168th most expensive place to live in England (out of 326 districts).
- 5.14 It is particularly important to note that over the previous 15 years (1999-2014), median house prices have increased by 198% (or £127,000) in York, compared to 164% nationally and 171% across North Yorkshire as a whole.
- 5.15 As set out in the Practice Guidance, higher house prices and long term, sustained increases can indicate an imbalance between the demand for housing and its supply. The fact that York’s median house prices have

effectively tripled in 15 years, from £61,000 in 1999 to £191,000 in 2014, and have risen at a much faster rate than comparable national and sub-regional figures, suggests that the local market is experiencing considerable levels of stress.

Affordability

- 5.16 The CLG’s former SHMA Practice Guidance defines affordability as a ‘*measure of whether housing may be afforded by certain groups of households*’⁵³. A household can be considered able to afford to buy a home if it costs 3.5 times the gross household income for a single earner household or 2.9 times the gross household income for dual-income households. Where possible, allowance should be made for access to capital that could be used towards the cost of home ownership [page 42].
- 5.17 The Practice Guidance concludes that assessing affordability involves comparing costs against a household’s ability to pay, with the relevant indicator being the ratio between lower quartile house prices and lower quartile [LQ] earnings.
- 5.18 Using CLG affordability ratios, Figure 5.2 illustrates that although the ratio fell substantially from a peak of 8.98 in 2007 following the financial crash and subsequent economic downturn, it has steadily increased since 2009 at a much faster rate than North Yorkshire as a whole. This suggests that levels of affordability are declining in York at a pace which is not the case for the rest of the sub-region (and indeed, for the country as a whole). In 2014, the median house price in York City was approximately 8.27-times the LQ income, compared to 7.69 for North Yorkshire and 6.88 nationally.

Figure 5.2 Ratio of house price to lower quartile earnings



Source: CLG Live Table 576

- 5.19 It can be seen in Figure 5.2 that over the past 15 years, the ratio of lower quartile house prices to lower quartile earnings in York has been consistently

⁵³ Annex G

above the national average, with the gap widening over time. Indeed, the rate of increase is worrying – between 1999 and 2014, the affordability ratio increased by 109%, significantly above the comparable growth rate for North Yorkshire (+76%) and England (+87%). Indeed, across the whole of northern England, only Manchester City has experienced a higher rate of increase in its affordability ratio than York.

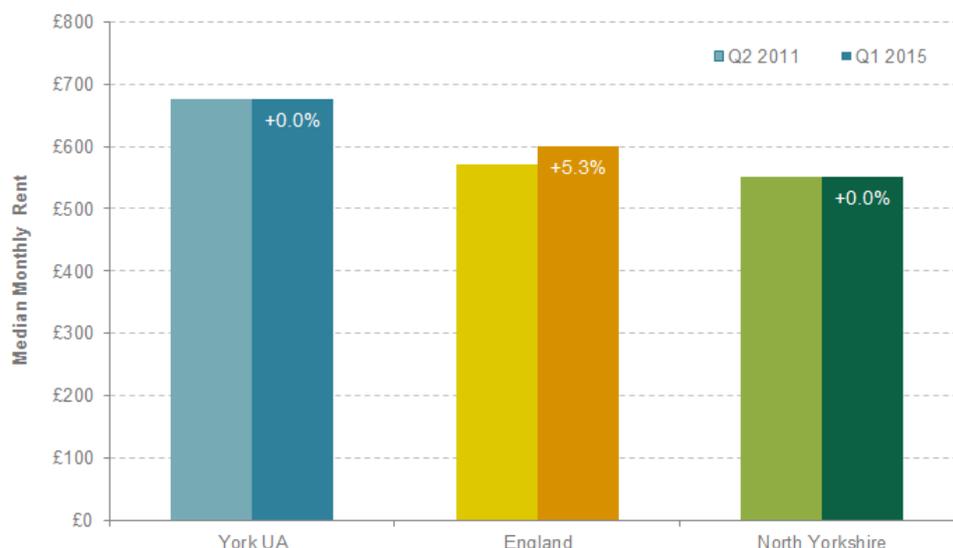
5.20 The affordability ratio highlights a constraint on people being able to access housing in York, with house price increases and rental costs outstripping increases in earnings at a rate well above the national level.

5.21 The **House Price Ratio**, the measure used within the proposed changes to the Practice Guidance by the LPEG⁵⁴, equates to 6.92 for York (based on NLP’s analysis of median house prices set against median earnings, averaged over the past 3 years). According to the LPEG Guidance, where HPR is at or above 5.3 and less than 7.0 a 10% uplift should be applied.

Rents

5.22 On a similar basis, high and increasing private sector rents in an area can be a further signal of stress in the housing market. Median rents in York are £675 per month, with median rents ranging from £567 per month for a 1 bed flat, to £695 per month for a 4+ bed house. All of these figures are significantly higher than the national average, with overall average rents comprising £600 across England, and £550 for North Yorkshire. Rental levels are therefore 12.5% higher than comparable national figures, although as Figure 5.3 demonstrates, rents have remained static in the City in recent years.

Figure 5.3 Median Monthly Rents



Source: VOA Private Rental Market Statistics

⁵⁴ Revised Practice Guidance text on Housing and Economic Development Needs – Appendix 6 of Local Plan Expert Group Report [ID: 2a-020-20140306]

- 5.23 The **Rental Affordability Ratio [RAR]**, the measure proposed to analyse market signals within the LPEG's proposed changes to the Practice Guidance⁵⁵, is 32.4% for York (based on NLP's analysis of LQ earnings against LQ 1-bedroom rental properties, averaged over the past 3 years). The LPEG Guidance suggests that where the RAR is between 30% and 35%, a 20% uplift should be applied to the demographic starting point OAHN.

Rate of Development / Under Delivery

- 5.24 The rate of development is intended to be a supply-side indicator of previous delivery. The Practice Guidance states that:

*"...if the historic rate of development shows that actual supply falls below planned supply, future supply should be increased to reflect the likelihood of under-delivery of a plan"*⁵⁶

- 5.25 York has never had an adopted Local Plan, hence the only relevant previous 'planned supply' figure is the target within the former Yorkshire and the Humber RS up to 2012. Thereafter, we have compared delivery against the household projections and its preferred OAHN range, as set out in Table 5.2.

Table 5.2 Rate of net housing delivery in York against possible policy benchmarks, 2004/05-2014-15

Year	Net Housing Completions	2012-based SNHP		Council's OAHN (841 dpa)	
		'Need'*	+/-	'Need'*	+/-
2004/05	1,160	640	+520	640	+520
2005/06	906	640	+266	640	+266
2006/07	798	640	+158	640	+158
2007/08	523	640	-117	640	-117
2008/09	451	850	-399	850	-399
2009/10	507	850	-343	850	-343
2010/11	514	850	-336	850	-336
2011/12	321	850	-529	850	-529
2012/13	482	758	-276	841	-359
2013/14	345	758	-413	841	-496
2014/15	507	758	-251	841	-334
Total 2004/05 – 2015/16	6,514		-1,720		-1,969

Source: Arup (August 2015): 'Evidence on Housing Requirements in York: 2015 Update', Table 4
 *RSS assumed average 0 640 dpa 2004/05 – 2007/08; 850 dpa 2008/09 – 2011/12

- 5.26 It is clear from the Council's own evidence that the City has consistently under-delivered housing, with a failure to deliver anything more than 525 dwellings in any single year since before the recession. The policy benchmarks suggest that the level of past under-delivery could range from around 1,700 to 1,970 dwellings over the past 11 years.
- 5.27 Furthermore, The Council's already low housing delivery figures have been artificially boosted by the inclusion of student accommodation in the

⁵⁵Ibid

⁵⁶Section 2a-019-20140306

completions figures. For example, CYC's 2012/13 Annual Monitoring Report states that 482 (net) dwellings were completed in 2012/13, but this figure includes 124 student cluster flats. The latest 6 months completions data set out in CYC's Housing Monitoring Update (October 2015) suggests that the Council is continuing to rely on student housing completions to boost its housing numbers, with 579 of the total 777 net completions during the first half of the 2015/16 monitoring year comprising privately managed off-campus student accommodation. It is highly questionable whether such accommodation is genuinely meeting the needs of York City's non-student population.

Overcrowding and Homelessness

- 5.28 Indicators on overcrowding, sharing households and homelessness demonstrate un-met need for housing within an area. The Practice Guidance suggests that long-term increases in the number of such households may be a signal that planned housing requirements need to be increased.
- 5.29 The Guidance states that indicators on:
- “...overcrowding, concealed and sharing households, homelessness and the number in temporary accommodation demonstrate unmet need for housing. Longer term increases in the number of such households may be a signal to consider increasing planned housing numbers...”⁵⁷*
- 5.30 The Census measures overcrowding based on a standard formula, which measures the relationships between members of a households (as well as the number of people in that household) to determine the number of rooms they require. A rating of -1 or less indicates a household has one fewer room than required, +1 or more indicates a household has one or more rooms than needed. At the national level, affordability issues in recent years, as well as a shortfall in housing supply, have meant that people are either willing to accept sub-optimal living conditions (e.g. living in a smaller home to manage costs) or are forced into accepting such housing outcomes (e.g. are priced out of the market and have to share with friends/family).
- 5.31 Table 5.3 illustrates that overcrowding against the occupancy rating in York is not severe, with 7.10% of households living in a dwelling that is too small for their household size and composition. This compares to 8.7% nationally. However, it represents a significant increase of 2 percentage points on the 5.1% recorded in York in 2001, which is above the national trend (which had increased by 1.6 percentage points from 7.1% in 2011).

⁵⁷ Section 2a-019-20140306

Table 5.3 Overcrowding: Household Room Occupancy Rating

	2001			2011		
	Total Households	-1 room occupancy or less	-1 room occupancy or less (%)	Total Households	-1 room occupancy or less	-1 room occupancy or less (%)
York	76,926	3,887	5.1%	83,552	5,930	7.1%
England	20,451,427	1,457,512	7.1%	22,063,368	1,928,596	8.7%

Source: Census 2001 / Census 2011

Note: The definition of the Census 'bedroom standard' is slightly different from the 'occupancy rating' that informs the Government's Under-Occupancy Charges, i.e. the Census states that 'two persons of the same sex aged between 10 and 20' can occupy one bedroom, whilst the Under Occupancy Charge changes this to 'any two children of the same sex aged under 16'. It is possible that if the Government's policy continues into the long term, then changes will be made to the categorisation of the Census's Occupancy Rating to bring the two datasets into line.

5.32 The Census also recorded the number of concealed families (i.e. where there is more than one family present in a household). Nationally, this rose significantly between 2001 and 2011, at least in part due to the impact of the recession on younger households' ability to afford their own home. This meant that many younger people, including families, remained in the family home for longer than might have been expected in the past, either through choice (to save money) or through necessity.

5.33 At the time of the 2011 Census, 1.9% of all families in England were concealed; this represented 275,954 families. This is a rise compared to 2001 when 1.2% of families were concealed. In York, a lower percentage of families were concealed (1.1%) than nationally (1.9%). However, this represents a higher proportional rise, of almost two thirds, from the 2001 figure. This is presented in Table 5.4.

Table 5.4 Concealed Families in York, Yorkshire and the Humber and England - 2001-2011

	Concealed Families		Change (percentage points)	Change in %
	2001	2011		
York	330 (0.7%)	586 (1.1%)	+0.43	+65.7%
Yorkshire and the Humber	15,890 (1.1%)	25,410 (1.7%)	+0.57	+51.1%
England	161,254 (1.2%)	275,954 (1.9%)	+0.69	+59.2%

Source: Census 2001/2011

5.34 The levels of overcrowding and concealed households in York are moderate when compared with the national and regional averages but have increased at a higher rate (albeit from a lower base). While the level of overcrowding and number of concealed households is not so significant as to conclude that there is severe market pressure, it nevertheless highlights inadequacy reducing flexibility in the housing market.

5.35 The levels of overcrowding are likely to be a symptom associated with restricted incomes in York, with people either willing to accept sub-optimal living conditions (e.g. living in smaller houses to manage costs) or forced into

accepting such housing outcomes (e.g. are priced out and have to share with friends/family). In such circumstances, overcrowding and concealed households may be indicative of insufficient supply to meet demand.

- 5.36 Table 5.5 indicates that York has a comparatively low number of homeless people in priority need, of just 103 (or 1.2 per 1,000 households), which is around half the national rate. The fall in homelessness levels in the City has also been much more pronounced than elsewhere over the past ten years.

Table 5.5 Numbers accepted as being homeless and in priority need- 2004/05-2014/15

	Homeless and in Priority Need		% Change	Absolute Change
	2004/05	2014/15		
York	424 (5.44 / 1,000 H'holds)	103 (1.2 / 1,000 H'holds)	-78%	-4.2 / 1,000 H'holds
North Yorkshire	1,025 (4.01 / 1,000 H'holds)	369 (1.41 / 1,000 H'holds)	-65%	-2.6 / 1,000 H'holds
England	120,860 (5.73 / 1,000 H'holds)	54,430 (2.40 / 1,000 H'holds)	-58%	-3.3 / 1,000 H'holds

Source: CLG Live Table 784: Local authorities' action under the homelessness provisions of the Housing Acts (P1e returns)

Synthesis of Market Signals

- 5.37 Drawing together the individual market signals above begins to build a picture of the current housing market in and around York; the extent to which demand for housing is not being met; and the adverse outcomes that are occurring because of this.
- 5.38 The performance of York against County and national comparators for each market signal is summarised in Table 5.6. When quantified, York has performed worse in market signals relating to both absolute levels and rates of change against North Yorkshire and England in 14 out of 28 measures.
- 5.39 It is clear that the City is currently facing very significant challenges in terms of house prices and private rental values causing affordability difficulties.

Table 5.6 Summary of the York Market Signals against North Yorkshire and England

Market Signal	North Yorkshire		England	
	Absolute Figure	Rate of Change	Absolute Figure	Rate of Change
House Prices	Worse	Worse	Better	Worse
Affordability Ratios	Worse	Worse	Worse	Worse
Private Rents	Worse	Same	Worse	Better
Past Development	~	~	~	~
Homelessness (Households in Temporary Accommodation)	Better	Better	Better	Better
Homelessness (Households in Priority Need)	Better	Better	Better	Better
Overcrowding (Overcrowded Households)	Worse	Worse	Better	Worse
Overcrowding (Concealed Families)	Better	Worse	Better	Worse

Source: NLP analysis

Footnote: Worse = performing worse against the average

Better = performing the same or better against the average

~ = data not available

5.40 To draw meaningful conclusions on the extent to which these market indicators show housing market stress within the City of York and a level of supply that is not meeting demand, the Practice Guidance suggests that comparisons of absolute levels and rates of change in such indicators should be made with comparator areas and nationally. For this reason, York has been compared and ranked against other local authority areas, and England as a whole.

5.41 These comparator areas have been chosen on the following basis:

A) Other nearby areas within the wider Yorkshire and the Humber Region:

- 1 East Riding
- 2 Hambleton
- 3 Harrogate
- 4 Hull
- 5 Leeds
- 6 Ryedale
- 7 Selby
- 8 Wakefield

B) The Practice Guidance also states that market signals must be compared with authorities which are not necessarily close geographically, but which share characteristics in terms of economic and demographic factors. These authorities have been chosen by examining the 'OAC Supergroup Area Classification Map', produced by the ONS in 2015, which groups each local authority into various socio-economic classifications. York, as a 'Coast and Heritage' authority, has been compared with other communities similarly classified within this ranking and which share similar socio-economic characteristics:

- 1 Bath and North East Somerset
- 2 Canterbury
- 3 Cheltenham
- 4 Colchester
- 5 Lancaster
- 6 Scarborough
- 7 Taunton Deane
- 8 Worcester

5.42

England has been used as the final comparator for both sets of tables. A comparison across the range of housing market signals within the authorities identified above is presented in Table 5.7 to Table 5.10. A higher ranking in these tables suggests a worse, or comparatively poorer performing, housing market for that indicator.

Table 5.7 York Market Signals Comparator Table - Cost of Housing [Neighbouring Authorities]

Rank	House Prices			Affordability			Rents		
	Median (2014)	% Change (1999-2014)	Absolute Change (1999-2014)	Ratio (2014)	% Change (1999-2014)	Absolute Change (1999-2014)	Median (Q1 2015)	% Change (Q2 2011-Q1 2015)	Absolute Change (Q2 2011-Q1 2015)
1	Harrogate	York	Harrogate	Harrogate	York	Harrogate	Harrogate	Leeds	Leeds
2	Hambleton	Harrogate	Hambleton	Hambleton	Harrogate	York	York	Selby	Selby
3	England	Hambleton	York	Ryedale	Ryedale	Ryedale	Leeds	Ryedale	Harrogate
4	York	Ryedale	England	York	England	Hambleton	England	Harrogate	Ryedale
5	Ryedale	Selby	Ryedale	England	Kingston upon Hull	England	Hambleton	England	England
6	Selby	England	Selby	Selby	East Riding of Yorkshire	Selby	Selby	East Riding of Yorkshire	East Riding of Yorkshire
7	Leeds	East Riding of Yorkshire	East Riding of Yorkshire	East Riding of Yorkshire	Selby	East Riding of Yorkshire	Ryedale	Kingston upon Hull	Kingston upon Hull
8	East Riding of Yorkshire	Kingston upon Hull	Leeds	Leeds	Leeds	Leeds	Wakefield	York	York
9	Wakefield	Leeds	Wakefield	Wakefield	Wakefield	Wakefield	East Riding of Yorkshire	Hambleton	Hambleton
10	Kingston upon Hull	Wakefield	Kingston upon Hull	Kingston upon Hull	Hambleton	Kingston upon Hull	Kingston upon Hull	Wakefield	Wakefield
Source:	CLG Live Table 586/Land Registry	CLG Live Table 586/Land Registry	CLG Live Table 586/Land Registry	CLG Live Table 576/Land Registry/ASHE	CLG Live Table 576/Land Registry/ASHE	CLG Live Table 576/Land Registry/ASHE	VOA Private Rental Market Statistics	VOA Private Rental Market Statistics	VOA Private Rental Market Statistics

Table 5.8 York Market Signals Comparator Table – Overcrowding and Homelessness [Neighbouring Authorities]

Rank	Overcrowded Households			Households in Priority Need			Concealed Families		
	Overcrowded Households, % (2011)	Change (%) (2001-2011)	Households in Priority Need, per 1,000 Households (2014/15)	% Change (2004/05-2014/15)	Absolute Change (2004/05-2014/15)	Change (percentage points) (2001-2011)	Concealed Families, % (2011)	Change (%) (2001-2011)	Change (percentage points) (2001-2011)
1	Leeds	York	York	Kingston upon Hull	East Riding of Yorkshire	Wakefield	England	Kingston upon Hull	Kingston upon Hull
2	England	Harrogate	England	England	Wakefield	East Riding of Yorkshire	Leeds	Selby	England
3	Kingston upon Hull	Kingston upon Hull	Kingston upon Hull	East Riding of Yorkshire	Hambleton	Hambleton	Kingston upon Hull	York	Selby
4	York	England	Leeds	Harrogate	England	Selby	Wakefield	Wakefield	Leeds
5	Wakefield	Selby	Harrogate	Wakefield	Kingston upon Hull	Ryedale	Selby	England	Wakefield
6	Harrogate	East Riding of Yorkshire	Selby	Hambleton	Selby	Harrogate	York	Leeds	York
7	Selby	Leeds	East Riding of Yorkshire	York	Harrogate	England	Hambleton	Hambleton	Hambleton
8	East Riding of Yorkshire	Wakefield	Wakefield	Leeds	York	York	East Riding of Yorkshire UA	Harrogate	East Riding of Yorkshire
9	Ryedale	Hambleton	Hambleton	Selby	Ryedale	Kingston upon Hull	Harrogate	East Riding of Yorkshire	Harrogate
10	Hambleton	Ryedale	Ryedale	Ryedale	Leeds	Leeds	Ryedale	Ryedale	Ryedale
Source:	Census 2011	Census 2001, Census 2011	Census 2001, Census 2011	CLG Live Table 784 (P1e Returns)	CLG Live Table 784 (P1e Returns)	CLG Live Table 784 (P1e Returns)	Census 2011	Census 2001, Census 2011	Census 2001, Census 2011

Table 5.9 York Market Signals Comparator Table - Cost of Housing [‘Coast and Heritage’ Authority Comparisons]

Rank	House Prices			Affordability			Rents		
	Median (2014)	% Change (1999-2014)	Absolute Change (1999-2014)	Ratio (2014)	% Change (1999-2014)	Absolute Change (1999-2014)	Median (Q1 2015)	% Change (Q2 2011-Q1 2015)	Absolute Change (Q2 2011-Q1 2015)
1	Bath and North East Somerset	York	Bath and North East Somerset	Bath and North East Somerset	Bath and North East Somerset	Bath and North East Somerset	Bath and North East Somerset	Lancaster	Lancaster
2	Canterbury	Canterbury	Canterbury	Canterbury	York	Canterbury	Canterbury	Canterbury	Canterbury
3	Cheltenham	Bath and North East Somerset	Cheltenham	Cheltenham	Lancaster	York	York	Bath and North East Somerset	Bath and North East Somerset
4	England	Colchester	York	York	Cheltenham	Cheltenham	Cheltenham	Worcester	Worcester
5	Colchester	Lancaster	Colchester	Taunton Deane	Canterbury	Taunton Deane	Colchester	Cheltenham	Cheltenham
6	York	Cheltenham	England	Colchester	Colchester	Colchester	England	England	England
7	Taunton Deane	Taunton Deane	Taunton Deane	Worcester	England	England	Taunton Deane	Taunton Deane	Taunton Deane
8	Worcester	England	Worcester	England	Taunton Deane	Worcester	Worcester	Colchester	Colchester
9	Scarborough	Scarborough	Scarborough	Scarborough	Scarborough	Lancaster	Lancaster	York	York
10	Lancaster	Worcester	Lancaster	Lancaster	Worcester	Scarborough	Scarborough	Scarborough	Scarborough
Source:	CLG Live Table 586/Land Registry	CLG Live Table 586/Land Registry	CLG Live Table 586/Land Registry	CLG Live Table 576/Land Registry/ASHE	CLG Live Table 576/Land Registry/ASHE	CLG Live Table 576/Land Registry/ASHE	VOA Private Rental Market Statistics	VOA Private Rental Market Statistics	VOA Private Rental Market Statistics

Table 5.10 York Market Signals Comparator Table – Overcrowding and Homelessness [‘Coast and Heritage’ Authority Comparisons]

Rank	Overcrowded Households			Households in Priority Need			Concealed Families		
	Overcrowded Households, % (2011)	Change (%) (2001-2011)	Households in Priority Need, per 1,000 Households (2014/15)	% Change (2004/05-2014/15)	Absolute Change (2004/05-2014/15)	Change (percentage points) (2001-2011)	Concealed Families, % (2011)	Change (%) (2001-2011)	Change (percentage points) (2001-2011)
1	England	York	York	Worcester	Worcester	Worcester	England	York	England
2	Cheltenham	Colchester	Colchester	Colchester	Canterbury	Canterbury	Worcester	Colchester	Canterbury
3	Canterbury	Taunton Deane	Cheltenham	Taunton Deane	Colchester	Colchester	Canterbury	England	York
4	Colchester	Worcester	England	England	England	Bath and North East Somerset	Scarborough	Canterbury	Taunton Deane
5	York	Bath and North East Somerset	Worcester	Scarborough	Taunton Deane	England	Lancaster	Taunton Deane	Scarborough
6	Bath and North East Somerset	Cheltenham	Bath and North East Somerset	Canterbury	Scarborough	York	Taunton Deane	Scarborough	Worcester
7	Worcester	England	Taunton Deane	Lancaster	Bath and North East Somerset	Taunton Deane	York	Bath and North East Somerset	Colchester
8	Scarborough	Scarborough	Canterbury	York	York	Scarborough	Bath and North East Somerset	Worcester	Lancaster
9	Taunton Deane	Canterbury	Scarborough	Bath and North East Somerset	Lancaster	Lancaster	Cheltenham	Cheltenham	Bath and North East Somerset
10	Lancaster	Lancaster	Lancaster	-	-	-	Colchester	Lancaster	Cheltenham
Source:	Census 2011	Census 2001, Census 2011	Census 2001, Census 2011	CLG Live Table 784 (P1e Returns)	CLG Live Table 784 (P1e Returns)	CLG Live Table 784 (P1e Returns)	Census 2011	Census 2001, Census 2011	Census 2001, Census 2011

- 5.43 It is clear from this analysis that the housing market in the City of York is increasingly dysfunctional, with a very steep level of house price growth in recent years leading to significant affordability challenges generating adverse outcomes for residents who need to access the housing market. The comparative analysis suggests that when compared against neighbouring Yorkshire districts, York has experienced the highest rate of house price growth over the period 1999 to 2014, at levels significantly above the national average at a rate higher than the national level of growth. Only Harrogate and Hambleton have higher house prices, whilst these two affluent districts (with the addition of Ryedale) are also the only ones in the wider area that have higher affordability ratios. Of particular importance is the rate of change in York's affordability ratio, which has been significantly higher than any of the comparable districts.
- 5.44 Median rental levels are also the highest of all the comparator Yorkshire authorities with the exception of Harrogate and the City has the highest rate of change of both overcrowded households and concealed families.
- 5.45 The performance of York's housing market relative to comparable authorities further afield (Table 5.9 and Table 5.10) which share similar socio-economic characteristics also suggests that the local housing market is under stress, with York amongst the very worst performing districts regarding rates of change in house prices, absolute and relative changes in affordability, median rents, and the rate of change in overcrowded households and concealed families.
- 5.46 The Practice Guidance, as well as providing general economic principles, points towards such factors as indicating that additional supply, over and above that solely needed by demographic change, may need to be delivered in order to address affordability and to reverse adverse housing market trends within the HMA.

LPEG Market Signals Sensitivity Test

- 5.47 This conclusion has been complicated by the more recent recommendations of the Local Plan Expert Group [LPEG]⁵⁸, which includes a standardisation of the appraisal of market signals and the extent of any uplift to the demographic starting point. The LPEG Report suggests taking account of just two market indicators (Appendix 6), namely the House Price Ratio and the Rental Affordability Ratio.
- 5.48 The Report suggests that, based on data by CLG, LPAs should apply an upward adjustment to the demographic starting point in line with the following benchmarks:
1. Where the House Price Ratio is less than 5.3 and Rental Affordability Ratio is less than 25%, **no uplift is required**;
 2. Where HPR is at or above 5.3 and less than 7.0, and/or the RAR is at or

⁵⁸Local Plans Expert Group (March 2016): Local Plans Report to the Communities Secretary and to the Minister of Housing and Planning

above 25% and less than 30%, **a 10% uplift should be applied;**

3. Where the HPR is at or above 7.0 and less than 8.7, and/or the RAR is at or above 30% and less than 35%, **a 20% uplift should be applied;**
and
4. Where the HPR is at or above 8.7 and/or the RAR is at or above 35%, **a 25% uplift should be applied.**

5.49 The data alluded to in the LPEG is not yet published by CLG, but based on NLP's own figures, it is calculated that the 3-year average HPR for York would be 6.92, whilst the equivalent 3-year average RAR would equate to 32.4%. These figures are currently only indicative and may change if CLG agree to publish these figures themselves.

5.50 **Nevertheless if the findings of the LPEG report are accepted, a 20% market signals uplift is required for York. It is NLP's judgement that given the extent of market imbalance clearly in evidence from the 6 key market indicators appraised in this section, this level of uplift would appear appropriate for the City of York.**

6.0 Full Objectively Assessed Needs

Introduction

- 6.1 In practice, applying the Framework requires a number of key steps to be followed in order to arrive at a robustly evidenced housing target:

The starting point for Local Plans is to meet the full objectively assessed development needs of an area, as far as consistent with the policies set out in the Framework as a whole [§6, §47 & §156].

An objective assessment of housing need must be a level of housing delivery which meets the needs associated with population and household growth, addresses the need for all types of housing including affordable and caters for housing demand [§159].

Every effort should be made to meet objectively assessed needs for housing and other development, and there should be positive response to wider opportunities for growth. Market signals, including affordability should be taken into account when setting a clear strategy for allocating suitable and sufficient land for development [§17].

In choosing a housing requirement which would not meet objectively assessed development needs, it must be evidenced that the adverse impacts of meeting needs would significantly and demonstrably outweigh the benefits, when assessed against the policies within the Framework as a whole; unless specific policies indicate development should be restricted [§14].

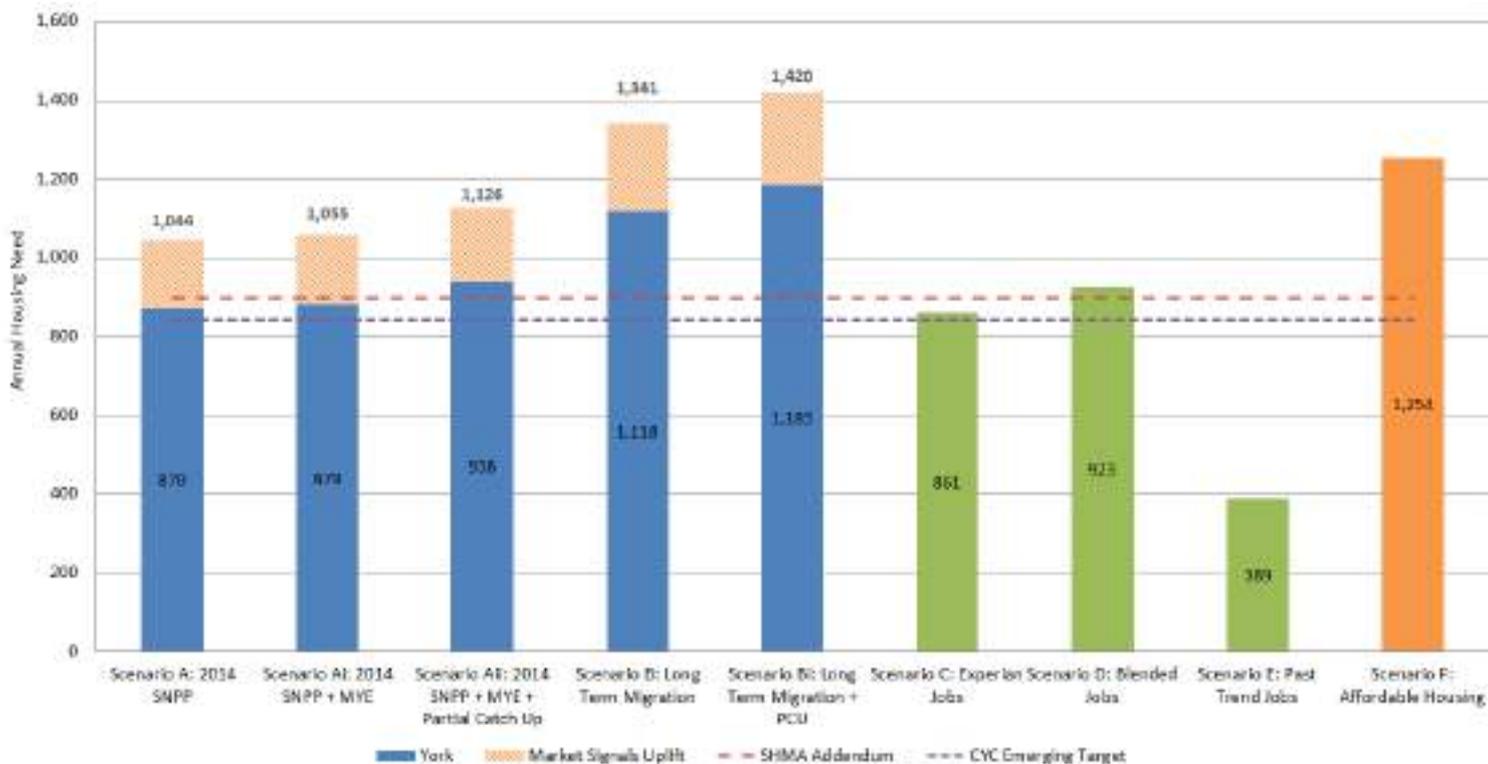
Where an authority is unable to meet its objectively assessed development needs or it is not the most appropriate strategy to do so, e.g. due lack of physical capacity or harm arising through other policies, it must be demonstrated under the statutory duty-to-cooperate that the unmet need is to be met in another local authority area in order to fully meet development requirements across housing market areas [§179 & §182 bullet point 1].

- 6.2 It is against these requirements of the Framework which the City of York's housing need must be identified. The Government's Practice Guidance states that 'household projections published by CLG should provide the starting point estimate of overall housing need.' It also states that the household projection may require adjustment to reflect factors affecting local demography and household formation rates which are not necessarily captured in past trends⁵⁹.
- 6.3 To comply with the Practice Guidance, this analysis has used the latest 2012-based SNHP to derive the baseline demographic need, which acts as the 'starting point' when determining the housing OAN. Thereafter, various assumptions, adjustments and sensitivities have been applied to take account of new demographic data, local factors and economic aspirations.

⁵⁹ ID 2a-015-20140306

6.4 Figure 6.1 sets out the annual dwelling need under each scenario as identified by NLP’s modelling work.

Figure 6.1 Model Outputs for the City of York: Dwellings per Annum 2012-2032



Source: NLP Analysis

Note: The orange boxes on the blue bars relate to the recommended uplift to address worsening market signals

The Starting Point – Demographic Needs

6.5 The CLG 2012-based household projections indicate a growth of 15,093 households over the period 2012-2032 in the City of York, at an annual average of 755 (+17.9%). By making an allowance for second/vacant homes (1.5%), this would equate to a need for 15,324 dwellings, or 766 dpa in the City of York between 2012 and 2032. This is lower than the 783 dpa reported by GL Hearn for their equivalent baseline scenario in the 2016 SHMA due to the slightly higher vacancy rate used by GL Hearn (using the 2011 Census rather than the Council Tax Base data).

6.6 As per the Practice Guidance, NLP has made adjustments to this starting point to reflect more up-to-date data, specifically the 2014-based SNPP and the 2013, 2014 and 2015 MYEs. The 2014-based SNPP alone increases the housing need to 870 dpa (Scenario A). Scenario Ai, which incorporates the 2015 MYE into the 2014-based SNPP, has the effect of increasing the population growth by 7,793 (+32%) from the 2012-based SNPP alone and, through the application of the same 2012-based SNHP headship rates, increases the level of housing need to **879 dpa** (Scenario Ai). This again is slightly lower than the (broadly) comparable 2014-based SNPP Scenario

modelled by GL Hearn (889 dpa) in its SHMA Addendum, albeit GL Hearn has used a different vacancy rate and was not able to incorporate the 2015 MYE data into its modelling.

- 6.7 However, as set out above, the 2012-based SNHP has been affected by the conditions that were experienced during the recession, as well as the effects of rapid house price increases in the early 2000s. NLP considers that it is reasonable to assume that rates of household formation and average household size will reflect a change in line with long term trends as the economy strengthens and peoples' circumstances improve. This is an approach that is recognised by LPEG and accepted by a number of Inspectors elsewhere.
- 6.8 In particular, research by the former National Housing and Planning Advice Unit [NHPAU⁶⁰] found that cohorts who are less able to access home ownership earlier in their housing 'career' due to 'boom' or recessionary factors impacting on affordability are nevertheless able to 'catch up' – 80% of the gap at the age of 30 is 'caught up' by the age of 40. This finding supports the resumption towards long term household formation trends.
- 6.9 Following a suitable adjustment to accelerate the headship rates for younger households under Scenario Aii, it is considered that a figure of **938 dpa** represents the appropriate demographic-led need for housing and appropriate baseline for the City of York. This would be the minimum necessary to meet the City's future housing needs to 2032.
- 6.10 NLP's modelling work suggests that, contrary to the approach taken by GL Hearn, long term migration rates could suggest a higher level of growth (Scenario B, 1,118 dpa / Scenario Bi, 1,183 dpa).
- 6.11 NLP's general approach is usually to apply the 938 dpa SNPP-led figure, which in this instance generates the lower level of housing need. This is because it reflects the starting point for the assessment of OAHN as required by the Practice Guidance. The long term migration scenario is essentially a sensitivity of this starting point that is undertaken to ascertain whether an upward adjustment to the SNPP-based figure is required (as recommended by LPEG).
- 6.12 NLP considers that in this instance, the realistic demographic starting point position is 938 dpa (Scenario Aii). Whilst there is a good case for taking forward a higher past trend migration approach, equalling 1,183 dpa (Scenario Bi), past migration is not always a good measure of likely future change. This is particularly so in the case of the City of York, which has had high levels of net international migration over the past ten years or so.
- 6.13 **Given the uncertainties concerning the implications of Brexit, it is considered that the sensible and modest future migration flows factored into the 2014-based SNPP for York and underpinning the 938 dpa figure represent the most appropriate demographic scenario going forward.**

⁶⁰NHPAU (2010): How do Housing Price Booms and Busts Affect Home Ownership for Different Birth Cohorts?

- 6.14 The Practice Guidance is very clear that the demographic baseline represents only the starting point – and not the end point - in the determination of OAHN. Adjustments should also be made, as appropriate, to reflect market signals, economic growth and affordable housing needs.

Do Market Signals indicate a need for an upward adjustment to purely demographic-led needs?

- 6.15 The market indicators assessed in Section 5.0 shows that there are significant imbalances between the demand for and supply of housing in the City of York. This analysis indicates pressure on the housing market, which will not be addressed by providing only for the level of growth produced by the continuation of demographic trends. A response is clearly required through an adjustment to the demographic-based scenarios, in line with the recommendations set out in the Practice Guidance.
- 6.16 The performance of York’s housing market relative to comparable authorities which share similar socio-economic characteristics suggests that the local housing market is under stress, with York amongst the very worst performing districts regarding rates of change in house prices, absolute and relative changes in affordability, median rents, and the rate of change in overcrowded households and concealed families.
- 6.17 It is NLP’s view that the market indicators would justify a significant uplift to the demographic-led (adjusted) baseline in the order of 20%. This aligns with recent Inspector’s decisions elsewhere where ‘more than modest’ market signals have been evident, notably at the Canterbury Local Plan Examination in Public. Although very limited weight can be attached to the LPEG recommendations at present, we draw comfort from the fact that the LPEG approach would also suggest that a 20% uplift would be appropriate for the City of York.
- 6.18 **When applied to Scenario Aii (938 dpa), this results in a need for 1,126 dpa. Applying the same level of uplift to the Long Term Migration PCU Scenario Bi (and recognising the potential limitations of this approach) would generate a need for up to 1,420 dpa.**

Are Economic Growth Needs Being Addressed?

- 6.19 The Practice Guidance requires plan-makers to assess likely employment growth based on past trends and/or economic forecasts. Where the labour force supply is projected to be less than the forecast job growth, the Practice Guidance states that this could result in unsustainable commuting patterns which could potentially reduce the resilience of local businesses.
- 6.20 A number of scenarios have been modelled to demonstrate the impact of a range of likely growth scenarios based on existing trends, forecasts and economic strategies. These scenarios also show the scale of change that would be required if demographic trends were to be reversed.

- 6.21 The economic forecasts for York indicate that, excluding the negative past trends job growth scenario, the employment-led figures range from 861 dpa based on Experian's latest job growth projections, and 923 dpa based on the 'Blended' jobs growth scenario. These are all lower than the level of housing need associated with the uplifted demographic scenarios as set out above.
- 6.22 The implication of this analysis is to demonstrate that the demographic-based projections would support a reasonable level of employment growth, and that no upward adjustment is required to the demographic-based housing need figures to ensure that the needs of the local economy can be met. Conversely, it is important to recognise that the Blended jobs growth scenario (D) generates a level of housing need that is only marginally lower than the demographically-led starting point (Scenario Aii before an adjustment is made for market signals) of 938 dpa. Therefore the OAHN cannot be any less than this as it would not meet the most appropriate employment-led scenario.

Is there a need to increase housing supply to aid the delivery of affordable housing?

- 6.23 The Practice Guidance makes clear that the consideration of an uplift in response to market signals and any adjustment to take account of affordable housing need should be undertaken as two discrete stages. The Practice Guidance⁶¹ identifies six relevant market signals that are to be considered. Not one of these relates to affordable housing need, i.e. the specific need of those households who lack access to suitable housing (both now and in the future). The assessment of market signals therefore does not include a consideration of affordable housing need. However, affordable housing needs must still be taken into account when determining OAHN.
- 6.24 Following the discussion on market signals, the Practice Guidance provides an overview of how affordable housing needs are to be assessed. The section closes by stating that:
- "An increase in the total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes"*⁶².
- 6.25 In this regard, the SHMA Addendum (June 2016) has identified an affordable housing need of 627 dpa. Assuming an optimistic 50% delivery requirement, this would result in need for 1,254 dpa, a figure that is almost at the mid-point of the earlier range of 1,126 dpa and 1,420 dpa.
- 6.26 GL Hearn has not allowed for any adjustment to the identified housing need to reflect this level of affordable housing need. We consider that this is a serious misjudgement.
- 6.27 NLP does not consider that it is adequate just to suggest that an uplift for market signals would be sufficient to address affordable housing need. Such

⁶¹ ID 2a-019-20140306

⁶² ID 2a-029-20140306

an approach is contrary to the Satnam Millennium, Oadby and Wigston and Kings Lynn judgments, all of which require an additional uplift (i.e. as distinct to the market signal adjustment). It also fails to reflect the requirements of the Framework [§47] and the Practice Guidance which clearly show the uplift for market signals to be separate to the adjustment for affordable housing.

6.28 In order to meet the identified level of affordable housing need in full, the bottom end of the range would need to be higher (although it is recognised that at 1,126 dpa, 90% of the City's affordable housing need would be met). The approach of Dove J at Kings Lynn informed the recommendation of LPEG to apply a specific level of uplift in response to identified housing need. Whilst the implication of the Kings Lynn HCJ is that Local Plans are not required to meet their affordable housing needs in full, in this instance, **an uplift of the OAHN range to between 1,254 dpa and 1,420 dpa would, in theory, enable this to be achieved (based on a 50% delivery rate).**

6.29 This would:

- 1 Enable affordable housing needs to be met in full – almost 50% more than the level associated with the Council's suggested OAHN of 841 dpa even at the lower end of NLP's recommended range;
- 2 Be significantly above the 138 affordable dwellings that CYC has delivered on an annual basis since 2007/08; and,
- 3 Accord with the Framework's expectation that LPA's should "*boost significantly the supply of housing*".

Local Plans Expert Group

6.30 LPEG issued its report to Government on 16th March 2016. Its recommendations are currently subject to a period of consultation which ended on 28 April. If implemented, the LPEG recommendations would have a significant impact upon the determination of OAHN in the future.

6.31 It is accepted that the LPEG recommendations have not yet been accepted by Government and it is not known when – or if – they will be. However, NLP has tested the implications of the proposed approach in order to assist the Inspector and the Secretary of State in the event that the recommendations are accepted in their current form.

6.32 Recognising that very limited weight can be attached to the report as it stands, the LPEG report would corroborate our approach to applying a 20% market signals uplift, as well as our assumptions concerning the separate application of accelerated headship rates for younger age groups.

Conclusions on the City of York's Housing Need

6.33 The scale of objectively assessed need is a judgement and the different scenarios and outcomes set out within this report provide alternative levels of housing growth for the City of York. NLP considers these to be as follows:

- 1 **755 hpa** equates to the 2012-based SNHP. With suitable adjustments to include an allowance for second/vacant homes; the latest 2014-based SNPP; the 2015 MYE; and necessary adjustments being made to headship rates in the younger age categories, this would generate a need for **938 dpa**. It is considered that this represents the suitable demographic starting point for the City of York. Anything much below this level would mean that the job projections associated with the most appropriate (Blended average) Employment-led Scenario (923 dpa) cannot be achieved;
- 2 The adjusted Long term Migration Scenario (Bi) suggests that potentially there could be an even higher level of population, and by extension, household growth to 2032. This generates a need for up to 1,183 dpa, although due to the uncertainties concerning long term international migration into York it is considered that in this instance, less weight can be attached to this scenario at the upper end of any OAHN range;
- 3 A significant worsening of some **market signals** suggests the need to improve affordability to stabilise increasing house prices and very high affordability ratios. This would justify an uplift to the figures over and above the level suggested by the demographic projections. The Practice Guidance⁶³ states that this should be set at a level which could be reasonably expected to improve affordability. A 20% uplift, based on very high and rising house prices and affordability ratios amongst other worsening market signals is considered appropriate in this instance and would align with recent Inspector's decisions whereby a 'more than modest' uplift is required. Applying this level of uplift to the demographic starting point **would indicate a minimum demographic OAHN of 1,126 dpa**, whilst a similar uplift to the Long term Migration (PCU) Scenario would generate a need for 1,420 dpa. This level of uplift would also align with the approach suggested in the LPEG report;
- 4 The demographic-based projections would support a reasonable level of **employment growth** at levels above that forecast by Experian, past trends or the Blended job growth approach. As such, (and only if the demographic figures are above 923 dpa) **no upward adjustment is required** to the demographic-based housing need figures to ensure that the needs of the local economy can be met;
- 5 The scale of affordable housing needs, when considered as a proportion of market housing delivery, implies higher levels of need over and above the lower end of the range, but below the upper end of the OAHN range. It is considered that to meet affordable housing needs in full, the OAHN range should be adjusted to between **1,254 dpa and 1,420 dpa**. It is, however, recognised that even at 1,126 dpa, 90% of York's affordable housing need can be delivered, a substantial amount.

⁶³ ID 2a-020-20140306

6.34 **The resultant housing OAHN for the City of York would therefore be at least 1,125 dpa (rounded), although there is a very strong case to meet affordable housing needs in full, in which case the OAHN would equate to 1,255 dpa (rounded).** If long term migration trends were to continue into the future, this would justify a higher OAHN of 1,420 dpa, although due to uncertainties regarding the level of international net migration into York it is considered that less weight should be attached to this figure.

6.35 It would be appropriate to revisit these conclusions once the 2014-based SNHP is released later this summer, and once further details regarding the likely economic and demographic consequences of Brexit are revealed.

6.36 This process is summarised in Table 6.1.

Table 6.1 Approach to OAN for the City of York 2012-2032

	Dwellings per annum (2012-2032)
Demographic Starting Point	755 hpa
Adjustments to Demographic-led Needs	938 dpa / 1,183 dpa
Uplift for Market Signals?	1,126 dpa / 1,420 dpa (+20%)
Employment Led Needs	861 dpa – 923 dpa
Affordable Housing Needs	1,254 dpa*
Uplift to demographic led needs for Affordable Housing? (rounded)	1,255 dpa – 1,420 dpa

*Based on an affordable housing net annual need of 627 dpa at a delivery rate of 50%

7.0 Summary

7.1 The Framework sets out that LPAs should use their evidence base to ensure they meet the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in the Framework [§47].

7.2 The City of York SHMA and subsequent Addendum (June 2016) provide evidence on the OAHN within the HMA covering the City of York. The documents make a number of assumptions and judgements which NLP considers to be flawed, or which do not properly respond to the requirements of policy and guidance. As a result, the concluded OAHN is not robust and is inadequate to meet need and demand within the HMA.

Deficiencies in the Council's Housing Need Evidence Base

7.3 There are a number of significant deficiencies in the City of York SHMA and Addendum which means that the 841 dpa OAHN figure currently being pursued by CYC is not soundly based. In particular:

- 1 The demographic modelling downplays the robustness of the 2014-based SNPP which are not supported by the evidence in other aspects of the document;
- 2 Adjustments to headship rates have been conflated with the uplift for market signals. The SHMA does not apply a separate uplift for market signals, but instead makes an adjustment to the demographic modelling based on changes to headship rates which should be part of a normal adjustment to the demographic starting point before market signals are considered. As a result, there is no adjustment for market signals at all despite the significant and severe market signal indicators apparent across the City of York;
- 3 A 'black-box' approach has been taken to the economic-led modelling, with key evidence relating to how the job projections have been factored into any PopGroup model being unpublished;
- 4 No explicit consideration or uplift applied in respect of delivering more homes to meet the needs of households in affordable housing need. This is despite the SHMA and Addendum indicating a level of affordable housing need (of 573 dpa and 627 dpa respectively) which would only be met well in excess of the concluded OAHN.

7.4 In combination, the judgements and assumptions applied within the SHMA seek to dampen the level of OAHN across the City of York. Fundamentally, it is considered that the OAHN(s) identified in the SHMA and Addendum fails to properly address market signals, economic or affordable housing needs, as envisaged by the Framework and Practice Guidance as clarified by High Court and Court of Appeal judgements.

The City of York's Housing Need

- 7.5 NLP has undertaken its own analysis of housing need for the City of York. Based on the latest demographic data, and through the use of the industry standard PopGroup demographic modelling tool, it is NLP's view that **the OAHN for York is at least 1,125 dpa, although there is a very strong case to meet affordable housing needs in full, in which case the OAHN would equate to 1,255 dpa (rounded).**
- 7.6 If long term migration trends were to continue into the future, this would justify a higher OAHN of 1,420 dpa, although due to uncertainties regarding the level of international net migration into York it is considered that less weight should be attached to this figure.
- 7.7 This allows for the improvement of negatively performing market signals through the provision of additional supply, as well as helping to meet affordable housing needs and supporting economic growth. Using this range would ensure compliance with paragraph 47 of the Framework by significantly boosting the supply of housing. It would also reflect paragraph 19 of the Framework, which seeks to ensure the planning system does everything it can to support sustainable development.



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Ref	Site	Site Area	Yield	Timing	Density	Years 1 to 5	Years 6-10	Years 11-16	Years 17-21
H1	Former Gas Works, 24 Heworth Green (Phase 1)	2.87	271	Short Term (Years 1 -5)	94.43	271			
H1	Former Gas works, 24 Heworth Green (Phase 2)	0.67	65	Medium Term (Years 6-10)	97.01	65			
H3	Burnholme School	1.90	72	Short Term (Years 1 -5)	37.89	72			
H5	Lowfield School	3.64	162	Short to Medium term (Years 1 -10)	44.51	80	82		
H6	Land R/O The Square Tadcaster Road	1.53	0	Short to Medium Term (Years 1 -10)	0.00				
H7	Bootham Crescent	1.72	86	Short to Medium Term (Years 1 -10)	50.00	46	40		
H8	Askham Bar Park & Ride	1.57	60	Short Term (Years 1 -5)	38.22	60			
H10	The Barbican	0.96	187	Short Term (Years 1 -5)	194.79	187			
H20	Former Oakhaven EPH	0.33	56	Short Term (Years 1 -5)	169.70	56			
H22	Former Heworth Lighthouse	0.29	15	Short Term (Years 1 -5)	51.72	15			
H23	Former Grove House EPH	0.25	11	Short Term (Years 1 -5)	44.00	11			
H29	Land at Moor Lane Copmanthorpe	2.65	88	Short to Medium Term (Years 1 -10)	33.21	88			
H31	Eastfield Lane Dunnington	2.51	76	Short to Medium Term (Years 1 -10)	30.28	76			
H38	Land RO Rufforth Primary School Rufforth	0.99	33	Short to Medium Term (Years 1 -10)	33.33	33			
H39	North of Church Lane Elvington	0.92	32	Short to Medium Term (Years 1 -10)	34.78	32			
H46	Land to North of Willow Bank and East of Haxby Road, New Earswick	2.74	104	Short to Medium Term (Years 1 -10)	37.96	104			
H52	Willow House EPH, Long Close Lane	0.20	15	Short Term (Years 1 -5)	75.00	15			
H53	Land at Knapton Village	0.33	4	Short Term	12.12	4			
H55	Land at Layerthorpe	0.20	20	Short Term (Years 1 -5)	100.00	20			
H56	Land at Hull Road	4.00	70	Short Term (Years 1 -5)	17.50	70			
H58	Clifton Without Primary School	0.70	25	Short Term (Years 1 -5)	35.71	25			
H59	Queen Elizabeth Barracks – Howard Road, Strensall	1.34	45	Short to Medium term (Years 1 -10)	33.58		45		
ST1	British Sugar/Manor School	46.30	1200	Lifetime of the Plan (Years 1-16)	25.92	0	600	600	
ST2	Former Civil Service Sports Ground Millfield Lane	10.40	266	Short to Medium Term (Years 1 -10)	25.58	166	100		
ST4	Land adj. Hull Road & Grimston Bar	7.54	211	Short to Medium Term (Years 1 -10)	27.98	111	100		
ST5	York Central	35.00	1700	Lifetime of the Plan and Post Plan period (Years 1-21)	42.86	0	500	600	600
ST7	Land East of Metcalfe Lane	34.50	845	Lifetime of the Plan (Years 1 -16)	24.49	200	295	350	
ST8	Land North of Monks Cross	39.50	968	Lifetime of the Plan (Years 1 -16)	24.51	250	300	418	
ST9	Land North of Haxby	35.00	735	Lifetime of the Plan (Years 1 -16)	21.00	150	285	300	
ST14	Land to West of Wigginton Road	55.00	1348	Lifetime of the Plan and Post Plan period (Years 1 -21)	25.16	200	400	400	348
ST15	Land to West of Elvington Lane	159.00	3339	Lifetime of the Plan and Post Plan period (Years 1 -21)	21.00	300	900	900	900
ST16	Terrys Extension Site – Terry’s Clock Tower (Phase 1)	2.18	22	Short to Medium Term (Years 1-5)		22			
ST16	Terry’s Extension Site – Terry’s Car Park (Phase 2)		33	Short to Medium Term (Years 1 – 10)			33		
ST16	Terry’s Extension Site – Land to rear of Terry’s Factory (Phase 3)		56	Short to Medium Term (Years 1 – 10)			56		
ST17	Nestle South (Phase 1)	2.35	263	Short to Medium Term (Years 1 -10)	111.91	100	163		
ST17	Nestle South (Phase 2)	4.70	600	Medium to Long Term (Years 6 – 15)	127.66		300	300	
ST31	Land to the South of Tadcaster Road, Copmanthorpe	8.10	158	Short to Medium Term (Years 1-10)	19.51	50	108		
ST32	Hungate (Phases 5+)	2.17	328	Short to Medium Term (Years 1-10)	151.15	128	200		
ST33	Station Yard, Wheldrake	6.00	147	Short to Medium Term (Years 1-10)	24.50	47	100		
ST35**	Queen Elizabeth Barracks, Strensall	28.80	500	Medium to Long Term (Years 6-15)	20.07		200	300	
ST36**	Imphal Barracks, Fulford Road	18.00	769	Post Plan period (Years 16-21)	42.72				769
		526.85	14985			3,054	4,807	4,168	2,617

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Garden village plan branded 'foolhardy' and 'too late'

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AT THE SITE: With the masterplan are from left, landowners Peter Smith and David Sherry and Martin Hawthorne of the Galtres Garden Village Development Company Picture: Frank Dwyer

f t G+ 13 comments

A DEVELOPER behind plans for a 1,753 home garden village north of York has vowed to press ahead - despite the scheme meeting widespread opposition.

Reacting to the proposal, [City of York Council](#) leader David Carr said it was not in the draft Local Plan and would not be included "at this time".

One local councillor also branded the plan "foolhardy" and York Outer MP [Julian Sturdy](#) said he would make "strong representations" against the development's inclusion in the Local Plan.

Martin Hawthorne, of Galtres Garden Village Development Company, defended the company's plan for the 93-hectare site.



He said: “Our scheme would address the city’s urgent housing shortfall in a garden setting and we believe will help to ensure that the new proposed Local Plan meets the approval of the Independent Inspector.

“We can start work almost immediately and would hope we can collaborate with the council’s new Housing Development Company to bring the mixed tenure housing and care village that is needed, along with a school, shops and transport links. We have redrawn our plans from last year in consultation with Earswick and **Huntington** communities and all the housing would be contained in a village well away from the other settlements.

“This would reduce traffic pressures, while piecemeal development increases this.

“We would also be creating a country park with amenities that would attract wildlife.”

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Council leader Cllr Carr said: “Without commenting on the merits or lack thereof of this particular plan, this is simply one developer’s submission to the Local Plan consultation, and a late one at that. This project is not included in the draft local plan, which makes the developer’s proposal somewhat misleading, and we have no intention of incorporating it into our plan at this time.”

Strensall ward Conservative Councillors Paul Doughty and Helen Douglas dismissed the proposal, close to the **A1237/A64**, as “foolhardy” and said the infrastructure and road networks could not cope.



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Councillor Doughty said: “My ward colleague and I have sought swift assurance from the council that these foolhardy proposals will not be included in the Local Plan and we condemn attempts by agents to slip this in to the Local Plan at the eleventh hour. Our MP Julian Sturdy, I and too many villagers to mention did not fight tooth and nail to squash previous plans for 2,000 homes at Earswick to stand by and watch another greenbelt grab adjacent potentially included.”

Mr Sturdy added: “I will be raising this as an urgent item to give strong representation against any possible inclusion when I meet with City Council officials on Friday but it is reassuring to hear confirmation that it is not included in the draft Local Plan.”

One of the Huntington and **New Earswick** ward councillors Keith Orrell said: “It would be a great concern if a further large site were to be included in the Local Plan at this late stage. It could lead to the need for further consultation and the potential to delay sending the plan to the Government. If this happened the Government have threatened to send in bureaucrats from London to impose their plan on York.”

He added: “In relation to the Huntington and New Earswick area there has been considerable development in recent years.

“Nearly 200 homes have been built along with the Vanguard shopping complex which has caused a large increase in traffic on our local roads.

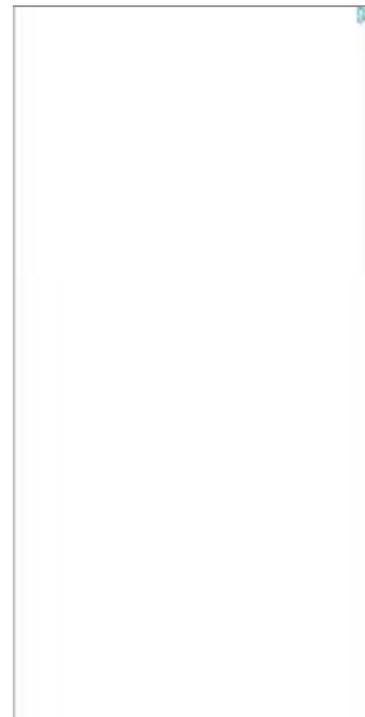
“The stadium development has now started which will further increase retail outlets as well as the daily use of the Community Stadium. Whilst local Liberal Democrat councillors secured a number of assurances about improved traffic management there is little doubt that traffic levels will increase yet again.

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“In addition the land on Monks Cross Drive has been allocated over 900 houses in the Local Plan.

“Cllr Runciman, Cllr Cullwick and myself believe that our area is providing the city with a disproportionate amount of development. As one resident put it to me ‘enough is enough’.”

And Cllr Doughty added: "We are likely to have in excess of 600 future homes on the Queen Elizabeth II Barracks site when the MoD leave and coupled with already likely known future Local Plan development proposals at Huntington and Monks Cross, the point has been reached where we have to say enough is enough for our local communities at this side of York.

"The pressure on local services and infrastructure, particularly our road network, simply cannot cope."

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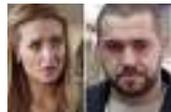
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This research has been carried out in compliance with the International standard ISO 20252, (the International Standard for Market and Social research), The Market Research Society's Code of Conduct and UK Data Protection law



I. Executive Summary

I.1 Background

- The Galtres Garden Village is a proposed residential development to the North of York. The Galtres Garden Village Development Company (GGVDC), a consortium of local landowners and consultants, was formed to take forward the Galtres Garden Village (GGV).
- GGVDC commissioned Qa Research to carry out a survey of residents in the City of York Council (CYC) area to understand views towards the proposal. Additionally, a survey amongst a small sample of York commuters was also undertaken.
- In total, 800 interviews were completed with York residents aged 16 or over (using a combination of telephone surveys and face-to-face interviews). Additionally, 83 commuters (defined as people who commute into the York area for study or work, but don't currently live in York although they would like to if they could) were interviewed face-to-face - findings from the commuters sample are not included in this Executive Summary.

I.2 Key Findings amongst York Residents

- York residents see a clear need for new homes in and around York, with 93% choosing at least one reason from a list of reasons why new homes might be needed. Primarily, the view was that new homes were needed to support the needs of existing residents, particularly so that *'...local young people can stay living locally'* (84%) and also more generally *'...to meet the needs of the local community'* (80%).
- When asked to consider what types of homes they would like to see built in the York area, affordability featured heavily with a desire for affordable homes *'to buy'* (88%), but also *'to rent'* (78%). In line with this, the most frequently selected property types were smaller homes, either as *'starter houses'* (84%) or slightly bigger *'family houses (2 or 3 bedrooms)'* (81%).
- The majority of respondents indicated that they *'agree'* that *'affordable housing for local people to rent or buy should be a top priority for the Council'* (81%) – in fact, the majority gave the highest possible score for this of 5 out of 5 (57%).
- Respondents were read a brief description of the proposed Galtres Garden Development (GGV) which focussed on its location;
 - One-in-four (24%) said they were aware of this development
 - The majority of respondents indicated that they felt this was an *'appropriate'* location by giving a score of either 4 or 5 out of 5 (55%)
 - However, 15% indicated to some degree that they felt this location was *'not appropriate'* by giving a score of 1 or 2.
- Respondents were asked to say how far they supported the development of the scheme, by giving their answer on a 10 point scale (where 10 means they fully support it);
 - With an average (mean) score of 7.1 out of 10 there is generally support for the development
 - Almost a third gave the highest scores of 9-10 (30%) indicating strong support for the scheme, while a further third gave scores of 7-8 (35%) which can also be considered as supporting the scheme
 - In contrast, the lowest scores of 1-4 were given by 13% of respondents, with around one-in-twenty giving the very lowest scores of 1-2 (7%).

