



Health Impact Assessment: CYC Bootham Park redevelopment proposal

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Contents

Table of figures	3
1. Executive summary	4
2. Development proposal.....	5
2. a) Background	5
2. b) Components.....	5
3. Overview of population affected	7
4. HIA Method.....	9
6. Health impacts	12
6. a) Environmental.....	12
6. a) i. Noise.....	12
6. a) i. Air pollution.....	14
6. a) iii. Sustainability	15
6. b) Wider determinants of health	17
6. b) i. Use of green space.....	18
6. b) ii. Security/safety	20
6. b) iii. Economic prosperity	22
6. b) iv. Active travel	23
6. b) v. Housing.....	25
6. b) vi. Community participation	28
6. b) vii. Effect on inequalities.....	30
6. b) viii. Heritage	32
6. b) ix. Education.....	33
6. c) Access to services.....	35
6. c) i. Hospital access	35
6. c) ii. Access to services on the Bootham site	38
6. c) iii. Changing capacity for local health services (including workforce)	39
6. c) iv. Connectivity.....	41
6. d) Population health needs.....	43
7. Commentary on ‘whole of system’ impact	46
8. Conclusion.....	46
8. a) Recommendations	47
8. b) Next steps	48
Appendices.....	49

Appendix 1: Summary table of positive and negative impacts of proposal	49
Appendix 2: Risk stratification and mitigation	54
Appendix 3: List of stakeholders consulted	59
Appendix 4: Project timeline	59
Appendix 5: Methodology for risk stratification.....	60
References	61

Table of figures

Figure 1: Proposed redevelopment of Bootham (North end of site)	7
Figure 2: City of York population profile.....	8
Figure 3: The wider determinants of health	10
Figure 4: Green space proposals.....	19
Figure 5: Proposed number of residential units	27
Figure 6: Proposed access routes across the site	42

1. Executive summary

Bootham Park Hospital is a large, historic site situated next to York District Hospital on the edge of York city centre. Bootham Park Hospital provided mental health services to the City for over 200 years, until its sudden closure in September 2015. The main site building has remained unused since 2015, with a replacement mental health facility currently under construction on Haxby Road.

Although the site is no longer suitable to provide modern mental health inpatient care, a draft redevelopment plan is being proposed by City of York Council (CYC) and York Teaching Hospital NHS Trust (YTHFT) that maximises the site's potential to benefit the City, including consideration for improving health and wellbeing.

A health impact assessment (HIA) was requested in order to explore the potential benefits of the proposed development plan on health and wellbeing, as well as identify any potential health risks and how they could be mitigated. Due to the very short timeframe for submission of the draft proposal a rapid HIA has been carried out, based on existing available evidence and discussions with key stakeholders.

The main health benefits of the proposal are:

- The preservation of existing green space, improving its usability for both individuals and communities by providing a range of features that will benefit health and wellbeing for people of all ages.
- Improving access to healthcare by: providing greater accessibility to the hospital site for patients/staff/emergency services; providing accommodation and facilities to increase staff recruitment and retention that will support existing services; providing step-down facilities to expedite hospital discharges and free up acute beds; and providing training facilities for current and future staff to ensure that a high standard of care can be delivered.
- Providing targeted improvements to meet the needs of older people, who are the fastest-growing part of the York population and are often vulnerable and at risk of needing further health and social support. This includes a range of housing options to meet various levels of need, which should also increase individuals' safety with appropriately designed housing and on-site support.
- Site improvements to promote active travel and public transport, which will increase connectivity across the city as well as positively benefiting both physical and mental health and wellbeing. Additional benefits include a positive effect on sustainability and the potential to decrease air pollution and increase safety on Gillygate.

The health risks identified include:

- **High impact** issues around on-site traffic increases and potential safety risks if the proposed walking, cycling, car and emergency vehicle (including air ambulance) usage are not properly segregated.
- **Medium impact** issues around safety and environmental issues during construction, the effect of providing car parking on air pollution/active travel/sustainability/inequalities, lack of community space isolating on-site residents, minor loss of green space and the risk that other vehicular traffic would use the route onto the site from the A19 as a cut through.
- **Low impact** issues around environmental noise, isolating physiotherapy as the only clinical service on site, and the impact of increasing the local population size on local services.

The HIA recommends prioritising several key areas for action to improve the health impact of the Bootham redevelopment proposal:

- (Re)developing buildings that are safe, sustainable and designed with the needs of residents and other users in mind
- Promoting the safety of residents and visitors by appropriately segregating pedestrian, cycling, motor vehicle, ambulance and air ambulance traffic on site
- Minimising the environmental and health impacts of car travel to the site whilst ensuring that those who need to access the site are able to do so
- Maximising the impact of green space for physical and mental wellbeing, including provision of recreational facilities and promoting active travel
- Encouraging community usage of the site, including exploring the potential for the site to act as a community hub

2. Development proposal

2. a) Background

Bootham Park Hospital was founded in 1772 as one of the country's first purpose built mental health hospitals. It continued to provide mental health facilities including adult inpatient care, an elderly assessment unit, community mental health teams and IAPT (improving access to psychological therapy) until 30th September 2015, when it was abruptly closed following a CQC visit. Both the CQC and a follow-up report from NHS England found that the main site building was not suitable for modern day mental health care.ⁱ Following extensive stakeholder engagement the decision was taken to build a new 72 bed mental health hospital on Haxby Road to deliver these services (due to be completed early 2020).

However, despite the main building being unsuitable for direct clinical use, the site does have redevelopment potential to be used for wider health benefit. A joint redevelopment proposal is being drafted by City of York Council (CYC) and York Teaching Hospitals NHS Foundation Trust (YTHFT) that respects the heritage and strong public feeling around the site, whilst including health, leisure and housing provision to fit the needs of the local area.

2. b) Components

The Bootham Park Hospital site covers 25 acres of green space and existing buildings, giving the potential for a mixed-use development. The majority of the site is owned by NHS Property Services, with smaller sections owned by CYC and YTHFT.

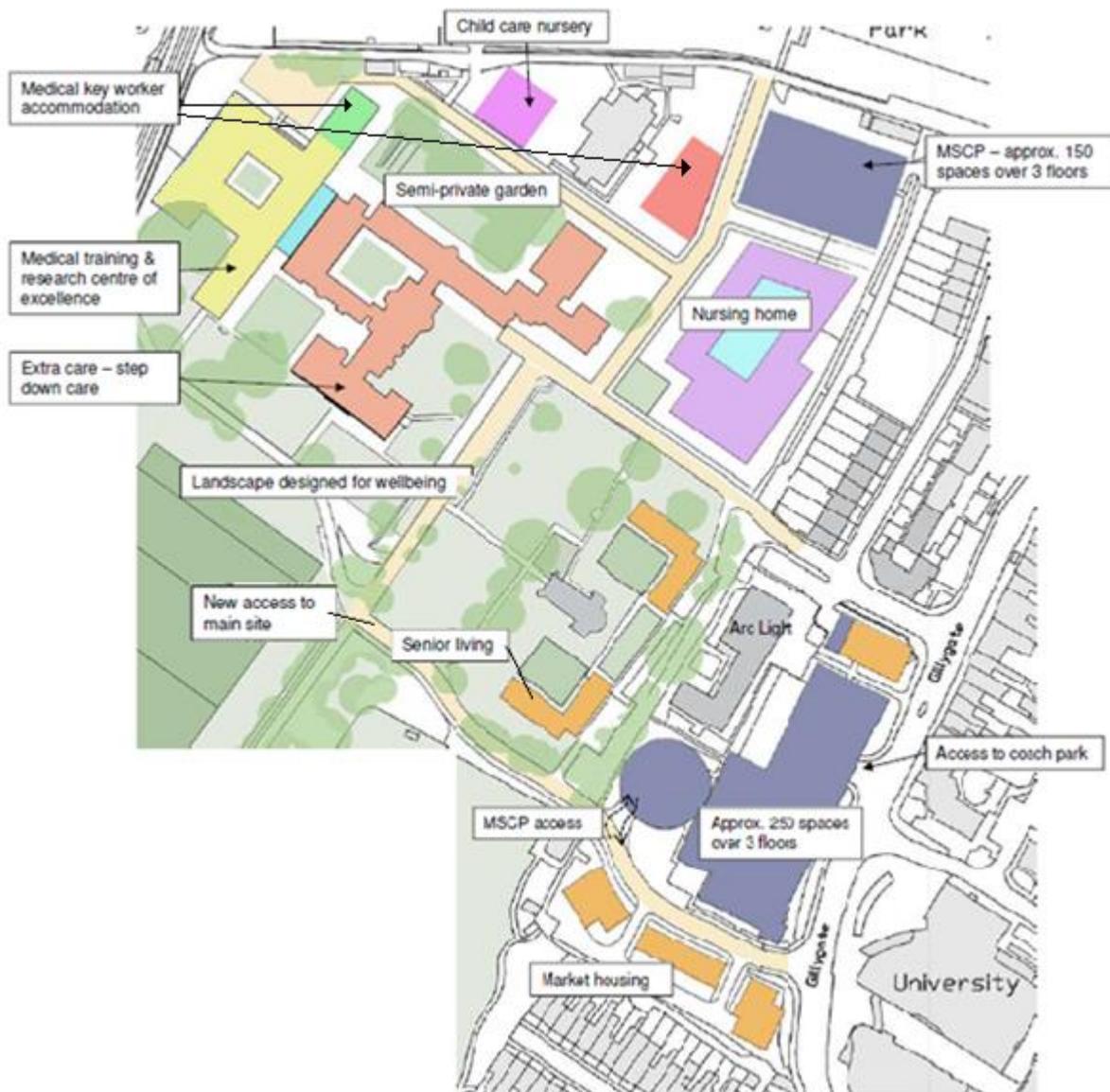
The key components of the CYC proposal are:¹

- To use land immediately adjacent to the York Teaching Hospital site to deliver **elder care accommodation, including step down and rehabilitation services**, in partnership with an independent sector partner.

ⁱ In October 2015 Margaret Kitching, Chief Nursing Officer; NHS England (North) commissioned a reflections, learning and assurance report be prepared by NHS England and it was published in March 2016.

- To provide **rented and affordable shared ownership dwellings for medical staff and other key workers** in York, built on some of the Bootham site, as part of a wider mixed tenure development and delivered with Homes England and other grant support.
- To provide **Extra Care accommodation (independent living with care) or residential care for older people, including accommodation for those living with dementia** in order to meet a significant under provision of this type of accommodation in York.
- To replace the western wings of the existing hospital building with a purpose-built facility comprising a ground floor **physiotherapy suite** and a first floor medical **training and research Centre of Excellence**.
- To maintain the virtue of the “parkland” setting for the historic Hospital by using this as **sports facilities and sustainable public open space**, working with local residents and potentially in partnership with the neighbouring Bootham School.
- To enhance traffic flow, in particular the **access for emergency vehicles and public transport**, onto the York Teaching Hospital site. This will improve access to the site and alleviate traffic congestion and air pollution difficulties in the immediate vicinity.
- To deliver much needed **housing and commercial development** on the site by leveraging the use of adjacent public sector land holdings and land on the Bootham site in order to secure improved access and **accommodate necessary car parking provision**.
- The creation of at least **180 new jobs**.

Figure 1: Proposed redevelopment of Bootham (North end of site)



Source: IBI Group, Bootham Park Hospital York Discussion paper: emerging site options 28/11/18

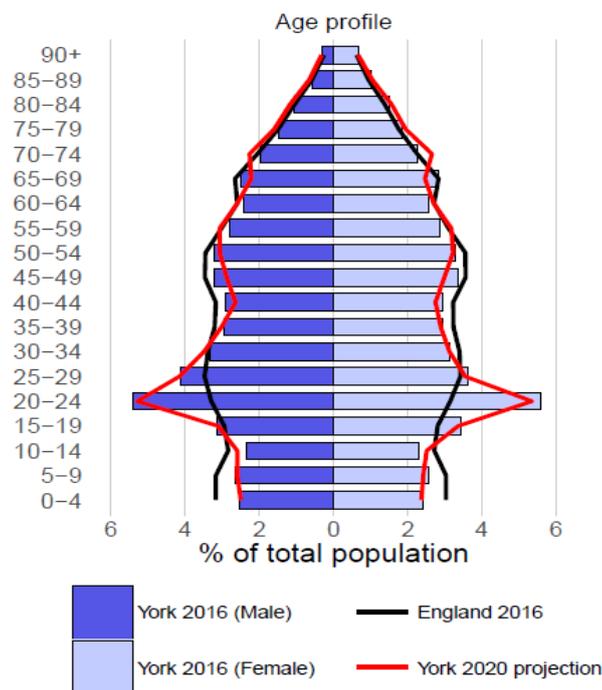
Full details of the proposal can be found in *The Bootham Park Site Development Plan*.

3. Overview of population affected

The City of York has a population of around 208,000 people.ⁱⁱ This is expected to rise by 11,600 (5.6%) to 219,600 by 2030.² In particular, the number of over-75s is expected to increase by 42% from 17,000 to 24,100. The Vale of York CCG population (which covers the broader catchment area for York Hospital secondary care services) is 357,000, and forecast to rise by 7.6% to 388,500 by 2040.³ York has a large student population, mainly based at the two universities (University of York and York St John).

ⁱⁱ 208,163 in 2017 mid-year population estimate, ONS (<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2017>)

Figure 2: City of York population profile



Source: National General Practice Profiles, Public Health England

Life expectancy compares favourably with the national average. However, there is a difference of 7.9 years for men and 4.3 years for women living in the most deprived areas of York compared to those in the least deprived areas.

York Population Profile Summary

- York has 208,163 residents with 5.7% from a black and minority ethnic community group. 83.9% are in good health, with 15.3% stating that they have some limitation in day to day activities.
- The average weekly household income in 2015/2016 was £637.58.
- 66% of residents own their own home, either outright or with a mortgage, 18% are private renters and 14% are social tenants. There are 7,614 Council Houses in York.
- 73.5% of residents have a Level 1 - 4 qualification, of which 62.9% are qualified at least to Level 2 (GCSE), but 18.0% have no qualifications at all.
- 9.7% of children are in child poverty (7.8% of children live in a household where a parent or guardian claims an out-of-work benefit) and there are 10.5% of households in fuel poverty.
- 1.6% of the working age population (aged 16-64) claim out of work benefits and 0.1% claim job seekers allowance.

Source: CYC York Profile <https://data.yorkopendata.org/dataset/2a844263-5c89-4fe1-95e9-ee5ae289598d/resource/3b4c2e63-5d5b-419b-9fe5-424ff071e0e5/download/york-profile.pdf>

The average deprivation level across York puts it in the least deprived 40% of areas nationally. However, there are pockets of higher deprivation in York, with areas in Clifton, Guildhall and Westfield wards among the most deprived 20% of areas nationally.

