City of York

LDF

Local Development Framework

York Northwest

Transport Masterplan

December 2011

Executive Summary

York's Key Transport Issues and Challenges

E1. This document sets out the transport approach for development within the York Northwest (YNW) corridor. It builds on and takes forward other preparatory studies that have already been undertaken by or on behalf of the Council. It sets out the principles and a package of transport measures that will enable the sustainable development of the sites and sets out who will be responsible for delivering them. It also sets out how the traffic impact will be monitored and how this will be linked to the phased development of the sites.

E2. The Council has taken the approach of developing the Transport Masterplan to enable the incremental development of YNW within a framework to manage and mitigate the cumulative transport impacts and to ensure the delivery of the transport infrastructure necessary for the development of York.

E3. This Masterplan sits alongside other development planning documents, such as the Local Development Framework's emerging Core Strategy and site-specific supplementary planning documents. The Council will use the Masterplan to assess the Transport Assessment, framework Travel Plan and other documents submitted by developers for the sites within YNW. Technical work, including transport modelling and engineering feasibility work undertaken in preparing this Masterplan builds on the transport study undertaken for York Central in 2005 (Faber Maunsell's Transport Masterplan).

E4. YNW is a strategically important development opportunity containing two strategic allocation sites that will have a significant impact on the city of York and the wider sub-region. Without mitigation, the development of this corridor has the potential to have a serious deleterious effect on the local and strategic highway network and therefore other networks, such as local buses and cycle routes. This was illustrated by the outcomes of previous modelling work, outlined in the YNW Transport Topic Paper (August 2010), which looked at a 'Reference Case', and showed the congestion and delay impacts associated with the additional traffic generated by development of the sites to be significant. Ultimately, this is contrary to the objective of reducing the impact of travel on the environment. Therefore, developers on YNW will need to

deliver a step change in the uptake of sustainable travel modes, as will developers of other large developments in York, in comparison to previous developments in the city.

1. Background

Area

1.01 YNW is an area within the city located to the northwest of the existing city centre. It is made up of two large development sites, currently designated as strategic allocations within the emerging Local development Framework (LDF) Core Strategy, The first is÷ York Central, which includes railway land to the northwest of York Station and the city centre. The second is the former British Sugar / Manor School site, mainly consisting of a former industrial area further out towards the northern outer ring road.

1.02 York Central is located on railway lands (operational and retained land) to the west of York Station, enclosed by the East Coast Main Line and the station Freight Avoiding Line and covers a developable land area of approximately 35ha. The site also includes residential uses (terraced housing and some recent mixed housing), some industrial sites and the National Railway Museum. There is a single spine road running northwest to southeast through the site, from Water End via Salisbury Road and Leeman Road and linking into the inner ring road at Station Road. Leeman Road has vehicle height restrictions at both ends because of low bridges under the rail lines.

1.03 The former British Sugar / Manor School site comprises approximately 42ha of land, located within the outer ring road, to the north west of the city, just over 2km from the city centre. It is bounded to the north and east by the East Coast Main Line and the York-Harrogate rail lines and to the southeast by pre-1960s suburban housing of relatively low density. Beyond the railway lines to the northeast is an area of open space incorporating the River Ouse and floodplain Ings. Existing commercial development is located to the north of the site, on Millfield Lane and York Business Park. York Business Park also contains a small area of recent housing accessed only via Kyle Way with some additional walking and cycling routes to the main area of the business park.

1.04 The former Manor School site and the Civil Service Sports Ground are identified as potential opportunity sites for a new access to link the development site to the A59 (Boroughbridge Road).

Existing transport network

1.05 York's northern outer ring road (A1237) carries significant flows of traffic around the city. It is single carriageway throughout with at-grade junctions (roundabouts) where it crosses radial roads. Both development sites are along the A59 York-Harrogate road, which is one of the main radial routes into York and also links to the A1 near Green Hammerton.

1.06 The A59 is single carriageway throughout and passes through residential areas on its way into the city centre. Between its junctions with Water End and Grantham Drive, the corridor narrows with houses coming close to the carriageway.

1.07 Water End is the only road crossing the River Ouse and the railway lines to link the A19 and A59 radials between the outer ring road and the city centre. As a result, it already carries significant cross-city traffic.

1.08 Previous work undertaken for YNW demonstrated that much of York's strategic highway network will operate at or over capacity during peak times of day by 2021 before factoring flows generated by YNW, with particularly acute congestion on the northern outer ring road and constrained city centre junctions.

1.09 The former British Sugar site was served by two access points when in use: Plantation Drive, which was the main employee vehicular access to the site; and Millfield Lane for HGV access. The site also has a disused access onto an un-adopted track leading to Ouse Acres. However, the terms for the use of this track and how often it was used when British Sugar was operational are unknown.

1.10 The cycle network in the area is generally good with most roads having either on-road or off-road facilities, but, some gaps remain. Boroughbridge Road (A59) has on-road cycle lanes on both sides between its junctions with Beckfield Lane and Water End. York's Orbital Cycle Route passes near to the site, running from Lindsey Avenue, across Boroughbridge Road and along Water End. As part of future planned works, the Council is undertaking junction alterations to improve cyclists' speed and safety along the Orbital Cycle Route.

1.11 Enhanced facilities for cyclists are already provided at the Cycle Hub Station near Lendal Bridge, which includes secure cycle parking, changing facilities, a repair workshop and some related retail. In addition a new cycle retail/hire outlet has recently opened at York Rail Station.

1.12 The local bus network is, to a significant extent, planned and provided by commercial operators. The Council's direct involvement is, at present, limited to part-subsidising additional services and journeys that it deems to be socially necessary, and in planning Park & Ride services. It is therefore likely that there will be changes to the network outside the Council's direct control in future, because of both external factors and operators' own plans in response to developments such as YNW. However, existing modelling undertaken by the Council has assumed that the network (in terms of routes and frequencies) will be similar in 2021 to what it is at present. It is likely that new or enhanced bus services will require a degree of subsidy in the short-term even if, in the longer term, they prove to be commercially sustainable.

1.13 Local bus services along the A59 corridor are commercially marginal, with some operating under contract to the Council. YNW should increase patronage on the corridor in general. However, in the short-term there is a risk of reduced service to existing communities along the corridor if existing services are simply rerouted through areas of new development. Development on the former British Sugar / Manor School site must contribute to a comprehensive local bus service without detriment to service levels for neighbouring areas. Reliability of bus services on the corridor is already poor with high journey time variability. Development on YNW will be expected to fund improvements such as bus priority, with developers contributing to the measures that mitigate the local impact of the development (if this can not met by the Access York project[1]) and contribute to the improvements that deliver city-wide benefits.

[1] Access York has been developed by the Council as a scheme that includes improvements to the outer ring road, upgrades to the Park & Ride network and bus priority measures along the A59. It was to be included as a Major Scheme through the (former) Regional Funding Allocation. At the time of publication, future public sector funding for the scheme is not certain and cannot be relied upon to match the timescales of private developers within YNW.

1.14 The proposed A59 Park & Ride site (Poppleton Bar), which the Council is progressing as part of Access York Phase I, is intended to be constructed to meet current planned growth without YNW in terms of its car park capacity (600 vehicles) and vehicles on the route. Upon opening, it is expected that the Park & Ride service will use single-deck rigid buses operating on a 10-minute frequency.

1.15 Existing residential areas are well served with footways along all carriageways. However, there are few direct links to the city centre from British Sugar / Manor School (indirect via Water End, Salisbury Road and Jubilee Terrace or direct along Boroughbridge Road and Holgate). The main roads provide direct routes but are poorer quality due to air pollution, traffic noise, multiple vehicle crossovers, etc. There are no direct routes northeast of British Sugar / Manor School, due to severance caused by the railway lines and the River Ouse. All walking routes from the former British Sugar / Manor School site currently require a crossing of Water End, which, although signalised at its junction with Boroughbridge Road, does cause a perceived delay. The junction with Salisbury Road further down Water End is also signalised with a toucan crossing, enabling pedestrians to cross Water End in a single manoeuvre at this point.

1.16 Pedestrian access between York Central and the city centre and rail station exists but is poor due to its location being surrounded by rail lines. A good quality, non-trafficked route runs along the southwest side of the River Ouse from Jubilee Terrace but river crossings are limited to Scarborough Bridge, which has stepped access, and Lendal Bridge, which can be accessed via steps or by one of two fairly long linking routes. Leeman Road passes under the station via an underpass known locally as Marble Arch. It has a separate segregated foot and cycleway on the south side of Leeman Road and footway on the northern side. under the rail station,. The underpass has high pedestrian use and lit throughout the day but the general pedestrian environment in and on the approaches to it is poor, particularly the northern footway which is elevated above and runs alongside the busy Leeman Road.

1.17 Road-based transport accounts for 26% of York's carbon emissions[2]. YNW developments must demonstrate that the need to travel is minimised and, where travel is necessary, both on-site and off-site

[2] DEC (2009) *Tackling climate change in York*.

journeys have a low carbon footprint. It is anticipated that trips will inevitably be generated towards other employment locations outside York, notably West Yorkshire and the Tees Valley. New developments will need to look at their impact on the highway network of neighbouring local authorities and the trunk road network and facilitate the increased use of more sustainable alternatives, such as rail.

1.18 Air quality at key junctions within the city, notably around the inner ring road and at Poppleton Road / Acomb Road junction and Clifton Green (all within the City's first declared air quality management area (AQMA)), is already poor and any additional traffic will cause further deterioration. Developments at YNW must demonstrate that, where they generate additional traffic, it does not significantly decrease air quality in existing air quality management areas nor bring other areas over the critical thresholds.

1.19 YNW is also a significant corridor for rail, with York Central itself bound by the East Coast Main Line (ECML) and the station Freight Avoiding Line (FAL)[3]. The York-Harrogate-Leeds line also branches off the ECML at Skelton junction. This junction is a severe restriction on services on the York-Harrogate-Leeds line as trains from Harrogate have to cross the down line and join the up line of the East Coast Main Line here and are given lower priority than other services continuing on the ECML itself. In addition, the double track coming into York merges into a single line section just before the junction itself.

1.20 Although YNW is traversed by rail lines, passenger access to rail services is currently limited to York Station and, to a lesser extent, Poppleton Station, so there is little scope for 'heavy' rail to provide for local journeys[4]. Looking ahead, previous work on YNW has investigated proposals to provide an additional station on the York-Harrogate-Leeds. Furthermore, the current service between York and Harrogate operates at one train per hour in each direction. Increasing this frequency to two trains per hour is possible but would require significant upgrading of track and signalling between York and Knaresborough.

[3] Opportunities exist within the York Central site to provide a new platform servicing the FAL, thereby enabling trains to/from Harrogate to avoid approaching York station via the ECML.
[4] Work has been undertaken within the Leeds City Region to investigate the potential for light rail or tram-train services

1.21 Interchange with other transport modes at York Station is restricted. The Council undertook significant work in the adopted highway outside of the front of the station in 2005/06, which brought improvements for pedestrians, cyclists and bus and taxi passengers. The lack of carriageway space in this area still limits the capacity of the area to adequately take coaches and rail replacement buses (when required) as the existing bus stops are operating at capacity.

1.22 Pedestrian access from the rear of York Station in to Leeman Road is via multiple sets of steps, so is, therefore, not easily negotiated by people with reduced mobility. Car parks and accesses to other properties in the area mean that, although passengers are picked up and set down from private cars and private hire vehicles informally in the area, this function is not provided for adequately.