- Respondents were asked to consider how different aspects of the scheme impacted on how likely they would be to support it;
 - The most appealing aspect was that when compared with similar schemes the GGV would include ‘...a greater proportion of affordable homes...’, something that three-quarters felt would make them ‘more likely’ (76%) to support it.
 - A similar proportion felt ‘more likely’ to support the scheme because ‘the company behind the scheme would work with housing associations to build the right mix of houses for the city’ (73%).
- A question was included which simply asked whether respondents felt that the GGV scheme should be included in the final version of the York Local Plan – 79% of respondents answered ‘yes’ they would like to see it included, while only 7% gave a firm ‘no’.

1.3 Conclusions

- Residents overwhelmingly believe that there is a need for new homes in and around York.
- The proposed Galtres Garden Village development has gained some awareness amongst York residents, as one-in-four (24%) indicated that they had heard of the proposal before the interview. This awareness was mainly driven by older residents and those living in wards near to the proposed GGV site.
- It’s important to note that this means that the majority of respondents (the remaining 76%) assessed the proposed development purely on the information contained within the survey, which included detail of the location (with supporting maps) and descriptions of the types of housing and facilities that the development would be likely to include.
- For most respondents this detail appears to have been sufficient for them to give their views on the proposed development, as consistently throughout the survey only small proportions said they ‘needed more information’ when given the opportunity.
- When asked how far they support the scheme, there was generally support, with 30% giving the top scores of 9-10 out of 10 and a further 35% giving scores of 7-8 and an overall mean score of 7.1 out of 10. Younger respondents in particular (aged under 35) offered the strongest support, perhaps reflecting the fact that this age group faces the biggest housing challenges (for example, the majority rent their home).
- However, perhaps the most revealing finding in this survey is that 76% would like to see the proposed development included in the City of York Council Local Plan and only 7% said with certainty that they would not.
- This is despite the fact that when asked to consider the planned location, the research recorded mixed views on how appropriate this was for housing development, although the majority of respondents (55%) indicated that they felt it was ‘appropriate’, a significantly higher proportion than felt it was ‘not appropriate’ (15%).
- Based on the descriptions included in the survey, respondents could readily identify aspects of the scheme that they ‘liked’ and a range of different things were chosen. Specifically, this included individual amenities such as the primary school, doctor’s surgery, care home and leisure facilities as well as the inclusion of affordable housing. However, in a more general way respondents made comments relating to the development and creation of a community and referenced these individual facilities as an integral part of this.
- Based on the detail included in the survey, respondents identified fewer elements that they ‘disliked’, focussing mainly on concerns around traffic and congestion.

2. Background and Objectives

The Galtres Garden Village is a proposed residential development to the North of York. The Galtres Garden Village Development Company (GGVDC), a consortium of local landowners and consultants, was formed to take forward the Galtres Garden Village (GGV).

Currently, (as of March 2018) the garden village is not included in the City of York Council Local Plan which is currently in draft format, but the GGVDC hopes that the garden village will be included in the final plan.

Research was required to understand the views of York residents towards the current housing situation in York and towards the proposed garden village development. GGVDC commissioned Qa Research to carry out a survey of residents in the City of York Council (CYC) area (referenced throughout this report as 'York residents').

Specifically, the main objectives of this research were to;

- Gather views amongst a robust and representative sample of York residents
- Understand perceptions of the current housing situation in York, exploring views on the level of development, priorities for development and the availability of housing generally
- Explore awareness and understanding of the proposed GGV development
- Establish levels of support or otherwise for the GGV
- Determine the proportion of York residents that would like to see the GGV included in the final CYC Local Plan.

In addition, a smaller parallel survey was also undertaken amongst a sample of 'commuters'. These were defined as people who commute into the York area for study or work, but don't currently live in York although they would like to if they could. This survey had the same objectives as that amongst 'York residents'.

This report outlines findings from both surveys.

3. Methodology

3.1 Survey of York Residents

In total, 800 interviews were completed with York residents aged 16 or over using a combination of telephone surveys and face-to-face interviews. The face-to-face interviews specifically targeted younger residents and this approach was adopted to ensure that younger residents were sufficiently well represented in the final sample. In total, 653 interviews were completed by phone and the 147 face-to-face.

All interviews were completed by Qa Research's contact centre in York and interviewing was carried out between Friday 9 March and 22 March 2018.

To ensure a representative sample, quotas were set on recruitment based on ward, gender and age and weighting was applied at the analysis stage to ensure that the final sample was representative of the population as a whole.

Based on a sample of 800 surveys, at the 95% confidence level, findings are accurate to within +/- 3%.

3.2 Survey of Commuters

A survey of 83 'commuters' (defined as people who commute into the York area for study or work, but don't currently live in York although they would like to if they could) was completed face-to-face between 16 March and 27 March 2018.

No quotas were set on recruitment, but to ensure that the views of people living at different sides of the York were included, interviewer shifts took place in York city centre, Selby, Tadcaster, Garforth, Pocklington and Thirsk.

A sample of 83 interviews should be seen as indicative only and as providing guidance on the views of this audience.

6. Conclusions

This research **outlines the views of a representative sample of residents** living the City of York Council area and the findings can therefore be seen as reflecting the views of the population as a whole.

Residents overwhelmingly believe that there is a need for new homes in and around York, mainly to serve the needs of the existing population but also to provide housing for those who wish to move into the area to live or work. In total, eight-in-ten agree that affordable housing should be *'a top priority for the Council'*.

It's also clear that the desire for new housing is driven by a need for affordable housing (both to buy and to rent), particularly smaller houses of 1-3 bedrooms. In contrast, less support exists for apartments and larger houses with 4 or more bedrooms.

Reflecting this, a third of York residents feel that they know someone who has had to move out of York and commute back in, but who would actually prefer to live in and around the City if they could and this situation was felt to be driven by housing being too expensive to buy or rent.

It's evident that the proposed Galtres Garden Village development has gained some awareness amongst York residents, as **one-in-four (24%) indicated that they had heard of the proposal before the interview**. This awareness was mainly driven by older residents and those living in wards near to the proposed GGV site.

It's important to note that this means that **the majority of respondents (the remaining 76%) assessed the proposed development purely on the information contained within the survey**, which included detail of the location (with supporting maps) and descriptions of the types of housing and facilities that the development would be likely to include. For most respondents this detail appears to have been sufficient for them to give their views on the proposed development, as consistently throughout the survey only small proportions said they *'needed more information'* when given the opportunity.

When asked how far they support the scheme, there was generally support, with 30% giving the top scores of 9-10 out of 10 and a further 35% giving scores of 7-8 and an overall mean score of 7.1 out of 10. Younger respondents in particular (aged under 35) offered the strongest support, perhaps reflecting the fact that this age group faces the biggest housing challenges (for example, the majority rent their home).

However, perhaps the most revealing finding in this survey is that **76% would like to see the proposed development included in the City of York Council Local Plan** and only 7% said with certainty that they would not.

This is despite the fact that when asked to consider the planned location, the research recorded **mixed views on how appropriate this was for housing development**. That said, the majority of respondents (55%) indicated that they felt it was *'appropriate'*, a significantly higher proportion than felt it was *'not appropriate'* (15%).

Notably, although the site wasn't universally seen as being suitable for housing development, there is **evidence that some who feel that it isn't appropriate would actually support the GGV nonetheless** and respondents who said it was *'not appropriate'* were actually more like to say they would like to see it included in the CYC Local Plan than not see it in there.

Based on the descriptions included in the survey, **respondents could readily identify aspects of the scheme that they 'liked'** and a range of different things were chosen. Specifically, this included individual amenities such as the primary school, doctor's surgery, care home and leisure facilities as well as the inclusion of affordable housing. However, in a more general way respondents made comments relating to the development and creation of a community and referenced these individual facilities as an integral part of this.

Based on the detail included in the survey, **respondents identified fewer elements that they 'disliked'**, focussing mainly on concerns around traffic and congestion.



Galtres Garden Village, York

Transport Strategy

March 2018

GALTRES GARDEN VILLAGE
YORK

TRANSPORT STRATEGY

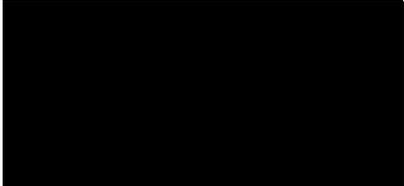
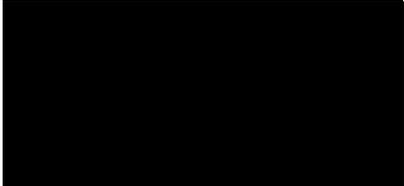
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APPENDICES

Appendix BGH1	Site Location Plan
Appendix BGH2	Personal Injury Collision Data
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Appendix BGH4	Plan showing proposed site accesses from North Lane including DMRB Assessment of proposed site access roundabout
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Appendix BGH11	Walking Accessibility Plan
Appendix BGH12	Cycling Accessibility Plan
Appendix BGH13	Public Transport Accessibility Plans

1.0 INTRODUCTION AND BACKGROUND INFORMATION

1.1 This Transport Strategy has been prepared by Bryan G Hall Ltd (BGH) on behalf of Galtres Village Development Company associated with the residential site on land to be known as Galtres Garden Village, to the north east of York. The site is being promoted through the emerging City of York Local Plan for a residential led mixed use development of up to 1,403 dwellings with 350 person retirement community in the hub (total 1,753 dwellings) with associated local facilities such as village hub, local shops, primary school and sports pitch.

1.2 The site is located to the east of Earswick on land to the north of North Lane as shown on the site location plans attached at **Appendix BGH1**. The site is bound by agricultural land to the west, north and east and North Lane to the south. The site has an approximate 900 metre site frontage onto the North Lane.

Background

1.3 In September 2016, a site was put forward on behalf our clients comprising a smaller area of the current site – essentially all the land to the west of Wisker Lane. A technical report on transport issues prepared by BGH (document ref: 16-275-001.01) was included with that submission. (That report (hereafter referred to as the ‘Sept 2016 report’) drew upon conclusions identified for a previous site that had been identified in the April 2014 Further Sites Consultation – site reference 777. That site is no longer being promoted).

1.4 The BGH Sept 2016 report appraised a scheme that compromised:

- A community of 893 residential units
- A Primary School
- New village cricket/ sports pitch
- Over 55’s retirement/ care home
- Local centre/ retail hub

1.5 A response was received from CYC to the September 2016 submission that stated:

“The site passes the first 3 criteria but based on its current boundary fails the sustainable access criteria (4a and 4b) not meeting the minimum scoring threshold for residential sites. The methodology and subsequent GIS analysis takes account of ‘major barriers’ such as main roads, railway lines and rivers as a key barrier to people having easy access to services and facilities. The location of the site adjacent to the A1237 therefore means it currently has very limited access to existing services and does not

attain the minimum score required to pass on to the next stage of the process and to be considered as a 'reasonable alternative'."

1.6 The CYC response referred to a Technical Officer Group meeting which identified potential issues and the need for further evidence, summarised as follows:

- York's urban form – it is suggested by CYC that a standalone sustainable settlement with an amended site boundary would better reflect the urban form of York;
- Indicative (draft) masterplan – further consideration to be given to the spatial layout, i.e. landscape setting, location and usage of open space and SUDs;
- Viability and deliverability of the site – CYC has suggested that there is concern that due to the size of the site, provision of community facilities would not be sufficient to create a sustainable development; and
- Highway mitigation – CYC has indicated that potential new access junctions into the site and the provision of a new footbridge over the A1237 need to be adequately assessed in terms of overall viability.

1.7 In March 2017, the site was put forward again on behalf of our clients comprising a larger area. A technical report on transport issues prepared by BGH (document ref: 16-275-002.01) was included with that submission. (That report (hereafter referred to as the 'March 2017 report') drew upon conclusions identified for the previous site.

1.8 The BGH March 2017 report appraised a scheme that comprised:

- A mixed community of 1,414 housing units
- 36 apartments
- Primary School
- New Village cricket/sports pitch
- 70 extra care/retirement units
- Local Centre/Retail Hub

1.9 CYC provided comments on all of the potential sites, the points relevant to highways and transport relating to the proposed site are summarised as follows:

- The provision of a pedestrian and cycle footbridge over the A1237 which would potentially improve its access to existing facilities within the Huntington area. It is not currently clear what services this would then bring within a suitable walking/cycling distance;

- Providing suitable access to the site and mitigating the impacts of the site on the highway network are likely to be difficult and expensive which would impact on the site viability and deliverability. The submissions to date do not evidence a suitable, safe access that is acceptable to the Council.

1.10 In October 2017, the site was put forward again on behalf of our clients comprising an increased number of dwellings. An updated technical report on transport issues was prepared by BGH (document ref: 16-275-003.03) that was included with that submission. (That report (hereafter referred to as the 'October 2017 report') drew upon conclusions identified for the previous site.

1.11 The BGH October 2017 report appraised a scheme that comprised:

- A mixed community of 1,403 housing units;
- 350 person retirement community in the hub
- Primary School
- New Village cricket/sports pitch
- Local Centre / Retail Hub

1.12 CYC have produced a Pre-Publication Consultation Response and the points relevant to highways and transport relating to the proposed site are summarised as follows:

- In terms of access, the primary access points are proposed off North Lane with a new roundabout junction leading into the site. At a strategic level there is currently no evidence that transport should be considered to be a 'show stopper' for this site - provided that effective measures to both to reduce car trip generation and to mitigate against the impact of the residual car trips are put in place. However, the proximity of the development to the Strategic Road Network, in particular issues with the North Lane junction with the A64, would need to be addressed with Highways England. Furthermore, there are some concerns with the proposed width of North Lane leading up to the two roundabouts as the new local distributor road for Galtres Village as this is considered to be narrow.

1.13 This Transport Strategy has been prepared to provide details of the site and also to the comments raised by CYC, setting out the relevant transport and access issues for the site.

Report Structure

1.14

Following this introduction, the report is split into the following sections:

- Section 2** provides a description of the setting of the site and the highway network in the vicinity of the proposed development;
- Section 3** describes the development proposals including access; estimates the generated trips and distributes them onto the local highway network; assesses the traffic impact at the proposed site access junctions;
- Section 4** describes the existing accessibility of the site in terms of sustainable modes of transport and outlines a strategy to improve the accessibility of the site;
- Section 5** provides a summary and draws conclusions on the results of the study.

2.0 DESCRIPTION OF EXISTING TRANSPORT NETWORK

Highway Network

- 2.1 The A1237 forms the Outer Ring Road around the north and west of York from the Hopgrove interchange to the A64 in the south-west. Along the site frontage, it is an all-purpose, single carriageway with a 7.3 metre wide carriageway and 1.0 metre wide carriageway margins with soft landscape verges to both sides, typically 6.0 metres wide.
- 2.2 The A1237 connects with the radial routes into/out of York City Centre via at grade roundabout junctions. To the south west of the site is the five-arm North Lane at-grade roundabout junction with the A1237 and Monks Cross Link and to the northwest is the four-arm at-grade roundabout junction with Strensall Road and the A1237.
- 2.3 The A1237 performs the function of a distributor type road for the City of York by providing connectivity between the radial routes to/from the north and access to a wide range of employment/commercial uses such as Clifton Moor retail/employment areas and Monks Cross. The A1237 Outer Ring Road has been subject to a number of studies over the years that have resulted in the implementation of various junction upgrades, such as at the A19 roundabout and the A59 junction. The A1237 York Outer Ring Road Study commissioned by CYC and undertaken by Halcrow, identified that the Outer Ring Road is predominantly used for short trips less than five minutes and less than five miles with no vehicles travelling along the whole length between the two junctions with the A64.
- 2.4 The A1237 connects with North Lane by way of a five-arm at-grade roundabout with an Inscribed Circle Diameter (ICD) of 62 metres. North Lane is an east/west route that runs between the A64 to the east, to the north of the Hopgrove junction. It performs the function of a local access road and along its length there is some frontage access to development.
- 2.5 North Lane is used as a “rat-run” for local traffic travelling eastbound along the A1237, along North Lane and then onto the A64 eastbound. For this reason, there are higher levels of traffic than would be expected for a road of this type. North Lane also provides access to some residential properties along its length. It is subject to the national speed limit for a single carriageway road (60mph) and is not street lit. Some 1.7km to the east of the A1237/North Lane five-arm roundabout junction, North Lane joins the A64 by way of a priority “T” junction.

2.6 The A1237 connects with Strensall Road by way of a four-arm at-grade roundabout junction with an Inscribed Circle Diameter (ICD) of 40 metres. Strensall Road is a north/south radial route that runs between Strensall Village to the north and the City Centre to the south. It performs the function of a local distributor type road and along the majority of its length there is frontage access to development.

2.7 Immediately to the north of A1237, Strensall Road enters the village of Earswick. Through Earswick it has a typical carriageway width of 7.0 metres with footways to both sides and frontage access to predominantly residential development. It is subject to a 30mph speed limit and is lit. Some 270 metres to the north of A1237, Strensall Road meets The Village by way of a three-arm mini-roundabout junction.

York Outer Ring Road Improvements

2.8 The CYC Local Transport Plan 2011-2031 proposes improvements to the A1237 north York Outer Ring Road (YORR). The project includes upgrades to 7 of the existing Outer Ring Road roundabouts to provide 3 lane entry on A1237, 2 lane exits on A1237, minor arm approaches widened to suit traffic flows, provision of walking and cycling improvements. The upgrades will also be constructed to allow for the potential dualling of the A1239, however at this stage there is not enough funding available to facilitate dualling.

2.9 A country park is proposed where the site adjoins the A1237 which will not prejudice the ability for the A1237 to be dualled in the future.

2.10 A report to the Executive Member for Transport and Planning, dated 13th July 2017 recommended to propose to Full Council that a budget of £34.2m be approved for the YORR improvements funded from the West Yorkshire Plus Transport Fund grant.

2.11 The junction improvements schedule is now classified as committed and it is understood that the detailed design of the schemes is currently underway. A proposed construction start date of July 2018 is set for the A1237/B1224 Wetherby Road and the A1237/Monks Cross Link/North Lane roundabout to commence January 2019. There has been no defined timetable for the remaining roundabouts.

Highways England – A64 Improvements

2.12 Highways England have produced a feasibility study into potential options to increase the flow of traffic along the A64 to the north of the Hopgrove

Interchange. The feasibility study also looks at potential options to increase the capacity at the Hopgrove Interchange.

- 2.13 It is understood, following discussions with Highways England, that the scheme is in the very early stages of development, and there are no firm proposals nor detailed information at this time. As part of the potential scheme it will include on line dualling at the point that North Lane meets the A64. There are, however, no details about the junction arrangements, however, this will need to be addressed by Highways England.

City of York Local Plan – Transport Topic Paper (September 2017)

- 2.14 In July 2016, the York strategic transport model was refreshed from its previous upgrade in 2010 to meet Web-Tag guidance and thereby provide a robust evidence base.

- 2.15 The 2016 baseline modelling was undertaken and showed the following high level results for the York Outer Ring Road in terms of traffic free-flow speed:

- The majority of the network appears to operate at above 50% (or even above 75%) of the free-flow speed; and
- Much of the A1237 ORR, the IRR and the key southern and western radial routes into the city centre appears to operate at below 50% of the free-flow speed.

- 2.16 The future year (2032/33) shows the impacts of Local Plan development combined with the infrastructure expected to be implemented by 2032/33. The main outputs from this are:

- In general the forecast travel times increase, despite there being small reductions in travel time on some links;
- The majority of the forecast journey time increases are relatively modest (less than 2 minutes)
- The A1237 Northbound is forecast to have an increase in journey time in the AM peak with a more than equal decrease in the PM Peak.

Review of Personal Injury Collision Data

- 2.17 Details of the personal injury accidents that have occurred on the highway network in the vicinity of the development site have been obtained from CYC for the period from 1st May 2011 to 31st December 2016. The accident data provided is attached at **Appendix BGH2**, including a plot showing the locations of the accidents. The study area includes North Lane along the southern site frontage

and to both sides of the five-arm roundabout junction with the A1237, a length of Monks Cross Link and the A1237 to the south of the five-arm roundabout junction, the A1237 to the north west, the Strensall Road/A1237 four-arm roundabout junction and lengths of Strensall Road and the A1237 back along each arm of the roundabout junction.

- 2.18 Within the study area there have been a total of 14 personal injury collisions, 2 of which were classified as serious in severity and the remaining 12 as slight.
- 2.19 At the North Lane/A1237 five-arm roundabout junction, a total of three personal injury collisions occurred within the study period, all of which were classified as slight in severity. Causation factors listed indicate that the collisions can be attributed to driver error or not driving appropriately to the weather conditions. A further collision occurred on Monks Cross Link approximately 100 metres to the south of the North Lane/A1237 roundabout junction, which was classified as serious in severity. The serious collision involved a single vehicle losing control on the right hand bend travelling northbound. The causation factor was listed as 'Impaired by alcohol'.
- 2.20 On North Lane at the junction with a private drive, adjacent to the eastern boundary of the site, a single personal injury collision occurred within the study period, which was classified as slight in severity.
- 2.21 Along the site frontage length of the A1237, a single slight personal injury collision occurred approximately 650 metres to the north east of the North Lane/A1237 roundabout junction. The accident occurred when the driver of a single vehicle attempted to avoid an animal in the road.
- 2.22 At the roundabout junction of Strensall Road/A1237, there have been a total of 6 personal injury collisions of which 1 was classified as serious in severity and 5 as slight. The serious collision was a rear end shunt type collision on the circulatory carriageway, with causation factors listed including 'failed to look properly' and 'junction overshoot'. Of the slight collisions, 3 involved motorcyclists losing control at the roundabout junction, 1 involved a cyclist and 1 was a rear end shunt type collision, all of which list causation factors which indicate that the collisions can be attributed to driver error or not driving appropriately to the weather conditions.
- 2.23 The final 2 slight personal injury collisions to have occurred within the request area for the study period occurred on Strensall Road to the north of the Strensall Road/A1237 roundabout junction and on the A1237 to the east of the junction. The accident on Strensall Road was a rear end shut type collision, and the

accident on the A1237 involved an erratically driven vehicle colliding with a motorcyclist.

- 2.24 In summary, a review of the personal injury collision data shows there are no significant highway safety issues identified on the local highway network.

Pedestrian and Cycle Network

- 2.25 There are no footways currently provided along the A1237 or North Lane to the east and south of the site. There are also no footways or crossing facilities currently provided at the North Lane/A1237 roundabout junction.

- 2.26 There is a Public Right of Way in the form of a bridleway adjacent to the site accessed off North Lane, approximately 150m to the east of the North Lane/A1237 roundabout junction, which provides access to Malton Road towards Monks Cross to the south. Another bridleway exists to the east of the site accessed from North Lane via Turbary Lane, which provides a link to Towthorpe Moor Lane to the north east of the site. There are also a number of Public Rights of Way to the west of the site which link Earswick to Huntington to the south, Haxby to the west and Strensall to the north, along the River Foss.

- 2.27 As shown on the York Cycle Map, which is available on the iTravel York website, there is formal provision for cyclists along the major roads in the immediate vicinity of the site. Cyclists can use the aforementioned bridleways to the east and west of the site, and there are existing advisory cycle lanes along Strensall Road through Huntington to the south of the Strensall Road/A1237 roundabout junction, along with off-road segregated pedestrian/cycleways and crossing facilities provided at the junction itself.

Public Transport

- 2.28 There are a number of bus stops provided on Strensall Road to the west of the site, located both to the north and south of the A1237. The stops to the south of the A1237 are closest to the proposed site, within an approximate 2.5 kilometres walking distance from the centre of the proposed development site, assuming direct access could be provided to the A1237, albeit there is lack of existing footway provision in this area.

- 2.29 The stops on Strensall Road are served by the number 5/5A bus services, which provide a maximum 20 minute daytime service frequency in each direction, equating to a total of around six buses per hour. The service runs from Strensall, south past the site through Huntington to the centre of York and on to Acomb with the returning service running in the opposite direction.

2.30 Table 3.1 outlines the facilities provided at each of the existing bus stops within the vicinity of the site.

Table 2.1 – Bus Stop Facilities

Bus Stop Location	Facilities Provided
Strensall Road north of the A1237 (NB)	Flag, pole, timetable and layby
Strensall Road north of the A1237 (SB)	Flag, pole, timetable and shelter
Strensall Road south of the A1237 (NB)	Flag, pole and timetable
Strensall Road south of the A1237 (SB)	Flag, pole, timetable and shelter

2.31 Table 3.2 below summarises the service frequency of the 5/5A bus service (towards York/Acomb) which currently serves the stops on Strensall Road.

Table 2.2 – 5/5A Bus Service Frequency

	Monday – Friday	Saturday	Sunday
First Service	06:00 from Strensall to Acomb	06:50 from Strensall to Acomb	08:45 from Strensall to Acomb
AM	25 minutes until 06:25 then 15-20 minutes	30 minutes until 08:47 then 15-20 minutes	60 minutes until 09:45 then 30 minutes
Daytime	15-20 minutes	15-20 minutes	30 minutes
PM	15-20 minutes until 20:00 then 60 minutes until 23:45	15-20 minutes until 20:00 then 60 minutes until 23:45	30 minutes until 18:15 then 45 minutes until 19:00 then 60 minutes until 23:45
Last Service	23:45 from Strensall to York 00:11 arrival at York Station Road	23:45 from Strensall to York 00:11 arrival at York Station Road	23:45 from Strensall to York 00:11 arrival at York Station Road

- 2.32 Further consideration has been given to buses which serve Monks Cross shopping centre to the south of the site, where there could be scope to extend an existing bus service from Monks Cross, discussed in detail later in this Transport Strategy. The existing bus services serving Monks Cross Shopping Park are provided in Table 2.3.

Table 2.3 - Summary of Existing Bus Services at Monks Cross

Route Number	Route	Frequency		
		Mon –Fri	Saturday	Sunday
9	Monks Cross – York Circular (Park and Ride Silver)	10 mins	15 mins	10 mins
12	Monks Cross – York City Centre – Foxwood Lane	30 mins	30 mins	-
20	Heworth – Monks Cross – Haxby – Clifton Moor	60 mins	60 mins	-
181	York – Monks Cross – Sherriff Hutton – Castle Howard – Malton	120 mins	120 mins	-

Park and Ride

- 2.33 Monks Cross Park and Ride is located approximately 2 kilometres to the south west of the site. There are a total of 750 car parking spaces and it is served by the Silver Line (Number 9) bus, which provides a high frequency service into York city centre.

3.0 PROPOSED DEVELOPMENT, ACCESS AND TRAFFIC IMPACT

Proposed Development

3.1 The site boundary plan is attached at **Appendix BGH3**. It is considered that the enlarged site offers the opportunity for a proposed development comprising the following uses:

- A mixed community of 1,403 housing units;
- 350 person retirement community in the hub
- Primary School
- New Village cricket/sports pitch
- Local Centre / Retail Hub

3.2 The proposed site has a total area of 92.97 hectares. Of the area, 7.74 hectares will be allocated for use by the local centre/extra care accommodation, primary school and sports pitches and 43.85 hectares will be allocated to residential development, split into cells of differing size.

Vehicular Access

3.3 CYC in the latest Pre-Publication Consultation Responses stated that:

“In terms of access, the primary access points are proposed off North Lane with a new roundabout junction leading into the site. At a strategic level there is currently no evidence that transport should be considered to be a ‘show stopper’ for this site - provided that effective measures to both to reduce car trip generation and to mitigate against the impact of the residual car trips are put in place”.

3.4 It is proposed that the site will be accessed via two main site access junctions as follows:

- 30m ICD roundabout junction from North Lane, located approximately 800m from the North Lane/A1237 five-arm roundabout, as shown on drawing number 16/275/SKH/003 at **Appendix BGH4**; and
- A second 30m ICD roundabout 300m to the east of the first access towards North Lane, as shown on drawing 16/275/SKH-003 at **Appendix BGH4**.

3.5 The provision of two access points into the development, is in line with guidance contained within CYC's Highway Design Guide, which sets out that distributor type roads serving over 400 dwellings should have two points of access.

3.6 CYC have raised a concern about the width of North Lane in the Pre-Publication Consultation Responses stating:

"Furthermore, there are some concerns with the proposed width of North Lane leading up to the two roundabouts as the new local distributor road for Galtres Village as this is considered to be narrow".

3.7 North Lane varies in width, however, has a general width of 6.0 metres. There are wide verges either side of the carriageway both of which are adopted, therefore if the Council deem that North Lane needs to be widened then this would be possible.

3.8 A further comment in the Pre-Publication Consultation Responses states that:

".....the proximity of the development to the Strategic Road Network, in particular issues with the North Lane junction with the A64, would need to be addressed with Highways England".

3.9 Highways England have produced a feasibility study into potential options to increase the flow of traffic along the A64 to the north of the Hopgrove Interchange. As part of the potential scheme it will include on line dualling at the point that North Lane meets the A64. There are, however, no details about the junction at this point. Discussions are on-going with Highways England to determine the most appropriate junction arrangement at the North Lane/A64 junction, however, the A64 scheme is not progress sufficient to provide firm details at this stage.

North Lane Roundabout Accesses

3.10 The accesses from North Lane will be via two 30m ICD roundabout, designed in accordance with the DMRB standards TD42/95 for a road with a 60mph speed limit. The drawing at **Appendix BGH4** shows a suitable location for the proposed access junctions with North Lane, which are approximately 800 metres and 1,100 metres to the east of the existing North Lane/A1237 five-arm roundabout junction.

3.11 Following previous comments from CYC in relation to the design of the site access junctions an assessment has been undertaken of the access proposals to assess whether it meets DMRB standards. This assessment is set out on the drawing at **Appendix BGH4** and shows that a safe and suitable access can be formed.

Pedestrian and Cycle Access

- 3.12 Pedestrian access to the site will be provided in the form of 3 metre wide shared footway/cycleways and appropriate crossing facilities on the proposed site access arms of the site access roundabout, with a footway provided to the north side of North Lane along its length to the A1237/North Lane roundabout. An appropriate crossing point would also be provided across the A1237 western arm to link to a potential footway/cycleway on the south western side of the A1237, which would likely connect to other strategic sites.
- 3.13 A 3 metre wide shared footway/cycleway would also be provided at the northern boundary of the site connecting into Strensall Road.

Development Trip Generation

- 3.14 The trip generation for the proposed larger site has been determined using the same method and trip rates as were used in the Technical Report prepared by BGH for the previous March 2017 submission for the smaller site (document ref.: 16-275-002.01). In the previous report, a comparison between TRICS trip rate data, CYC Strategic modelling trip rate data and surveyed trip rates for a nearby existing residential development served by Earswick Chase was undertaken. It was concluded that the surveyed trip rates were higher than the TRICS average trip rates and the average trip rates from CYC Strategic modelling, which were similar rates. This reflects the lack of local services provision within Earswick itself and the size and tenure of the properties served by Earswick Chase.
- 3.15 Given that there would be provision of dedicated local facilities within the proposed Galtres Garden Village site, it was considered in the previous September 2016 report that the surveyed trip rates are not representative. Therefore the trip generation for the smaller site was undertaken using the more representative TRICS data, and the same method has been used to determine the trip generation for the larger 1,403 dwelling site. The TRICS data is attached at **Appendix BGH5** and summarised in Table 3.1, which also sets out the predicted trip generation for 1,403 dwellings on the site.

Table 3.1 - TRICS Derived Vehicle Trip Rates per Dwelling and Trip Generation for 1,403 dwellings

	AM Peak Hour			PM Peak Hour		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Trip Rates	0.141	0.377	0.518	0.335	0.189	0.524
Trip Generation	198	529	727	470	265	735

Table 3.2 - TRICS Derived Vehicle Trip Rates per Dwelling and Trip Generation for 350 person Retirement Flats

	AM Peak Hour			PM Peak Hour		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Trip Rates	0.169	0.120	0.289	0.126	0.116	0.242
Trip Generation	59	42	101	44	41	85

3.16 As noted in the previous March 2017 report for the smaller site, the development proposals comprised a mix of uses, including residential, primary school, local community facilities/retail etc. which will assist in encouraging sustainable travel patterns by occupants/visitors of the proposed development and also potential sites to the south. The mix of land uses proposed was therefore considered to minimise the need to travel offsite by private car. This is particularly the case for the larger 1,403 dwelling site, as there will be additional local facilities as proposed. The previous report also argued that providing a percentage of affordable housing on the site would be likely to reduce vehicle trip generation on the site during peak hours, when compared to the low percentage of affordable housing provided at the Earswick Chase development.

3.17 Due to the size of the proposed development, it is considered that the proposed local facilities will predominantly serve the 1,403 dwellings on the site and are therefore unlikely to generate a significant number of vehicle trips during the peak hours on the wider network beyond the site. The implementation of a Travel Plan at the site will also help to reduce the number of single occupancy car journeys to and from the site.

3.18 In order to establish the likely distribution profile of traffic generated by the proposed development, trip distribution has been determined based on 2011 Census Journey to Work Data for the middle super output areas of York 001 and York 005, within which the site is situated. The assignment is summarised at **Appendix BGH6**.

Assessment of the Traffic Impact of the Development Generated Trips on the Proposed Site Access Arrangements

3.19 For traffic impact assessment purposes, and to be consistent with the Local Plan period, the impact of development generated traffic on the site access junctions has been considered at a future year of 2032. In the previous report for the smaller site, the surveyed traffic flows were projected to a future year of 2032 using Temprow growth factors. The 2032 baseline flows for the AM and PM peak hours have been reproduced on the diagrams attached at **Appendix BGH7**.

3.20 The development generated peak hour traffic flows at **Appendix BGH8** have been added to the 2032 baseline flows at **Appendix BGH7**, resulting in the 2032 predicted flows attached at **Appendix BGH9**. The 2032 predicted flows account for the proposed realignment of North Lane at the North Lane/A1237 five-arm roundabout junction.

3.21 The capacity of the proposed site access roundabout junctions has been assessed for the 2032 predicted scenario using the Junctions 8 ARCADY modelling software. The results are summarised in Table 3.2, and the full outputs are attached at **Appendix BGH10**.

Table 3.2
North Lane 30m ICD Site Access (west) Roundabout Junction

Arm	2032 Predicted Flows			
	Morning Peak Hour		Evening Peak Hour	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Site Access	0.31	0	0.18	0
North Lane East	0.64	2	0.46	1
Caravan Park	0.00	0	0.00	0
North Lane West	0.46	1	0.75	3

Table 3.3
North Lane 30m ICD Site Access (east) Roundabout Junction

Arm	2032 Predicted Flows			
	Morning Peak Hour		Evening Peak Hour	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Site Access	0.29	0	0.16	0
North Lane East	0.37	1	0.35	1
North Lane West	0.35	1	0.52	1

3.22 As identified in Table 3.2 and Table 3.3 of the 2032 predicted morning and evening peak hour analysis of the operation of the site access roundabouts shows that the junctions are predicted to operate within capacity during both peak hours.

Off-Site Highway Junctions

3.23 At the request of CYC, an assessment of the impact of the proposed development on nearby junctions has been undertaken. The three junctions which have been assessed further are the A1237/North Lane five arm roundabout, A64 Hopgrove Interchange to the southeast of the site and the Strensall Road roundabout to the northwest of the site.

3.24 The predicted impact of the development generated traffic in 2032 has been assessed using Junctions 8 for the A1237/North Lane roundabout. This includes the CYC proposed York Outer Ring Road improvement scheme to widen the A1237 approach arms at this junction to two lanes. In order to accommodate the development related trips additional changes to the junction would be required but only on the North Lane approach to the roundabout. These include widening on the approach to extend the flare length and minor widening at the give way line. The improvements can be accommodated within the adopted highway boundary and can be achieved with the CYC proposed York Outer Ring Road improvement scheme.

Table 3.4
A1237/North Lane Roundabout Junction with CYC improvement and additional development mitigation

Arm	2032 Predicted Flows			
	Morning Peak Hour		Evening Peak Hour	
	RFC	Queue (PCU)	RFC	Queue (PCU)
A1237 East	0.57	1	0.50	1
Monks Cross Link	0.25	0	0.84	5
North Lane West	0.13	0	0.33	1
A1237 West	0.65	2	0.63	2
North Lane Existing	0.85	5	0.53	1

3.25 The assessment of the further two junctions involves a percentage impact of proposed vehicular on the two off site highway junctions.

3.26 This assessment involves the percentage increase in vehicular traffic at the two junctions as a result of our development traffic.

Table 3.6 – Predicted Percentage Increase – 2032

	2032 Base Flows		2032 Predicted Flows		Percentage Increase	
	AM	PM	AM	PM	AM	PM
Strensall Road Roundabout	4,039	3,887	4,366	4,211	8.1%	8.3%
Hopgrove Interchange	5288	5400	5,439	5,549	2.9%	2.8%

4.0 OUTLINE SUSTAINABLE TRANSPORT STRATEGY AND IMPACT

4.1 CYC in the latest Pre-Publication Consultation Responses stated that

“At a strategic level there is currently no evidence that transport should be considered to be a ‘show stopper’ for this site - provided that effective measures to both to reduce car trip generation and to mitigate against the impact of the residual car trips are put in place”

To achieve a sustainable development on the site and to address the concerns raised by CYC the following section outline a possible strategy to provide an accessible site.

Walking

Existing Accessibility

4.2 Although there are a number of existing local facilities within Huntington to the west of the site, however these are slightly in excess of 2 kilometres walking distance from the centre of the site. Furthermore, there is a lack of existing footway provision to link the site to these facilities as detailed in Section 2.0.

Outline Strategy

4.3 The primary strategy to overcome the issue of pedestrian accessibility to existing facilities will primarily be to provide dedicated local facilities on site, which would be within the maximum recommended walking distance of all dwellings on the site. A list of the potential local facilities to be provided on the site is provided in Section 3.0.

4.4 Secondly, shared footway/cycleways and crossing facilities will be provided as appropriate to facilitate pedestrian access to the site at both access junctions, as detailed in Section 3.0. A new footway/cycleway is to be provided at the northern boundary of the site, which would likely connect into Strensall Road, giving access to local facilities and bus services. 4.5

4.6 Lastly a shared pedestrian/cycle way could be provided along the west side of Monks Cross Drive to connect to the Monks Cross Shopping Centre.

4.7 The walking accessibility plan attached at **Appendix BGH11** has been prepared using the Visography TRACC software.

Cycling

Existing Accessibility

- 4.8 Cyclists can use the existing bridleways accessed off North Lane to access the site from Malton Road to the south and Towthorpe Moor Lane to the north east of the site, as described in Section 2.0. There is currently no formal provision for cyclists along the major roads in the immediate vicinity of the site, however there are advisory cycle lanes along Strensall Road to the west of the site, and there are also a number of facilities and employment areas located within cycling distance.

Outline Strategy

- 4.9 The shared footway/cycleways to be provided along the A1237 and North Lane as described previously will benefit accessibility of the site for cyclists. It will be possible as part of the development to resurface the Bridleways to improve the facilities for residents of the site. There is potential to provide a pedestrian/cycleway to the Monks Cross Shopping Centre.
- 4.10 Secure cycle parking would be provided in line with local standards at each residential dwelling and for each local facility use on the site. This may help to maximise cycle ownership levels on the site and therefore increase the potential for journeys to and from the site to be made by bicycle.
- 4.11 It is generally accepted that the bicycle is an ideal mode of transport for journeys under 8 kilometres and that cycling has clear potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport.
- 4.12 The cycling accessibility plan attached at **Appendix BGH12** has been prepared using the Visography TRACC software. It shows that, with the outline strategy measures in place, areas including York, Strensall and a number of outlying villages are within a 5 kilometres cycling distance of the site. This means a large range of facilities and employment opportunities are within cycling distance of the site.

Public Transport

Existing Accessibility

- 4.13 The nearest bus stops to the site are located on Strensall Road to the west of the site and are served by the frequent 5/5A bus services, as detailed in Section 2.0. The lack of existing footway provision in the vicinity of the site currently limits pedestrian access between the site and the existing bus stops.

Outline Strategy

- 4.14 Pedestrian access from the site to the existing bus stops on Strensall Road will be improved with the implementation of the shared footway/cycleway along the northern boundary of the site connecting to Strensall Road. The walking distance from the centre of the site to these existing stops would still be slightly in excess of 2.0 kilometres with the implementation of these measure.
- 4.15 The primary strategy to overcome the public transport accessibility issues would be to route bus services through the site that would further enhance the bus provision for the site. This bus route could feasibly be a reconfiguration of an existing service or a new service. A route could be provided via one of the site access roundabouts, stopping near the local centre and exiting via the second site access roundabout onto North Lane, continuing west back towards the A1237/North Lane roundabout.
- 4.16 The exact details of the will be confirmed through discussion and agreement between the relevant parties at the appropriate time. Any increase in bus services or frequency would be determined and form part of a Section 106 contribution through the planning process.
- 4.17 Clearly, if bus services are to be routed through the site, the internal road layout would need to be suitable for use by buses. Therefore, the internal layout would be designed in accordance with the CYC Highway Design Guide to ensure that buses can satisfactorily access the site. There is scope to extend the Monks Cross Park and Ride service in order to provide a regular bus service through the site.
- 4.18 It is believed that the development is of a sufficient quantum to commercially sustain a 30 minute frequency bus service between the site and the city centre in the long term. However financial support may be required to ‘pump-prime’ (in effect, subsidising the operating costs of) bus services during initial phases of development. This will be required to ensure that the site is accessible by public transport from the outset, such that sustainable travel behaviour can be established from an early stage.
- 4.19 The public transport accessibility plans for the weekday morning and evening peak periods attached at **Appendix BGH13** have been prepared using the Visography TRACC software. It shows that, with the outline strategy measures in place, a number of areas are accessible from the site within a 60 minute journey time using the reconfiguration of an existing public transport service. The areas accessible within 60 minutes include the entire conurbation of York, as well as some more rural villages.

5.0 SUMMARY AND CONCLUSIONS

5.1 This Technical Report forms part of a submission in relation to Galtres Garden Village, to the north east of York, through the emerging City of York Local Plan for a residential led mixed use development. The site is located to the north east of York on land to the north of North Lane.

5.2 The site offers the opportunity for a proposed development comprising the following uses:

- A mixed community of 1,403 housing units;
- 350 person retirement community in the hub
- Primary School
- New Village cricket/sports pitch
- Local Centre / Retail Hub

5.3 CYC have recently produced a Pre-Publication Consultation Response, which this Technical Note has addressed. The points relevant to highways and transport relating to the proposed site are summarised as follows:

In terms of access, the primary access points are proposed off North Lane with a new roundabout junction leading into the site. At a strategic level there is currently no evidence that transport should be considered to be a 'show stopper' for this site - provided that effective measures to both to reduce car trip generation and to mitigate against the impact of the residual car trips are put in place. However, the proximity of the development to the Strategic Road Network, in particular issues with the North Lane junction with the A64, would need to be addressed with Highways England. Furthermore, there are some concerns with the proposed width of North Lane leading up to the two roundabouts as the new local distributor road for Galtres Village as this is considered to be narrow.

5.3 The proposed vehicular access strategy provides access directly from North Lane via two new roundabout junctions, one approximately 800m and 1,100m east of the North Lane/A1237 roundabout junction. North Lane varies in width, however, has a general width of 6.0 metres. There are wide verges either side of the carriageway both of which are adopted, therefore if the Council deem that North Lane needs to be widened then this would be possible.

- 5.4 Within the site, connectivity will be provided for all modes of travel in line with good design principles of Manual for Streets and Manual for Streets 2.
- 5.5 A Strategy has been defined that identifies possible measures and features that could enhance the provision for modes other than the private car such as walking, cycling and public transport. The site is located with employment, leisure and educational facilities nearby to again minimise journey lengths. Furthermore by providing a development with a mix of both residential and employment land uses it will assist in minimising the need to travel by the private car.
- 5.6 This Technical Report has comprehensively addressed all the technical issues raised by CYC including the recently produced Pre-Publication Consultation Response and it can therefore be concluded the site access arrangements are feasible and deliverable and accord with National and emerging Local Plan policies. This Technical Report has demonstrated that suitable safe access can be provided and that the site would be able to provide local services on site including a new primary school and local shops that will promote sustainable travel choices.

APPENDIX BGH 1



Client: GALTRES VILLAGE DEVELOPMENT COMPANY

Project: GALTRES GARDEN VILLAGE

BRYAN G HALL
 CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS
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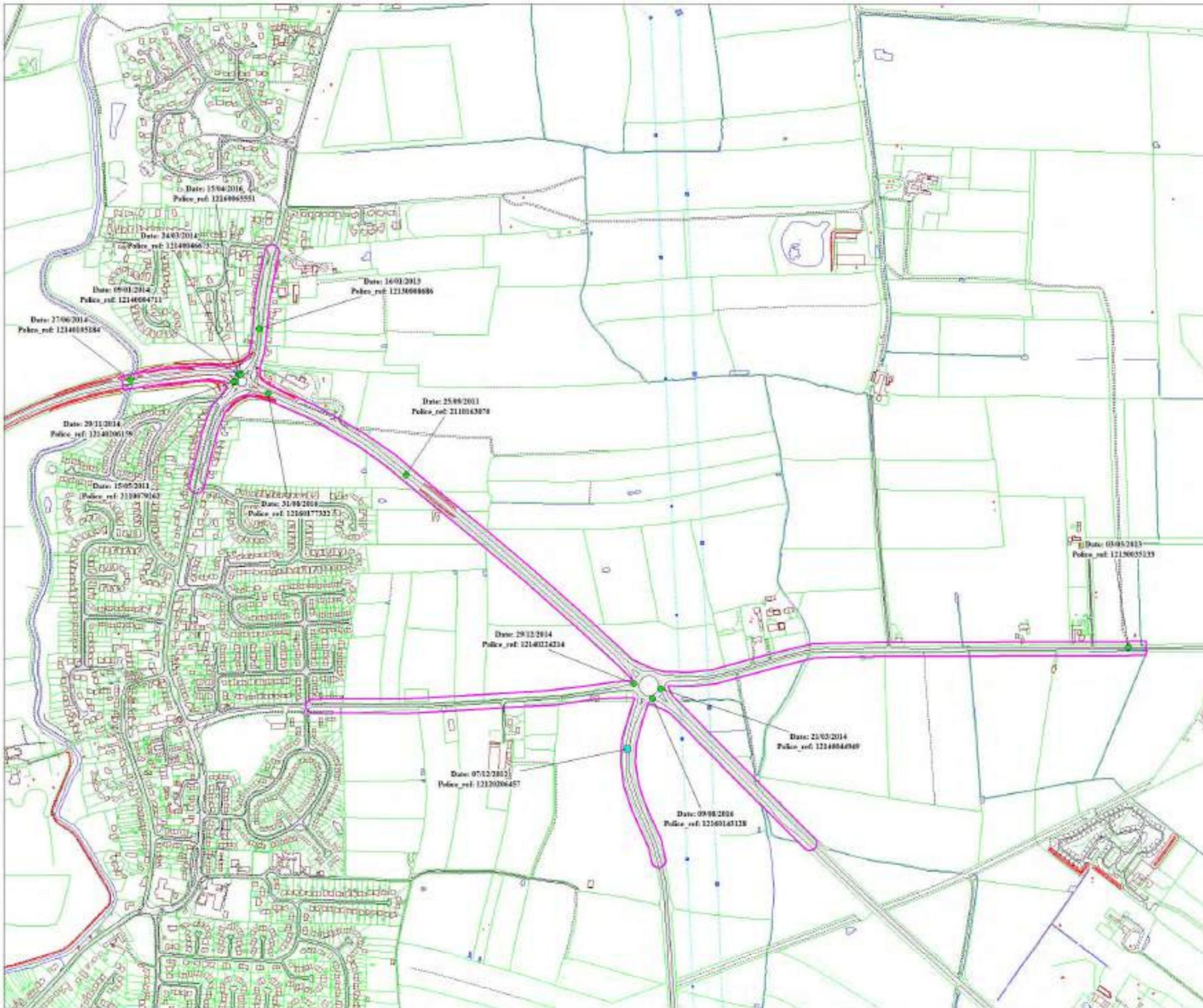
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Title: SITE LOCATION PLAN

Rev:	Amendment:	Drn:	Chk:	Date:			
Job No:	16-275	Drawn:	JT	Checked:	MC	Date:	30.10.17
Scale:	Not to Scale	Drawing No:	16/275/LOC/004		Revision:		
A3 - 420 x 297							

APPENDIX BGH 2



Colour coding by SEVERITY
 Serious (R)
 Major (G)

Accidents Between Dates
 01/05/2011 and 31/12/2016

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A1237 - Earswick

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DRAWING TITLE

A1237 - Earswick

SCALE 1 : 4000

DATE 23/02/2017

DRAWING No: 737A

DRAWN BY Sharon Wilkins

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12120206457 07/12/2012 Time 2111 Vehicles 1 Casualties 1 Serious
 E: N: First Road: C 416 Road Type Single carriageway
 Speed limit: 60 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Impaired by alcohol	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLE 1 ON SWEEPING RIGHT HAND BEND LOSES CONTROL LEAVES CARRIAGEWAY COLLIDES WITH LAMP POST ROLLING ONTO ITS ROOF

Occurred on MONKS CROSS LINK 100 METRES SOUTH OF A1237 YORK

Vehicle Reference 1 Car Going ahead right bend
 Vehicle movement from S to NE No tow / articulation
 On main carriageway Overturned
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: Lamp post
 Nearside Age of Driver 47 Female
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 47 Female Driver/rider Severity: Serious
 Not a pupil Postcode YO329YH Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection: Notes:
Selected using Build Query : 737A - Earswick - A1237

12130008686 16/01/2013 Time 1733 Vehicles 2 Casualties 1 Slight
 E: N: First Road: C 90 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Frost/Ice
 Darkness: street lights present and lit Fog or mist
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Slippery road (due to weather)	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:	Rain, sleet, snow, or fog	Vehicle 1	
4th:			
5th:			
6th:			

V2 WAS STATIONARY ON STRENSALL ROAD PREPARING TO TURN RIGHT INTO A DRIVEWAY. V1 HAS DRIVEN ALONG THE JUNCTION FROM THE ROUNDABOUT AND CRASHED INTO THE BACK OF FEMALES CAR.

Occurred on STRENSALL ROAD, OUTSIDE HOUSE NO. 123, YORK

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 18 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Car Waiting to turn right
 Vehicle movement from S to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 30 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 30 Female Driver/rider Severity: Slight
 Not a pupil Postcode YO310RB Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12130035133 03/03/2013 Time 1220 Vehicles 2 Casualties 2 Slight
 E: N: First Road: U 1410 Road Type Single carriageway
 Speed limit: 60 Junction Detail: Pri Drive Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Poor turn or manoeuvre	Vehicle 1	Very Likely
4th:	Loss of control	Vehicle 1	Very Likely
5th:			
6th:			

VEHICLE 1 STATIONARY ON PRIVATE ROAD JUNCTION WITH NORTH LANE, HUNTINGTON, YORK. VEHICLE 2 TRAVELS ALONG NORTH LANE FROM DIRECTION OF A64 TOWARDS PRIVATE JUNCTION. RIDER OF VEHICLE 1 FOR UNKNOWN REASON LOSES CONTROL OF MOTORCYCLE AND COMES OUT FROM JUNCTION COLLIDING WITH N/S/F OF VEHICLE 2.

Occurred on NORTH LANE, HUNTINGTON, YORK

Vehicle Reference 1 Motor Cycle over 125 cc and up to 500cc Starting
 Vehicle movement from N to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering main road First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 17 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 17 Male Driver/rider Severity: Slight
 Not a pupil Postcode WF31RX Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Nearside Age of Driver 24 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 2 Age: 24 Female Driver/rider Severity: Slight
 Not a pupil Postcode YO188DA Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12140004711 09/01/2014 Time 1845 Vehicles 2 Casualties 1 Slight
 E: N: First Road: A 1237 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled C 90
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

V1 TRAVELLING A1237 FROM CLIFTON TOWARDS A64. V2 TRAVELLING STRENSALL ROAD FROM HUNTINGTON TOWARDS STRENSALL. V2 IS PASSING ROUNDABOUT OF A1237 WHEN V1 FAILS TO SEE V2 AND TRAVELS ON INTO PATH OF V2, CAUSING COLLISION AND SLIGHT INJURY.

Occurred on STRENSALL ROAD AT JUNCTION WITH A1237 RING ROAD, HUNTINGTON, YORK

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 50 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Pedal Cycle Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Nearside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Male
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 40 Male Driver/rider Severity: Slight
 Not a pupil Postcode YO329FY Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection: Notes:
Selected using Build Query : 737A - Earswick - A1237

12140044949 21/03/2014 Time 1243 Vehicles 2 Casualties 2 Slight
E: N: First Road: U 3710 Road Type 1 A 1237
Speed limit: 60 Junction Detail: Roundabout Give way or controlled
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight:street lights present Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Poor turn or manoeuvre	Vehicle 1	Very Likely
4th:	Junction restart	Vehicle 1	Very Likely
5th:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
6th:			

V1 AT JUNCTION OF ROUNDABOUT WITH NORTH LANE AND A1237 IN RIGHT HAND LANE, V2 AT SAME JUNCTION IN LEFT HAND LANE. V1 ENTERS ROUNDABOUT TAKING 4TH EXIT AND V2 TURNING LEFT AT 1ST EXIT. V1 NEARSIDE SKIRT

OOB. INJURY TO DRIVER AND F/O/S OF V2.

Occurred on NORTH LANE AT JUNCTION WITH A1237 RING ROAD, YORK

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Starting
Vehicle movement from E to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 50 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 50 Male Driver/rider Severity: Slight
Not a pupil Postcode YO329SA Seatbelt

Vehicle Reference 2 Car Starting
Vehicle movement from E to SW No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Nearside Age of Driver 63 Female
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 2 Age: 26 Female Passenger Severity: Slight
Not a pupil Postcode YO329SA Seatbelt
Front seat

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection: Notes:
Selected using Build Query : 737A - Earswick - A1237

12140046673 24/03/2014 Time 1400 Vehicles 2 Casualties 1 Serious
 E: N: First Road: A 1237 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled C 90
 Crossing: Control None Facilities: Central reservation Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Junction overshoot	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

V1 DRIVEN INTO THE REAR OF THE VEHICLE IN FRONT (V2). THIS WAS AS A RESULT OF V1 DRIVER LOOKING TO HIS RIGHT UPON APPROACHING THE STRENSALL/HUNTINGTON ROUNDABOUT ON THE A1237.

Occurred on A1237 AT JUNCTION WITH STRENSALL ROAD ROUNDABOUT, YORK

Vehicle Reference 1 Minibus Going ahead but held up
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 63 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 58 Female
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 58 Female Driver/rider Severity: Serious
 Not a pupil Postcode YO613NZ Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months
 Selection: Notes:
 Selected using Build Query : 737A - Earswick - A1237

12140105184 27/06/2014 Time 1721 Vehicles 2 Casualties 1 Slight
 E: N: First Road: A 1237 Road Type Single carriageway
 Speed limit: 60 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd:	Aggressive driving	Vehicle 1	Very Likely
3rd:	Impaired by alcohol	Vehicle 1	
4th:			
5th:			
6th:			

GREEN CAR DESCRIBED BY WITNESSES TO BE DRIVING DANGEROUSLY SWERVING ALL OVER THE ROAD. CAR LOOKS TO GO TO OVERTAKE MOTORCYCLE THEN TURNED INTO MOTORCYCLE KNOCKING RIDER OFF. CAR THEN MAKES OFF.
 Occurred on A1237 NEAR STRENSALL, YORK

Vehicle Reference 1 Car Overtaking moving vehicle O/S
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Offside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 43 Male
 Not hit and run Breath test Positive
 Driver Postcode: VRM:

Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
 Hit object in road None Off road: Road sign / ATS
 Nearside Age of Driver 37 Male
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 37 Male Driver/rider Severity: Slight
 Not a pupil Postcode YO322ZY Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12140206159 29/11/2014 Time 0246 Vehicles 1 Casualties 1 Slight
 E: N: First Road: A 1237 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled C 90
 Crossing: Control None Facilities: Central reservation Road surface Wet/Damp
 Darkness: street lights present and lit Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Inexperienced or learner driver/rider	Vehicle 1	Very Likely
2nd: Travelling too fast for conditions	Vehicle 1	Very Likely
3rd: Slippery road (due to weather)	Vehicle 1	Possible
4th: Careless/Reckless/In a hurry	Vehicle 1	Possible
5th: Loss of control	Vehicle 1	Possible
6th:		

VI HAS BEEN TRAVELLING ON A1237 FROM MONKS CROSS TOWARDS HAXBY. AT THE STRENSALL ROUNDABOUT VI HAS LOST CONTROL AND BOTH DRIVER AND VEHICLE HAVE DONE TO GROUND.

Occurred on A1237 STRENSALL ROAD, YORK

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway Skidded
 Location at impact Leaving roundabout First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 17 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 17 Male Driver/rider Severity: Slight
 Not a pupil Postcode YO264YQ Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12140224214 29/12/2014 Time 1040 Vehicles 2 Casualties 2 Slight
 E: N: First Road: A 1237 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled Unclassified 3710
 Crossing: Control None Facilities: None within 50m Road surface Frost/Ice
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Slippery road (due to weather)	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

V1 APPROACHING ROUNDABOUT FROM NORTH LANE, GOES TO BRAKE, HOWEVER DUE TO ICE THIS HAS CAUSED THE BRAKES TO LOCK AND THE VEHICLE HAS ENTERED THE ROUNDABOUT AND CRASHED INTO V2.

Occurred on NORTH LANE AT JUNCTION WITH A1237 ROUNDABOUT, YORK

Vehicle Reference 1 Car Stopping
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Entering roundabout First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 36 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 36 Female Driver/rider Severity: Slight
 Not a pupil Postcode YO179AQ Seatbelt

Vehicle Reference 2 Car Going ahead right bend
 Vehicle movement from NW to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Nearside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 59 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 2 Age: 59 Male Driver/rider Severity: Slight
 Not a pupil Postcode YO323L1 Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12160065551 15/04/2016 Time 2233 Vehicles 1 Casualties 1 Slight
 E: N: First Road: A 1237 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled C 90
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Loss of control	Vehicle 1	Very Likely
2nd:	Slippery road (due to weather)	Vehicle 1	Very Likely
3rd:	Travelling too fast for conditions	Vehicle 1	Very Likely
4th:	Inexperienced or learner driver/rider	Vehicle 1	Very Likely
5th:			
6th:			

V1 ENTERS ROUNDABOUT AT NIGHT AND LOOSES CONTROL ON WATER IN ROAD CAUSING HIM TO FALL FROM VEH.
 Occurred on A1237 AND STRENSALL ROAD ROUNDABOUT YORK

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 25 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 25 Male Driver/rider Severity: Slight
 Not a pupil Postcode YO265RU Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12160143128 09/08/2016 Time 1743 Vehicles 2 Casualties 1 Slight
 E: N: First Road: A 1237 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 1237
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight:street lights present Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Following too close	Vehicle 2	Very Likely
2nd:	Slippery road (due to weather)	Vehicle 2	Possible
3rd:			
4th:			
5th:			
6th:			

V1 TRAVELLING AROUND ROUND ABOUT TOWARDS MONKS CROSS LINK FOLLOWED BY V2 WHEN UNKNOWN VEHICLE PULLS OUT IN FRONT OF V2 CAUSING IT TO BRAKE AND V2 HITS REAR OF V1. UNKNOWN VEHICLE CONTINUES ON IT WAYS

Occurred on A1237 AT JUNCTION MONK CROSS LINK; YORK; NORTH YORKSHIRE

Vehicle Reference 1 Car Going ahead right bend
 Vehicle movement from NW to SW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Motorcycle over 500cc Going ahead other
 Vehicle movement from NW to SW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 51 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 51 Male Driver/rider Severity: Slight
 Not a pupil Postcode YO196AS Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

12160177322 31/08/2016 Time 1805 Vehicles 2 Casualties 2 Slight
 E: N: First Road: A 1237 Road Type Single carriageway
 Speed limit: 60 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 2	Possible
2nd:	Following too close	Vehicle 2	Possible
3rd:			
4th:			
5th:			
6th:			

V1 AND V2 TRAVELLING W IN SLOW MOVING TRAFFIC WHEN V2 RUNS INTO REAR OF V1.

Occurred on A1237 YORK OUTER RING RING ROAD APPROX 50 METRES E OF ROUNDABOUT JUNCTION WITH STRENSALL ROAD

Vehicle Reference 1 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 32 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 32 Female Driver/rider Severity: Slight
 Not a pupil Postcode TS58EL Seatbelt

Casualty Reference: 2 Vehicle: 1 Age: 36 Male Passenger Severity: Slight
 Not a pupil Postcode TS58EL Seatbelt
 Front seat

Vehicle Reference 2 Goods vehicle - unknown weight Going ahead other
 Vehicle movement from E to W Articulated
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

2110079262 15/05/2011 Time 1300 Vehicles 1 Casualties 1 Slight
 E: N: First Road: A 1237 Road Type 1
 Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 1237
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Loss of control	Vehicle 1	Very Likely
2nd:	Inexperienced or learner driver/rider	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

WHEN STOPPED AT ROUNDABOUT AND PREPARING TO SET OFF, DRIVER GAVE VEHICLE TOO MUCH GAS AND LET THROTTLE OUT TOO QUICK.