York has significantly higher levels of hospital admissions for alcohol consumption and self-harm than the national average, and a significantly higher rate of suicides. However, there are lower than average rates of smoking in adults and higher than average numbers of adults who are physically active. In terms of child health, there are also fewer obese children than average, although there are still 16% who are obese by age 10-11.

15% of adults in York reported living with a limiting long-term illness or disability. Across Vale of York the highest reported rates of ill health are from: hypertension (13.4%); obesity (9.8%); depression (9%); asthma (6.1%); and diabetes (5.6%).⁴

More information on the local population can be found on the York Joint Strategic Needs Assessment website,⁵ the York summary population profiles⁶ and in the population health profiles for City of York⁷ and Vale of York CCG.⁸

4. HIA Method

A Health Impact Assessment (HIA) can be defined as:

*A combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.*⁹

The aim of a HIA is to produce a systematic but flexible framework by which the health benefits and challenges of issues such as policy changes and planning decisions can be identified. The overall outcome of a HIA is a set of recommendations that should be used to inform policy and practice regarding the decision in question. HIAs are best done prospectively, but can be concurrent or retrospective.

There is some flexibility regarding the topics covered by a HIA, and in what detail. In terms of depth, HIAs can broadly be categorised into desk-based, rapid, intermediate, or comprehensive. Which method is chosen depends on available resources, the scale of the proposal and the size of the potential impacts:¹⁰

Desk based	Provides a broad overview of potential health impacts.	An 'off the shelf' exercise based on collecting and analysing existing accessible data.
Rapid	Provides a more detailed overview of potential health impacts.	Involves collecting and analysing existing data with limited input from experts and key stakeholders
Intermediate	Provides a more thorough assessment of potential health impacts, and more detail on specific predicted impacts.	Involves collecting and analysing existing data as well as gathering new qualitative data from stakeholders and key informants
Comprehensive	Provides a comprehensive assessment of potential health impacts.	Involves collecting and analysing data from multiple sources (qualitative and quantitative)

For this HIA, a ‘rapid’ approach has been taken due to the restricted time available for completion. The report is predominantly based on analysing existing accessible data but with the addition of valuable discussion from project stakeholders and some public engagement.

Health impact assessments look at ‘health’ in its broadest sense. The WHO Constitution defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".¹¹ The WHO has also acknowledged that “there is no health without mental health”.¹² Health Impact Assessments recognise that health and wellbeing is determined by a much broader set of factors than just access to healthcare. Although not all HIAs will include an assessment of every single factor that could affect health, consideration of at least some of the wider determinants of health is necessary to provide a holistic picture of health and wellbeing effects.

Figure 3: The wider determinants of health¹³



Conducting a HIA involves several recognised steps:¹⁴

Step	Purpose
Screening	Determine whether HIA is appropriate and required
Scoping	Set out the parameters of the HIA (i.e. the appropriate level of depth and the scope of health topics to be included)
Identification	Develop a community/population profile and collect information to identify potential health impacts
Assessment	Synthesise and critically assess the information in order to prioritise health impacts
Decision making and recommendations	Make decisions to reach a set of final recommendations for acting on the HIA’s findings
Evaluation and follow up	Evaluate the processes involved in the HIA and its impact, and follow up the HIA through monitoring and a health impact management plan

This HIA follows the general HIA methodology, as outlined below:

Screening was carried out using the recommended questions from the Department of Health HIA Toolkit, which advises completing a HIA if the project meets the following criteria:¹⁵

1. Will the proposal have a direct impact on health, mental health and wellbeing?
2. Will the policy have an impact on social, economic and environmental living conditions that would indirectly affect health?
3. Will the proposal affect an individual's ability to improve their own health and wellbeing?
4. Will there be a change in demand for or access to health and social care services?

The Bootham Park site proposal scores positively in answer to each of these questions; a HIA is therefore an appropriate tool to use in this case.

Scoping was carried out by the HIA lead (VT), with a set of parameters proposed to and agreed by the development plan lead officer (RW), representing both CYC and YTHFT.

Identification and **assessment** involved collecting background data on the health needs of the local population from a variety of sources, including CYC population profiles and Joint Strategic Needs Assessment, Public Health England health profiles, stakeholder discussions and other publicly available data sets (e.g. Air Quality England data, Office of National Statistics population data). Searching academic and grey literature identified some of the likely health impacts, including quantification of health risks and recommendations for how these could be mitigated.

Despite the short time scale for completing the report, stakeholder engagement was carried out with representatives from key local organisations (see Appendix 3). Discussions centred on identifying health risks and benefits of the proposal, plus any potential ways of mitigating these. An overview document (matrix) was created to help highlight which risks and benefits were associated with which parts of the proposal (Appendix 1), and to help quantify which risks potentially had the most impact (Appendix 2).

In addition to stakeholder organisations, a review of previous public consultation work carried out through My Future York was included, to identify what health issues they had previously raised. The public comments also included suggestions about how health benefits from the site could be improved.

The draft document was reviewed by stakeholders and members of the Bootham Park Steering group. The HIA **recommendations** were discussed and endorsed at the Steering Group meeting on 12th March 2019.

Actions for **evaluation and follow up** are noted in the HIA recommendations; the exact follow up will depend on whether the proposed development plan is accepted or whether an alternative proposal is chosen. Either way there is scope for the assessment and recommendations in this HIA to be a valuable resource during the next phase of development.

A project timeline has been included as Appendix 4.

Although HIA is a robust method of assessing health impacts of issues such as policy changes and planning decisions, there are some limitations. For this HIA, limitations included the single reviewer and the very short time scale for completion, which minimised the opportunity for detailed

literature review and extensive consultation. The completed proposal was also unavailable during HIA as it was undergoing continual development; this fluidity of the proposal meant it was easier to highlight issues and suggest mitigations, but also meant it was more challenging to provide a robust assessment of the overall proposal.

6. Health impacts

Health impacts have been categorised into 4 broad categories: environmental, wider determinants, access to services, and population needs.

6. a) Environmental

Environmental factors affect both health and health inequalities. The environment can negatively affect health directly by exposing people to harmful agents such as air pollution, or indirectly by disrupting life-sustaining ecosystems.¹⁶ Climate change also affects human health, with risks from extreme weather patterns and events, changes to food supplies, and changing the spread of infectious diseases.¹⁷

Poor environmental quality has the greatest effect on people whose health is already at risk. The Marmot Review recommends 3 main policy actions to ensure that the built environment promotes health and reduces inequalities for all local populations. Firstly, policies and interventions should be prioritised that improve active travel, improve good quality open and green spaces, improve the quality of food, and improve the energy efficiency of housing. Secondly, planning, transport, housing, environmental and health systems should be fully integrated to address the social determinants of health in each locality. Finally, locally-developed and evidence-based community regeneration programmes should be supported that remove barriers to community participation and action, and reduce social isolation.¹⁸

6. a) i. Noise

Environmental noise is an important environmental risk to physical and mental health and wellbeing. Exposure to noise poses both auditory and non-auditory health risks. Very loud noise (usually over 85 decibels) can cause direct injury to the auditory system, leading to hearing loss and tinnitus. However, persistent noise can have wider health effects by increasing stress levels. As well as causing annoyance and a lower perceived quality of life,¹⁹ long-term noise exposure can cause cardiovascular disease (particularly hypertension), cognitive impairment and sleep disturbance. Groups particularly vulnerable to effects of noise include children, the elderly, shift workers and people already in ill health.²⁰ The World Health Organisation recommends that exposure to road traffic noise should be kept below 53 decibels (45 decibels at night), and below 54 decibels for railway traffic (44 at night) to prevent adverse health effects.²¹

In contrast, living in a quiet area with limited environmental noise has a positive impact on health-related quality of life.²²

Impact of proposed Bootham development plan

It is important to consider the impact of both noise from the surrounding area on the Bootham site, and also the impact of redeveloping the Bootham site on the surrounding area. There are likely to be short term and long-term noise implications for the site; however, none of these have been

identified as of high concern (see Appendix 2). In the short term, there is likely to be some noise on site during construction and building remodelling, which may affect local residents. In the long term, increasing the number of users of the site will slightly increase the level of noise produced, for example through car parking access and the use of recreational facilities.

There are some considerations for prospective residents of the site. The York-Scarborough railway line runs adjacent to the north border of the site, noise from which may be audible to residents on the northwest part of the development (key worker accommodation). There is an average of 18 trains per day between York and Scarborough in each direction, although no trains run between 11pm and 6am.²³ However, by preserving the tree lines and the large area of green space in front of the main Bootham building a degree of tranquillity will be preserved for residents, maintaining the separation between residential areas and the A19.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Maintaining the large area of green space in front of the main building will provide tranquillity for the on-site residents, and act as a buffer from the busy A19 road at Bootham. This will be of particular value for vulnerable residents (for example, people with dementia). 	<ul style="list-style-type: none"> ➤ There will inevitably be some construction noise during site development, which will be audible to local residents and people accessing the site. ➤ There may be a slight increase in noise on parts of the site long-term, for example from site traffic at the car park or public use of green space (e.g. sports matches), however this is not expected to be above acceptable background levels. ➤ It is possible that there may be increased noise from ambulance sirens using the new access road to the hospital. ➤ The northwest border of the site lies next to the Scarborough train line. There may be some noise from passing trains (on average 18 per day in each direction 36 in total) audible to some site residents.

Mitigating negative impacts and increasing health benefits

- An Environmental Impact Assessment (EIA) should be undertaken before initiating any construction, which would include a more detailed assessment of expected noise levels.
- It is possible to restrict noise during building work through the use of planning conditions and by following 'considerate construction' principles, for example scheduling work at appropriate times of the day/week/year.
- Although users of green space on site will inevitably produce a small amount of noise, it is possible to enforce restrictions on the noise levels for large-scale events, particularly at unsociable hours, in the same way as for existing open spaces.
- Yorkshire Ambulance Service (YAS) staff only use sirens when necessary in residential areas. It is more likely that they would have to use the ambulance horn directed at specific obstacles than use a siren on these roads due to general lack of other traffic.

- Maintaining trees along the external borders of the site will limit the impact of noise from e.g. the A19 or the railway.

6. a) i. Air pollution

Air pollution is a mixture of particles and gases that can negatively affect human health. The most significant pollutants in the UK are particulate matter (PM) and nitrogen dioxide (NO₂). Air pollution has a range of health effects, including increasing the risk of cardiovascular and respiratory symptoms, and has also been associated with reduced life expectancy. The health effects of air pollution are greatest in vulnerable populations, including children, the elderly, people with existing cardiovascular or respiratory disease, and people who spend long periods of time in polluted locations.²⁴

York has several areas of poor air quality, with pollution levels that breach national and international guidelines. York inner ring road and surrounding roads are a designated Air Quality Management Area (AQMA), subject to an Air Quality Action Plan to decrease pollution levels.²⁵ Gillygate is an air quality technical breach area identified in the latest AQMA for York city centre (AQMA 5, December 2018). The Gillygate continuous monitoring station annual mean concentration has fallen from 35 in 2014 to 27 in 2018 (air quality objective <40 µg/m³ annual mean).^{26,27} However, diffusion tube analysis at specific points on Bootham showed exceedances of the 40 µg/m³ threshold (61.7 (distance-adjusted 43.6) at the former Gillygate Surgery and 60.1 (distance-adjusted 42.5) at the Papillon Hotel).²⁸ Real time air quality monitoring data is available online.²⁹

Impact of proposed Bootham development plan

The Bootham development proposal is likely to have some effect on air pollution by affecting the flow of traffic down Gillygate. The provision of alternative means of transport to the hospital should encourage people to walk, cycle or take public transport rather than drive. It also provides routes for pedestrians and cyclists that bypass Gillygate, reducing their exposure to air pollution in that area. The provision of car parking on the site may decrease the necessity of some traffic entering the city centre from the north east, as may providing an alternative entrance to Bootham school to the current entrance off Gillygate. However, there is also a risk that car parking provision may increase traffic through Gillygate from the west in order to reach both the Bootham site and York Hospital.

There is a small risk in the short term that dust created during building work as part of the redevelopment will negatively affect air quality on site. The Bootham Park site contains a large number of mature trees that will help offset local air pollution; ideally these would be maintained.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Trees help offset local air pollution ➤ Cycling and footpath provision encourages non-vehicular transport to the hospital and surrounding areas, which may decrease traffic on Gillygate and other surrounding roads. It also provides alternative routes to Gillygate for pedestrians and cyclists, and therefore limits their exposure to pollutants. ➤ Parking provision and an alternative entrance to Bootham schools may limit 	<ul style="list-style-type: none"> ➤ There is a risk that increased car parking may encourage extra traffic through Gillygate (and other routes) to site. ➤ Some localised dust etc. is possible during site development. ➤ Residents in on-site housing and people working in on-site facilities will bring extra traffic to the site.

traffic entering Gillygate from the northeast, which may slightly decrease air pollution levels.	
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Mitigating negative impacts and increasing health benefits

- Decreasing air pollution from building work could be managed through appropriate planning conditions and following ‘considerate construction’ principles.
- The Bootham development plan already contains considerable provision for active transport as an alternative to car travel, which will have a positive effect on decreasing air pollution.
- Any provision of parking will attract cars, which will increase local/on site air pollution. It may be possible to limit parking to necessary users only by using disincentives such as parking charges or limiting parking to Bootham/York Hospital users.
- It is possible to monitor ongoing air quality sampling on Gillygate for any significant fluctuations, although these are likely to be affected by other changes in local traffic management beyond the Bootham redevelopment. There is also a background air quality monitoring station on the Bootham site itself; monitoring the results of this will identify any on site changes.
- Ensuring that landscaping of green space preserves the existing trees will offset some local air pollution.

6. a) iii. Sustainability

Sustainable living improves environmental quality and provides a more resilient system in which people can live and work. Sustainable development has been broadly described as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.³⁰ These needs include the provision of food, energy, water, sanitation, housing, employment and healthcare; all of which have an impact on individuals’ health and wellbeing.

There is commitment across the city, including from the Council, to work towards a sustainable future. CYC’s ‘One Planet Council’ approach sets out their ambition to put sustainability and resilience at the heart of its decision-making processes. It forms an integral part of the wider One Planet York programme, which brings together organisations from across York, with a shared aspiration of becoming a more sustainable, resilient and collaborative ‘One Planet’ city.³¹

This section focuses on sustainability of the built environment, particularly regarding housing and transport. Considerations when developing environmentally conscious architecture include selecting locational, functional and structural solutions that exist in harmony with the local conditions (topography, water surfaces, flora and fauna etc.); limiting the overall footprint of development (i.e. reduce building on green areas); using renewable energy resources such as solar energy, wind or biomass; taking ecological construction theories and environment-friendly building materials into consideration with building structures, sanitary engineering systems, and alternative construction methods; and considering environment-conscious ventilation, energy, and material consumption in the functioning of the building.³² Resilience to climate change is also an issue; a recent planning proposal for retirement flats in Bristol was rejected as rooms for elderly residents were at risk of unacceptable overheating due to potential solar gain.³³

Transport considerations include reducing dependency on non-sustainable fossil fuel transportation and increasing active transport (i.e. walking, cycling etc.), which has both environmental and health benefits. The UK government has set out its ambition to end the sale of conventional petrol and diesel cars and vans by 2040;³⁴ several cities (including Leeds, Birmingham and Nottingham) are also developing Clean Air Zones to decrease local air pollution levels. New local developments should be considered in light of the nationally-driven agenda to decrease fossil fuel-based vehicles over the next 20 years.

