City of York Council

Local Plan ST15 Sustainable Transport Study

Local Plan Site ST15
Sustainable Transport Strategy

Wood Group UK Limited – May 2022

Report for

City of York Council

Main contributors

Shisi Tong
Miguel Plata
Bev Coupe

Issued by

Bev Coupe
Signature here
.....

Approved by

Monika Crouse
Signature here
.....

Wood Group UK Limited

Floor 23
25 Canada Square
Canary Wharf
London E14 5LQ
United Kingdom
Tel +44 (0)20 3215 1610

Doc Ref.

document1

Copyright and non-disclosure notice

Third party disclaimer

Management systems

This document has been produced by Wood Group UK Limited in full compliance with our management systems, which have been certified to ISO 9001, ISO 14001 and ISO 45001 by Lloyd's Register.

Document revisions

No.	Details	Date
01	Baseline Draft	April 2021
02	Baseline draft issue to client	February 2022
03	Final draft issue to client	May 2022

Contents

No table of figures entries found.

1. Introduction

This chapter provides an introduction to the Strategic Site Allocation ST15 and background to the Sustainable Transport Strategy.

1.1 Background

Wood Group UK Limited (hereafter referred to as 'Wood') has been commissioned by City of York Council (CYC) to prepare a Sustainable and Active Travel Strategy for Strategic Site Allocation ST15: Land to the West of Elvington Lane (hereafter referred to as 'ST15' or 'the Site') and supporting Policy SS13 from the City of York Draft Local Plan. The location of the site allocation is shown in **Figure 1.1**.

Figure 1.1 City of York Local Plan Map – ST15

ST15 is a Strategic Site Allocation within the draft City of York Local Plan and will be a key site in helping the Council meet the housing needs of the city. The aim of the Strategy is to:

- Provide an understanding of the transport related design expectations and standards for garden villages and for ST15 based on the Local Plan policy;
- Provide an understanding of the opportunities and constraints of the site and its transport connections to York and to neighbouring communities;
- Provide technical and design based recommendations for consideration as part of a masterplanning exercise, both for internal and external trips in order to maximise a modal shift away from car usage and to integrate/enhance existing links to the city of York and its surroundings.

The Strategy will support the delivery of an exemplar development scheme that is in line with the principles of development of a new sustainable garden village, and will deliver connectivity via sustainable modes, as well as encourage environmental responsibility, energy conservation and healthy lifestyles.

Source: City of York Local Plan

The draft Local Plan policy for the 159ha site is for a freestanding mixed-use community of approximately 3,339 homes; education comprising nursery, primary and potentially secondary; shops; health services; community facilities; and public open space. Primary access will be via a new grade-separated junction to the A64, with secondary access from Elvington Lane connecting with the A1079. A description of the draft Local Plan policy is included in **Section 3.3**.

As a garden village, and mixed-use community, ST15 will have a level of self-containment, and sustainable travel will be maximised through the provision of an internal transport network that makes walking, cycling and public transport the most attractive travel modes.

However, it must be recognised that the site does not sit in isolation and as such, must stitch into the fabric of its surroundings, and opportunities and constraints in relation to neighbouring communities should be considered, principally Heslington, the University and Elvington. The masterplan for the Site will need to integrate with strategic movement corridors and public transport services so that it is well connected to the surrounding settlements and nearby facilities, services and employment. There is an expectation that ST15 will have significant numbers of trips to other surrounding areas such as:

- York city centre, including the Rail Station for onward travel
- University of York's two campuses & Science Park
- York St John University
- One or more local secondary schools, if a secondary school is not provided on ST15, and York College, as the area's major centre for A level and vocational studies
- Fulford and Elvington village centres and other local centres
- York Hospital (as a local employer and for the services provided)
- Other local retail & leisure destinations, including Monks Cross, Clifton Moor and the McArthur Glen Designer Outlet
- Leeds City Region, and central Leeds in particular

CYC has undertaken strategic transport modelling to understand the likely impact of the Local Plan housing and employment growth on the City's transport network. The outcomes of this currently show that there will be changes across the road network leading to increased delays. The modelling indicates that the radial routes principally affected by ST15 are the A19 (Fulford Road and A64 junction to the southeast), the A1079 (Hull Road/Grimston Bar to the east) and the A64 which is part of National Highways' strategic road network. In contrast, transport modelling for the site suggests around a quarter of the trips it generates may destinate at the University, which is an ideal attractor for sustainable transport trips because of the distance involved and high level of control the University is able to hold over on-campus car parking.