1.23 The pedestrian access to the rear of the Station to Leeman Road is not accessible to cyclists. At the front of the station cycle access to the main area of cycle racks to the south of Platform 3 is via the long-stay car park, off Queen Street. In addition, new pedestrian / cycle accesses to the front of York Station were completed in 2011. The first of these runs from Lowther Terrace, through the long-stay car park, onto the station platforms near to the main area of cycle racks. The second runs from Post Office Lane off Leeman Road to the northern end of the short-stay car park. Both of these new accesses are gated and their opening hours are currently restricted.

Development Proposals

1.24 York Central is intended to incorporate a mixture of uses throughout the site and these are set out in the emerging Core Strategy of the Local Development Framework. Although the exact allocations are likely to change as the site develops, transport modelling work has assumed that the development will be residential-led, with over 1,500 residential units, 87,000 sqm of B1a employment area, 6,500 sqm of A3/A4 retail use, hotel, leisure and education uses.

1.25 York Central will incorporate some existing land uses. The National Railway Museum lies in the eastern part of the site and has plans to rationalise and improve the facilities it has within this area, some of which may also have an impact on the operational rail lines and could affect Leeman Road. York Central will continue to have some aspects of

operational railway land, notably Network Rail's existing facility off Holgate Road, the signalling centre, rolling stock stabling and other track maintenance uses.

1.26 The former British Sugar / Manor School site is planned as residential development, with approximately 1,300 units and local community facilities.

1.27 As part of the initial modelling work for YNW, outlined in the Transport Topic Paper, four different development scenarios were tested and the residential-led scenario was found to have the largest potential impact on the highway network. Even if it transpires that the actual development mix varies from the assumed development mix, it is anticipated that the general interventions proposed in this Masterplan will still apply, although further detailed work and mitigation may be required

2. Strategy and principles

2.01 YNW is to be developed in a highly sustainable manner, where the need to travel will be minimised and travel by sustainable modes will be encouraged through design, active promotion and, where necessary, support for new services.

2.02 The development will be designed around the hierarchy of road users as set out in the Council's Local Transport Plan (LTP3), which sets out the city's transport strategy from 2011 until 2031. This will be applied on a whole site level and down to street-level design:

(i) Pedestrians[5]
(ii) People with mobility problems
(iii) Cyclists
(iv) Public transport users (includes rail, bus, taxi, coach and water)
(v) Powered two wheelers
(vi) Commercial / business users (includes deliveries and heavy goods vehicles)
(vii) Car borne shoppers and visitors
(viii) Car borne commuters

2.03 Spatial planning will seek to ensure that, in the first instance, the need to travel is minimised, and where travel is necessary that it can be done more sustainably. For example, ensuring that local shops and facilities are within 800m walking distance of all residencies should encourage people to walk or cycle to them in preference to using a car .

2.04 Pedestrian and cycling permeability of the site will be maximised. Low speed limits (20 mph or lower)will be set by the internal street-level situation. Pedestrians and cyclists will benefit from priority at junctions with the carriageway where appropriate. New developments will include links to and extensions of existing pedestrian and cycle networks in the form of new or improved paths and links to facilities such as the Cycle Hub Station.

[5] Pedestrians with mobility problems are given the highest priority.

2.05 YNW developments will maximise accessibility to a range of destinations through provision of safe and convenient new walking and cycling routes and infrastructure, which overcome key barriers, link existing off- and on-road networks and provides convenient ancillary facilities. Principal linked destinations will include the city centre, York Station, Northminster Business Park, York Business Park, Station Business Park, Clifton Moor, Acomb and Rawcliffe with indicative routes shown in Figure 2.1.

2.06 Walking and cycling routes will be high quality, direct, continuous routes with clear signage linking with the local bus network and York Station. The network will be designed such that safe, well-lit routes are suitable for use throughout the day and after dark.

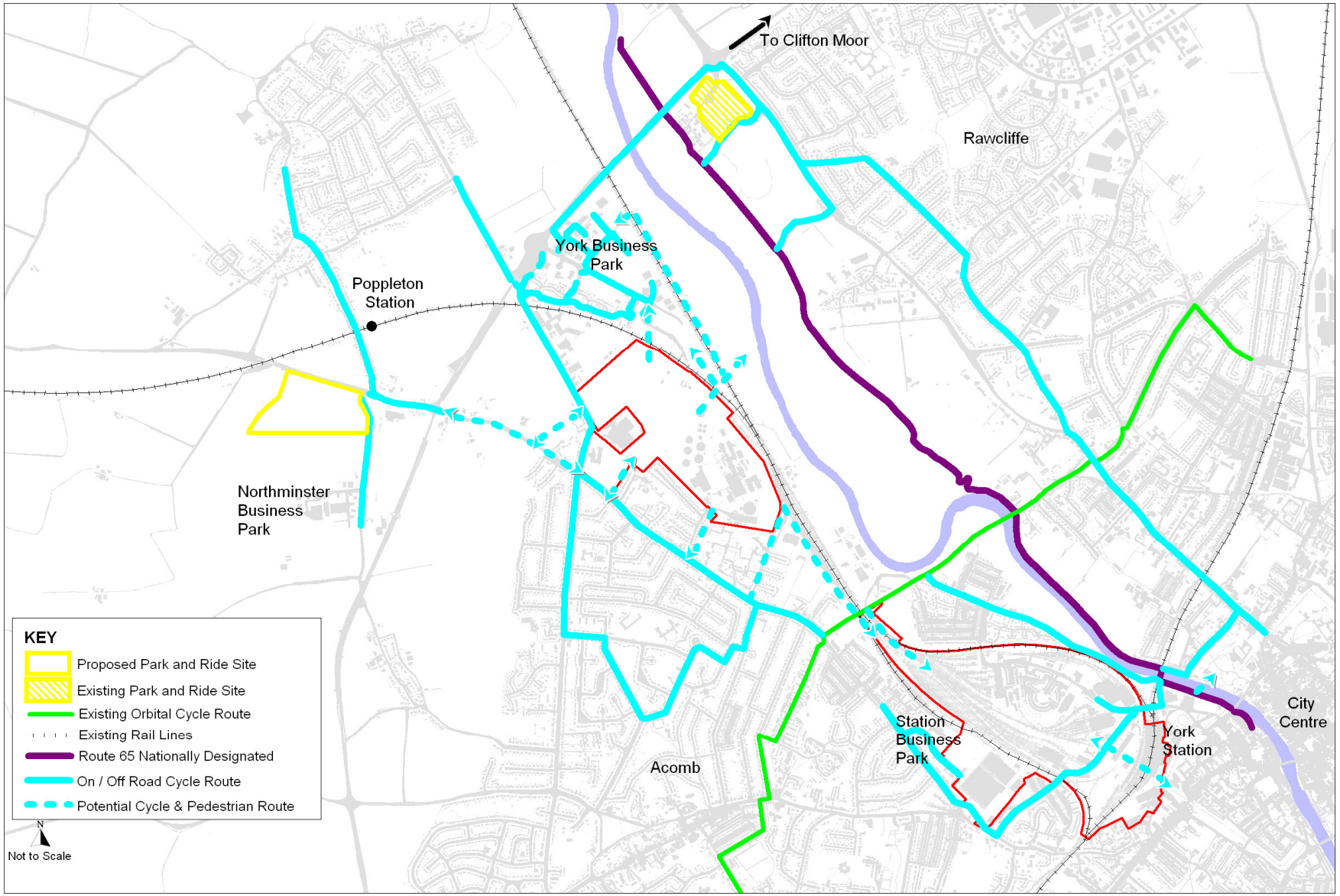
2.07 A combination of dedicated lanes, segregated from vehicular traffic (using grade separation wherever possible between carriageway, cyclepaths and footways), in conjunction with cycle lanes provided within the more traditional carriageway space, will be expected. Both options will provide safe, high quality, convenient and attractive routes for cycle journeys.

2.08 Cycle storage of a high quality, level of security and protection against the elements will be provided at all destinations on site. At employment sites, additional facilities for cyclists, such as changing facilities and lockers, will be provided.

2.09 Developers will ensure that cycle facilities are provided in accordance with City of York Council's Standards & Principles for Designing Cycling Infrastructure.

2.10 Transport and open space provision are overarching issues that are relevant to the comprehensive development of YNW. Therefore, developers will ensure that adequate provision is made for pedestrian and cycle access for leisure purposes and to open space. Developers may seek to harmonise provision, which may include links to existing green infrastructure and riverside areas near to the office developments at York Central and adjacent to the former British Sugar / Manor School site, by pooling resources with those from other developments or other public funding that may become available.

Figure 2.1: Principal walking and cycling linkages



2.11 Developments will ensure the provision of high quality, frequent public transport services from each development site that integrate with the current local bus network. Developments will also link the two sites by a direct local bus service.

2.12 Due to the scale of the development and the distance from the city centre, public transport has a significant role to play in order to reduce the usage of the private car. The YNW sites will be highly permeable for public transport with dedicated routes to improve journey time reliability and ensure the bus has a journey time benefit over private cars. Bus priority will ensure that buses are not delayed at junctions in the vicinity of and throughout the site. High quality bus stop infrastructure will be located close to residencies and other destinations and be designed in accordance to recognised design guidance. Bus stops will not be sited more than 400m apart through residential areas and this distance will be further reduced in areas of high-density housing.

2.13 From an accessibility planning perspective, no residential or commercial property will be more than 400m (5 minutes walking distance) from a bus stop. In addition, the proximity of bus stops to retail destinations should be closer than car parking provision.

2.14 York Central will be a major destination that will attract significant commercial bus services when built out. However, a minimum standard level of service is required from the outset and will include:

- A direct link to one edge-of-city Park & Ride site, with buses running from 07.00 (first departure from Park & Ride site) until 20.00 (last departure from York Central) from Monday to Saturday inclusively, with at least six buses per hour between 08.00 and 18.00. A Sunday service will operate on the same frequency between 09.30 and 18.00.

- Direct links to key residential and employment areas, such as Acomb[6] , Dringhouses and Rawcliffe, running from 07.00 (first departure from both ends of route) until 19.00 from Monday to Saturday, with at least three buses per hour for the whole period.

[6] Analysis of SATURN modelling has shown that these locations are likely to be significant trip generators for York Central but other areas may also be identified as further studies are undertaken as the site develops.

On Sundays, this should operate from 09.00 until 18.00, at one bus per hour.

2.15 The former British Sugar / Manor School site will not be served directly by the A59 Park & Ride. Any such service would be a benefit to residents and visitors to this area but the extra journey distance and any additional stops would add significant journey time penalties to the service and reduce its attractiveness to Park & Ride passengers to travel to the city centre using the service, unless routed adjacent to the rail line between the two development sites (subject to safeguarding of land and engineering feasibility in the longer-term). The site will instead be served by other high quality local bus services with the minimum standard including:

- A direct link to the city centre (which, in the fullness of time, should also serve the York Central development), with buses running from 07.00 (first departure from the site) until 23.00 (last departure from the city centre) on all days, with at least four buses per hour during the peak and interpeak periods (08.00 – 18.00) on Monday to Saturday and one bus per hour in the evening. On Sunday, there should be two buses per hour; direct link(s) to key local facilities, such as schools, shops and medical centres; also Acomb as the immediate district centre.

2.16 New services must avoid abstraction from other local bus services, as far as possible, and mitigate this where it can not be avoided. Developers must consider the impact of any rerouting away from the A59 corridor (including Poppleton) and mitigate the effects.