Wider plans for improving sustainable travel across York are set out in the draft Local Plan (2018). The majority of commuting trips are within York, and overall York is a net importer of journeys to work (particularly from East Riding and North Yorkshire). Car travel predominates, but the city has some advantages (such as a compact urban area and flat terrain) that could facilitate sustainable travel. However, there are also challenges to sustainable travel, with the layout of the city (including the rivers, railways, strays, City Walls and historic streets) affecting movement patterns and concentrating journeys onto a small number of key locations with restricted options for improvement.³⁵

The draft Local Plan (2018) aims to:³⁶

- Ensure that sustainable transport provision and travel planning is a key component of future development and subsequent operation
- Promote sustainable connectivity through ensuring that new development is located with good access to high quality public transport and to the strategic cycling and walking network
- Reduce the need to travel, through ensuring that new development is located with good access to services
- Help deliver the infrastructure to support sustainable travel, including the provision of safe new cycle and walking routes as part of a city-wide network, high quality well located bus stops and secure cycle parking facilities, rail and expanded/relocated park and ride facilities
- Manage private travel demand via car parking policies and other measures

Impact of proposed Bootham development plan

Detailed building plans for the proposed developments on the Bootham site are not currently available; however, whether constructing new buildings or redeveloping existing ones there is potential to build in features of sustainable design. These include optimising site potential (reusing existing buildings where possible, being considerate of local ecosystems, optimising use of space), maximising energy (and water) efficiency, optimising quality of the internal environment (lighting, ventilation etc.), and optimising operational and maintenance practices.³⁷

The Bootham proposal includes provision for active transport (walking, cycling etc.), which is more sustainable than motorised transport using vehicles that run on fossil fuels and produce emissions that are damaging to health and the environment. However, there are also plans to increase available car parking facilities on the site; this could dissuade people from using more sustainable alternatives.

There is mixed public opinion regarding the planned car parking availability. Some people are keen for more parking to be available for the hospital, whereas others felt that it would instead be better

to promote sustainable transport and try to reduce emissions and congestion in York. Some compromises were suggested, trying to include sustainable features in car parking facilities.

“There is a book called ‘my garden is a car park’. Car parks don’t need to look like car parks they can look like gardens.”(Feedback from My Future York public engagement)

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ There is the opportunity to build in elements of environmental efficiency when designing/ remodelling buildings, for example taking a 'fabric first' approach to insulation etc. ➤ Active transport is actively promoted, with walking/cycling routes and cycling facilities. ➤ Providing bus access increases and encourages public transport, which is more sustainable than driving individual vehicles. ➤ Provision of solar panels on the car park roof provides a sustainable energy source for part of the development. 	<ul style="list-style-type: none"> ➤ Provision of car parking facilities encourages travel using personal vehicles, which is less sustainable than active transport or public transport alternatives.

Mitigating negative impacts and increasing health benefits

- The draft proposal already includes provision for sustainable transport, providing cycling and walking routes as well as changing facilities to encourage staff to cycle to work. It will be important to ensure enough cycle facilities (e.g. secure bike parking) are provided to meet the needs of residents, staff and visitors to the site.
- Any new car parking facilities (both residential and in multi-storey car parks) should include electric car charging points to encourage the use of ultra-low emission vehicles (ULEVs).
- An environmentally-conscious approach should be taken to constructing/redeveloping buildings. Environmental efficiency can be included based on a 'fabric first' approach, for example using appropriate insulation in walls and ceilings, with sustainable building materials used where possible. Care should be taken to optimise site potential, energy use, water conservation, material use, and operational and maintenance practices, as well as enhance indoor environmental quality.³⁸
- As much green space should be preserved and enhanced as possible. Green features should be incorporated into building design (provision for gardens, surrounding green space etc.).
- Sustainable features such as recycling facilities and renewable energy sources (e.g. solar panels) should be included.
- Carry out a Sustainability Appraisal (European Directive 2001/42/EC).

6. b) Wider determinants of health

The wider determinants of health cover the social, cultural, political, economic, commercial and environmental factors that shape the conditions in which people are born, grow, live, work and age.³⁹ They recognise that opportunities for creating good health often occur long before the point at which individuals need to access health care. Many of these determinants are highlighted in Figure 3 above. This HIA covers the wider determinants most relevant to the proposed development plan.

6. b) i. Use of green space

Green spaces, such as parks, sports fields and woodlands, are a key part of the urban environment. Green spaces encourage physical activity and relaxation and provide safe routes for walking and cycling. Green areas can be a refuge from noise and provide trees that produce oxygen and absorb air pollution.⁴⁰ York contains several large green space areas, including Rowntree Park, Yorkshire Museum Gardens and the Strays (Micklegate, Monk, Bootham and Walmgate). However, only 5.8% of York residents have access to woodland within 500m of where they live; less than half the national average.⁴¹

Green space can have positive effects on physical and mental wellbeing. It provides areas for physical activity, which improves mental wellbeing as well as providing physical health benefits such as improving cardiovascular risk and obesity.⁴² Green spaces are also associated with positive mental health and wellbeing, including both spaces with a nature focus and those focused on sporting or recreational activities.⁴³ In addition, providing community green space encourages community activity, which can improve social isolation and loneliness at an individual level as well as improving community cohesion.⁴⁴ Access to green space also has the potential to reduce health inequalities.⁴⁵

Consultations run by My Future York have demonstrated that there is strong public feeling regarding the green space in front of the main Bootham building. York residents felt that the parkland should be kept as green space that can be used and enjoyed by the community, maintaining the historic frontage to the site. Ideas for how to improve the use of this green space included many that have been incorporated into the plan, such as playgrounds and wellbeing trails, as well as improved pedestrian and cycle access. Keeping the tree-lined avenue next to Bootham School and the tree-belt alongside the railway line are also encouraged.

"I think of Bootham Park as a big open space, with wonderful listed buildings, and beautiful trees. A green lung for York which belongs to all of us who live here." (Feedback from My Future York engagement)

Impact of proposed Bootham development plan

The proposal includes part of the open area in front of the main building to be developed as (at least two) sports pitches. Bootham School, situated next to the site, has a shortfall of sports pitches on their current site, and there is scope for them to manage this area in exchange for priority use of the pitches. Use of the pitches by other local schools and the wider community would also be encouraged.

Other parts of the parkland green space have been designated for play facilities, fitness/wellbeing trails, sensory areas and memorial/contemplation spaces (see Figure 4 below). These provide a range of facilities catering to people of different age groups and abilities. Walking and cycling route also integrate active travel with green space. The majority of trees on site will also be maintained, including the avenues on either side of the main parkland. However, there will be some loss of green space through construction of some of the new buildings, including the nursing home and new residences besides the chapel.

It has been recommended to move the car park currently situated in front of the main building, which would further enhance the green space at the front of the site. This would allow for private

gardens to be provided for the extra care residents, which would be particularly important for supporting those with dementia.

Figure 4: Green space proposals



Source: IBI Group, Bootham Park Hospital York Discussion paper: emerging site options 28/11/18

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Most existing green space on the site will be maintained, with some remodelling to encourage greater use by the community. ➤ There is the potential to develop walking and running routes/trails, which will encourage physical activity. ➤ Other recreation areas such as sports pitches, play equipment, wellbeing trails and sensory/contemplation gardens with encourage physical activity across all age groups. ➤ There are clear benefits of physical activity/recreation space/experiencing the natural environment on mental health and wellbeing, obesity, and community participation. There are also particular benefits of sensory gardens on people with dementia and learning disabilities. ➤ There is the potential to include a 	<ul style="list-style-type: none"> ➤ There will be some loss of green space through the construction of new buildings (nursing home, senior living accommodation around the chapel).

community food garden, which could encourage further physical activity (gardening) as well as healthy eating education and provision.	
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Mitigating negative impacts and increasing health benefits

- The main area of green space at the front of the site is being preserved, although there is some green space lost under current plans around the chapel and for the care home. However, efforts can still be taken to preserve as much green space in this area as possible through landscaping, creation of gardens etc.
- There is the opportunity to include recreation facilities explicitly targeting physical and mental wellbeing for people of all ages, for example including adult outdoors equipment, a wellbeing trail, walking/running routes or even community gardening plots.

6. b) ii. Security/safety

Accidents and injuries are an important health concern. Common injury locations are in the home, at work and through road traffic collisions; physical security is therefore affected by safety in and around the home and workplace as well as safety of the environment/local neighbourhood. Feeling safe is also an important aspect of wellbeing.

Local data shows that although York has a lower than average number of people killed or seriously injured on the road, it has a significantly higher than average number of young cyclists (<25yrs) who are killed or seriously injured in road traffic collisions. York also has a significantly higher average rate of emergency hospital admissions due to falls in people aged 80+, and a high level of hospital admissions caused by unintentional and deliberate injuries in children.⁴⁶

Any redevelopment will involve construction work (including the presence/use of equipment and vehicles) on a site that also contains some public access. There are national guidelines setting out how health and safety should be managed during construction, such as the Health and Safety Executive Construction (Design and Management) Regulations 2015.⁴⁷

The main site building is currently unoccupied. At present there is limited access to the site and public engagement has suggested that the area can be unsafe, particularly at night time.

Impact of proposed Bootham development plan

There are short-term and long-term safety concerns arising from the proposed development plan. In the short term there will inevitable by safety issues to address during site development, with construction traffic having to periodically cross areas with ongoing public access. However, these can be minimised by using construction safety guidelines as above.

Longer term risks to safety on site include managing the different groups of site users (pedestrians, cyclists, emergency response vehicles) and ensuring that paths/roads used by pedestrians, cyclists, cars and ambulances (plus air ambulance landings) are sufficiently segregated to decrease the risk of accidents or collisions occurring.

The redevelopment plans are intended to benefit vulnerable populations, particularly regarding older people but also of children and community groups (which may include people with physical or

learning disabilities) using the site. These groups are at higher risk of accidents and other safety issues. Outdoor facilities and residential areas should be specifically designed with vulnerable users in mind; for example, considering ways to decrease falls risks (e.g. installation of grab rails, ramps).

The site proposal includes installing better pedestrian and cycle traffic controls on Bootham at the gates to the hospital grounds, which will make access to and from the site safer at the Bootham end. In addition, there are plans for a clear and well-lit route through the Bridge Lane wall, including removal of a small section of the hospital wall, which will make that access point more visible.

Redeveloping the housing that sits on the carriageway between the A19 and the main hospital building will provide surveillance of the parkland in front. This, plus general continued use of the site by the wider community, should alleviate current concerns about crime and safety raised in regard to the site being disused.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Bringing the site back into regular use should increase the safety/security of users by having an increased community presence. ➤ Constructing houses designed specifically with vulnerable users in mind (for example people with dementia or limited mobility) should increase their safety in their homes by decreasing the risk of accidents etc. ➤ Allowing ambulances to access the hospital directly from Bootham will increase the safety of pedestrians and other road users on Gillygate, as cars will not have to mount the kerb to let blue-light ambulances past. ➤ There is the potential to improve access to the hospital for other emergency services (fire, police), which will increase their responsiveness to incidents on the hospital site and the Bootham site. 	<ul style="list-style-type: none"> ➤ Construction work on site may pose a safety risk to site users during building works. ➤ There will need to be appropriate segregation of walking/cycling/vehicle/ ambulance traffic across the site to reduce the risk of accidents/collisions. ➤ There is a potential risk to public safety from air ambulances landing on the open access green space. This is an existing issue and is currently managed by on site security; however, there may be an increased number of people to manage. ➤ Safety of vulnerable population in e.g. extra care housing.

Mitigating negative impacts and increasing health benefits

- It will be necessary to include specific security and safety measures as part of site planning conditions, following national guidelines (e.g. CDM 2015).
- Walking routes and cycle paths should be appropriately marked. There should be an appropriate speed limit for traffic (including ambulances) on the site. If two-way traffic is considered on the lane leading from the A19 there need to be enough passing places to conduct traffic safely.
- There are already existing protocols for managing safety and security during air ambulance landings. However, these will need to be revised and strengthened due to the expected increase in site use, particularly of vulnerable users, and include appropriate signage and security protocols.
- Public spaces should be appropriately lit to maintain safety, whilst keeping lighting at a suitable level to avoid unnecessary light pollution for local residents.

- Home should be designed with the safety of residents in mind. This should include the need (or potential need) for extra equipment for older residents, such as grab rails, wet rooms and lifts/stair lifts.

6. b) iii. Economic prosperity

Poverty is associated with poor health outcomes for individuals and populations. The Joseph Rowntree Foundation has identified 4 key ways income affects health:⁴⁸

- **Material:** Money buys goods and services that improve health. The more money families have, the better the goods they can buy.
- **Psychosocial:** Managing on a low income is stressful. Comparing oneself to others and feeling at the bottom of the social ladder can be distressing, which can lead to biochemical changes in the body, eventually causing ill health.
- **Behavioural:** For various reasons, people on low incomes are more likely to adopt unhealthy behaviours – smoking and drinking, for example – while those on higher incomes are more able to afford healthier lifestyles.
- **Reverse causation** (poor health leads to low income): Health may affect income by preventing people from taking paid employment. Childhood health may also affect educational outcomes, limiting job opportunities and potential earnings.

Good health across all age groups also has a positive effect on the economy. Healthier children have better educational outcomes, which improves productivity in adulthood; a healthy working-age population is more engaged and productive; and healthy older people can continue to work or add to the economy through volunteering etc. rather than being forced to take early retirement. An unhealthy population provides additional costs to the economy through unemployment, low earnings, sickness absence, and relying on health-related benefits. This can lead to individuals stuck in a cycle of poor health and poor wealth, which brings costs to the individual, society and the economy.⁴⁹

In York, the rate of benefits claimants is well below the national average (1.6% of the working age population (aged 16-64) claim out of work benefits and 0.1% claim job seekers allowance).⁵⁰ The York economy benefits significantly from tourism, welcoming around 7 million visitors a year who spend around £564 million each year (75% by leisure visitors and 25% by business visitors) and supporting 19,000 jobs in the city.⁵¹ Other large employers include Nestlé, CYC, YTHFT, and the Universities of York and York St John.