In order to minimise the traffic impact on the road network in the vicinity of the Site, the delivery of ST15 will need to enable and encourage use of sustainable and active travel modes to achieve a modal shift from car use. The principal travel modes to achieve this will be cycling and public transport.

Cycling levels in York have always exceeded both national and regional averages, largely as a result of the City's size, the virtually flat topography and relatively mild climate. The Council has invested heavily in cycling infrastructure over the past three and half decades and have developed a 200km+ network of routes. There are still gaps in the network, and the ST15 site is expected fill some of the gaps in the south-eastern area of the city.

Bus use in York is also high – with the City having the 11th highest local transport authority (LTA) trip rate in England. Bus use in York has increased from 10 million trips per annum in 2000 to 16 million in 2019. This

have been achieved through the development of an extensive Park and Ride network on the main radial routes into the City and near the City Centre, and is now largely electrified. In addition, the LTA has invested in the development of other bus services in the city. With regards to proposed new development,, CYC typically expects developers to fund any new bus services required from first occupancy of developments for 10 years, or 5 years after last occupancy (Local Plan policy T1) – whichever comes first in order to facilitate public transport use and establish a sustainable travel ethos from the start, resulting in reduced traffic impact.

The Strategy needs to consider how the use of sustainable modes can be maximised within ST15 through its layout and design, and also how external connectivity enables the viability of sustainable transport to be a preferred travel choice.

1.2 Structure of the Sustainable Transport Strategy

The Transport Strategy is set out as follows:

- **Chapter 2 Garden Village Guidance and Case Studies** which presents a summary of the Garden Communities Programme, transport related design standards for garden communities and case study examples of other garden villages that are being progressed;
- **Chapter 3 Policy and Guidance Review** which provides a summary of national policy and CYC policy documents that define the transport requirements for new development and for ST15;
- **Chapter 4 Context and Site Analysis for ST15**Context and Site Analysis for ST15 which sets out the transport network in the area of ST15, approximate journey times and transport demand in York, and presents gap analysis which highlights garden village best practice and the CYC policy environment for ST15.
- **Chapter 5 Trends in Travel Behaviour and Transport Technology** which provides insight into recent research into travel behaviour
- **Chapter 6 ST15 Sustainable Transport Strategy** which sets out the objectives and key design principles for ST15;
- **Chapter 77 Strategy for Active Travel** which sets out the strategy for walking and cycling;
- **Chapter 88 Strategy for Public Transport** Strategy for Public Transportwhich sets out the strategy for bus service provision to meet the mode share ambition for ST15;
- **Chapter 99 Strategy for Reducing the** Need to Travel which identifies measures to reduce the need to travel and discourage local and off-site travel by car; and
- **Chapter 1010 Framework Travel Plan** sets out initiatives to promote and encourage sustainable travel by the new occupants of ST15.

2. Garden Village Guidance and Case Studies

In this chapter we provide an overview of guidance and examples of garden villages that are in construction, in the planning process or in design to identify best practice principles that should be considered in the Sustainable Transport Strategy for ST15.

2.1 Introduction

To meet housing needs, in 2017 the Government announced a target of 300,000 new homes to be delivered a year on average by the mid-2020s. Developing garden communities is seen as a mechanism to provide new housing, infrastructure, jobs and services in sustainable settlements and to promote this, the Garden Communities Programme was launched in August 2018 by the Ministry of Housing, Communities and Local Government (MHCLG) when 23 Garden Communities were announced. ST15, identified as 'Land West of Elvington' was included in a second tranche of 19 Garden Communities announced in June 2019.

The Town and Country Planning Association (TCPA) has produced an extensive set of policy and practical resources that provide guidance on the planning and delivery of garden cities and communities[1]. In *Guide 3: Design and Masterplanning*[2] it is specified that the '*TCPA's Garden City standards for transport state that a Garden City's design must enable at least 50% of trips originating in the new settlement to be made by non-car mean, with a goal to increase this over time to at least 60%; and the latest best practice in street and transport design should be used as a minimum standard.* (p16).