2.17 Developers will ensure that Park & Ride is an attractive mode for people heading into York Central where their journey begins away from a direct local bus route.

2.18 Rail is unlikely to provide a significant number of local journeys in the short-term, although development of light rail, including stops at the British Sugar / Manor School site (reserved site exists at the White Rose (York)Business Park) and within the York Central development, remains as a long-term aspiration for the corridor. However, medium-distance rail travel (primarily commuting) is likely to be significant and other sustainable modes should connect directly with York Station. York Central in particular will need to provide significantly improved bus and

coach interchange facilities at or near to York Station. York Central is also expected to generate significant inbound rail passenger flows from outside York, requiring much-improved local bus links to the west of York Station to serve YNW.

2.19 Developments at York Central must not compromise the operation of existing rail services and recognise aspirations for future improvements, such as improving the northern rail line approaches to York Station and reducing delays at Skelton junction.

2.20 Travel information will be provided for all modes, within peoples' homes and throughout the development (and actively pursued through the Travel Plans). This will include the provision of real time travel information through a range of media to allow an accurate comparison of different modes to enable sustainable travel choice from the outset.

2.21 Travel Plans will be used to test innovative ticketing products, such as off-bus ticketing, as well as providing incentives for sustainable travel.

2.22 Routing of deliveries and parking of delivery vehicles will be planned and communicated to avoid introducing conflict with other road users. This will inform the layout of the site and may be developed along side the Parking Strategy detailed below.

2.23 Developers will demonstrate that the safety and security of all road users is accounted for in their proposals.

2.24 Developments will ensure that, where possible, residual traffic is routed via the outer ring road and not through existing sensitive areas and those that are already near capacity. Primary access to York Central will be via the A59 corridor. Developers will avoid routing traffic through the city centre and Water End and where it could conflict with cycle and pedestrian networks. The Council has already identified that residential areas in Poppleton, the area around Crichton Avenue and Acomb are likely to be subject to increased through-traffic, beyond that which is acceptable as a result of development in YNW. Developers will therefore need to provide mitigation for those areas and others identified through the stages of development. Where it is shown that such areas remain vulnerable to increased traffic levels, it may be necessary to provide additional traffic management measures or works, in order to manage congestion, loss of amenity and air quality.

Parking strategy

2.25 Developers will produce a parking strategy for each site, setting out items including:

- Parking levels across the site for different land uses.
- A charging structure for parking fees and what the income will be used for (e.g. priorities for supporting the travel plan(s), cycling incentives and bus ticketing initiatives etc.).
- The spread of accessible parking bays.
- Other measures to directly reduce demand for private car parking, which will include both financial contributions to facilitate the integration of the car club service within the development and in addition the provision of car club spaces and car sharing spaces.
- The provision of dedicated parking bays and charging points for the charging of electric or electrically assisted vehicles.

2.26 York Central will need to provide designated parking to serve the rail station (either on- or off-site, for example at a Park & Ride site) but will ensure that non-rail travellers are not encouraged to park within the immediate area of the station. Developments in York Central will also need to ensure that they take account of city centre parking strategies to stop parking displacement and discourage short motorised vehicle trips between the city centre and York Central. Taxi ranks will be incorporated into appropriate points within York Central.

2.27 At a local level, parking will be taken out of central areas and away from other transport modes wherever possible and be located away from building frontages to provide a high quality pedestrian environment. Parking should be pooled away from dwellings and facilities rather than dispersed throughout sites. Sites will be designed so that parked vehicles do not intrude into or dominate the streetscape. Developers will investigate how non-fossil fuel use can be encouraged within YNW and, as a minimum, electric vehicle charging points will be provided throughout the site.

2.28 Halcrow, on behalf of the Council, analysed the expected parking accumulation for each land use on each of the sites and the results of this are shown in Table 2.1 along with the allowance in accordance with

the parking standards within City of York Council's current Local Plan (4th Edition), which is much more generous.

Table 2.1: Total car parking spaces for each site[7] (from Halcrow's TN1)

Land use	York Central		British Sugar / Manor School	
	Parking allowance	Estimated spaces required	Parking allowance	Estimated spaces required
Residential	2,207	1,150	2,156	1,360
Leisure	1,251	470	N/A	N/A
Employment	1,933	1,160	N/A	N/A
Education	75	46	N/A	N/A

2.29 There is a likely risk that over-provision of parking, especially for commercial uses, will encourage additional trips onto the highway network. For this reason, new and replacement car parking provision within developments in York Central should be minimal and not exceed the revised standard shown in Table 2.2 (0.75 and 1.25 spaces for dwellings with up two beds and more than two beds respectively and 1 per 70sqm for employment uses) in any area.

Table 2.2: Car parking spaces per unit for each site (Halcrow's TN1)

Land Use	CYC Standard	Estimated Standard proposed by Halcrow after modelling
Residential: Flats or 2 bed houses	1 / dwelling	0.75 / dwelling
Residential: 3 or 4 bed houses	2 / dwelling	1.25 / dwelling
Employment	1 / 45sqm	1 / 70sqm

[7] These figures do not take into account existing parking on the sites.

2.30 For developments where there is no operational need for parking and especially those towards the city centre, the parking rate will be reduced towards zero (accessible parking spaces and spaces for car club car parking will still need to be provided in these areas).

2.31 For the former British Sugar / Manor School site and residential parts of York Central (the non-urban quarter), there is a danger of under-provision of formal parking encouraging displacement and therefore inappropriate parking. Reducing the quantity and /or convenience of parking spaces should not be considered in isolation. Parking provision will, therefore, need to be considered in combination with other measures to enable future occupiers of the site to travel using more sustainable forms of transport. The approach to parking provision will vary across the sites on a (yet to be determined) zonal basis, being dependent of a range of factors including the physical access to the zone, accessibility by the more sustainable forms of transport and any other tangible benefits to potential occupiers. .

Access strategy

2.32 Early transport modelling work looked at the benefits of linking the two development sites – York Central and British Sugar / Manor School – directly with an all-purpose link. Based on this work and other work undertaken, this option has been dismissed[8] due to the limited number of expected trips between the two sites and high engineering costs (largely due the physical constraints of the sites) leading to a very low benefit to cost ratio. Approximately 60% of traffic that would use the link would not be new to the network but would already be using other radial routes and, by abstracting it from other areas of the city, cause knock-on effects near to YNW and elsewhere.

2.33 Previous studies have established that new all purpose links between York Central and the city centre are likely to encourage additional through traffic from existing radial routes into the city centre, as well as encouraging car based trips to and from the development itself. This was shown to have a substantially adverse affect impact on city centre junctions, increase congestion and reduce air quality. For this reason, York Central should be a 'terminus' for private motorised traffic, which should not have through movement to the city centre. Below is a

[8] Development of the sites should not prejudice the potential of this route to be provided in the future

summary of the tested unrestricted (all purpose) access options for the site.

- Holgate Business Park contains several options, all of which would require the spanning of the station Freight Avoiding Line.
- Chancery Rise would require the spanning of the station Freight Avoiding Line, though an identified next step in taking this option forward is appraisal of its modelled performance within the wider network in comparison with alternatives at Holgate Business Park.
- West of Severus Bridge (Water End) would require the spanning of the station Freight Avoiding Line and land-take could involve part of Poppleton Road Primary School's playing field.
- Millennium Green would require the spanning of the East Coast Main Line (shorter than a station Freight Avoiding Line crossing, but highly skewed) and land-take may affect the Millennium Green.

2.34 York Central will require two new all-purpose access routes to enable development of the site – one from the Holgate area and another from Water End[9]. In addition to the options listed in paragraph 2.33, the following restricted accesses will be retained (and improved, where necessary) or created:

- Salisbury Road for local access and through route for public transport.
- Leeman Road (Marble Arch) for public transport and local access only. An intelligent system will need to be provided to restrict access to the city centre for general traffic but to allow local buses, taxis and private hire vehicles, emergency vehicles and other 'permitted' vehicles (such as car club cars). The mechanism and implications of allowing access to the city centre for local residents from the Leeman Road area will need further consideration given that redistributing existing journeys by Leeman Road residents onto Water End, Boroughbridge Road and Bootham may not be acceptable.
- A package of new or improved links to improve connectivity for pedestrians and cyclists between York Central and the city centre. Improvements could include new linkages over Marble Arch, new bridges across the River Ouse, new rail crossings from Queen

[9] Determined through evaluation of network performance and engineering works required

Street Bridge and retained (permissive) or ideally improved links through York Rail station, subject to detailed design and financial viability considerations.

2.35 British Sugar / Manor School primary traffic access routes will include Millfield Lane (limited) and a direct access onto the A59 at either the former Manor School site or the former Civil Service Sports Ground:

- Former Manor School site.
- Former Civil Service Sports Ground.
- Millfield Lane – Traffic modelling has shown this option to cause significant detriment to the operation of junctions on the outer ring road – not only the York Business Park roundabout but also the A59 roundabout, which would take journeys towards Leeds and back into the city centre (in the absence of another, more direct link). Because of this, and the fact that it uses a barriered level crossing across the York-Harrogate rail line and passes Manor School, this route is not suitable on its own for the large volumes of traffic that residential development on the former British Sugar / Manor School site would generate.

2.36 Other access routes:

- Plantation Drive - This route was, during the operation of the British Sugar works, used to access the site by car and so is able to support some traffic. However, as a minor road, it is not suitable as a primary all-purpose access route due to the proximity of existing housing but could serve local buses, pedestrians and cyclists and some limited all-purpose access.
- Ouse Acres - This route is suitable for walking and cycling access to and from the site. It may also be suitable for public transport use and some limited all-purpose access.
- Water End link - This route will connect the southeastern end of the site to York Central via Water End. This route is necessary to connect the predominantly residential development of British Sugar / Manor School, to employment and leisure opportunities on the York Central site by walking and cycling. Modelling work has shown that there is insufficient demand (in the short-to-medium-term) for this to be a public transport route and high engineering costs would rule this out. However, it remains an important route

for walking and cycling and could enable the route to be safeguarded for a public transport link in the longer-term.