Impact of proposed Bootham development plan

The Bootham has a variety of economic benefits, which in turn will indirectly impact health. Firstly, the rejuvenation of the Bootham Park area should bring additional footfall to the Bootham/Gillygate part of the city (known as the 'Fifth Quarter' economic area). Business owners from the Fifth Quarter have had an opportunity to comment on early drafts of the plan, with generally positive comments in particular about increasing the use of green space and the likely positive impact this will have on their businesses. Similarly, the new residents of the Bootham site are within walking distance of these facilities, which benefits both local businesses and improves the independence and connectivity of the residents by having somewhere accessible to shop.

Maintaining the current coach park on Union Terrace will continue to allow large tourist groups access the city centre. The improved travel infrastructure (pedestrian, cycling, public transport as well as car parking) will allow greater connectivity of this part of the city with the city centre, the hospital and beyond towards the Nestlé factory.

The development is expected to create around 180 jobs. This brings benefits to these individuals and their families, and also to the population they work for. Many of these jobs will be on the Bootham site, some of which will be in direct caring roles to improve the health and wellbeing of site residents and hospital patients (e.g. nursing home staff, physiotherapists). Providing benefits such as a day nursery on site not only generates employment but enables others to work more productively as well.

Building extra care accommodation is a cost-effective alternative to residential care, which will reduce the pressure on the adult social care budget (although will potentially increase the costs to be paid by individuals). Finally, the money that is currently spent on maintaining the unused Bootham Park buildings can be spent more effectively elsewhere in the health and social care system.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Encouraging community use of Bootham parkland may encourage footfall through the ‘Fifth Quarter’ economic area. ➤ Additional accommodation on site will increase the local population, who will use local amenities. ➤ The proposed development is expected to create around 180 jobs. ➤ Child welfare provision enables parents to work. ➤ Improving travel infrastructure (foot, cycling, public transport, motor vehicles) to this part of the City may boost footfall to local businesses. ➤ Including coach parking is beneficial to encouraging tourism. ➤ The current cost of the upkeep of the Bootham site can be spent more effectively elsewhere in the health and social care system. ➤ Extra care is more cost effective than residential accommodation, and can save costs in the adult social care budget. 	<ul style="list-style-type: none"> ➤ Although extra care accommodation may be more cost-effective for the city than residential care, it may increase the cost to individuals.

Mitigating negative impacts and increasing health benefits

- Continue to engage local businesses and other stakeholders to ensure that the redevelopment is considered part of the local economic area.
- Ensure that extra care accommodation is not prohibitively expensive for the majority of people who need it.

6. b) iv. Active travel

Active travel (walking, running, cycling etc.) has beneficial effects on physical and mental wellbeing. It encourages greater use of green space, and provides physical activity in a way that can be more

easily combined into everyday routines. Active travel is a sustainable mode of transport and does not contribute to air pollution, which can also adversely affect health. A shift to active travel and public transport combined with improved land use can give much greater immediate health co-benefits than improving fuel and vehicle efficiencies.⁵²

Swapping motorised transport for active travel can give additional health gains by reducing cardiovascular and respiratory disease from air pollution, reducing traffic injuries and reducing noise-related stress. General benefits from the increase in physical activity include protective effects against some cancers, type 2 diabetes, heart disease and other obesity-related risks. Active travel also improves health inequalities, by improving mobility for women, children, elderly and people on lower incomes, who have reduced access to private vehicles.⁵³

Levels of active travel are higher in York than the national average. 72% of adults report being physically active, with 33% walking for travel and 10.5% cycling for travel at least three times a week. However, 60.4% of adults in York are classified as overweight or obese.⁵⁴

Public engagement highlighted the value of the walking and cycling routes running north-south across the site, particularly for avoiding the busy traffic on Gillygate. However, existing paths do not always link up and cyclists are required to use the pedestrian access, which risks accidents and slows cycle travel.

‘It’s currently not open every day of the week, the pathways aren’t continuous, the bit where there is a gate and bit for bicycles to pass through is a bit awkward with people often competing for space to get through’ (Public comment via My Future York online engagement survey)

Impact of proposed Bootham development plan

Draft plans for Bootham include increasing the provision of several walking and cycle routes across the site (see Figure 5). These will increase connectivity between key areas of the city (city centre, railway station, hospital and beyond to the Nestlé site), which will hopefully encourage people to use active travel methods to travel between areas. However, the cycling and walking infrastructure that the Bootham site connects with (e.g. along the A19, or the Scarborough railway bridge) are also likely to need updating make this a safer and more attractive option. Additionally, putting extra car parking on the Bootham site is likely to disincentivise some people from walking or cycling (or taking public transport).

There are also plans to provide secure cycle storage and changing facilities, which will further enable people to use active travel methods. In particular, these facilities are aimed at encouraging staff to cycle longer distances to work.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Walking and cycling routes are provided across the site, linking the hospital and Bootham and allowing better connectivity across the city. ➤ There are plans to provide cycle storage and changing facilities, which will enable more 	<ul style="list-style-type: none"> ➤ Car parking provision discourages active travel.

<p>people to cycle to work as well as cycle to/from the site for leisure.</p> <p>➤ Maintaining the pleasant natural environment encourages visits to/through the site on foot or cycling etc.</p>	
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Mitigating negative impacts and increasing health benefits

- Walking and cycling routes should be clearly signposted from surrounding areas to encourage use of the site. The walking/cycling infrastructure of nearby areas may also need to be updated to further improve connectivity, as part of making York a more cycle-friendly city. Work on improvements to the Scarborough railway bridge are currently underway; due for completion in Spring 2019.
- It is important to provide enough secure cycle facilities to cater for staff, residents and visitors to Bootham/York Hospital, including the potentially large number of student users of the Centre of Excellence.
- If car parking provision is to be provided, its use should be targeted primarily towards those who have specific need of it such as disabled visitors, or staff who have no other means of accessing the hospital site.

6. b) v. Housing

Housing quality affects both physical and mental health. Cold houses increase the risk of cardiovascular and respiratory disease, as well as hypothermia. There is also a relationship between cold housing and excess winter deaths.⁵⁵ Conversely, houses susceptible to excess heating (e.g. from solar gain, poor ventilation or inadequate heating control) also pose health risks such as dehydration and increased cardiovascular stress, with people aged over 65 most vulnerable.⁵⁶ The very young and the elderly are at greatest risk of accidents in the home, which can cause serious injury or death. Falls are a particularly serious issue among the elderly; 75% of deaths related to falls happened in the home, with falls making up 10-25% of ambulance calls to older adults.⁵⁷ In addition, poor housing can also delay hospital discharges and lead to hospital readmissions, increasing the burden on secondary health care.

Having safe, stable and affordable accommodation is also vital for mental wellbeing. Location of the home is important, with the proximity of amenities and public transport key for increasing independence and connectivity. Social isolation and loneliness can lead to poor physical and mental health. Currently 5.7% of households in York are occupied by a single person aged 65+.⁵⁸

The York draft Local Plan (currently under review by the Secretary of State for Housing, Communities and Local Government) requires the minimum annual provision of 867 new dwellings over the plan period to 2032/33 and post plan period to 2037/38.⁵⁹ The Plan aims to respond to the needs of York’s population, with specific provision for groups including older persons, Gypsies and Travellers, and students reflecting expected demographic change. The Plan specifically refers to the anticipated increase in the number of people over 70 years old living in York during the plan period; provision of housing on the Bootham site is likely to benefit this demographic need in particular, especially in light of the current national shortfall of specialist accommodation for elderly.⁶⁰

Public engagement has highlighted concerns about the creation of expensive housing and high-end hotel provision. It is recognised that the City needs more housing, but that affordable homes for local residents and suitable accommodation for the elderly should be prioritised. There is public support for intermediate care beds or rehabilitation facilities on site to free up acute beds in the hospital. There was also support for providing key worker accommodation.

Impact of proposed Bootham development plan

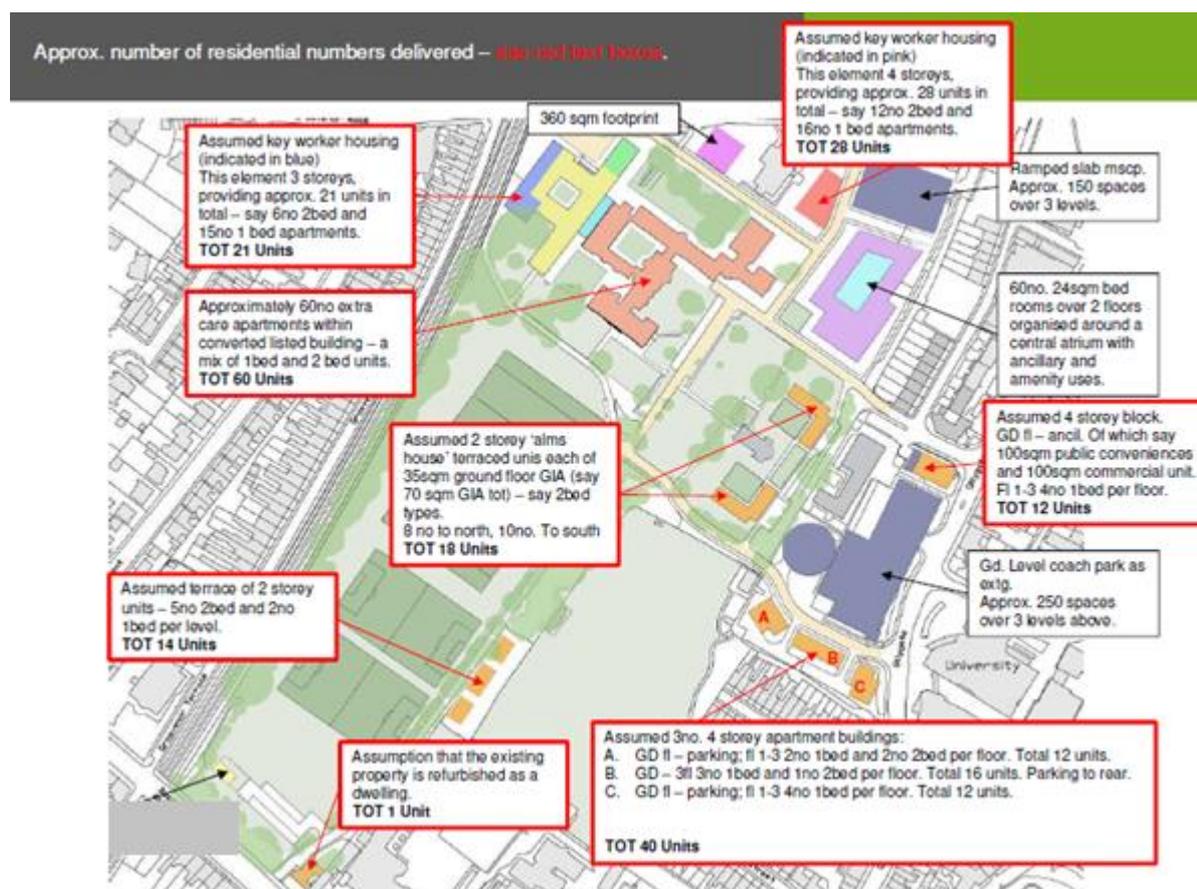
The proposal includes provision of 194 units of accommodation, a summary of which is given in Figure 4. In addition, there are plans for another 60 bedrooms within a single care home on the site, which would include residential accommodation and transitional care beds to be used to assist with hospital discharges. The transitional care beds and associated rehabilitation services would be delivered in partnership with an independent sector partner. These should alleviate pressure on the acute care system by addressing delayed transfers of care, with the potential to release between 30 and 60 hospital beds for other use.

The largest area of accommodation would be within the converted listed building, which includes provision for 60 extra care apartments. These would provide accommodation for people who are generally able to live independently but may need some extra support, and would include accommodation specifically targeted at/suitable for people living with dementia. There are also plans for 'alms house'-style dormer bungalows around the chapel, aimed at over-55s who live independently. Both the extra care accommodation and the alms houses are intended to include properties both for sale and for rent. Providing accommodation directly catering for the needs of elderly residents will enable them to live as independently as possible, but also with appropriate support in place to prevent unnecessary deterioration. Accommodation designed directly with their needs in mind can reduce the risk of accidents in the home and maintain individuals' independence. Creating a thriving community with communal spaces allowing residents to interact will decrease the risk of social isolation and loneliness and improve mental wellbeing.

There is also provision for 49 units of key worker accommodation, which would be targeted at staff working across health and social care. Providing housing for key workers should support recruitment and retention of vital staff for the health and social care system. This will have indirect benefits to the wider health of the population as existing services will have greater capacity to respond to demand.

The remainder of the housing units will be general market housing, which will generate some income for the site and also go towards the fulfilment of the council's requirement to provide over 800 new dwellings per year. This includes mixed tenure homes on the south-western corner of Union Terrace car park, plus the original gatehouse building and 14 new maisonette-style apartments on the site of existing buildings overlooking the main area of green space (see Figure 5 below).

Figure 5: Proposed number of residential units



Source: IBI Group, Bootham Park Hospital York Discussion paper: emerging site options 28/11/18

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Provides needed accommodation for older people with a variety of needs, from independent bungalows to extra care to nursing home accommodation. ➤ Provides needed accommodation for hospital staff and other key workers, which should help with staff recruitment and retention. ➤ Helps the City meet its housing targets. ➤ On-site houses are within in walking/cycling distance to most amenities, including health care facilities and the city centre. ➤ Moving the elderly into on-site accommodation may free family houses elsewhere in the city. ➤ Providing step-down beds facilitates hospital discharges, freeing up bed space for acute care. 	<ul style="list-style-type: none"> ➤ Extra parking provision will be required for site residents and staff.

Mitigating negative impacts and increasing health benefits

- Ensure housing provision is affordable, good quality, targeted at those groups most in need and appropriate (i.e. designed with the needs of e.g. residents with dementia in mind).
- Ensure enough cycle facilities are available for residents and visitors, particularly considering the expected student use of on-site training facilities.
- Limit the number of parking spaces available for each property. Not all residents/properties will need a space (e.g. extra care, nursing home) but there will still need to be spaces available for e.g. nursing home staff and visitors.
- Consider providing visitor permits for existing/planned parking facilities rather than adding extra parking.