In '*Understanding garden villages - an introductory guide*'[3], the TCPA defines a garden city (or community) as '*a holistically planned new settlement that enhances the natural environment and offers high-quality affordable housing and locally accessible work in beautiful, healthy and sociable communities*' (p3). Within the document, garden villages are described as:

- settlements of between 1,500 and 10,000 homes;
- a new discrete settlement, and not an extension of an existing town or village, although this does not exclude proposals where there are already existing homes;
- local authority led with support from the community and the Local Enterprise Partnership;
- 'well designed', 'high quality' and 'attractive'; and
- Embedding key Garden City principles to develop communities that 'stand out from the ordinary' and do not 'use "garden" as a convenient label'.

The following sections provide a summary of guidance on the development of garden communities and set out five garden village examples.

[1] https://tcpa.org.uk/collection/garden-city-standards-21st-century/ (Accessed on 03/05/22)
[22] *Guide 3: Design and Masterplanning*, TCPA, December 2017. Available online - Masterplanning.qxd (tcpa.org.uk) (Accessed on 03/05/22)
[3] *Understanding garden villages: an introductory guide*, TCPA, January 2018. Available online - https://tcpa.org.uk/wp-content/uploads/2021/11/TCPA_Guide_-_Understanding_Garden_Villages_Jan_2018.pdf (Accessed on 03/05/22)

2.2 Garden Communities Criteria

The August 2018 '*Garden Communities*' prospectus[4] from the MHCLG states that for a garden village to meet the criteria of a garden community, it should have a housing supply of 1.500 to 10,000 homes and should be strong in aspects, such as the following:

- Exceptional quality or innovations;
- Predominantly brownfield sites; and
- Be in an area of particularly high housing demand, or be able to expand substantially further in the future.

The prospectus set out key qualities for garden communities. In relation to transport, the prospectus states that a high-quality garden community should have an integrated, forward looking and accessible transport network to support economic prosperity and wellbeing for residents. It highlights the promotion of public transport, walking and cycling to provide simple and sustainable access to jobs, education and services.

To meet this key quality, a village community needs to deliver a masterplan which has walkable neighbourhoods and an internal transport network that facilitates sustainable travel, and good connectivity to the external sustainable transport network and key destinations, such as employment, education, services, and train stations.

2.3 Design and Sustainable Transport Principles

The TCPA's *Guide 3: Design and Masterplanning*[2] set out basic urban design principles which include the following that are relevant to transport.

- **Ease of movement and connectivity** – a transport network that makes walking, cycling and public transport the most attractive modes is essential to achieve a sustainable travel trip target of at least 50%. Public transport nodes and neighbourhood facilities should be a short walk (no more than 10 minutes) away from every home. Homes should be within 800 metres of schools for children under the age of 11.
- **Walkable neighbourhoods** – should be based around a network of mixed use town and local centres in which residents can meet most of their day-to-day needs.

The TCPA *Guide 13: Sustainable transport*[5] sets out key actions to achieve sustainable transport, and the relevant planning policy context, key principles and guidance on funding on delivery. According to the TCPA guidelines, sustainable transport is key to the success of a garden community, which requires them to have an integrated and accessible transport system, with walking, cycling and public transport designed to be the most attractive forms of local transport. Guide 13 sets out 10 principles, a summary of each is provided below.

Principle 1: Location and connectivity should be the starting point

It is stated that a garden city should be connected to existing networks of development which can support the new settlement. It is therefore essential that the location of a garden village is connected physically as well as economically. Local authorities must ensure the location of new garden cities is sustainable and viable

[4] *Garden Communities*, Ministry of Housing, Communities and Local Government, August 2018. Available online - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/805688/Garden_Communities_Prospectus.pdf (Accessed on 03/05/22)

[55] *Guide 13: Sustainable Transport*, TCPA, September 2020. Available online - https://tcpa.org.uk/wp-content/uploads/2021/11/gc_practicalguide_transport_newvectoslogo.pdf (Accessed on 03/05/22)

with high levels of accessibility of both internally and to other settlements. Development in a location with existing rail, bus and road networks can provide a sustainable pattern of growth, and development should have a good public transport and cycle network connections to neighbouring towns and cities.