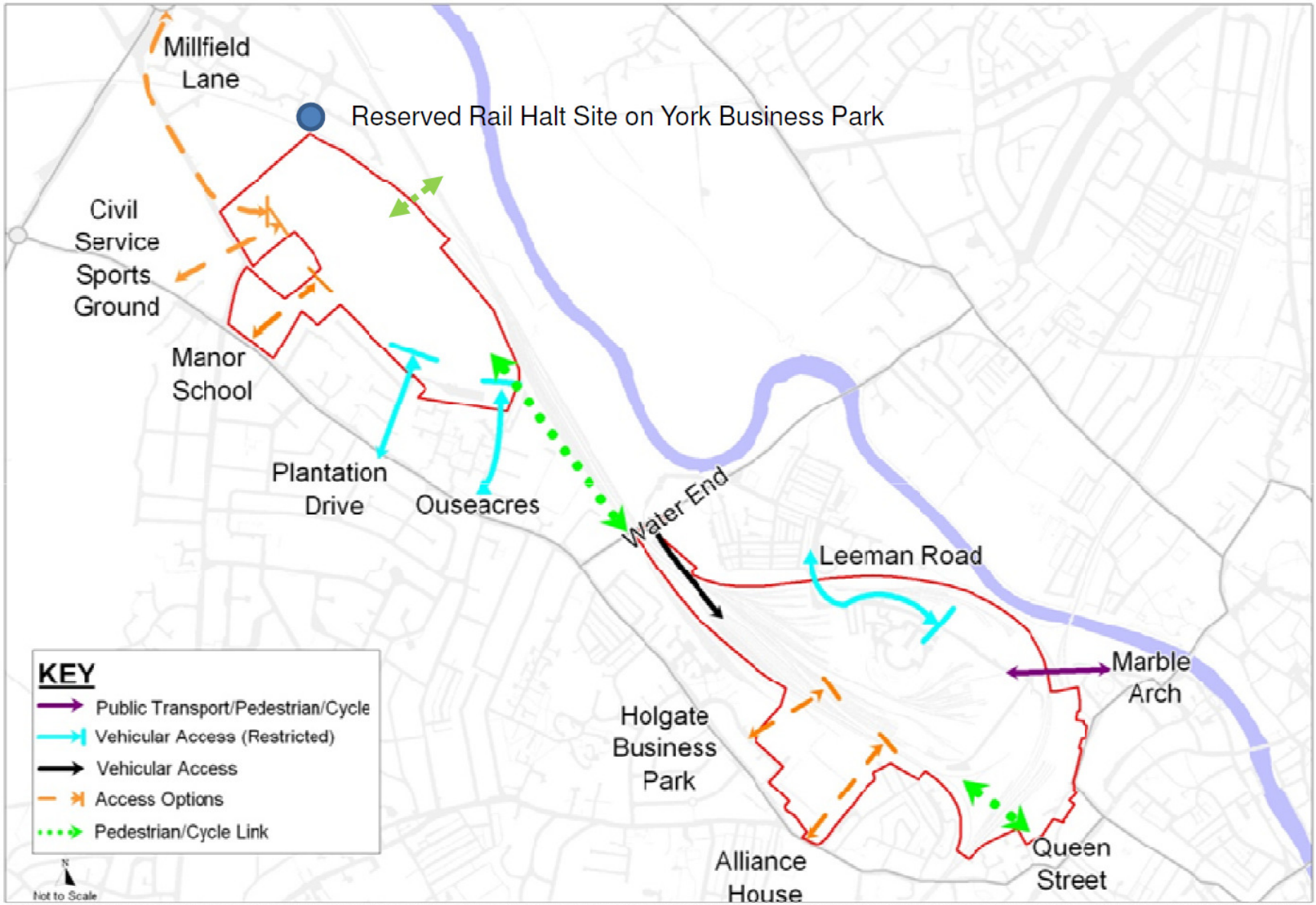
- White Rose (York) Business Park – This cycling and pedestrian link would connect the site to employment and other opportunities nearby and link the business park to the local services and facilities provided as part of the development. The link could also connect to a future rail stop serving the development, and should take the existing reserved station site on York Business Park into account.

2.37 A summary of the access routes is shown in Figure 2.2**Error! Reference source not found.**.

2.38 Rail-based link. Although light rail is unlikely to be part of the transport network of the site in the short- to medium-term, the area along the York-Harrogate line should be protected for future development of light rail, with a rail halt that will link in with the sustainable transport networks on site. The rail halt should not encourage off-site traffic and act as a railhead for other parts of York, in order to minimise additional traffic on the network and abstraction from the local bus and Park & Ride network.

2.39 No new traffic distributors will be created as part of the developments and no through routes for general traffic but there will be a high degree of permeability for walking and cycling and a single through-route for public transport and emergency vehicles through each site, to minimise additional journey time.

Figure 2.2: Summary of access approaches



3. Residual Impact (from evaluation of the 'Reference Case')

3.01 The 'Reference case' provides a baseline against which alternative approaches to the servicing of the site in transport terms could be compared. It also establishes the measures required on a traditional 'predict and provide' basis to mitigate the impacts of the development of YNW.

3.02 Four development scenarios were produced to assess the capacity of the city's highway network to accommodate different land use mixes under the 'Reference Case': residential-led; education-led; employment-led; and retail led. Transport assessment undertaken on all four scenarios showed that there was no significant variation in trip generation and distribution profiles in the modelled period. This included office, leisure and residential as the principal land uses on York Central and residential on the former British Sugar / Manor School site. The projected person trip rates for 2021 are shown in Table 3.1. These are based on :

- Scenario 1 land uses - Office, leisure quarter and residential at York Central.
  Residential at British Sugar / Manor School.
- Person trip rates and modal share derived from a bespoke **M**ulti modal **A**ssessmen**t** **T**ool (MATT) and a **R**etail **P**arking **P**rovision model (RPP).

Table 3.1: Projected journeys in am peak for 2021

		Highway trips (car drivers, car passengers, motorcycles)	Public transport trips (including Park & Ride)	Non-motorised trips (pedestrians and cyclists)	Public transport trips as proportion of all trips
York Central	Inbound	1,053	599	1,040	22%
	Outbound	784	173	469	12%
British Sugar / Manor School	Inbound	172	33	81	12%
	Outbound	661	124	311	11%
Total		**2,667**	**929**	**1,901**	**17%**

3.03 If there are any significant alterations to the land use mix as the site progresses, developers will need to revisit some of the modelling work at their own expense. For example, if a retail-led approach is taken, further analysis will be required outside of the morning peak hour and include Saturday peak-hour modelling.

3.04 The headline impacts from the Reference Case (in the absence of suitable intervention measures) were that:

- Trips generated in the morning peak were 4,118 for York Central and 1,382 for British Sugar / Manor School.
- The modelled modal share for car journeys (car driver plus car passenger) were 43% and 63% for York Central and British Sugar / Manor School respectively. This would mean that British Sugar / Manor School would have a higher car mode share than the city average and this is due to its distance to the city centre and other attractors. Full details of the modal distribution of trips are shown in Figure 3.1. The total 2,667 new car-based trips would equate to an addition 7% of the journeys on the whole city network compared to 2008 but will obviously be concentrated on the northwest part of the city. The predicted impact of these mode shares on the highway network in terms of congestion and delay was significant.
- Figure 3.3 and Figure 3.4 show the distribution of highway trip origins/destinations from York Central and British Sugar / Manor School.
- The Reference Case would result in a 24% increase in network delay and result in a significant number of junctions across the city operating over their theoretical capacity.
- Impacts on the strategic network, principally the A59 and A1237, were particularly significant and would require mitigation works.
- Fundamentally, the 'standard' approach did not deliver the objective of reducing the impact of travel on the environment (for example improving local air quality).
- Parking accumulation estimates for residential land uses at York Central give a maximum parking requirement of 1,150 spaces compared with a maximum allowable number of spaces by City of York Council (CoYC) parking standards of 2,207. Leisure land uses at York Central are shown to require 470 spaces and Employment land uses 1,160 spaces in comparison with parking standards of 1,251 spaces and 1,933 spaces respectively. At the former British

Sugar / Manor School site, there is a demand for 1,360 spaces in comparison with 2,156 allowed by CoYC parking standards.

3.05 Even though the estimated parking levels are lower than the maximum allowable, they may be considered to still be too high for a development that is intended to be highly sustainable.

3.06 Taking forward the approach of the Reference Case as the only way of mitigating the impacts of the development will have a significant adverse affect on the transport network and the environmental quality of York. This demonstrates that developers will need to deliver a step-change in the provision and uptake of sustainable travel options in order to reduce the negative impacts of travel on the city. The sites will also need to be designed to minimise the need to travel.