6. b) vi. Community participation

At an individual level, social isolation and loneliness are linked to poor health, in particular to worse cardiovascular and mental health outcomes.⁶¹ Participating in organised recreational activities improves mental health and increases resilience against life stressors.⁶² The sense of belonging to a particular group or community also has protective effects on mental health and wellbeing.⁶³ Community groups can be targeted at, or prove particularly beneficial to, vulnerable groups such as users of mental health services and people with physical or learning disabilities. Volunteering to help with community activities has also been linked to improved health outcomes.⁶⁴

York has a higher than average rate of adults receiving community-based support. However, adults with learning disabilities and adults with mental health problems have lower rates of support by social care than the national average.⁶⁵ Only 44.5% of adult social care users have as much social contact as they would like according to the Adult Social Care Users Survey.⁶⁶

There is a strong feeling of community 'ownership' of the Bootham Park site among local residents, who wish to be able to use as much of the site as possible. Public engagement highlighted the desire to use green space for gentle social activities such as gardening or food growing, or to support particular parts of the community e.g. through hosting a mental health drop-in safe haven. Opportunities were also highlighted for mixed commercial and community uses, for example through running sports or wellbeing classes.

Impact of proposed Bootham development plan

The development proposal involves opening parts of the site to use by the wider community, particularly green space at the front of the site and several walking and cycling access routes. This will include sports pitches, which can be used by schools and potentially other community groups.

There is the opportunity for the community to get involved with running parts of the site, either parts of the green space or green space and housing through a Community Land Trust.

The central block of extra care accommodation should create a community environment for residents, with shared services alongside individual accommodation units. However, there is a risk that this could cause segregation of residents from the rest of the local community; a balance needs to be struck between maintaining safety and connectivity.

The old ballroom and bowling alley sections of the main building are to be refurbished into multifunctional social/dining areas. Including community access to these areas would improve intergenerational interactions and decrease isolation. They could also be used by visitors and staff from the Centre of Excellence.

The Centre of Excellence will provide links with the university communities, and also a link with staff on the main hospital site who will come and use these facilities.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Potential for community groups to use outdoor space, including for health and wellbeing purposes and to host larger community events. ➤ The Centre of Excellence will provide a link to university community. ➤ Opening access routes will facilitate community use of the site. ➤ There will be the ability for schools and community groups to use the recreational facilities. ➤ The proposal acknowledges the strong community feelings about the future of site as a public resource that should have a link to health and wellbeing. ➤ The potential to create a community land trust would allow the land to be used permanently for the public good. ➤ It is also possible that not-for-profit ownership could be set up with legally enforceable rights of access to the public. 	<ul style="list-style-type: none"> ➤ Risk of isolating the people in specialised older care accommodation if there is not some overlap with the communal areas of the site.

Mitigating negative impacts and increasing health benefits

- Ensure that facilities are available for use by community groups and for community events by ensuring legal open access rights to green space.
- Maintain some part of the central building areas as community space (e.g. canteen area, community resource space for voluntary sector providers), allowing wider community interaction for residents (particularly intergenerational integration) and reducing the risk of social isolation. Providing a service ‘hub’ would also increase community use and footfall, as well as benefitting organisations directly working to improve the health and wellbeing of York residents. Similar examples can be seen elsewhere in York, such as The Centre@Burnholme or York Nurturing Community Kitchen & Community Hub.
- There are also opportunities for community management of parts of the site, for example through setting up a Community Land Trust to manage housing development. This would allow the community to take greater ownership of an area they already feel passionately about. There would also be opportunities for community groups to bid for funding grants to improve the site, e.g. through the RHS National Garden Scheme.
- Keep the community engaged throughout planning and development; proposals designed with community input are more likely to be appropriate for and used by the community they

are intended to serve. More detailed guidance can be found in NICE guideline [NG44] – Community engagement: improving health and wellbeing and reducing health inequalities.⁶⁷

6. b) vii. Effect on inequalities

The WHO defines health inequalities as “differences in health status or in the distribution of health determinants between different population groups”.⁶⁸ Some health inequalities are impossible to avoid, such as biological variations between groups or individuals. However, of more concern are inequalities that are also inequitable, where the uneven distribution may be unnecessary and avoidable as well as unjust and unfair; for example, the difference in life expectancy between the most deprived and the least deprived people in society.

The Bootham redevelopment proposal should not exacerbate health inequalities. This should include inequalities experienced by people with protected characteristics, populations with high deprivation, people from marginalised social groups and where possible people from different geographic parts of the local area.

There are also opportunities for the Bootham development to reduce health inequalities. The Marmot Review (2010) suggested identified areas for action to reduce inequalities; several of these (including creating and developing healthy and sustainable places and communities, creating fair employment and good work for all, ensure a healthy standard of living for all, and strengthening the role and impact of ill health prevention) will be directly affected by the proposals.⁶⁹

Impact of proposed Bootham development plan

There is a risk that parts of the Bootham development plan will provide more benefit for people who are from less deprived backgrounds. Evidence from academic literature suggests that improving neighbourhood walkability, active transport and green space (all included in the Bootham proposal) may predominantly benefit socioeconomically advantaged groups.⁷⁰ An example of where this might occur is through giving the privately-run Bootham School preferential use of sporting facilities on site in exchange for managing green space, which would potentially disadvantage other local schools. Similarly, if car park charges are introduced in the car parks on the site they are likely to have greater impact on the less wealthy and those who have a clinical need to visit Bootham or York Hospital more frequently. It may be possible to offer reduced fees for hospital users to mitigate this. It may also negatively affect people with poor mobility or disabilities who are unable to walk or cycle and rely on personal vehicles. It is important to ensure enough disabled parking is provided for staff, residents and visitors to the site.

Extra care accommodation is cheaper for the city than residential home accommodation; however, this may not necessarily be so for individuals. There is a risk that the provision of high-quality extra care accommodation on site will come at a rental/property cost that is only accessible to wealthy older people. Having a mixed tenure of properties to buy and rent will decrease this risk, but care should still be taken not to make all accommodation on site unaffordable to those who would benefit most.

The Bootham proposal could potentially exacerbate geographical inequalities in access to care. Providing a bespoke extra care service for the elderly on site could create inequality with other elderly pockets of the York population. However, if successful the Bootham model could potentially be replicated in other areas of the city. In addition, although having a single central hub for

physiotherapy services next to York Hospital improves secondary care access it risks decreasing community access if more patients have to travel to the central site (or if travel times for physiotherapists continuing to see patients in their own homes and in community rehabilitation hospitals increase).

However, there are some areas where the development proposal could have a positive effect on inequalities. Bootham Park sits in a ward with a high level of deprivation; Guildhall ward and the adjacent Clifton ward are two of the three most deprived areas in York.⁷¹ However, although at ward level there is high deprivation there are several affluent residential areas adjacent to the site. Providing extra local amenities is likely to have the greatest impact for those residing nearby, particularly in terms of use of green space and community facilities; it is important to make sure that this extends beyond the surrounding pockets of affluence into the rest of the local community.

Providing affordable accommodation and affordable childcare for key workers improves their access to work and acts as a social enabler, which will have a positive impact on decreasing inequalities. Providing public transport access improves accessibility to both Bootham and York Hospital for those who do not have personal transport and are unable to walk or cycle.

Green space can be used by people of all ages. To facilitate this, the draft proposal ensures that there are areas suitable for recreation for people of different age groups and physical/emotional health needs across the site. These include play areas and sports facilities for children and young people, walking trails suitable for all ages, and sensory gardens that will provide a calm and reflective space, particularly catering for the needs of the elderly (although accessible to all who may wish to use them).

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ The green space is large enough for multi-purpose use, which gives the potential to include recreational activities for people of all ages. ➤ Childcare facilities are social enabler. ➤ Providing public transport access improves accessibility for those who do not have cars and who are unable to walk/cycle. ➤ Providing affordable housing means a greater proportion of the population can access accommodation. 	<ul style="list-style-type: none"> ➤ Not everyone has access to a car/personal transport, or is able to walk or cycle. ➤ Any car parking would need to include provision for disabled parking. ➤ Centralising physiotherapy services may improve secondary care access but decrease the ease of community access. ➤ The benefit arising from the sports pitches will be greatest for Bootham School, potentially at the expense of other schools/groups who could benefit. ➤ Extra care housing may not be affordable to all. ➤ Car parking charges would have more significant impact on less wealthy people and those who need to frequently attend Bootham/York Hospital.

Mitigating negative impacts and increasing health benefits

- Increasing the provision of public transport will improve access for those who have no access to personal transportation. This includes adding the Bootham site to bus routes, with the potential to create a drop off point for community transport or even a shuttle bus.

- Adequate disabled parking should be provided in suitable locations on site to serve residents, staff and visitors.
- Particularly target green space engagement at individuals and community groups from surrounding areas of deprivation in Clifton and Guildhall wards who are close enough to get the maximum benefit from the site.
- Bootham School to ensure green space available for use by community/other schools when not in curriculum use, as part of its charitable status requirements.
- Ensure that accommodation is priced so that it is not just the wealthiest members of society who are able to benefit from living on site. The mixed-tenure approach should help with this.
- Ensure that centralising physiotherapy services does not impact on community delivery.

6. b) viii. Heritage

The site contains a number of listed buildings, including the Grade 1 listed principal building designed by John Carr (built 1777), and the Grade 2 listed Medical Superintendent’s House (1860s). However, from a health perspective it is the site’s heritage as a place of mental health provision that is of key interest for this HIA.

There continues to be strong advocacy for continuing mental health uses for the site. Although no longer suitable for the provision of acute mental health services, there are ways in which it may be possible to maintain a link with the site’s traditional focus on improving the mental health and wellbeing of the local population.

There is also increasing evidence that engaging with heritage sites has some benefit on wellbeing in its own right.⁷²

Impact of proposed Bootham development plan

The proposed development plan has tried to sympathetically incorporate features specifically aimed at improving mental health and wellbeing. Firstly, green space use by residents and the community will involve activities that will indirectly benefit mental wellbeing, such as use of sports pitches and walking trails. There will also be some green space that is targeted directly at improving mental wellbeing, for example sensory gardens. These areas will be particularly beneficial for people who have, or are at risk of having, poor mental wellbeing, including residents with dementia and people with learning disabilities.

Part of the site’s history includes supporting older people with mental health issues. The proposed development plan includes considerable provision for older people, including those living with dementia. As well as providing accommodation and outdoor space specifically targeted with the needs (and safety) of people with dementia in mind, the on-site links to the Centre of Excellence for training and research will continue to improve best practice of managing dementia. All of these will contribute to helping realise York’s ambition of becoming a dementia friendly city.⁷³

Positive factors identified	Negative factors identified
➤ Parts of the site will still be used for activities that promote mental wellbeing, particularly around the maintenance of the outdoor space.	➤ The site’s main function will no longer be purely to treat mental ill health. However, there is still scope to include non-clinical activities on the site that can improve

<ul style="list-style-type: none"> ➤ There will also be some use of the site still for health and social care, including physiotherapy facilities, care home and the Centre for Excellence. ➤ In keeping with the site’s mental health origins, particularly for older people, there will be priority support for people with dementia including accommodation and suitable outdoor space. 	<p>mental wellbeing.</p>
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Mitigating negative impacts and increasing health benefits

- It is possible to make even clearer links between outdoor space and mental wellbeing. This could also link in to the site’s heritage for example through heritage/wellbeing trails. It may be possible to partner with charitable/community organisations to fulfil this brief.
- Increasing the scope for community activities and facilities on site will provide opportunities to decrease social isolation and loneliness. Particular links could be made with organisations working to improve mental health, including members of the York Dementia Action Alliance, which would link both to the site’s heritage and the proposed usage by older residents.
- Integrate mental health and wellbeing considerations directly into urban design.⁷⁴

6. b) ix. Education

Education can create opportunities for better health. Good education can support the development of positive life skills such as building strong foundations for supportive social connections, accessing good work, lifelong learning and problem solving, and feeling empowered and valued. These help people live healthier lives through increasing opportunities to develop lifelong healthy habits, afford a good quality of life, live and work in safe and healthy environments, and manage and limit exposure to life’s challenges.⁷⁵ People who do not have good access to education experience negative health outcomes; people with the lowest healthy life expectancy are three times more likely to have no qualifications compared to those with the highest health life expectancy.⁷⁶

Hull York Medical School (HYMS) has recently expanded, with an additional 90 places on the undergraduate medical course increasing the number of trainees per year by 69% from 140 to 230 (spread over both the Hull and York campuses).⁷⁷ There is currently little capacity for growth of medical training facilities in their current location at the rear of the York District Hospital site. HYMS currently have around 130-150 students based at York Hospital across years 3-5, with some additional use by first- and second-year students. The site is a training location for other students, including nursing and midwifery students from the University of York, physiotherapy and occupational therapy students from York St John University, and students on more specialised training from further afield, such as dietetics and radiography. As well as students, York Hospital provides ongoing staff training, including to doctors and other staff undertaking further training post-qualification.

Local authorities are required to take reasonable steps to ensure that enough child care is available in their area to allow families to work or train. The latest Childcare Sufficiency Assessment for York (2017) suggests that overall there is currently sufficient affordable, accessible and high quality childcare to meet demand from families with children aged 0-14 (and up to 18 for disabled

children) and to meet the new extended entitlement; however, provision is at full capacity in most areas of the city, especially during the Summer Term, and additional capacity will be required to meet future increases in demand.⁷⁸

Impact of proposed Bootham development plan

There are three features of the proposal that would have an impact on education: providing school sports facilities, providing a childcare centre, and the creation of a new Centre of Excellence for clinical teaching and research.

Bootham School currently does not have sufficient sports facilities on its main site, with students having to travel to playing fields on Rawcliffe Lane (around 1 mile from the main school campus). Providing additional sports pitches on the Bootham site would increase the student’s access to sports facilities and decrease the amount of time students spend walking along the A19 to Rawcliffe Lane.

As discussed above, providing a day nursery on the Bootham site is beneficial for parents (in this case primarily key workers, but also other local residents) who are better enabled to attend work when appropriate childcare is available. However, providing nursery places that incorporate high quality pre-school education can also benefit the children by enhancing their intellectual and social/behavioural development.⁷⁹

Education facilities including a clinical skills centre, library, lecture theatre/teaching rooms and hospital research staff are currently based on the main York District Hospital site. The Bootham proposal includes creating a purpose-built Centre of Excellence to house the above facilities on the northwest corner of the site. Moving clinical training facilities to the Bootham site would free up 1,400m² of space in the main hospital, which could be used for alternative clinical purposes. Providing high quality facilities could also help attract new staff, and increase the skills and experience of existing staff. This would improve quality of care as well as staff recruitment and retention. Moving the facilities would potentially increase their availability out of hours, which would enable them to be used for external courses. However, there is some concern that moving them off the main hospital site will lead to a decrease in their use, as they will not be as immediately accessible to hospital staff.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Provision of additional sports facilities that can be used by schools. ➤ Provision of a day nursery will improve access to pre-school education for children of key workers. ➤ Improved training facilities that can be used by a range of multidisciplinary health care staff and trainees. ➤ Moving clinical training facilities out of the main hospital may enable their out of hours use, including e.g. for courses with external attendees. 	<ul style="list-style-type: none"> ➤ Moving the clinical training facilities (including the library and other research facilities) into the Centre of Excellence may decrease their ad-hoc use.