Occurred on STRENSALL ROAD AT JUNCTION WITH A1237, ~

Vehicle Reference 1 Motor Cycle over 125 cc and up to 500cc Starting
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 27 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 27 Female Driver/rider Severity: Slight
 Not a pupil Postcode YO304YL Seatbelt

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

2110163070 25/09/2011 Time 1745 Vehicles 1 Casualties 1 Slight
 E: N: First Road: A 1237 Road Type Single carriageway
 Speed limit: 60 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Passing too close to cyclist, horse rider or pedestrian	Vehicle 1	Very Likely
2nd:	Loss of control	Vehicle 1	Very Likely
3rd:	Nervous/Uncertain/Panic	Vehicle 1	Very Likely
4th:	Animal or object in carriageway	Vehicle 1	Very Likely
5th:			
6th:			

SINGLE VEH RTS 5 OCCUPANTS DRIVER ON A 1237 FROM HUNTINGTON ROUNDABOUT (MONKS CROSS) TOWARDS CLIFTON MOOR (BY FIRE STATION ON A1237) DRIVER SWERVES TO AVOID ANIMAL IN THE ROAD AND CLIPS KERB VIA HIS OFFSIDE THIS SENDS THE VEH INTO A SKID WHICH THE DRIVER FAILS TO CORRECT AND TRAVELS IN OPPOSITE CARRIAGEWAY AND SUBSEQUENTLY SPINS 360 DEGREES BEFORE LANDING ON THE OPPOSITE SIDE OF THE ROAD ON ALL FOUR WHEELS FACING EAST BOUND AND LANDS IN HEDGE ROW

Occurred on A1237 HUNTINGTON ROAD~

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway Skidded and overturned
 Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
 Hit object in road None Off road: Entered ditch
 O/S Age of Driver 18 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 17 Female Passenger Severity: Slight
 Not a pupil Postcode YO411BY Seatbelt
 Back seat

Accidents between dates 01/05/2011 and 31/12/2016 (68) months

Selection:

Selected using Build Query :

Notes:

737A - Earswick - A1237

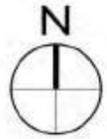
Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	2	5	7
2-wheeled motor vehicles	0	0	6	6
Pedal cycles	0	0	1	1
Horses & other	0	0	1	1
Total	0	2	12	14

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	2	6	8
Passenger	0	0	3	3
Motorcycle rider	0	0	6	6
Cyclist	0	0	1	1
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	2	16	18

APPENDIX BGH 3



DO NOT SCALE
All dimensions to be checked on site and Architect to be notified of any discrepancies prior to commencement

DESIGNER'S RISK ASSESSMENT
Contributor (Design and Management) Regulations 2013
RESIDUAL RISKS:

REF.	DESCRIPTION	DATE
------	-------------	------



REVISION	DATE	DESCRIPTION	CHECKED
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ARCHITECTURE | MASTERPLANNING | URBAN DESIGN

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JOB / CLIENT
Galtres Garden Village
O'Neill Associates

DRAWING TITLE
Boundary Plan

PROJECT ARCHITECT	RC	DRAWN BY	AH	CHECKED	
SCALE	1:5000@A2	PROJECT NO.	N81:2848		
DATE	23/10/17	DRAWING NO.			

DRAWING STATUS	DRAFT	CONSULTATION	TENDER	CONSTRUCTION	AS BUILT
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APPENDIX BGH 4

APPENDIX BGH 5

Calculation Reference: AUDIT-604801-160809-0826

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	2 days
03	SOUTH WEST	
	DC DORSET	2 days
	DV DEVON	3 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	3 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	4 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
	NY NORTH YORKSHIRE	6 days
	SY SOUTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	5 days
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	2 days
	TW TYNE & WEAR	1 days
10	WALES	
	PS POWYS	1 days
11	SCOTLAND	
	AG ANGUS	1 days
	EA EAST AYRSHIRE	1 days
	FA FALKIRK	2 days
	HI HIGHLAND	1 days
	PK PERTH & KINROSS	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 6 to 432 (units:)
 Range Selected by User: 5 to 4334 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 12/11/15

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	9 days
Tuesday	12 days
Wednesday	11 days
Thursday	12 days
Friday	7 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	51 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	27
Edge of Town	24

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	44
No Sub Category	7

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C1	1 days
C3	49 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

1,001 to 5,000	6 days
5,001 to 10,000	12 days
10,001 to 15,000	12 days
15,001 to 20,000	9 days
20,001 to 25,000	6 days
25,001 to 50,000	6 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	6 days
25,001 to 50,000	7 days
50,001 to 75,000	4 days
75,001 to 100,000	14 days
100,001 to 125,000	6 days
125,001 to 250,000	7 days
250,001 to 500,000	6 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	16 days
1.1 to 1.5	35 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	3 days
No	48 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
 VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	58	0.072	51	58	0.267	51	58	0.339
08:00 - 09:00	51	58	0.141	51	58	0.377	51	58	0.518
09:00 - 10:00	51	58	0.141	51	58	0.168	51	58	0.309
10:00 - 11:00	51	58	0.139	51	58	0.160	51	58	0.299
11:00 - 12:00	51	58	0.143	51	58	0.154	51	58	0.297
12:00 - 13:00	51	58	0.170	51	58	0.156	51	58	0.326
13:00 - 14:00	51	58	0.165	51	58	0.161	51	58	0.326
14:00 - 15:00	51	58	0.163	51	58	0.185	51	58	0.348
15:00 - 16:00	51	58	0.267	51	58	0.189	51	58	0.456
16:00 - 17:00	51	58	0.292	51	58	0.179	51	58	0.471
17:00 - 18:00	51	58	0.335	51	58	0.189	51	58	0.524
18:00 - 19:00	51	58	0.233	51	58	0.163	51	58	0.396
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.261			2.348			4.609

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 6 - 432 (units:)
 Survey date date range: 01/01/08 - 12/11/15
 Number of weekdays (Monday-Friday): 51
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Calculation Reference: AUDIT-604801-171030-1007

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : N - RETIREMENT FLATS
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	KC KENT	1 days
	OX OXFORDSHIRE	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	BR BRISTOL CITY	2 days
	DV DEVON	1 days
	NS NORTH SOMERSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	SY SOUTH YORKSHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	VG VALE OF GLAMORGAN	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 28 to 137 (units:)
 Range Selected by User: 28 to 149 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 17/10/16

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	3 days
Tuesday	2 days
Wednesday	3 days
Thursday	3 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	5
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known	1 days
C3	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	4 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	1 days
100,001 to 125,000	2 days
125,001 to 250,000	5 days
250,001 to 500,000	2 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	10 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	2 days
No	10 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	12 days
-----------------	---------

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters (Cont.)

8	OX-03-N-01	RETIREMENT VILLAGE		OXFORDSHIRE
	RUSKIN ROAD			
	EASINGTON			
	BANBURY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		70	
	Survey date:	WEDNESDAY	11/11/15	Survey Type: MANUAL
9	SC-03-N-01	RETIREMENT VILLAGE		SURREY
	WESTFIELD ROAD			
	WOKING			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		39	
	Survey date:	WEDNESDAY	18/11/15	Survey Type: MANUAL
10	SY-03-N-01	RETIREMENT FLATS		SOUTH YORKSHIRE
	MOSS CLOSE			
	WICKERSLEY			
	NEAR ROTHERHAM			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		28	
	Survey date:	WEDNESDAY	19/12/12	Survey Type: MANUAL
11	TW-03-N-02	RETIREMENT FLATS		TYNE & WEAR
	BRABOURNE GARDENS			
	NORTH SHIELDS			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:		36	
	Survey date:	THURSDAY	17/12/09	Survey Type: MANUAL
12	VG-03-N-01	RETIREMENT FLATS		VALE OF GLAMORGAN
	BRADFORD PLACE			
	PENARTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		46	
	Survey date:	MONDAY	16/07/12	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	51	0.048	12	51	0.025	12	51	0.073
08:00 - 09:00	12	51	0.102	12	51	0.062	12	51	0.164
09:00 - 10:00	12	51	0.169	12	51	0.120	12	51	0.289
10:00 - 11:00	12	51	0.120	12	51	0.131	12	51	0.251
11:00 - 12:00	12	51	0.143	12	51	0.143	12	51	0.286
12:00 - 13:00	12	51	0.115	12	51	0.146	12	51	0.261
13:00 - 14:00	12	51	0.151	12	51	0.167	12	51	0.318
14:00 - 15:00	12	51	0.133	12	51	0.148	12	51	0.281
15:00 - 16:00	12	51	0.116	12	51	0.144	12	51	0.260
16:00 - 17:00	12	51	0.126	12	51	0.116	12	51	0.242
17:00 - 18:00	12	51	0.069	12	51	0.097	12	51	0.166
18:00 - 19:00	12	51	0.066	12	51	0.056	12	51	0.122
19:00 - 20:00	7	63	0.039	7	63	0.046	7	63	0.085
20:00 - 21:00	7	63	0.030	7	63	0.057	7	63	0.087
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.427			1.458			2.885

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

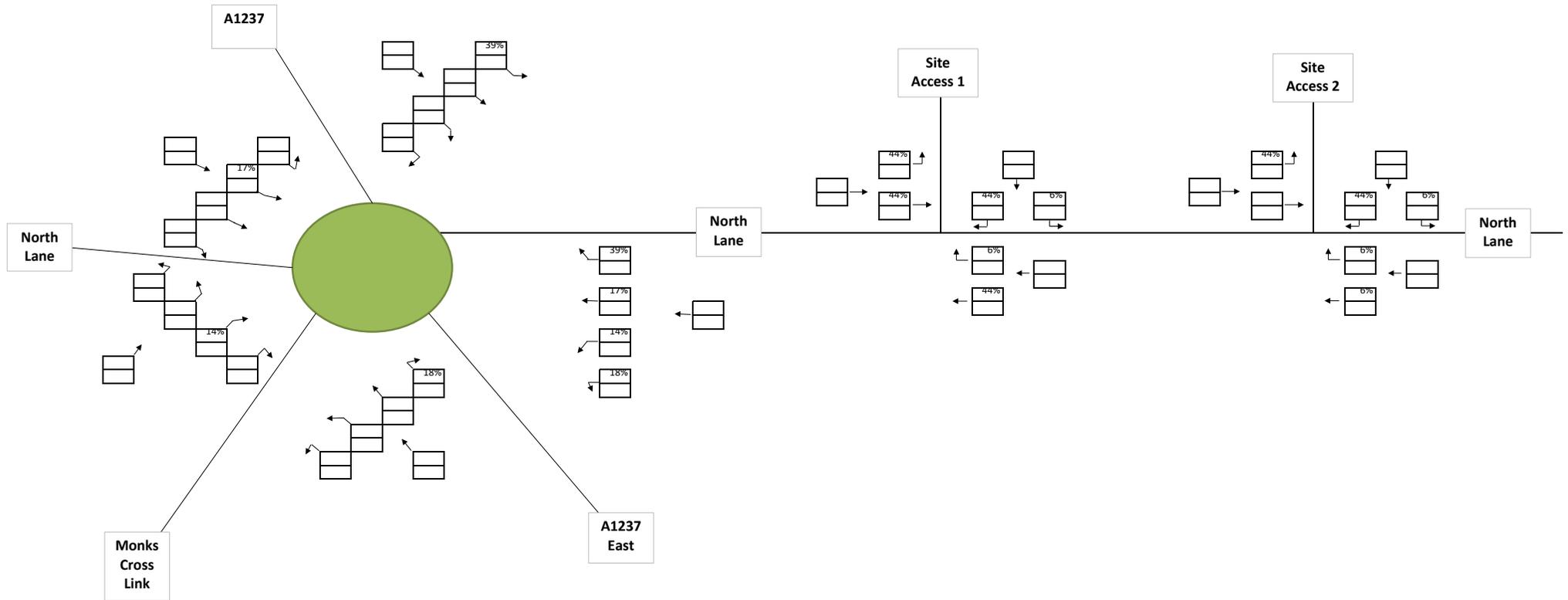
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

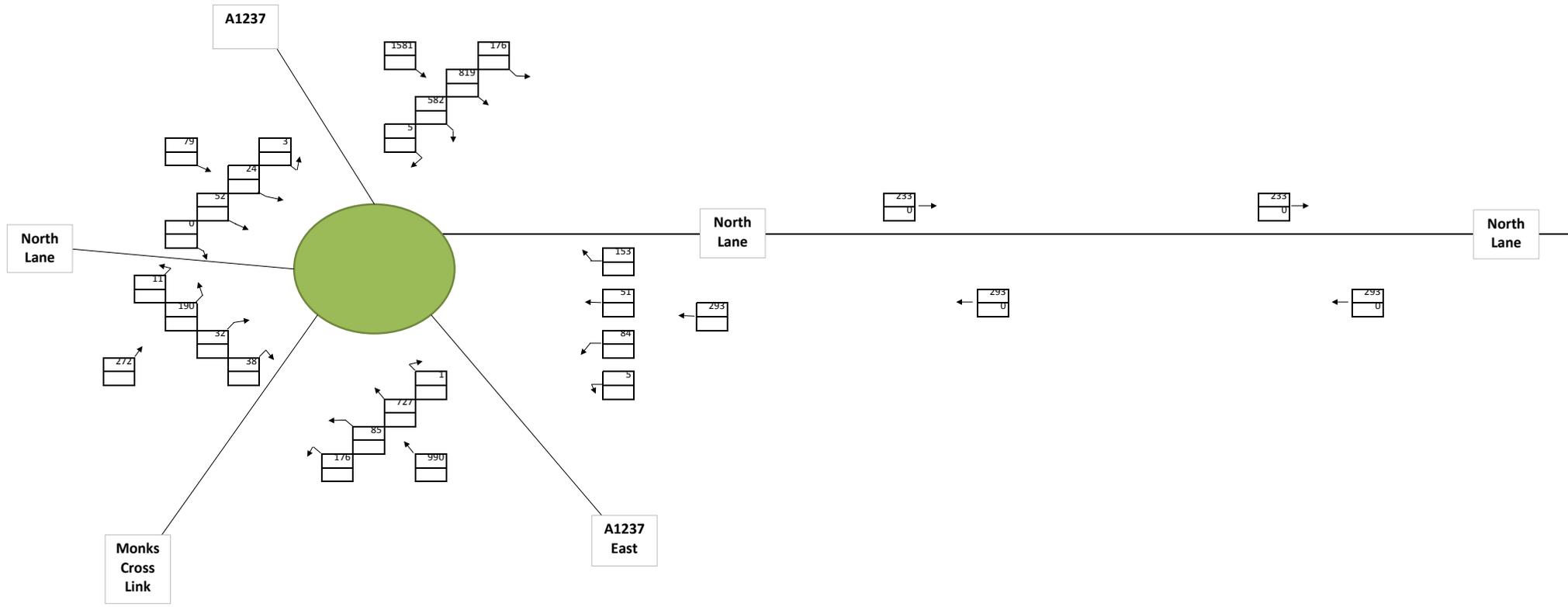
Trip rate parameter range selected: 28 - 137 (units:)
 Survey date date range: 01/01/09 - 17/10/16
 Number of weekdays (Monday-Friday): 12
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

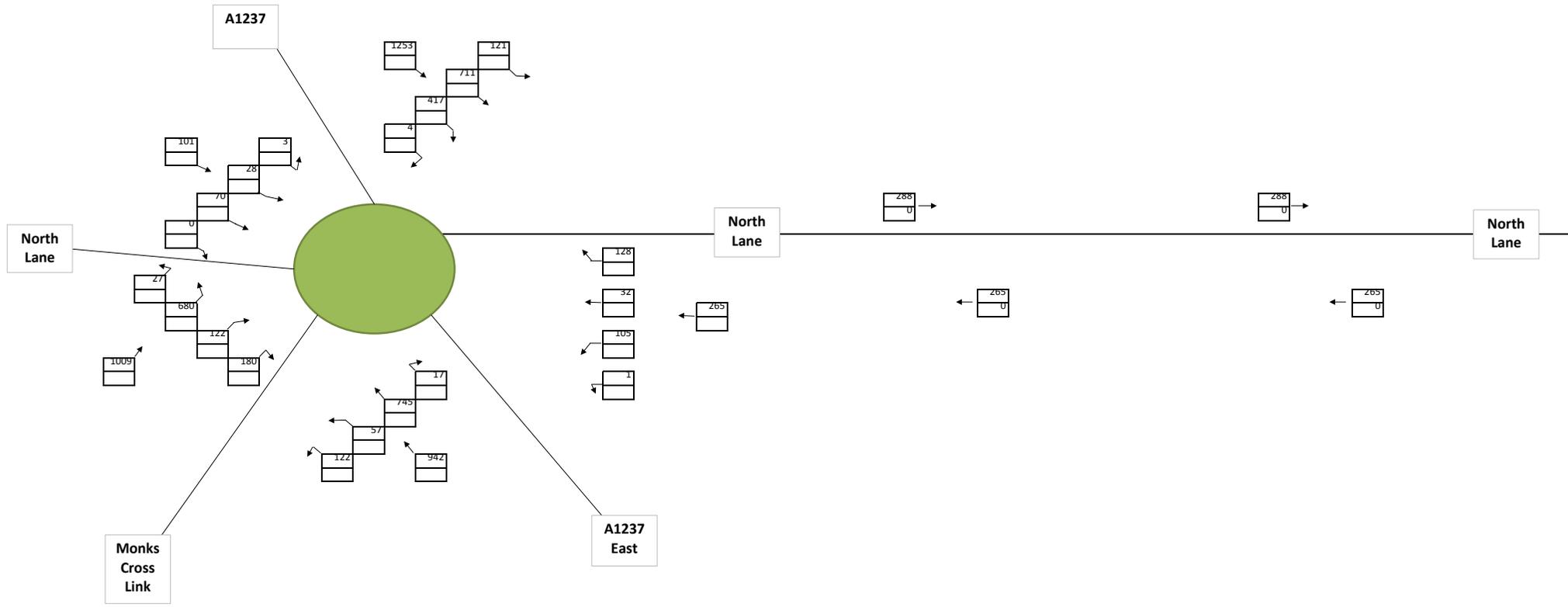
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

APPENDIX BGH 6

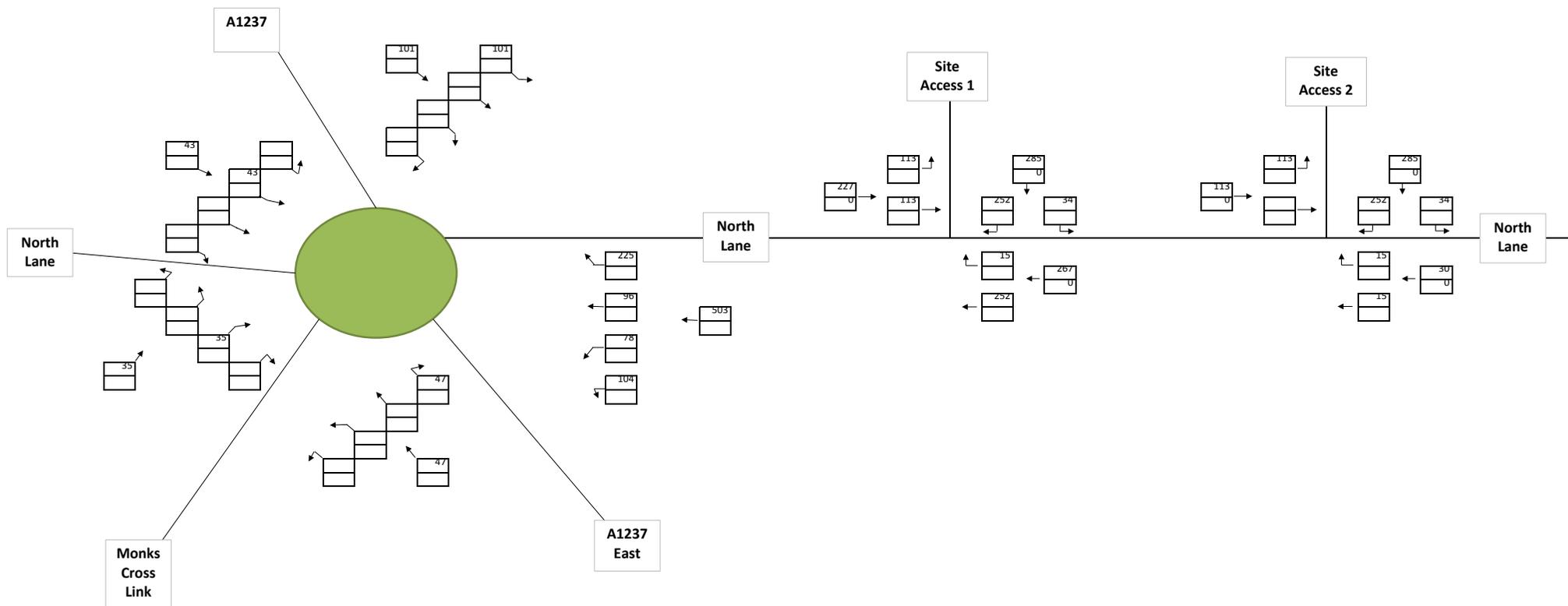


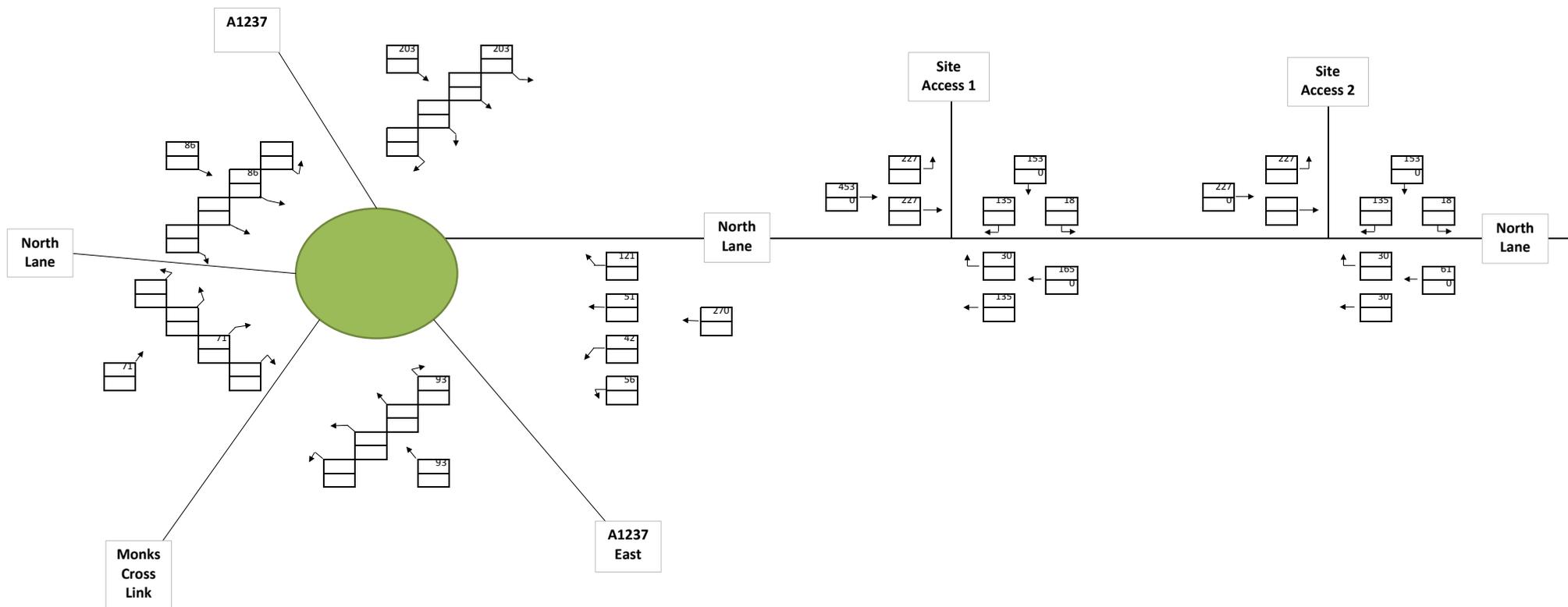
APPENDIX BGH 7



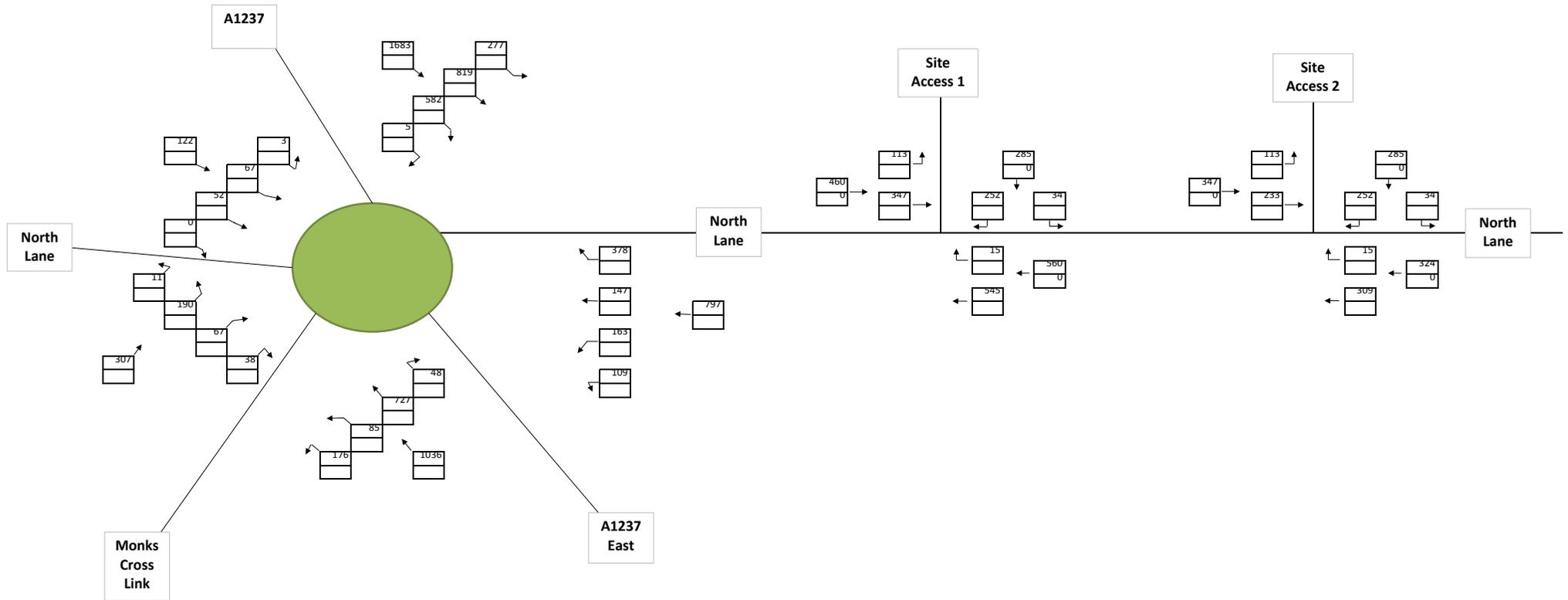


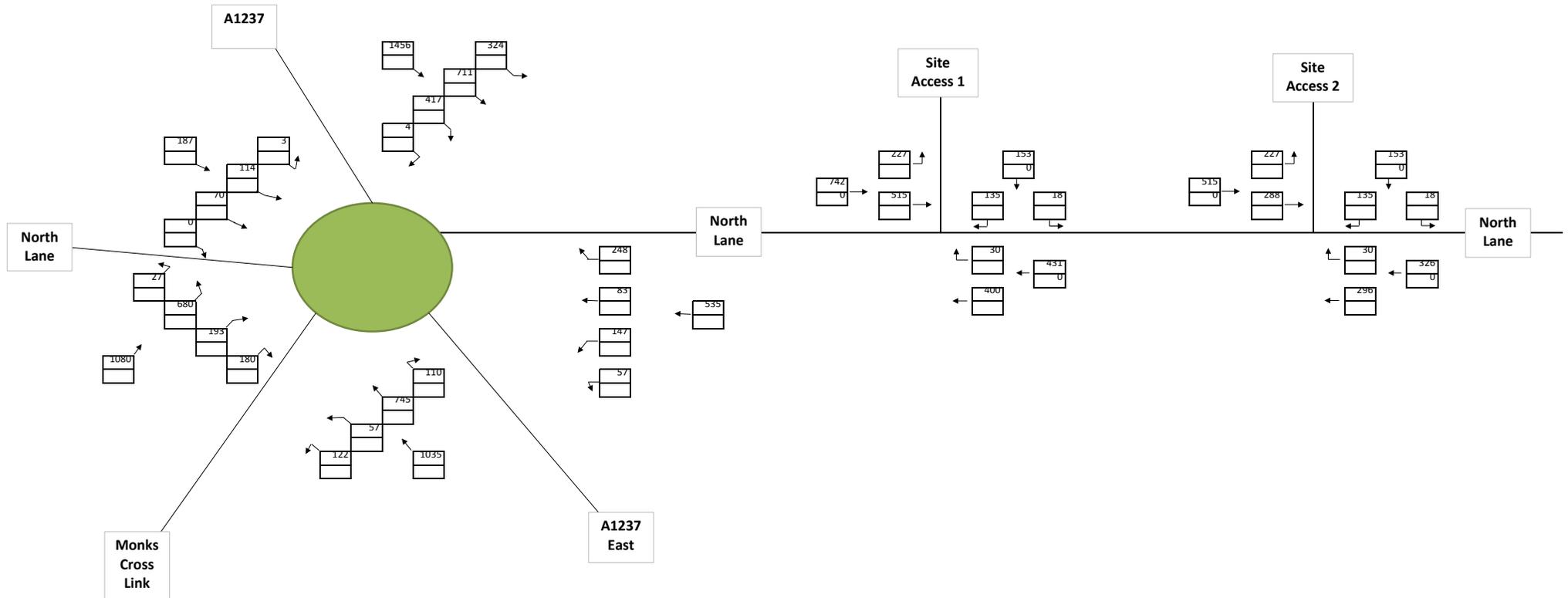
APPENDIX BGH 8





APPENDIX BGH 9





APPENDIX BGH 10

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017
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Filename: Site Access 1 - 4 arm.arc8

Path: Y:\2016\16-251 to 16-275\16-275 Earswick\Technical\Revised Submission October 2017\ARCADY

Report generation date: 30/10/2017 14:26:29

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2032 Predicted								
Site Access	0.45	5.14	0.31	A	0.23	4.84	0.18	A
North Lane East	1.77	10.48	0.64	B	0.85	6.50	0.46	A
Caravan Park	0.00	0.00	0.00	A	0.00	0.00	0.00	A
North Lane West	0.85	6.10	0.46	A	2.93	13.23	0.75	B

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2032 Predicted, AM" model duration: 08:00 - 09:30

"D2 - 2032 Predicted, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.5.523 at 30/10/2017 14:26:28

File summary

Title	Proposed Site Access 1
Location	Galtres Garden Village, York
Site Number	
Date	20/10/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	16-275
Enumerator	johnturner
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2032 Predicted, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Predicted, AM	2032 Predicted	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			7.77	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
North Lane East	2	North Lane East	
Caravan Park	3	Caravan Park	
North Lane West	4	North Lane West	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
North Lane East	0.00	99999.00
Caravan Park	0.00	99999.00
North Lane West	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.65	4.50	3.15	20.00	32.00	34.00	
North Lane	3.00	4.50	5.00	20.00	32.00	39.00	

East							
Caravan Park	3.50	3.50	0.00	20.00	32.00	39.00	
North Lane West	3.00	4.50	5.00	20.00	32.00	39.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.555	1226.889
North Lane East		(calculated)	(calculated)	0.525	1105.258
Caravan Park		(calculated)	(calculated)	0.509	1027.381
North Lane West		(calculated)	(calculated)	0.525	1105.258

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	286.00	100.000
North Lane East	ONE HOUR	✓	560.00	100.000
Caravan Park	ONE HOUR	✓	0.00	100.000
North Lane West	ONE HOUR	✓	460.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.000	34.000	0.000	252.000
	North Lane East	15.000	0.000	0.000	545.000
	Caravan Park	0.000	0.000	0.000	0.000
	North Lane West	113.000	347.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.00	0.12	0.00	0.88
	North Lane East	0.03	0.00	0.00	0.97
	Caravan Park	0.25	0.25	0.25	0.25

	North Lane West	0.25	0.75	0.00	0.00
--	-----------------	------	------	------	------

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
From		Site Access	North Lane East	Caravan Park	North Lane West
	Site Access	1.000	1.000	1.000	1.000
	North Lane East	1.000	1.000	1.000	1.000
	Caravan Park	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
From		Site Access	North Lane East	Caravan Park	North Lane West
	Site Access	0.0	0.0	0.0	0.0
	North Lane East	0.0	0.0	0.0	0.0
	Caravan Park	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.31	5.14	0.45	A
North Lane East	0.64	10.48	1.77	B
Caravan Park	0.00	0.00	0.00	A
North Lane West	0.46	6.10	0.85	A

Main Results for each time segment

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	215.32	214.33	259.86	0.00	1082.69	0.199	0.25	4.142	A
North Lane East	421.60	418.75	188.85	0.00	1006.16	0.419	0.71	6.100	A
Caravan Park	0.00	0.00	607.59	0.00	718.20	0.000	0.00	0.000	A
North Lane West	346.31	344.49	11.22	0.00	1099.37	0.315	0.46	4.757	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	257.11	256.81	311.52	0.00	1054.03	0.244	0.32	4.515	A
North Lane East	503.43	502.18	226.28	0.00	986.52	0.510	1.03	7.413	A
Caravan Park	0.00	0.00	728.46	0.00	656.70	0.000	0.00	0.000	A
North Lane West	413.53	412.96	13.45	0.00	1098.20	0.377	0.60	5.249	A

Main results: (08:30-08:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	314.89	314.39	381.30	0.00	1015.30	0.310	0.45	5.133	A
North Lane East	616.57	613.71	277.02	0.00	959.89	0.642	1.74	10.313	B
Caravan Park	0.00	0.00	890.72	0.00	574.13	0.000	0.00	0.000	A
North Lane West	506.47	505.47	16.44	0.00	1096.63	0.462	0.85	6.080	A

Main results: (08:45-09:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	314.89	314.88	382.04	0.00	1014.89	0.310	0.45	5.142	A
North Lane East	616.57	616.46	277.45	0.00	959.67	0.642	1.77	10.479	B
Caravan Park	0.00	0.00	893.91	0.00	572.50	0.000	0.00	0.000	A
North Lane West	506.47	506.45	16.51	0.00	1096.59	0.462	0.85	6.099	A

Main results: (09:00-09:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	257.11	257.60	312.68	0.00	1053.38	0.244	0.33	4.528	A
North Lane East	503.43	506.26	226.98	0.00	986.15	0.511	1.06	7.547	A
Caravan Park	0.00	0.00	733.24	0.00	654.26	0.000	0.00	0.000	A
North Lane West	413.53	414.50	13.56	0.00	1098.14	0.377	0.61	5.272	A

Main results: (09:15-09:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	215.32	215.62	261.68	0.00	1081.68	0.199	0.25	4.159	A
North Lane East	421.60	422.92	189.98	0.00	1005.56	0.419	0.73	6.192	A
Caravan Park	0.00	0.00	612.90	0.00	715.50	0.000	0.00	0.000	A
North Lane West	346.31	346.90	11.33	0.00	1099.31	0.315	0.46	4.787	A

(Default Analysis Set) - 2032 Predicted, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Predicted, PM	2032 Predicted	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			10.08	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
North Lane East	2	North Lane East	
Caravan Park	3	Caravan Park	
North Lane West	4	North Lane West	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
North Lane East	0.00	99999.00
Caravan Park	0.00	99999.00
North Lane West	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.65	4.50	3.15	20.00	32.00	34.00	
North Lane East	3.00	4.50	5.00	20.00	32.00	39.00	
Caravan Park	3.50	3.50	0.00	20.00	32.00	39.00	
North Lane West	3.00	4.50	5.00	20.00	32.00	39.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.555	1226.889
North Lane East		(calculated)	(calculated)	0.525	1105.258
Caravan Park		(calculated)	(calculated)	0.509	1027.381
North Lane West		(calculated)	(calculated)	0.525	1105.258

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	153.00	100.000
North Lane East	ONE HOUR	✓	430.00	100.000
Caravan Park	ONE HOUR	✓	0.00	100.000
North Lane West	ONE HOUR	✓	742.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.000	18.000	0.000	135.000
	North Lane East	30.000	0.000	0.000	400.000
	Caravan Park	0.000	0.000	0.000	0.000
	North Lane West	227.000	515.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.00	0.12	0.00	0.88
	North Lane East	0.07	0.00	0.00	0.93
	Caravan Park	0.25	0.25	0.25	0.25
	North Lane West	0.31	0.69	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	1.000	1.000	1.000	1.000
	North Lane East	1.000	1.000	1.000	1.000
	Caravan Park	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.0	0.0	0.0	0.0
	North Lane East	0.0	0.0	0.0	0.0

	Caravan Park	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.18	4.84	0.23	A
North Lane East	0.46	6.50	0.85	A
Caravan Park	0.00	0.00	0.00	A
North Lane West	0.75	13.23	2.93	B

Main Results for each time segment

Main results: (16:15-16:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	115.19	114.68	384.86	0.00	1013.33	0.114	0.13	4.004	A
North Lane East	323.73	321.96	101.18	0.00	1052.16	0.308	0.44	4.918	A
Caravan Park	0.00	0.00	423.15	0.00	812.06	0.000	0.00	0.000	A
North Lane West	558.62	554.50	22.46	0.00	1093.47	0.511	1.03	6.630	A

Main results: (16:30-16:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	137.54	137.40	461.56	0.00	970.76	0.142	0.16	4.320	A
North Lane East	386.56	385.99	121.23	0.00	1041.64	0.371	0.58	5.486	A
Caravan Park	0.00	0.00	507.22	0.00	769.28	0.000	0.00	0.000	A
North Lane West	667.04	665.01	26.93	0.00	1091.13	0.611	1.54	8.407	A

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	168.46	168.22	563.36	0.00	914.28	0.184	0.22	4.824	A
North Lane East	473.44	472.40	148.43	0.00	1027.37	0.461	0.84	6.475	A
Caravan Park	0.00	0.00	620.83	0.00	711.47	0.000	0.00	0.000	A
North Lane West	816.96	811.68	32.96	0.00	1087.96	0.751	2.86	12.784	B

Main results: (17:00-17:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	168.46	168.45	566.82	0.00	912.35	0.185	0.23	4.838	A
North Lane East	473.44	473.42	148.63	0.00	1027.26	0.461	0.85	6.499	A
Caravan Park	0.00	0.00	622.05	0.00	710.84	0.000	0.00	0.000	A
North Lane West	816.96	816.66	33.03	0.00	1087.93	0.751	2.93	13.230	B

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	137.54	137.78	466.64	0.00	967.94	0.142	0.17	4.339	A
North Lane East	386.56	387.57	121.57	0.00	1041.46	0.371	0.60	5.515	A
Caravan Park	0.00	0.00	509.15	0.00	768.30	0.000	0.00	0.000	A
North Lane West	667.04	672.33	27.04	0.00	1091.07	0.611	1.61	8.702	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	115.19	115.34	389.25	0.00	1010.89	0.114	0.13	4.021	A
North Lane East	323.73	324.32	101.77	0.00	1051.86	0.308	0.45	4.953	A
Caravan Park	0.00	0.00	426.08	0.00	810.56	0.000	0.00	0.000	A
North Lane West	558.62	560.82	22.63	0.00	1093.38	0.511	1.06	6.786	A

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017
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Filename: Site Access 1 - 4 arm.arc8

Path: Y:\2016\16-251 to 16-275\16-275 Earswick\Technical\Revised Submission October 2017\ARCADY

Report generation date: 30/10/2017 14:27:05

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2032 Predicted								
Site Access	0.45	5.14	0.31	A	0.23	4.84	0.18	A
North Lane East	1.77	10.48	0.64	B	0.85	6.50	0.46	A
Caravan Park	0.00	0.00	0.00	A	0.00	0.00	0.00	A
North Lane West	0.85	6.10	0.46	A	2.93	13.23	0.75	B

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2032 Predicted, AM" model duration: 08:00 - 09:30

"D2 - 2032 Predicted, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.5.523 at 30/10/2017 14:27:04

File summary

Title	Proposed Site Access 1
Location	Galtres Garden Village, York
Site Number	
Date	20/10/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	16-275
Enumerator	johnturner
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2032 Predicted, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Predicted, AM	2032 Predicted	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			7.77	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
North Lane East	2	North Lane East	
Caravan Park	3	Caravan Park	
North Lane West	4	North Lane West	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
North Lane East	0.00	99999.00
Caravan Park	0.00	99999.00
North Lane West	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.65	4.50	3.15	20.00	32.00	34.00	
North Lane	3.00	4.50	5.00	20.00	32.00	39.00	

East							
Caravan Park	3.50	3.50	0.00	20.00	32.00	39.00	
North Lane West	3.00	4.50	5.00	20.00	32.00	39.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.555	1226.889
North Lane East		(calculated)	(calculated)	0.525	1105.258
Caravan Park		(calculated)	(calculated)	0.509	1027.381
North Lane West		(calculated)	(calculated)	0.525	1105.258

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	286.00	100.000
North Lane East	ONE HOUR	✓	560.00	100.000
Caravan Park	ONE HOUR	✓	0.00	100.000
North Lane West	ONE HOUR	✓	460.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.000	34.000	0.000	252.000
	North Lane East	15.000	0.000	0.000	545.000
	Caravan Park	0.000	0.000	0.000	0.000
	North Lane West	113.000	347.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.00	0.12	0.00	0.88
	North Lane East	0.03	0.00	0.00	0.97
	Caravan Park	0.25	0.25	0.25	0.25

	North Lane West	0.25	0.75	0.00	0.00
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Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
From		Site Access	North Lane East	Caravan Park	North Lane West
	Site Access	1.000	1.000	1.000	1.000
	North Lane East	1.000	1.000	1.000	1.000
	Caravan Park	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
From		Site Access	North Lane East	Caravan Park	North Lane West
	Site Access	0.0	0.0	0.0	0.0
	North Lane East	0.0	0.0	0.0	0.0
	Caravan Park	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.31	5.14	0.45	A
North Lane East	0.64	10.48	1.77	B
Caravan Park	0.00	0.00	0.00	A
North Lane West	0.46	6.10	0.85	A

Main Results for each time segment

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	215.32	214.33	259.86	0.00	1082.69	0.199	0.25	4.142	A
North Lane East	421.60	418.75	188.85	0.00	1006.16	0.419	0.71	6.100	A
Caravan Park	0.00	0.00	607.59	0.00	718.20	0.000	0.00	0.000	A
North Lane West	346.31	344.49	11.22	0.00	1099.37	0.315	0.46	4.757	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	257.11	256.81	311.52	0.00	1054.03	0.244	0.32	4.515	A
North Lane East	503.43	502.18	226.28	0.00	986.52	0.510	1.03	7.413	A
Caravan Park	0.00	0.00	728.46	0.00	656.70	0.000	0.00	0.000	A
North Lane West	413.53	412.96	13.45	0.00	1098.20	0.377	0.60	5.249	A

Main results: (08:30-08:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	314.89	314.39	381.30	0.00	1015.30	0.310	0.45	5.133	A
North Lane East	616.57	613.71	277.02	0.00	959.89	0.642	1.74	10.313	B
Caravan Park	0.00	0.00	890.72	0.00	574.13	0.000	0.00	0.000	A
North Lane West	506.47	505.47	16.44	0.00	1096.63	0.462	0.85	6.080	A

Main results: (08:45-09:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	314.89	314.88	382.04	0.00	1014.89	0.310	0.45	5.142	A
North Lane East	616.57	616.46	277.45	0.00	959.67	0.642	1.77	10.479	B
Caravan Park	0.00	0.00	893.91	0.00	572.50	0.000	0.00	0.000	A
North Lane West	506.47	506.45	16.51	0.00	1096.59	0.462	0.85	6.099	A

Main results: (09:00-09:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	257.11	257.60	312.68	0.00	1053.38	0.244	0.33	4.528	A
North Lane East	503.43	506.26	226.98	0.00	986.15	0.511	1.06	7.547	A
Caravan Park	0.00	0.00	733.24	0.00	654.26	0.000	0.00	0.000	A
North Lane West	413.53	414.50	13.56	0.00	1098.14	0.377	0.61	5.272	A

Main results: (09:15-09:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	215.32	215.62	261.68	0.00	1081.68	0.199	0.25	4.159	A
North Lane East	421.60	422.92	189.98	0.00	1005.56	0.419	0.73	6.192	A
Caravan Park	0.00	0.00	612.90	0.00	715.50	0.000	0.00	0.000	A
North Lane West	346.31	346.90	11.33	0.00	1099.31	0.315	0.46	4.787	A

(Default Analysis Set) - 2032 Predicted, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Predicted, PM	2032 Predicted	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			10.08	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
North Lane East	2	North Lane East	
Caravan Park	3	Caravan Park	
North Lane West	4	North Lane West	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
North Lane East	0.00	99999.00
Caravan Park	0.00	99999.00
North Lane West	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.65	4.50	3.15	20.00	32.00	34.00	
North Lane East	3.00	4.50	5.00	20.00	32.00	39.00	
Caravan Park	3.50	3.50	0.00	20.00	32.00	39.00	
North Lane West	3.00	4.50	5.00	20.00	32.00	39.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.555	1226.889
North Lane East		(calculated)	(calculated)	0.525	1105.258
Caravan Park		(calculated)	(calculated)	0.509	1027.381
North Lane West		(calculated)	(calculated)	0.525	1105.258

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	153.00	100.000
North Lane East	ONE HOUR	✓	430.00	100.000
Caravan Park	ONE HOUR	✓	0.00	100.000
North Lane West	ONE HOUR	✓	742.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.000	18.000	0.000	135.000
	North Lane East	30.000	0.000	0.000	400.000
	Caravan Park	0.000	0.000	0.000	0.000
	North Lane West	227.000	515.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.00	0.12	0.00	0.88
	North Lane East	0.07	0.00	0.00	0.93
	Caravan Park	0.25	0.25	0.25	0.25
	North Lane West	0.31	0.69	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	1.000	1.000	1.000	1.000
	North Lane East	1.000	1.000	1.000	1.000
	Caravan Park	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		Site Access	North Lane East	Caravan Park	North Lane West
From	Site Access	0.0	0.0	0.0	0.0
	North Lane East	0.0	0.0	0.0	0.0

	Caravan Park	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.18	4.84	0.23	A
North Lane East	0.46	6.50	0.85	A
Caravan Park	0.00	0.00	0.00	A
North Lane West	0.75	13.23	2.93	B

Main Results for each time segment

Main results: (16:15-16:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	115.19	114.68	384.86	0.00	1013.33	0.114	0.13	4.004	A
North Lane East	323.73	321.96	101.18	0.00	1052.16	0.308	0.44	4.918	A
Caravan Park	0.00	0.00	423.15	0.00	812.06	0.000	0.00	0.000	A
North Lane West	558.62	554.50	22.46	0.00	1093.47	0.511	1.03	6.630	A

Main results: (16:30-16:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	137.54	137.40	461.56	0.00	970.76	0.142	0.16	4.320	A
North Lane East	386.56	385.99	121.23	0.00	1041.64	0.371	0.58	5.486	A
Caravan Park	0.00	0.00	507.22	0.00	769.28	0.000	0.00	0.000	A
North Lane West	667.04	665.01	26.93	0.00	1091.13	0.611	1.54	8.407	A

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	168.46	168.22	563.36	0.00	914.28	0.184	0.22	4.824	A
North Lane East	473.44	472.40	148.43	0.00	1027.37	0.461	0.84	6.475	A
Caravan Park	0.00	0.00	620.83	0.00	711.47	0.000	0.00	0.000	A
North Lane West	816.96	811.68	32.96	0.00	1087.96	0.751	2.86	12.784	B

Main results: (17:00-17:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	168.46	168.45	566.82	0.00	912.35	0.185	0.23	4.838	A
North Lane East	473.44	473.42	148.63	0.00	1027.26	0.461	0.85	6.499	A
Caravan Park	0.00	0.00	622.05	0.00	710.84	0.000	0.00	0.000	A
North Lane West	816.96	816.66	33.03	0.00	1087.93	0.751	2.93	13.230	B

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	137.54	137.78	466.64	0.00	967.94	0.142	0.17	4.339	A
North Lane East	386.56	387.57	121.57	0.00	1041.46	0.371	0.60	5.515	A
Caravan Park	0.00	0.00	509.15	0.00	768.30	0.000	0.00	0.000	A
North Lane West	667.04	672.33	27.04	0.00	1091.07	0.611	1.61	8.702	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	115.19	115.34	389.25	0.00	1010.89	0.114	0.13	4.021	A
North Lane East	323.73	324.32	101.77	0.00	1051.86	0.308	0.45	4.953	A
Caravan Park	0.00	0.00	426.08	0.00	810.56	0.000	0.00	0.000	A
North Lane West	558.62	560.82	22.63	0.00	1093.38	0.511	1.06	6.786	A

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017
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Filename: A1237 North Lane - Proposed CYC Roundabout Layout.arc8
Path: Y:\2016\16-251 to 16-275\16-275 Earswick\Technical\Revised Submission October 2017\ARCADY
Report generation date: 30/10/2017 10:30:12

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2032 Base								
A1237 East	0.90	3.00	0.48	A	0.74	2.58	0.43	A
Monks Cross Link	0.24	2.86	0.19	A	2.32	7.63	0.70	A
North Lane West	0.08	3.33	0.07	A	0.17	5.45	0.14	A
A1237 West	1.44	2.99	0.59	A	1.01	2.64	0.50	A
North Lane Existing	0.45	5.05	0.31	A	0.36	4.45	0.27	A
A1 - 2032 Predicted								
A1237 East	1.32	4.21	0.57	A	1.00	3.17	0.50	A
Monks Cross Link	0.34	3.62	0.25	A	4.92	15.48	0.84	C
North Lane West	0.15	4.15	0.13	A	0.49	8.72	0.33	A
A1237 West	1.85	3.60	0.65	A	1.68	3.81	0.63	A
North Lane Existing	5.14	22.15	0.85	C	1.14	7.02	0.53	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D3 - 2032 Base, AM" model duration: 08:00 - 09:30
"D4 - 2032 Base, PM" model duration: 16:45 - 18:15
"D5 - 2032 Predicted, AM" model duration: 08:00 - 09:30
"D6 - 2032 Predicted, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.5.523 at 30/10/2017 10:30:10

File summary

Title	(untitled)
Location	
Site Number	
Date	05/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	JohnTurner
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
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5.75			N/A	0.85	36.00	20.00
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Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2032 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A1237 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Monks Cross Link - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	North Lane West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	A1237 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	North Lane Existing - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Base, AM	2032 Base	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5			3.17	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description

A1237 East	1	A1237 East	
Monks Cross Link	2	Monks Cross Link	
North Lane West	3	North Lane West	
A1237 West	4	A1237 West	
North Lane Existing	5	North Lane Existing	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A1237 East	0.00	99999.00
Monks Cross Link	0.00	99999.00
North Lane West	0.00	99999.00
A1237 West	0.00	99999.00
North Lane Existing	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A1237 East	4.80	11.00	89.00	23.50	75.00	37.50	
Monks Cross Link	5.00	7.30	115.00	25.00	75.00	30.00	
North Lane West	3.00	6.80	54.00	16.70	75.00	37.50	
A1237 West	5.70	10.80	77.00	23.40	75.00	26.50	
North Lane Existing	2.70	7.50	35.00	20.00	75.00	18.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A1237 East		(calculated)	(calculated)	0.669	2934.509
Monks Cross Link		(calculated)	(calculated)	0.563	2191.204
North Lane West		(calculated)	(calculated)	0.491	1782.797
A1237 West		(calculated)	(calculated)	0.696	3059.947
North Lane Existing		(calculated)	(calculated)	0.526	1901.885

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A1237 East	ONE HOUR	✓	989.00	100.000
Monks Cross Link	ONE HOUR	✓	271.00	100.000

North Lane West	ONE HOUR	✓	79.00	100.000
A1237 West	ONE HOUR	✓	1582.00	100.000
North Lane Existing	ONE HOUR	✓	293.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.000	176.000	85.000	727.000	1.000
	Monks Cross Link	38.000	0.000	11.000	190.000	32.000
	North Lane West	52.000	0.000	0.000	3.000	24.000
	A1237 West	819.000	582.000	5.000	0.000	176.000
	North Lane Existing	5.000	84.000	51.000	153.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.00	0.18	0.09	0.74	0.00
	Monks Cross Link	0.14	0.00	0.04	0.70	0.12
	North Lane West	0.66	0.00	0.00	0.04	0.30
	A1237 West	0.52	0.37	0.00	0.00	0.11
	North Lane Existing	0.02	0.29	0.17	0.52	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	1.000	1.000	1.000	1.000	1.000
	Monks Cross Link	1.000	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000	1.000
	A1237 West	1.000	1.000	1.000	1.000	1.000
	North Lane Existing	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.0	0.0	0.0	0.0	0.0
	Monks Cross Link	0.0	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0	0.0
	A1237 West	0.0	0.0	0.0	0.0	0.0
	North Lane Existing	0.0	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A1237 East	0.48	3.00	0.90	A

Monks Cross Link	0.19	2.86	0.24	A
North Lane West	0.07	3.33	0.08	A
A1237 West	0.59	2.99	1.44	A
North Lane Existing	0.31	5.05	0.45	A

Main Results for each time segment

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	744.57	742.88	656.97	0.00	2495.17	0.298	0.42	2.052	A
Monks Cross Link	204.02	203.50	767.45	0.00	1759.26	0.116	0.13	2.314	A
North Lane West	59.48	59.29	856.83	0.00	1362.40	0.044	0.05	2.762	A
A1237 West	1191.01	1188.36	110.36	0.00	2983.09	0.399	0.66	2.003	A
North Lane Existing	220.59	219.78	1123.72	0.00	1310.84	0.168	0.20	3.298	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	889.09	888.46	785.92	0.00	2408.94	0.369	0.58	2.366	A
Monks Cross Link	243.62	243.47	918.01	0.00	1674.52	0.145	0.17	2.515	A
North Lane West	71.02	70.97	1024.95	0.00	1279.91	0.055	0.06	2.977	A
A1237 West	1422.19	1421.17	132.06	0.00	2967.98	0.479	0.92	2.326	A
North Lane Existing	263.40	263.08	1343.92	0.00	1195.02	0.220	0.28	3.862	A

Main results: (08:30-08:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	1088.91	1087.64	961.97	0.00	2291.21	0.475	0.90	2.988	A
Monks Cross Link	298.38	298.11	1123.73	0.00	1558.74	0.191	0.24	2.855	A
North Lane West	86.98	86.89	1254.73	0.00	1167.18	0.075	0.08	3.331	A
A1237 West	1741.81	1739.74	161.70	0.00	2947.34	0.591	1.43	2.976	A
North Lane Existing	322.60	321.93	1645.19	0.00	1036.56	0.311	0.45	5.033	A

Main results: (08:45-09:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	1088.91	1088.90	963.38	0.00	2290.27	0.475	0.90	2.995	A
Monks Cross Link	298.38	298.37	1125.23	0.00	1557.89	0.192	0.24	2.857	A
North Lane West	86.98	86.98	1256.25	0.00	1166.43	0.075	0.08	3.334	A
A1237 West	1741.81	1741.79	161.85	0.00	2947.24	0.591	1.44	2.985	A
North Lane Existing	322.60	322.59	1647.11	0.00	1035.56	0.312	0.45	5.048	A

Main results: (09:00-09:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

A1237 East	889.09	890.35	788.02	0.00	2407.53	0.369	0.59	2.374	A
Monks Cross Link	243.62	243.89	920.26	0.00	1673.25	0.146	0.17	2.518	A
North Lane West	71.02	71.10	1027.26	0.00	1278.78	0.056	0.06	2.982	A
A1237 West	1422.19	1424.24	132.30	0.00	2967.81	0.479	0.92	2.336	A
North Lane Existing	263.40	264.06	1346.80	0.00	1193.51	0.221	0.28	3.875	A

Main results: (09:15-09:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	744.57	745.21	659.45	0.00	2493.52	0.299	0.43	2.061	A
Monks Cross Link	204.02	204.18	770.17	0.00	1757.73	0.116	0.13	2.317	A
North Lane West	59.48	59.53	859.80	0.00	1360.95	0.044	0.05	2.767	A
A1237 West	1191.01	1192.04	110.76	0.00	2982.81	0.399	0.67	2.011	A
North Lane Existing	220.59	220.91	1127.24	0.00	1308.99	0.169	0.20	3.308	A

(Default Analysis Set) - 2032 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A1237 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Monks Cross Link - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	North Lane West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	A1237 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	North Lane Existing - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Base, PM	2032 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5			4.25	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
A1237 East	1	A1237 East	
Monks Cross Link	2	Monks Cross Link	
North Lane West	3	North Lane West	
A1237 West	4	A1237 West	
North Lane Existing	5	North Lane Existing	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A1237 East	0.00	99999.00
Monks Cross Link	0.00	99999.00
North Lane West	0.00	99999.00
A1237 West	0.00	99999.00
North Lane Existing	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A1237 East	4.80	11.00	89.00	23.50	75.00	37.50	
Monks Cross Link	5.00	7.30	115.00	25.00	75.00	30.00	
North Lane West	3.00	6.80	54.00	16.70	75.00	37.50	
A1237 West	5.70	10.80	77.00	23.40	75.00	26.50	
North Lane Existing	2.70	7.50	35.00	20.00	75.00	18.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A1237 East		(calculated)	(calculated)	0.669	2934.509
Monks Cross Link		(calculated)	(calculated)	0.563	2191.204
North Lane West		(calculated)	(calculated)	0.491	1782.797
A1237 West		(calculated)	(calculated)	0.696	3059.947
North Lane Existing		(calculated)	(calculated)	0.526	1901.885

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry

		✓	✓	HV Percentages	2.00			✓	✓
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Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A1237 East	ONE HOUR	✓	941.00	100.000
Monks Cross Link	ONE HOUR	✓	1009.00	100.000
North Lane West	ONE HOUR	✓	101.00	100.000
A1237 West	ONE HOUR	✓	1253.00	100.000
North Lane Existing	ONE HOUR	✓	266.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.000	122.000	57.000	745.000	17.000
	Monks Cross Link	180.000	0.000	27.000	680.000	122.000
	North Lane West	70.000	0.000	0.000	3.000	28.000
	A1237 West	711.000	417.000	4.000	0.000	121.000
	North Lane Existing	1.000	105.000	32.000	128.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.00	0.13	0.06	0.79	0.02
	Monks Cross Link	0.18	0.00	0.03	0.67	0.12
	North Lane West	0.69	0.00	0.00	0.03	0.28
	A1237 West	0.57	0.33	0.00	0.00	0.10
	North Lane Existing	0.00	0.39	0.12	0.48	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	1.000	1.000	1.000	1.000	1.000
	Monks Cross Link	1.000	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000	1.000
	A1237 West	1.000	1.000	1.000	1.000	1.000
	North Lane Existing	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.0	0.0	0.0	0.0	0.0
	Monks Cross Link	0.0	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0	0.0

	A1237 West	0.0	0.0	0.0	0.0	0.0
	North Lane Existing	0.0	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A1237 East	0.43	2.58	0.74	A
Monks Cross Link	0.70	7.63	2.32	A
North Lane West	0.14	5.45	0.17	A
A1237 West	0.50	2.64	1.01	A
North Lane Existing	0.27	4.45	0.36	A

Main Results for each time segment

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	708.43	706.93	515.10	0.00	2590.04	0.274	0.38	1.909	A
Monks Cross Link	759.63	756.66	738.33	0.00	1775.65	0.428	0.74	3.522	A
North Lane West	76.04	75.74	1404.90	0.00	1093.50	0.070	0.07	3.537	A
A1237 West	943.32	941.34	312.73	0.00	2842.16	0.332	0.50	1.891	A
North Lane Existing	200.26	199.57	1037.92	0.00	1355.97	0.148	0.17	3.111	A

Main results: (17:00-17:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	845.94	845.43	616.21	0.00	2522.43	0.335	0.50	2.147	A
Monks Cross Link	907.07	905.48	883.10	0.00	1694.17	0.535	1.14	4.555	A
North Lane West	90.80	90.68	1680.81	0.00	958.13	0.095	0.10	4.150	A
A1237 West	1126.42	1125.72	374.27	0.00	2799.30	0.402	0.67	2.149	A
North Lane Existing	239.13	238.88	1241.39	0.00	1248.95	0.191	0.24	3.564	A

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	1036.06	1035.11	754.36	0.00	2430.05	0.426	0.74	2.579	A
Monks Cross Link	1110.93	1106.32	1081.18	0.00	1582.68	0.702	2.29	7.487	A
North Lane West	111.20	110.95	2055.62	0.00	774.23	0.144	0.17	5.426	A
A1237 West	1379.58	1378.23	457.49	0.00	2741.35	0.503	1.01	2.638	A
North Lane Existing	292.87	292.38	1519.40	0.00	1102.73	0.266	0.36	4.439	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

A1237 East	1036.06	1036.05	755.29	0.00	2429.42	0.426	0.74	2.583	A
Monks Cross Link	1110.93	1110.80	1082.29	0.00	1582.06	0.702	2.32	7.634	A
North Lane West	111.20	111.20	2060.97	0.00	771.60	0.144	0.17	5.450	A
A1237 West	1379.58	1379.56	459.08	0.00	2740.24	0.503	1.01	2.645	A
North Lane Existing	292.87	292.87	1521.57	0.00	1101.58	0.266	0.36	4.451	A

Main results: (17:45-18:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	845.94	846.88	617.64	0.00	2521.48	0.335	0.51	2.152	A
Monks Cross Link	907.07	911.70	884.81	0.00	1693.20	0.536	1.17	4.634	A
North Lane West	90.80	91.04	1688.40	0.00	954.40	0.095	0.11	4.172	A
A1237 West	1126.42	1127.76	376.52	0.00	2797.74	0.403	0.68	2.157	A
North Lane Existing	239.13	239.62	1244.60	0.00	1247.26	0.192	0.24	3.573	A