Figure 3.1: Inbound highway trips to York Central

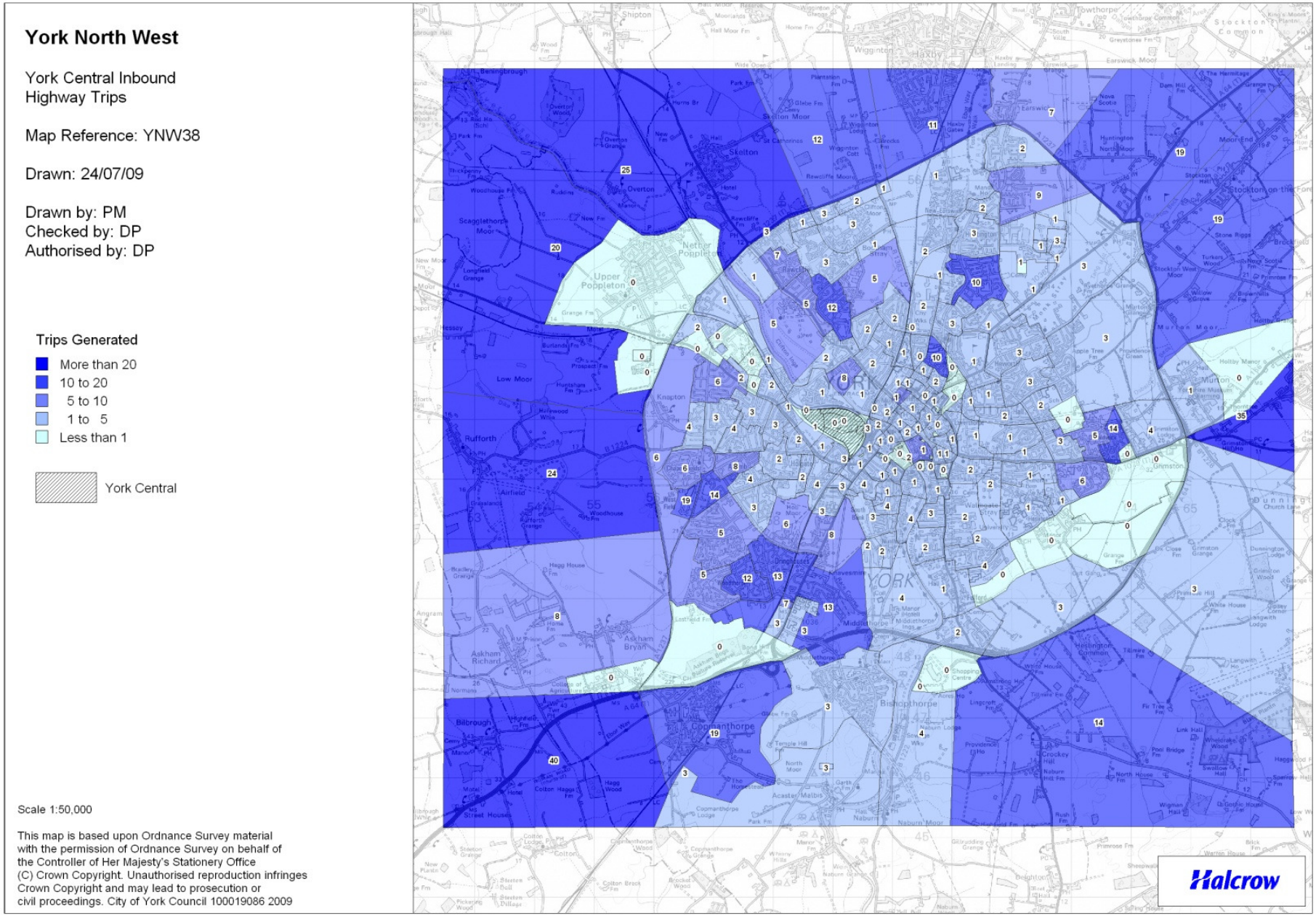


Figure 3.2: Outbound highway trips from York Central

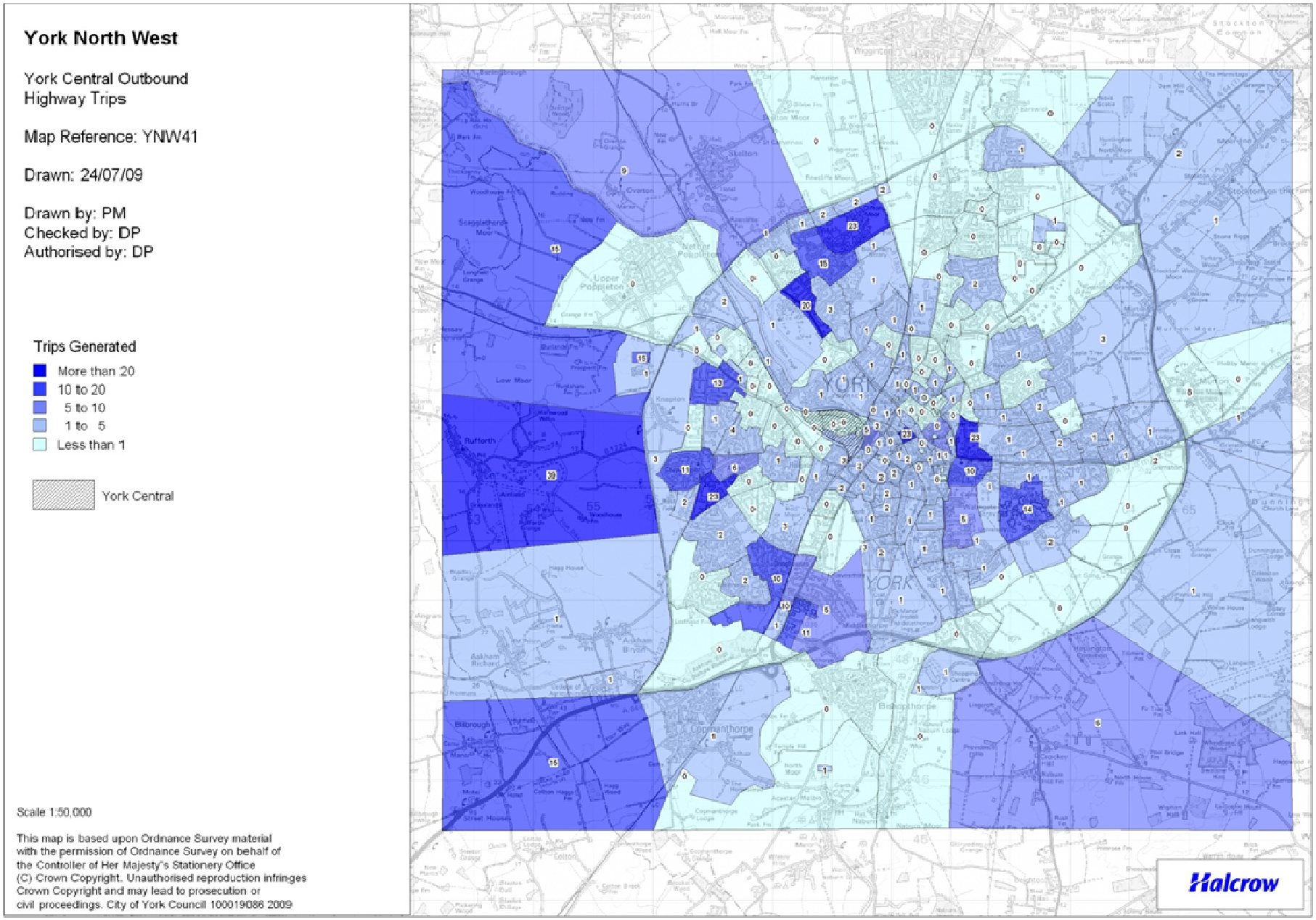


Figure 3.3: Inbound highway trips to British Sugar / Manor School

York North West

British Sugar Inbound
Highway Trips

Map Reference: YNW44

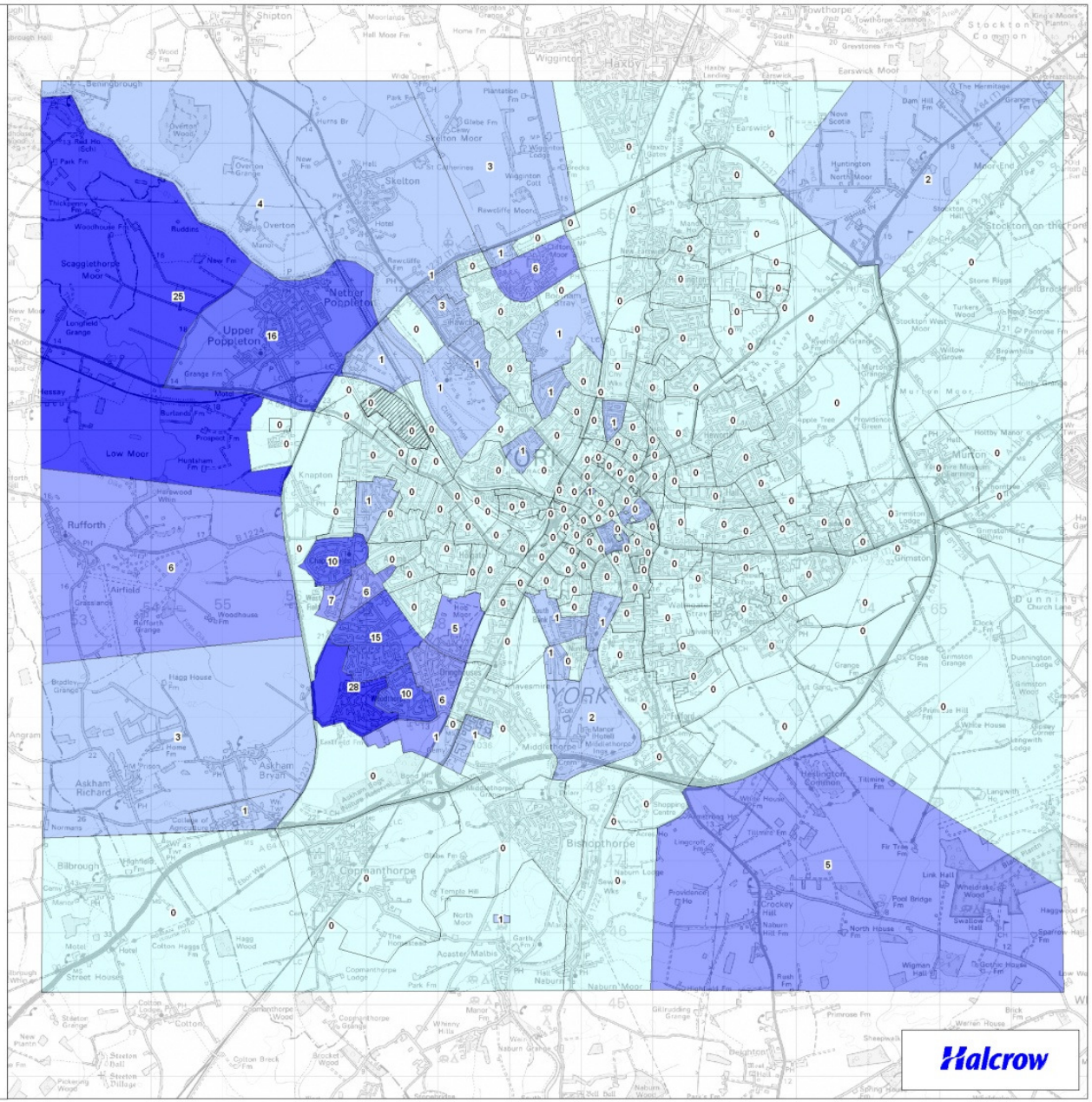
Drawn: 24/07/09

Drawn by: PM
Checked by: DP
Authorised by: DP

Trips generated

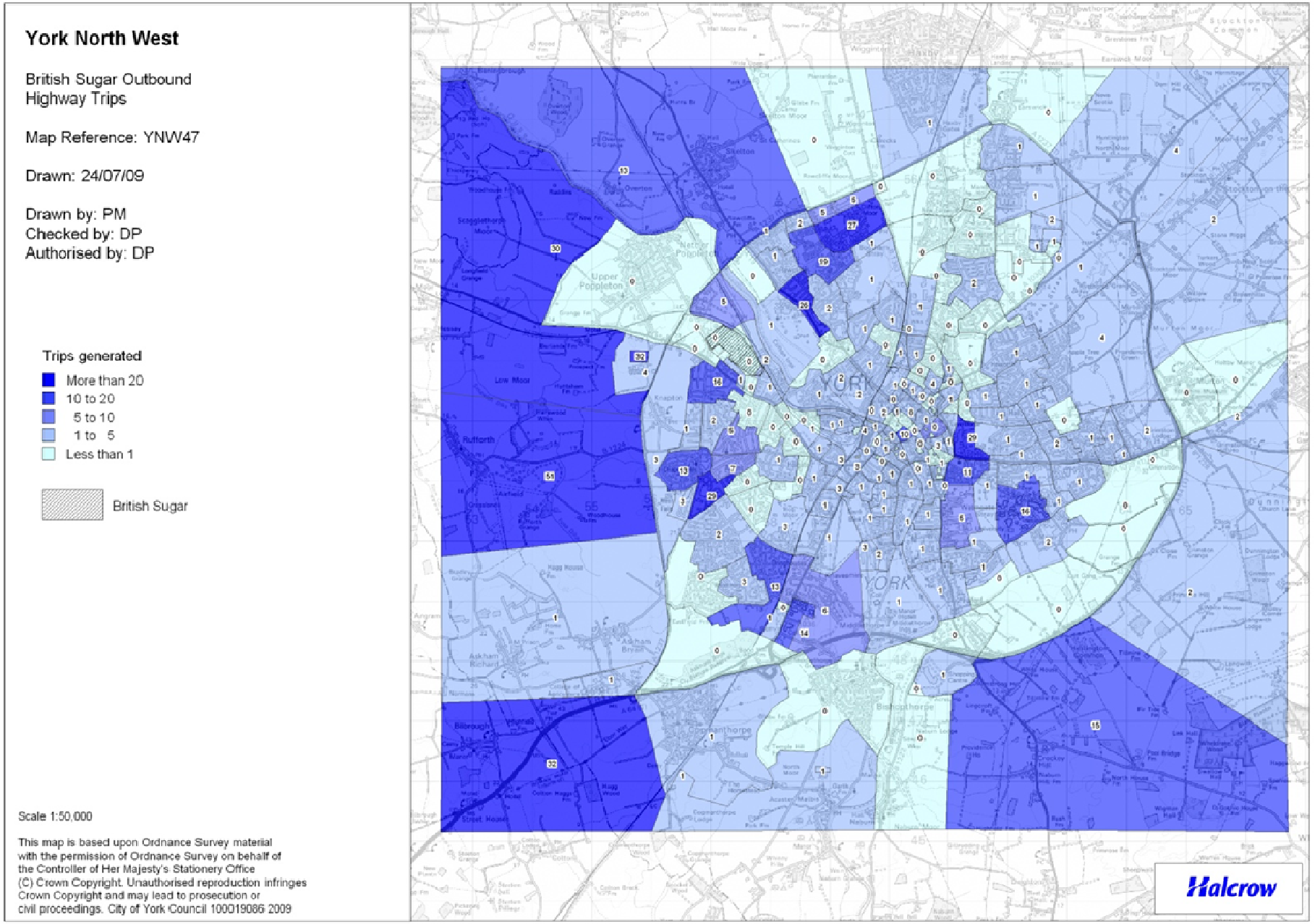
- More than 20
- 10 to 20
- 5 to 10
- 1 to 5
- Less than 1

British Sugar



Scale 1:50,000

Figure 3.4: Outbound highway trips from British Sugar / Manor school



4. Outline of 'Sustainable Case'

4.01 As the 'Reference Case' shows the transport impacts of development on the YNW sites to be significant. Ultimately these are contrary to the objective of reducing the impact of travel on the environment (e.g. not likely to contribute to improving poor air quality in York).