Mitigating negative impacts and increasing health benefits

- Ensure that health training facilities are suitable and available for multidisciplinary use, including for hospital staff and other university students.
- Consider hosting community events in the Centre of Excellence space. These could also be linked to mental health and wellbeing; for example, open lectures as part of YorNight.
- Ensure users of childcare provision can benefit from the 30 hours free childcare where eligible.

6. c) Access to services

The Bootham redevelopment proposal affects access to a variety of services. These include health services on the York Hospital site, all facilities on the Bootham site, changing capacity for local services (including through workforce development), and connectivity to/from the site and the rest of the city.

6. c) i. Hospital access

The Bootham site is positioned directly next to York Hospital, which is the main provider of secondary health services for York. York Hospital has over 700 beds and offers a range of inpatient and outpatient services, including acute medical and surgical services and urgent and emergency care (emergency department, urgent care centre). York Hospital is outgrowing its current site, with space limitations preventing significant modernisation. Given the expected increase in the City of York and Vale of York populations by 2030, a potential increase in the use of secondary services will exacerbate the problem and could reduce both efficiency and quality of care.

A large number of people access York Hospital every year. In 2018 there were 85,700 A+E attendances, 92,200 admissions (48,200 planned and 44,000 unplanned), 4700 ambulatory care admissions, 3000 deliveries and 341,400 outpatient appointments (98,000 first appointments and 243,400 follow up appointments) at the York Hospital site.⁸⁰ There were also 9200 attendances at York Hospital Urgent Care Centre in 2017/18, with particularly high usage by 20-29 year olds (24% of all attendances).⁸¹ There are around 5200 staff working on the York Hospital site; around 4000 work shift patterns and 1200 work in '9-5' roles.

Transport access to York Hospital is limited, in part by the site itself but also due to surrounding transport infrastructure. There are only 1126 car parking spaces on the site, 637 for staff and 489 for patients and visitors, which is significantly fewer than the daily number of people traveling by car to the site. There are inadequate cycle facilities and bus access to the hospital is limited by the surrounding road network. There is heavy congestion during the day on surrounding roads, including Gillygate and Wigginton Road (main site access route). This is exacerbated at certain times of day, including rush hour(s) and patient visiting hours. A hospital-wide Travel and Access Plan is in preparation, which some of the proposals for Bootham could feed in to.

Impact of proposed Bootham development plan

The location of the Bootham site means that there is the potential to affect access to York Hospital, both advantageously and adversely. This covers both transport access to the Hospital, and also access to the services it provides.

Relocating medical training and research facilities from York Hospital to the Bootham site will free up around 1400m² space in the Hospital to expand and modernise existing clinical services. The provision of transitional care beds will also free up additional bed space on the hospital that can be used for acute cases. Lack of supported care (residential, nursing and extra care accommodation) in York also delays hospital discharge; providing these on the Bootham site will help alleviate this shortage and facilitate faster hospital discharges, again freeing up acute beds.

Improving transport access to the Hospital is a key part of the Bootham site proposal. This includes improving ambulance access, increasing car parking spaces and bus access, and increasing opportunities for active travel to the site by walking/cycling.

The main improvements to site access routes are shown in Figure 6 below. For pedestrians and cyclists, these include improving the north/south access from the A19 up towards the main hospital site, plus improving east/west access, including better access to/from Gillygate and over the Scarborough railway to Scarborough Terrace. Providing better cycle parking and better changing facilities will also improve the feasibility of cycling to the hospital site.

There are two key routes for improving ambulance access to York Hospital. Firstly, a new access road would be created via the Union Terrace car park, turning right between the chapel and the Medical Superintendent's House across the existing road from Union Terrace towards Bootham Court. A widened gap would be made in the Bridge Lane wall to join up with the existing road running through the centre of the York Hospital site. Whilst the first part of this access route will allow traffic entering and leaving the site to be shared between Union Terrace and the new road, the last part would be accessible to emergency and public service vehicles only. This would improve access for ambulances and also for police and fire & rescue vehicles, who are also often required to attend the hospital site.

In addition, the historic carriageway from the A19 to Bootham Park Hospital would be opened up to ambulances (but not to general traffic besides cyclists, pedestrians and necessary residents). This would join to the new route as described above to provide ambulances with direct access to the Hospital. YAS data suggests that bypassing Gillygate in this manner will reduce the journey time of a routine ambulance journey by 20 minutes, with reductions on blue-light transport also significant. It is estimated that this would improve the journey times of 20-30 ambulances per day. This could have a significant impact on patient outcomes, particularly for conditions where faster access to services decreases the risk of morbidity and mortality (e.g. stroke, myocardial infarction).

Maintaining provision for helicopter landing on the Bootham site will maintain existing air ambulance access to York Hospital. This only affects a small number of patients, but they are often those with serious injuries for whom rapid access to treatment is essential.

Providing car parking facilities on the Bootham site potentially allows for York Hospital to expand by building on one of their existing car parking sites. However, even with the expected 400 additional spaces in the two proposed multi storey car parks on the Bootham site this is unlikely to improve the shortfall in hospital parking, unless a significant shift to alternative modes of transport is encouraged and facilitated.

There will be excellent access to the hospital for key workers living on the hospital site, who will be able to walk from their accommodation in under 5 minutes. Other site residents will also have quick and easy access to the hospital, should they need to attend. There is a risk that increasing the proximity of these residents to the hospital will increase the likelihood they will use urgent and emergency care (rather than e.g. attending primary care or self-caring where appropriate). However, by designing bespoke accommodation with support on site, residents should be able to manage their own health along with community services, potentially reducing the burden on acute services.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Providing transitional beds should free up acute hospital beds. ➤ Providing appropriate accommodation for older people with a varying range of dependency should decrease their wider medical and social needs, potentially decreasing the need for hospital admissions. ➤ Increasing connectivity between the site and surrounding areas improves public access to services on both the Bootham site and the main hospital site. ➤ Opening additional access routes to ambulances could decrease their travel time by up to 20 minutes. ➤ Maintaining the helicopter landing point will allow air ambulances to continue to access the hospital. ➤ Providing additional parking facilities and improving bus access will improve staff and visitor access to the hospital. ➤ Opening up more pedestrian and cycle routes across the site will also improve staff and visitor access to the hospital. ➤ Key workers living on the Bootham site will be in close proximity to the hospital. ➤ Approx. 4,000m² of space will be released on the main hospital site that can be redeveloped into clinical facilities. ➤ Other emergency services could also benefit from improved access to the hospital site. 	<ul style="list-style-type: none"> ➤ The ease of accessibility of the hospital site for new Bootham residents could potentially encourage them to use hospital services (e.g. urgent and emergency care) more than they would if they lived further away, for example as an alternative to using primary care or self-care. ➤ Providing car parking facilities for York Hospital on the Bootham site may allow development on existing car park areas at the hospital. However, there is not enough provision to fully meet the parking needs of the hospital as they currently stand, without significant change to alternative modes of transport for a large proportion of staff/visitors.

Mitigating negative impacts and increasing health benefits

- Providing adequate personal support to on-site residents should improve their ability to manage their own health and wellbeing, reducing the likelihood they would inappropriately attend urgent and emergency care facilities.
- Allowing all emergency service vehicles rather than just ambulances to use the new access routes would improve response times of the fire and police services to the Hospital as well as ambulance response times.

- Clinical space freed up in the hospital by relocating services could be used to improve urgent and emergency care (e.g. ED front door services). Seeing the most appropriate practitioner straight away could potentially reduce the number of people who actually require hospital admission, by providing alternative treatment pathways where appropriate.
- Ensure that bus routes are able to connect to the Bootham site; there is the potential to use the new access road and Union Terrace as a loop.
- On-site support should be provided to residents to help them with managing their health and wellbeing. This could be linked to provision of community services on site through a community hub.
- Greater use of alternative transport should be encouraged, particularly if there is to be further loss of parking through development works on the York Hospital site.

6. c) ii. Access to services on the Bootham site

The proposal includes locating some health and social care services on the Bootham site directly, including the physiotherapy department, transitional care beds and nursing/residential care. Training and research facilities will also be relocated from the York Hospital site to form the Centre of Excellence.

YTHFT physiotherapy service is a single service covering both acute and community settings, divided into clinical specialist teams.⁸² The physiotherapy teams are currently split between temporary accommodation on the Bootham site, Archways Intermediate Care Unit on Belgrave Street, and the old Clifton Hospital site. This arrangement is due to be changed, with physiotherapy services reportedly either all returning to the main hospital site or potentially to the Bootham site.

Impact of proposed Bootham development plan

Relocating the physiotherapy service into a purpose-built facility should provide a more effective space than the current temporary accommodation. Siting physiotherapy services on Bootham rather than in the community would potentially increase their accessibility for secondary care inpatients and outpatients at York Hospital, although arguably not as much as housing them on the York Hospital site itself. However, there is the risk that siting the service centrally will decrease the accessibility of physiotherapy for patients in the community if they are required to travel to the site, and also increase travel time for physiotherapists visiting patients in the community. There are potential benefits of co-locating physiotherapy with the Centre of Excellence, as staff and trainees will have greater access to training and research facilities. However, there are potentially downsides to having physiotherapy as the single clinical service on the site; this may isolate them from other members of the multidisciplinary team (such as occupational therapists) with whom they work closely.

The Bootham proposal includes plans for a purpose built 60 bed residential/nursing care home overlooking the hospital chapel. This facility would include transitional care beds as well as permanent accommodation, and would be built and operated by an independent sector partner with the Hospital Trust buying back a certain number of beds for a fixed period of time and at an agreed price. This would increase the number (and therefore accessibility) of residential and nursing home beds in York, which is particularly important following the short notice closure of several homes in late 2018.

As discussed above, improvements in access to the site for pedestrians, cyclists, public transport users and car owners would increase accessibility of the on-site services. However, improving vehicle access and adding more services to this central site could potentially increase congestion to the Bootham/York Hospital area, which will have negative impacts on accessibility as well as environmental quality.

Moving the existing training and research facilities from York Hospital to a new Centre of Excellence could improve flexibility of access, with the potential to open the Centre for external events and for out of hours access, which is difficult in their current location. However, moving these facilities off the main site may decrease the number of 'drop in' visits made by staff as they will no longer be embedded in the clinical environment.

Currently there is little utilisation of the green space on the Bootham site, which would be improved by promoting public access and providing facilities such as sports pitches, cycle routes and walking trails. Access would be increased for local residents, staff, visitors and tourists, both as individuals and as part of community groups.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> • Provides more green space and facilities for physical activity that should be accessible community members of all ages. • Improves access to physiotherapy services for secondary care patients. • Improve external and out of hours access to the Centre of Excellence. Also improves access for physiotherapists. • Improving connectivity will improve accessibility of facilities on the site. • Increase accessibility of residential and nursing care accommodation in York. 	<ul style="list-style-type: none"> • Centralising services could increase congestion to the Bootham/York Hospital area. • Potential to negatively impact community access to physiotherapy through centralisation of services. • As the only clinical service on site, physiotherapy could become isolated from the rest of the multidisciplinary team they work closely with. • Potentially fewer 'drop in' visits to training and research facilities through relocating them off the main York Hospital site.

Mitigating negative impacts and increasing health benefits

- Continue to promote active transport methods as the key means of accessing the Bootham site.
- Ensure that centralising physiotherapy services does not impact on community delivery (including through Primary Care Networks) or multidisciplinary team working.

6. c) iii. Changing capacity for local health services (including workforce)

Any population change will have an impact on the number of people accessing local health (and related) services. The size of the impact will be dependent on the size of the expected population change, plus their likelihood of interacting with services. In terms of health services, primary care services are more likely to see an effect than secondary services due to frequency of attendance. The two closest GP practices are both run by York Medical Group (32 Clifton and Monkgate).

In addition, increasing the size of the local health workforce will affect the capacity of existing service provision. YHFT workforce plan forecasts demand for all staff groups over the next five

years, and will give an indication of which key workers they are most in need of recruiting.⁸³ However, prioritisation of key workers should include staff for wider health and social care services as well as hospital staff.

Impact of proposed Bootham development plan

There may potentially be a small impact on primary care services from increasing the local population size. York Medical Group, who run the two closest practices to Bootham, has just over 44,000 registered patients. There are a proposed 194 residential units on the Bootham site; many will be single occupancy but based on the assumption that there will be a (maximum) average of 2 people per unit this would add 388 people to the local population. If all residents joined one of the closest GP practices (both YMG) it would increase their patient population by less than 1% (0.88%), which is not enough to employ extra staff or need additional services. Whilst some new residents are likely to be more frequent primary care users (e.g. nursing home or extra care residents), other such as key workers are likely to be low service users. It is expected that older residents are likely to be relocating from other parts of York and will therefore already be part of the York health and social care population, and already registered with a York GP.

As discussed above, providing transitional care beds (and additional residential/nursing beds) on the Bootham site will free up acute bed spaces in York Hospital, which will improve their acute capacity.

The focus on providing key worker accommodation and facilities (e.g. childcare, training centre) will improve recruitment and retention of the local health and social care workforce. This will have a positive effect on local service capacity as more staff will be available to higher-quality services in a more efficient manner.

Providing bespoke facilities on site for physiotherapy may lead to an increased capacity within the service, or again encourage recruitment and retention of staff.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Providing key worker accommodation should improve recruitment and retention of medical staff, which will maintain/ increase local service capacity. ➤ Improved facilities (including housing and child care) for hospital staff should also have positive effects on recruitment and retention of healthcare workforce. ➤ Improvement of facilities for the physiotherapy service, with a potential to increase their capacity ➤ The provision of transitional care beds should improve capacity in acute care and decrease delayed discharges from hospital, freeing up acute capacity. ➤ Providing high quality training facilities will improve staff skills. It may also help attract new staff and students. ➤ Moving research and training facilities from 	<ul style="list-style-type: none"> ➤ There will be a small increase in local population size, which may result in a very marginal increase in demand for local services. The impact is likely to be greater (although still small) on primary care rather than secondary care, as many of these will be local residents who would already use hospital (and also community) services.

the main hospital site should free up space in York Hospital to increase acute capacity.	
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Mitigating negative impacts and increasing health benefits

- The change in population size is not big enough to warrant any significant changes in local health services. Many (particularly elderly) residents are expected to be relocating from other parts of York; they are already part of the wider health system and will already be in the existing population base for secondary care and community services.
- The on-site resident population will be in more need of some services than others; for example, the older residents in extra care accommodation are likely to be users of frailty and dementia services. There is the potential to target provision of some of these services to the Bootham site directly. In addition, providing prevention and early intervention in this manner should decrease residents' need for more advanced services e.g. secondary care.
- Ensure that key worker accommodation is available for staff from a range of essential services, not just hospital staff.