Principle 2: Set an overarching vision, focused on delivering sustainable transport

The vision should consider three core aims:

- **Promote active travel**: align with the national aims to improve health and wellbeing. Useful guidance for planners and designers to follow includes *The Planning for Walking Toolkit*[6] and *Healthy Streets Approach*[7] both produced by Transport for London (TfL) should be referred to .
- **Establish excellent public transport from the outset**: the provision of buses, electric shuttles, trains, pedestrian and cycleways and space for micro-mobility. Given the cost of new rail infrastructure, buses are likely to play a major role in local transport systems in new garden cities.
- **Reduce the use of private cars**: move away from car dependent development through designing an active travel network, providing for buses, cycle parking and appropriate interchange between different transport modes, pairing electric cars with co-sharing schemes. Reduced car use can be influenced by parking policy, innovative approaches such as peripheral community car parks for areas of car-free housing can reduce private car use.

Principle 3: Collaboration is crucial

Cross-boundary analysis, design and funding is work is crucial if public transport networks are to be expanded and developed in a way that benefits everyone in the wider area. Engagement activities are crucial in giving all members of the community the opportunities to influence important decisions such as bus routes and services and effective signage for walking routes.

Principle 4: Sustainable transport systems must be inclusive

Transport provision and access should consider the different types of user need and social context in terms of gender, age and disability.

Principle 5: Transport must be future-proofed

Garden community development should highlight the technology-focused initiatives to ensure that the transport systems are maintained and fit for the future. Local authorities need to consider the factors of generational changes – for example more people working from home in the long term. Technology-driven initiatives like micro-mobility technology (such as e-bikes and e-scooters), mobility hubs in new development and demand responsive services can make a difference.

Principle 6: Local Plans should establish mode share targets and networks

Mode share targets to increase cycling and walking activities should be set in Local Plans and should be in accordance with the vision and objectives of a new garden community. The following key actions should be followed.

- Determine the future networks for walking, cycling and public transport for the end of the Local Plan period and key stages in-between and include them in plans for the new community.

[6] *The Planning for Walking Toolkit*, TfL, March 2020. Available online - The Planning for Walking Toolkit (tfl.gov.uk) (Accessed on 03/05/22)
[7] *Healthy Streets Approach*, TfL – suite of documents available online - Healthy Streets - Transport for London (tfl.gov.uk) (Accessed on 03/05/22)

- Set a mode share and accessibility target for the settlement, and make sure that the networks and service levels proposed can deliver them.
- Set out the walking, cycling and public transport infrastructure needs at each stage in the Local Plan Infrastructure Delivery Plan (IDP) to ensure that they are met before major roads are delivered. Investment in active travel and public transport infrastructure should be prioritised and linked to mode share targets.
- Ensure that the Transport Assessment for the new garden city aims to deliver the objectives and mode share.

Principle 7: Build to the right density

The densities of garden cities should be sufficient to support the community facilities built on site or within each reach by sustainable modes, helping to reduce the need for dependency on the private car.

Principle 8: Apply for a user hierarchy

Prioritising pedestrian and cyclists involves creating routes that are safe, direct, convenient, inclusive and accessible. The street design process should apply a user hierarchy with pedestrians at the top of the hierarchy. The hierarchy should help to ensure that streets serve all their users in a balanced way.

Principle 9: Consider key design features

Space for car parking should be limited. Well-designed cycle parking for homes and at other destinations should be conveniently sited to encourage greater use. Bus routing should be direct and fast and have an easily understandable network, with bus services routeing along the main spine of the development.

Principle 10: Integrate green infrastructure and climate resilience within transport design

Walking and cycling routes should be safe and attractive, incorporate green infrastructure, have good signage, feature benches along the way and link places of interest and services to homes. Adapting transport networks to new or existing green infrastructure also enhances ecological connectivity, improves the landscape and provides wider goods and services that benefit local communities.

2.4 Garden Village Case Studies

To better understand the potential ways in which a garden community can better integrate sustainable transport into its development, research has been undertaken of a number of garden village schemes which is summarised in the following sections.