4.02 It is essential, therefore, for the management of these impacts that a more sustainable approach to transport is taken. However, the council recognises that there is a limit to the amount of modal shift that can be achieved. There are some journeys that cannot be replaced by public transport, for example if the person must travel by private transport because they are disabled or their journey is too far or complex to be done reasonably by public transport. Many of the journeys that modelling work predicted to be bound for outer zones will not be transferable to sustainable modes for their entire route (22% of outbound journeys from British Sugar / Manor School).

4.03 Taking the trip distributions from the council's SATURN strategic traffic macro-simulation model, the council undertook further analysis using the Accession accessibility planning software in order to identify those trips that people could reasonably take on foot, by cycle or by local bus[10].

4.04 Figure 4.1 shows the spatial results. Figure 4.2 shows the theoretical proportion of those residual highway trips that could transfer to more sustainable modes (walking, cycling and use of public transport) and therefore the upper limit to what could be achieved through modal shift (50% for York Central and 54% for British Sugar / Manor School). For York Central, this could be further increased as many inbound trips could transfer to Park & Ride (although they would still have an impact on the outer ring road).

[10] Thresholds for journeys taken on foot are 1km, for cycling 4km and for public transport where there is a 30-minute journey time. For inbound trips to York Central, all trips originating in the outermost zones were deemed to be achievable by car and then Park & Ride for the last part of the journey – shown as 'ORR and P&R' in Figure 4.2.

Figure 4.1: Areas where residual highway trips could transfer to sustainable modes

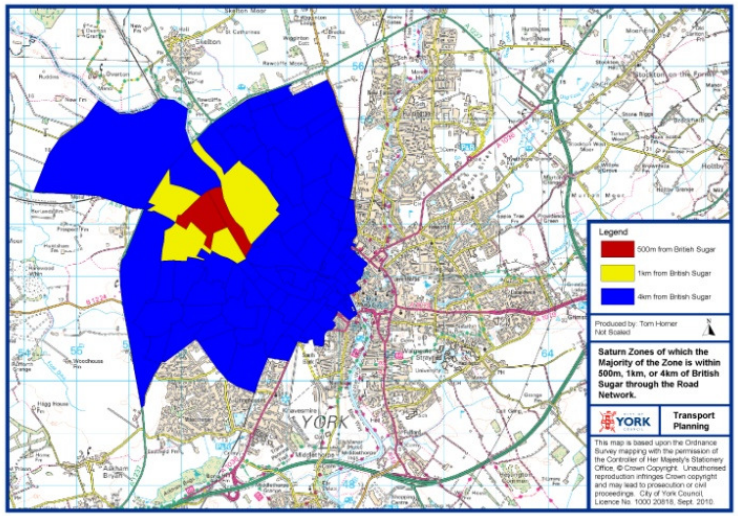
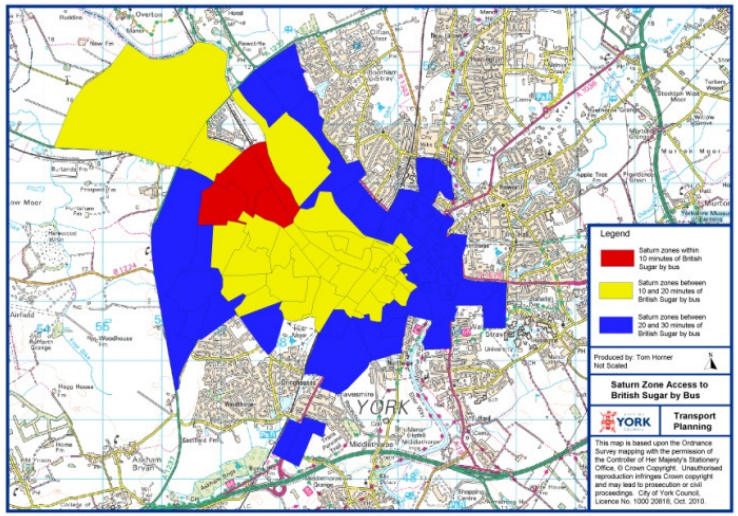
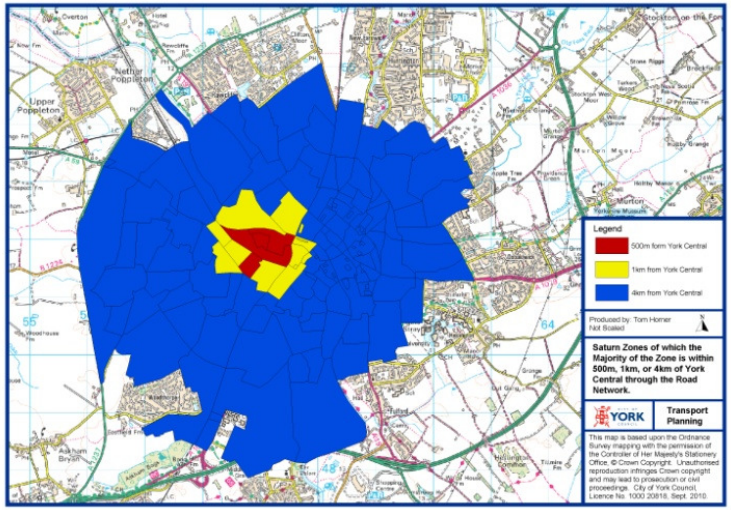
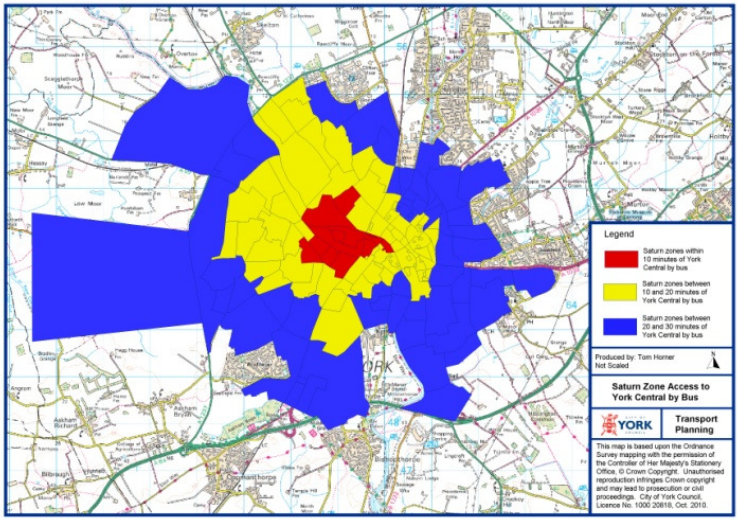
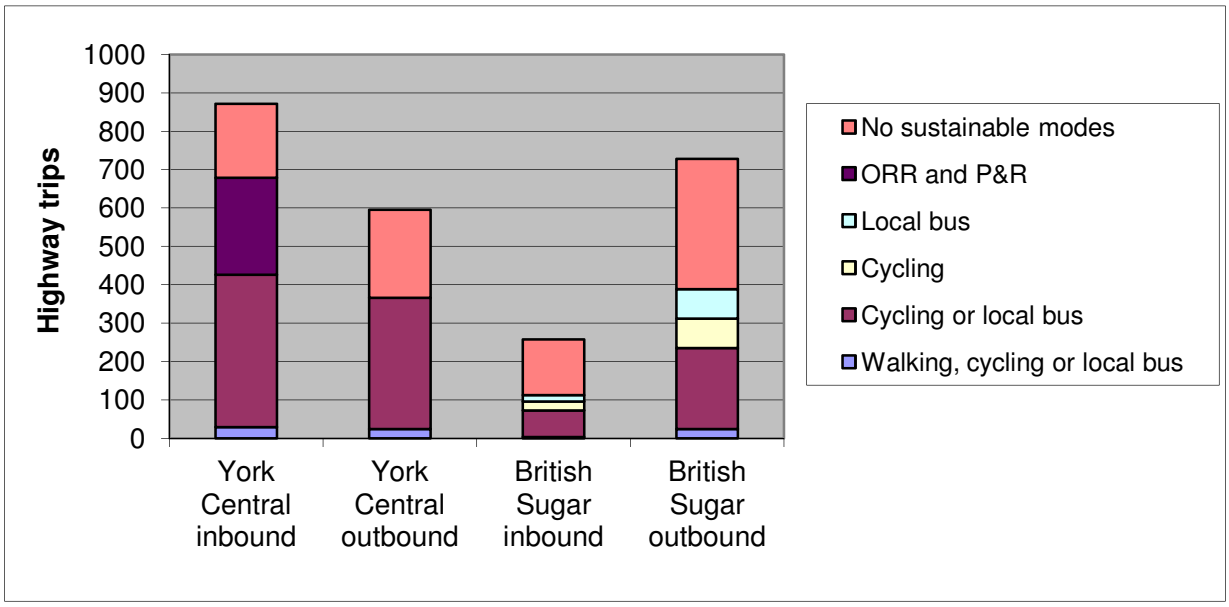
Walking or cycling	Local buses
British Sugar / Manor School	
	
York Central	
	

Figure 4.2: Residual highway trips in the morning peak hour that could transfer to sustainable modes



4.05 In order to make any further reduction in residual highway trips, it will be necessary to influence the origin or destination choice of residents or visitors, for example by encouraging employees to live closer to their place of work and providing more facilities locally or encouraging flexible working practices including homeworking. These measures will be pursued through the travel planning process.

4.06 The following sections outline a package of measures that will contribute to a more sustainable transport approach.

On-site measures

4.07 In order to ensure more sustainable travel patterns, design and layout of the sites will be crucial and must be built around the principle of the hierarchy of road users outlined in paragraph 2.02. This will be the first pillar of delivering the Sustainable Case. In particular, the layout of the site should maximise walking and cycling permeability and provide good access to external opportunities, services and facilities (e.g. open space).

4.08 Road layouts will be designed to ensure that vehicles travel at an appropriate speed to the area, for example, in a residential street where children may be playing, a low speed following Manual for Streets

principles and the emerging council policy for 20 mph speed limits in residential areas.

4.09 Transport interchange points will be provided throughout the sites that will accommodate all modes, including walking, cycling, local buses, taxis, car club and car sharing spaces and, where appropriate, car parking.

4.10 At the scale of individual buildings, careful consideration will be given to the layout of parking (especially in relation to the proximity of provision for other modes, such as cycle parking), for example by not allowing parking (other than accessible parking) immediately next to the main entrances to offices or residential dwellings. Where parking is provided, there will be an appropriate number of parking spaces reserved for car sharers. A combination of allocated and non-allocated parking will be expected for the residential areas. The following guidance on parking design is recommended, Car Parking: What Works Where, Better Places to Live and PPS3.

4.11 Consideration should also be given to implementing car parking charges in non-residential areas of development within the sites. This may fall within a travel planning package of measures.