6. c) iv. Connectivity

The UN Report *Mobilising sustainable transport for development* states that "Transport is not an end in itself, but rather a means allowing people to access what they need: jobs, markets, social interaction, education, and a full range of other services and amenities contributing to healthy and fulfilled lives."⁸⁴ The connectivity provided by transport can therefore also affect health, in addition to the health impacts already discussed from taking part in active travel or the environmental impacts of vehicle emissions.

Public feedback has highlighted the key position of the Bootham site in relation to connecting parts of the city, particularly from the railway station and the city centre.

"The route that this is on – railway station, Scarborough Railway Bridge, over to Gillygate is very important. Better crossing points across Bootham would be helpful." (Feedback from cycling community groups walk around, 22nd October 2018)

Scarborough Railway Bridge (over the River Ouse) provides the most direct access from Bootham to the railway station and is used by more than 3000 pedestrians and cyclists every day. It is currently undergoing a £4.8 million upgrade, expected for completion Spring 2019.

Impact of proposed Bootham development plan

Figure 6 highlights the proposed access routes for the Bootham site; this includes new routes to be opened up as well as existing routes to be improved.

Figure 6: Proposed access routes across the site



Source: IBI Group, Bootham Park Hospital York Discussion paper: emerging site options 28/11/18

Many of these routes have already been discussed, including opening the carriageway running from the A19 to the main buildings to ambulance traffic, opening a new access route from Gillygate via the Union Terrace car park, and incorporating new walking and cycling routes parallel to the railway line.

However, there are additional points of connectivity. The draft proposal includes consideration of moving the car and 'drop off' point for Bootham School from its current access point at the end of Portland Street (accessed from half way down Gillygate) to the Bootham Hospital end of the school grounds. This option could remove further traffic from Gillygate and the peak travel times. A new 'estate road' would also be provided, giving access to the rear of the Bootham Hospital buildings including the Centre of Excellence. This would mean that existing car parking and vehicle access to the front of the main building could be removed.

Improving walking and cycle connectivity to (and across) the site will facilitate commuting to York Hospital via active travel. It will also improve connectivity to the Nestle site beyond York Hospital, which is another of York's largest employers (with 2500 staff on campus in total). However, improving cycling infrastructure on the site should be coupled with improving cycle infrastructure

around the site and across York more widely to make it a safer and more feasible option for a wider range of people.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Walking routes, North/South and East/West cycle routes increase connectivity across the city, including to the city centre and to the Nestle site. ➤ Improved bus and coach access. ➤ Improved ambulance access from Bootham/Gillygate to York Hospital. ➤ Improved access for other emergency services to York Hospital. 	<ul style="list-style-type: none"> ➤ Opening the carriageway from the A19 to the main building risks other traffic e.g. taxis using the route as a cut through to the Hospital.

Mitigating negative impacts and increasing health benefits

- Restrict the A19-Bootham carriageway to emergency vehicles only (and essential residents). This could include automatic number plate recognition (already used on Coppergate) with fines for inappropriate use, or automatic access control.
- Improve connectivity to the railway station as well as to the city centre. The refurbishment of Scarborough Bridge is an important part of this (due for completion Spring 2019).
- Ensure that the footpaths and cycleways surrounding the site are in good condition, so that journeys across the site can continue safely into the wider York travel infrastructure. This includes the footbridge over the railway at the north of the site.

6. d) Population health needs

There are many ways to define ‘health needs’.⁸⁵ The NHS uses one of the most common definitions, where health need is defined as ‘the ability of people to benefit from healthcare provision’.⁸⁶ However, this definition tends to focus on ‘health care’ rather than ‘health’, which makes it less useful when looking more broadly at the wider determinants of health.⁸⁷ Using Bradshaw’s definition of need into four categories is more useful here, with needs classified as normative (need that is defined by experts), felt (need perceived by an individual/group), expressed (felt needs turned in to action/help-seeking) and comparative (difference between health/services in one group compared to another).⁸⁸

The need for sufficient good-quality mental health care falls into all four need categories. The closure of Bootham Park Hospital left a city-wide need for further mental health facilities, particularly inpatient beds. This remains a significant need but is being addressed through the construction of the new, purpose-built mental health hospital off Haxby Road rather than through the Bootham site. However, this does not mean that Bootham cannot play a role in supporting the general mental wellbeing of the population. Improving mental wellbeing benefits people with existing mental health conditions and also the general population, and may reduce their potential need for higher level mental health services in the future.

Broader discussion of the health needs of the population can be found in Section 3 above, and through CYC’s Joint Strategic Needs Assessment website (www.healthyyork.org). There are particular areas of need that will be affected by the Bootham proposal. Firstly, the size of the overall population is forecast to continue to expand over the next decade, which will lead to a greater

number of people being eligible for all local services. Within this, the expected expansion of the over-75s by 42% is particularly likely to affect services, as ageing increases the risk of having multiple co-morbidities. The presence of multiple co-morbidities increases the likeliness of older people using primary and secondary care services. There are also issues with providing suitable accommodation for elderly people who have been admitted to hospital, with a lack of social care packages and accommodation causing delays in some discharges. The latest figures for York show that there were 856 'delayed days' during November 2018; of these, 210 were due to lack of nursing home availability, 119 were due to lack of residential home availability, and 184 were due to awaiting care packages at home.⁸⁹ York currently has over 600 residents in long-term residential and nursing care (618 in September 2018).⁹⁰

One issue arising both from the needs around both mental health and supporting the elderly population is dementia. In the UK around 850,000 people are estimated to have dementia, which could increase to 1 million by 2025.⁹¹ Over half a million people act as primary carers for people with dementia. Dementia currently costs the UK £26 billion per year, with costs expected to rise as the population ages. In York 4% of people aged over 65 (around 1600 people) are recorded as having dementia in their primary care records, although this likely only represents two thirds of the actual number of people living with dementia.⁹² Two-thirds of people with dementia live in their own homes, with one third living in a care home. Around 80% of people living in care homes are thought to have dementia or severe memory problems. Providing suitable accommodation both in care homes and in the community is therefore important to meet the needs of people with dementia and their carers. However, in 2017 only 32.5% of York's residential and nursing care suitable for dementia received an overall rating of good or outstanding from the Care Quality Commission.⁹³

National guidance advises local authorities to adapt the built environment towards being age friendly and dementia friendly, as well as promoting healthy lifestyles and making healthy choices easier.⁹⁴ Community interventions that address healthy lifestyles, social isolation and loneliness are also recommended, alongside making dementia a priority at both strategic and delivery levels for community programmes.

However, there are other local health needs that should be considered, including for younger groups. The resident population of Guildhall ward has an age profile that is heavily skewed towards students and young adults, with a significantly higher than the York average number of 15-34 year olds and below average numbers of residents in all other age categories.⁹⁵ The health needs of students in York have been set out in detail in the York Student Health Needs Assessment; again, improving mental health and wellbeing is one of the main issues.⁹⁶ Guildhall ward is also in the bottom five wards in York for childhood obesity, with 10% of reception children and 20% of year 6 children considered obese.⁹⁷

Impact of proposed Bootham development plan

The Bootham development proposal provides opportunities to address many of the issues mentioned in the national guidance on building age-friendly environments. Redeveloping the site will allow the outdoor space as well as indoor accommodation and facilities to be designed with the needs of older people in mind. Green space and leisure facilities will promote healthy lifestyle choices, particularly around exercise, whilst opportunities for community use of green space will provide opportunities to tackle loneliness and social isolation.

The site also aims to provide accommodation targeted to meet the needs of older residents. This includes nursing/residential care, extra care, and independent living for older people. Care needs of residents will be taken into account at the design stage for accommodation, ensuring it is fit for purpose. Transitional care beds will facilitate the early discharge of older and vulnerable patients from the hospital back into community living, whilst also freeing space in the hospital to meet acute care needs.

Positive factors identified	Negative factors identified
<ul style="list-style-type: none"> ➤ Improves facilities for physical activity for people of all ages, which promotes physical fitness and improves mental wellbeing. May also have a small effect on other factors including social isolation and obesity prevention. ➤ Meets the need for supported accommodation for York’s growing elderly population. Transitional beds may improve hospital discharges and prevent delayed transfers of care. ➤ Better training facilities will ensure current and future staff are better able to meet population health needs. ➤ Physiotherapy and other services will have more fit for purpose facilities that will allow them to better meet patients’ needs. ➤ Improves responsiveness of emergency care by decreasing ambulance travel time. May improve hospital discharges due to better access for YAS patient transport service. ➤ Creates space for modernisation and expansion of York Hospital services to meet the needs of the growing population. 	<ul style="list-style-type: none"> ➤ The proposed additional accommodation will not be enough to support the needs of all elderly residents/people with dementia/ people in need of nursing or residential accommodation; there is likely to still be a shortfall in places across the city. However, this is not something that can be wholly mitigated just through the Bootham site.

Mitigating negative impacts and increasing health benefits

- Ensure that both internal accommodation and the external environment are designed to be dementia friendly and suitable for older residents. This should include the need (or potential need) for modifications such as ramps, grab rails and lifts/stair lifts, as well as assistance with property maintenance etc. Guidance is available for designing dementia- and age-friendly environments.^{98,99}
- Particularly encourage green space use by individuals and community groups who have the most to benefit, including those at risk of social isolation, those with poor mental health and wellbeing, and those not doing the recommended level of exercise for their age group. Community uses should also be targeted at the high number of young people residing in Guildhall ward, including use for exercise, active travel and social engagement/volunteering.

7. Commentary on ‘whole of system’ impact

This HIA considers factors that affect not just the health and social care system, but also wider determinants of health across the local community and beyond. This is important in order to account for indirect effects on health (such as the impact on mental wellbeing from accessing green space) as well as the more obvious direct effects. Overall, the benefits of the Bootham development proposal appear to outweigh the risks from a health perspective.

The HIA illustrates examples of where improvements to wider determinants such as housing and education can have knock-on effects on health and social care. For example, providing warm, safe housing for older people can decrease their risk of falls and exacerbations of respiratory illnesses. This in turn has the potential to decrease their use of acute medical services, creating greater capacity in the system. Encouraging active travel has direct impacts on improving cardiovascular health and decreasing the risk of obesity, but can also positively affect mental wellbeing.

Although the main buildings on the site are no longer suitable to directly support clinical care, the plan illustrates that the site can still play a role in improving the health and wellbeing of the local population. Improvements to mental wellbeing and provision of care for people with dementia are particularly important given the site’s heritage and the rising need within the York population.

However, the Bootham proposal also needs to be considered within the scope of the wider plans for health and social care across the city in order to ensure the sustainability of the site into the future. The NHS Long Term Plan covering the next 10 years emphasises boosting out of hospital care, and redesigning and reducing pressure on emergency hospital services.¹⁰⁰ The extra clinical space generated in York Hospital by transferring training and research facilities to Bootham could be prioritised for urgent and emergency care to meet these needs and prevent unnecessary hospital admissions.

The future of the site beyond the next decade should also be considered. The Bootham site should aim to be sustainable in its own right; should York Hospital ever need to move to a larger site elsewhere in the city with greater accessibility, or the clinical training facilities (and potentially even the hospital) move closer to the university site, Bootham should be designed to adapt to potential changes in future use.

8. Conclusion

This HIA has demonstrated that the draft development plan set out by CYC/YTHFT for the Bootham Park Hospital site includes elements that could have both positive and negative health impacts.

The main health benefits of the proposal are:

- The preservation of existing green space, and improving its usability for both individuals and communities by providing a range of features that will improve health and wellbeing for people of all ages.
- Improving access to healthcare by: providing greater accessibility to the hospital site for patients/staff/emergency services; providing accommodation and facilities to increase staff recruitment and retention that will support existing services; providing step-down facilities

to expedite hospital discharges and free up acute beds; and providing training facilities for current and future staff to ensure that a high standard of care can be delivered.

- Providing targeted improvements to meet the needs of older people, who are the fastest-growing part of the York population and are often vulnerable and at risk of needing further health and social support. This includes a range of housing options to meet various levels of need, which should also increase individuals' safety with appropriately designed housing and on-site support.
- Site improvements to promote active travel and public transport, which will increase connectivity across the city as well as positively benefiting both physical and mental health and wellbeing. Additional benefits include a positive effect on sustainability and the potential to decrease air pollution and increase safety on Gillygate.

The health risks identified include:

- **High impact** issues around on-site traffic increases and potential safety risks if the proposed walking, cycling, car and emergency vehicle (including air ambulance) usage are not properly segregated.
- **Medium impact** issues around safety and environmental issues during construction, the effect of providing car parking on air pollution/active travel/sustainability/inequalities, lack of community space isolating on-site residents, minor loss of some green space and the risk that other vehicular traffic would use the route onto the site from the A19 as a cut through.
- **Low impact** issues around environmental noise, isolating physiotherapy as the only clinical service on site, and the impact of increasing the local population size on local services.

8. a) Recommendations

The organisations responsible for redeveloping the Bootham site should note the health risks and benefits highlighted in the HIA. Potential ways of enhancing positive health benefits and mitigating health risks are highlighted above and should be incorporated into planning where possible. It is recommended that the following areas be prioritised:

(Re)developing buildings that are safe, sustainable and designed with the needs of residents and other users in mind

Promoting the safety of residents and visitors by appropriately segregating pedestrian, cycling, motor vehicle, ambulance and air ambulance traffic on site

Minimising the environmental and health impacts of car travel to the site whilst ensuring that those who need to access the site are able to do so

Maximising the impact of green space for physical and mental wellbeing, including provision of recreational facilities and promoting active travel

Encouraging community usage of the site, including exploring the potential for the site to act as a community hub

These recommendations should be considered alongside the draft document for 'Creating Healthy Places' that is currently being developed by CYC planning and public health departments, which sets out additional health-related Key Performance Indicators (KPIs) that all local planning proposals should incorporate.

8. b) Next steps

1. Bootham redevelopment proposal lead officer and steering group to consider recommendations in order of priority, and include mitigating factors where possible.
2. If the draft proposal is accepted:
 - a. Monitor whether or not mitigating factors are included in the proposal, and in the final site redevelopment.
3. If the draft proposal is not accepted:
 - a. Use this as a framework to highlight the health benefits and risks associated with alternative site proposals/usage. It may be possible to incorporate some of the above into alternative proposals.
4. Consider using HIA methodology to address future significant planning proposals across the York area.