Main results: (18:00-18:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	708.43	708.95	516.95	0.00	2588.81	0.274	0.38	1.917	A
Monks Cross Link	759.63	761.28	740.66	0.00	1774.34	0.428	0.75	3.558	A
North Lane West	76.04	76.16	1411.49	0.00	1090.27	0.070	0.08	3.552	A
A1237 West	943.32	944.04	314.56	0.00	2840.89	0.332	0.50	1.900	A
North Lane Existing	200.26	200.52	1041.46	0.00	1354.11	0.148	0.17	3.120	A

(Default Analysis Set) - 2032 Predicted, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A1237 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Monks Cross Link - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	North Lane West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	A1237 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	North Lane Existing - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked

2032 Predicted, AM	2032 Predicted	AM		ONE HOUR	08:00	09:30	90	15		
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Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5			7.53	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
A1237 East	1	A1237 East	
Monks Cross Link	2	Monks Cross Link	
North Lane West	3	North Lane West	
A1237 West	4	A1237 West	
North Lane Existing	5	North Lane Existing	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A1237 East	0.00	99999.00
Monks Cross Link	0.00	99999.00
North Lane West	0.00	99999.00
A1237 West	0.00	99999.00
North Lane Existing	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A1237 East	4.80	11.00	89.00	23.50	75.00	37.50	
Monks Cross Link	5.00	7.30	115.00	25.00	75.00	30.00	
North Lane West	3.00	6.80	54.00	16.70	75.00	37.50	
A1237 West	5.70	10.80	77.00	23.40	75.00	26.50	
North Lane Existing	2.70	7.50	35.00	20.00	75.00	18.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A1237 East		(calculated)	(calculated)	0.669	2934.509
Monks Cross Link		(calculated)	(calculated)	0.563	2191.204
North Lane West		(calculated)	(calculated)	0.491	1782.797
A1237 West		(calculated)	(calculated)	0.696	3059.947

North Lane Existing	(calculated)	(calculated)	0.526	1901.885
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The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A1237 East	ONE HOUR	✓	1036.00	100.000
Monks Cross Link	ONE HOUR	✓	306.00	100.000
North Lane West	ONE HOUR	✓	122.00	100.000
A1237 West	ONE HOUR	✓	1683.00	100.000
North Lane Existing	ONE HOUR	✓	797.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.000	176.000	85.000	727.000	48.000
	Monks Cross Link	38.000	0.000	11.000	190.000	67.000
	North Lane West	52.000	0.000	0.000	3.000	67.000
	A1237 West	819.000	582.000	5.000	0.000	277.000
	North Lane Existing	109.000	163.000	147.000	378.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.00	0.17	0.08	0.70	0.05
	Monks Cross Link	0.12	0.00	0.04	0.62	0.22
	North Lane West	0.43	0.00	0.00	0.02	0.55
	A1237 West	0.49	0.35	0.00	0.00	0.16
	North Lane Existing	0.14	0.20	0.18	0.47	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To				

From		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
	A1237 East	1.000	1.000	1.000	1.000	1.000
	Monks Cross Link	1.000	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000	1.000
	A1237 West	1.000	1.000	1.000	1.000	1.000
	North Lane Existing	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

From	To					
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
	A1237 East	0.0	0.0	0.0	0.0	0.0
	Monks Cross Link	0.0	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0	0.0
	A1237 West	0.0	0.0	0.0	0.0	0.0
North Lane Existing	0.0	0.0	0.0	0.0	0.0	

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A1237 East	0.57	4.21	1.32	A
Monks Cross Link	0.25	3.62	0.34	A
North Lane West	0.13	4.15	0.15	A
A1237 West	0.65	3.60	1.85	A
North Lane Existing	0.85	22.15	5.14	C

Main Results for each time segment

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	779.96	777.90	955.94	0.00	2295.25	0.340	0.51	2.369	A
Monks Cross Link	230.37	229.70	1042.55	0.00	1604.42	0.144	0.17	2.617	A
North Lane West	91.85	91.53	1086.37	0.00	1249.78	0.073	0.08	3.108	A
A1237 West	1267.05	1263.99	204.14	0.00	2917.78	0.434	0.76	2.173	A
North Lane Existing	600.02	596.68	1123.50	0.00	1310.96	0.458	0.84	5.017	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	931.34	930.40	1143.56	0.00	2169.78	0.429	0.75	2.903	A
Monks Cross Link	275.09	274.85	1247.13	0.00	1489.28	0.185	0.23	2.964	A
North Lane West	109.68	109.57	1299.59	0.00	1145.16	0.096	0.11	3.475	A
A1237 West	1512.98	1511.67	244.30	0.00	2889.82	0.524	1.09	2.610	A
North Lane Existing	716.49	713.96	1343.70	0.00	1195.14	0.600	1.47	7.443	A

Main results: (08:30-08:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	1140.66	1138.42	1391.20	0.00	2004.17	0.569	1.31	4.147	A
Monks Cross Link	336.91	336.47	1519.73	0.00	1335.86	0.252	0.34	3.600	A
North Lane West	134.32	134.13	1585.83	0.00	1004.73	0.134	0.15	4.134	A
A1237 West	1853.02	1850.05	299.04	0.00	2851.70	0.650	1.83	3.584	A
North Lane Existing	877.51	864.11	1644.51	0.00	1036.92	0.846	4.82	19.501	C

Main results: (08:45-09:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	1140.66	1140.59	1402.65	0.00	1996.51	0.571	1.32	4.206	A
Monks Cross Link	336.91	336.90	1529.50	0.00	1330.35	0.253	0.34	3.622	A
North Lane West	134.32	134.32	1593.60	0.00	1000.91	0.134	0.15	4.153	A
A1237 West	1853.02	1852.98	299.47	0.00	2851.40	0.650	1.85	3.604	A
North Lane Existing	877.51	876.20	1647.09	0.00	1035.57	0.847	5.14	22.153	C

Main results: (09:00-09:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	931.34	933.58	1159.70	0.00	2158.98	0.431	0.76	2.942	A
Monks Cross Link	275.09	275.52	1260.96	0.00	1481.50	0.186	0.23	2.987	A
North Lane West	109.68	109.87	1310.67	0.00	1139.73	0.096	0.11	3.495	A
A1237 West	1512.98	1515.94	244.96	0.00	2889.36	0.524	1.11	2.626	A
North Lane Existing	716.49	730.93	1347.48	0.00	1193.15	0.601	1.53	8.021	A

Main results: (09:15-09:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	779.96	780.93	962.70	0.00	2290.72	0.340	0.52	2.385	A
Monks Cross Link	230.37	230.61	1049.07	0.00	1600.75	0.144	0.17	2.627	A
North Lane West	91.85	91.96	1092.38	0.00	1246.83	0.074	0.08	3.116	A
A1237 West	1267.05	1268.39	205.01	0.00	2917.18	0.434	0.77	2.186	A
North Lane Existing	600.02	602.74	1127.46	0.00	1308.87	0.458	0.86	5.119	A

(Default Analysis Set) - 2032 Predicted, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A1237 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Monks Cross Link - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	North Lane West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	A1237 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Warning	Geometry	North Lane Existing - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
---------	----------	---	--

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Predicted, PM	2032 Predicted	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5			7.21	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
A1237 East	1	A1237 East	
Monks Cross Link	2	Monks Cross Link	
North Lane West	3	North Lane West	
A1237 West	4	A1237 West	
North Lane Existing	5	North Lane Existing	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A1237 East	0.00	99999.00
Monks Cross Link	0.00	99999.00
North Lane West	0.00	99999.00
A1237 West	0.00	99999.00
North Lane Existing	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A1237 East	4.80	11.00	89.00	23.50	75.00	37.50	
Monks Cross Link	5.00	7.30	115.00	25.00	75.00	30.00	
North Lane West	3.00	6.80	54.00	16.70	75.00	37.50	
A1237 West	5.70	10.80	77.00	23.40	75.00	26.50	

North Lane Existing	2.70	7.50	35.00	20.00	75.00	18.50	
---------------------	------	------	-------	-------	-------	-------	--

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A1237 East		(calculated)	(calculated)	0.669	2934.509
Monks Cross Link		(calculated)	(calculated)	0.563	2191.204
North Lane West		(calculated)	(calculated)	0.491	1782.797
A1237 West		(calculated)	(calculated)	0.696	3059.947
North Lane Existing		(calculated)	(calculated)	0.526	1901.885

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A1237 East	ONE HOUR	✓	1034.00	100.000
Monks Cross Link	ONE HOUR	✓	1080.00	100.000
North Lane West	ONE HOUR	✓	187.00	100.000
A1237 West	ONE HOUR	✓	1456.00	100.000
North Lane Existing	ONE HOUR	✓	535.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
From	A1237 East	0.000	122.000	57.000	745.000	110.000
	Monks Cross Link	180.000	0.000	27.000	680.000	193.000
	North Lane West	70.000	0.000	0.000	3.000	114.000
	A1237 West	711.000	417.000	4.000	0.000	324.000
	North Lane Existing	57.000	147.000	83.000	248.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To				
		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
	A1237 East	0.00	0.12	0.06	0.72	0.11
	Monks Cross Link	0.17	0.00	0.03	0.63	0.18

From	North Lane West	0.37	0.00	0.00	0.02	0.61
	A1237 West	0.49	0.29	0.00	0.00	0.22
	North Lane Existing	0.11	0.27	0.16	0.46	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To				
From		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
	A1237 East	1.000	1.000	1.000	1.000	1.000
	Monks Cross Link	1.000	1.000	1.000	1.000	1.000
	North Lane West	1.000	1.000	1.000	1.000	1.000
	A1237 West	1.000	1.000	1.000	1.000	1.000
	North Lane Existing	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To				
From		A1237 East	Monks Cross Link	North Lane West	A1237 West	North Lane Existing
	A1237 East	0.0	0.0	0.0	0.0	0.0
	Monks Cross Link	0.0	0.0	0.0	0.0	0.0
	North Lane West	0.0	0.0	0.0	0.0	0.0
	A1237 West	0.0	0.0	0.0	0.0	0.0
	North Lane Existing	0.0	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A1237 East	0.50	3.17	1.00	A
Monks Cross Link	0.84	15.48	4.92	C
North Lane West	0.33	8.72	0.49	A
A1237 West	0.63	3.81	1.68	A
North Lane Existing	0.53	7.02	1.14	A

Main Results for each time segment

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	778.45	776.63	674.53	0.00	2483.43	0.313	0.46	2.107	A
Monks Cross Link	813.08	809.29	936.15	0.00	1664.31	0.489	0.95	4.192	A
North Lane West	140.78	140.12	1617.17	0.00	989.35	0.142	0.17	4.239	A
A1237 West	1096.15	1093.45	500.00	0.00	2711.75	0.404	0.68	2.220	A
North Lane Existing	402.78	401.10	1037.46	0.00	1356.21	0.297	0.42	3.763	A

Main results: (17:00-17:15)

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Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	929.54	928.84	807.12	0.00	2394.76	0.388	0.63	2.454	A
Monks Cross Link	970.90	968.21	1119.90	0.00	1560.89	0.622	1.62	6.046	A
North Lane West	168.11	167.77	1934.63	0.00	833.59	0.202	0.25	5.404	A
A1237 West	1308.91	1307.72	598.28	0.00	2643.30	0.495	0.98	2.693	A
North Lane Existing	480.95	480.15	1240.88	0.00	1249.22	0.385	0.62	4.676	A

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	1138.46	1137.00	987.21	0.00	2274.33	0.501	1.00	3.161	A
Monks Cross Link	1189.10	1176.78	1370.43	0.00	1419.88	0.837	4.70	14.147	B
North Lane West	205.89	204.96	2359.65	0.00	625.06	0.329	0.48	8.551	A
A1237 West	1603.09	1600.31	729.05	0.00	2552.24	0.628	1.67	3.771	A
North Lane Existing	589.05	587.03	1517.04	0.00	1103.96	0.534	1.13	6.942	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	1138.46	1138.44	989.76	0.00	2272.63	0.501	1.00	3.173	A
Monks Cross Link	1189.10	1188.20	1372.92	0.00	1418.48	0.838	4.92	15.478	C
North Lane West	205.89	205.85	2372.88	0.00	618.57	0.333	0.49	8.721	A
A1237 West	1603.09	1603.03	734.03	0.00	2548.77	0.629	1.68	3.805	A
North Lane Existing	589.05	588.99	1521.40	0.00	1101.67	0.535	1.14	7.021	A

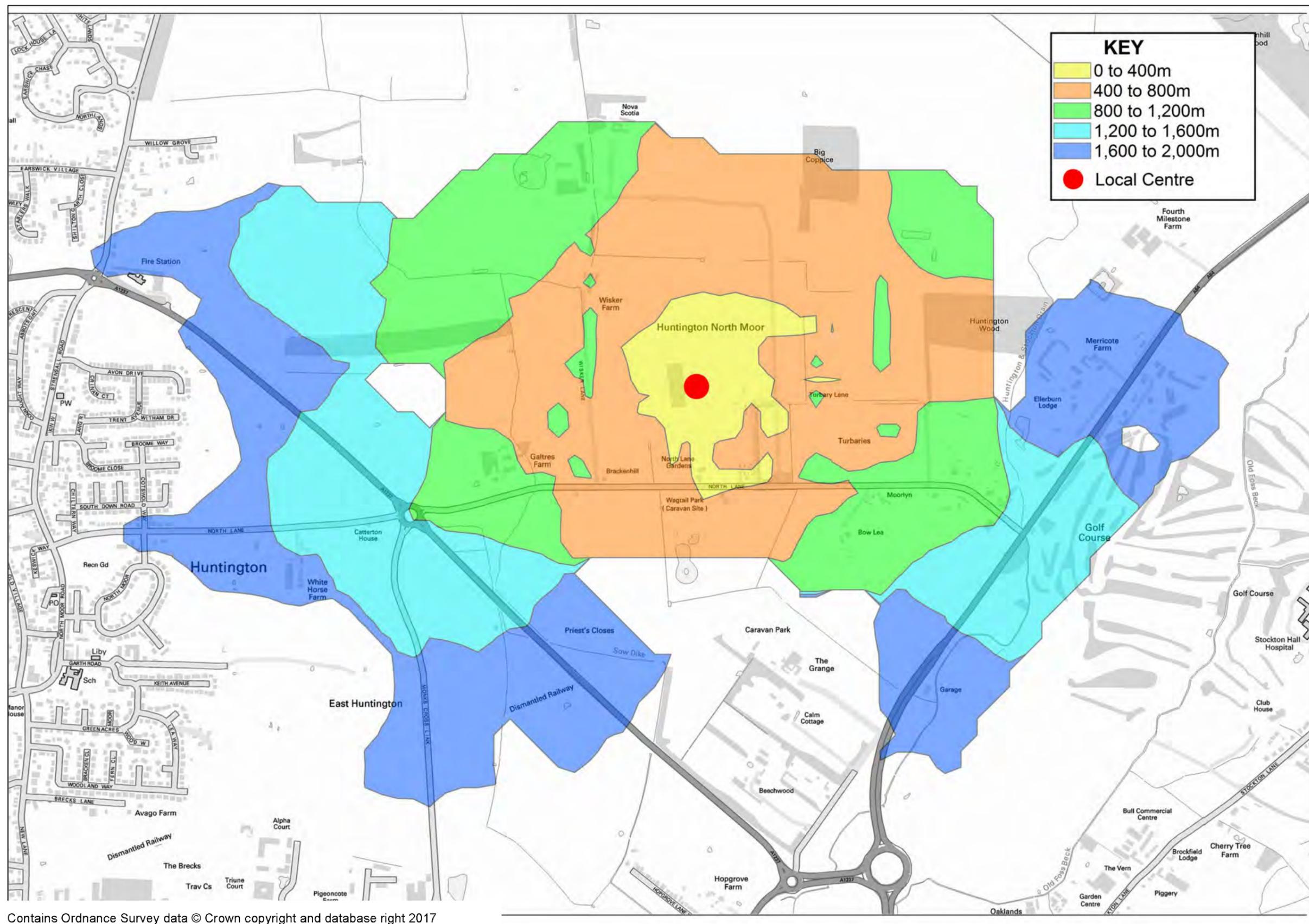
Main results: (17:45-18:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	929.54	930.99	810.79	0.00	2392.31	0.389	0.64	2.465	A
Monks Cross Link	970.90	983.87	1123.56	0.00	1558.83	0.623	1.68	6.399	A
North Lane West	168.11	169.05	1952.98	0.00	824.59	0.204	0.26	5.501	A
A1237 West	1308.91	1311.69	605.18	0.00	2638.50	0.496	0.99	2.720	A
North Lane Existing	480.95	482.97	1247.06	0.00	1245.97	0.386	0.63	4.732	A

Main results: (18:00-18:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A1237 East	778.45	779.17	677.91	0.00	2481.17	0.314	0.46	2.117	A
Monks Cross Link	813.08	815.94	939.96	0.00	1662.17	0.489	0.97	4.269	A
North Lane West	140.78	141.14	1626.92	0.00	984.57	0.143	0.17	4.269	A
A1237 West	1096.15	1097.38	503.57	0.00	2709.26	0.405	0.68	2.234	A
North Lane Existing	402.78	403.61	1042.01	0.00	1353.82	0.298	0.43	3.793	A

APPENDIX BGH 11



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Client: GALTRES VILLAGE DEVELOPMENT GROUP

Project: GALTRES GARDEN VILLAGE, YORK

B	Updated site layout and access	JT	MC	26.10.17
A	Updated site layout	JT	MC	13.03.17
Rev:	Amendment:	Drn:	Chk:	Date:

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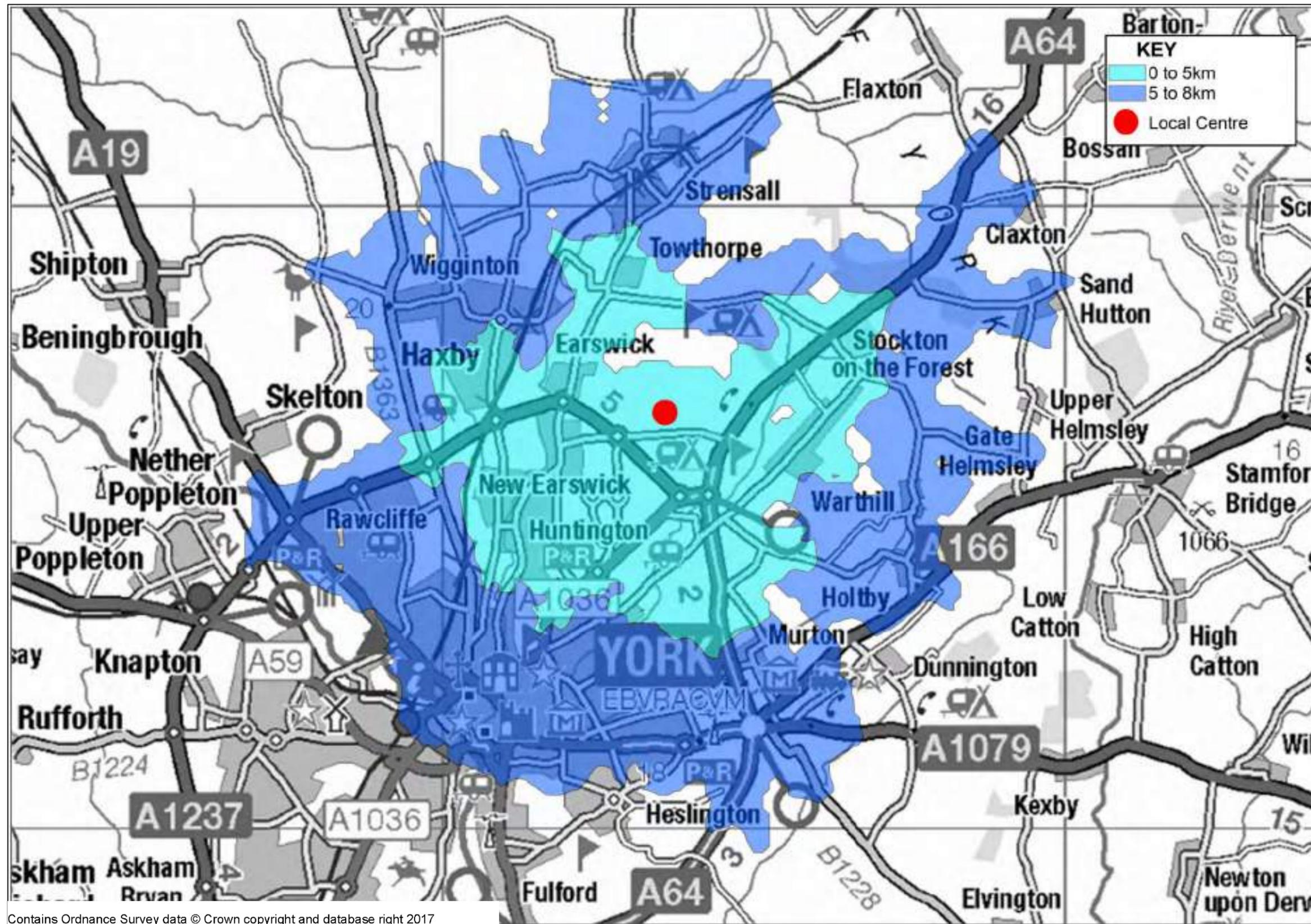
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Lighterman House
26/36 Wharfedale Road
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T 0203 553 2336

Title: WALKING ACCESSIBILITY PLAN, 2KM

Job No:	16-275	Drawn:	JT	Checked:	MC	Date:	08/07/2016
Scale:	Not to Scale	Drawing No:	16-275-ACC-001		Revision:	B	

APPENDIX BGH 12



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Client: GALTRES VILLAGE DEVELOPMENT GROUP

Project: GALTRES GARDEN VILLAGE, YORK

B	Updated site layout and access	JT	MC	26.10.17	
A	Updated site layout	JT	MC	13.03.17	
Rev:	Amendment:	Drn:	Chk:	Date:	
Job No:	16-275	Drawn:	JT	Checked: MC	Date: 08/07/2016
Scale:	Not to Scale	Drawing No:	16-275-ACC-002	Revision:	

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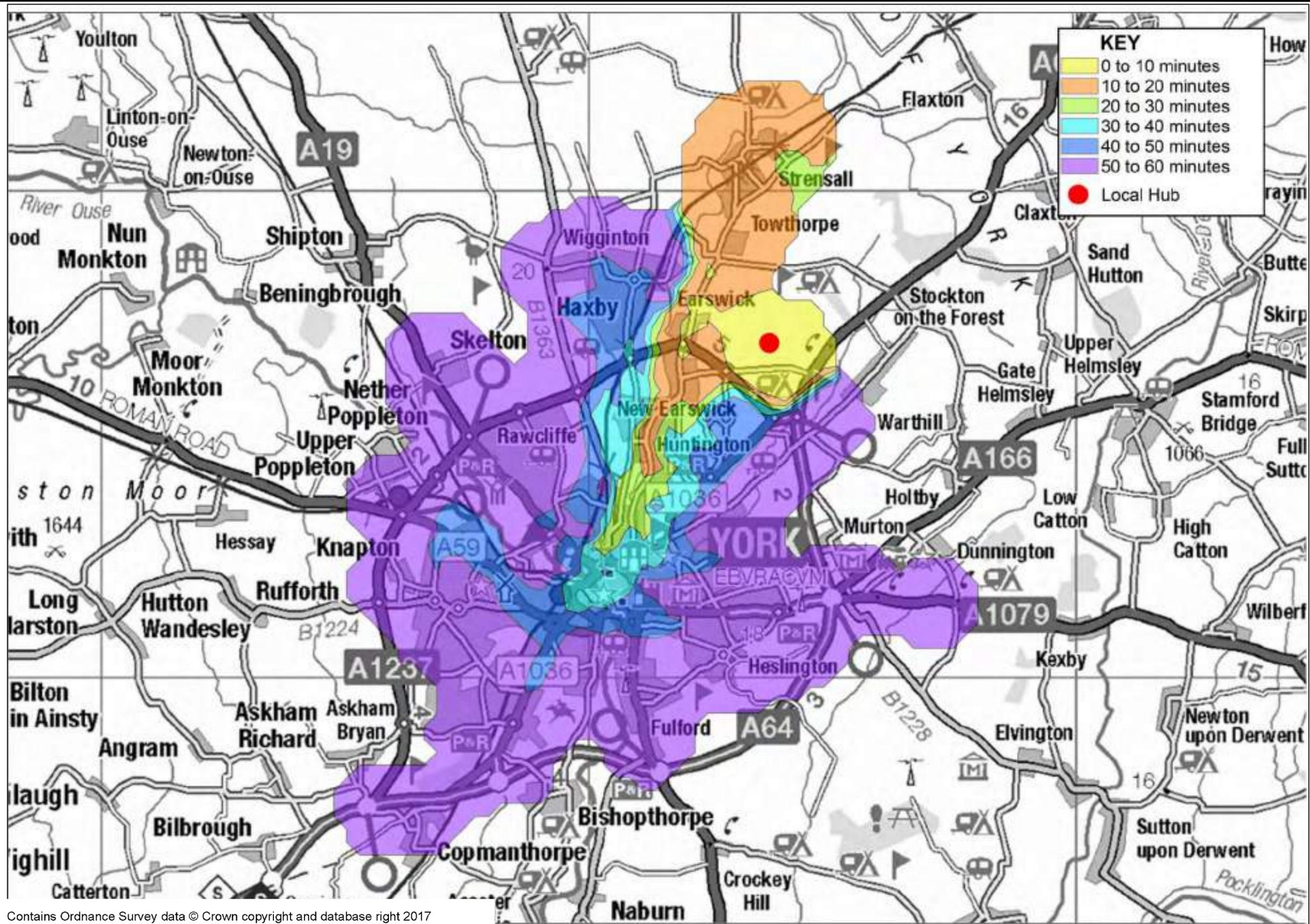
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Lighterman House
26/36 Wharfedale Road
LONDON | N1 9RY
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Title: CYCLING ACCESSIBILITY PLAN, 8KM

APPENDIX BGH 13



KEY	
[Yellow Box]	0 to 10 minutes
[Orange Box]	10 to 20 minutes
[Light Green Box]	20 to 30 minutes
[Cyan Box]	30 to 40 minutes
[Blue Box]	40 to 50 minutes
[Purple Box]	50 to 60 minutes
[Red Dot]	Local Hub

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Client: GALTRES VILLAGE DEVELOPMENT COMPANY

Project: EARSWICK, YORK

B	Updated site layout	JT	MC	30.10.17
A	Updated site layout	JT	MC	13.03.17
Rev:	Amendment:	Dwn:	Chk:	Date:

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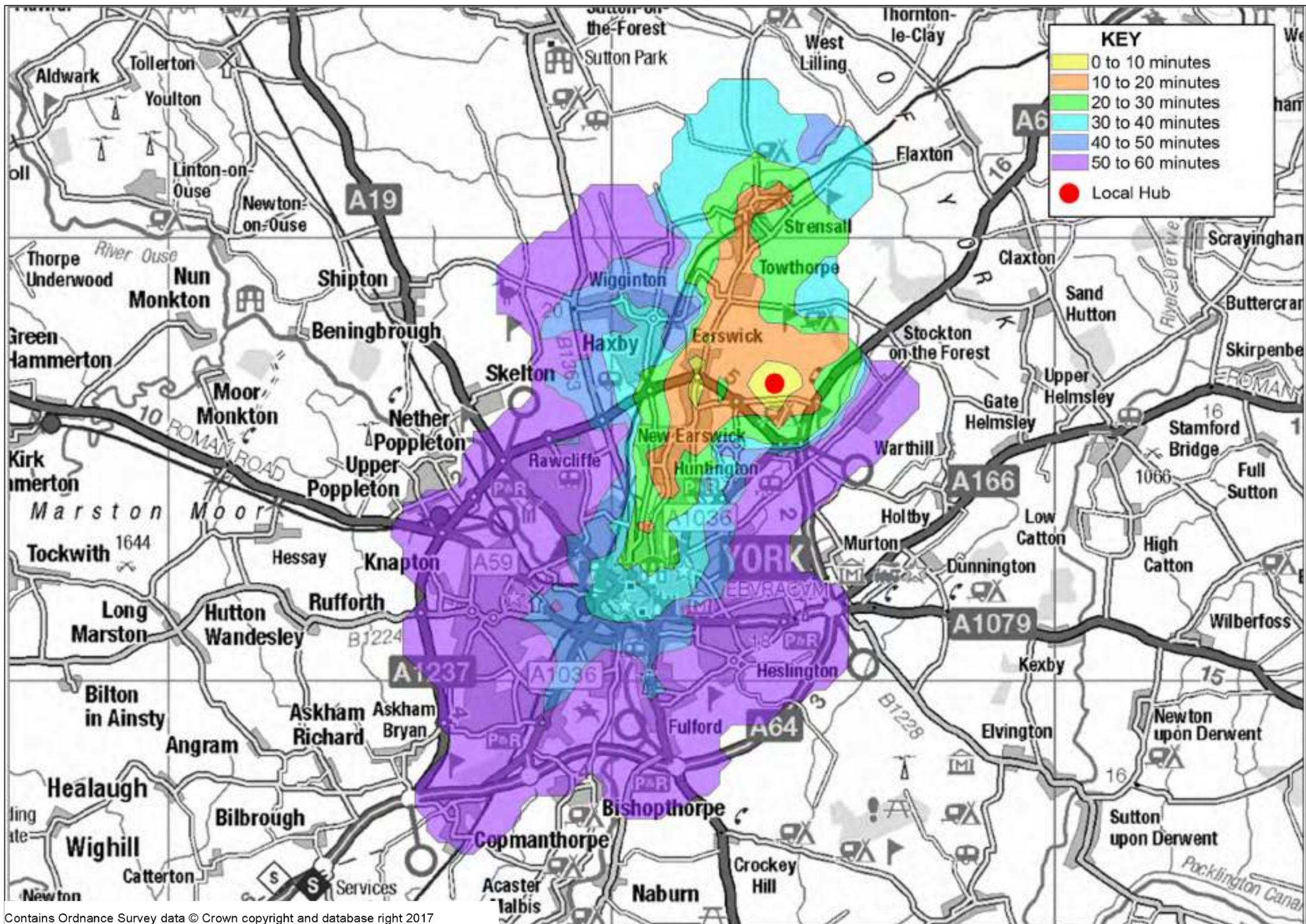
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Title: PUBLIC TRANSPORT ACCESSIBILITY PLAN AM, 60 MINUTES
BUS ROUTED THROUGH SITE

Job No:	16-275	Drawn:	JT	Checked:	MC	Date:	08/07/2016
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Scale:	Not to Scale	Drawing No:	16-275-ACC-003	Revision:	B
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Client: GALTRES VILLAGE DEVELOPMENT COMPANY

Project: EARSWICK, YORK

B	Updated site layout	JT	MC	30.10.17
A	Updated site layout	JT	MC	13.03.17
Rev:	Amendment:	Drn:	Chk:	Date:

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Title: PUBLIC TRANSPORT ACCESSIBILITY PLAN PM, 60 MINUTES
BUS ROUTED THROUGH SITE

Job No:	16-275	Drawn:	JT	Checked:	MC	Date:	08/07/2016
Scale:	Not to Scale	Drawing No:	16-275-ACC-004		Revision:	B	

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Galtres Garden Village, Huntington, York.

EXTENDED PHASE 1 HABITAT SURVEY
September 2017

	Staff Member	Position
Extended Phase 1 Habitat Survey :	Daniel Lombard BSc MCIEEM	Ecologist
Report prepared by :	Daniel Lombard BSc MCIEEM	Ecologist
Signed off by :	Chris Toohie MSc MCIEEM	
Notes.	This report contains sensitive information concerning protected species and caution should be exercised when copying and distributing to third parties.	

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DRAFT

1.0 EXECUTIVE SUMMARY

- 1.1 In September 2017, Wold Ecology was commissioned to undertake an Extended Phase 1 Habitat Survey on land to the north of North Lane, Huntington, York (national grid reference centroid SE 63328 56617) in North Yorkshire.
- 1.2 In order to accomplish the brief, a desk top study, external consultation and an extended Phase 1 field survey was undertaken by Wold Ecology staff.
- 1.3 The habitats within the Application Site primarily comprises arable and pastoral agricultural land bounded by hedgerows, scattered trees, ditches, immature plantations with farm yards/buildings. There are no statutory or non-statutory sites within the site boundary.
- 1.4 The proposed development involves site clearance and the erection of approximately 1800 residential dwellings including services and infrastructure.
- 1.5 The surrounding habitat is potentially important and the proposed development may impact upon mobile species. Consequently, the extended phase 1 assessment also targeted the following species relevant to the Application Site and proposed development:
- Bats
 - Great crested newts
 - Badger
 - Birds
 - Reptiles
 - Hedgehogs
 - Water vole
 - Otter
- 1.6 The extended phase 1 survey and ecological assessment recommends the following phase 2 surveys to ensure that a comprehensive study is undertaken:
- **Bats**
 - It is not possible to predict the full pre-, mid-development and long-term impacts on bat populations based on daytime surveys conducted in September. In order to prevent any potential impacts occurring to bats present, it is recommended that an activity survey (emergence and dawn) are completed in spring/summer (May to August) period. This will provide further information on bats at the site and must target any buildings or trees which are to be demolished or felled which have potential to support roosting bats.
 - Boundary features, woodlands, scattered trees and rough grassland habitats is suitable for foraging and commuting habitat. In order to determine the value of this habitat to commuting and foraging bats, bat transect surveys should be undertaken between April and October. This will enable targeted management on site, retention of optimum bat habitats including dark corridors and enhanced foraging and dispersal routes.
 - **Birds**
 - The Phase 1 survey recorded habitats potentially valuable to protected and/or birds of conservation concern. Wold Ecology recommends a breeding and winter bird survey is undertaken to establish the breeding

status of Protected Schedule 1 species and Species of Conservation Concern/BAP species within the Application Site.

- Additionally, barn owl surveys will be undertaken on buildings and trees to assess whether these birds are nesting within the Application Site.
- **Great crested newts**
 - A great crested newt survey was undertaken during 2014 and no great crested newts were recorded. As the field survey data is in excess of 3 years old, it is recommended that the presence absence survey is undertaken to provide current survey data for the site. Additionally, this will include 4 further ponds present within the eastern part of the site that were not originally surveyed.
- **Badger**
 - A badger survey was undertaken during 2014. As the field survey data is in excess of 3 years old, it is recommended that additional badger surveys are undertaken to provide current survey data for the site.
- **Water Vole**
 - A water vole survey was undertaken during 2014. As the field survey data is in excess of 3 years old, it is recommended that additional water vole surveys are undertaken to provide current survey data for the site.
- **Otter**
 - Evidence of otters was noted within the Application Site during the phase 1 survey. Further surveys are recommended to determine how otters use the site. No holts were observed during the field surveys.
- **Reptiles**
 - Wold Ecology recommends that a reptile presence or absence survey is undertaken during the months of highest activity; April/May and/or September, when there is adequate sun but the nights are cool enough to require basking during the day. The optimum season is spring when there is an increase in mating activity and the best times of day are 0900 to 1100, and 1600 to 1900, when reptiles are most likely to be basking in open locations. The survey guidelines insist on at least 7 visits during the specified active periods and it is recommended that traps are laid at least 6 weeks prior to the surveys commencement.

1.7

In addition:

- Any trees, shrubs, buildings and vegetation to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged.
- Potential discharge of foul water into the adjacent watercourses should be addressed by Land Drainage Consultant.
- Himalayan balsam was recorded within the boundaries of Application Site. It is recommended that a specialist contractor is employed to remove the Himalayan balsam off site.
- An Ecological Method Statement and Ecological Enhancement Management Plan should be implemented prior to building works commencing.

1.8

The data collected to support the output of this report is valid for 18 months. This report is valid until **March 2019**. After this time, additional surveys need to be

undertaken to confirm that the status of the site, for European protected species, has not changed.

- 1.9 Species list within this report may be forwarded to the local biodiversity records centre to be included on their national database. No personal information will be sent. Please contact Wold Ecology if you do not wish the species accounts and grid references to be shared.

DRAFT

2.0 INTRODUCTION

- 2.1 In September 2017, Wold Ecology was commissioned by to undertake an Extended Phase 1 Habitat Survey on land to the north of North Lane, Huntington, York (national grid reference centroid SE 63328 56617) in North Yorkshire.
- 2.2 An ecological assessment is a requirement of the Local Authority Planning Department, as part of the planning application process. This is specified in the following legislation:
- National Planning Policy Framework (NPPF): Biodiversity and Geological Conservation – national planning policy relation to biodiversity. NPPF Biodiversity and Geological Conservation gives further direction with respect to biodiversity conservation and land use change/development. NPPF states that not only should existing biodiversity be conserved but importantly that habitats supporting such species should be enhanced or restored where possible. The policies contained within NPPF may be material to decisions on individual planning applications.
- 2.3 In addition, an ecological assessment is also required so that the local authority comply with the Habitats and Species Regulations 2010 and to have regard to the purpose of conserving biodiversity in the exercise of their functions (Natural Environment and Rural Communities (NERC) Act 2006).
- 2.4 Planning authorities must determine whether the proposed development meets the requirements of Article 16 of the EC Habitats Directive before planning permission is granted (where there is a reasonable likelihood of European Protected Species being present). Therefore, during its consideration of a planning application, where the presence of a European protected species is a material consideration, the planning authority must satisfy itself that the proposed development meets three tests as set out in the Directive.
- 2.5 The Local Authority must be satisfied that the proposed development must meet a purpose of:
- a) 'Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'.
- In addition, the authority must be satisfied that:
- (b) 'That there is no satisfactory alternative'
 - (c) 'That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'.
- 2.6 **Case Law - Woolley v Cheshire East Borough, 5th June 2009.**
- 2.6.1 The ruling states that if it is clear or perhaps very likely that the requirements of the Directive cannot be met because there is a satisfactory alternative or because there are no conceivable 'other imperative reasons of over-riding public interest' then the authority should act on that and refuse permission.'
- 2.6.2 In addition, the judgement also clarified that it was not sufficient for planning authorities to claim that they had discharged their duties by imposing a condition on a consent that requires the developer to obtain a licence from Natural England. Natural England considers it essential that appropriate survey information supports

a planning application prior to the determination. Natural England does not regard the conditioning of surveys to a planning consent as an appropriate use of conditions.

- 2.7 In order to fulfil the brief, the following has been undertaken:
- A desktop study and consultation.
 - Field survey including accessible adjacent land up to 1km.
 - An Extended Phase 1 Habitat Assessment.
- 2.8 This report describes the findings of the field survey and desktop study whilst identifying further surveys to ensure that a comprehensive study is undertaken.

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3.0 COMPANY PROFILE

- 3.1 Wold Ecology Ltd was established in 2006 and is a professional company whose staff is experienced in providing a bespoke service for environmental management and ecological assessments. Wold Ecology employs several experienced and qualified associates to undertake specialist survey work. Professional service is of primary importance and Wold Ecology only employs staff who can demonstrate knowledge and expertise to an exceptional standard.
- 3.2 Wold Ecology provides a wide range of specialised advice aimed at integrating business with nature. We specialise in ecological surveys, land management planning and site assessments, these include:
- **European Protected Species Surveys**
Bats, Birds, Great Crested Newts, Water Vole, Badger, Crayfish and Fungi surveys. Phase 1 and Phase 2 NVC Habitat Surveys, Landscape Character Assessment, Environmental Impact Assessments.
 - **European Protected Species Licenses**
Bat Licenses - Chris Tochie is one of 139 Natural England Registered Consultant (December 2016) who can hold a Natural England Bat Low Impact Class License.
Great crested newt development license holders. Implementation of licenses (amphibian fencing, destructive searches, watching briefs and post development monitoring).
 - **Arboricultural Surveys.**
Arboricultural Impact Assessments, Root Protection Zones and CAD drawings.
 - **Ecological Construction Method Statements and Ecological Enhancements Plans.**
 - **Ecological Clerk of Works.**
- 3.3 Wold Ecology is committed to working towards the conservation of our natural heritage. Wold Ecology support The Wolds Barn Owl Study Group, Driffeld Millennium Green, Cornfield Project (Ryedale Folk Museum), Butterfly Conservation and RSPB projects with volunteer staff time and financial resources. Wold Ecology has adopted an important site for nature conservation on Flamborough Head.
- 3.4 Wold Ecology is an Associate Member of the RSPB, a Bat Conservation Trust Benefactor and Corporate Member of the Yorkshire Wildlife Trust.
- 3.5 Surveyor Profile – Daniel Lombard B Sc., MCIEEM.
- 3.5.1 Job title: Senior Field Ecologist.
- 3.5.2 Expertise.
- Phase 1 habitat field surveys and biodiversity assessments including BREEAM assessments.
 - Bat surveys, bat ecology, bats and wind turbine assessments, bat sound analysis and monitoring.
 - Great crested newt and reptile surveys.
 - Mammal surveys including water vole, otter and badger.
 - Ornithological surveys.

- Invertebrates studies, principally Lepidoptera, Odonata, Coleoptera and Diptera plus habitat management/creation for these groups.
 - Management planning, pond and wetland management.
- 3.5.3 Qualifications.
- B Sc. Environmental Science.
 - Great Crested Newt License – 2015-17182-CLS-CLS
 - Bat License – 2015-11490-CLS-CLS
 - Bird Ringing C Licence – C/6298
- 3.5.4 Professional Membership.
- Member of the Chartered Institute of Ecology and Environmental Management.
- 3.6 A detailed surveyor profile is included in Appendix 5.
- 3.7 Daniel Lombard meets the criteria for a suitably qualified ecologist by:
- Holding a Bachelor of Science degree (hons) in Environmental Science;
 - Being employed as a practising ecologist since 2007, with over 10 years' relevant experience and;
 - Being a full member of the Institute of Ecology and Environmental Management (this makes him subject to peer review and bound by a professional code of conduct).
- 3.8 Chris Toohie M Sc. MCIEEM has read and reviewed the report and confirms that it:
- Represents sound industry practice
 - Reports and recommends correctly, truthfully, and objectively
 - Is appropriate, given the local site conditions and scope of works proposed
 - Avoids invalid, biased, and exaggerated statements

4.0 SURVEY METHODOLOGY

- 4.1 A Phase 1 Habitat Survey was undertaken on 20th September 2017. During the site visit, the whole of the Application Site and accessible neighbouring land was examined in detail.

Survey	Date	Time		Wind Speed	Wind Direction	Temperature		Rainfall	Cloud Cover
		Start	Finish			Start	Finish		
Field	20/09/2017	10.30	17.00	15mph	SE	16°C	15°C	None	50%

- 4.2 The habitats within the Application Site were mapped (see Appendix 2) according to the techniques described in the publication *Handbook for Phase 1 Habitat Survey* (JNCC 2010).
- 4.3 Target notes (if applicable) provide descriptions of the main habitats found on the site, including information about species composition, habitat structure, evidence of management, habitats too small to map and transitional or mosaic habitats.
- 4.4 Sufficient detail on the composition of the vegetation was obtained from the Phase 1 Habitat Survey, which enabled it to be successfully characterised and assessed.
- 4.5 During the site visit, notes were made of features of potential value to other groups such as birds, mammals, amphibians, reptiles or invertebrates, paying particular attention to species protected by law:

Species/Group	Indicative habitat	Field signs (in addition to sightings)
Bats	Roosts - Trees, buildings, bridges, caves etc. Foraging areas - e.g. Parkland, waterbodies, wetlands, woodland, hedgerows Commuting routes - Linear features (e.g. hedgerows, water courses, tree lines).	Potential roost sites: Droppings, urine splashes, staining and feeding remains.
Badger	Habitat mosaic in rural and many urban habitats	Excavations and tracks, sett entrances, latrines, hairs, well-worn paths, prints, scratch marks on trees
Otter	Rivers, streams, canals, ponds, lakes, ditches, drains and coastal areas.	Holts (or dens), prints, spraints, slide marks into watercourses and feeding signs.
Water Vole	Rivers, streams, canals, ponds, lakes, ditches, drains and marshes.	Burrow entrances, prints, distinctive latrine areas and feeding signs.
Birds	Habitat mosaic	Nests, droppings below nest sites (especially in buildings or trees); tree holes
Reptiles	Habitat mosaic	Sloughed skins
Great Crested Newt	Ponds within 500 m of suitable habitat within the site boundary. Habitat Suitability Index (HSI assessment)	Egg wraps and animals (depending on time of year)

5.0 LIMITATION OF FIELD SURVEY

- 5.1 Whilst the majority of the Application Site was examined at the macro scale, many species will have been overlooked at the micro level because it is not the purpose of a phase 1 habitat survey to classify all taxa occurring in the Application Site. In addition, whilst the actual timing of the survey was adequate to classify the habitat types, there is undoubtedly a strong seasonal element to the presence of species within the site and species occurring outside of the survey period will have been missed.
- 5.2 This report will serve to indicate the possible value of the site in nature conservation terms based upon the survey and desk top data gathered. As with any survey of this kind, it cannot be a definitive description of the site and its associated habitats and species.
- 5.3 Access was only granted within the Application Site and land owned by the client; neighbouring land was only studied from vantage points, maps and aerial photography and it is possible that habitats important to the ecology of the Application Site may not have been recorded fully.
- 5.4 However, a phase 1 habitat survey of this nature, supported by a thorough desk top survey, is sufficient to make a number of general assumptions about the ecology of the site.

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6.0 SURVEY RESULTS

6.1 General description

6.1.1 The Application Site is situated on agricultural land to the north of North Lane 600m east of Earswick village and 1.3km north east of Huntington village, in a rural location. The Application Site comprises a mosaic of cattle pasture, arable crops and hay meadows which are bounded by linear habitats including hedgerows and ditches. Small areas of plantation, semi-natural woodland, ponds and farm yards occur within the Application site boundaries.

6.1.2 Woodland cover in the Application Site and neighbouring land is moderate with tree cover occurring as agricultural plantations, singleton trees in hedgerows, fields and within mature gardens. A series of mature hedgerows with wide bases and trees bound most fields within the Application Site and provide habitat connectivity. The River Foss is located approximately 1.3km west and provides habitat connectivity to the wider countryside.

6.1.3 A summary of the surrounding habitat is as follows (radius of < 2km from the Application Site):

- Buildings – farm buildings and residential properties
- Forest Park Golf Club
- Hedgerow
- Mature trees and woodland
- Big Coppice
- Huntington Wood
- Damhill Wood
- Arable
- Mature private gardens
- Ponds and watercourses
- River Foss
- Old Foss Beck
- Sow Dike
- Grazed pasture

6.2 Desktop Study.

6.2.1 Natural England, the North & East Yorkshire Ecological Data Centre (NEYEDC), National Biodiversity Network (NBN) and www.magic.gov.uk were consulted in order to obtain any ecological information that they hold of relevance to the Application Site.

6.2.2 The desk top study identifies land parcels of nature conservation value within 2 km locality of Application Site. Relevant extracts from associated documentation are highlighted below. The following data resources were searched:

- Sites of Special Scientific Interest (SSSI)
- Special Protection Areas (SPA)
- National Parks
- National Reserves
- Special Areas of Conservation (SAC)
- Ramsar sites

- Areas of Outstanding Natural Beauty (AONB)
- Local Nature Reserves (LNR)
- Local wildlife sites (LWS)
- Natural England Habitat Inventories
- Natural Area documentation
- European protected species records
- UK Biodiversity Action Plan habitats and species records
- Local Biodiversity Action Plan habitats and species records
- Notable species records

6.2.3 Statutory sites

6.2.3.1 The following statutory sites are located within 2 km of the Application Site.

<i>Designation</i>	<i>Name or location of site</i>	<i>Grid Reference</i>
Sites of Special Scientific Interest Special Areas of Conservation	Strensall Common	SE 641 588

6.2.4 Local Wildlife Sites (LWS).

6.2.4.1 The following local wildlife sites lie within 2 km of the Application Site (see figure 1):

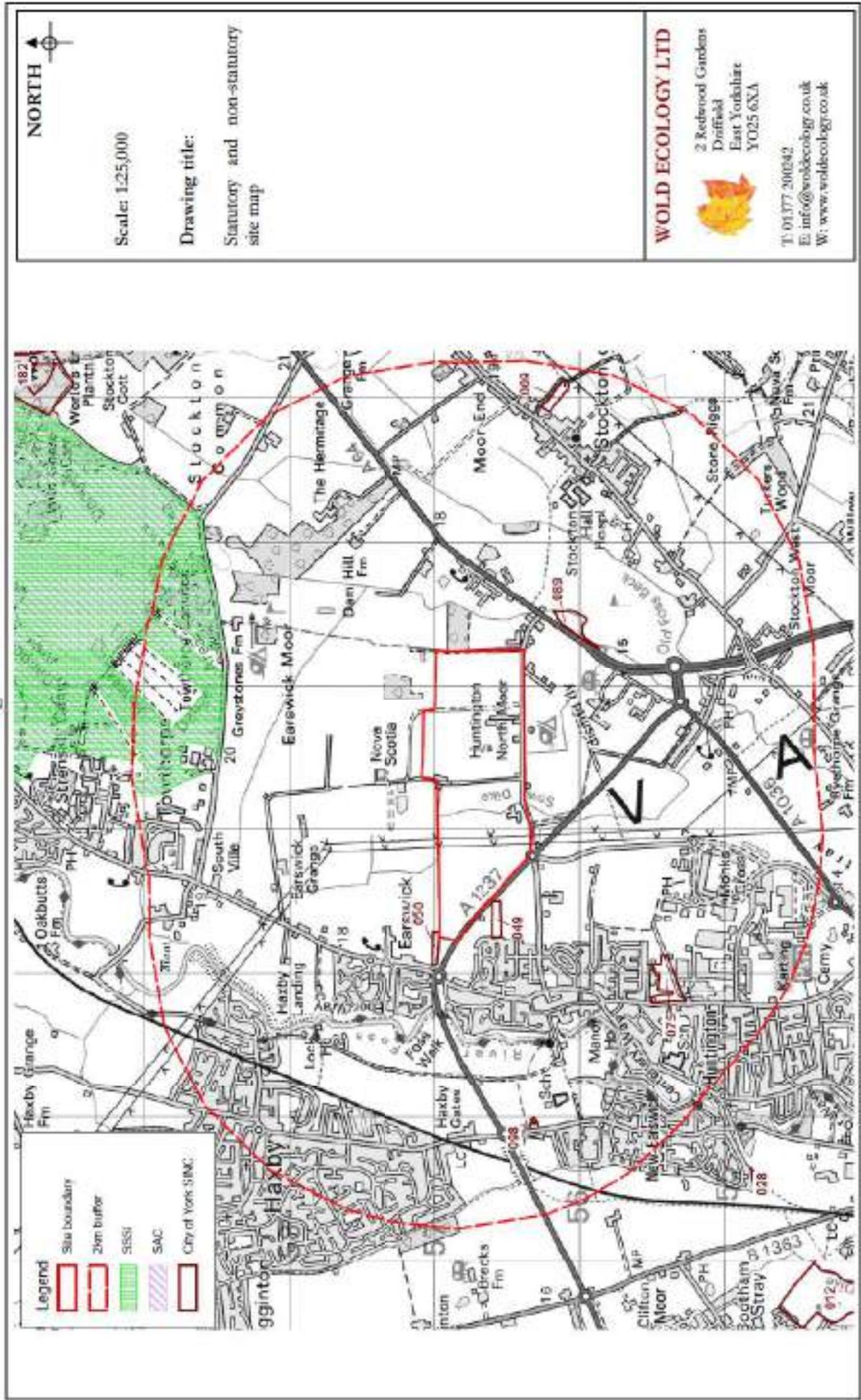
<i>Site Code</i>	<i>Site Name</i>	<i>Grid reference</i>
009	Carr Banks Meadow	SE 660 561
049	North Lane Meadow	SE 623 565
050	Earswick Meadow/Earswick Strensall Road Pasture	SE 622 570
075	New Lane Meadows	SE 619 553
089	Huntington Field [A64] [Huntington Site 9]	SE 644 560
098	Joseph Rowntree School Pond	SE 609 563

6.2.5 Natural England Habitat Inventories

6.2.5.1 All the Natural England Habitat Inventories were searched, including the woodland inventory and grassland inventory. The following areas of notable habitat from the Habitat Inventories list were found within 2 km of the Application Site.

<i>Designation</i>	<i>Name or location of site</i>	<i>Grid Reference</i>
Lowland dry acid grassland Lowland heathland Fens Reedbeds	Strensall Common	SE 641 588
Deciduous woodland	Numerous small parcels	

Figure 1.



6.3 Natural Character Areas

6.3.1 National Character Areas (NCAs) divide England into 159 distinct natural areas. Each is defined by a unique combination of landscape, biodiversity, geodiversity and cultural and economic activity. Their boundaries follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment. As part of its responsibilities in delivering the Natural Environment White Paper, Biodiversity 2020 and the European Landscape Convention, Natural England is revising its National Character Area profiles to make environmental evidence and information easily available to a wider audience.

6.3.2 NCA profiles are guidance documents which will help to achieve a more sustainable future for individuals and communities. The profiles include a description of the key ecosystem services provided in each character area and how these benefit people, wildlife and the economy. They identify potential opportunities for positive environmental change and provide the best available information and evidence as a context for local decision making and action.

6.3.3 The Application Site falls within the Natural Character Area 28: The Vale of York. The following Statements of Environmental Opportunities from NA 28 relate to the Application Site/proposed development:

- **SEO 3:** Increase the network of species-rich meadows, pastures, fields and hedgerows, ensuring that they and the wider farmed environment are managed to reduce rates of diffuse pollution and improve water quality. Extend and enhance heathland sites on areas of sandy soil for the benefit of biodiversity, as well as enhancing the sense of place.
- **SEO 4:** Protect the historic and cultural features of the Vale, in particular the traditional settlement patterns of remaining villages and the evidence of previous settlements that provide a strong sense of place.

6.4 European Protected Species records

6.4.1 Badger *Meles meles* is recorded in the surrounding 5km radius (source – NBN Atlas 2017).

6.4.2 Bats

- Currently, there is no pre-existing information on bats at the site.
- Data for the surrounding 10km radius shows records of noctule *Nyctalus noctula*, brown long eared bat *Plecotus auritus*, Natterer's bat *Myotis nattereri*, Daubenton's bat *Myotis daubentonii*, soprano pipistrelle *Pipistrellus pygmaeus* and common pipistrelle *Pipistrellus pipistrellus* (source – NEYEDC and NBN Atlas 2017).
- Wold Ecology recorded foraging and commuting noctule bats whilst undertaking great crested newt surveys at the site in 2014 (source - Wold Ecology 2014).

6.4.3 Great crested newts

- Great crested newt *Triturus cristatus* is recorded at Huntington, Stockton on the Forest and Monks Cross within 2km from the Application Site (source – NEYEDC and NBN Atlas 2017).
- Wold Ecology presence/absence surveys in 2014 did not identify any great

crested newts within the Application Site or within ponds in the surrounding 500 metres; the surveys targeted ponds to the north of the A1237.

6.4.4 Water vole

- Water vole *Arvicola amphibious* has been recorded on the River Foss and within 2km of the Application Site at Haxby, Stockton on the Forest (source – NEYEDC and NBN Atlas 2017).
- Wold Ecology surveys in 2014 did not observe any water voles on land adjacent to the northern boundary of the Application Site (source - Wold Ecology 2014).

6.4.5 Otter

- Otter *Lutra lutra* is recorded in the surrounding 5km radius (source – NEYEDC and NBN Atlas 2017).

6.4.6 Reptiles

- Grass snake *Natrix natrix*, adder *Vipera berus* and common lizard *Zootoca vivipara* are recorded in the surrounding 10km radius in association with Strensall Common (source – NBN Atlas 2017).
- Reptile surveys were undertaken in 2014 in optimum habitat adjacent to the Application Site, no evidence of reptiles was observed (see Wold Ecology Reptile Report, 2014).

6.4.7 A list of all European Protected, notable and UK BAP species within 2km of the Application Site can be found in Appendix 7.

6.4.8 Phase 1 Field Survey Results

6.4.8.1 The following habitat types were recorded within the Application Site:

Phase 1 Habitat Classification	Reference Code
Broad-leaved semi-natural woodland	A1.1.1
Broad-leaved plantation woodland	A1.1.2
Broad-leaved plantation woodland/ Semi improved neutral grassland	A1.1.2/ B2.2
Scattered trees (Mixed)	A3.3
Semi improved neutral grassland	B2.2
Improved grassland	B4
Poor semi improved grassland	B6
Open standing water	G1
Running water	G2
Arable	J1.1
Amenity grassland	J1.2
Intact hedge (species poor & rich)	J2.1.2/J2.2.2
Fence	J2.4
Buildings	J3.6
Bare ground	J4

6.4.8.2 Broad-leaved semi-natural woodland

6.4.8.2.1 Scattered patches of deciduous woodland occur sporadically throughout the Application Site and these are most prominent as secondary woodland along lanes and woodland adjacent to farm buildings. These are all below 100 years of age and are likely to have been planted for timber, as coverts or game cover. The most notable sections occur in the eastern half of the site adjacent to Whisker Lane.

6.4.8.2.2 Trees are dominated by broad-leaf species including sycamore *Acer pseudoplatanus*, pedunculate oak *Quercus robur* and ash *Fraxinus excelsior* with an understory characterised by wych elm *Ulmus glabra*, holly *Ilex aquifolium* and willows *Salix sp.* Basal floral communities are not characteristic of ancient woodlands with widespread communities characterised by species like nettles *Urtica sp.*, lesser burdock *Arctium minus*, hogweed *Heracleum sphondylium*, cow parsley *Anthriscus sylvestris* being dominant. This habitat has value to a wide diversity of wildlife including roosting bats.

6.4.8.3 Broad-leaved plantation woodland

6.4.8.3.1 This habitat occurs as a linear strip on the access road to Nova Scotia and adjacent to Turbary Lane. These plantations are less than 40 years old and appear to have been planted primarily for aesthetic reasons in lines and are of a similar age structure.

6.4.8.3.2 Tree species are dominated by sycamore, rowan *Sorbus aucuparia*, white willow *Salix alba*, silver birch *Betula pendula*, Norway Spruce *Picea abies*, whitebeam *Sorbus subg. Aria*, hornbeam *Carpinus betulus*, field maple *Acer campestre*, aspen *Populus tremuloides* and red alder *Alnus rubra*. Basal vegetation is not suggestive of ancient woodland indicator communities and is dominated by nettles, lesser burdock, hogweed and cow parsley. This habitat has a lack of standing or fallen deadwood and is of a decreased ecological value.

6.4.8.4 Broad-leaved plantation woodland/semi-improved neutral grassland

6.4.8.4.1 This habitat occurs at Whitehorse Farm Meadows (Target Note 1) within the central part of the Application Site where a linear field runs from east to west. This habitat appears to have been used for agriculture within the past 30 years and has over the past 15 years been transformed into an area of open plantation and semi-improved grassland, possibly in conjunction with an environmental stewardship scheme. Currently, this habitat contains a series of areas used for tree planting with more open tussocky grassland around marginal areas.

6.4.8.4.2 The plantation element of this habitat is dominated by 10-15-year-old trees including pedunculate oak, ash, silver birch and alder *Alnus glutinosa*. Botanically, this area is the richest within the Application Site, however communities are common and wide ranging.

6.4.8.4.3 Species diversity is dominated by greater stitchwort *Stellaria holostea*, common knapweed *Centaurea nigra*, meadowsweet *Filipendula ulmaria*, tufted vetch *Vicia cracca*, crested dogtail *Cynosurus cristatus*, common vetch *Vicia sativa*, rough hawkbit

Leontodon bispidus, field horsetail *Equisetum arvense*, red fescue *Festuca rubra*, Yorkshire fog *Holcus lanatus*, soft rush *Juncus effusus*, lesser trefoil *Trifolium dubium*, creeping buttercup *Ranunculus repens*, common sorrel *Rumex acetosa*, hoary ragwort *Senecio erucifolius*, common spotted orchid *Dactylorhiza fuchsii*, common ragwort *Jacobaea vulgaris*, fleabane *Pulicaria dysenterica*, marsh thistle *Cirsium palustre*, scarlet pimpernel *Anagallis arvensis*, tufted hairgrass *Deschampsia cespitosa*, mugwort *Artemisia vulgaris*, selfheal *Prunella vulgaris*, ribwort plantain *Plantago lanceolata* and false oat grass *Arrhenatherum elatius*.

6.4.8.5 Scattered trees (mixed)

6.4.8.5.1 An abundance of trees occur around the Application Site, primarily as remnant hedgerow trees and adjacent to farm buildings. These have arisen from both planting and natural regeneration; all are below 150 years of age and show varying amounts of wildlife value, from dead trees to young healthy ones. A large number of trees, particularly pedunculate oaks, contain standing deadwood habitats of value to roosting bats. In addition, many of these trees are likely to be of value to foraging bats, birds and invertebrates.

6.4.8.5.2 Tree species composition consist of silver birch, ash, Norway spruce, domestic apple *Malus domestica*, beech *Fagus sylvatica*, copper beech *Fagus sylvatica f. purpurea*, Lombardy poplar *Populus nigra 'Lombardi'*, pedunculate oak, Scots pine *Pinus sylvestris*, sycamore, horse chestnut *Aesculus hippocastanum*, rowan, goat willow *Salix caprea*, Sitka spruce *Picea sitchensis*, grey poplar *Populus × canescens*, hazel *Corylus avellana*, white willow, field maple and crab apple *Malus sylvestris*. Numerous woody shrub species can be found growing away from hedgerows in association with tree bases, particularly around the farm buildings. Species comprise of snowberry *Symphoricarpos albus*, holly, elder *Sambucus nigra*, Oregon grape *Mahonia aquifolium*, hawthorn *Crataegus monogyna*, Lawson cypress *Chamaecyparis lawsoniana*, dogwood *Cornus sanguinea* and field rose *Rosa arvensis*.