4.12 Building design will ensure that there is sufficient cycle parking in close proximity to employment and leisure sites and that showering, changing and locker facilities are available for those arriving by foot or cycling either on-site or nearby.

Non-highway measures

4.13 The production and implementation of the travel plans will be the second pillar in delivering the Sustainable Case. A Framework Travel Plan will be produced, which will form the broader strategy to inform detailed residential and individual work-based travel plans and this will be lead by the travel plan co-ordinator (or feasibly co-ordinators). The co-ordinator will ensure that individual travel plans take account and deliver the high-level strategy from the Framework Travel Plan and other documents, such as a Parking Strategy. It is essential that developers allocate appropriate ongoing revenue and capital funding streams to support these measures, including the travel plan co-ordinator. In order to guarantee their effectiveness and the 'locking in'

of benefits, the travel plans must include details of monitoring, enforcement, penalties and bonds.

4.14 Reducing the need to travel will be investigated as part of the travel plan process. This could involve direct incentives to staff, such as employers offering preferential relocation and recruitment packages, to live closer to their employment site. Employers can also reduce the need to travel for their existing staff through supporting and encouraging home-working. In some areas, establishing tele-working offices might be appropriate.

4.15 The travel planning process will also investigate and implement a range of innovative techniques and products, such as off bus ticketing, car clubs or Click-to-Park systems to control parking at a single company-level, to encourage sustainable travel. It is essential that measures identified in the Travel Plans be implemented in time of the first occupancy on each part of the sites.

4.16 Evidence from other towns indicates that the non-highway measures could have the highest positive impact for reducing the need for travel, or travelling by more sustainable forms of transport, thus improving local air quality.

Local highway mitigation measures

4.17 After delivering the measures that form the Sustainable Case, developers will identify and fund mitigation on junctions and links around the site where their development still has a direct negative impact on traffic flows (and attendant environmental disbenefits, such as increasing detriment to local air quality). This will include upgrade works at junctions to improve the safety and speed for all users but notably pedestrians and cyclists, for example by improving the design of the Water End / Boroughbridge Road junction to take more account of cyclists' needs.

4.18 Developers will investigate the impacts on the junctions shown in Table 4.1 as a minimum, with additional junctions surveyed if the impact is shown to spread further. A commentary of the current dynamics of these junctions and the scope to implement improvements is included in the Appendix to this document.

4.19 Developers will identify and fund (subject to engineering and financial viability) a suitable package of measures to improve connectivity for pedestrians and cyclists between York Central and the city centre (see also paragraph 2.34)

4.20 The developer of the British Sugar / Manor School site should also contribute toward the provision of a crossing of the York-Harrogate Line to the White Rose Business Park (see also paragraph 2.36).

Table 4.1: Junctions to be modelled in detail by developers

York Central	British Sugar / Manor School
Outer ring road junctions: B1224 Wetherby Road A59 York Business Park / Millfield Lane A19 Clifton Moor Link Road (Manor Lane – Hurricane Way public transport link) B1363 Wigginton Road Acomb Road / Poppleton Road Boroughbridge Road / Water End Clifton Green (A19 / Water Lane / Water End) Water End / Salisbury Road Blossom Street / Queen Street A1036 / Dalton Terrace Dalton Terrace / Holgate Road Junction A1036 / Holgate Road A1036 / St Helen's Road	Outer ring road junctions: B1224 Wetherby Road A59 York Business Park / Millfield Lane A19 Clifton Moor Link Road B1363 Wigginton Road A59 / Beckfield Lane A59 / Carr Lane Boroughbridge Road / Water End Clifton Green (A19 / Water End)
Note Modelling techniques (software)and the parameters to be used in the modelling shall be agreed with the council before commencement	

Public transport service improvements

4.21 Park & Ride has significant potential to remove additional highway trips originating outside of the York boundary to York Central from the local road network. As such, developers on York Central will contribute to further upgrades to the core Park & Ride network, notably the expansion of Poppleton Bar Park & Ride's car park from 600 to 1250 spaces and, if necessary, the additional cost of upgrading the bus fleet to articulated vehicles to increase capacity on the route. Project planning to date has assumed that additional capacity required because of York Central will be provided completely by larger vehicles without the need to increase the frequency. The peak vehicle requirement (PVR) for this service is projected to be five. This may reduce because of journey-time savings from running through lightly-trafficked routes in York Central. Further modelling work and future travel plan surveys may identify further improvements needed to other Park & Ride sites and services around the city.

4.22 Previous modelling work undertaken by the Council has shown the potential for marginal improvements to some existing bus services (notably routes 10, 19, 24 and 26) to provide for expected demand from both sites.

4.23 Figure 4.1 also shows that improvements to bus services and connectivity towards the east of the city could further increase the uptake of public transport and developers will need to investigate this.

Outer ring road and cross-city mitigation measures

4.24 Earlier modelling work on the former British Sugar / Manor School site has shown that, without any measures to reduce generated traffic, most access scenarios, notably those that use the Millfield Lane access, have significant impacts on the A1237 outer ring road.

4.25 Initial modelling has identified a likely significant increase in traffic in the following areas, which will need further investigation by site developers and mitigation as appropriate:

- **Acomb** - Traffic generated by both York Central and the former British Sugar / Manor School sites could be drawn through parts of Acomb, especially if there is insufficient capacity around the outer ring road. Without additional traffic management measures, roads

such as Beckfield Lane and Carr Lane are likely to see additional traffic.

- **Poppleton** - Without a major upgrade to the A59 roundabout, development on the former British Sugar / Manor School site will draw traffic through the village of Poppleton, especially if Millfield Lane is used as a principal access route. The detrimental effect of this on the village could be significant.
- **Burton Stone Lane/Crichton Avenue** - This residential area already takes cross-city traffic heading towards York Hospital and the east of the city, which, in part, is due to congestion on the northern outer ring road, the inner ring road around the Bootham / Gillygate area and the lack of alternative cross-city routes

4.26 Developers will need to investigate the impact on the above areas (and others identified through more detailed modelling) further and propose mitigation measures to address all issues raised, including environmental issues, such as air quality.

5. Package of measures, including phasing of interventions and funding

5.01 Developers are expected to mitigate the direct impacts of increases in traffic flow (including consequential air quality impacts) arising from their development. The level of mitigation expected through obligations as part of the planning consent will be in compliance with the following criteria:

a) It is necessary to make the development acceptable in planning terms.
b) It is directly related to the development.
c) It is fairly and reasonably related in scale and kind to the development.

5.02 The direct impacts of increases in traffic will be identified in developers' Transport Assessments (informed by further transport modelling work) and other documents, such as the Strategic Environmental Impact Assessment, as necessary.

5.03 Table 5.1 and Table 5.2 show the list of local mitigation works that the Council has identified as being necessary, for the 'Reference case' and the 'Sustainable case' respectively.

5.04 The LDF will set out the physical, social and green infrastructure needed to facilitate the amount of development proposed for York. As part of this process the LDF Infrastructure Delivery Plan (IDP) was published in September alongside the LDF Core Strategy Submission (Publication). The essential strategic infrastructure needs identified in the IDP, include, among others, those for community facilities, waste, education, health and transport. The transport infrastructure elements within this are shown in Table 5.3.

Table 5.1: Local mitigation works ('Reference' case) directly linked to site development with approximate present day cost estimates (£000s) where available

Item	York Central	British Sugar / Manor School
A59 roundabout works (Stage 1)[11]		3,900
York Business Park Roundabout works		3,500
Poppleton Bar Park & Ride expansion capital costs[12]:		
Upgrade of vehicles to articulated ultra low or zero emission buses	354	
Construction of additional 650 parking spaces	2,121	
Bus Priority on A59 (Plantation Drive)		460
Local bus services – on-site highway infrastructure	485	160
Local bus services – revenue support	3,520	2,038
Local bus services – subsidised travel (annual travel passes)	557	411
Access restrictions through Leeman Road, with appropriate access for local buses and residents	150	
Direct link to Water End for pedestrians and cyclists (from British Sugar development)		266 - 424[13]
Off site walking and cycling infrastructure[14]	82	
Measures to improve connectivity to the city centre (see paragraph 2.34)*	To be determined	
Vehicular cordon in Acomb (Carr Lane area)	450	
Vehicular cordon in Clifton (Crichton Avenue area)	270	
Vehicular cordon in Poppleton		180
Total, excluding item denoted thus (*)		

[11] It is essential that this work takes place before any further development on YNW. This work is planned as part of Access York Phase I. In the absence of Major Scheme Bid funding, site developers will have to fund these costs.

[12] These additional costs will be incurred when the parking demand at the site or the passenger demand reaches 75% capacity of the site or the Park & Ride vehicles on a regular weekday in a neutral month.

[13] This range of costs has been identified from early engineering feasibility work, which looked at several options along the western side of the railway and one along the eastern side. The eastern side option is dependent on the construction of a bridge over the rail lines, which is not included within this range of costs.

[14] This figure accounts for basic on-street works. There will be significant additional costs for bridges over rail lines.

Table 5.2: Local mitigation works ('Sustainable' case) directly linked to site development with approximate present day costs (£000s) where available

Item	York Central	British Sugar / Manor School
Local bus service improvements (capital and revenue)	To be determined	
Junction improvements	To be determined	
Cycle route expansion / improvement	To be determined	
Pedestrian route expansion / improvement	To be determined	
'Smarter choices' programme improvements (capital and revenue)	To be determined	
Travel plans and travel planning improvements (capital and revenue)	To be determined	

5.05 York Northwest represents a significant proportion of the total development planned within the city. Therefore, developments on this site will be required to make a significant contribution towards the delivery of the essential strategic infrastructure, including the transport works outlined in Table 5.3, to mitigate the cumulative impact of development across the city. Other measures, such as bus network improvements, demand management measures and support for 'smarter choices' initiatives (see Table 6 for the 'sustainable case' above) could reduce the traffic generated by development in YNW thereby lessening, to some degree, the requirement for contributing toward the strategic transport infrastructure. This will be taken into account in the consideration of development proposals within YNW.

Table 5.3: Contribution to city-wide strategic transport infrastructure

Item	Estimated Cost	Responsibility
Outer Ring Road junction improvements and upgrades (all works) excluding • items not shown elsewhere • grade separation	£48.0M	All Developments in York
	£7.4M	Other public and private sector funding.
A59 roundabout works Stage 2 (signalisation etc.)	£0.1M	All developments in York
A59 bus priority works	£0.25M £0.35M	All developments in York York Central
Askham Bar Park & Ride Construction of additional 150 parking spaces	£0.5M	All developments in York

Notes

1 For potential sources of raising funding through all developments in York paragraph 5.07 to paragraph 5.12

2 On-going (revenue)funding to maintain the new infrastructure and support bus services, smarter choices measures and travel plans etc. may also be required.

5.06 The IDP also proposes the sources of funding, for the identified strategic infrastructure needs. These sources include developers. Developer contributions have traditionally been sought through the planning permission process, either through obligations or obligations imposed in the award of planning permission. From, April 2010, local authorities have been given the discretionary powers to implement and charge Community Infrastructure Levy (CIL) as a means of raising additional funding to be spent on local and sub-regional infrastructure to support the development of the area.

5.07 City of York Council is a potential CIL charging authority, but does not yet have a CIL in place. Should it decide to adopt a CIL, it will need to be in place by April 2014. If this deadline is to be achieved it is likely that a 'preliminary draft charging schedule' (which should include a list of the infrastructure items CIL is intended to fund) would need to be

issued for consultation in spring 2012 as part of the CIL preparation process. Further stages in this process include consultation on a 'draft charging schedule' and an examination by an independent inspector.