Appendices

Appendix 1: Summary table of positive and negative impacts of proposal

	Redeveloping green space	Housing	Centre of Excellence	Transport
	Recreation areas Sports pitches Sensory garden	Extra care, NH/RH + transitional beds Key worker accommodation General housing	Medical training Physiotherapy, child care services	Active transport Car (and coach) parking, public transport Emergency vehicles
Use of green space	Maintains existing green space, redeveloped to encourage greater use by community	Some loss of green space with new buildings		Develop walking routes/trails
Connectivity				Walking routes, N/S and E/W cycle routes increase connectivity across the city Improves bus and coach access. Easier ambulance access from Bootham/Gillygate to Hospital. Open route risks other traffic e.g. taxis using as a cut through.
Community engagement	Potential for community groups to use outdoor space, including for health and wellbeing purposes	Risk of isolating the people in specialised older care accommodation if there is not some overlap with the communal areas	Links to university community	Improves access for community to area

		of the site.		
Housing		Provides needed accommodation for elderly population Provides needed accommodation for health staff Helps City meet new housing targets		On site houses in walking/ cycling distance to most amenities Need for extra parking provision for on-site houses
Security/safety	Bringing the site back into regular use should increase safety/security of users by having increased community presence	Creating a community presence should improve general security/safety. Construction of housing appropriate to care needs (especially elderly/infirm) should improve personal safety. Need to consider site safety for users during building works.		Need to ensure appropriate segregation of walking/cycling/vehicle/ambulance traffic for safety/accident reduction. Decrease risk to public safety on Gillygate (from cars mounting kerb to let ambulances through). Improve access to hospital for other emergency services (fire, police). Risk to public safety from air ambulance landing on open access green space.
Noise	Some noise from developing site. Minor noise from recreation users. Keeping green space acts as buffer between busy road and housing etc.	Construction noise during site development. Living space should be tranquil due to green space buffer - particularly of value for vulnerable residents	Construction noise during site development	Construction noise during site development. Noise from trains on Scarborough line. Siren noise from ambulances

<p>Air Pollution</p>	<p>Trees help offset local air pollution</p>	<p>Some localised dust etc. possible during site development</p>	<p>Some localised dust etc. possible during site development</p>	<p>Encourages non-vehicular transport, which may decrease traffic on Gillygate and other surrounding roads. Also provides alternative route for pedestrians and cyclists so limits their exposure to pollutants</p> <p>Diverts some traffic from Gillygate AQMA, which may slightly decrease air pollution levels. Risk that increased car parking may encourage extra traffic through Gillygate (and other routes) to site.</p>
<p>Sustainability</p>	<p></p>	<p>When developing/redeveloping housing is opportunity to build environmental efficiency into accommodation e.g. 'fabric first' approach</p>	<p>When remodelling building is opportunity to build in environmental efficiency e.g. 'fabric first' approach (insulation etc.)</p>	<p>Sustainable transport methods (walking, cycling)</p> <p>Increased bus access. Solar panels on car park roof. Car transport less sustainable.</p>
<p>Economic prosperity</p>	<p>May encourage footfall through Fifth Quarter</p>	<p>Increases local population who will use local amenities. Creates jobs for people working in elderly care accommodation.</p>	<p>Child welfare provision enables parents to work</p>	<p>Improving travel to this part of the City may boost local businesses</p> <p>Coach parking beneficial to tourism. Car/bus increase local activity</p>
<p>Active travel</p>	<p>Pleasant environment encourages walking, cycling etc.</p>	<p></p>	<p></p>	<p>Promotes active travel (routes and facilities)</p> <p>Discourages active travel</p>

<p>Effect on inequalities</p>	<p>Potential for activities for all ages</p> <p>Benefit likely for greatest for Bootham School</p>	<p>Extra care housing may not be affordable to all</p>	<p>Centralising physio benefits hospital pts but not community</p> <p>Childcare facilities are social enabler</p>	<p>Not everyone has access to a car, or is able to walk/cycle. However, providing several alternatives (including bus) improves accessibility for greatest number. Need to ensure provision of disabled parking. Car parking charges would have more significant impact on less wealthy people and those who need to frequently attend Bootham/York Hospital.</p>
<p>Heritage</p>	<p>Some use of site for activities that promote mental wellbeing. Keeps recognised green space.</p>	<p>Maintains some use of site for health and social care</p>	<p>Maintains some use of site for health services</p>	
<p>Education</p>	<p>Improves school sports facilities</p>		<p>Improved training facilities for healthcare staff.</p> <p>Moving training facilities from main site could decrease ad-hoc use.</p> <p>Day nursery for hospital staff.</p>	

<p>Access to health services</p>	<p>Provides more local facilities for physical activity that should be accessible by the community (all ages)</p>	<p>Transitional beds free up acute hospital beds. More appropriate accommodation for elderly (extra care) should decrease other medical and social needs Services function better with more staff</p>	<p>As the only clinical service on site, physiotherapy could become isolated from the rest of the multidisciplinary team they work closely with</p>	<p>Improves access to hospital services, and on-site health services. Ambulance travel time decrease by up to 20 mins. Keep air ambulance access</p>
<p>Change in local population</p>		<p>Small increase in local population size, very marginal increase in demand for local services Improves recruitment and retention of medical staff Small increase in local population size, very marginal increase in demand for local services</p>		<p>Increased population in on site housing will bring extra traffic to site</p>
<p>Meeting population health needs</p>	<p>Improves facilities for physical activity for people of all ages, which promotes physical fitness, improves mental wellbeing. May have small effect on social isolation, obesity prevention etc.</p>	<p>Meets need for supported accommodation for growing elderly population. Transitional beds may improve hospital DTOC</p>	<p>Better training facilities will ensure current and future staff are better able to meet population health needs Physio services will have more fit for purpose facilities that will allow them to better meet patient need</p>	<p>Improves responsiveness of emergency care by decreasing ambulance travel time. May improve hospital discharges due to better access for YAS PTS</p>

Appendix 2: Risk stratification and mitigation

Health concern	Negative factors identified	Direct/indirect effect on health	Impact of issue (likelihood, population affected, severity, duration, importance to stakeholders)	Possibility of mitigation	Other suggestions for improving health impact
Use of green space	Some loss of green space from new buildings	Indirect	Medium (likely, site users affected, low severity, long-term, high importance to stakeholders)	Limited - majority of green space across the site is being preserved, only a small amount lost under current plans (around chapel). Can aim to preserve what is possible as gardens, landscaping etc.	Recreation facilities explicitly targeting physical and mental wellbeing e.g. adult outdoors equipment, wellbeing trail
Connectivity	Open route for ambulances bypassing Gillygate risks other traffic e.g. taxis using as a cut through	Indirect	Medium (possible, site users, medium severity, long-term, low-medium importance)	Yes - Restrict to emergency vehicles only (and essential residents). Possible use of number plate recognition (e.g. Coppergate), fines for misuse.	Improve connectivity to the railway station as well as city centre
Community engagement	Risk of isolating people in care accommodation if there is no overlap with the communal areas of the site	Indirect	Medium (possible, on site residents, medium severity, long term, medium importance)	Yes – Include community space inside the main buildings (e.g. café area, community hub)	Ensure facilities available for use by community groups and for community events e.g. legal access rights, community land trust
Housing	Need for extra parking provision for on-site houses (assuming an average of 1 parking space per tenancy = 90 additional parking spaces (not including staff/resident parking for care home and extra care facilities, or visitor parking)	Indirect	High (very likely, local residents and site users, high severity, long-term, medium importance to stakeholders)	Limited - limit number of parking spaces for each property. Not all properties will need a space (e.g. extra care) but will need visitor access. Issue visitor permits for use in existing spaces?	Ensure cycle facilities available for residents, and particularly for students coming to use the training facilities
Security/safety	Consider safety of people using/traversing the site during building works.	Direct	Medium (likely, site users, high severity, short term, low importance)	Yes - include specific security and safety measures as part of planning conditions	Ensure public spaces appropriately lit to maintain safety (but care to avoid too much light pollution for local

	Risk of accidents if walking/cycling/vehicle/ ambulance traffic not appropriately segregated	Direct	High (likely, site users, high risk, long term, medium importance)	Yes - make sure walking/cycle paths appropriately marked. Speed limit for traffic (including ambulances) on site. If two-way traffic ensure enough passing places.	residents)
	Risk to public safety from air ambulance landing on open access green space	Direct	High (possible, site users, high risk, long term, med-high importance)	Yes - Strengthen pre-existing processes (site previously use for this function), ensure appropriate signage, security and protocol	
Noise	Construction noise from site development	Direct/indirect depending on volume	Medium (likely, affects local residents and site users, low-medium severity, short-term, low stakeholder concern)	Yes - 'considerate construction', planning conditions	Conduct Environmental Impact Assessment (EIA) before initiating any construction
	Minor noise from use of recreation facilities	Indirect	Low (possible, affects local residents, low severity, long-term, low stakeholder concern)	Limited - no large scale events at unsocial hours	
	Siren noise from ambulances	Indirect	Low (unlikely, on site residents, low severity, long-term, low-medium importance)	Yes - YAS staff only use sirens when necessary. More likely to use horn on this road (if obstacle) due to lack of other traffic	
	Noise from trains on Scarborough line	Indirect	Low (possible, on site residents, low severity, long-term, low-medium importance)	Limited - keep trees along green space border	
Air Pollution	Some localised dust etc. possible during site development	Direct	Low (possible, site users, low-med severity, short term, low importance)	Yes - 'considerate construction', planning conditions	Consider additional sampling to determine effect of new development

	Risk that increased car parking may encourage extra traffic through Gillygate (and other routes) to site.	Direct	High (likely, wider local population, medium, long-term, med-high importance)	Limited - plan already includes plans for active transport as an alternative. Provision of parking is likely to attract cars unless disincentive provided (e.g. limited to hospital/Bootham site users, parking charges)	on Gillygate air quality
Sustainability	Some encouragement of car transport (less sustainable)	Direct	Medium (possible, site users, medium severity, long-term, medium importance)	Limited - already plans for sustainable alternatives (cycle, walking). Ensure new car park facilities have electric charge points.	Ensure recycling facilities available for residents. Advocate use of sustainable building materials and renewable energy (e.g. solar panels)
Economic prosperity					Ensure that housing (including extra care accommodation) is affordable – including mixed tenure approach.
Active travel	Provision of car parking discourages active travel	Indirect	Medium (likely, site users, low-med severity, long-term, med-high importance)	Limited - already plans for active travel (cycling, walking) but these not suitable for all people.	Provide enough cycle facilities for residents and visitors to Bootham/YDH. Walking and cycling routes should be clearly signposted from surrounding areas to encourage use of the site.
Effect on inequalities	Risk of disproportionate benefit to Bootham School from use of sports facilities	Indirect	Medium (possible, site users, low-med severity, long-term, med-high importance)	Yes - Community Land Trust approach will keep land permanently for public good. Legally-enforceable access rights.	
	Centralising physiotherapy may make it less accessible for community users (increase patient and staff travel times etc.)	Indirect	Medium (possible, all local population, medium severity, long term, medium)	Limited – consider patient and staff travel times when planning community provision	

	Not everyone has access to a car, or is able to walk/cycle	Indirect	Medium (very likely, site users, medium severity, long-term, medium importance)	Yes - bus routes. Consider drop off point for community transport	
	Need to consider needs of those with disabilities when designing transport facilities	Indirect	Medium (very likely, site users, medium severity, long-term, low-medium)	Yes - provide adequate disabled parking in suitable locations	
Heritage					Make explicit links with mental health and wellbeing e.g. heritage trail
Education	Moving clinical training facilities (including library and research facilities) out of York Hospital may decrease their ad-hoc use by staff.	Indirect	Low (possible, hospital staff, low-medium severity, long term, low)	Limited – encourage use by holding clinical and training events on site. Ensure all staff have necessary access for new building	Ensure health training facilities are suitable for multidisciplinary use
Access to health services	As the only clinical service on site, physiotherapy could become isolated from the rest of the multidisciplinary team they work closely with.	Indirect	Low (possible, physiotherapy staff, low-medium severity, long term, low importance)	Limited – engage wider MDT on site through Centre of Excellence facilities	
Change in local population	Small increase in local population size will give marginal increase in demand for local health services	Indirect	Low (likely, no significant population affected, low severity, long term, low stakeholder concern)	No - change in population size not big enough to warrant any significant changes in local health services (e.g. need for extra GP). Most residents expected to be relocating from other parts of York (i.e. same health system) anyway	
	Increased population in on site housing will bring extra traffic to site	Direct	Medium (very likely, site users, medium severity, long term, low-med importance)	Limited - limit parking spaces (as above), site parking in least pedestrianised areas	

Meeting population health needs					<p>Consider targeting community participation at those with greatest ability to benefit e.g. those at risk of social isolation, poor mental health and wellbeing, or not doing the recommended level of exercise</p> <p>Use developing CYC document on 'creating healthy places' to target additional health-related KPIs all York planning proposals should incorporate</p>
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Appendix 3: List of stakeholders consulted

Internal (CYC) representatives: Bootham redevelopment proposal lead officer (also YTHFT representative), Public Health

External organisations: Healthwatch, Hull York Medical School, Yorkshire Ambulance Service, Vale of York CCG

Steering Group: representatives from CYC (including Transport, Highways & Environment; Planning & Public Protection; Regeneration & Asset Management; Communications), YTHFT, NHS property services, IBI group, Colliers International, Turner & Townsend.

Appendix 4: Project timeline

Step	Date	Description
Screening	20 th December 2018	Meeting with project lead (VT), CYC lead officer for Bootham redevelopment (RW) and Vale of York CCG Director of Primary Care and Population Health on 20 th December 2018 to agree project feasible.
Scoping	8 th January 2019	VT and RW meeting on to set out the parameters of the HIA (i.e. the appropriate level of depth and the scope of health topics to be included).
Identification	9 th January – 9 th February 2019	VT collated information on the local population and potential impacts of the project via literature searching and discussions with stakeholders from Healthwatch, Vale of York CCG, Hull York Medical School and Yorkshire Ambulance Service. Further discussions were held with CYC public health after completion of the initial draft.
Assessment	11 th February 2019	Circulation of draft report to external stakeholders for comments.
Decision making and recommendations	12 th March 2019	Discussion of HIA report at Bootham redevelopment steering group to confirm final recommendations.
Evaluation and follow up	Ongoing	Evaluation of the impact of the HIA, including monitoring of the development of the Bootham site for inclusion of HIA recommendations and/or use of a health impact management plan.

Appendix 5: Methodology for risk stratification

Calculating risk level

Impact of issue	1	2	3	4	5
Likelihood	very unlikely	unlikely	possible	likely	very likely
Population affected	On site residents/staff	Local residents	People using/visiting site	People using surrounding services e.g. hospital, Fifth Quarter	All York/Vale of York residents
Severity	Low (No/few associated risks)		Medium (Some risks identifiable)	Severe (risk of death, economic instability etc.)	
Duration	Short term		Long term		
Importance to stakeholders	Low (not mentioned)	Low-medium (Implied but not explicitly discussed)	Medium (Discussed but not emphasised)	Medium-high (Concerns/interest expressed)	High (Area of particular interest/concern)

Min score = 6
Max score = 25

< 12 = low
12-18 = medium
19+ = high

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