6.4.8.5.3 Remnants of a number of traditional orchards are found in association with buildings on North Lane (See Target Note 3), these primarily consist of 2-5 scattered trees within close proximity to one another. These are below 100 years of age and dominated by fruit species like apples *Malus sp* and plums *Prunus sp*.

6.4.8.6 Semi improved neutral grassland

6.4.8.6.1 This habitat comprises most un-managed areas within the Application Site and primarily relates to hedge bases, field corners and tree bases, as well as occasional fields out of agriculture production. These habitats are left relatively undisturbed and offer value to a diversity of wildlife.

6.4.8.6.2 Botanical species composition is dominated by short-fruited willowherb *Epilobium obscurum*, stinging nettle *Urtica dioica*, Yorkshire fog, nipplewort *Lapsana communis*, great willowherb *Epilobium hirsutum*, creeping buttercup, redshank *Persicaria maculosa*, great plantain *Plantago major*, scented mayweed *Matricaria chamomilla*, dandelion *Taraxacum officinale*, hedge bindweed *Calystegia sepium*, creeping thistle *Cirsium arvense*, prickly sow thistle *Sonchus asper*, false oat grass, bramble *Rubus fruticosus*, spear thistle *Cirsium vulgare*, hairy tare *Vicia hirsuta*, shining cranesbill *Geranium lucidum*, white clover *Trifolium repens*, perennial ryegrass *Lolium perenne*, creeping soft grass *Holcus mollis*, pineapple mayweed *Matricaria discoidea*, scarlet pimpernel, broad-leaved dock *Rumex obtusifolius*, pale persicaria *Persicaria lapathifolia*, rough meadow grass *Poa*

trivialis, common ragwort, common reed *Phragmites australis*, cleavers *Galium aparine*, red fescue *Festuca rubra*, cow parsley *Anthriscus sylvestris*, field horsetail *Equisetum arvense*, field speedwell *Veronica persica*, rough hawkbit *Leontodon hispidus*, small flowered cranesbill *Geranium pusillum*, red clover *Trifolium pratense*, common knapweed, common mouse-ear *Cerastium fontanum*, bistort *Bistorta officinalis*, dotted loosestrife *Lysimachia punctata*, chickweed *Stellaria media*, cocks-foot *Dactylis glomerata*, greater birds-foot trefoil *Lotus pedunculatus*, tufted vetch, soft rush, hard rush *Juncus inflexus*, woody nightshade *Solanum dulcamara*, cut-leaved cranesbill *Geranium dissectum*, hemlock *Conium maculatum*, field poppy *Papaver rhoeas* and field forget-me-not *Myosotis arvensis*.

6.4.8.7 Improved grassland

6.4.8.7.1 This is a dominant habitat within the Application Site and occurs as cattle grazed pasture, sheep grazed pasture, as hay meadows and for silage production. This habitat type is relatively limited in terms of its botanical diversity with perennial rye grass *Lolium perenne*, white clover *Trifolium repens* and red clover *Trifolium pratense* dominating non-grazed areas. Grazed areas show more species which like eutrophic conditions and include thistles and nettles within the short sward. These areas are all well drained and flat, with the exception of Huntington North Moor which contains a large ephemeral pool (Pond 8, see figure 3).

6.4.8.8 Poor Semi-improved grassland

6.4.8.8.1 A parcel of this habitat occurs adjacent to North Lane, in association with the derelict house and its associated collapsed farm buildings. This field appears to be subjected to occasional low-density cattle grazing. The grassland is well drained and forms sparse open tussocks, it is dominated by rank grasses including cocks-foot with red fescue. Broad-leaved species growing within the sward are characteristic of improved soils including thistles, ragwort and docks.

6.4.8.9 Open standing water

6.4.8.9.1 A total of 10 ponds exist within the site boundaries or within 500 metres of the Application Site (see figure 3). These are predominantly overgrown with scrub and/or ephemeral. The following ponds occur on site:

- a. **Pond 1** – Small circular ephemeral pool along a hedgerow, heavily shaded by willows, 40cm deep and less than 50m². Surveyed for great crested newt, with absence confirmed in 2014.
- b. **Pond 2** – Elongate pond in an area of willow and blackthorn scrub along a hedge, ephemeral, heavily shaded no macrophytes, 40cm deep and 280m². Surveyed for great crested newt with absence confirmed in 2014.
- c. **Pond 3** – Elongate pond in area of dense blackthorn scrub, in an area of pasture, heavily shaded, ephemeral, no macrophytes other than woody nightshade *Solanum dulcamara*, 40cm deep and 170m². Surveyed for great crested newt with absence confirmed in 2014.
- d. **Pond 4** – Circular pond in an arable field, bounded by willows, small numbers of goldfish *Carassius auratus*, contains yellow flag *Iris pseudacorus*, ivy leaved crow-foot *Ranunculus bederaceus*. The pond is 1.5m deep and 260m². Surveyed for great crested newt, with absence confirmed in 2014.
- e. **Pond 5** – Elongate pond in a plantation fed by ditches, heavily shaded. No macrophyte growth. 1m deep and 500m². Surveyed for great crested newt with absence confirmed in 2014.

- f. **Pond 6** – Circular heavily shaded pond within an area of willow woodland. No significant aquatic macrophyte growth. 1m deep and 770m². Surveyed for great crested newt with absence confirmed in 2014.
- g. **Pond 7** – Kidney shaped ornamental pond, with white water lily *Nymphaea alba* and reedmace *Typha*. No fish observed but may be present. 70cm deep and 100m². This pond was not surveyed during 2014.
- h. **Pond 8** – Ephemeral pool within an area of sheep grazed pasture. Shallow 40cm deep and 350m². No macrophytes other than ivy leaved water-crow foot. This pond was not surveyed during 2014.
- i. **Pond 9** – Elongate pond bounded by trees and scrub. 1m deep and 320m². No notable macrophyte communities, partially shaded. This pond was not surveyed during 2014.
- j. **Pond 10** – Elongate pond bounded by trees and scrub. 1.5m deep and 800m². No notable macrophyte communities, partially shaded. This pond was not surveyed during 2014.

6.4.8.19 Running Water

- 6.4.8.10.1 A number of slow flowing ditches occur within the Application Site, dominated by Sow Dike which runs from north to south through the site; smaller tributary ditches run into this system. Ditches are all less than 3 metres in width and range between 1-2 metres in depth and are typically associated with arable field margins for land drainage. Ditches appear to range from ephemeral tributaries to the year-round water in Sow Dike. Aquatic species is poor and ditches appear subjected to agro-chemical drift and run-off. Species are dominated by water plantain *Alisma plantago-aquatica*, lesser duckweed *Lemma minor* and common water starwort *Callitriche stagnalis*.

6.4.8.11 Arable

- 6.4.8.11.1 This habitat occurs scattered throughout the Application Site, primarily in the western half of the site and is subject to fertilizer, pesticide and herbicide applications. These fields are well drained and have been in agricultural production for a long-time period. Currently, these field are used for a mixture and rotation of bean, cereal crop, and brassica production. There are very few other species growing with the exception of germander speedwell *Veronica chamaedrys* and scarlet pimpernel *Anagallis arvensis*.

6.4.8.12 Amenity grassland

- 6.4.8.12.1 This habitat is limited and occurs around farm buildings as lawns and tends to be regularly managed throughout the growing season, the grassland is kept to a short lush sward. These areas do not show any significant amounts of weed removal or fertilizer applications and are well drained. Species composition is dominated by annual meadow grass *Poa annua*, perennial ryegrass, common daisy *Bellis perennis*, white clover and black medic *Medicago lupulina*.

6.4.8.13 Intact hedge (species poor & rich)

- 6.4.8.13.1 Hedgerows show a diversity of structures and range from between 6 to 2 metres in height with managed and unmanaged sections. Most hedgerows are intact with a complete structure with the occasional exception in the form of gaps up to 10 metres in length. They do not appear to be regularly managed with the exception

of roadside hedges which have evidence of flailing. These hedgerows do not show large amounts of ancient management practices with the occasional evidence of laying within them. No ancient hedgerow indicator communities were found within their bases. Species composition within the hedges comprises of hawthorn, ash, field rose, goat willow, blackthorn *Prunus spinosa*, hazel *Corylus avellana*, wild cherry *Prunus avium* and field maple.

6.4.8.14 Fence

6.4.8.14.1 Small numbers of fences occur around farmyards and to a lesser extent within field boundaries. These have predominantly fallen out of use and are of negligible value to wildlife.

6.4.8.15 Buildings

6.4.8.15.1 The following buildings/farms are present on site:

- a. **Galtres Farm (Target Note 2)**
 - **Farm buildings** – comprise cement fibreboard and tin roofs with timber and breezeblock walls.
 - **Farmhouse** – comprises a hipped pan tile roof and redbrick walls.
- b. **Whisker Farm (Target Note 4)**
 - **Farmhouse** – comprises a pitched pan tile roof with redbrick walls.
 - **Farm buildings** – comprises timber, cement fibreboard and tin structures.
- c. **Bungalow 1 (North Lane) (Target Note 5)** – Occupied single storey building comprising red brick walls and a pitched pan tile roof.
- d. **Bungalow 2 (North Lane) (Target Note 7)**
 - **Residential Bungalow** - Occupied single storey building comprising red brick walls and a pitched pan tile roof.
 - **Outbuildings (old piggery and chicken huts)** - comprise timber and red brick. Many have collapsed and all are unused.
- e. **Derelict House & Farm Buildings (North Lane) (Target Note 6)**
 - **House** – Unoccupied two storey building comprises brick walls and a pitched roof covered with pan tiles.
 - **Farm Buildings** – Approximately 4 almost completely collapsed buildings with tin roofs and red brick walls.
 - **Nissen Hut** – Red brick walls with a rounded cement fibreboard roof.

6.4.8.16 Bare ground

6.4.8.16.1 These habitats occur around the periphery of farm buildings and along lanes, they primarily comprise gravel and exposed earth used for vehicles and access to buildings. This habitat is of no significant ecological value with silverweed *Argentina anserina* and pineapple mayweed *Matricaria discoidea* found growing.

6.4.9 The following species were recorded during the phase 1 field survey:

- Blackbird *Turdus merula*
- Robin *Erithacus rubecula*
- Song thrush *Turdus philomelos*
- Wren *Troglodytes troglodytes*
- Chiffchaff *Phylloscopus collybita*

- Goldcrest *Regulus regulus*
- Great tit *Parus major*
- Coal tit *Parus ater*
- Blue tit *Cyanistes caeruleus*
- Long-tailed Tit *Aegithalos caedatus*
- Starling *Sturnus vulgaris*
- House sparrow *Passer domesticus*
- Chaffinch *Fringilla coelebs*
- Goldfinch *Carduelis carduelis*
- Swallow *Hirundo rustica*
- House martin *Delichon urbicum*
- Great spotted woodpecker *Dendrocopos major*
- Woodpigeon *Columba palumbus*
- Feral pigeon *Columba livia*
- Collared dove *Streptopelia decaocto*
- Pied wagtail *Motacilla alba*
- Dunnock *Prunella modularis*
- Carrion crow *Corvus corone*
- Magpie *Pica pica*
- Jackdaw *Corvus monedula*
- Rook *Corvus frugilegus*
- Jay *Garrulus glandarius*
- Black headed gull *Chroicocephalus ridibundus*
- Herring gull *Larus argentatus*
- Grey heron *Ardea cinerea*
- Buzzard *Buteo buteo*
- Hobby *Falco subbuteo*
- Sparrowhawk *Accipiter nisus*
- Kestrel *Falco tinnunculus*
- Rabbit *Oryctolagus cuniculus*
- Brown hare
- Field vole *Microtus agrestis*
- Brown rat *Rattus norvegicus*
- Roe deer *Capreolus capreolus*
- Mole *Talpa europaea*
- Peacock *Aglais io*
- Small tortoiseshell *Aglais urticae*
- Red admiral *Vanessa atalanta*
- Large white *Pieris brassicae*

6.4.10 The surrounding habitat is potentially important and the development area may impact upon mobile species. Consequently, the extended phase 1 assessment targeted the following species relevant to the Application Site and proposed development:

- Bats
- Great crested newt
- Badger
- Reptiles
- Birds
- Hedgehog
- Water vole
- Otter

6.5 Bats

6.5.1 The bat survey involved an initial walkover of the Application Site to assess the overall habitat quality for bats. This included the identification of key potential foraging habitat and potential flight corridors. This survey also targeted any potential or actual roost sites and evidence of actual bat use i.e. droppings, feeding signs.

6.5.2 Trees were assessed for features associated with arboreal bat species, in this region predominantly Daubenton's bat, Natterer's bat, noctule, common pipistrelle, soprano pipistrelle and brown long-eared. Such features typically consist of:

- Woodpecker holes
- Trunk and bough splits
- Tear outs
- Flush cuts
- Frost damage
- Wounds
- Cankers
- Dense ivy growth
- Areas of but rot
- Dry knot holes
- Impact shatters
- Dense epicommic growth.

6.5.3 Buildings were also assessed for their potential to support bats, species typically associated with buildings in this region include common pipistrelle, soprano pipistrelle, brown long eared, Natterer's bat, whiskered bat and Brandt's bat. Buildings are more likely to support bats with the following features:

- Pre (or early 20th century)
- Agricultural buildings, built with traditional brick, stone and timber
- Buildings which have large and complicated roof voids with unobstructed flying spaces
- Large roof timbers with mortise joints, ridge beams, cracks and holes
- Entrances to fly through, like open doors and windows
- Poorly maintained internal fabric
- South facing roofs
- Weatherboarding and/or hanging tiles

- Undisturbed buildings or roofs
- A complex of similar buildings, in good habitat.

6.5.4 Conclusions

6.5.4.1 Following the visual inspection, an assessment was made of the buildings and trees potential to support roosting bats. All of the buildings have potential for roosting bats and a further detailed inspection required if any building are to be disturbed or demolished.

6.6.4.2 Currently, a number of trees, particularly hedgerow pedunculate oaks, contain features suitable for roosting bats, this is predominantly with respect to knot holes and splits from branch drops. These are suitable for roosting bats and may be of more importance in this region given the limited amount of tree cover.

6.6.4.3 Boundary and interior features are optimum for foraging and commuting bats and include woodland, plantation and hedgerow habitats. In addition, the mosaic of habitats present on site may be of local importance to local bat populations.

6.6 Great crested newt.

6.6.1 Records of great crested newt occur within 2km of the Application Site. The closest known populations occur at Huntington and Monks Cross.

6.6.2 The entire Application Site was assessed for its potential to support great crested newts, whilst conducting a walkover survey. In addition, aerial photographs, maps and physical searches of the surrounding landscape gave an impression of how the Application Site is connected ponds within the locality and potentially great crested newt populations.

6.6.3 Refuge search.

6.6.3.1 Amphibians can take refuge under logs, bark and stones whilst in terrestrial habitat. All available features within the Application Site were turned over to search for the presence of amphibians. This method is not an effective method of presence/absence; however, it can be used as a general indication of amphibians within an area. Despite the time of year amphibians are occasionally found outside of hibernacula in such situations, especially during mild damp weather such as that prior and during the field survey.

6.6.4 Results.

6.6.4.1 Ten ponds were observed during the walkover survey (see figure 3), these are either found within the Application Site boundaries or within 500 metres from its boundaries. Pond 6 was included in the original 2014 great crested newt assessment although boundary changes now mean it is over 500 metres from the site. The wider habitat contains a network of other ponds and waterbodies, which span across the adjacent agricultural landscape. The following ponds were surveyed:

- Pond 1 - SE 62774 56928
- Pond 2 - SE 63034 56958
- Pond 3 - SE 62814 56703
- Pond 4 - SE 62748 56543

- Pond 5 - SE 63319 57221
- Pond 6 - SE 63338 57628
- Pond 7 - SE 63433 57030
- Pond 8 - SE 63748 56840
- Pond 9 - SE 64273 57000
- Pond 10 - SE 64223 57070

6.6.4.2 A habitat suitability index and habitat assessment was completed on the accessible ponds. The assessment combined Phase 1 Habitat Survey (JNCC 1990), Great Crested Newt Mitigation Guidelines (English Nature 2001) and Evaluating the Suitability of Habitat for the Great Crested Newt (R. S. Oldham, J. Keeble, M. J. S. Swan and M. Jeffcote, undated) methodology. This evaluation included:

- Physical description of the pond including surrounding habitat
- Location
- Pond area
- Pond drying
- Water quality
- Shade
- Fowl
- Fish
- Other ponds within 1 km
- Terrestrial habitat
- Macrophytes (emergent and submerged vegetation cover).

6.6.4.3 Habitat Suitability Index (HSI) evaluation.

6.6.4.3.1 The likely presence of great crested newts in ponds can be predicted by examining aquatic habitat features such as the presence of fish, waterfowl and water quality. This data is used to calculate a habitat suitability index (Oldham *et. al.* 2000). The HSI is represented by a number from 0 to 1, the higher the number the more likely the pond is to be occupied by great crested newt.

6.6.4.3.2 The HSI system is not sufficiently precise to allow the conclusion that any high score will support great crested newts, or that a pond with a low score will not do so.

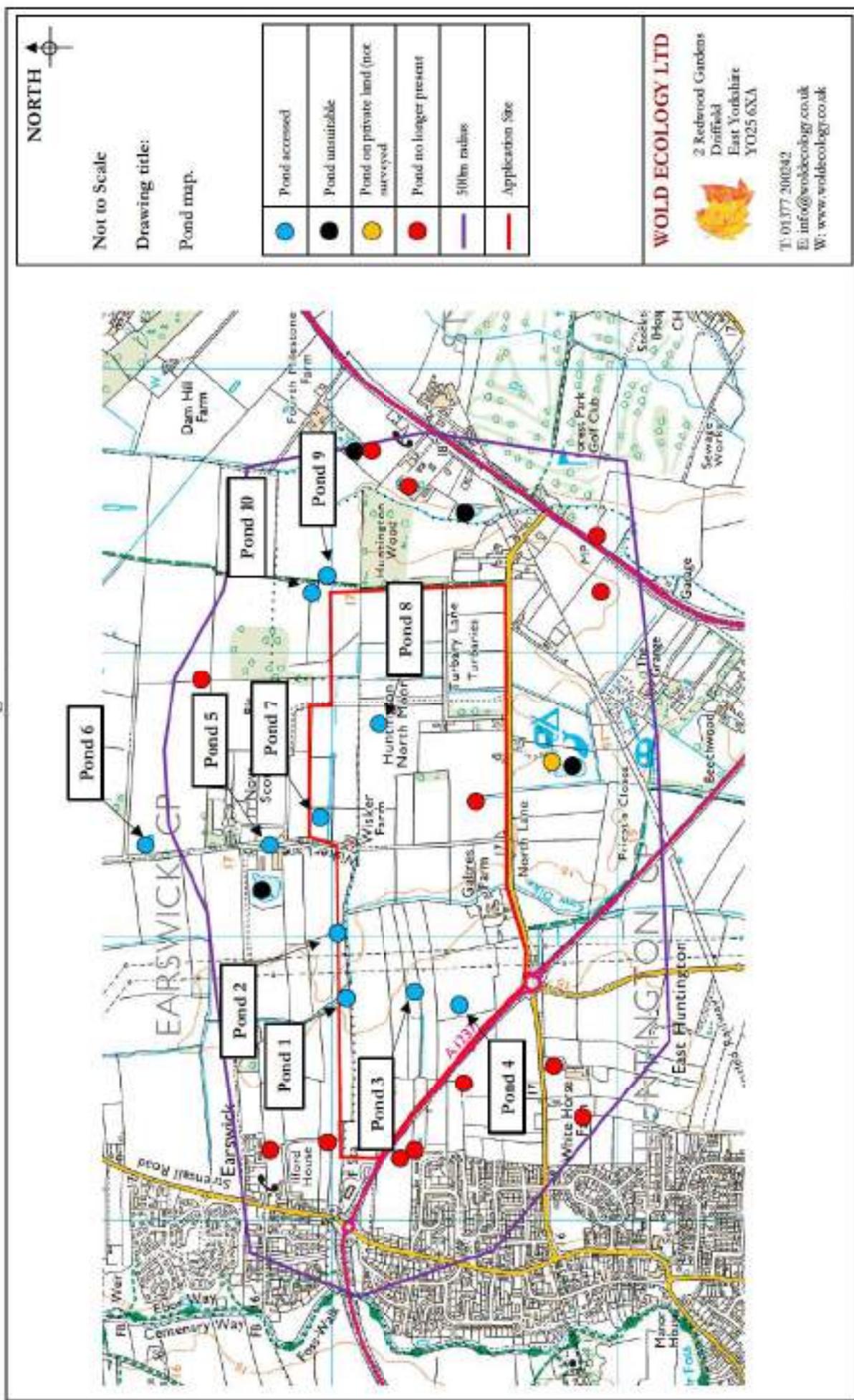
6.6.4.3.3 Full details of the HSI scoring can be viewed in Appendix 8.

6.6.4.3.4 HSI Scoring

Pond	HSI Score (tenth root of total)	Suitability
1	0.61	Average
2	0.36	Poor
3	0.58	Below Average
4	0.77	Good
5	0.63	Average
6	0.61	Average
7	0.80	Excellent

8	0.58	Below Average
9	0.75	Good
10	0.76	Good

Figure 3.



6.6.4.4 Conclusions

6.6.4.4.1 It has been determined that a great crested newt population is currently present within 2km of the Application Site. Six ponds are present within the boundaries of the Application Site, with a further three ponds within 500 metres of the Application Sites boundaries. 500 metres is within the range that great crested newt may travel to terrestrial habitat and/or other aquatic breeding sites. The upper range for dispersal is typically around 1.3km (Baker *et al* 2011) and usually concerns sub-adult newts unconcerned with breeding (Amtzen & Tennis 1993). Beebee & Griffiths, 2000, suggest that new sites are colonised rapidly. In many cases these young newts form the preponderance of the population, when recruitment is high. The wider landscape contains numerous ponds, and the remnants of several ponds which have been lost.

6.6.4.4.2 The terrestrial habitat within the Application Site is excellent for great crested newt as it provides, daytime refugia, foraging areas, hibernation areas and dispersal route ways. These features are typically associated with the ditch edges, hedgerows, woodland, farm yards and grassland. Damp grassland of this nature offers excellent foraging potential for great crested newt particularly on molluscs, beetles and worms. Consequently, the occurrence of great crested newt occurring within the Application Site cannot be reliably ruled out.

6.6.4.4.3 Great crested newt presence/absence surveys were undertaken in 2014 by Wold Ecology on the western half of the site (ponds 1-6), with no evidence of great crested newts found within the studied ponds (see Great Crested Newt Report, 2014).

6.6.5 As the report expired in spring 2017, it is recommended that the presence absence survey is undertaken again to provide current survey data for the site, additionally a further four ponds in the eastern half of the site (ponds 7-10) not included in the original survey now require survey to establish whether great crested newts are present.

6.7 Reptiles

6.7.1 The desktop study identified grass snake, adder and common lizard as the only reptile species which is found within the wider area. These species are moderately localised in North Yorkshire.

6.7.2 Results

6.7.2.1 No direct observations or field signs of reptiles was recorded on site. It is unlikely to observe reptiles on phase 1 surveys without appropriate survey methodology, especially where populations are small or sparse. A full walkover was undertaken to assess the sites potential to support reptiles.

6.7.2.2 The Application Site is considered to be suitable for reptiles for the following reasons:

- Reptiles thermoregulate in sheltered locations, predominantly in close proximity to cover such as rank or shrubby vegetation, large rocks, walls and tree stumps in which they can quickly escape. The Application Site primarily consists of a matrix of open areas, dense and open vegetation's, offering a

diversity of ecotones favoured by reptiles.

- Brash, rotten logs and decaying vegetation provide important breeding, foraging and thermoregulation habitat for slow worm and grass snake. These are present within the Application Site.
- Some of the Application Site has a south facing aspect which allows it to warm up quickly and retain heat, this is favoured by reptiles. The walls which run around the dock are particularly good habitat for common lizard.
- Reptiles use cracks, crevices and small mammal burrows to access underground refugia and hibernacula. These habitat features are numerous within the Application Site, increasing the sites value to reptiles.
- The presence of the above features, with a sufficient depth to remain frost free improves the potential for reptiles to hibernate within the Application Site.
- Reptiles are typically not very wide-ranging species, instead staying in optimum habitat. Such optimum habitat occurs within the wider area, associated with Strensall Common.
- This site has been out of us for a considerable time and has converted back to a semi-natural state, allowing time for reptiles to re colonise it.
- The site is large allowing viable self-sustaining reptile populations to occur.

6.7.3 **Wold Ecology does not recommend any further reptile surveys.**

6.8 **Birds**

6.8.1 All bird species recorded by either sight, song or call were noted, in addition particular attention was given to key species of conservation concern and which habitat within the Application Site they were recorded using. All active (and disused) nests, territorial, breeding and foraging birds were recorded in further detail to analyse how breeding birds use the Application Site.

6.8.2 The following survey followed guidance and methods recommended within *Bird Monitoring Methods, a manual of techniques for key UK species* Gilbert et.al RSPB 1998, *Common Standards Monitoring Guidance for Birds* JNCC 2004 and *Survey Techniques Leaflet 8*.

6.8.3 **Schedule 1 Listed Birds**

6.8.3.1 Wold Ecology assessed the site for the following schedule 1 listed species recorded in Yorkshire, which have the potential to breed within the Application Site and/or surrounding adjacent local area, or breed elsewhere whilst using the Application Site to forage or roost:

Species recorded within 2km	Suitability of Application Site
Hobby <i>Falco subbuteo</i>	Breeding habitat present within boundary tree lines. A single bird observed during the Phase 1 survey (September 2017)
Barn Owl <i>Tyto alba</i>	Breeding/roosting potential present in surrounding agricultural buildings. Large amounts of foraging habitat present within the Application Site. A barn owl was observed during the SINC assessment in 2007 and during great crested newt surveys in 2014.

Common Quail <i>Coturnix coturnix</i>	Suitable breeding habitat abundant in the southern half of the Application Site, associated with clover and open ryegrass lays.
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6.8.3.2 There is potential for schedule 1 listed bird species to breed on the site or used the site for foraging during the breeding phase.

6.8.4 None-schedule 1 birds

6.8.4.1 The field surveys undertaken during 2013 and 2014 recorded the following species:

Eurasian Teal *Anas crecca*
Mallard *Anas platyrhynchos*
Grey Partridge *Perdix perdix*
Common Pheasant *Phasianus colchicus*
Grey Heron *Ardea cinerea*
Red Kite *Milvus milvus*
Eurasian Sparrowhawk *Accipiter nisus*
Common Buzzard *Buteo buteo*
Common Kestrel *Falco tinnunculus*
Common Moorhen
European Golden Plover *Pluvialis apricaria*
Northern Lapwing *Vanellus vanellus*
Eurasian Cudlew *Numenius arquata*
Black-headed Gull *Larus ridibundus*
Herring Gull *Larus argentatus*
Stock Pigeon *Columba oenas*
Common Wood Pigeon *Columba palumbus*
Eurasian Collared Dove *Streptopelia decaocto*
Tawny Owl *Strix aluco*
Common Swift *Apus apus*
Great Spotted Woodpecker *Dendrocopos major*
Skylark *Alauda arvensis*
Barn Swallow *Hirundo rustica*
House Martin *Delichon urbicum*
Meadow Pipit *Anthus pratensis*
White/Pied Wagtail *Motacilla alba*
Yellow Wagtail *Motacilla flava*
Winter Wren *Troglodytes troglodytes*
Hedge Accentor *Prunella modularis*
European Robin *Eritbacus rubecula*
Common Blackbird *Turdus merula*
Fieldfare *Turdus pilaris*
Song Thrush *Turdus philomelos*
Redwing *Turdus iliacus*
Mistle Thrush *Turdus viscivorus*
Blackcap *Sylvia atricapilla*
Lesser Whitethroat *Sylvia curruca*
Common Chiffchaff *Phylloscopus collybita*
Willow Warbler *Phylloscopus trochilus*
Goldcrest *Regulus regulus*
Long-tailed Tit *Aegithalos caudatus*
Blue Tit *Cyanistes caeruleus*

Great Tit *Parus major*
Coal Tit *Periparus ater*
Eurasian Treecreeper *Certhia familiaris*
Black-billed Magpie *Pica pica*
Eurasian Jackdaw *Corvus monedula*
Rook *Corvus frugilegus*
Carrion Crow *Corvus corone*
Common Starling *Sturnus vulgaris*
House Sparrow *Passer domesticus*
Eurasian Tree Sparrow *Passer montanus*
Chaffinch *Fringilla coelebs*
European Greenfinch *Carduelis chloris*
European Goldfinch *Carduelis carduelis*
Common Linnet *Carduelis cannabina*
Yellowhammer *Emberiza citrinella*
Reed Bunting *Emberiza schoeniclus*

6.8.5 Impacts to birds

6.8.5.1 Impacts related to breeding birds are essentially related to the temporary loss of habitat which is utilised by breeding and wintering species. Due to the size of the site, it is likely that significant populations are dependent on the area and will be lost from the site without sufficient survey and mitigation.

6.8.6 The following further surveys are recommended regarding birds:

- **Breeding Bird Survey**
- **Winter Bird Survey**
- **Barn Owl Survey (including an assessment of buildings for usage)**

6.9 Badgers

6.9.1 A badger survey was undertaken during 2014 on adjacent land. As the report is valid until spring 2017, it is recommended that additional badger surveys are undertaken to provide current survey data for the site (see Wold Ecology Badger Report 2014).

6.10 Hedgehog

6.10.1 Legislation

6.10.1.1 Although the Hedgehog *Erinaceus europaeus* only receives partial protection under the Wildlife and Countryside Act 1981 (as amended), its numbers have declined dramatically over the past two decades, resulting in the suggested proposal of upgrade to a higher level of protected status. The British population has declined by 25% over the past 10 years. The reasons for the decline are thought to be complex but include the loss of hedgerows and permanent grasslands as well as agricultural intensification.

6.10.2 Survey Methodology

6.10.2.1 All features of potential value to hedgehogs are surveyed; including areas of thick vegetation, outbuildings, lawns, grassland, scrub, woodland and hedge bases. Evidence of breeding nests, hibernation nests and loafing nests were searched for

in areas of suitable cover.

6.10.2.2 Well-worn animal paths, pool edges and footpaths were inspected for hedgehog footprints. Open areas were inspected for hedgehog droppings, particularly amenity grassland. Additionally, the surrounding road system was surveyed for road casualties.

6.10.2.3 The following field signs will indicate the presence of hedgehogs:

- Nests within dense vegetation
- Hedgehog droppings
- Hedgehog prints
- Road casualties.

6.10.3 Results.

6.10.3.1 No evidence of hedgehogs was noted during the phase 1 survey. The Application Site is likely to support hedgehogs owing to the large amounts of suitable nesting and foraging habitat present. Consideration should be given to hedgehogs during the proposed development.

6.11 Water vole

6.11.1 All aquatic habitats within the Application Site were assessed. This typically includes streams, ditches, rivers, ponds and rush-pasture/marsh habitats; particularly when attached to other habitat corridors in the case of the latter two habitats.

6.11.2 A visual search for the presence of water voles and their signs was undertaken within any suitable habitat within or adjacent to the Application Site. Specifically, the visual survey involved:

- Actual sightings
- Evidence of burrow entrance holes
- Cropped "gardens" around tunnel entrances
- Survey for latrines and droppings
- Remains of feeding stations
- Runways through vegetation
- Paths along the water's edge
- Footprints
- Dead animals or parts of dead animals

6.11.3 Results.

6.11.3.1 There were no sightings or evidence to suggest that water vole is present on the ditches within 100 metres of the proposed development area. However, some sections of these ditches were inaccessible at the time of survey. It was beyond the remit of the phase 1 survey to check ditches in detail for water vole activity.

6.11.3.2 The Application Site is suitable for water voles because:

- They are recorded within 1km of the Application Site; water voles exist in meta-populations. The likelihood of presence is significantly increased close to where existing populations already occur.
- The Application Site contains densely vegetated banks of waterbodies and

ditches, water voles usually inhabit the vegetation up to two metres from the water's edge.

- Banks with loamy sandy soils and a gradient suitable for burrowing in are present throughout the waterbodies and ditches within the Application Site.
- Water voles are closely associated with diverse native vegetation. Rich diversity of aquatic and terrestrial macrophytes for feeding, nest building and cover occur within the Application Site.
- The presence of year-round open water for escaping from predators, dispersal, drinking and aquatic plant food as well as shelter at extremes of water level fluctuations are all present within the habitat structure in the waterbodies close (<100m) from the proposed development area.
- The Application Site has a lack of significant invasive grazing around the water's edge and a lack of significant habitat disturbance throughout the site.
- Habitat connectivity to the wider area is good and is not prohibited by sub optimum habitats, drained waterways, culverts, excessive woodland cover along waterways and poor water quality.

6.12 Otter Survey

6.12.1 This involved walking the banks of all waterbodies in and adjacent to the application site, to identify field signs (see below). Regarding resting sites, these were considered on the basis of being sites that are typical of the places known to be used by otters for lying-up and show evidence of use. Three categories were used to describe resting sites:

- **Actual resting sites** were where there were signs that the site was well used by otters including a well trampled entrance, otter spraints and footprints
- **Possible resting sites** were where the site was typical of an otter resting site with obvious evidence that it was being used by a mammal but no signs that otters were using the site
- **Potential resting sites** were areas that are typical of an otter resting site but with no signs of use.

6.12.2 Otter signs were looked for in a systematic manner, checking prominent habitat features such as islands, headlands and inlets. Within these areas suitable features including rocks, logs, tussocks, swan nests etc. were looked at for signs of spraints and bare wet ground for footprints. Specifically, the visual survey involved:

- Actual sightings
- Evidence of holts
- Evidence of "Couches" resting places
- Survey for spraints
- Evidence of feeding remains
- Trails and footprints

6.12.3 Results.

6.12.3.1 Otter evidence was recorded on Sow Dike with spraints found on ditch debris. It is likely that otters travel through the ditch systems within the Application Site whilst foraging between fishing ponds. No holts were located within the Application Site or accessible adjacent land, however given the large size of the site, suitable habitat does occur for holt creation and for laying up during the day.

6.12.3.2 The Application Site is suitable for otters because:

- They are recorded within 1km of the Application Site; otters are good dispersers travelling along river corridors, ditch systems and streams they can also travel away from water between watersheds along hedgerows systems and more open habitats such as arable farmland. The likelihood of presence is significantly increased close to where existing populations already occur.
- The Application Site contains undisturbed vegetated banks and bramble thickets. These habitat features offer daytime holding up sites “couches”, used by resting otters.
- The watercourse banks are made up of loamy sandy soils and a gradient suitable for holt creation. They also contain root systems from trees such as ash and sycamore, suitable in structure to contain holts.
- The Application Site supports a diversity of species such as fish, small mammals, water birds, amphibians and invertebrates which make up the otter’s diet.
- The presence of year-round open water for escaping from disturbance, dispersal, preening, feeding as well as shelter at extremes of water level fluctuations are all present within the habitat structure in the waterbodies close (<100m) from the proposed development area.
- The Application Site has a lack of significant disturbance such as dog walkers, river management and recreational activities. It also provides sheltered isolated inaccessible areas.
- Habitat connectivity to the wider area is good and is not prohibited by sub optimum urban habitats, busy road networks and excessive culverts on waterways.

7.0 EVALUATION OF SURVEY RESULTS

7.1 Overall Approach to Assessment.

7.1.1 The overall approach to assessment followed in this report can be summarised as: A baseline identification of the nature conservation interest within the ecological Application Site by establishing levels of interest for ecological features measured against definable criteria.

7.2 Evaluation Criteria.

7.2.1 The thorough evaluation of the ecological importance of a site is essential in order to assess the significance of the ecological assessment

7.2.2 The evaluation criteria are given in detail in Appendix 6. Their aim is to consider the habitats, communities and species present on site in relation to the following:

- The legislative framework (e.g. the Wildlife and Countryside Act 1981, Habitats and Species Regulations 2010 and the EC Directive on the Conservation of Habitats and Wild Fauna and Flora (92/43/EEC) for the presence of protected species and habitats).
- Nature conservation designations, including national site designations (Sites of Special Scientific Interest, National Nature Reserves etc.), local designations (Sites of Importance for Nature Conservation, Local Nature Reserves, County Wildlife Sites etc.).
- Accepted criteria for species rarity and declining populations, and rarity of habitat types or communities, including species and habitats identified in the British Red Data Books, national biodiversity action plan, and species and habitats identified in regional or local biodiversity action plans where available.
- Accepted criteria for overall site evaluation (including rarity, diversity, naturalness, historical factors and issues relating to landscape ecology).

7.3 Evaluation of Survey Results.

7.3.1 The field survey work did not identify the presence of any habitats or plant species considered rare in the United Kingdom.

Rarity is defined in this report as:

Rare—species not recorded in more than 100, 10 x 10 km grid-squares in the British Isles.

Very Rare—species not found in more than 15 different 10 x 10 km grid-squares in the British Isles.

7.4 Habitats

7.4.1 Biodiversity Action Plans (BAP) and Species and Habitats of Principal Importance for the Conservation of Biological Diversity

7.4.1.1 In 1995, 'Biodiversity: The UK Steering Group Report' was published, which aimed to conserve and enhance biological diversity within the UK, including action plans for 38 key habitats and for 402 of our most threatened species. These plans describe the status of each habitat and species, outline the threats they face, set targets and objectives for their management, and propose actions necessary to achieve

recovery. The Biodiversity Action Plans (BAP) have recently been updated, new ones added and others removed, so there are now 1,149 species and 65 habitats that have been listed as priorities for conservation action. A list of these UK BAP species and habitats can be found at <http://www.ukbap.org.uk/NewPriorityList.aspx>.

7.4.1.2 In addition, there are approximately 150 Local Biodiversity Action Plans (LBAP), normally at county level. These plans usually include actions to address the needs of the UK priority habitats and species in the local area, together with a range of other plans for habitats and species that are of local importance or interest.

7.4.1.3 The following BAP Habitats are recorded on site.

UK BAP broad habitat.	UK BAP priority habitat.	Habitat present within the Application Site.
Rivers and Streams	Rivers	N
Standing Open Waters and Canals	Oligotrophic and Dystrophic Lakes	N
	Ponds	Y
	Mesotrophic Lakes	N
	Eutrophic Standing Waters	N
	Aquifer Fed Naturally Fluctuating Water Bodies	N
Arable and Horticultural	Arable Field Margins	Y
Boundary and Linear Features	Hedgerows	Y
Broadleaved, Mixed and Yew Woodland	Traditional Orchards	Y
	Wood-Pasture and Parkland	N
	Upland Oakwood	N
	Lowland Beech and Yew Woodland	N
	Upland Mixed Ashwoods	N
	Wet Woodland	N
	Lowland Mixed Deciduous Woodland	N
	Upland Birchwoods	N
Coniferous Woodland	Native Pine Woodlands	N
Acid Grassland	Lowland Dry Acid Grassland	N
Calcareous Grassland	Lowland Calcareous Grassland	N
	Upland Calcareous Grassland	N
Neutral Grassland	Lowland Meadows	N
	Upland Hay Meadows	N
Improved Grassland	Coastal and Floodplain Grazing Marsh	N
Dwarf Shrub Heath	Lowland Heathland	N
	Upland Heathland	N
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps	N
	Purple Moor Grass and Rush Pastures	N
	Lowland Fens	N
	Reedbeds	N
Bogs	Lowland Raised Bog	N
	Blanket Bog	N
Montane Habitats	Mountain Heaths and Willow Scrub	N
Inland Rock	Inland Rock Outcrop and Scree Habitats	N
	Calaminarian Grasslands	N
	Open Mosaic Habitats on Previously Developed Land	N

	Limestone Pavements	N
Supralittoral Rock	Maritime Cliff and Slopes	N
Supralittoral Sediment	Coastal Vegetated Shingle	N
	Machair	N
	Coastal Sand Dunes	N
Marine Habitats		N

7.4.2 Hedgerows

7.4.2.1 A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide (Bickmore, 2002). Any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat, where each UK country can define the list of woody species native to their respective country. Climbers such as honeysuckle and bramble are recognised as integral to many hedgerows, however they require other woody plants to be present to form a distinct woody boundary feature, as such they are not included in the definition of woody species. The definition is limited to boundary lines of trees or shrubs, and excludes banks or walls without woody shrubs on top of them.

7.4.2.2 Based on an analysis of Countryside Survey data, using the threshold of at least 80% cover of any UK native woody species, it is estimated that 84% of countryside hedgerows in GB would be included. Hedgerows are a primary habitat or at least 47 species of conservation concern in the UK, including 13 that are globally threatened or rapidly declining, more than for most other key habitats. They are especially important for butterflies and moths, farmland birds, bats and dormice (where locally present).

7.4.2.3 Since 1945 there has been a continual decline in both the quantity and quality of the UK's native hedgerows either through removal or poor management practices. The Environment Act 1995 introduced an enabling power to protect important hedgerows in Britain. Land managers are required to consult local authorities before hedgerows can be removed. Article 10 of the EC Habitats Directive requires member states to encourage the management of linear features such as hedgerows in their planning and development policies and with a view to improving the ecological coherence of the Natura 2000 network. This is supported by the Habitats and Species Regulations 2010, which recognises the importance of these features for the migration, dispersal and genetic exchange of wild species. NPPF further encourages the development of policies for the management of hedgerows.

7.4.2.4 UKBAP targets for hedgerows are:

- Maintain the net extent of hedgerows across the UK
- Maintain the overall number of individual, isolated hedgerow trees and the net number of isolated veteran trees;
- Ensure that hedgerows remain, on average, at least as rich in native woody species
- Achieve favourable condition of 348,000 km (50%) by 2015
- Reverse the unfavourable condition of over-managed hedgerows across the UK by reducing the proportion of land managers who trim most of their

hedges annually

- Halt further decline in the condition of herbaceous hedgerow flora in Great Britain by 2010 (and improve their condition by 2015)
- Improve the condition of the hedgerow tree population by increasing numbers of young trees (1-4 years) in Great Britain to 80,000 by 2015 and
- Achieve a net increase in the length of hedgerows of an average of 800 km per year in Great Britain to 2015.

7.4.2.5 The criteria for an important hedgerow are one or more of the following:

- Marks a pre-1850 parish or township boundary.
- Incorporates an archaeological feature.
- Is part of, or associated with, an archaeological site.
- Marks the boundary of, or is associated with, a pre-1600 estate or manor.
- Forms an integral part of a pre-parliamentary enclosure field system.
- Contains certain categories of species of bird, animals or plants listed in the Wildlife and Countryside Act or Joint Nature Conservation Committee (JNCC) publications and includes:
 - (a) at least seven woody species, on average, in a 30m length.
 - (b) at least six woody species, on average, in a 30m length and has at least three associated features.
 - (c) at least six woody species, on average, in a 30m length including a black-poplar tree, or a large-leaved lime, or small-leaved lime, or wild service-tree.
 - (d) at least five woody species, on average in a 30m length and has at least four associated features.

7.4.2.6 Runs alongside a bridleway, footpath, road used as a public path, or a byway open to all traffic and includes at least four woody species, on average, in a 30m length and has at least two of the associated features listed at (i) or (v) below. The associated features are:

- (i) a bank or wall supporting the hedgerow.
- (ii) less than 10% gaps.
- (iii) on average, at least one tree per 50m.
- (iv) at least three species from a list of 57 woodland plants.
- (v) a ditch.
- (vi) a number of connections with other hedgerows, ponds or woodland.
- (vii) a parallel hedge within 15m.

7.4.2.7 Based on the criteria above, hedgerows within and adjacent to the Application Site are UKBAP habitat.

7.4.2.8 If applicable, hedges should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked* by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged. **Permission should be granted from the planning authority prior to removing a hedge and new hedgerows should be planted to compensate for the hedge removal.**

* Thick and overgrown hedgerows are often difficult to inspect fully and removal of a hedge during the spring/summer period is not recommended.

- 7.4.2.9 During the construction period, it is important that a root protection exclusion zone is in place adjacent to any hedgerow. This must be at least 5m from the centre of the hedge and must be kept free of plant and storage of building supplies.
- 7.4.2.10 The hedgerows should ideally be maintained to a minimum height of at least 2m and kept free of fertilisers, pesticides and development on land within 3m of the hedge centre. The long-term management of these hedges will add to their biodiversity value; the hedge should be cut only once every three calendar years and should not be cut between the beginning of February and mid-September to ensure breeding birds are not disturbed. Hedge cutting should occur outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive). Cutting the hedge in January will provide maximum quantities of food for birds over winter.
- 7.4.2.11 The hedgerows should be trimmed every three years at the end of winter, avoiding periods of hard frost. This is to maintain the current shape and condition of the hedgerows. Hedgerows less than 2m in height should be lightly trimmed along the sides annually until a desired height of at least 2.5m is reached.
- 7.4.2.12 Currently, the hedgerow bases are quite sparse with a limited forbe layer. A minimum 3m grass margin adjacent to the hedges adjacent within the Application Site should be encouraged and allowed to provide rough grassland dispersal routes and habitat for small mammals. The hedgerow should be cut during late summer (August/September) with all cuttings should be removed from the site to stop soil enrichment and the smothering of less competitive species of herb. The grassland should be cut every 2-3 years, as part of the management program on a 2-3 year rotation, to avoid scrub encroachment. The grassland margins should be topped at 12cm to encourage tussocks.
- 7.4.2.13 Some of the hedgerows are beyond the laying stage and would benefit from infilling gaps with new shrubs rather than coppicing. The standing dead, dying and old wood is a feature which should be retained.
- 7.4.2.14 The new hedgerows should consist of:
- Hawthorn
 - Blackthorn
 - Holly
 - Hazel
 - Dogwood
 - Field Maple
 - Crab Apple

7.4.3 Ponds

7.4.3.1 Description

- 7.4.3.2 Ponds, for the purpose of UK BAP priority habitat classification, are defined as permanent and seasonal standing water bodies up to 2 ha in extent which meet one or more of the following criteria:
- Habitats of international importance; Ponds that meet criteria under Annex I of the Habitats Directive.

- Species of high conservation importance: Ponds supporting Red Data Book species, UK BAP species, species fully protected under the Wildlife and Countryside Act Schedule 5 and 8, Habitats Directive Annex II species, a Nationally Scarce wetland plant species, or three Nationally Scarce aquatic invertebrate species.
- Exceptional assemblages of key biotic groups: Ponds supporting exceptional populations or numbers of key species. Based on (i) criteria specified in guidelines for the selection of biological SSSIs (currently amphibians and dragonflies only), and (ii) exceptionally rich sites for plants or invertebrates (i.e. supporting ≥ 30 wetland plant species or ≥ 50 aquatic macroinvertebrate species).
- Ponds of high ecological quality: Ponds classified in the top PSYM category ("high") for ecological quality (i.e. having a PSYM score $\geq 75\%$). [PSYM (the Predictive System for Multimetrics) is a method for assessing the biological quality of still waters in England and Wales; plant species and / or invertebrate families are surveyed using a standard method; the PSYM model makes predictions for the site based on environmental data and using a minimally impaired pond dataset; comparison of the prediction and observed data gives a % score for ponds quality].
- Other important ponds: Individual ponds or groups of ponds with a limited geographic distribution recognised as important because of their age, rarity of type or landscape context e.g. pingos, dune slack ponds, machair ponds.

7.4.3.3 Priority habitat ponds can be readily identified by standard survey techniques such as those developed for NVC, Common Standards Monitoring, the National Pond Survey or for specific species groups. Ponds will need to be distinguished from other existing priority habitat types. The general principle to be applied is that where the standing water element is functionally a component of another priority habitat and that priority habitat definition takes account of the standing water element then it should be treated as part of that habitat. For example, small waterbodies within blanket bog should be considered as part of the blanket bog priority habitat, but ponds in heathland (which are not dealt with through the heathland HAP) should be considered under the pond priority habitat. Agreement has been reached with the lake HAP group that the pond priority habitat will cover most water bodies up to 2 ha while the lake priority habitat will cover most water bodies greater than 2ha. As with other potentially overlapping priority habitat types a small proportion of cases will need to be individually assessed to decide how they are best dealt with.

7.4.2.3 Ponds are widespread throughout the UK, but high-quality examples are now highly localised, especially in the lowlands. In certain areas high quality ponds form particularly significant elements of the landscape, e.g. Cheshire Plain marl pits, the New Forest ponds, pingos of East Anglia, mid-Wales mawn pools, the North East Wales pond landscape, the forest and moorland pools of Speyside, dune slack pools, the machair pools in the Western Isles of Scotland, and examples of Habitats Directive Annex I pond habitats across Northern Ireland.

7.4.3 Working adjacent to watercourses

- 7.4.3.1 If applicable, potential discharge of foul water into the adjacent watercourses should be addressed by a Land Drainage Consultant.
- 7.4.3.2 Under the Water Resources Act 1991 and associated byelaws, works in, over, under or adjacent to 'main rivers' require the consent of the Environment Agency. This is to ensure that they neither interfere with the Agency's work nor adversely affect the environment, fisheries, wildlife and flood defence in the locality. The Environment Agency functions under the responsibilities of the Environment Act 1995. The EC Habitats Directive protects Special Areas of Conservation (SAC) and Special Protection Areas (SPA) and special consents are required from Natural England or the Countryside Council for Wales (in Wales only).
- 7.4.3.3 Construction and maintenance activities in or near water have the potential to cause serious pollution or impact on the bed and banks of a watercourse and on the quality and quantity of the water. Some activities with the potential for affecting watercourses or groundwater may require either consent in England and Wales under the Water Resources Act 1991 or an authorisation in Scotland under the Water Environment (Controlled Activities) (Scotland) Regulations 2005.
- 7.4.3.4 Types of activity that may impact upon the bed and banks of a watercourse or of a wetland include:
- repairs, maintenance or improvements to any structure in, over or above main river (as defined in the Water Resources Act 1991)
 - erection or construction of any structure, either permanent or temporary, in, over or above main river.
 - diversion of flows
 - works within the river channel or a lake/loch
 - works within 10 metres of a main river watercourse or flood defence (in England, Northern Ireland and Wales).
- 7.4.3.5 Run off from site roads and river crossings can contain high levels of silt. Reducing the pollution risk can be achieved by:
- brushing or scraping roads to reduce dust and mud deposits
 - putting small dams in artificial roadside ditches to retain silt
 - using existing permanent bridges or pipe crossings for river crossing
 - if necessary building temporary bridges - but not fording rivers and
 - working from the bank where possible – not in the river
- 7.4.3.6 Fresh concrete and cement are very alkaline and corrosive and can cause serious pollution. Concrete and cement mixing and washing areas should:
- be sited at least 30 metres from any watercourse or surface water drain to minimise the risk of run off entering a watercourse
 - have settlement and re-circulation systems for water reuse, to minimise the risk of pollution and reduce water usage
 - have a contained area for washing out and cleaning of concrete batching plant or ready mix lorries
 - wash waters from concrete and cement works should never be discharged in to the water environment.

- 7.4.3.7 Ensure machinery is properly maintained, check for oil leaks before use. There are risks of pollution from fuel, oils and silt associated with use of machinery which could result in prosecution. Particular attention should be paid to using chainsaws in or near the water's edge as chain oil sprayed during operation easily contaminates the water. Follow the correct procedures and if possible use biodegradable oil to reduce this risk
- 7.4.3.8 Ensure fuel, oil and chemical storage on site is secure. Site the storage on an impervious base within a secondary containment system such as a bund. The base and bund walls should be impermeable to the material stored and able to contain at least 110% of the volume stored. Site the storage area above any flood water level and where possible away from high-risk locations (such as within 10 metres of a watercourse or 50 metres of a well, borehole or spring), to minimise the risk of a spill entering the water environment. Biodegradable chainsaw chain bar lubricant and biodegradable hydraulic oil in plant should be used when working in or near watercourses. The Environment Agency and its contractors use biodegradable oils for their own operations. Biodegradable oils are less toxic than most of the synthetic oil but should still be stored and used to the same standards as other oils.
- 7.4.3.9 Keep a spill kit with sand, earth or commercial products that are approved for your stored materials, close to your storage area. Train staff on how to use these correctly.
- 7.4.3.10 In no circumstance should burning take place in the water course channel or close to the bank edge and ash must not blow or wash into the watercourse as it is harmful to water life
- 7.4.3.11 Be sure to stack or remove any material well away from the river to avoid it being washed into the water again during the next flood.

7.4.4 Ditches.

- 7.4.4.1 Whilst ditches are not classified as a BAP Habitat, they have the potential to support BAP species, species of conservation concern and species protected under higher legislation. Subsequently the following prescriptions are recommended.
- 7.4.4.2 The bank sides of all watercourses must be kept free of debris, storage and potential leaching of cement powders and building materials into the watercourse. It is recommended that any reclaimed building materials are stored at least 10 metres away from the edge of the bank.
- 7.4.4.3 Ditch habitat management is best carried out between September-October, when most species are not entirely dependent on the ditch but are still active and have not entered winter torpor or hibernation.
- 7.4.4.4 The ditches are currently in a moderate to poor condition and can be improved for wildlife by less vigorous management. The ditches should all be managed in a more sympathetic manner with less whole scale vegetation clearance occurring at any one time. Ideally, ditches should be managed on an 8 year rotation with only one bank of a ditch being cut in any one year. A minimum of two years between cutting should also be achieved and will provide a mosaic of ditches at different stages of vegetation growth, openness and age.

7.4.4.5 When practical; consideration should be given to widening ditch confluences to create pools at ditch junctions. These deeper pools will hold water throughout the year when other parts of the ditch dry out. They can be valuable habitat features providing refuges for water voles and other wildlife. These ponds can quickly be created during routine ditch management works by deepening and widening ditches at suitable junctions. Creating back water channels within ditch banks that hold permanent water during periods of drought and low flow and are less vigorously managed can also provide shelter to water voles during extremes in water level. These should be dug at 90° angles into the existing ditch embankments. Creating shelves, ledges and bays along straight ditch edges will help create more habitat features useful for water vole colonisation. Straight ditches with straight uniform margins offer little habitat diversity and subsequently are of less value. A diversity of vegetation from reed filled to open ditches should be achieved.

7.4.4.6 If practical the defunct drainage ditches should be restored and opened up to provide an improved drainage system and also an improved wildlife habitat. These ditches should preferably be connected to each other. Management should occur on rotation to provide a diversity of ditch structures. Only one side of the ditch should be managed in any year, preferably with smaller sections on each bank.

7.4.5 Trees

7.4.5.1 Any trees to be retained should be protected by barriers erected following guidelines given in BS5837:2012 "Trees in Relation to Construction". English Nature (2000) recommends that 'an exclusion zone of 15 times the diameter of the tree at breast height is created'. This will protect the roots from compaction and physical damage whilst protecting the tree from fertilizers and chemical applications. The latter can have a detrimental effect on the trees relationship with lichens and mycorrhizal fungi. Root protection zones should be free of plant, storage of building sundries and excavation works should be limited where possible; this will help preserve the life of the trees.

7.4.6 Arable Field Margins

7.4.6.1 Description

7.4.6.1.1 Arable field margins are herbaceous strips or blocks around arable fields that are managed specifically to provide benefits for wildlife. The arable field must be in a crop rotation which includes an arable crop, even if in certain years the field is in temporary grass, set-aside or fallow. Arable field margins are usually sited on the outer 2-12m margin of the arable field, although when planted as blocks they occasionally extend further into the field centre.

7.4.6.1.2 In general terms, the physical limits of the arable field margin priority habitat are defined by the extent of any management undertaken specifically to benefit wildlife. Single payment cross-compliance margins are considered as part of the boundary habitat and are not part of the arable field margin habitat.

7.4.6.1.3 The outer edge refers to the edge closest to the field boundary. Where there is a living field boundary (hedgerow or line of trees), any herbaceous vegetation within 2m from the centre of the living boundary is considered to be part of the living boundary habitat. The arable field margin outer boundary starts at the edge of this

boundary habitat. Where the boundary is a ditch or other water body, any herbaceous vegetation within 2m from the centre of the water body (or one metre from the edge of the water body if this extends further into the field) is considered to be part of the boundary habitat. The arable field margin outer boundary starts at the edge of this boundary habitat. Where the boundary is non-living (e.g. a fence or wall), the outer edge is defined by the extent of any management undertaken specifically to benefit wildlife. Where the habitat comprises a block of, for example, wild bird seed mixture, it has only an outer edge.

7.4.6.1.4 The inner edge refers to the edge closest to the centre of the field. In all cases, the inner edge is defined by the extent of any management undertaken specifically to benefit wildlife.

7.4.2.2 The following margin types are included:

- Cultivated, low-input margins. These are areas within arable fields that are cultivated periodically, usually annually or biennially, but are not sprayed with spring/summer insecticides and not normally sprayed with herbicides (except for the control of injurious weeds or problem grasses such as creeping thistle, black grass, sterile brome or wild oat). Cultivated, low-input margins include conservation headlands and land managed specifically to create habitat for annual arable plants.
- Margins sown to provide seed for wild birds. These are margins or blocks sown with plants that are allowed to set seed and which remain in place over the winter. They may be sown with cereals and/or small-seeded broad-leaved plants or grasses but areas sown with maize are excluded as they are of lower value for wild birds.
- Margins sown with wild flowers or agricultural legumes and managed to allow flowering to provide pollen and nectar resources for invertebrates.
- Margins providing permanent, grass strips with mixtures of tussocky and fine-leaved grasses. Areas of grass established as cross compliance requirements (see below) are excluded from this definition, but all other strips of grassland created by sowing or natural regeneration, such as field margins or beetle banks, are included.

7.4.6.3 The following margin types are excluded:

- Although set-aside, biomass and organic crops can have incidental benefits for wildlife in arable fields, these areas are not managed specifically for wildlife and are therefore excluded from the definition.
- Margins established as cross compliance requirements under the Single Payment Scheme (in England and Scotland) or as mandatory requirements of an Entry-Level Agri-environment Scheme (in Wales and likely in Northern Ireland) are excluded. These margins, where present, would be included as part of the priority hedgerow habitat, where put in place to protect the hedgerow.
- Whole-field options such as over-wintered stubbles (with or without a fallow) and in-field options such as skylark plots are currently excluded from the definition of priority habitat, although their value for wildlife is acknowledged and their status will be reviewed in due course.

- 7.4.6.4 The field margins within the Application do not meet the UKBAP criteria for arable field margins
- 7.4.7 Traditional orchards**
- 7.4.7.1 Description**
- 7.4.7.1.1 Habitat structure rather than vegetation type, topography or soils, is the defining feature of the habitat. Traditional orchards are structurally and ecologically similar to wood-pasture and parkland, with open-grown trees set in herbaceous vegetation, but are generally distinguished from these priority habitat complexes by the following characteristics: the species composition of the trees, these being primarily in the family Rosaceae; the usually denser arrangement of the trees; the small scale of individual habitat patches; the wider dispersion and greater frequency of occurrence of habitat patches in the countryside. Traditional orchards include plantings for nuts, principally hazel nuts, but also walnuts. Management of the trees is the other main feature distinguishing traditional orchards and wood-pasture and parkland. Trees in traditional orchards are, or were, grown for fruit and nut production, usually achieved through activities such as grafting and pruning; whereas timber has been the main product from trees in wood-pastures and parkland, mostly derived from pollarding or selective felling. Grazing or cutting of herbaceous vegetation are integral to orchard management, as they are in wood-pastures and parkland. The presence of scrub, mostly in the form of hedgerows on the site boundaries, or sometimes, especially in unmanaged orchards, among the orchard trees, is analogous to the frequent occurrence of scrub in wood-pastures and parkland and plays a similar ecological role (see under biodiversity characteristics described below). Ponds and other wetland features are often present; being used now, or in the past, for watering livestock.
- 7.4.7.1.2 Orchards are hotspots for biodiversity in the countryside, supporting a wide range of wildlife and containing UK BAP priority habitats and species, as well as an array of Nationally Rare and Nationally Scarce species. The wildlife of orchard sites depends on the mosaic of habitats they encompass, including fruit trees, scrub, hedgerows, hedgerow trees, non-fruit trees within the orchard, the orchard floor habitats, fallen dead wood and associated features such as ponds and streams. A feature of the biodiversity of traditional orchards is the great variety of fruit cultivars that they contain. For example, Luckwill and Pollard (1963) list 101 varieties of perry pear distributed across the parishes of Gloucestershire. This agricultural biological diversity is not an explicit part of the current UK BAP, although the UK Government is a signatory to the Global Strategy for Plant Conservation (2001). The Government response (Cheffings and others 2004) includes a target for conserving crop diversity.
- 7.4.7.1.3 Traditional orchards are defined for priority habitat purposes as orchards managed in a low intensity way, in contrast with orchards managed intensively for fruit production by the input of chemicals such as pesticides and inorganic fertilisers, frequent mowing of the orchard floor rather than grazing or cutting for hay, and planting of short-lived, high-density, dwarf or bush fruit trees.
- 7.4.7.1.4 Spacing of trees in traditional orchards can vary quite widely (from c. 3m in some plum orchards and traditional cobnut plats to over 20m in some large perry pear and cherry orchards. There is some overlap of density of planting with intensive

orchards, but these orchards often have densities at least twice as high as the most closely-spaced traditional orchard.