5.08 One of the key principles of CIL is that should not render development unviable. Careful consideration of this will be required if this is taken forward in York.

5.09 The Community Infrastructure Levy can be charged alongside planning obligations, (obligations are subject to the criteria set out in 5.01), but these two sources can not be used to fund the same piece of infrastructure. However, CIL can be charged and used to fund further improvements over-and-above those required to mitigate the direct local impacts of the development.

Apportionment

5.10 The complexities arising from identifying and separating the specific local impacts and mitigation of a development from the city wide impacts and strategic infrastructure are numerous. These are particularly difficult to resolve when different developments take place at different timescales, which may in turn be different from the timescales for the delivery of strategic transport infrastructure.

5.11 Table 5.1 to Table 5.3 have shown an indicative apportionment between local authority funding and funding from developers seeking to develop the YNW sites. In the most simplistic terms, contributions for measures in Table 5.1 and Table 5.2 will be sought through obligations, whereas contributions for strategic infrastructure shown in Table 5.3 will be sought, primarily, through the mandatory (if adopted) CIL rates.

5.12 It is anticipated that further planning advice on this will be issued alongside the issue of the preliminary draft charging schedule in 2012. This is likely to establish a suitable 'blend' of funding mechanisms that could be pursued to implement the necessary city-wide transport infrastructure improvements. Once this advice has been published in full, the costs stated in Table 5.3 will be subject to review.

5.13 In addition to the costed measures shown in Table 5.1 to Table 5.3, each development will fund highway infrastructure needed to access the site itself:

- Two new all-purpose highway accesses will be provided into York Central at Holgate and off Water End.
- Restrictions will be placed on vehicle movements along the Leeman Road spine.
- Bus priority will be provided on the A59 corridor.
- Measures to improve connectivity to the city centre (see paragraph 2.34).

5.14 The developer of the British Sugar / Manor School site should also investigate the provision of a crossing of the York-Harrogate Line to the White Rose Business Park (see also paragraph 2.36)..

6. Monitoring

6.01 Site developers will appoint a travel plan co-ordinator(s), who will be in post (approximately 3 months) before any dwellings or commercial units are occupied. As well as producing, implementing and updating a Framework Travel Plan for the whole-site, the co-ordinator(s) will advise individual sub-developers on their travel plans to ensure that they contribute to the overall strategy and sustainable development of the sites.

6.02 As part of the monitoring approach, ongoing on-site collection of data will take place, for example with permanent automated traffic counters and air quality monitoring stations.

6.03 Developers will undertake an annual travel survey in order to inform an update to the travel plans. Full details covering what will be required should targets not be achieved, together with supplementary measures, any penalties and how such targets/measures will be enforced. It is likely that part of the plan will incorporate bonds, which would be utilised (possibly by the local authority) to secure additional measures or works, in the event that 'soft' initiatives do not deliver the assumed number of trips or modal split percentages by different forms of transport.

6.04 The travel plans will set targets appropriate to measuring the impact of traffic from developments on YNW on the existing highway network and the local environment. Car trips will be monitored against targets (both total and interim based on the development phasing). Targets will also be set for public transport trips in order to ensure that bus services in the area are self-supporting financially by the time the site is built out. Other indicators that will be monitored (but not necessarily with targets) include: cycle trips measured by cordon counts or automatic counters; pedestrian trips by cordon counts.

6.05 The travel plan will be reviewed annually and, whilst the site is being built out, this review may inform changes necessary to meet the strategic aims of the development, such as further reductions to the car parking standards or reassessment of parking charges applied to parking in non-residential areas of the sites.

APPENDIX – OUTLINE OF HIGHWAY JUNCTIONS

Junction	Current junction performance	Opportunities for upgrade or improvement
1) A1237 / B1244 Wetherby Road roundabout	Junction takes relatively minor traffic flows from either way on the B1224 and currently operates under capacity throughout the day. However, roundabout radius is small. Developments on York Northwest could draw additional traffic through Acomb and hence through Wetherby Road and this junction.	Potential to enlarge radius of roundabout, possibly combined with additional lanes on all approaches and exits.
2) A1237 / A59 roundabout	Junction operates at or over capacity throughout the day. Roundabout radius is small in comparison to existing flows. Junction already causes significant delays with traffic queues long enough to affect nearby junctions (notably A1237 / York Business Park / Millfield Lane, A1237 / A19 and A1237 / Clifton Moor Link Road).	Potential to enlarge radius of roundabout and construct additional lanes on approaches and exits. However, available land is restricted so expansion beyond that already proposed in the Access York programme is probably not feasible. There are also private driveway accesses off both A59 arms near to the junction. Developments outside of the ORR mean that there is a need to protect and prioritise pedestrian and cyclist movements across the junction and an underpass is planned for the northern arm of the A1237.

Junction	Current junction performance	Opportunities for upgrade or improvement
3) A1237 / York Business Park / Millfield Lane roundabout	Junction on its own operates approaching design capacity but is regularly disrupted by traffic queueing from neighbouring junctions.	Bridges over the East Coast Main Line and River Ouse to the north and York-Harrogate rail line and Millfield Lane to the south limit further expansion. Existing development at York Business Park restricts land available for expansion to the east, notably for slip roads needed for grade separation. There is potential to enlarged radius of roundabout to allow an additional circulatory lane, possibly combined with additional lanes on all approaches and exits.
4) A1237 / A19 roundabout	Junction has been expanded on several occasions in recent years, with the latest scheme increasing the junction to three lanes approaches and two lane exits on the A1237 and the northern A19 arms.	Further upgrades to junction capacity are unlikely to be easy, especially given pedestrian/cycle underpass on eastern A1237 arm.
5) A1237 / Clifton Moor Link Road roundabout	Junction on its own operates within capacity but is regularly disrupted during peak hours by queuing traffic from neighbouring junctions.	Existing development at Clifton Moor restricts land available for expansion to the south.
6) A1237 / B1363 Wigginton Road roundabout	Junction operates near to capacity during peak hours.	

Junction	Current junction performance	Opportunities for upgrade or improvement
7) Clifton Green (A19 / Water Lane / Water End)	Junction operates near to and over capacity during peak hours, with particularly large flows from Water End. Junction is on route 2 (Rawcliffe Bar Park & Ride), which operates at 6 buses an hour two ways across the junction. Junction is on an important route for cyclists and forms part of York's developing Orbital Cycle Route. Recent junction work has reduced capacity of this junction in order to improve safety for cyclists and increase effective cycle capacity of the junction. Although cyclists are separated from general traffic on the approaches (cycle lanes and advanced stop lines), they still need to travel with general traffic through the junction itself (Water Lane to Water End and vice versa). Junction has a pedestrian facility on one arm (Water Lane).	Junction is restricted by narrow footways, Clifton Green and other conservation issues. Additional capacity could be provided by simplifying the operation of the junction by restricting or removing some turning movements. Potential for provision of new or improved pedestrian crossings, with provision of Puffin facilities.

8) Boroughbridge Road / Water End	Junction operates near to capacity during peak hours and is also affected at times by traffic queueing back from Water End. The junction is on a busy bus route (approximately 5 buses per hour in each direction) and on the proposed route of the A59 Park & Ride service. Proximity of Poppleton Road Primary School means that pedestrian facilities are heavily used at some times of day. As with Clifton Green, this junction is on an important route for cyclists and forms part of York's developing Orbital Cycle Route. Although cyclists are separated from general traffic on most of the approaches (cycle lanes and advanced stop lines), they still need to travel with general traffic through the junction itself (Water End to Lindsey Avenue and vice versa).	Potential for improvements to pedestrian crossings, including Puffin facilities and bus priority.
9) Water End / Salisbury Road	Junction on its own operates within capacity but is regularly disrupted during peak hours by queueing traffic from neighbouring junctions. Junction is on route 2 (Rawcliffe Bar Park & Ride), which operates at 6 buses an hour one way across the junction. This junction is on an important route for cyclists – both going through the junction on the Orbital Cycle Route and cyclists joining or leaving to or from the city centre.	

10) Acomb Road / Poppleton Road	Operates near to or at capacity during peak periods. Junction is on a busy bus route (combined arms 10 buses per hour in each direction) and on the proposed route for the A59 Park & Ride. Proximity of schools means that pedestrian facilities are heavily used at some times of day.	The Council has investigated signal rephasing and inclusion of bus priority as part of the Access York project. Puffin pedestrian facilities would improve pedestrian safety and convenience.
11) Blossom Street / Queen Street	Junction operates at and over capacity for most of the day. Current traffic lanes are of limited width and large vehicles turning Blossom Street to Queen Street sometimes have to straddle lanes.	The Council has upgraded this junction in 2010/11, with additional work on the approaches being undertaken in 2011/12. Beyond these upgrades, there are few further opportunities for further upgrade without removing some turning movements.
12) A1036 / Holgate Road	Junction operates near to capacity during peak hours with extensive queueing on Holgate Road. Junction is on busy bus routes (combined arms 31 buses per hour in each direction) and on the proposed route of the A59 Park & Ride. Junction is on busy pedestrian routes, with several schools nearby.	Little scope to upgrade junction due to proximity of buildings to carriageway. May be opportunity to reroute existing inbound bus services via Dalton Terrace to also take advantage of The Mount bus lane. Local Transport Plan Capital Programme scheme to improve pedestrian and cycle provision is planned for 2011/12.

13)A1036 / Dalton Terrace	Junction operates at or near to capacity during peak hours with extensive queueing on The Mount. Junction is on a busy bus route (20 buses per hour in each direction), including route 3 (Askham Bar Park & Ride). Junction is on busy pedestrian routes, with several schools nearby.	Little scope to upgrade junction due to proximity of buildings to carriageway. Puffin pedestrian facilities would help improve walking safety and amenity.
14)A1036 / St Helen's Road	Junction operates within capacity throughout the day. Junction is currently configured to allow articulated buses to run St Helen's Road to A1036 north and vice versa. Junction is on a busy bus route (combined arms 20 buses per hour in each direction), including route 3 (Askham Bar Park & Ride). Junction is on busy pedestrian routes, with several schools and York College nearby.	Development in YNW has the potential to draw additional traffic through Acomb, which could increase the use of this junction, given it is one of few crossing points over the railway lines from the Tadcaster Road corridor. This may mean that restrictions or remodelling could be required at this junction.
15)A59 / Beckfield Lane	Junction operates within capacity throughout the day but can be blocked during peak hours by traffic queueing back from the outer ring road. Low Poppleton Lane has very low traffic flows but is an important route for public transport and cyclists.	Development in YNW has the potential to draw additional traffic through Acomb (notably coming from the A64 and avoiding the congested outer ring road junctions). This may mean that restrictions or remodelling might be required at this junction. Depending on the strategy adopted to access the British Sugar / Manor School site, there may be further opportunities to remove traffic from Low Poppleton Lane.

16) A59 / Carr Lane	Junction operates within capacity throughout the day. The junction is on a busy bus route (combined arms 5 buses per hour in each direction) and the proposed route of the A59 Park & Ride.	Development in YNW has the potential to draw additional traffic through Acomb (notably coming from the A64 and avoiding the congested outer ring road junctions). This may mean that restrictions or remodelling might be required at this junction. The Council has investigated bus priority at this junction as part of the Access York project.