7.4.7.1.5 Like wood-pastures and parklands, traditional orchards can occur on a wide range of soil types, from slightly acid, relatively infertile soils to fertile river floodplain soils and lime-rich soils. Orchards can be found on slopes ranging from steep to level, and with any aspect. Generally, sites do not have badly impeded drainage, although locally, within sites, there may be wetter areas. Orchards are found in the lowland landscape in the UK, defined as the land below the altitudinal limit of enclosure (i.e. below the 'moor wall').

7.4.7.1.6 Traditional orchards can easily be distinguished from other wooded habitats based on the preponderance of domestic fruit and nut species: apple, plum, pear, damson, cherry, walnut and cobnut. Only in a very few cases will there be a significant number of other tree species in a traditional orchard, unless the orchard is becoming woodland through neglect. An arbitrary distinction of requiring, say, 50% of trees to be domestic fruit or nut species in an orchard, is rarely likely to be invoked for distinguishing orchards from wood-pasture/parkland.

7.4.7.1.7 Traditional orchards contrast with orchards managed intensively for fruit production, where there are inputs of chemicals such as pesticides and inorganic fertilisers, frequent mowing of the orchard floor rather than grazing or cutting for hay, and planting of short-lived, high-density, dwarf or bush fruit trees (stems generally 75 cm or less).

7.4.7.2 Management

7.4.7.2.1 Historical data gathered from England show that over the whole country orchard area has declined by 57% since 1950 (English Nature 2005). Orchards are hotspots for biodiversity in the countryside, supporting a wide range of wildlife and containing BAP priority habitats and species, as well as an array of Nationally Rare and Nationally Scarce species. The wildlife of orchard sites and apple trees depends on the mosaic of habitats they encompass, including fruit trees, scrub, hedgerows, hedgerow trees, the orchard floor habitats, fallen dead wood and associated features such as ponds.

7.4.7.2.2 Identification of existing apple trees on site and the planting of additional apple trees around the site will attract woodland edge species such as bullfinch *Pyrrhula pyrrhula* and song thrush *Turdus philomelos*. English Nature (2005) state that pipistrelle *Pipistrellus pipistrellus* and noctule *Nyctalus noctula* bats forage over orchards, both of which are protected species and protected within the biodiversity action plan.

7.4.7.2.3 The planting of additional apple trees around the site will attract woodland edge species such as bullfinch *Pyrrhula pyrrhula* and song thrush *Turdus philomelos*. English Nature (2005) state that pipistrelle *Pipistrellus pipistrellus* and noctule *Nyctalus noctula* bats forage over orchards, both of which are protected species and protected within the biodiversity action plan.

7.4.7.2.4 The soft landscaping scheme should consider the planting of apple varieties that tolerate the northern climate and are northern varieties. These include:

Cockpit.	Bramley Seedling.	Ribstan Pippin.
Peasgood Nonsuch.	Ellison's Orange.	Warner's King.

Dogsnout.
Sykeshouse Russet.
Stamford Pippin.
Arram White.

Bess Pool.
Balsam.
Barnack Beauty.
Flower of the Town.

Fillingham Pippin.
Allington Pippin
Yorkshire Aromatic.
Beverley Pippin.

7.5 Species

7.5.1 Bats

7.5.1.1 Legal obligations towards bats are generally concerned with roost protection. All developments, known to contain bat roosts, require a licence from Natural England. Under Section 9 of the Wildlife and Countryside Act (1981), it is an offence for anyone without a licence to kill, injure, disturb, catch, handle, possess or exchange a bat intentionally. It is also illegal for anyone without a licence to intentionally damage or obstruct access to any place that a bat uses for shelter or protection. Additional bat activity survey work will be required to determine the impact on bat populations. This will result in one of the following ways forward with the proposed development.

7.5.1.2 If a bat roost is identified and the proposed development activity will result in disturbance to the roost, it will be necessary to consult with Natural England and a Natural England development licence will be required.

7.5.1.3 Survey information will be required to inform the detail required for the Natural England licence application. The application process currently requires the input of a qualified bat ecologist/consultant and includes:

- The submission of a licence to capture, disturb and/or destroy the roosts or resting places of bats.
- The production of a detailed Method Statement to support the application. This will include a proposed work programme. One copy will be sent to a Natural England wildlife adviser for assessment. It should be noted that the Method Statement will be appended to any licence granted. The Method Statement will include the necessary mitigation required of the development.
- The production of a Reasoned Statement of Application to support the application. This will provide a rational and reasoned justification as to why the proposed activity meets the requirements of the Conservation of Habitats and Species Regulations 2010, Regulations 53(2)(e-g) and 53(9)(a-b).
- The usual timescale expected for the process of an application is approximately 30 working days from the date of acknowledgement of receipt. Natural England wildlife advisers are given 20 working days to fulfil requests for information. This timescale will also apply to requests for licence amendments.
- For additional information on licences please refer to Natural England Guidance Leaflet WML-G12 (www.naturalengland.org).

7.5.1.4 If no bat roosts are detected during the emergence/return surveys, the work can commence with adherence to a method statement which will identify safe working practices and precautions necessary to avoid injury or death to any bats that may be present in the buildings.

7.5.1.5 In order to prevent any potential impacts occurring to bats present, Wold Ecology recommend bat activity surveys (emergence and return) are

completed in spring/summer (May to August). This will provide further information on bats at the site and must target buildings and trees with bat potential.

- 7.5.1.6 Further bat activity surveys are required within 1 year of any demolition of the buildings or tree felling. This will also ensure local planning good practise guidelines are followed.
- 7.5.1.7 It is also recommended that, bimonthly activity transect surveys are undertaken between April to September, at least 3 weeks apart. This is in order to assess the usage of bats within the Application Site and will focus on potential flight lines and will use sample stopping points. Two surveyors will undertake the transect surveys at dusk and/or dawn. The aim of a transect is to ensure that the whole transect takes no more than four hours. The surveys will commence at sunset or 2 hours before sunrise.
- 7.5.1.8 A route will be chosen by a bat ecologist during daylight hours to incorporate habitat features with potential for use by foraging and commuting bats. These will include woodland, woodland edge, hedgerows, lines of trees, stream corridors, lake or pond edges, scrub margins and grassland, especially semi- or unimproved pasture – where applicable.
- 7.5.1.9 Transects will be walked at a steady pace and incorporated up to 15 listening station stops, interspersed along the chosen route at approximately 100 metre intervals. The Bat Conservation Trust (2007) recommend that 'length of each listening stop was between 2 and 5 minutes, depending on the overall length of the transect, and bearing in mind that it should take no more than 4 hours overall'.
- 7.5.1.10 Bat passes and feed buzzes will be recorded during the transect survey. This is to identify bat activity 'hotspots' and flight lines. Automated recording devices will also be used to assist with the survey.
- 7.5.1.11 Transect surveys will enable targeted management on site, retention of optimum bat habitats including dark corridors and enhanced foraging and dispersal routes.

7.5.2 **Birds**

- 7.5.2.1 It is concluded that the study site is a good habitat for woodland edge and agricultural bird species with various designations. There is nesting potential for a range of bird families such as finches, tits, sparrows, thrushes, chats and raptors. Several simple management prescriptions can improve the site for breeding bird species.
- 7.5.2.2 Any trees, shrubs and vegetation to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged. Since a number of nests are active, work will need to wait until fledging has occurred, then trees should be removed immediately to avoid other nests being created.
- 7.5.2.3 The Phase 1 survey recorded habitats potentially valuable to protected and/or birds of conservation concern. **Wold Ecology recommends a breeding bird and**

winter bird survey to enable the suit of breeding species to be assessed and mitigation recommended as appropriate. The breeding bird survey would follow an abridged version of the Common Bird Census originally set up by the British Trust for Ornithology (BTO) and described within Bird Monitoring Methods, a manual of techniques for key UK species Gilbert et.al RSPB 1998. The Common Bird Census was designed to gather a large amount of detailed data in order to assess the number of territories for every species breeding within an Application Site. For this reason the CBC recommends 10 visits. Organisations such as the RSPB have more recently designed a simpler version of the CBC for projects such as the Volunteer Farming Alliance scheme by incorporating the detailed mapping of all species using the BTO recording codes but recommending only three visits. The purpose of this simplified method of breeding bird survey is to establish actual or likely breeding. If more detailed information is required on precise territories the full CBC would be recommended. Visits would be spaced evenly and made between March and late June.

7.5.3 **Great crested newt.**

7.5.3.1 Under British legislation, the great crested newt is given full protection under section 9 of the Wildlife and Countryside Act 1981 (as amended). This Act transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'). This prohibits the intentional killing, injuring or taking, possession or disturbance of great crested newts whilst occupying a place used for shelter or protection and the destruction of these places. Protection is given to all stages of life (e.g. adults, sub-adults, larvae, and ovae).

7.5.3.2 Great crested newts, like all British amphibians, rely on water bodies for breeding, but otherwise spend much of their lives on land. They are ectotherms and have permeable skins, so most movement occurs when the air temperature is above approximately 5°C and there is, or has recently been rain.

7.5.3.3 Amphibians spend the winter in places where they will be protected from frost and flooding. Whilst on land outside of the hibernation period, great crested newts will also take refuge to shelter from extremes of weather; hence during the day they will often rest in dense vegetation, under refuges or underground. Adult great crested newts normally begin moving from their over-wintering land sites between February and April, with some adult newts not reaching the desired water body until May, depending on the weather. Not all life-stages enter water over the course of a year; immature newts (or efts) may spend all year on land.

7.5.3.4 **Wold Ecology recommend that a great crested newt presence or absence survey is undertaken on all suitable and accessible watercourses within 500m of the Application Site, prior to development work commencing.** The recommended great crested newt surveys must follow survey methods based on the guidance contained within 'Great Crested Newt Mitigation Guidelines' *English Nature*, 2001. The survey work will involve the following elements:

- Make an accurate and comprehensive assessment of the potential for great crested newts on the site and the likelihood of their presence within the development boundaries.
- Undertake four surveys of the site for great crested newt, including all ponds within 500m of proposed development. This includes seasonal ponds.

- An additional two surveys will be required if great crested newts are present. This is in order to assess the population size and is required to support any subsequent Natural England license.
- Submit a report detailing the above and offer a non-technical summary of the legal implications behind any great crested newt presence
- Make any initial recommendations for potential mitigations required in the light of survey and report, especially with regard to the need for a Natural England license.
- The requirement for great crested newt presence or absence surveys should be included on any planning decision letter. A great crested newt ecologist will be present on site during the initial start of works; in order to provide advice to contractors, managers and implement any subsequent mitigation strategies.

7.5.3.5 Field Survey Methods.

7.5.3.5.1 Egg Search - This method involves searching both live and dead submerged vegetation for great crested newt eggs. English Nature (2001) state that 'this is often a very effective method for detecting great crested newt presence'. English Nature (2001) also state that the optimum time for egg searches is between 'April and June'.

7.5.3.5.2 Bottle Trapping - This method involves setting bottle traps (normally made from 2-litre plastic bottles) around the pond margin, and leaving the traps set overnight. A density of one trap per two metres of shoreline is recommended for general survey purposes. This is a particularly reliable method for detecting the presence of great crested newts.

7.5.3.5.3 Torch Survey - This method involves searching for great crested newts at night by shining a torch in the pond. In clear ponds this can be a simple and very effective way of detecting newts.

7.5.3.5.4 Netting - Using a long-handled dip-net, great crested newts can be captured by sampling the area around the pond edge. Netting can be conducted by day or night, but better results may be obtained at night when adult newts are more likely to be in open water. There should be at least 15 minutes of netting per 50m of shoreline.

7.5.3.5.5 English Nature (2001) recommends at least 3 of the 4 field survey methods are undertaken during each visit. Four visits are required to determine the presence/absence of great crested newts and these must be undertaken during suitable weather conditions and between the months of mid-March to mid-June; with at least two of these visits occurring between mid-April and mid-May.

Method.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Egg search.												
Bottle trapping.								(L)	(L)			
Torch survey.								(L)	(L)			
Refuge search.												

Most effective		Less effective		Not effective		Larvae search (L)
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7.5.4 Hedgehogs

- 7.5.4.1 Care must be taken whilst carrying out vegetation clearance, or stimming. A thorough check of the vegetation prior to removal will help ensure that no hedgehogs are injured or killed during development works. Sleeping hedgehogs frequently suffer severe injuries from trimmers.
- 7.5.4.2 Avoid setting fire to piles of vegetation unless they have been turned, checked or moved immediately prior to burning. Hedgehogs often get killed or injured in fires during vegetation removal and during early November.

7.5.5 Invasive species

- 7.5.5.1 Himalayan balsam *Impatiens glandulifera* was recorded scattered within the boundaries of Application Site, associated with shaded ditch banks. This appears to be in the early stages of colonisation.
- 7.5.5.2 Invasive non-native plants are species which have been brought into the UK which have the ability to spread causing damage to the environment, the economy and human health.
- 7.5.5.3 As invasive plants listed under schedule 9 of the wildlife and countryside act have been identified on site, the site owner has a responsibility to prevent them spreading into the wild or causing a nuisance/damage.
- 7.5.5.4 You must not plant or otherwise cause to grow in the wild any plant listed on schedule 9 of the Wildlife and Countryside Act 1981.
- 7.5.5.5 Due to the presence of invasive plants within the Application Site, the owner must comply with specific legal responsibilities, including:
- Spraying invasive plants with herbicide.
 - Cutting and burning invasive plants.
 - Burying invasive plant material on site.
 - Disposing of invasive plants and contaminated soil off site.
- 7.5.5.6 The site owner is not obliged to remove or treat invasive plants, but must not:
- Allow invasive plants to spread onto adjacent land - the owner of that land could take legal action against you.
 - Plant or encourage the spread of invasive plants outside of your land - this can include moving contaminated soil from one place to another or incorrectly handling and transporting contaminated material and plant cuttings.
- 7.5.5.7 It is recommended that a specialist contractor is employed to remove the Himalayan balsam off site.

7.5.6 Water Vole.

- 7.5.6.1 The water vole is found throughout Britain but is confined mainly to lowland areas near water. Once common and widespread, this species has suffered a significant decline in numbers and distribution. A national survey in 1989-90 failed to find signs of voles in 67% of sites where they were previously recorded and it is estimated that this will rise to 94% by the turn of the century. A recent population estimate based on the number of latrines found suggested a total GB pre-breeding population of 1,200,000 animals.
- 7.5.6.2 In Yorkshire populations have suffered because of disturbance to riparian habitats caused by unsympathetic management, such as heavy grazing or frequent mowing; and isolated populations have become more susceptible to predation, especially by American Mink *Neovison vison*.
- 7.5.6.3 As the lower reaches of rivers become unsuitable for habitation, the distribution of water voles becomes discontinuous and existing sites become isolated and vulnerable. There are few data available on the ecology or conservation requirements of this species as its former common status means that it has attracted little study.
- 7.5.6.4 Water voles live in colonies extending along watercourses. The voles construct complicated tunnel systems in the banks with entrances both above and below the waterline.
- 7.5.6.5 Water voles are herbivorous, feeding largely on the stems and leaves of waterside plants.
- 7.5.6.6 Water voles prefer slow-moving watercourses less than 3m wide and around 1m deep, with lush bank side vegetation and no extreme water level fluctuations. Canals, water meadows and ponds are also used. In urban situations, sub-optimal areas are often inhabited, where the lack of predators can compensate for reduced bank side cover.
- 7.5.6.7 The water vole is fully protected under section 9 of Schedule 5 of the Wildlife and Countryside Act 1981 (updated 6th April 2008). Legal protection makes it an offence to:
- Intentionally kill, injure or take (capture) a water vole
 - Possess or control a live or dead water vole, or any part of a water vole
 - Intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place
 - Sell, offer for sale or advertise for live or dead water voles.
- 7.5.6.8 It is clearly not the intention of the law to prevent all development, management or maintenance works in areas used by water voles. However, legal protection does require that due attention is paid to the presence of water voles and appropriate actions are taken to avoid committing offences.
- 7.5.6.9 **Wold Ecology recommends that the watercourses within 100m of the proposed development are surveyed for presence or absence of water voles and American mink. The survey will include:**
- A thorough hand search by an experienced surveyor involving a close

examination of all waterways and pond banks up to two metres from the water's edge. The hand search should be throughout the Application Site to determine the presence of absence of both species, by looking for field signs

- Report the findings of the field survey work and any implications which development within the Application Site may have on water voles and aquatic mammals.

7.5.6.10 The most effective period for surveying water voles is during the breeding season; between April and October. During the breeding season, water voles reach a peak in activity levels and it is at this time that they leave the most evidence of their presence, through territorial marking and feeding remains. Water voles do not hibernate; however, their activity levels drop significantly over the winter. Subsequently, winter surveys may be able to determine presence at a site, but absence can only be confirmed by doing breeding season survey visits. The following table highlights optimum water vole surveying periods:

	J	F	M	A	M	J	J	A	S	O	N	D
Breeding season												
Survey season												

Most effective	
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Less effective	
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7.5.7 Otters

7.5.7.1 Otters have recently begun to increase in populations after a prolonged historical decline. Their numbers were heavily depleted through habitat loss, habitat degradation as well as persecution through hunting and trapping. Despite the recent increase otters are still vulnerable to population isolation and decline.

7.5.7.2 Otters are semi aquatic mammals and require aquatic habitats to carry out their basic biological functions. Otters are found in both fresh and salt water ecosystems, however within saline habitats they still require freshwater for grooming and to ensure the fur remains waterproof.

7.5.7.3 Otters are a generalist predator which predominantly feed on water dependent prey such as fish, freshwater mussels, crayfish, amphibians and water birds such as moorhens. They will also occasionally predate land mammals such as rabbits and brown rats. Otters also require undisturbed areas in which to rest, create holts and to breed and rear their cubs.

7.5.7.4 Otters are strictly protected by the Wildlife and Countryside Act 1981 (as amended) and by the EC Habitats Directive, (transposed into domestic law through the Conservation (Natural Habitats &c) Regulations 1994 (as amended) (the Habitats Regulations). Under the Habitats Regulations otters are classed as a European protected species and therefore given the highest level of protection.

7.5.7.5 Legal protection makes it an offence to:

- Deliberately capture and otter
- Deliberately disturb an otter either at its resting place or away from it.
- To intentionally kill or injure and otter
- To damage or destroy a breeding site or resting place (i.e. an otter holt).

- 7.5.7.6 It is not the intention of the law to prevent all activity in areas used by otters. However, legal protection does require that due attention is paid to the presence of otters and that appropriate actions are taken to safeguard the places they use for shelter, protection and/or breeding.
- 7.5.7.7 **Wold Ecology recommends that the watercourses within 100m of the proposed development area are surveyed for presence or absence of otters.**
- 7.5.7.8 The survey will include:
- A thorough hand search by an experienced surveyor involving a close examination of all waterways and pond banks as well as features used from territory marking such as bridges, islands, grass tussocks, tree stumps and boulders. The hand search should be throughout the Application Site to determine the presence or absence of otters, by looking for field signs.
 - Report the findings of the field survey work and any implications which development within the Application Site may have on otters.
- 7.5.7.9 Otters are active throughout the year, they also show none seasonal breeding patterns in England meaning litters can be born during any month. Consequently, otter surveys can be undertaken at any time of the year. Ideally surveys should be undertaken between extremes of water level.
- 7.5.8 Reptiles**
- 7.5.8.1 The legislation relating to the protection of the more common reptiles (adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow worm *Anguis fragilis*) in Britain is contained mainly within the Wildlife and Countryside Act (1981) as amended by the Countryside and Rights of Way Act (2000). Their inclusion on Schedule 5 gives 'partial protection' (i.e. only parts of section 9 apply). Under the Act it is an offence to;
- Intentionally (or recklessly) kill or injure commoner reptile species.
- 7.5.8.2 Reptiles are most widely distributed on large areas of ideal habitats such as heathland, moorland, rough grassland and sand dunes. However, they can be found in a wide range of other habitats that are found within the Application Site. The common factor is sufficient vegetation structure. Reptiles are often patchily distributed across a site, and may be concentrated into small areas or narrow strips of habitat, sometimes in large concentrations.
- Grass snakes tend to be found in rank grass, herbs, bramble etc. often along hedgerows, field margins and in gardens.
 - Common lizards exploit a variety of habitats, but commonly in rough or lush grassland, wasteland and heathland.
- 7.5.8.3 **Wold Ecology recommends that a reptile presence or absence survey is undertaken during the months of highest activity; April/May and/or September, when there is adequate sun but the nights are cool enough to require basking during the day. The optimum season is spring when there is an increase in mating activity and the best times of day are 0900 to 1100, and 1600 to 1900, when reptiles are most likely to be basking in open locations. The survey guidelines insist on at least 7 visits during the specified active periods and it is recommended that traps are laid at least 6 weeks prior to the surveys commencement.**

7.5.9 Flora

- 7.5.9.1 Although a plant species list was compiled during the January survey, inevitably some species will have been missed. The vegetated habitats within the Application Site are complex and are worthy of further surveys during mid-summer. This site is evidently species-rich due to the heterogeneous and disturbed nature of the site, the urban location, and the influence of the adjacent estuary.
- 7.5.9.2 Further vegetation survey of this site is desirable. However, the usual approach, the National Vegetation Classification (Rodwell, 2000), generally deals with heterogeneous urban wasteland on anthropogenic soils rather poorly, as there are few uniform stands of vegetation about which generalisations can be made, and these seldom conform well to the NVC's semi-natural stereotypes.
- 7.5.9.3 **World Ecology recommends a National Vegetation Classification assessment of the site and subsequent UK Priority habitat and Local Wildlife Site Assessment. This should be undertaken between June and July to ensure the full range of botanical species are taken into account.**

7.5.10 Management planning

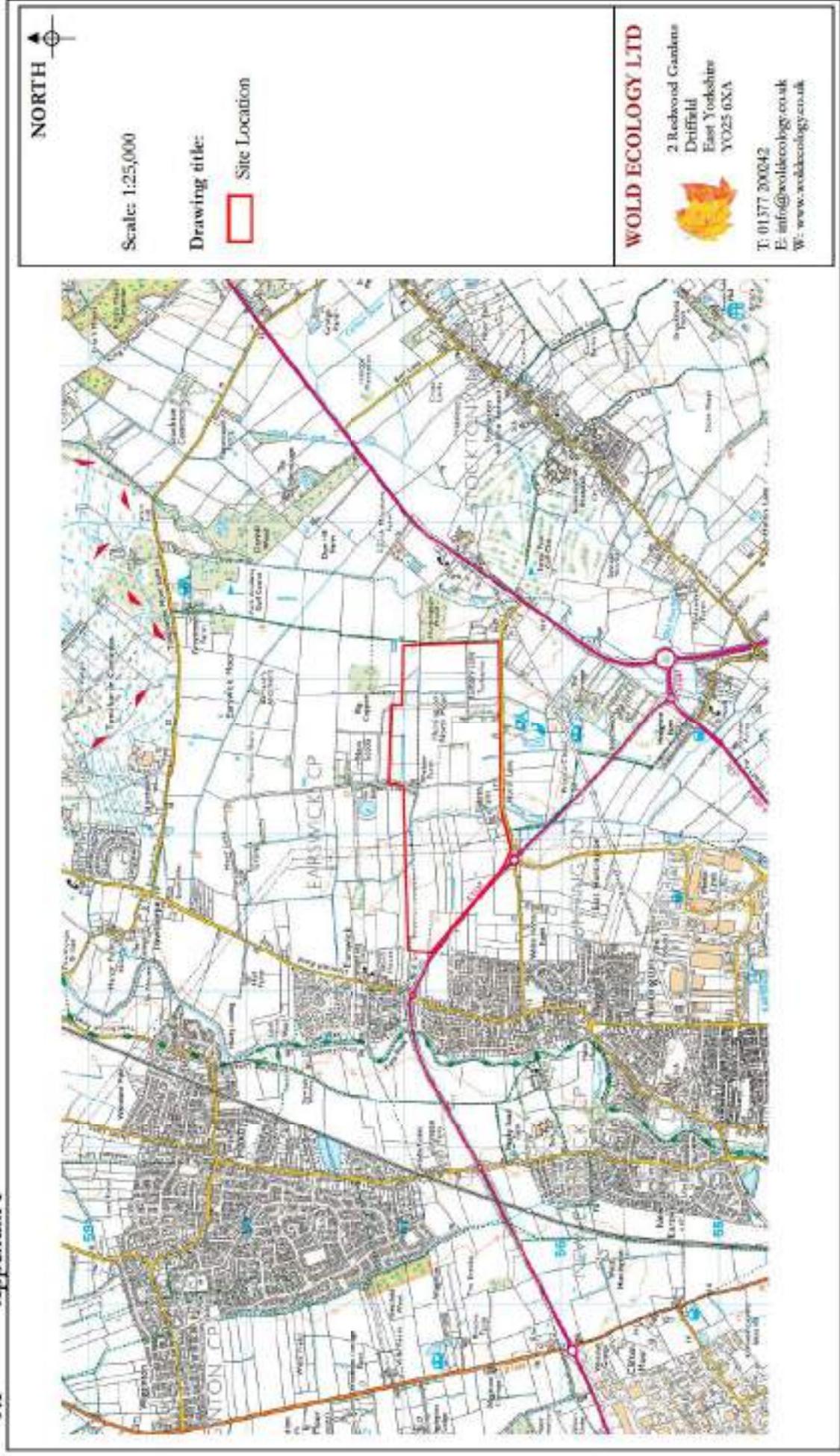
- 7.5.10.1 Management planning is an important tool in safeguarding countryside sites for future generations although, as yet, there are no statutory obligations for the production of management plans. The LA21 and BAP promote sustainable management of habitats, species and land, with management planning playing a major role in achieving this.
- 7.5.10.2 With few natural wildlife habitats remaining in Britain today and the vast majority of nature conservation sites being semi-natural, these habitats require continual management if their complex and fragile conservation value is to be preserved for generations to come.
- 7.5.10.3 The role of a management plan can be diverse and complex, but also flexible to meet the needs of the site managers. The basic role of a management plan is to help ensure the long-term conservation of habitats and related flora and fauna. Lambert et al (1990, p3) highlight that "habitats usually need to be managed if their conservation value is to be maintained" and Clarke and Mount (1998, page i) state that "management planning is all about the good stewardship of land". These two statements can only be continually achieved to an adequate standard through the formalised production of a management plan.
- 7.5.10.4 It is recommended that a detailed Construction Method Statement, an Ecological Enhancement Plan and a Management Plan is produced in order to protect, maintain and enhance the sites ecological value.

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9.0 APPENDICES

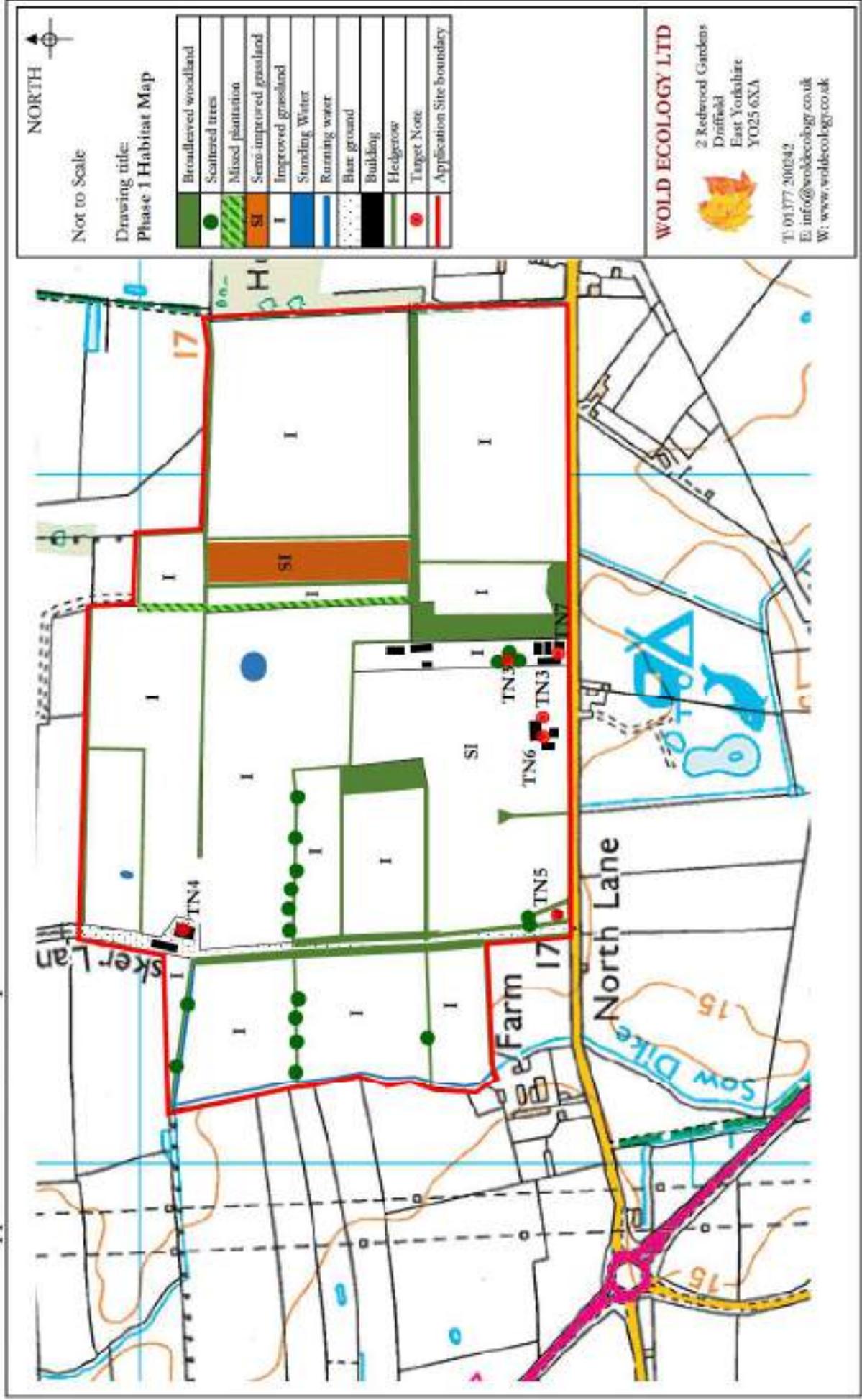
9.1 Appendix 1



9.2 Appendix 2 – Western Compartment



9.2 Appendix 2 – Eastern Compartment



Target Notes

Target Note	Description	Grid Reference
1	Whitehorse Farm Meadows	SE 62826 56772
2	Galtres Farm	SE 63121 56422
3	Traditional Orchards	SE 63038 56385, SE 63631 56402 SE 63736 56460
4	Whisker Farm	SE 63336 56920
5	Bungalow 1	SE 63371 56395
6	Derelict House & Farm Buildings	SE 63631 56402
7	Bungalow 2 & Outbuildings	SE 63743 56415

9.3 Appendix 3 – Summary of desktop study

Organisation.	Response Summary.	Date.
Natural England.	Local designations.	September 2017
Natural England.	UKBAP species and habitats within 2 km of the Application Site.	September 2017
North and East Yorkshire Ecological Data Centre.	Species lists within 2 km of the Application Site.	September 2017
National Biodiversity Network.	Species lists within 2 km of the Application Site.	September 2017
www.magic.gov.uk	European Protected species licenses within 2km of the Application Site.	September 2017

9.4 Appendix 4 - Protected Species Legislation

The following provides background to the current legislation in England - for full details reference should be made to the relevant legislation. A number of wild animals are classified as Protected Species as they are protected by various pieces of legislation. The most commonly encountered Protected Species of animal are listed in the table below. This table summarises which sections of legislation each species is protected by and the legislative text is provided on the following pages.

Legislation	Schedule 5 Wildlife and Countryside Act 1981 (As amended) Part 1						EPS	PBA
	S1 (1)	S1 (4 & 5)	S9 (1)	S9 (2)	S9 (4)(a)	S9 (4)(b)		
Adder <i>Vipera berus</i>			✓*				✓	
Common lizard <i>Zootoca vivipara</i>			✓*				✓	
Grass snake <i>Natrix natrix</i>			✓*				✓	
Slow worm <i>Anguis fragilis</i>			✓*				✓	
Smooth snake <i>Coronella austriaca</i>			✓	✓	✓	✓	✓	✓
Sand lizard <i>Lacerta agilis</i>			✓	✓	✓	✓	✓	✓
Great Crested Newt <i>Triturus cristatus</i>			✓	✓	✓	✓	✓	✓
Natterjack Toad <i>Epidalea calamita</i>			✓	✓	✓	✓	✓	✓
All UK bats Chiroptera			✓	✓	✓	✓	✓	✓
Water vole <i>Arvicola amphibious</i>			✓	✓	✓	✓	✓	
Otter <i>Lutra lutra</i>			✓	✓	✓	✓	✓	✓
Dormouse <i>Muscardinus avellanarius</i>			✓	✓	✓	✓	✓	✓
Badger <i>Meles meles</i>								✓
Red Squirrel <i>Sciurus vulgaris</i>			✓	✓	✓	✓	✓	
Pine Marten <i>Martes martes</i>			✓	✓	✓	✓	✓	
Scottish Wildcat <i>Felis silvestris</i>			✓	✓	✓	✓	✓	✓
White-clawed crayfish <i>Austropotamobius pallipes</i>			✓				✓	
All Nesting birds	✓							
Specific Nesting birds i.e. Barn Owl, Black Redstart	✓	✓						

S = Section

() = Paragraph

EPS = European Protected Species i.e. listed under Regulation 40 of the Conservation (Natural Habitats &c.) Regulations 2010

PBA = Protection of Badgers Act 1992

* = Only part of this section

Legislative Text

Wildlife and Countryside Act 1981 (as amended)

Since its original enactment, the Wildlife and Countryside Act has been subject to many changes (notably via Schedule 12 of the Countryside and Rights of Way Act 2000). These have in particular affected penalties and enforcement. Offences under section 9 of the Act are now 'arrestable'. Enforcement is usually by the Police and less frequently by Natural England. However, section 25(2) of Wildlife and Countryside Act also states that a local authority may institute proceedings. Prosecutions can result in a level five fine (currently £5000) for each offence (and the Act is specific that killing/injuring of each individual animal can constitute a separate offence), the forfeiture of any equipment, etc., used to perpetrate that offence and (under the Countryside and Rights of Way Act 2000) up to six months' imprisonment.

The Wildlife and Countryside Act 1981 (as amended), transposes into domestic law the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention). It is an offence under the various sections of Part 1 of the Act to -

- S.1 (1) intentionally kill, injure, or take any wild bird or their eggs or nests.
- S.1 (4) intentionally or recklessly kill, injure, or take any wild bird listed on Schedule 1 of the Act, or their eggs or nests (special penalties apply if convicted) (For a full list of Schedule 1 bird species see the full text of the Wildlife and Countryside Act 1981 [as amended])
- S.1(5) (a) disturb any wild bird listed on Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
 - (b) disturb dependent young of such a bird
- S.9 (1) intentionally or recklessly kill, injure or take any wild animal included in Schedule 5 (certain reptiles are only protected from killing and injuring);
- S.9 (2) be in possession or control of any live or dead wild animal included in Schedule 5 or any part or derivative;
- S.9 (4) (a) intentionally or recklessly damage or destroy, or obstruct access to, any structure or place used by a Schedule 5 animal for shelter or protection;
- S.9 (4) (b) disturb any such animal while it is occupying such a structure or place which it uses for that purpose
- S.9 (5) (a) sell, offer for sale, possess or transport any live or dead wild animal included in Schedule 5 for the purpose of sale or any part or derivative;
- S.9 (5) (b) advertise for buying or selling such things.

European Protected Species (EPS)

EPS and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats & Species Regulations, 2010. These Regulations transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

A person who—

- (a) deliberately captures, injures or kills any wild animal of a European protected species,
- (b) deliberately disturbs wild animals of any such species,
- (c) deliberately takes or destroys the eggs of such an animal, or
- (d) damages or destroys a breeding site or resting place of such an animal, is guilty

of an offence.

For the purposes of paragraph (b), disturbance of animals includes in particular any disturbance which is likely—

(a) to impair their ability—

(i) to survive, to breed or reproduce, or to rear or nurture their young, or

(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

(However, please note that the existing offences under the Wildlife and Countryside Act, which cover obstruction of places used for shelter or protection (for example, a bat roost), disturbance and sale, still apply to EPS.)

These actions can be made lawful through the granting of licenses by the appropriate authorities, e.g. Natural England. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on the wild population of the species concerned.

Protection of Badgers Act 1992 (PBA)

The main legislation protecting badgers is the Protection of Badgers Act 1992. This Act consolidates all previous legislation including the Badgers Act 1973 (as amended) and the Badgers (Further Protection) Act 1991. Under the 1992 Act it is an offence to:

- destroy a sett
- interfere with a badger sett by damaging a sett or any part thereof
- obstruct access to a sett
- disturb a badger while occupying a sett
- wilfully kill, injure, take or attempt to kill, injure or take a badger;
- dig for a badger
- possess a dead badger or any part of a badger
- cruelly ill-treat a badger
- use badger tongs in the course of killing, taking or attempting to kill a badger
- sell or offer for sale or control any live badger
- mark, tag or ring a badger
- cause a dog to enter a sett

The 1992 Act defines a badger sett as: “any structure or place which displays signs indicating current use by a badger”. Since development operations may take place over a protracted period, Natural England recommends that licences be sought for developments that may affect seasonally-used setts as well as main setts. Natural England considers a good guide to be that if a sett has shown signs of occupation within the past twelve months it is considered active.

The Protection of Badgers Act 1992 allows for licences to be issued for a number of purposes, including development under the Town and Country Planning Act 1990 and to prevent serious damage to property. Licences to interfere with badger setts or disturb badgers for development are issued by the Government’s statutory

nature conservation agencies, e.g. Natural England.

9.5 Appendix 5 - Staff Profiles

Surveyor Profile – Daniel Lombard B Sc. (Hons), MCIEEM.

Job title: Ecologist.

Career Summary.

- Daniel has spent all his working life in the environmental sector. He is an experienced and competent field ecologist with proven skills in species identification across a range of biota and an in-depth appreciation of many aspects of biodiversity, ecology and biology.
- Upon leaving University Daniel volunteered with a range of conservation organisations including The Wildlife Trust, North York Moors National Park, BTO and RSPB.
- He briefly operated as a freelance ecologist before starting full time at Wold Ecology.
- Daniel is currently involved in a number of local projects in which he has volunteered his time and resources. He is a member of Filey Bird Observatory and acts as the recorder for both Dragonflies and Butterflies within the group.
- He acts as an ecologist giving free advice to the Yorkshire branch of Butterfly Conservation including habitat management plans and field surveys. He also contributes to the BTO bird ringing scheme, helping in the scientific study birds.
- Daniel also contributes to national invertebrate, bird, fungi and mammal recording schemes.

Project Experience in last 5 years.

- Daniel has undertaken over 300 bat activity surveys since 2010 including dawn and dusk surveys at a range of sites across England.
- Daniel specialises in reptile, amphibian, bird and mammal surveys and has undertaken a wide range of surveys for species including otter, water vole, badger, adder, grass snake, common lizard, slow worm and great crested newt. This includes writing and contributing towards mitigation strategies and habitat enhancements where appropriate. He has also contributed to white clawed crayfish surveys.
- Daniel has undertaken a large number of Phase 1 surveys, EIA assessments and biodiversity assessments as well as both BREEAM and CODE reports.
- Daniel has undertaken and helped supervise a seabird surveys on the North Yorkshire coastline at an internationally important seabird colony on the behalf of Natural England and the Environment Agency. This has involved leasing with a variety of conflicting stakeholders to mitigate against potential adverse impacts to the colony.

Scope of Assessment

The first step is to identify any biodiversity features found on the site that are subject to legal or policy controls, as follows:

Designated Sites

The location of the site is compared to the distribution of sites with a statutory or non-statutory nature conservation designation using information derived from the desk study. Consideration is given to designated sites that could be affected directly or indirectly by the proposed development.

Habitats outside Designated Sites

The habitats known to occur on the site are compared to those which receive some protection, in law or policy, outside of designated sites i.e. hedgerows, uncultivated land and semi-natural areas, habitats listed as Priorities in the UKBAP, habitats listed as Habitats of Principal Importance for the Conservation of Biodiversity by the Secretary of State and habitats listed as requiring action in the Local Biodiversity Action Plan.

Ancient Woodland

The ancient woodland inventory is checked to determine whether any known ancient woodland occurs either on the site or nearby.

Protected Species

The species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in nature conservation legislation i.e. the Wildlife and Countryside Act 1981, as amended, and the Habitats and Species Regulations 2010, as amended.

In addition, the species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in animal welfare legislation, i.e. the Badgers Act 1992 and the Wild Mammals (Protection) Act 1996.

Biodiversity Action Plan Priority Species

The species known to occur on the site are compared with those listed as Priorities in the UKBAP, Species of Principal Importance for the Conservation of Biodiversity by the Secretary of State or requiring action in the Local Biodiversity Action Plan.

Other Species of Conservation Concern

The species known to occur on the site are compared with other nature conservation listings, such as red data books.

Invasive Plant Species

The species of plant present on the site are compared with those listed by government agencies as invasive non-natives, with particular attention given to those listed in the Wildlife and Countryside Act.

Review of Legislation and Policy

If any of the above are found to occur on or near the site and are likely to be affected by the development in any way, the relevant legislation and planning policy

(including national, regional, county and borough policies) are examined to determine whether the proposed development is compliant.

Ecological Enhancement

Planning policy generally requires new developments to be enhanced for biodiversity. The existing proposals are considered to determine whether biodiversity enhancements are offered and whether they are adequate to meet the policy requirements. Again, national, regional, county and borough policies are considered.

Identification of Potential Further Ecological Issues

Further ecological issues are those which cannot be resolved during the desk study and extended Phase 1 habitat survey for any reason, including the following:

- The development is near a designated site and consultation with the relevant regulator is required to determine whether further assessment is required;
- Suitable habitat is present on or near the site for a protected species/species of conservation concern and specialist survey techniques are required for their detection;
- Suitable habitat is present on or near the site for a protected species/species of conservation concern and the extended Phase 1 habitat survey was not undertaken at a suitable time of year for their detection;
- A protected species/species of conservation concern was found on or near the site but further information on population size or distribution is required to resolve any legal and planning policy issues (such as obtaining licences).

Discussion of issues raised by 3rd parties, e.g. reports of protected species from the site by local people, may also be discussed under this heading.

The desk study is used as a guide to the protected species/species of conservation in the local area, however, the list is not taken to be exhaustive and it is borne in mind that some species may no longer occur in the locality.

No attempt is made to evaluate the importance of the site for species not yet confirmed to be on or near the site, nor to discuss the implications for the development if the species were to be found on the site.

9.7 Appendix 7 Species records within 2km of the Application Site (NEYEDC)

9.7.1 The following species have been recorded within 2km of the Application Site:

Scientific name	Common name	Taxonomic group	Year	Designated as
<i>Bufo bufo</i>	Common Toad	amphibian	2004	BAP-2007, Bem-A3, England NERC S.41, WACA-Sch5_sect9.5a, WACA-Sch5_sect9.5b
<i>Lissotriton helveticus</i>	Palmate Newt	amphibian	1992	Bem-A3, WACA-Sch5_sect9.5a, WACA-Sch5_sect9.5b
<i>Lissotriton vulgaris</i>	Smooth Newt	amphibian	2016	Bem-A3, WACA-Sch5_sect9.5a, WACA-Sch5_sect9.5b
<i>Rana temporaria</i>	Common Frog	amphibian	2003	Bem-A3, HabDir-A5, WACA-Sch5_sect9.5a, WACA-Sch5_sect9.5b
<i>Triturus cristatus</i>	Great Crested Newt	amphibian	2016	BAP-2007, Bem-A2, England NERC S.41, HabDir-A2*, HabDir-A4, HabReg-Sch2, WACA-Sch5_sect9.4b, WACA-Sch5_sect9.5a, WACA-Sch5_sect9.5b, WACA-Sch5Sect9.4c
<i>Alcedo atthis</i>	Kingfisher	bird	1996	Bem-A2, Bird-Amber, BirdsDir-A1, WACA-Sch1_part1
<i>Anas penelope</i>	Wigeon	bird	2003	BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, ECCITES-C
<i>Anas platyrhynchos</i>	Mallard	bird	2002	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2
<i>Athene noctua</i>	Little Owl	bird	2002	Bem-A2, ECCITES-A
<i>Branta canadensis</i>	Canada Goose	bird	2003	BirdsDir-A2.1, CMS_A2
<i>Carduelis carduelis</i>	Goldfinch	bird	2002	Bem-A2
<i>Carduelis chloris</i>	Greenfinch	bird	2002	Bem-A2
<i>Cygnus olor</i>	Mute Swan	bird	2003	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2
<i>Emberiza schoeniclus</i>	Reed Bunting	bird	2002	BAP-2007, Bem-A2, Bird-Amber, England NERC S.41
<i>Erithacus rubecula</i>	Robin	bird	2002	Bem-A2
<i>Falco tinnunculus</i>	Kestrel	bird	2004	Bem-A2, Bird-Amber, CMS_A2, ECCITES-A
<i>Fringilla montifringilla</i>	Brambling	bird	2002	WACA-Sch1_part1
<i>Gallinula chloropus</i>	Moorhen	bird	2002	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2
<i>Parus caeruleus</i>	Blue Tit	bird	2002	Bem-A2
<i>Parus major</i>	Great Tit	bird	2002	Bem-A2
<i>Passer domesticus</i>	House Sparrow	bird	2002	BAP-2007, Bird-Red, England NERC S.41
<i>Pica pica</i>	Magpie	bird	2004	BirdsDir-A2.2
<i>Prunella modularis</i>	Dunlin	bird	2002	Bem-A2, Bird-Amber
<i>Tachybaptus ruficollis</i>	Little Grebe	bird	1996	Bird-Amber, CMS_AEWA-A2
<i>Turdus merula</i>	Blackbird	bird	2002	BirdsDir-A2.2
<i>Tyto alba</i>	Barn Owl	bird	2015	Bem-A2, Bird-Amber, ECCITES-A, WACA-Sch1_part1
<i>Moryanthes trifoliata</i>	Bogbean	flowering plant	1996	ECCITES-D
<i>Arvicola amphibius</i>	European Water Vole	terrestrial mammal	2016	BAP-2007, England NERC S.41, WACA-Sch5_sect9.1(kill/injuring), WACA-Sch5_sect9.1(taking), WACA-Sch5_sect9.2, WACA-Sch5_sect9.4a, WACA-Sch5_sect9.4b, WACA-Sch5_sect9.5a, WACA-Sch5_sect9.5b, WACA-Sch5Sect9.4c
<i>Erinaceus europaeus</i>	Hedgehog	terrestrial mammal	2003	BAP-2007, Bem-A3, England NERC S.41
<i>Lepus europaeus</i>	Brown Hare	terrestrial mammal	1999	BAP-2007, England NERC S.41
<i>Lutra lutra</i>	European Otter	terrestrial mammal	2009	BAP-2007, Bem-A2, ECCITES-A, England NERC S.41, HabDir-A2*, HabDir-A4, HabReg-Sch2, RedList Global post2001 NT, WACA-Sch5_sect9.4b, WACA-Sch5_sect9.5a, WACA-Sch5_sect9.5b, WACA-Sch5Sect9.4c

Scientific name	Common name	Taxonomic group	Year	Designated as
<i>Myotis daubentoni</i>	Daubenton's Bat	terrestrial mammal	1996	Bern-A2, CMS_A2, CMS_EUROBATS-A1, HabDir-A4, HabReg-Sch2, WACA-Sch5 Sect9.4b, WACA-Sch5 Sect9.5a, WACA-Sch5 Sect9.5b, WACA-Sch5Sect9.4c
<i>Pipistrellus</i>	Pipistrelle Bat species	terrestrial mammal	2011	CMS_A2, HabReg-Sch2, WACA-Sch5 Sect9.4b, WACA-Sch5 Sect9.5a, WACA-Sch5 Sect9.5b, WACA-Sch5Sect9.4c
<i>Pipistrellus pipistrellus</i>	Pipistrelle	terrestrial mammal	1994	Bern-A2, Bern-A3, CMS_A2, CMS_EUROBATS-A1, HabDir-A4, HabReg-Sch2, WACA-Sch5 Sect9.4b, WACA-Sch5 Sect9.5a, WACA-Sch5 Sect9.5b, WACA-Sch5Sect9.4c
<i>Pipistrellus pipistrellus</i> 45kHz	45 KHz Pipistrelle	terrestrial mammal	2004	Bern-A2, Bern-A3, CMS_A2, CMS_EUROBATS-A1, HabDir-A4, HabReg-Sch2, WACA-Sch5 Sect9.4b, WACA-Sch5 Sect9.5a, WACA-Sch5 Sect9.5b, WACA-Sch5Sect9.4c
<i>Plecotus auritus</i>	Brown Long-eared Bat	terrestrial mammal	2012	BAP-2007, Bern-A2, CMS_A2, CMS_EUROBATS-A1, England NERC S.41, HabDir-A4, HabReg-Sch2, WACA-Sch5 Sect9.4b, WACA-Sch5 Sect9.5a, WACA-Sch5 Sect9.5b, WACA-Sch5Sect9.4c
Vespertilionidae	Bats	terrestrial mammal	2004	CMS_A2, HabReg-Sch2, WACA-Sch5 Sect9.4b, WACA-Sch5 Sect9.5a, WACA-Sch5 Sect9.5b, WACA-Sch5Sect9.4c

9.8 Appendix 8 - HSI Scoring.

9.8.1 The HSI for great crested newts is a measure of habitat suitability but is not a substitute for newt surveys. In general, ponds with high HSI scores are more likely to support great crested newts than those with low scores (The Herpetological Conservation Trust, 2008).

9.8.2 The HSI is a geometric mean of ten suitability indices (SI):
$$\text{HSI} = (\text{SI1} \times \text{SI2} \times \text{SI3} \times \text{SI4} \times \text{SI5} \times \text{SI6} \times \text{SI7} \times \text{SI8} \times \text{SI9} \times \text{SI10})^{1/10}$$

- The ten suitability indices are scored for a pond, in the field and from map work.
- The ten field scores are then converted to SI scores, on a scale from 0.01 to 1 (0.01 instead of 0, because multiplying by 0 reduces all other SI scores to 0).
- The ten SI scores are then multiplied together.
- The tenth root of this number is then calculated $(X)^{1/10}$

9.8.3 The field scores were collected by Dan Lombard. Some of the field scores are categorical, some are numerical. The numerical field scores are converted to SI scores by reading off the values from graphs produced by Oldham *et al.* (2000). Full details of the HSI rationale and guidance can be obtained from the Herpetological Conservation Trust.

9.8.4 HSI Results

Geographical location – SI 1

All ponds are located in Zone A which is an optimal location for great crested newts. Each pond scores 1 point.

Pond 1	= 1.0
Pond 2	= 1.0
Pond 3	= 1.0
Pond 4	= 1.0
Pond 5	= 1.0
Pond 6	= 1.0
Pond 7	= 1.0
Pond 8	= 1.0
Pond 9	= 1.0
Pond 10	= 1.0

Pond area – SI 2

The approximate size of the pond is shown in brackets.

Pond 1 (50m ²)	= 0.05
Pond 2 (280m ²)	= 0.5
Pond 3 (170m ²)	= 0.4
Pond 4 (260m ²)	= 0.5
Pond 5 (500m ²)	= 1.0
Pond 6 (770m ²)	= 1.0
Pond 7 (100m ²)	= 0.2
Pond 8 (350m ²)	= 0.6
Pond 9 (320m ²)	= 0.6
Pond 10 (800m ²)	= 1.0

Pond drying – SI 3	
Pond 1 (Sometimes)	= 0.5
Pond 2 (Sometimes)	= 0.5
Pond 3 (Sometimes)	= 0.5
Pond 4 (Rarely)	= 1.0
Pond 5 (Sometimes)	= 0.5
Pond 6 (Sometimes)	= 0.5
Pond 7 (Never)	= 0.9
Pond 8 (Annually)	= 0.1
Pond 9 (Never)	= 0.9
Pond 10 (Never)	= 0.9

Water quality – SI 4	
Pond 1 (Moderate)	= 0.67
Pond 2 (Poor)	= 0.33
Pond 3 (Poor)	= 0.33
Pond 4 (Moderate)	= 0.67
Pond 5 (Poor)	= 0.33
Pond 6 (Poor)	= 0.33
Pond 7 (Good)	= 1.0
Pond 8 (Poor)	= 0.33
Pond 9 (Moderate)	= 0.67
Pond 10 (Moderate)	= 0.67

Shade – SI 5	
Pond 1 (80%)	= 0.6
Pond 2 (100%)	= 0.2
Pond 3 (100%)	= 0.2
Pond 4 (70%)	= 0.8
Pond 5 (100%)	= 0.2
Pond 6 (100%)	= 0.2
Pond 7 (0%)	= 1.0
Pond 8 (0%)	= 1.0
Pond 9 (70%)	= 0.8
Pond 10 (70%)	= 0.8

Fowl – SI 6	
Pond 1 (Absent)	= 1.0
Pond 2 (Major)	= 0.01
Pond 3 (Absent)	= 1.0
Pond 4 (Absent)	= 1.0
Pond 5 (Absent)	= 1.0
Pond 6 (Minor)	= 0.67
Pond 7 (Absent)	= 1.0
Pond 8 (Minor)	= 0.67
Pond 9 (Absent)	= 1.0
Pond 10 (Minor)	= 0.67

Fish – SI 7	
Pond 1 (Absent)	= 1.0
Pond 2 (Minor)	= 0.67
Pond 3 (Absent)	= 1.0
Pond 4 (Minor)	= 0.67

Pond 5 (Absent)	= 1.0
Pond 6 (Absent)	= 1.0
Pond 7 (Possible)	= 0.67
Pond 8 (Absent)	= 1.0
Pond 9 (Possible)	= 0.67
Pond 10 (Possible)	= 0.67

Ponds within 1 km – SI 8

Pond 1 (12)	= 1.0
Pond 2 (12)	= 1.0
Pond 3 (12)	= 1.0
Pond 4 (12)	= 1.0
Pond 5 (12)	= 1.0
Pond 6 (12)	= 1.0
Pond 7 (12)	= 1.0
Pond 8 (12)	= 1.0
Pond 9 (12)	= 1.0
Pond 10 (12)	= 1.0

Terrestrial habitat – SI 9

Pond 1 (Good)	= 1.0
Pond 2 (Good)	= 1.0
Pond 3 (Good)	= 1.0
Pond 4 (Good)	= 1.0
Pond 5 (Good)	= 1.0
Pond 6 (Good)	= 1.0
Pond 7 (Good)	= 1.0
Pond 8 (Good)	= 1.0
Pond 9 (Good)	= 1.0
Pond 10 (Good)	= 1.0

Macrophytes – SI 10

Pond 1 (40%)	= 0.7
Pond 2 (0%)	= 0.3
Pond 3 (0%)	= 0.3
Pond 4 (10%)	= 0.4
Pond 5 (0%)	= 0.3
Pond 6 (0%)	= 0.3
Pond 7 (70%)	= 1.0
Pond 8 (0%)	= 0.3
Pond 9 (0%)	= 0.3
Pond 10 (0%)	= 0.3

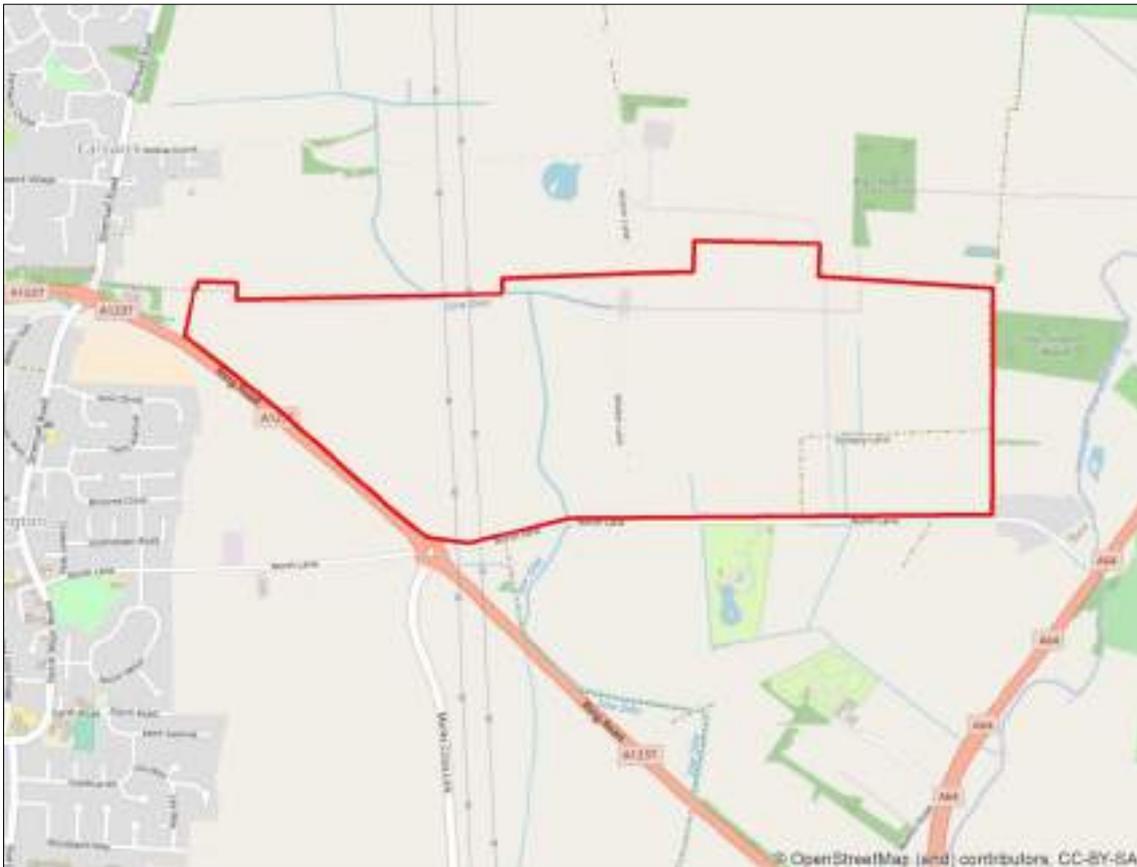
Summary of HSI scoring.											
SI	1	2	3	4	5	6	7	8	9	10	Total
Pond 1	1.0	0.05	0.5	0.67	0.6	1.0	1.0	1.0	1.0	0.7	0.007035
Pond 2	1.0	0.5	0.5	0.33	0.2	0.01	0.67	1.0	1.0	0.3	0.000033165
Pond 3	1.0	0.4	0.5	0.33	0.2	1.0	1.0	1.0	1.0	0.3	0.00396
Pond 4	1.0	0.5	1.0	0.67	0.8	1.0	0.67	1.0	1.0	0.4	0.071824
Pond 5	1.0	1.0	0.5	0.33	0.2	1.0	1.0	1.0	1.0	0.3	0.0099
Pond 6	1.0	1.0	0.5	0.33	0.2	0.67	1.0	1.0	1.0	0.3	0.006633

Pond 7	1.0	0.2	0.9	1.0	1.0	1.0	0.67	1.0	1.0	1.0	0.1206
Pond 8	1.0	0.6	0.1	0.33	1.0	0.67	1.0	1.0	1.0	0.3	0.0039798
Pond 9	1.0	0.6	0.9	0.67	0.8	1.0	0.67	1.0	1.0	0.3	0.05817744
Pond 10	1.0	1.0	0.9	0.67	0.8	0.67	0.67	1.0	1.0	0.3	0.064964808

Each SI score is multiplied together to give a total. The tenth root of this number is then calculated, consequently, the calculated HSI for a pond should score between 0 and 1.



YORK ARCHAEOLOGICAL TRUST



GALTRES GARDEN VILLAGE HERITAGE APPRAISAL

By Jayne Rimmer and Ben Reeves

HERITAGE APPRAISAL REPORT

Report Number 2017/96 October 2017



YORK ARCHAEOLOGICAL TRUST



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NON-TECHNICAL SUMMARY

The site of the proposed Galtres Garden Village development is currently agricultural land situated just outside the A1237 ring road to the east of the village of Huntington on the outskirts of York. There are no known archaeological sites within the proposed development area. However, the site lies within an area on the north-east side of the city where numerous prehistoric and Roman discoveries have been made in recent decades.

KEY PROJECT INFORMATION

Project Name	Galtres Garden Village Heritage Appraisal
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Client	On behalf of O'Neill Associates
NGR	SE 462829 456560

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1 INTRODUCTION

Galtres Farm is situated in an area characterised by open fields and farmland to the east of the village of Huntington. The farm buildings appear to date from the mid-20th century onwards. Historic maps suggest that prior to this the site was open land from at least the mid-19th century onwards.

This document is an updated and expanded version of the heritage appraisal issued by YAT in August 2016 (Rimmer 2016, YAT Report 2016/54). The client has commissioned YAT to undertake reappraisal of the original document in light of the expansion of the proposed development area (Figures 1 and 2).

This heritage appraisal sets out the historical background to the village of Huntington and summarises the key archaeological investigations that have been carried out in the vicinity. The archaeological constraints and opportunities for the Galtres Farm site are identified and a series of recommendations are made.

2 METHODOLOGY

This rapid appraisal has been compiled from a search of readily available online resources, and reports held in the York Archaeological Trust library. A list of all of the sources consulted can be found at the end of this document.

3 LOCATION, GEOLOGY & TOPOGRAPHY

Galtres Farm is situated to the north-east of York in the village and civil parish of Huntington. The site is bounded by the A1237 York Outer Ring Road) to the west/south-west, North Lane to the south, Huntington Wood and farm land to the east and farm land to the north. North Lane is a historic routeway running eastwards from the village of Huntington. The A1237 was constructed in the 1980s.

The plot is an irregular shape, and the south-east portion extends eastwards towards Wisker Lane. The proposed site measures 111.00 hectares.

The site is underlain by rocks from the Sherwood Sandstone Group, over these is a superficial geology comprising glaciolacustrine clay and sand of the Sutton Sand Formation.

4 HISTORICAL BACKGROUND

The place name Huntington is of Old English derivation, combining the personal name *Honta* with the suffix *ington* meaning a farmstead (Mawer and Stenton 1969, 12). The village is listed in Domesday Book as *Huntindune*, a medium-sized settlement with a number of separate manors and a parish church with a priest (VCH 1923, 145–50). Huntington church is believed to have been re-built in the 12th century (McRae 2013a). The River Foss runs through the village and divides it into two parts: East and West Huntington. The church is situated to the west of the river, and the main village centre to the east. A bridge crossing the Foss is mentioned in the late 13th century.

In the medieval period, Huntington was situated in the royal forest of Galtres. The forest was established by the Norman kings of England in North Yorkshire and extended to the city walls. Very little of this woodland now remains. The forest and villages within it were administered by royal officials, a Lord Chief Forester, a bailiff and other officials from Davy Hall in Davygate, York. Across the medieval period areas of the forest were gradually cleared, many of the trees were used for the construction of buildings and other structures. The clearances were subsequently used as small holdings or grazing land (Macnab 2000, 3).

Forest clearance continued into the post-medieval period. In c. 1629, Land called “the New Intake” was enclosed by the elder Sir Arthur Ingram when he entered into an agreement with the king for the deforestation of his landholdings within the forest (VCH 1923, 145–50). Enclosure maps of 1768 and 1775 depict Huntington North Moor (which lies to the north-east of Galtres Farms) and Earswick Common. In 1770, the enclosure of a common comprising 600 acres took place in neighbouring Earswick.

The area surrounding Huntington village was characterised by open fields and farming activities until the 20th century (McRae 2013a, 2013b). The York to Scarborough railway line was built across the parish of Huntington in 1845. On the east side of North Moor Road, estates were created from the 1930s onwards. Since then, the village of Huntington has grown steadily and become part of the York suburban area.

4 ARCHAEOLOGICAL BACKGROUND

No archaeological interventions have been carried out within the proposed development area.

Prehistoric activity has been located and examined north of Hopgrove Farm where a circular ditch of possible Iron Age date was excavated (SE63805530), approximately 1.5km south of the site (Johnson 2004, 6).

A number of archaeological investigations have been carried out in the Monks Cross area, approximately 2.3km south of the proposed development area, where significant prehistoric and Roman period discoveries have been made.

In 2002, routine aerial photography by English Heritage identified two rectangular enclosures characteristic of Roman “marching camps” in the vicinity of Monks Cross Shopping Park to the south-east of Huntington village (Horne and Macleod 2002). Later that year, a geophysical survey of both camps was undertaken, alongside an archaeological evaluation of Camp 1 (Ottaway 2002). In 2004, an archaeological excavation was carried out in Camp 1 and evidence for prehistoric and Roman period features were discovered. Geophysical survey, undertaken prior to excavation, established the layout of the camp but did not identify the presence of prehistoric features (Johnson 2004, 89).

The earliest prehistoric features were two Neolithic pits. Two small curvilinear ditched enclosures, probably representative of hay-stack or hay-rick gullies, were also thought to be Neolithic but no dating evidence was found to confirm this.

A substantial pit alignment was discovered, forming a major landscape feature traversing the north-eastern corner of the site (Johnson 2004, 16–23; Figs 8–12; Plates 1–2). Johnson interpreted the feature as being of Bronze Age or Iron Age date by analogy with similar ones elsewhere in the region, although no dating evidence was recovered. The feature had been re-

cut, suggesting it was a long-standing landscape feature, and small quantities of Roman pottery in the uppermost of the pit fills suggest that the last vestiges were still visible in the mid-2nd century AD.

The excavation of the Roman camp ditch showed it had been accurately surveyed using precise Roman measurements. Two entrances to the camp were present in the excavated area, which comprised simple gaps in the camp ditch. The absence of surviving archaeological remains suggested that this was a temporary camp which would have been fitted out with ephemeral structures - such as tents - rather than permanent structures.

In 2012, further excavations in the area to the south-east of Camp 1 revealed a number of undated features thought to be of prehistoric date and a ditch containing a Bronze Age arrowhead (Johnson 2012). Between 18th and 19th April 2013 a watching brief was maintained during topsoil stripping works at Huntington South Moor, York, (NGR: SE 6256 5452). This area lay immediately to the south of the open area excavation of 2002/3 in which part of a prehistoric pit alignment was examined. The watching brief did not encounter any trace of the pit alignment and as such accords with the observations of evaluation trenches excavated in the vicinity in 2012. It seems reasonable to assume that the pit alignment terminates in, or immediately adjacent to, the south-eastern part of the 2003 trench.

In 2015, an archaeological excavation was carried out at Camp 2 prior to the construction of the new Community Stadium to the south of the Monks Cross Shopping Park. Two sides and one corner of the Roman camp ditch were identified in the archaeology. No internal features of a clear Roman date were present within Camp 2, due to modern truncation. The absence of building materials suggests that, like Camp 1, this was also a temporary camp.

A number of flints were also recovered from the excavations undertaken by YAT in the Monks Cross area suggesting prehistoric activity in the area. The 2015 excavations in Camp 2 identified a number of linear features, pits and post-holes, which were scattered across the site. Though no conclusive prehistoric artefacts were recovered during the excavation, it is likely that these features also date to the prehistoric period.

At a slightly greater distance of 4.1km south-west of the site at Rawcliffe Moor (SE59205630; YAT Gazetteer site 632), ditches and probable hut circles are likely to relate to part of an Iron Age settlement.

Areas of ridge and furrow have been identified on aerial photographs of Huntington taken prior to modern development. These features are suggestive of ploughing activities dating to the medieval and post-medieval periods. The 2015 excavation identified a series of narrowly-spaced, and exceptionally straight, plough furrows dating to the 19th century. A ceramic field drain dating to the late 19th century or later was also identified.

5 CONSTRAINTS AND OPPORTUNITIES

There have been no archaeological investigations in the vicinity of the Galtres Farm site. Excavations to the south at Monks Cross Shopping Park suggest prehistoric and Roman activity in the wider area.

Historic landscape characterisation of the Huntington area has identified broad ridge and furrow (long parallel soil ridges in excess of 5 metres) dating to the medieval and post-

medieval period in the farm land surrounding the Galtres Farm site, particularly to the north, south and west. The ridge and furrow would have been formed by using a heavy plough. This suggests that the Galtres Farm site has historically been utilised as open fields and farm land.

Aerial photographs taken in the 1980s showed field boundaries of unknown date to the north of the site and a possible earthwork of unknown date in the field to the east of the Galtres Farm building (to the east of Sow Dike).

A number of sand holes and sand pits can be seen on the mid-19th century OS maps to the south-east of the site, presumably relating to small-sand or gravel extraction, and an area of land identified as the “turbaries” to the west of the site, was probably utilised for cutting turf or peat.

The former York to Scarborough railway line runs north-east/south-west to the south of North Lane. There are a number of historic buildings in the wider landscape; on the north-west side of the Malton Road is The Grange (Grade II Listed), and Calm Cottage and its associated gate piers (Grade II). Both date to the early 19th century.

6 RECOMMENDATIONS

A rapid search of readily available internet resources has identified prehistoric and Roman remains within the landscape surrounding the site. There is no evidence for modern activity within the site (e.g. quarrying or large-scale industrial works) that would preclude the presence of archaeological remains. As such, there is the potential for as yet unknown archaeological remains to be present on the site, most likely relating to the prehistoric or Roman periods.

In order to further inform the assessment of the archaeological potential of the site and to support any future planning application the following staged approach is recommended.

Desk-based research and a detailed desk-based assessment (DBA) is recommended in order to provide a detailed analysis of the historical development of the site, and to identify the extent to which the new development may impact on any below ground archaeological potential.

Desk-based assessment should be followed by a geophysical survey to determine any possible archaeological remains on the site, and provide information for targeted evaluation trenching.

Subsequent to evaluation and planning permission, if archaeological remains were found to be present, the impact of the development on them can then be mitigated through excavation, watching brief or preservation in situ.

The above staged approach would be carried out and the scope defined in consultation with the City of York Archaeologist.

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Ottaway, P.J., 2002. *Huntington South Moor, Monk's Cross, York. Report on an Archaeological Evaluation*. York Archaeological Trust report number 2002.26

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LIST OF ONLINE SOURCES CONSULTED

https://www.york.gov.uk/info/20216/archaeology/1288/historic_environment_record

City of York HER online

<http://archaeologydataservice.ac.uk/>

Archaeological Data Service

<https://cyc.sdp.sirsidynix.net.uk/client/yorkimages>

Imagine York (images)

www.britainfromabove.org.uk/

Britain from Above aerial photographs

www.bgs.ac.uk/

British Geological Survey

www.british-history.ac.uk/

Library of key sources for the period 1300-1800

www.domesdaybook.co.uk/

Domesday Book Online

www.englishheritagearchives.org.uk/

English Heritage Archives

www.english-heritage.org.uk/listing/listed-buildings/

EH Listed buildings

<http://www.genuki.org.uk/>

Genuki UK and Ireland Genealogy

<http://www.geog.cam.ac.uk/cucap/>

Cambridge University Collection of Aerial Photographs

http://www.google.co.uk/intl/en_uk/earth/

Google Earth

www.heritagegateway.org.uk/

Heritage Gateway

www.historyofyork.org.uk/

History of York

www.imagesofengland.org.uk/

English Heritage Images

<http://magic.defra.gov.uk/MagicMap.aspx>

DEFRA searchable map

<http://maps.nls.uk/series/index.html>

The National Library of Scotland

www.nottingham.ac.uk/ins/placenamesociety/index.aspx

The English Place Name

Society

www.pastscape.org.uk/

English Heritage listing information

<http://www.victoriacountyhistory.ac.uk/>

Victoria County History on line.

FIGURES



Figure 1 former 2016 proposed development area

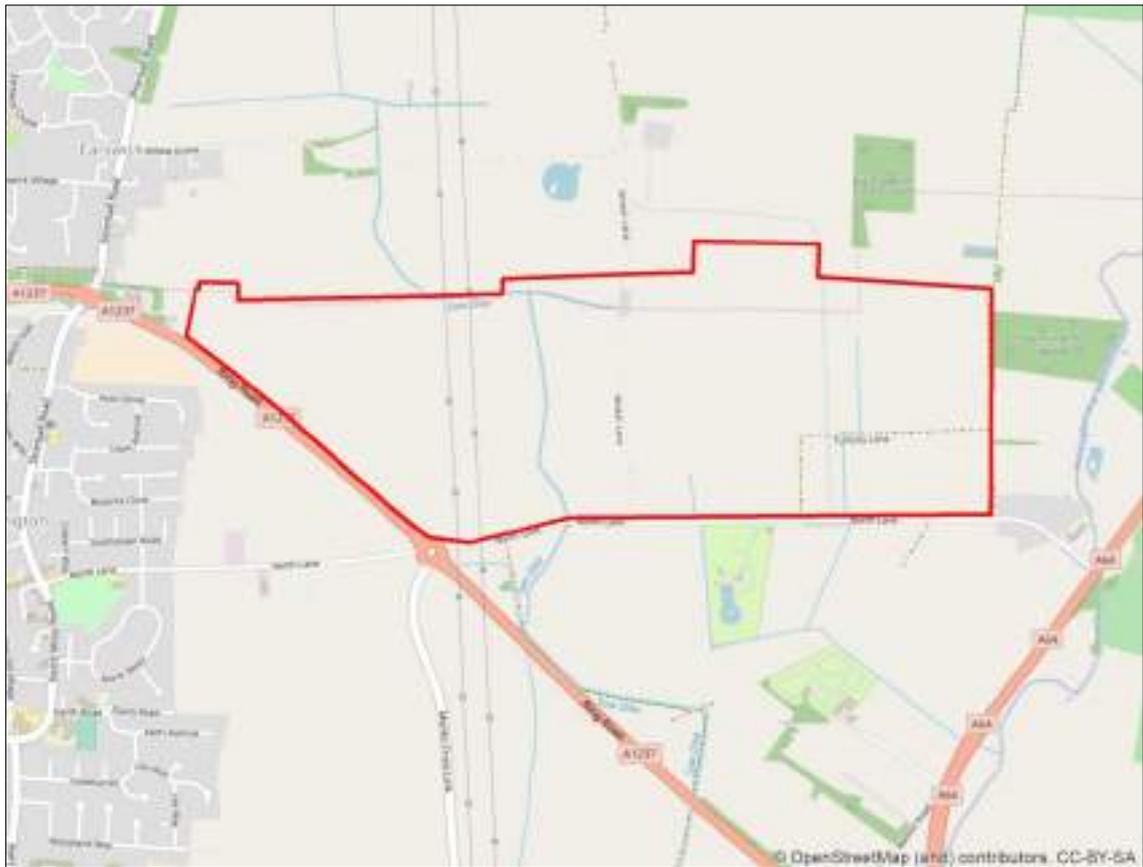


Figure 2 extended 2017 proposed development area

Galtres Garden Village, York

Heritage Appraisal

March 2018



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Galtres Garden Village, York

Heritage Appraisal

EXECUTIVE SUMMARY

Site Name: Galtres Garden Village, York

Address: York House Main Street Ripley HG3 3AY

Local Planning Authority: City of York Council

Conservation Area: N/A

Listed buildings: N/A

Report Production: Liz Humble and Dave Pinnock

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Humble Heritage Ltd is a professional built heritage and archaeological consultancy operating in the specialised area of the historic environment. The practice has extensive experience of historical and archaeological research, assessing significance and heritage impact and preparing heritage statements, archaeological desk-based assessments, statements of significance, conservation management plans and so forth. Humble Heritage Ltd provides heritage and archaeological advice on behalf of a wide variety of clients across much of England.

Humble Heritage Ltd undertook this Heritage Appraisal during February-March 2018. This report has been prepared on behalf of Galtres Village Development Company to review the heritage impact of development on land to the north of North Lane Huntington (Galtres Garden Village). The intention is to assess the potential development site for inclusion in the York Local Plan using the same methodology that City of York Council have employed to assess other potential development sites. This methodology is based on the Heritage Topic Paper produced as part of the local plan process (revised in 2014) which summarises the heritage significance of the City of York and the many thousands of designated and non-designated heritage assets within its boundary. The Heritage Topic Paper identified six '*principal characteristics*' of the City of York's historic environment, further broken down into a variable number of '*character elements*'. The City of York Council have assessed other local plan sites according to a tabulated list of six principal characteristics and their character elements, and this methodology has been followed here.

The proposed development will have no impact on the majority of character area elements, and for the four character elements on which there will be an impact this will be at the lower end of the scale, with mitigation possible. This compares very favourably with the other sites assessed by City of York Council in their Heritage Impact Assessment Annexes published in September 2017.

INTRODUCTION

- 1.01 This Heritage Assessment has been prepared by Liz Humble (MA, MA, MCIfA, IHBC) and Dave Pinnock (BA, MA) of Humble Heritage Ltd, on behalf of Galtres Village Development Company to review the heritage impact of development on land to the north of North Lane Huntington (Galtres Garden Village). It was produced during February-March 2018
- 1.02 The aims of this report are to:
- Inform the prospective developers with respect to the heritage implications of the proposal;
 - To provide a tool to help the planning authority to understand the site, its significance and the contribution that it makes to heritage of the city of York and its surrounding area, and hence the potential effect of any future development at the site;
 - Assist those in the planning system to make decisions regarding the York Local Plan that support a positive strategy for the conservation and enjoyment of the historic environment as required by paragraph 126 of the National Planning Policy Framework.

PLANNING CONTEXT

General

- 2.01 The role of heritage in the planning system is governed by legal aspects relating to the protection of listed buildings and conservation areas, and government planning guidance (the NPPF) together with associated guidance from government and from Historic England.

Legislation, planning policy and guidance

- 2.02 Listed buildings are protected in law by the 1990 Planning (Listed Buildings and Conservation Areas) Act paragraph 66(1), which states, *'In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.'*
- 2.03 With regards to Conservation Areas, section 72(1) of the Act requires that, *'In the exercise, with respect to any buildings or other land in a conservation area, of any powers under the provision mentioned in subsection (2), special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area'.*
- 2.04 The importance of identifying the significance of a heritage asset is highlighted in the National Planning Policy Framework (NPPF) as this is essential in informing future change that affects heritage assets. The aim of heritage conservation is to sensitively manage change to ensure that significance is protected, and also revealed, reinforced and enhanced, at every possible opportunity. In Annex 2 of the NPPF 'significance' is defined as *'The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting'.*
- 2.05 At the heart of the National Planning Policy Framework (NPPF) is a strong presumption in favour of sustainable development (paragraph 14). The purpose of this Heritage Statement is to satisfy

paragraph 128 of the National Planning Policy Framework which states that *'In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contributions made by their setting'*.

- 2.06 The NPPF indicates that when assessing impact, great weight should be given to the asset's conservation and that this should be proportionate to the importance of the asset. Significance can be harmed not just by a material change to the asset but also to its setting which can be of great value to the significance. If the proposal is deemed to cause harm to the asset, a robust justification will need to be presented to and assessed by the local planning authority.
- 2.07 If the development will lead to substantial harm to the significance of a designated heritage asset, paragraph 133 indicates that the development should be refused consent by the local planning authority, unless it can be proved that the loss or damage to the asset can be outweighed by substantial benefits to the public OR if the proposal can demonstrate all of the following:
- *'the nature of the heritage asset prevents all reasonable uses of the site; and*
 - *no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and*
 - *conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and*
 - *the harm or loss is outweighed by the benefit of bringing the site back into use.'*
- 2.08 If the development leads to 'less than substantial harm' to the significance of a designated heritage asset, paragraph 134 indicates that this harm still needs to be assessed against the public benefit of the scheme and whether or not the viability of the site is being optimised.
- 2.09 The role of heritage in local plans is explicitly addressed in paragraph 126 of the NPPF:

'126. Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment¹, including heritage assets most at risk through neglect, decay or other threats. In doing so, they should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance. In developing this strategy, local planning authorities should take into account:

- *the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation*
- *the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring*
- *the desirability of new development making a positive contribution to local character and distinctiveness; and*
- *opportunities to draw on the contribution made by the historic environment to the character of a place.'*

Heritage in the York Local Plan: Heritage Topic Paper

- 2.10 In the early stages of the York Local Plan, as part of the production of an evidence base, the Heritage Topic Paper (HTP) was produced, and later revised in 2014, with the aim of coming to a 'shared understanding' of the special character and significances of the City of York (meaning both the historic city centre and the surrounding villages and countryside). The HTP was produced in recognition of the complexity of the historic environment in the region, which comprises many thousands of designated and undesignated heritage assets of levels of significance ranging from international to local.
- 2.11 Rather than attempt to address each separate heritage asset individually as part of the local plan process, the HTP was intended *'to develop a strategic understanding of the city's special qualities and its complex 2000 year history'*. It did this by defining six principal characteristics of the City of

York's historic environment, each broken down into a variable number of character elements, as follows:

- the city's strong urban form, townscape, layout of streets and squares, building plots, alleyways, arterial routes, and parks and gardens;
- the city's compactness;
- the city's landmark monuments, in particular the City Walls and Bars, the Minster, churches, guildhalls, Clifford's Tower, the main railway station and other structures associated, with the city's railway, chocolate manufacturing heritage; the city's architectural character, this rich diversity of age and construction displays variety and order and is accompanied by a wealth of detail in window and door openings; bay rhythms; chimneys and roofscape; brick; stone; timber; ranges; gables; ironwork; passageways; and rear yards and gardens;
- the city's archaeological complexity: the extensive and internationally important archaeological deposits beneath the city. Where development is permitted, the potential to utilise this resource for socio-economic and educational purposes for the benefit of both York's communities and those of the wider archaeological sector will be explored; and
- the city's landscape and setting within its rural hinterland and the open green strays and river corridors and Ings, which penetrate into the heart of the urban area, breaking up the city's built form.

Heritage in the York Local Plan: Heritage Impact Assessment

2.12 City of York Council undertook a heritage impact appraisal (April 2013) in order to '*assess whether the strategic sites and policies of the City of York Local Plan Preferred Options will conserve or enhance the special characteristics of the city*' as outlined in the HTP. Initially the heritage impact appraisal limited itself to the assessment of the proposed policies of the local plan, but following consultation with Historic England, annexes to the heritage impact appraisal were produced in September 2017. These annexes assessed preferred local plan sites against the 6 principal characteristics and their character element subdivisions.

Methodology

- 3.01 The Heritage Impact Appraisal Annexes assessed preferred local plan sites against the six principal characteristics of the City of York's historic environment and their individual character elements as assessed in the HTP.
- 3.02 This assessment will follow the same methodology. It has been informed by analysis of historic maps of the area, a Landscape Capacity Assessment (LCA) (TGP Landscape Architects 2017), a Heritage Appraisal Report (HAR) (YAT 2017), and a brief review of other sources of information about the site.
- 3.03 The following tables are reproduced from the HTP and represent an analysis with examples of each character element. These will form the basis of the site assessment of the proposed Galtres Garden Village site. The analysis will be presented in tabular form, after the methodology employed in the Heritage Impact Appraisal Annexes produced by CoYC. The full matrix of character elements defined by the HTP is shown below:

Principal characteristic 1: Strong urban form

Character elements	Key features	Examples	Significance
Large urban blocks	Mixed use blocks composed of taller (3-5 storey) buildings facing the street with lower extensions and ad-hoc smaller structures behind and within the blocks, retained private yards. Blocks strongly enclose streets	Throughout the walled city but particularly evident at Stonegate/ Low Petergate/Church Street.	This is a defining characteristic and the historic urban core.
Long narrow plots and gated side passages	Usually reflecting medieval or earlier building plots with side access to former workshops and gardens	Stonegate and Coney Street	Highly flexible form capable of successive occupation and reuse. A rare opportunity to appreciate the complexities of a medieval city as so much survives
Framed shop fronts	Variety of good quality "frames" around shop windows, providing visual support to building above whilst allowing interaction with the street. Usually associated with smaller retail premises	Stonegate, Goodramgate, Low and High Petergate contain many historic examples. The Shambles interesting but less authentic. Coney Street is an example of a street under pressure	The extensive survival of small specialist retail establishments is a significant contributor to the quality of the York experience. Architecturally there is a close fit between this use and the layout and fabric of many surviving historic buildings; so importantly this characteristic maintains the authenticity of historic form and additionally it supports the local economy
Medieval street patterns	Overlaid pattern of historic routes, narrow well enclosed primary streets, gentle curvilinear routes, secondary lanes & ginnels/alleys threading through the blocks or giving access to more private enclaves. High degree of choice, connectivity and permeability.	Networks both south and north of the river within the city walls: Micklegate, St Martin's Lane, Goodramgate, Coney Street, Coffee Yard, historic water lanes on north bank leading to river	The survival of such an extensive network of medieval streets and lanes is rare in an English city. The "preconquest" origin of so many streets in the historic core increases the significance of this asset
Small squares	Close distribution of small squares intimate in scale. Larger spaces formed later by highways interventions or through provision of markets. Few examples of formal compositions such as at "Eye of York".	St Helen's Square (good quality natural materials), St Sampson's Square (early market place) & King's Square (triangular space created from former church yard) – both lined with trees. Added to in C20th with St Mary's Square off Coppergate and enhancement scheme in Parliament Street.	Rare survivals of early spaces where previous uses often determine the spatial form. Enduring quality of openness to be guarded.
Rich townscape	city centre as a place of diversity, contrasts and surprises; unfolding views of great variety and historic interest; juxtaposition of different materials and forms; experience of shock scale; bridges offering panoramic views; pre-industrial skyline of city centre; city walls as vantage points, highly legible environment	Micklegate unfolding up the hill(Pevsner), view from Exhibition Square towards Bootham Bar and beyond, emergence from Minster Gates to south transept of Minster, from Lendal Bridge towards north bank of River Ouse, roofscape from Clifford's Tower	Highly Attractive environment of human scale developed over two millennia. Vulnerable to loss through large scale interventions (highways and buildings)
Arterial roads	broad straight streets connecting city centre to suburbs enclosed by buildings of higher stature towards city bars; cobbled margins and tree lined avenues giving way to broad verges (at best); routes interrupted by large outlying complexes providing green open spaces	Blossom Street/The Mount/Tadcaster Road (main route into city from Great North Road, Bootham with later Georgian Edwardian and Victorian residential developments and location of purpose built hospital by John Carr	Streets of high quality following historic routes, particular to York

Principal characteristic 2: Compactness

Character elements	Key features	Examples	Significance
Contained concentric form	The city is walkable and the centre is accessible by cycle and foot with relative ease. The York outer ring road accentuates the city form and the walls enclose the historic core.	The whole city.	This creates strongly defined entry points or 'gateways' and separates out rural from urban in a way that links countryside and urban very positively. A very significant contributor to York's unique identity.
Flat terrain and views	Low lying setting and compactness of city creates both long views and surprise views both out of and in to the historic core	View from Clifford's Tower; views from the City Walls; revealed views of the Minster and other key monuments; enclosed views within the urban centre – The Shambles, High and Low Petergate	Prohibits outward views from street level, enhancing the importance of views from elevated positions providing panoramic views of City's roofscape.
Arterial roads	Broad straight streets connecting city centre to suburbs enclosed by buildings of higher stature towards city bars; cobbled margins and tree lined avenues giving way to broad verges (at best); routes interrupted by large outlying complexes providing green open spaces	Blossom Street/ Tadcaster Road (main route into city From from Great North Road, Bootham with later Georgian, Edwardian and Victorian residential developments and location of purpose built hospital by John Carr	Streets of high quality following historic routes, particular to York.
Dense urban fabric	Inward focussed centre, mixed uses both horizontally and vertically in urban centre, identifiable sub-areas of particular form and use	Retail core with living above the shop (Shambles), housing districts (Southbank), commercial area close to station	Mixed use compact city retains inherent characteristics of the pre-industrial city. The dense multi-nucleated city is also be a model for sustaining the city in the future.
Identifiable compact districts	Outlying development is divided into segments by the rivers, strays and arterial roads; this containment of built form positively accentuates the identity of each area whilst allowing quick access to open areas, informal green spaces and the cycle routes and riverside walks leading out of the city	Southbank and Tadcaster Road (Knavesmire/ Racecourse), Bishopthorpe Road & Fulford Road (divided by river)	Defining characteristic of peripheral area; access routes of high amenity value
Urban villages retain identity	Village greens as focus or linear main streets with surviving back lanes. Clusters of facilities retained in village core	Clifton (village green), Fulford (linear main street with wide verges)	Clustered form provides community focus; origins as separately planned rural settlements
Planned rural villages	Enduring form of curving linear main street with burgage plots running to historic back lanes; broad planted verges common feature of main artery, later infilling and minor extensions often protect historic grain, openness, and views out to countryside	Wheldrake, Elvington (linear), Askham Richard with village green	Origin as early planned agricultural settlements often dating from the 12th century.

Principal characteristic 3: Landmark monuments

Character elements	Key features	Examples	Significance
Buildings of high cultural significance	Visually, aesthetically and historically interesting and sometimes associated with historical events and specific individuals	The Minster; Clifford's Tower (12th century massacre of York Jews); The Eye of York complex (Luddites; Chartists).	The relative completeness of the city walls and the presence of so many principal monuments within their circuit such as the Minster, Castle, Guildhalls, And numerous churches is unique in England.
Physical and temporal landmarks	The Minster in particular can be viewed from the Wolds, Moors and Dales. The walls are ever present and a perambulation of	The Minster; Clifford's Tower, Terry's Factory; Nestle Factory. Rowntree Wharf; Foss Islands chimney	The revealed views, distant views and iconic views of the Minster and other monuments are extremely important and are a principal

	them will reveal many of the City's monuments including Terry's and the Nestle Factory. Clifford's Tower is particularly associated with historical events. The Civil War is associated with the Bars. The Eye of York with Luddites.		characteristic
Substantial numbers of medieval communal buildings	Buildings that reflect functional importance as civic centres, places of justice, work and religious activity	Minster Court; Gray's Court; St Leonard's Hospital; King's Manor; Merchant Adventurers Hall.	The Minster is the largest Gothic Cathedral north of the Alps and Probably the most architecturally expressive.
Monument clustering	There is very little dispersion and most principal monuments are sited within the historic core and there is a degree of intervisibility, especially from the City Walls.	Exhibition Square (Bootham Bar; Roman Wall; City Wall; Art Gallery; Kings Manor; St Mary's Abbey).	The proximity of principal monuments to each other helps legibility and accessibility making it easy to enjoy the historical and cultural significances of York.
Quantity of monuments	York has a higher than average number of listed buildings and other principal monuments.	Views from the City Walls.	This is a defining characteristic of York which has succeeded in conserving so much of its architectural and artistic legacy.
Diversity of monuments	Diversity ranges from Substantial limestone structures like the Minster to Timber framed Barley Hall and Merchant Adventurers Hall and domestic buildings to brick built Railway headquarters and 19th and 20th century factories	Brick – Fairfax House; Limestone – The Minster; Timber framing – Merchant Adventurers Hall.	This diversity adds richness and interest and sets it apart from Bath as an example where easy access to good quality local stone and formal 18th century town planning resulted in less diversity.
Churches locked into urban fabric	Provide pockets of green space within dense urban blocks and are a haven for wildlife.	Churches off Micklegate.	Substantially enriches the spatial quality and amenity of the city centre in particular and historically they are surviving markers for important city parishes.

Principal characteristic 4: Architectural character

Character elements	Key features	Examples	Significance
Architectural legacy	Buildings representing two thousand years of architectural development in close proximity to each other.	14th century almshouses on Goodramgate; The Guildhall, Merchant Adventurers Hall, The North eastern Railway Headquarters, Yorkshire House.	Expression of York's history - its important religious and early political role; and its socio-economic and technological development within Britain and Europe
Variety	The fine grain of urban blocks accommodates a tremendous range of building types from all ages. Early timber framed ranges and gabled fronts sit amongst later 18th century and 19th century brick built development. Formal Georgian town houses occupy plots adjacent to more ordinary dwellings. Churches and churchyards punctuate almost continuous street lines. Large guildhalls sit in their own enclaves. Few streets have consistent themes, though streets have formed their own identity. High degree of articulation through bay windows, window reveals, chimneys, high brick walls, iron railings and decorative artefacts.	Early 14th century Lady Row Goodramgate, Micklegate House, St Leonard's Place	York's Architectural Continuity and change have resulted in a rich townscape with formality and informality coexisting.
Human scale	The limits of natural materials and techniques have ensured that human scale buildings predominate. Narrow plot boundaries assist in developing	Majority of city centre and village buildings built as residences, shops, workshops. Former railway HQ building sets standard for station cluster. 1960s and 1980s	The absence of post-war high rise development has protected the visual dominance of the Minster and ensured the survival of ground level views as well as preserving

	rhythm. Where these limits have been exceeded to create factories, warehouses, office blocks, they have simple massing and are clustered on low ground close to the station or within extra mural compounds. Even so height is restrained, roof-tops acknowledge with modelling or decorative parapets, and facades have a level of detailed consideration.	insurance buildings sit reasonably well into the urban landscape	York's unique skyline. The significance of this is also experiential for visitors and residents. Use of large scale with hierarchy of elements is usually reserved for important buildings
Craftsmanship	Highly skilled craftsmen and artists have benefited from religious and secular patronage through-out York's history. Of particular significance are: stained glass, stone carving carpentry and timber relief work, wrought and cast ironwork, monuments, brasses, bells and public statuary	Minster east window, Merchant Adventurer's aisled timber frame, Lutyen's war memorials	Highly significant artefacts in international and national context. Focus of research and apprenticeship training. Important to retain knowledge, skill base and workshops in city centre and local area.
Materials	Magnesian limestone used for early religious buildings and the few stone houses, with sandstone being sourced later for civic buildings. Historically materials were locally sourced and crafted, with timber framing succeeded by clamp bricks in lime mortar. Highly skilled master carpenters extended spans and the range of details in important buildings such as Guildhalls. Brickwork gave warmth, texture and solidity to many ordinary buildings whose solidity was punctured by regular openings of limited width. Subtle variety of detail exists within regular facades, though timber framing allowed more freedom. Heavy dentilled cornices and string courses of formal architectural buildings are common. Small element tile and pantiles common on older roofs were followed by slate brought in by the railways. White/buff bricks belong to industrial period.	City churches (limestone), guildhalls (timber framing), 18th and 19th century houses (brickwork), 1870s railway station and hotel (buff brick)	Materials signify the importance of a building. They dictate rhythm, scale and proportion and are used to give emphasis through articulation and detail. Modern framed buildings in York have used natural materials and solid positional discipline to avoid uncharacteristic transparency.

Principal characteristic 5: Archaeological Complexity

Character elements	Key features	Examples	Significance
Exceptional preservation in historic core	Timber foundations of Anglo-Scandinavian houses have been found well preserved at Coppergate and Hungate. Food waste and other similar organic waste is well preserved giving valuable insight into diet, health, economy that is lacking in more conventional archaeological deposits	Excavated examples include Coppergate and more recently, Hungate.	Very few major urban sites of this age and complexity in Northern Europe have this amount of well preserved archaeological deposits, especially for the earlier periods. York has an Internationally significant resource.
Depth of deposits in historic core	Remains of successive development from Roman through to the present day.	Throughout the centre but best illustrated through the 1980's excavations of Coppergate, now ably presented by the York Centre	This is one of the main factor in York's bid to become a World Heritage Site.
2000 years of urban	Archaeological deposits relating to at least Roman through to the	The Hungate Excavations revealed the remains of housing from the	Very few North European cities have so much well preserved

development	present day,	period of Sebohm Rowntree's ground breaking study of poverty and health. Coppergate Provided exceptional insights into Anglo Scandinavian York.	evidence of urban development over such a long period of time.
Finite and non renewable resource	Anaerobic deposits that are extremely dependant on sustained ground conditions. Fluctuating water table creates pressures on the continued preservation of these deposits. Any form of deposit removal, even by archaeologists in a controlled and recorded manner will destroy important evidence and information.	Throughout the city.	Archaeological deposits and the remains of human settlement and activity provide a rare insight into the lives of our ancestors in a way that the limited number of contemporary documents cannot. Because the deposits are so rich and so well preserved in York, the information contained within them is both irreplaceable and internationally important, especially for the earlier periods.
Majority of Known and unknown archaeological features and deposits are not designated heritage assets.	The York Historic Environment Record contains some 6000 records relating to the archaeology of York and its surroundings which is only a small percentage of actual remains.	East Heslington excavations of prehistoric and Roman settlement	Very difficult to predict where significant archaeology will be found and because the historic core is so special, its relationship with the rural hinterland is also very important. The low density of damaging development throughout the Unitary area has meant that more archaeology has survived.

Principal characteristic 6: Landscape and setting

Character elements	Key features	Examples	Significance
Views in and out	Long-distance views of York Minster in low lying relatively flat vale landscape. The Minster constantly reappears at closer quarters. View of the race course/ Knavesmire and Terrys combined. Rural edge setting viewed from majority of ring road by way of field margin (northern ring road business parks exception to rule). Views out to the Wolds, Moors and the Howardian Hills (orientation, identity, and sense of location/ setting).	Views from the A64 to Minster from stretch between Hopgrove roundabout to Hull Road View of Minster and city from Askham Bryan roundabout Closer views of Minster from Leeman Road and Water End. View of Terrys/race course/Knavesmire from A64/Bishopthorpe. Views out from Acomb, Kimberlow Hill/Grimston Bar. Views from the Ouse when approaching from the south; Views entering York by Rail from the North, as the line sweeps round by Water End bridge.	This is an important English cathedral landscape that goes to the heart of York's identity and attractiveness. There is a unique combination of elements of historic/ cultural significance important for the setting and identity of York. The proximity of hills/ countryside give a strong sense of place and location. The long distance views are rare - element of surprise and appreciation
Strays (including racecourse) and common land	Openness; greenness; natural/rural character within city. Village greens	All the strays. Some connect with other open spaces which extend their capacity as part of the City's green infrastructure with linked spaces providing a continuous green route through a range of open spaces, e.g. Scarcroft recreation ground – Scarcroft allotments – Knavesmire – allotments - Hob Moor. Walmgate Stray/ allotments - university grounds, Heslington golf course.	More than any other similar city there is a strong countryside connection between the historic core and perimeter countryside. Variety between them; each serving a range of different functions; in part protected by historic management. Immediacy and availability/welcome, most are open access. Race course open space - cultural significance. Race days – sense of event across city.
Rivers and Ings	Derwent/Ouse: Flooding; Ings meadows; retention of traditional management over centuries - still hay cropped and grazed where possible. Ouse - walking along most of either bank north to Beningborough Hall, south past Bishops palace. Activity on river - rowing (3 clubs) dating back to mid 19th century. Foss – two rivers converging in city centre;	Derwent Ings; Fulford Ings (north of the ring road); Naburn Marsh (south of ring road); Church and South Ings at Acaster Malbis; all SSSI's; Millenium Walk, New Walk, Terrys Walk ; avenues of trees.	The Derwent Ings are internationally important. SSSI's of national importance. Their significance lies in the number and extent of SSSI's within the local authority boundary. Setting of city and recreational value.

	walkway from centre to countryside beyond ring road; linking villages – the 'hidden' river. Views along river/banks		
Open countryside and green belt	The open countryside surrounding York contributes to the landscape setting of the historic city. A wide variety of different habitats and landscape elements including: Lowland heath; wet acidic grassland; rich hedgerows; valley fen; open Ings landscape associated with river; wildflower meadows; Airfields with large expanse of openness/ cultural heritage/habitat value; Village settings including: assarted land; strip field pattern/ridge and furrow; hedgerows; veteran orchards. Long distance uninterrupted recreation routes with cultural significance through countryside Orchards – vale of York high orchard productivity historically; veteran Pear and apple trees often in gardens of later development	Strensall Common; Askham bog; Heslington tilmire. Airfields: Elvington, Acaster Malbis, Rufforth, Clifton Moor, Copmanthorpe. Rufforth & Murton. Nether Poppleton; Skelton Hessay churchyards. Ebor Way, Minster way – linking two Minsters. York to Selby disused railway line passing through open countryside connecting to other routes. Walmgate stray; Heslington golf course Derwent Ings. Scarcroft recreation ground – Scarcroft allotments – Knavesmire/Racecourse – splits to Hob Moor allotments – Hob Moor and Trans-Pennine trail cycle route. Orchard trees: in gardens at Skelton, Tanghall, Holgate. One fruit tree planted in every garden in first model of New Earswick.	Strensall common most extensive, northerly lowland heath site in Britain. Askham bog - most significant site in northern England and has uniquely extensive historical records of its wildlife dating back to 18th century. High concentration of airfields. Elvington - uncommon grassland habitat and birds because of extensive open nature. National route: spur of Trans- Pennine trail, runs coast to coast from Southport to Hornsea; cultural heritage along line of disused railway. Orchards at Skelton, Tanghall and Holgate remnant veteran Pear and apple trees usually in back gardens of later development. Significance written into deeds of properties. Historically significant.
Suburban villages	Street trees, public parks, large gardens, 'quiet streets', pedestrian-friendly environment, strong community identity, allotments, front gardens bound by hedges	New Earswick model village, Tanghall, Dringhouses	Design/movement examples; philanthropic; cultural significance; association with Rowntrees Complete compositions of key features and holistic community provision
Parks and gardens	Registered historic parks and gardens Parks for the people Designed campus Landscape Matrix of accessible parks	Museum gardens; Rowntrees park; York cemetery. Others - Tower gardens, Homestead Par York university	Museum gardens: Exceptional concentrated collection of SAMs/ listed buildings in designed circulatory walk; botanical gardens Rowntrees park and Homestead park given to people of York by Rowntrees and son Seebolm: Cultural significance and major recreational facility for large population, landscape/trees/ setting. York cemetery: landscape setting, trees, bio-diversity, important people/ head stones; listed structures. Iconic campus landscape (originally)
Relationship of the historic city of York to the Surrounding settlements	The relationship of York to its surrounding settlements. This relationship relates to not simply the distance between the settlements but also the size of the villages themselves, and the fact that they are free-standing, clearly definable settlements	Skelton, Upper and Nether Poppleton, Bishopthorpe...etc	The relationship of York to its surrounding settlements was identified as one of the elements which contributes to the special character of the City. The relationship of York to these settlements could be damaged by with the growth of the city or, conversely, the expansion of the villages.

Proposed Development

- 4.1 The Galtres Garden Village consists of a proposed mixed/residential development on land to the north of North Lane Huntington. An indicative masterplan is shown below in **Figure 1**.
- 4.2 The land is presently of an agricultural nature, consisting of a number of fields. The site is arable farmland in its northern and southern thirds, with a central third of pasture and emerging woodland to the west of Whisker Lane. To the east of Whisker Lane, the land is predominantly pasture land. The field boundaries within the site are defined by mature native hedgerows and trees with occasional sections of timber post and wire fence.
- 4.3 The development will include a 'country park' on the west side of the development, including new planting of trees and vegetation and the creation of a pedestrian and cycle link connecting the new village with Earswick and Huntington. The main part of the development will consist of housing and Village Hub to include community buildings, a school and village green.
- 4.4 Highways England are consulting on proposals to dual the A64 from the Hopgrove roundabout to Whitwell. Highways England have indicated the extent of land that might be required for the widening which would have implications for the southeast corner of the masterplan. If required, an additional small area of land in the four fields immediately north of the northeast corner of the masterplan shown below would be incorporated into the scheme (with a corresponding loss of area in the southeast part of the scheme). This would have no effect on the heritage implications of the scheme as assessed below.



Figure 1: Indicative masterplan (dwg. no. PL002, ID Partnership Architecture, Northern).

SITE ASSESSMENT

1 Strong urban form

No.	Character elements	Key features	Contribution this site makes to the character element	Impact that the development of this site may have upon the character area	Ways in which the harm might be mitigated
1.1	Large urban blocks	Mixed use blocks composed of taller (3-5 storey) buildings facing the street with lower extensions and <i>ad-hoc</i> smaller structures behind and within the blocks, retained private yards. Blocks strongly enclose streets.	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
1.23	Long narrow plots and gates side passages	Usually reflecting medieval or earlier building plots with side access to former workshops and gardens	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
1.3	Framed shop fronts	Variety of good quality 'frames' around shop windows, providing visual support to building above whilst allowing interaction with the street. Usually associated with smaller retail premises	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
1.4	Medieval Street patterns	Overlaying pattern of historic routes, narrow well enclosed primary streets, gentle curvilinear routes, secondary lanes and ginnels/alleys threading through the blocks or giving access to more private enclaves. High degree of choice, connectivity and permeability	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
1.5	Small squares	Close distribution of small squares intimate in scale. Larger spaces formed later by highways interventions or through provision of markets. Few examples of formal compositions such as at 'Eye of York'	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
1.6	Rich townscape	City centre as a place of diversity, contrasts and surprises; unfolding views of great variety and historic interest; juxtaposition of different materials and forms; experience of shock scale; bridges	This site makes a neutral contribution to this character element as it is outside the historic core.	None	

		offering panoramic views; pre-industrial skyline of city centre; city walls as vantage points; highly legible environment			
1.7	Arterial roads	Broad straight streets connecting city centre to suburbs enclosed by buildings of higher stature towards city bars; cobbled margins and tree lined avenues giving way to broad verges (at best); routes interrupted by large outlying complexes providing green open spaces.	This site makes a neutral contribution to this character element as it is outside the historic core.	None	

2 Compactness

No.	Character elements	Key features	Contribution this site makes to the character element	Impact that the development of this site may have upon the character area	Ways in which the harm might be mitigated
2.1	Contained concentric form	The city is walkable and the centre is accessible by cycle and foot with relative ease. The York outer ring road accentuates the city form and the walls enclose the historic core	This site makes a neutral contribution to this character element as it is outside the historic core and beyond the outer ring road. The site will form an independent settlement clearly separate from the city, and will therefore have a neutral effect on the 'contained, concentric form' of the city.	None	
2.2	Flat terrain and views	Low lying setting and compactness of city creates both long views and surprise views both out of and into the historic core.	This character element is concerned with the views from high points in the city (Clifford's Tower, walls, minster) over the city itself ('panoramic views of City's roofscape'). This site makes a neutral contribution to this character element as it is outside the historic core.	None	
2.3	Arterial roads	Broad straight streets connecting city centre to suburbs enclosed by buildings of higher stature towards city bars; cobbled margins and tree lined avenues giving way to broad verges (at best); routes interrupted by large outlying complexes providing green open spaces.	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
2.4	Dense urban fabric	Inward focussed centre, mixed uses	This site makes a neutral contribution to	None	

		both horizontally and vertically in urban centre, identifiable sub-areas of particular form and use.	this character element as it is outside the historic core.		
2.5	Identifiable compact districts	Outlying development is divided into segments by the rivers, strays and arterial roads; this containment of built form positively accentuates the identity of each area whilst allowing quick access to open areas, informal green spaces and the cycle routes and riverside walks leading out the city.	The examples given in the Heritage Topic Paper (HTP) to illustrate this character element are all historic suburbs located within the outer ring road, the 'peripheral area' of the city. This site makes a neutral contribution to this character element as it is outside the outer ring road and is not a 'peripheral area' of the city. The proposed new development will be an identifiable compact district.	None	
2.6	Urban villages retain identity	(a) Village greens as focus or linear main streets with surviving back lanes. (b) Clusters of facilities in village core.	This character element concerns villages that now form part of the suburbs of the city (examples given to illustrate the point are Clifton and Fulford). This site makes a neutral contribution to this character element as it is outside the city.	None	
2.7	Planned rural villages	Enduring form of curving linear main street with burgage plots running to historic back lanes; broad planted verges common feature of main artery, later infilling and minor extensions often protect historic grain, openness, and views out to the countryside.	This site makes a neutral contribution to this character element as it will not have any impact on historic rural villages.	None	

3 Landmark monuments

No.	Character elements	Key features	Contribution this site makes to the character element	Impact that the development of this site may have upon the character area	Ways in which the harm might be mitigated
3.1	Buildings of high cultural significance	Visually, aesthetically and historically interesting and sometimes associated with historical events and specific individuals.	This site makes a neutral contribution to this character element as it is outside the historic core and will have no effect on any listed buildings.	None	
3.2	Physical and temporal landmarks	(a) The Minster in particular can be viewed from the Wolds, Moors and Dales. The walls are ever present and a	a), b) The Landscape Capacity Assessment (LCA) concluded that <i>'In particular, there will be no significant</i>	None	

		perambulation of them will reveal many of the City's monuments including Terry's and the Nestle Factory. (b) Clifford's Tower is particularly associated with historical events. The Civil War is associated with the Bars. The Eye of York with Luddites.	<i>effects on views of the York Historic Core and its context, nor significant effects on views from the Historic Core. Therefore there is no risk to the setting and special character of York as a historic city.'</i> The York Central Historic Core Character Appraisal has not identified any views of the Minster that will be affected by this development.		
3.3	Substantial number of medieval communal buildings	Buildings that reflect functional importance as civic centres, places of justice, work and religious activity.	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
3.4	Monument clustering	There is very little dispersion and most principle monuments are sited within the historic core and there is a degree of intervisibility, especially from the City Walls.	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
3.5	Quantity of monuments	York has a higher than average number of listed buildings and other principle monuments	This site makes a neutral contribution to this character element as it is outside the historic core. The HTP also mentions 'views from the city walls' as an example of this character element. The site will not be visible from the city walls. The site will not harm any listed buildings.	None	
3.6	Diversity of monuments	Diversity ranges from substantial limestone structures like the Minster to Timber framed Barley Hall and Merchant Adventurers Hall. From domestic buildings to brick built railway headquarters and 19th-20th century factories.	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
3.7	Churches locked into urban fabric	Provide pockets of green space within dense urban blocks and are a haven for wildlife.	This site makes a neutral contribution to this character element as it is outside the historic core.	None	

4 Architectural character

No.	Character elements	Key features	Contribution this site makes to the character element	Impact that the development of this site may have upon the character area	Ways in which the harm might be mitigated
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4.1	Architectural legacy	Buildings representing two thousand years of architectural development in close proximity to each other.	The architectural character of the city refers to 'the historic centre and suburbs' (HTP, 6.23). This site makes a neutral contribution to this character element as it is outside the historic core. There are no listed buildings or other designated heritage assets within the site or close enough to be affected.	None	
4.2	Variety	The fine grain of urban blocks accommodates a tremendous range of building types from all ages. Few streets have consistent themes, though streets have formed their own identity	This site makes a neutral contribution to this character element as it is outside the historic core and suburbs and is thus not part of the ' <i>fine grain of urban blocks</i> '.	None	
4.3	Human scale	The limits of natural materials and techniques have ensured that human scale buildings predominate. Narrow plot boundaries assist in developing rhythm. Where these limits have been exceeded to create factories, warehouses, office blocks, they have simple massing and are clustered on low ground close to the station of within extra mural compounds. Even so height is restrained, roof-tops acknowledge with modelling or decorative parapets, and facades have a level of detailed consideration.	The proposed development will consist of conventional housing types of up to two storeys.	None	Particular attention should be paid in this area to the heights of the proposed new builds.
4.4	Craftsmanship	Highly skilled craftsmen and artists have benefited from religious and secular patronage through-out York's history. Of particular significance are: stained glass, stone carving, carpentry and timber relief work, wrought and cast ironwork, monuments, brasses, bells and public statuary	This proposed development will be of a high standard of architectural design, complementing the generally high quality of buildings and craftsmanship in York.	None	High quality craftsmanship to housing

5 Archaeological complexity

No.	Character elements	Key features	Contribution this site makes to the character element	Impact that the development of this site may have upon the character area	Ways in which the harm might be mitigated
5.1	Exceptional preservation in historic core	Timber foundations of Anglo- Scandinavian houses have been found well preserved in Coppergate and Hungate. Food waste and other similar organic waste is well preserved giving invaluable insight into diet, health, economy that is lacking in more	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
5.2	Depth of deposits in the historic core	Remains of successive development from Roman through to the present day	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
5.3	2000 years of urban development	Archaeological deposits relating to at least Roman through to the present day	This site makes a neutral contribution to this character element as it is outside the historic core.	None	
5.4	Finite and Non-renewable resource	(a) Anaerobic deposits that are extremely dependant on sustained ground conditions. Fluctuating water table creates pressures on the continued preservation of these deposits. (b) Any form of deposit removal, even by archaeologists in a controlled and recorded manner will destroy important evidence and information.	(a) There are unlikely to be anaerobic deposits (b) Some level of archaeological potential of site has been suggested by the HAR, although the significance of any remains is unknown. The HAR concluded that "There are no known archaeological sites within the proposed development area. However, the site lies within an area on the north-east side of the city where numerous prehistoric and Roman discoveries have been made in recent decades." (YAT 2017, ii)	(b) Further investigation in the form of a more detailed desk-based assessment, geophysical survey, followed by targetted trial trenching to investigate any features is recommended in the HAR. Development and intrusive investigation on this site would have a destructive impact on any surviving archaeological deposits.	b) Non intrusive desk based Assessment, geophysical survey and targetted trial trenching will give further information regarding the extent and significance of any archaeological remains. This will allow appropriate mitigation measures to be implemented, which could range from preservation in situ to full archaeological excavation.
5.5	Majority of known and unknown archaeological features and deposits are not designated heritage assets.	The York HER contains some 6000 records relating to the archaeology of York and its surroundings which is only a small percentage of what actually remains.	The HAR concludes that "There are no known archaeological sites within the proposed development area. However, the site lies within an area on the north-east side of the city where numerous prehistoric and Roman discoveries have been made in recent decades." (YAT 2017, ii)	Further investigation in the form of a more detailed desk-based assessment, geophysical survey, followed by targetted trial trenching to investigate any features is recommended in the HAR. Development and intrusive investigation on this site would have a destructive impact on any surviving archaeological deposits.	Non intrusive desk based Assessment, geophysical survey and targetted trial trenching will give further information regarding the extent and significance of any archaeological remains. This will allow appropriate mitigation measures to be implemented, which could range from preservation in situ to full archaeological excavation.

6 Landscape and setting

No.	Character elements	Key features	Contribution this site makes to the character element	Impact that the development of this site may have upon the character area	Ways in which the harm might be mitigated
6.1	Views in and out	<p>(a) Long-distance views of York Minster in low-lying relatively flat vale landscape. The Minster constantly reappears at closer quarters.</p> <p>(b) View of the race course/Knavesmire and Terrys combined.</p> <p>(c) Rural edge setting viewed from majority of ring road by way of field margin (northern ring road business parks exception to rule).</p> <p>(d) Views out to the Wolds, Moors and the Howardian Hills (orientation, identity, and sense of location/setting).</p>	<p>a), b) The Landscape Capacity Assessment (LCA) concluded that <i>'In particular, there will be no significant effects on views of the York Historic Core and its context, nor significant effects on views from the Historic Core. Therefore there is no risk to the setting and special character of York as a historic city.'</i> The York Central Historic Core Character Appraisal has not identified any views of the Minster that will be affected by this development.</p> <p>(c) The site is located on the rural fringes of York outside the ring road. It contributes to the rural setting of the city.</p> <p>d) The site will not affect views from the city towards these landscapes. The LCA concluded: <i>'the Site is very well contained and any potential housing development here will only be seen when in close proximity to the western and southern boundaries of the site and from along the A1237 road corridor.'</i></p>	<p>(c) Development will result in the loss of open countryside surrounding York. However there will remain a clear undeveloped margin between the site and the outer ring road, which will minimise the visual impact of the development</p>	<p>The proposed area of development should include carefully designed landscaping and buffering to its outer edges.</p>
6.2	Strays (including racecourse) and common land	<p>Openness; greenness; natural/rural character within city. Village greens.</p>	<p>This site makes a neutral contribution to this character element as it is outside the historic core or suburbs and will not affect any historic strays or village greens.</p>	<p>None</p>	
6.3	Rivers and Ings	<p>(a) Derwent/Ouse: Flooding; Ings meadows; retention of traditional management over centuries - still hay cropped and grazed where possible. (b) Ouse - walking along most of either bank</p>	<p>This site makes a neutral contribution to this character element as it is not located adjacent to any of the rivers or on their ings.</p>	<p>None</p>	

		north to Beningborough hall, south past Bishops palace. Activity on river - rowing (3 clubs) dating back to mid 19th century. (c) Foss – two rivers converging in city centre; walkway from centre to countryside beyond ring road; linking villages – the ‘hidden’ river. (d) Views along river/banks.			
6.4	Open Countryside and green belt	a) The open countryside surrounding York contributes to the landscape setting of the historic City; (b) A wide variety of different habitats and landscape elements including: Lowland heath; wet acidic grassland; rich hedgerows; valley fen; open Ings landscape associated with river; wildflower meadows; (c) Airfields with large expanse of openness/cultural heritage/habitat value; (d) Village settings including: assorted land; strip field pattern/ridge and furrow; hedgerows; veteran orchards. (e) Long distance uninterrupted	(a) The site currently forms part of the open countryside surrounding the city. (b) An area of community woodland funded by the Forestry Commission Woodland Grant Scheme lies just south of the site boundary, but will be unaffected physically by the proposals and will be improved by the proposed ‘country park’ to its north. (d) Historic field boundaries across the site generally, although these are predominantly straight boundaries typical of Parliamentary Enclosure of the late eighteenth or nineteenth centuries. Lidar imagery suggests that the ridge and furrow north of Galtres Farm referred to in the HCA is located beyond the southern site boundary, and there will be no impact from the proposed development. It is in this area that the older ‘corved’ field boundaries are found, and they will be also unaffected.	(a) Development will result in the loss of open countryside surrounding York. However there will remain a clear undeveloped margin between the site and the outer ring road, which will minimise the visual impact of the development (d) field boundaries will inevitably be lost due to development, but these are of the less significant parliamentary enclosure type, rather than the older boundaries to the southeast of the site (which will be unaffected)	(a) Any development will result in the inevitable loss of open countryside. The proposed area of development should include carefully designed landscaping and buffering to its outer edges.
6.5	Suburban villages	Street trees, public parks, large gardens, ‘quiet streets’, pedestrian friendly environment, strong community identity, allotments, front gardens bound by hedges	This site makes a neutral contribution to this character element as it is outside the historic core or suburbs	None	
6.6	Parks and Gardens	(a) Registered historic parks and gardens (b) Parks for the people (c) Designed campus	This site makes a neutral contribution to this character element as it is not located on	None	

		landscape (d) Matrix of accessible parks	or near parks or gardens.		
6.7	Relationship of the historic city of York to the surrounding villages	The relationship of York to its surrounding settlements. This relationship derives from: - (a) the distance between the Settlements (b) the size of the villages themselves, (c) the fact that they are freestanding, clearly definable settlements	a), b)The site will not affect any existing settlements. It arguably reduces the distance between Huntington and Stockton on the Forest, but separation is reinforced by the outer ring road and the A64 and the two existing settlements are thus insulated from the proposed new development c) the proposed settlement will be a freestanding, clearly definable settlement.	None (c) Small standalone settlement to complement the urban form of York being surrounded by small villages.	

CONCLUSION: HERITAGE IMPACT OF THE PROPOSED DEVELOPMENT

- 5.01 The proposed development will have no impact on the majority of character area elements, and for the four character elements on which there will be an impact this will be at the lower end of the scale, with mitigation possible. This compares very favourably with the other sites assessed by City of York Council in their Heritage Impact Assessment Annexes published in September 2017.
- 5.02 The four character elements that the site will have an impact on are:
- *5 Archaeological complexity: Finite and Non-renewable resource*
 - *5 Archaeological complexity: Majority of known and unknown archaeological features and deposits are not designated heritage assets*
 - *6 Landscape and setting: Views in and out*
 - *6 Landscape and setting: Open Countryside and green belt*
- 5.03 In the case of the 'archaeological complexity' character elements, every other site assessed in the Heritage Impact Assessment Annexes published in September 2017 also have impacts in these two character elements, and several sites have a greater impact than the Galtres Garden village.
- 5.04 The archaeological impact of the scheme is likely to be at the lower end of the scale. The Heritage Appraisal Report produced by the York Archaeological Trust notes that "There are no known archaeological sites within the proposed development area. However, the site lies within an area on the north-east side of the city where numerous prehistoric and Roman discoveries have been made in recent decades." The report recommends a full desk-based assessment, geophysical survey and targeted trial trenching to establish the extent and significance of any archaeological remains in the site. Although not known at this stage, there is nothing in the information available to date that suggests the presence of remains of the highest significance - archaeological remains are likely to range from low/local to medium/regional levels of significance, if present.
- 5.05 The impact of the scheme on 'landscape and setting' character elements is also common to many of the schemes assessed in the Heritage Impact Assessment Annexes.
- 5.06 The impact of the Galtres Garden Village on these character elements is also likely to be quite low, and a considerable degree of mitigation is already built into the scheme. The scheme avoids

impact on ridge and furrow and older field boundaries, which are located to the southwest of the site boundary. There will be a positive impact on the community woodland located to the southwest, which will be enhanced by improving access and appreciation by the creation of the new 'country park'.

- 5.07 Most importantly the Landscape Capacity Assessment carried out by TGP Landscape Architects confirmed that, *'In particular, there will be no significant effects on views of the York Historic Core and its context, nor significant effects on views from the Historic Core. Therefore there is no risk to the setting and special character of York as a historic city.'* The York Central Historic Core Character Appraisal does not identify any views of the Minster - considered to be *'extremely important and are a principal characteristic'* by the Heritage Topic Paper - that will be affected by this development.
- 5.08 The impact on open countryside, especially when viewed from York's outer ring road, will be minimised by the nature of the scheme. Although it will entail an unavoidable loss of countryside, there will remain a clear undeveloped margin between the site and the outer ring road, which will minimise the visual impact of the development
- 5.09 If the scheme were amended by the inclusion of land to the north of the northeast corener of the present masterplan (due to the southeast corner of the proposed site being unavaiolable due to Highways England requirements), this would have no greater impact on heritage issues than the existing scheme.
- 5.10 Overall the Galtres Garden Village proposals compare very favourably in terms of their impact on heritage compared with the other schemes already assessed in the Heritage Impact Assessment Annexes published in September 2017.

SOURCES CONSULTED

City of York Council (CoYC) 2013 Heritage Impact Appraisal (April 2013)

CoYC 2014 Heritage Topic Paper Update (2014)

CoYC 2017 Heritage Impact Assessment Annexes September 2017

TGP Landscape Architects 2017 Galtres Garden Village Landscape Capacity Assessment For Galtres Village Development Company. Ref: D156/AG/V5/Oct2017

York Archaeological Trust (YAT) 2017 Galtres Garden Village Heritage Appraisal. Report Number 2017/96



Strensall

R

E

Wether Ho.

Towthorp

S T O C K

M O O

Earswick

Stockton

Huntington

Wetherholme



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T: 01904 340591

Holt



DRAINAGE APPRAISAL REPORT

GALTRES GARDEN VILLAGE, EARSWICK, YORK

Commissioned by O'Neill Associates

Report 15739-Y-RP-001-R1

19 September 2017

Site Appraisal for Drainage in Relation to Development Potential

CONTENTS

- 1 INTRODUCTION
- 2 SURFACE WATER DRAINAGE
- 3 FOUL WATER DRAINAGE
- 4 CONCLUSIONS
- 5 SCOPE
- 6 LIMITATIONS

APPENDIX A – Plan of Proposed Development Area

APPENDIX B – Yorkshire Water Sewer Network Plan

APPENDIX C – British Geological Survey Information

APPENDIX D – Environment Agency Flood Map for Planning

ISSUE LOG FOR REPORT 15739-Y-RP-001

<i>Rev</i>	<i>Date</i>	<i>Description</i>	<i>Author</i>	<i>Checked</i>
R0	19 Sept 2017	FIRST ISSUE – DRAFT	SGD	-
R1	25 Oct 2017	SECOND ISSUE	SGD	LB

Issuing office Mason Clark Associates (York). Refer to final page for full office details.

1 INTRODUCTION

- 1.1 The site lies to the south east of Earswick village and east of the York Outer Ring Road A1237 and to the north of North Lane.
- 1.2 The total site area is around 67.4 Ha and is predominantly in agricultural use.
- 1.3 The site is crossed by a number of drainage ditches and the Sow Dike flows from north to south across the site. This a tributary of the Tang Hall Beck and then to the River Foss.
- 1.4 The general site levels at the eastern and western ends of the site are around 17mAOD with the ground falling below 15m AOD along the bank tops of the Sow Dyke.
- 1.5 The strategic plan is to provide residential development and associated neighbourhood facilities on the site. Large areas of the site will be set aside for landscaping to provide amenity space and areas to establish screening vegetation.
- 1.6 At present this is a preliminary appraisal for the drainage of the proposed area of the development site.

2 SURFACE WATER DRAINAGE

- 2.1 The EA Flood Map for Planning shows that the land comprising the proposed development site is located in Flood Zone 1, which is land that is not liable to flooding in a 1 in 1000 year flood event. Flood zones refer to the probability of only sea and river flooding, ignoring the presence of existing defences.
- 2.2 The nearest areas identified to be at risk of flooding in a 1 in 100 year flood event are the River Foss corridor, which is at least 1km to the west of the proposed development area, and the area around the drainage ditch outside the eastern perimeter of the possible development area. The site levels at the boundaries of the site are around 17m and the areas of flooding are indicated to be below the 15m contour adjacent to the site areas. The proposed development site is not expected to suffer fluvial flooding in a 1 in 1000 year flood event.
- 2.3 It is proposed that surface water drainage across the development will aim to reduce the overall flood risk further in the proposed development area and beyond through the layout and form of the development, and the appropriate application and implementation of sustainable drainage systems across the site.
- 2.4 Preliminary desk top investigations suggest that the natural soils in the area of the site are predominantly clay and are unlikely to be suitable for the discharge of point soakaway discharge systems.
- 2.5 Sustainable drainage systems cover a wide range of sustainable approaches to surface water drainage management. The most appropriate system will be designed to control surface water close to where it falls and mimic the natural drainage as closely as possible.
- 2.6 Consideration will be given to the existing natural land drainage systems on site and beyond, the indicative site layout indicates that extensive areas of open spaces are available around the development for onsite surface water balancing features such as swales and attenuation lagoons prior to controlled discharge to the existing points of discharge, which appear to be into the existing Sow Dyke flowing through the site.
- 2.7 Strategic and site specific flood risk assessments, and designs to manage residual flood risk, will be undertaken in the future at relevant planning application stages.
- 2.8 Proposed surface water drainage systems and outfalls will be discussed and agreed with the appropriate local authority, drainage board, water authority and the Environment Agency with regard to the flow rates, content and treatment required and the future long term monitoring and maintenance of any pipes and structures installed as part of the surface water drainage systems to serve the development.
- 2.9 Where appropriate the surface water drainage systems will be offered for adoption by YW or the local authority and will be designed to meet their required standards.

3 FOUL WATER DRAINAGE

- 3.1 Existing foul water sewers are shown on the Yorkshire Water sewer network plan. There are no existing adopted foul sewers crossing or adjacent to proposed development site. There are existing adopted sewers for foul water drainage in Strensall Road, Earswick, outside the A1237 York Ring Road, to the north west of the proposed development. There are foul water sewers serving the residential developments off North Lane to the west side of the A1237 York Ring Road.
- 3.2 The foul water drainage for the proposed development site is likely to comprise local gravity drainage to a pumping station on site which will lift and transfer flows to an existing foul sewer outfall which is off the site.
- 3.3 It is currently proposed that the foul water drainage will be discharged to an adopted sewerage system in or adjacent to Earswick Village, together with appropriate enhancement in capacity of the existing sewerage systems if required.
- 3.4 A strategic approach will be undertaken to the foul water drainage for the site in conjunction with other possible development in the adjacent Earswick and Huntington areas.
- 3.5 Foul water drainage will be offered for adoption by Yorkshire Water Services and will be designed to the appropriate standards for adoption.

4 CONCLUSIONS

- 4.1 The site could be developed for residential accommodation and associated neighbourhood facilities in relation to surface water and foul water drainage systems by appropriate detailed design and layout and construction of the development.
- 4.2 Surface water can be attenuated and controlled on site, where there is adequate land available. The future discharge from the development will be to the existing surface water drainage network at the existing run off rates.
- 4.3 Foul water will be collected by a system of adopted local gravity drainage on site. A proposed adopted foul water pumping station on the site will discharge to the existing Yorkshire Water sewer off site. All foul water from the site will go on for full treatment at a Yorkshire Water Waste Water Treatment Plant.

5 SCOPE

- 5.1 This report has been commissioned by O'Neill Associates to assess the suitability of the site at Earswick for a practicable drainage solution in relation to the proposed development. This report is based upon the data referred to and is an assessment of the likelihood of the foul and surface water drainage strategies as discussed.
- 5.2 This report shall be for the private and confidential use of O'Neill Associates and their Client and immediate advisors in connection with the proposed development. It shall not be reproduced in whole, or in part, or relied upon by third parties for any use whatsoever without the express written authority of Mason Clark Associates.
- 5.3 Mason Clark Associates shall have no liability for any use of the report other than for the purpose for which the report was originally prepared.

6 LIMITATIONS

- 6.1 *Our inspection and report are concerned with the drainage aspects of the site such as pipes, chambers, falls and discharges. We have not concerned ourselves with the condition of buildings or services on the site, unless specified in the report.*
- 6.2 *Sampling and testing of materials is beyond the scope of this report.*
- 6.3 *This report is limited to the property under consideration. It does not consider the effects that adjoining properties may have, unless with prior agreement, a detailed inspection of all adjoining properties can be made.*
- 6.4 *The report has been prepared for the client alone and no third party should rely on it. For the avoidance of doubt, the Contracts (Rights of Third Parties) Act 1999 shall not apply to this contract*
- 6.5 *All building and construction works are covered by the requirements of the CDM regulations. Owners/Clients have legal responsibilities to engage persons and companies with appropriate level of skills knowledge and experience to ensure that the requirements of the CDM regulations are met. The works required will be covered by the CDM regulations 2015 and you should understand your obligations and act accordingly.*
- 6.6 *Unless specifically mentioned no comment is made in the report as to the presence of new or old mine workings or tunnelling, heavy metals, chemical, biological, electromagnetic or radioactive contamination or pollution, or radon methane or other gases, underground services or structures, springs and water courses, sink holes or the like, noise or vibratory pollution, mould, asbestos and asbestos products.*

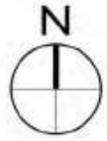
Signed on behalf of Mason Clark Associates Ltd:



S G Dick *BSc(Hons) CEng CEnv MICE*
Position *Associate*

APPENDIX A

Plan of Proposed Development Area



DO NOT SCALE
All dimensions to be checked on site and Architect to be notified of any discrepancies prior to commencement

DESIGNER'S RISK ASSESSMENT
Contributor (Design and Management) Regulations 2013
RESIDUAL RISKS:

REF.	DESCRIPTION	DATE
------	-------------	------



REVISION	DATE	DESCRIPTION	CHECKED
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ARCHITECTURE | MASTERPLANNING | URBAN DESIGN

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JOB / CLIENT
Galtres Garden Village
O'Neill Associates

DRAWING TITLE
Boundary Plan

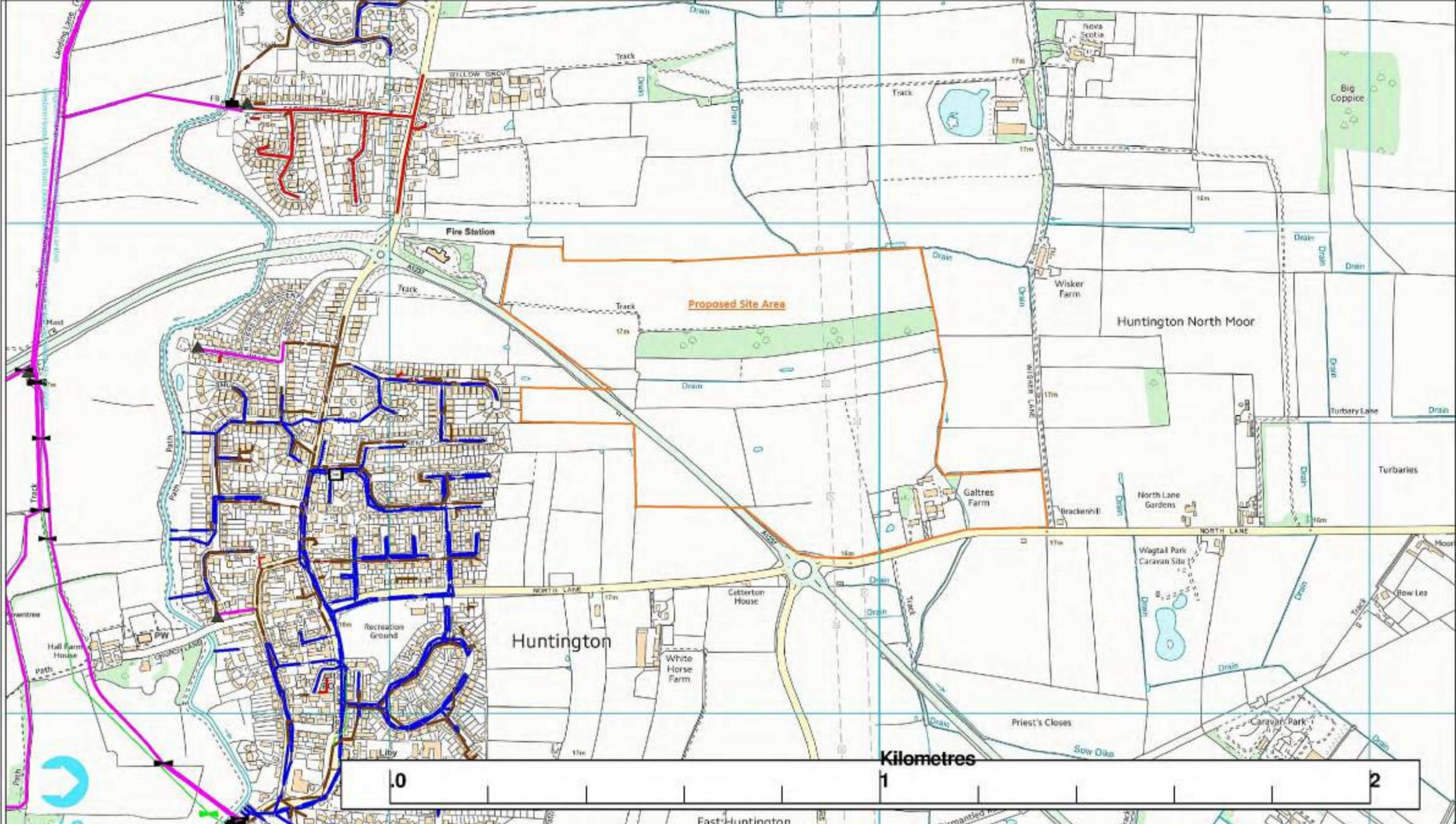
PROJECT ARCHITECT	RC	DRAWN BY	AH	CHECKED	
SCALE	1:5000@A2	PROJECT NO.	N81:2848		
DATE	23/10/17	DRAWING NO.			

DWG STATUS	DRAFT	CONSULTATION	TENDER	CONSTRUCTION	AS BUILT
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APPENDIX B

Yorkshire Water Sewer Network Plan



Safemove
A part of YorkshireWater

460945 : 455601

Map Name : SE6155NW



YorkshireWater

Yorkshire Water,
PO Box 500,
Halifax Road,
Bradford BD6 2LZ

Contact Name :
Search Advisor H BROOK
Contact Tel : 75 4487

Title

Notes

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Partial Key

- Foul Sewer = F
- Combined Sewer = C
- Surface Water Sewer = SW
- Trade Sewer = TD
- Partially Separate = PS

Date Req : 01/08/2016, 12:20:41

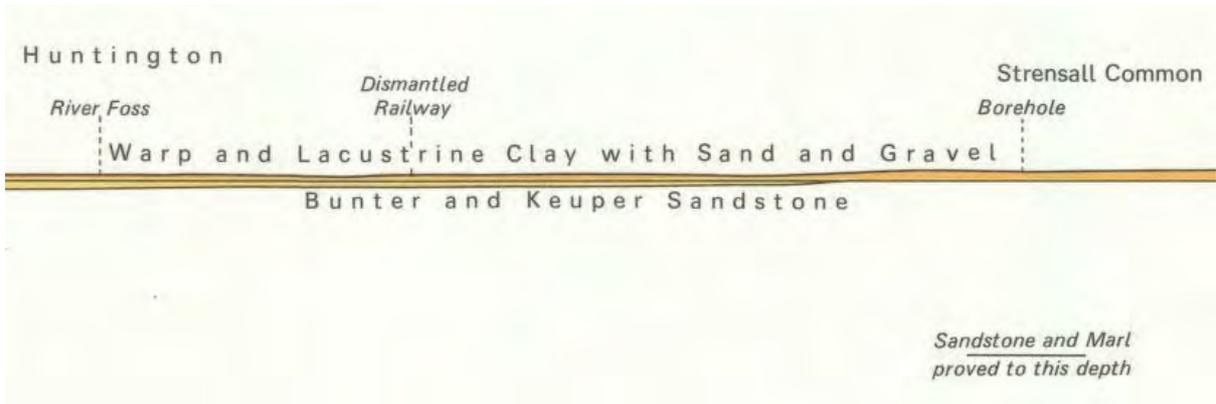
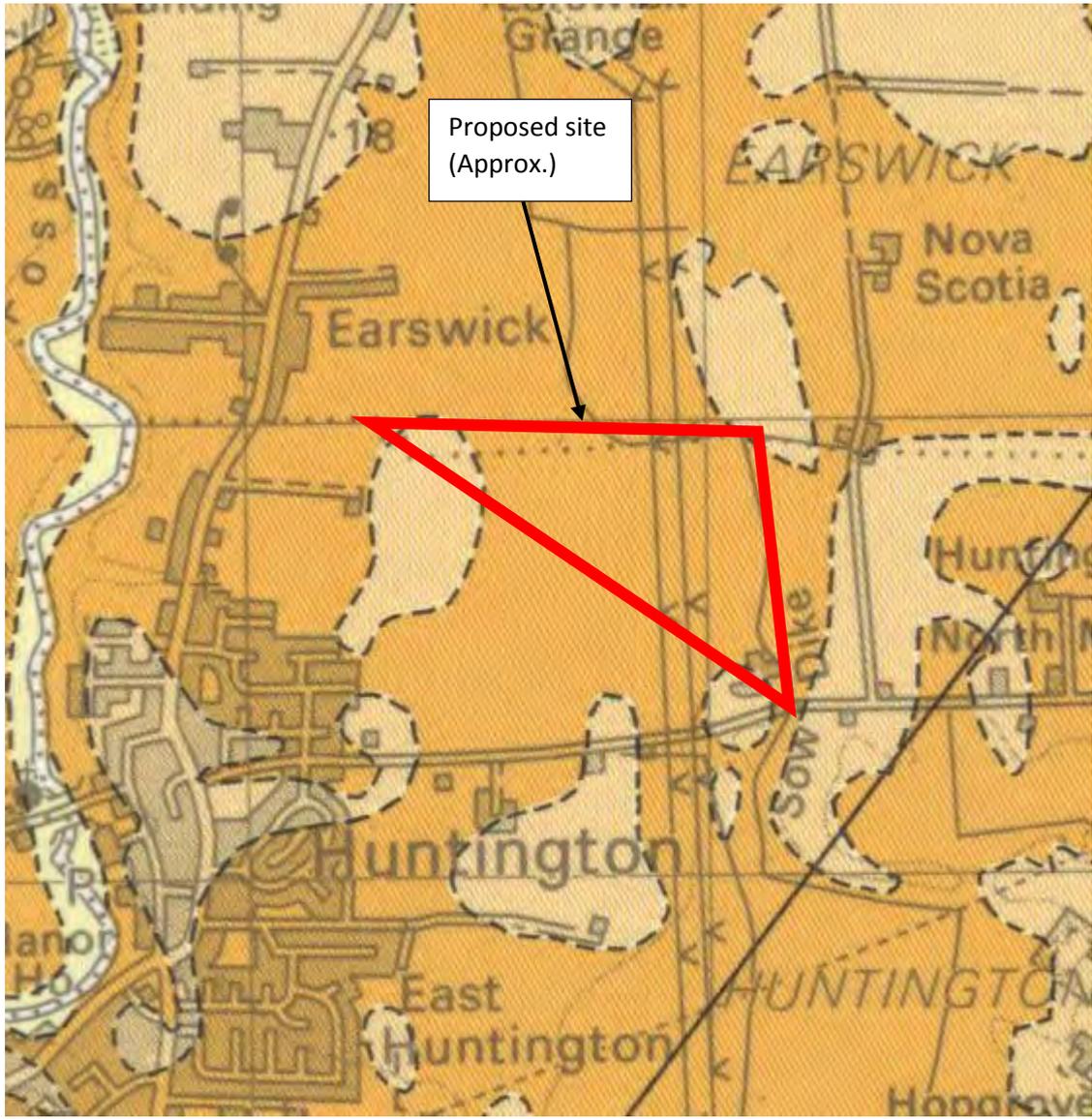
Source : Sewer Network Enquiry

This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown.

Date Gen : 01/08/2016, 12:20:42

APPENDIX C

British Geological Survey Information

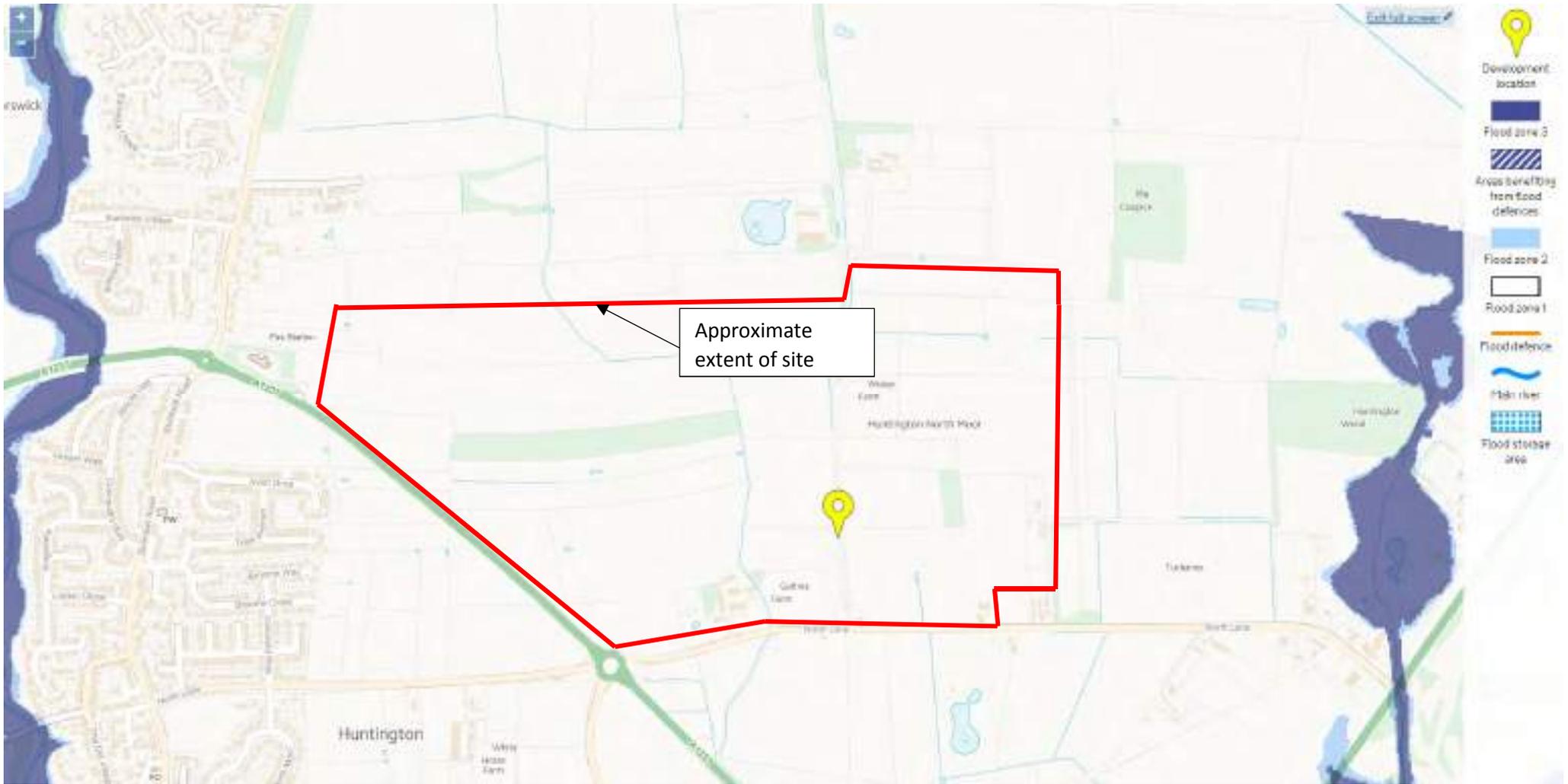


British Geological Survey – Plan and Section

APPENDIX D

Environment Agency Flood Map for Planning

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EA Flood Map for Planning – Galtres Garden Village Site



<p>Hull (Registered Office) Church House 44 Newland Park Hull HU5 2DW 01482 345797 www.masonclark.co.uk consultants@masonclark.co.uk</p>	<p>Leeds Unit E Millshaw Business Living Global Avenue Leeds LS11 8PR 0113 2779542 www.masonclark.co.uk</p>	<p>York Partnership House Monks Cross Drive Monks Cross York YO32 9GZ 01904 438005 www.masonclark.co.uk</p>
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 Land remediation advice

Road and sewer design to adoptable standards
 Section 38 and 104 Agreements
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 Topographical Surveys
 Monitoring Surveys

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 M & E Modelling
 Volumetric / Level analysis
 Scan to BIM
 Scan data cloud hosting
 Hi-Def HDR photographic surveys

DO NOT SCALE
 All dimensions to be checked on site and Architect to be notified of any discrepancies prior to commencement

DESIGNER'S RISK ASSESSMENT
 Construction Design and Management Regulations 2015

RESIDUAL RISKS:

REF	DESCRIPTION	DATE



REVISION	DATE	DESCRIPTION	CHECKED



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JOB / CLIENT
 Galtres Garden Village
 O'Neill Associates

DRAWING TITLE
 Indicative Masterplan - Option with A64 Offset

PROJECT ADDRESS	RC	DRAWN BY	AH	CHECKED	
SCALE	1:5000@A0	PROJECT NO.	N81:2484	DRAWING NO.	PL003
DATE	22.03.2018				
DRAW STATUS		CONCEPT	TENDER	CONSTRUCTION	RECORD

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Eamonn Keogh

From: Ben Reeves <breeves@yorkat.co.uk>
Sent: 28 March 2018 12:59
To: Eamonn Keogh
Cc: Ian Milsted
Subject: Galtres Garden Village

Dear Eamon,

Judging by the work we undertook for the heritage statement last year we do not know of any archaeological sites or discoveries within the new area shown on the revised master plan.

As we pointed out in the heritage statement there is potential for prehistoric or Roman remains in this area. However, any remains are unlikely to be of such significance that the impacts can't be mitigated or that they might prohibit development.

Regards,
Ben



Eamonn Keogh

From: Andrew Gardner <andrew.gardner@tgp.uk.com>
Sent: 27 March 2018 16:46
To: Eamonn Keogh
Subject: Galtres Garden Village - Landscape Comments
Attachments: D156_AG_V6_311017 Galtres Garden Village Landscape Capacity FINAL.pdf

Eamonn,

As discussed on the phone, attached is the tweaked Landscape capacity report. Our comments on the possible revised Masterplan are set out below.

There would be no additional impacts on landscape designations over and above those set out in the Landscape Capacity Report should the site boundary be amended.

The impact on the viewpoints would by and large remain the same, although Viewpoints 1, 2 and 6 would potentially change.

Viewpoint 1 (Currently No Change)

There is potential for some glimpse views of the area that would extend to the north east of the current red line, which would lead to a Moderate / Minor effect, which is not considered significant.

Viewpoint 2 (Currently Moderate / Minor Effect)

There is potential for views of the site to increase should the proposed development moves further north. This could increase the effect on the viewpoint to a Moderate effect which is considered significant.

Viewpoint 6 (Currently Major / Moderate Effect)

There is potential for views of the site to reduce from this viewpoint as the site boundary may have to move further west due to the dualing of the A64 allowing retention of more mature hedgerows and trees. The effect on the viewpoint would likely reduce to Moderate, which is still considered significant.

The effects on these viewpoint could all be mitigated with retention of as much existing, mature vegetation as possible and supplemental planting and buffer areas between the housing areas and site boundary. This would reduce effects over time, making the effects non-significant.

Hopefully this is all you require, but if you need anything further just let me know.

Many thanks

Andrew

Eamonn Keogh

From: Martin Crabtree <martincrabtree@bryanghall.co.uk>
Sent: 27 March 2018 15:52
To: Eamonn Keogh
Subject: RE: Galtres garden Village

Eamonn

I only have a couple of comments on the alternative masterplan:

- The masterplan takes the scheme further north so the bus penetration into the site will need to take this into account to ensure that walking distances to the service is acceptable.
- The walking distances for some of the dwellings may have increased to the Local Centre particularly those in the north east of the site.

If you wish to discuss please let me know.

Regards

Martin Crabtree
Principal Engineer

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

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A proposal to create a unique Partnership: City of York Council and The Homes and Communities Agency working with Galtres Village Development Company.

Executive Summary

The delivery of many more new homes is a key goal for City of York Council (the council) and it wishes to see development proceed in a structured way which is to the benefit of the citizens of York. The council is dealing with huge pressures associated with serving an ageing population and creating an affordable housing solution for the lower paid. To compound these issues there is a mis-match between homes being built for the market and the needs and budgets of those needing new homes who require council assistance.

This is an offer to secure a powerful partnership between a substantial land owner, Galtres Village Development Company (GVDC) with the Council and the Homes and Communities Agency (HCA). GVDC is offering to change the way affordable homes are created here at the **Galtres Garden Village** by transforming the way the scheme is designed and delivered. We are offering to deliver all the affordable homes to the council or its newly formed development company and not sell to another housing provider. We invite the council to participate in the design, specification and delivery of these homes at a price which will be affordable, creates an asset for the future and will deliver new homes for the people of York in a comparatively short timeframe. This opportunity could give the new development company a huge 'lift' as it starts trading.

We understand the close working relationship the council has with the HCA and we want to build on this partnership by inviting the HCA to take an active role in the scheme by offering investment capital and grant funding.

Context

The council has recently invited local land owners to offer sites for development as part of the Local Plan exercise. The landowners around the Galtres area of Monks Cross have put their land assets together, totalling c.150 acres and have appointed GVDC to act as developer on their combined behalf. The site is capable of producing 1500 -1700 homes of which 450 - 500 will be affordable, in a **Garden Village** setting.

Currently the council expects large schemes to provide 30% of the homes built to be allocated for affordable. The developer decides on the mix, which is driven by the sales market. The developer usually sells the affordable homes to a registered provider (RP) who holds the asset and value into the future and the council usually thereafter holds no financial interest in the property.

In the context of the current market there are 4 important factors to consider;

- Developers will build to sell in the market and this often drives them to produce large, high value 4 and 5 bedroomed family homes.
- Reform to Housing benefit regulations means rents on larger homes (even at affordable levels) will be too expensive for welfare dependent or low paid families, especially taking into account the spare room subsidy issues (bedroom tax) and the constraints being imposed around the Local Housing Allowance.
- Affordable homes are generally sold to RPs who then gain from the long term ownership and asset value uplift.
- The design and delivery of the new homes is entirely in the hands of the developer.

GVDC understands that the housing environment is complex and wishes to work with the council and the HCA to make the delivery of new affordable homes more advantageous for the people of York and to the council.

Our Offer - Delivering a new option

We know that the Council is looking to build new homes, appropriately sized, specified and priced and is setting up a development vehicle to help achieve this goal. **Firstly we positively embrace the opportunity to create 30% of**

this scheme as affordable housing and will offer all the affordable homes to council, be that the council or its development company, and not sell to another RP.

Secondly to invite the council to actively participate in the design of their new homes and will invite a representative to be a monitor in the GVDC board. This will give the council absolute assurance that its interests are being taken into account and complete transparency into the process.

Thirdly we wish to see the new homes become a long term asset for the council or its development company, providing much needed revenue and reducing housing and care costs elsewhere in the city. By providing homes for the elderly, be they bungalows or apartments in an older persons village setting or homes for those with a disabled member of the family, it is possible to create homes which specifically meet the needs of the most vulnerable, making a huge difference to their lives. Whatever is needed can be built and it does not need to be left to the discretion of the developer. The long term investment return will be the Council's NOT other RPs.

We can provide homes for low-paid families at a size and price point which suits them. By using the rent-now-buy-later funding model we will be able to offer the homes for rent and promote home ownership in the future. The council will receive the full value at a later date which it can re-invest.

Finally this whole development is ready to go NOW and we can build substantial numbers of homes for the Council and for outright sale within the first five years of the local plan. We can make the land available from the start of the development and produce all the affordable homes. Normally s106 homes will take many years to come through the system and we are offering to build the affordable homes from the outset and complete within 3 - 7 years.

Who Is GVDC ?

Several landowners and a housing professional have come together to promote the whole site on behalf of the individual land owners. The board members of GVDC are;

Chairman -	Peter Smith FRICS	local landowner and developer
Board member	David Sherry	local landowner and developer
Board member	Stuart Roberts	local landowner , developer and businessman
Board member	Tara Smith	local landowner, specialist in property development and investment.
Board member	Martin Hawthorne	specialist in property development and public sector issues

We realise that in order to promote the opportunity effectively we need to hold all the land ownerships in one place and have one organisation to coordinate the development activity . GVDC will not be selling the opportunity to a national homebuilder once planning is obtained as it intends to develop out the whole scheme itself - GVDC is in this for the long term . It will be the one body to co-ordinate design, planning, funding, construction and sales.

In order to be open and collaborative the board of GVDC will welcome the input of officers and members of the council in the design and development process. Council officers will be welcome at design and business meetings; we will want the council's input in to mix and design and we will open Board meetings to council representatives, so the council can see exactly how the scheme is progressing and make a meaningful contribution to its design and development.

Consultation already underway

Local residents

We have put forward proposals over the last 5 years which have been consulted upon by local residents . We have, as a direct result, moved the proposals further eastwards, away from Earswick . The scheme now sits as new village totally unseen by the passing York citizen using the ring road. We have designed the traffic flow for the neighbourhood to have as low impact as possible using the A 64 directly and Monks Cross roundabout as key transport nodes,

well away from the Earswick roundabout . We have also included for a bus route to go through our scheme and have included for a fully working community hub on site ; shops , recreation , schools, training centre - so that traffic from our site to other places will be minimised as it can be self-served .

Local Authority

In order to match the council's social priorities we have included for a large older person element to this scheme , a truly affordable rent now buy later scheme and aim to support the council in the long term by supporting their commercial housing business to help it have a long term viability and create future income for York and its citizens. **We will commit to a 30% affordable housing provision happily.**

The Environment

We have considered the ecological considerations to a huge degree. Our plans **increase** and **encourage** bio diversity and we will design and pay for a fantastic natural **Garden village** feel to the scheme . We will identify clearly our boundaries and plant a landscape buffer around our site to show the population that this lovely scheme is a new **Garden village**, not an extension to Earswick. The land around can be designated green belt , with the council content that this site has given back to the citizens of York more than it has taken.

Our Design Ethos

We do not have external shareholders to answer to and we want to build a new **Garden Village** to make us and York people proud. We have embraced the principle of building a **Garden Village**, with fantastically designed open spaces and local facilities . The landowners realise that in order to be successful at gaining planning and selling new homes we have to create a fabulous environment, with play areas, sports facilities, shops and schools. We wish to create a place superior to 'standard' offer which will be made by the national homebuilders . Our house types, environment and overall offer has to be second to none, exciting and attractive.

Specifying exactly what the council wants in the affordable portfolio

The council will have very specific requirements for quality, space standards, 'price point' and components. A normal developer offer would not include bungalows , older persons/ extra care facilities , smaller family homes or many other requirements which will enhance this scheme. All the space and quality standards can be the council's decision and we will deliver what is required in a time frame which will have much more positive impact to the residents of York. We can together design and build homes which will offer a life changing solution for York residents. The costs of providing a bespoke scheme like this can be prohibitively expensive when compared to a traditional s106 arrangement and we are suggesting that by using HCA grant along side Council finances, we can increase the options , increase specification , speed up delivery and provide a unique opportunity to answer some of the pressing housing needs of the City.

There is always the fall-back position available to the council, if it wishes us to deliver s106 homes according to normal policy and practice . If this is what the council wishes then we will still commit to giving the council first option on buying the homes at prices set in the policy, and deliver them over time, linked with the sales rate.

Our Training and Jobs Ethos

The prospect of creating a long term development program means we can produce a fantastic training and jobs offer. Working with the CITB , local educational establishments and others we can together tailor a training and employment program which meets the needs of local people.

We will be actively looking to set up formal long term training resource here. This might well mean looking at how modular construction could play a part in providing the homes for the future. We know the HCA is actively looking at this market and we can, together, see if this has any merits in this location.

It is one thing however simply looking to enhance the training opportunity for the traditional trades, welcome though that is, but we want to take this to a new level. We would wish to work with newly qualified tradespeople to seek opportunities for them to continue their work in construction here on the site. That is the advantage for the council of having a long term partnership with a developer who cares about wider employment issues.

We will want to consider how to take skills to a higher level and we can see 2 streams of development. Firstly there will be those who have a natural aptitude for business and will wish to set up their own business. York needs home grown young entrepreneurs and we will work together to see how these people can be supported in business.

Secondly some trainees will have a real ability to learn and we will want to see them make the most of their academic potential. Again working together we will want them to continue on the working / learning road so that higher educational qualifications and degrees should become available to those who thought this level of education was unaffordable.

We will work in partnership to maximise the learning experience this scheme will offer and will encourage apprenticeships in other elements of construction too such as project management, property development, architecture, civil engineering, marketing etc.

Working in Partnership with the HCA

We will coordinate all the project management, infrastructure, construction issues at cost, in an open-book, transparent way, so the council can see precisely what it is getting for its investment. If the HCA would offer grant investment at the same time this should bring the net borrowing for the council down to a level where the scheme is even more affordable and sustainable. We will offer a real step change in quality and speed of delivery to justify this grant expenditure.

HCA Investment

GVDC is not a traditional developer supported by shareholder capital, that is why we can be so flexible and creative. We would wish to apply for the HCA's construction finance to cash flow the development and look at using the Infrastructure Fund if required. There are many avenues open for funding where the land is already in place but GVDC would like to give the HCA the opportunity to offer funding as the scheme is socially orientated supporting the HCA's ethical lending policy. The area is greenfield and we assume that having brought the hugely valuable asset of the land to the table, then loan finance for infrastructure and home building should be available at affordable and attractive rates.

Housing finance as a long-term Investment

Offers like this are rare and the council has a real opportunity to be a partner in an exciting large-scale development supporting its long term investment plan. If the council wishes to see developments come forward using its own capital then this scheme is hugely attractive. We will happily work with the council to see if there is merit in the council being a major investor of funds , receiving the investment income / return as any commercial lender would do.

Investing for the future

The opportunity to own and manage 450 -500 new homes over the course of the next few years will enhance the new development company's value or the council's housing value significantly. The new older person accommodation should relieve pressure on over stretched resources elsewhere and the ability to have an older persons village arrangement at scale should create efficiencies in care costs.

The grant regime allows the council to hold new homes for rent for a period and sell in the future , either to the resident or on the open market if the resident moves on . This allows for the council to take advantage of the full sales receipt (without a Right to Buy discount). The council can also offer homes for affordable rent , market rent or shared ownership in the future depending on the housing circumstances. All these scenarios should be very attractive both

for social and financial reasons. **We aim to build into this scheme an income structure which should benefit York citizens well into the future.**

The HCA accepts clearly that low paid families are finding it difficult to buy a home; the cost of paying high private rents means there is no spare income to save for a deposit. There is an opportunity here to help this cohort of population. This customer base perhaps does not see the council as their first choice housing provider and the council could create a below-market rented option for low paid working families and become attractive to a new customer base. Property for this market could be a fine investment, potential residents are plentiful, running costs will be low and the re-sale value of homes in the future could be very strong given that the new **Garden village** will continue to develop and grow over time.

Experience and history of delivery in York

This type of housing has been created in York already. Martin Hawthorne, a member of the GVDC board was the lead officer working for the housing association which produced hugely successful Discus bungalow scheme at Regent Street and Richmond Street. He was the Development Director for Tees Valley Housing, Fabrick and Thirteen Housing for the last 16 years . He pioneered the idea that working families on modest incomes could access low cost rented homes initially and buy when they were ready. Indeed the Discus scheme is acknowledged as a forerunner of today's grant regime. The scheme also was a master class in how organisations can work together, creating new homes for the very elderly and families alike in a spirit of cooperation and harmony. The team, led by Martin, built nearly 200 new homes in only 3 years in the heart of the city, working with the local community and working around some really challenging issues . The scheme was recently visited and praised by officers from The Department of Communities and Local Government (DCLG) for its wide ranging commitment to quality, flexibility and focus on the

real needs of local York residents . It was considered such an exemplary scheme that BBC radio 5 live and Sky TV both ran reports on the scheme.

Conclusion

As the Council decides which sites to take forward within the local plan we are keen to show that we can offer a unique partnership which gives all three parties a position where they can invest in a way to complement their business objectives.

We want the scheme to prosper on the basis of cooperation, positive discussion; not based on argument and counter argument as many new developments nowadays tend to do.

Our aim is to build a beautiful place, a benefit to York citizens, in harmony with the landscape for all budgets and lifestyles. We know that increasing housing numbers in York will mean inevitably some countryside has to be developed. We believe our site, if converted to a **Garden Village** will be an improvement on the existing use .The current existing farmland currently has little biodiversity and is not open or accessible for York residents . Our site once developed will create new pleasant places for people to live, play and enjoy. There will be a wide and rich diversity of flora and it is situated in a place close to roads, bus links, a shopping facility and will become an asset to the city.

The residents, from all walks of life who move here will be close enough to the City to enjoy what it has to offer whilst enjoying the space within of a **Garden Village**, inspired in no small measure by the Rowntree legacy; the aim to give more back to the citizens of York than has been taken.

Galtres Garden Village



DRAFT

Infrastructure, Delivery and Phasing

The following sets out an indicative infrastructure delivery and phasing plan for Galtres Garden Village. It is envisaged the early phases of development resulting in the delivery of a loop road which will provide access to the retirement village and a significant amount of affordable housing within phases 1 and 2 of the development.

Before an individual cell is developed, the associated infrastructure for that cell will be put in place. Cells that come forward in advance of a phase as defined within this Infrastructure Delivery Plan (IDP) will not be delivered until the associated infrastructure (including the infrastructure for the preceding phases), is completed.

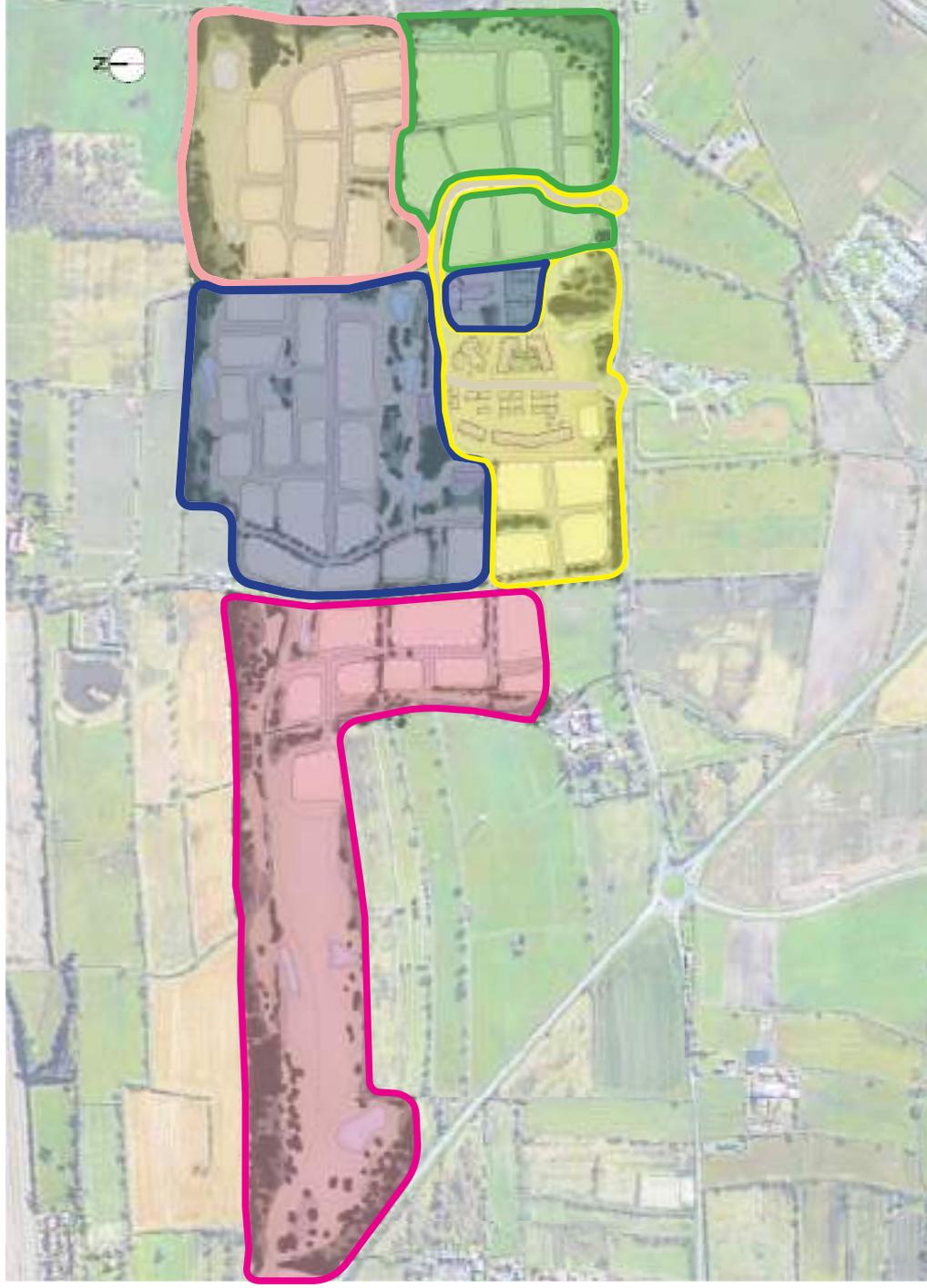
Phasing

Galtres Garden Village will be delivered in 5 phases over a 14 year period as indicated in the table below, with the necessary infrastructure delivered in accordance with the 'trigger' set out under the infrastructure delivery section below. The phasing plan envisages early stages of development being located on the southern part of the site adjacent to the two new roundabouts on North Lane which are proposed to access the Garden Village. Phase 1 includes the retirement village and initial SuDS area to serve this first phase of development.

Infrastructure Delivery

- Phase 1 will relate to the retirement village and residential development cells west of the retirement village. Initial SuDS ponds adjacent to North Lane will also be delivered within this phase.
- Phase 2 will see work commence on residential development cells to the east of the retirement village and north of the second roundabout on North Lane.
- Phase 3 will include housing in the north eastern corner of the site and a significant area of green infrastructure space to the north of these cells and the landscaping within the east west green route
- Phase 4 will include the village hub area and retail units.
- Phase 5 relates to the western development cells and delivery of the country park in the north western corner of the site which will also provides a direct pedestrian link with Huntington via the A1237.

It should be noted that works on some cells will take place over a significant period of time due to the scale and size of the cell. Some phases of development will therefore overlap with other phases.



Phase	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1														
2														
3														
4														
5														

Phase	Approximate No of dwellings	% of affordable	Phased Delivery Period
1	383 (incl 350 Continuing Care Retirement Community)	35%	2019 - 2023
2	340	35%	2020 - 2025
3	300	30%	2021 - 2027
4	460	25%	2024 - 2029
5	270	20%	2027 - 2032

Infrastructure Works

An infrastructure phase is proposed which will facilitate development in cells throughout the site. The infrastructure phase will commence in advance of development within housing cells. Specific items which are included within the infrastructure phase are identified below. The triggers by which individual elements of site wide infrastructure must be in place by are identified within the delivery phase section.

Site Establishment Phase to include the following

1. Access road into the site and length of spine road to provide access to phase 1 and 2 cells.
2. Planting to access road
3. Compound location
4. Provision of foul drainage
5. Construction of initial SuDS area
6. Temporary connections to SuDS area
7. Strategic landscaping to northern, eastern and western edges of sites will be started but not completed
8. Earthworks
9. Landscape infrastructure
10. Drainage to support roadways
11. Foul drainage

Reserved matters applications will come forward for individual cells or groups at any time. The order within which different housing cells come forward may vary from the delivery phase although no housing cell will be occupied until the necessary infrastructure for that phase has been delivered.

Flood Management and Drainage Strategy

The drainage infrastructure will address issues relating to surface water and foul water discharge, delivering benefits to the wider area as a result. The developer Galtres Village Development Company (GVDC) will deliver all of the necessary infrastructure for the masterplan area.

Phase	Surface Water	Foul Water	SuDS	Developer/Trigger*
1	Watercourse enabling works and main SuDS basin constructed, along with the outfall connecting the main SuDS Basin to the watercourse. Connection to existing Yorkshire Water system and main drainage network constructed for SuDS Pond.		SuDS basins	Ultimate developer in accordance with planning condition(s)
2	Drainage network throughout developed cells to connect into SuDS basins constructed in Phase 1 and Phase 2. Swales/Drainage Network constructed to link highway/main drainage network to SuDS Pond.		SuDS basin	Ultimate developer in accordance with planning condition(s)
3	Drainage network throughout developed cells to connect into SuDS basins constructed in Phases 1, 2 & 3. Highway/main drainage constructed within main access road. Connection points to be installed for each of the Cells to connect to once construction begins.		SuDS basin	Ultimate developer in accordance with planning condition(s)
4	Drainage network throughout developed cells to connect into SuDS basins constructed in Phases 1, 2, 3, 4 & 5. SuDS Ponds constructed for each cell (where possible) prior to construction of drainage network within developed cells		SuDS basin	Ultimate developer in accordance with planning condition(s)
5	Drainage network throughout developed cells to connect into SuDS basins constructed in Phases 1, 2, 3, 4 & 5. SuDS Ponds constructed for each cell (where possible) prior to construction of drainage network within developed cells		SuDS basin	Ultimate developer in accordance with planning condition(s)

Site Access Junctions and Local Highway Infrastructure

The proposed development will involve undertaking a number of works in the surrounding area to enhance accessibility, upgrade junctions and provide two principal points of access to the site from North Lane. As part of the Phase 1 works two roundabouts will be constructed on North Lane providing access to the phase 1 and phase 2 areas. Highway works to create the new roundabouts will be funded by GVDC and sufficient length of the spine road to allow delivery of the retirement community, affordable housing and private housing.

Public Transport Improvements

Based on data extracted from national Travel Survey 2002 to 2102 the average distance people walk to a bus stop is 550m and the 85 percentile distance is 810m. The 85 percentile is taken as the catchment of a bus stop. The masterplan has been developed to ensure that all development cells will be within 550m of bus stops along the spine road subject to agreeing with a bus operator.

A shorter loop road is proposed serving the village hub, retirement community and school with a secondary loop that will provide access to the wider site acting like a secondary concentric outer loop road. It is envisaged that 4/5 bus stops in both directions will be provided within Galtres Garden Village.

Phase	Bus Stops	Developer/Trigger*
1	Bus stop 1 western gateway	Secured by condition
2	Bus stop 2 village hub	Secured by condition
3	Bus stop 3 north eastern edge	Secured by condition
4	Bus stop northern edge	Secured by condition
5	Bus stop north western edge	Secured by condition

Off Site Highway Works

Beyond the proposed garden village, the proposed development may be required to make a financial contribution towards the costs of highway works in relation to the A64 junction to the east of North Lane.

Education

The masterplan proposes a two form entry primary school within the village hub. This will be delivered later on within the overall development cycle once sufficient homes have been constructed to ensure pupil numbers. This is proposed within phase 4 of the development. Discussion will be required with City of York with regard to existing primary and secondary school capacity in the wider locality.

A developer contribution towards secondary school provision via a s106 contribution is suggested as an appropriate way in which to secure funding for secondary education provision.

Public Open Space & Strategic Landscaping

The proposed development will see the delivery of all required public open space (as set out and agreed with City of York through their Open Space Needs Assessment) delivered within each phase.

In addition, strategic landscaping will also be delivered across the proposed development in order to mitigate against the potential impact on views and the loss of openness in the wider area including advance structure planting. The public open space and strategic landscaping will be delivered in accordance with the adjacent table.

Management & Maintenance

Community involvement is an important factor in ensuring housing estates and landscaping become places to enjoy and value. It is the intention to encourage as much community involvement as possible in the safeguarding of their spaces, and to ensure they remain at a high standard. As part of the community involvement a levy will be set up in order to fund long term management, maintenance and improvements to the proposed green infrastructure and amenities which will be undertaken by an appointed Management Company. This levy will form part of a legal agreement written into the deeds of all the residential and properties.

- Parks and Gardens
- Outdoor Sports
- Play Space
- Amenity Open Space
- Semi Natural Green Space
- Allotments
- Country Park

Management & Maintenance

To be secured by private management company(s) and set out within respective S106 agreements or as otherwise agreed. Subject to future management and maintenance plans.

Ecology

The proposed development will deliver a number of ecological mitigation and enhancement measures in order to mitigate against the proposed development. These mitigation and enhancement measures will include on-site works and will be delivered in accordance with the table below:

Phase	Green Infrastructure and SANGS	Play Area / Play Space	Outdoor Sports	Allotments	Ecological habitat improvements
1	Strategic landscaping Village Green		Trim trail Sports pitches	Community allotments	
2	Strategic landscaping	Eastern Gateway play area	Trim trail	Community allotments	
3	Strategic Landscaping		Sports Pitch Trim trail Sensory gardens	Community Allotments	Habitat zone to north east corner of site
4	Strategic Landscaping	Country Park	Trim trail	Community Allotments	Habitat enhancements as part of country park
5	Strategic Landscaping	Country Park		Community Allotments	Habitat enhancements as part of country park
Phase	Ecological works (on site)				Developer/Trigger*
1	Trees and hedgerows to be retained where possible. The retained hedgerows and plantations will be protected during construction using protective barriers. A Construction and Environmental Management Plan (CEMP) will be prepared and implemented to protect and enhance retained habitats within the site, to protect adjacent habitats outside the site, to prevent pollution of and damage to hedgerows and trees, and to ensure that works are undertaken in accordance with wildlife legislation. Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species. Site works will minimise disturbance and prevent harm to species present.				Ultimate developer in accordance with planning condition(s) / s106
2	Trees and hedgerows to be retained where possible. The retained hedgerows and plantations will be protected during construction using protective barriers. A Construction and Environmental Management Plan (CEMP) will be prepared and implemented. Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species. Site works will minimise disturbance and prevent harm to species present.				Ultimate developer in accordance with planning condition(s) / s106
3	Trees and hedgerows to be retained where possible. The retained hedgerows and plantations will be protected during construction using protective barriers. A Construction and Environmental Management Plan (CEMP) will be prepared and implemented. Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species. Site works will minimise disturbance and prevent harm to species present.				Ultimate developer in accordance with planning condition(s) / s106
4	A Construction and Environmental Management Plan (CEMP) will be prepared and implemented. Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species. Site works will minimise disturbance and prevent harm to species present.				Ultimate developer in accordance with planning condition(s)
5	A Construction and Environmental Management Plan (CEMP) will be prepared and implemented. Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species. Site works will minimise disturbance and prevent harm to species present.				Ultimate developer in accordance with planning condition(s)

PHASE 1 DELIVERY

Site establishment phase to include the following

1. New roundabout and access to the site from the North Lane.
Trigger = prior to first occupation
2. Compound location
Trigger = Prior to first occupation
3. Construction of initial SuDS area
Trigger = Prior to first occupation
4. Temporary connection to SuDS
5. Strategic Landscaping within phase 1
Trigger = Prior to first occupation
6. Approximately **383** units in phase 1 including 350 continuing care retirement community
Trigger = Secured by condition
7. Footpaths and public footpath with phased delivery
Trigger = Secured by condition
8. Provision of accessible public open space
Trigger = Prior to occupation of first dwelling
9. Advance landscape planting to eastern boundary adjacent to phase 2
Trigger = Prior to first occupation



Flood Management and Drainage Strategy

- Drainage network throughout developed cells connecting network into SuDS features.
- Connection to combined sewer
- SuDS basins and outfall to watercourse

Highway Works within the site

- Footpaths & cycleways - Pedestrian crossing points at new roundabout at western and eastern gateways
- New eastern and western site access

Public Open Space & Strategic Landscaping

- Landscape works at the eastern and western gateway entrances

- Establishment of advance structure planting along eastern boundary
- Partial establishment of recreation links around site perimeter

Ecological Works

- Trees and hedgerows to be retained where possible
- Retained hedgerows and plantations will be protected during construction using protective barriers
- Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species
- Site works to minimise disturbance and prevent harm to species present including nesting birds
- Creation of ecological area along southern and eastern edge to support a range of wildlife habitats.

PHASE 2 DELIVERY

Phase 2 to include

1. Other landscaping works as set out in the landscaping proposals for the area

Trigger = Prior to occupation of first dwelling

2. Incidental children's play features along eastern and northern edge

Trigger = Prior to occupation of first dwelling

3. Approximately **340** units in Phase 2

4. SuDS basin serving development cells

5. SuDS basin

Flood Management and Drainage Strategy

- Drainage network throughout developed cells to connect into SuDS basins constructed in phase 1
- Foul network to connect to combined sewer
- SuDS basin

Public Open Space & Strategic Landscaping

- Landscape works along eastern edge
- Creation of approximately 10 allotments

Ecological Works

- Trees and hedgerows to be retained where possible
- Landscaping will be used to provide new areas of high quality habitat.



PHASE 3 DELIVERY

Phase 3 to include

1. Other landscaping works as set out in the landscaping proposals for the area including green routes

Trigger = Prior to occupation of first dwelling

2. Commence works to create village hub.

Trigger = 85% of units phase 3 or 6 years from commencement

3. Commence works to create local retail centre. Completion of retail centre prior to occupation of last dwelling in phase 3.

Trigger = Prior to occupation of last dwelling in phase 3

4. Approximately 300 dwellings in phase 3

5. SuDS basin to serve development cells

Flood Management and Drainage Strategy

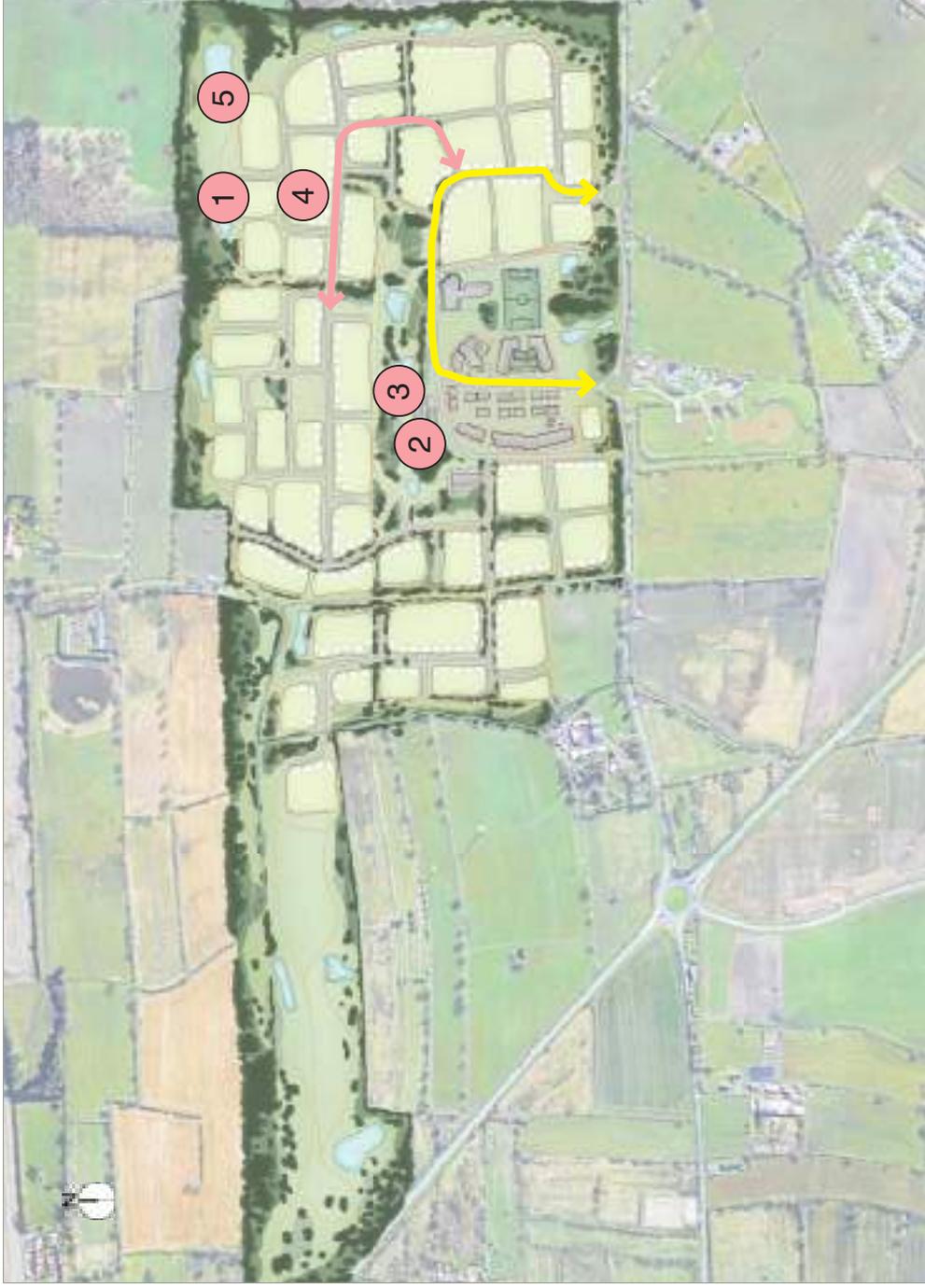
- Drainage network throughout developed cells to connect into SuDS basins constructed in phase 1
- Foul network to connect to combined sewer
- SuDS basin constructed

Public Open Space & Strategic Landscaping

- Landscape works along eastern and northern edge
- Creation of approximately 10 allotments

Ecological Works

- Trees and hedgerows to be retained where possible
- Landscaping will be used to provide new areas of high quality habitat



PHASE 4 DELIVERY

Phase 4 to include

1. Other landscaping works as set out in the landscaping proposals for the area including green routes and eastern and northern edge planting
Trigger = Prior to occupation of first dwelling

2. Complete strategic landscape planting and recreation foot and cycle paths and art works along eastern and northern boundaries.
Trigger = Prior to occupation of last dwelling

3. Approximately 460 dwellings in phase 4

4. SuDS basin

5. Completion of primary school prior to occupation of 50% of phase 4 dwellings
Trigger = 50% of units within phase 4

6. Commence works to primary school. Completion of primary school prior to occupation of 50% of phase 4 dwellings
Trigger = 50% of units within phase 4

Flood Management and Drainage Strategy

- Drainage network throughout developed cells to connect into SuDS basins constructed in phase 1
- Foul network to connect to combined sewer
- SuDS basin to serve development cells

Public Open Space & Strategic Landscaping

- Landscape works along western edge
- Creation of approximately 10 allotments

Ecological Works

- Trees and hedgerows to be retained where possible
- Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species



PHASE 5 DELIVERY

Phase 5 to include

1. Other landscaping works as set out in the landscaping proposals for the area including green routes and western and northern edge planting
Trigger = Prior to occupation of first dwelling

2. Complete strategic landscape planting and recreation foot and cycle paths and art works along western and northern boundaries.
Trigger = Prior to occupation of last dwelling

3. Approximately 270 dwellings in phase 5

4. SuDS basin

5. Completion of country park prior to occupation of 50% of phase 5 dwellings
Trigger = 50% of units within phase 5

Flood Management and Drainage Strategy

- Drainage network throughout developed cells to connect into SuDS basins constructed in earlier phases
- Foul network to connect to combined sewer
- SuDS basin to serve development cells

Public Open Space & Strategic Landscaping

- Landscape works along western edge adjacent to A1237
- Creation of approximately 10 allotments

Ecological Works

- Trees and hedgerows to be retained where possible
- Landscaping will be used to provide new areas of high quality habitat, beneficial to a range of species