Long Marston Airfield (LMA) Garden Village

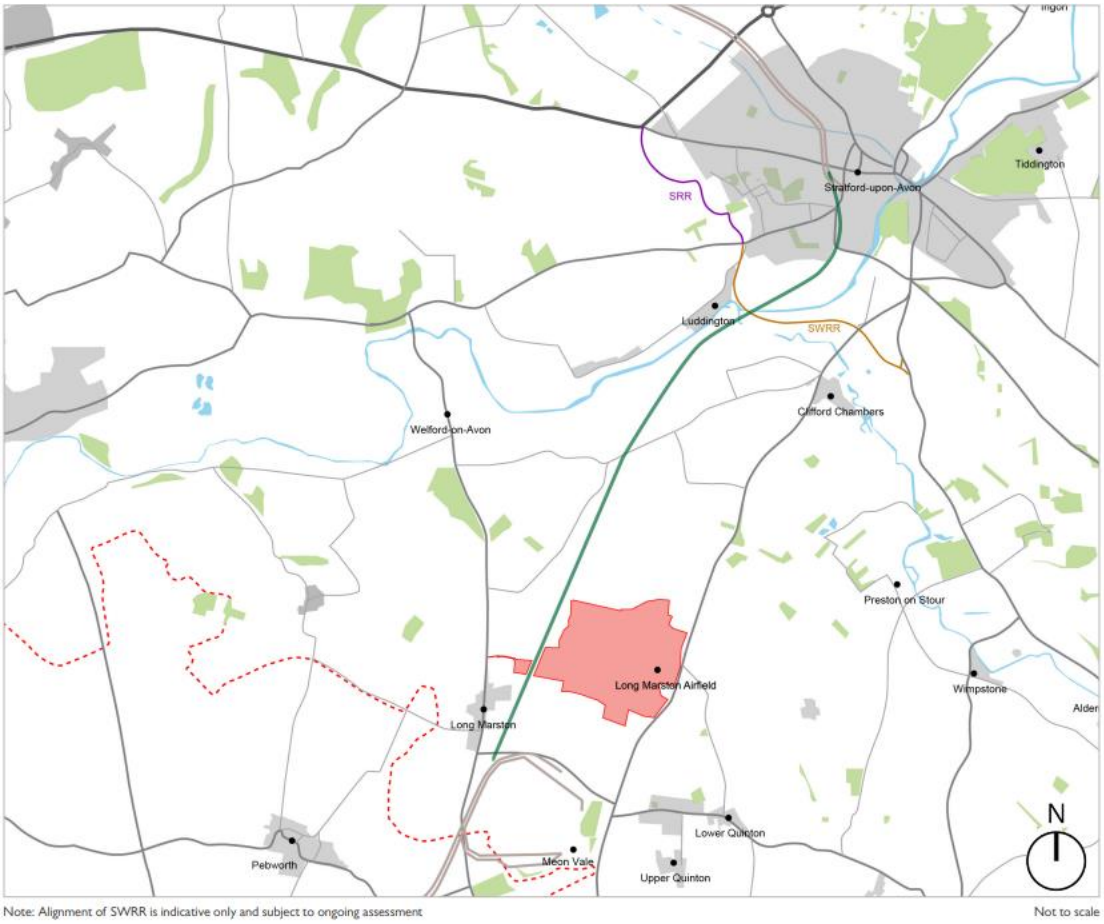
Overview

The Stratford-on-Avon Core Strategy was adopted in July 2016 and covers the plan period 2011 to 2031. The policy for LMA is for a new settlement for 3,500 homes, 13ha of employment land, a local centre, two primary schools and a secondary school and open space on the site which was decommissioned as a military airfield in 1958 and has since been used mainly as a venue for a variety of festivals, motorsports and running events.

LMA is located approximately 3 miles (4.8km) south of Stratford-upon-Avon within Stratford-upon-Avon District and Warwickshire County. The site is linked to Stratford-upon-Avon by the north-south transport corridors along the B4632 Campden Road, immediately east of the site, and the 'Stratford Greenway' walking and cycling route, which runs along the route of the former Stratford-Honeybourne railway line immediately west of the site. A freight only branch remains in situ between Honeybourne and Long Marston Depot,

however there is support for reinstatement of the passenger line, subject to funding and retention of the Stratford Greenway route. The site location is shown in **Figure 2.1**.

Figure 2.1 LMA Location Map



Source: https://www.stratford.gov.uk/doc/206807/name/Long%20Marston%20Airfield%20SPD%20Feb%202018.pdf

Highway modelling undertaken to support the preparation of the Core Strategy demonstrated that a south west relief road (SWRR) would be needed due to limited highway capacity within the existing network and very little scope to increase highway capacity over and above what has already been identified.

To help deliver LMA, bids for Housing Infrastructure Funding (HIF) were submitted and £13.4m was awarded to help deliver Phase 1 and address issues with contamination and viability. However, the forward funding bid to deliver the SWRR was not successful due to the delivery method, land acquisition requirements and public opposition.

A LMA Garden Village Framework Masterplan Supplementary Planning Document (SPD)[8] was adopted by the planning authority in February 2018.

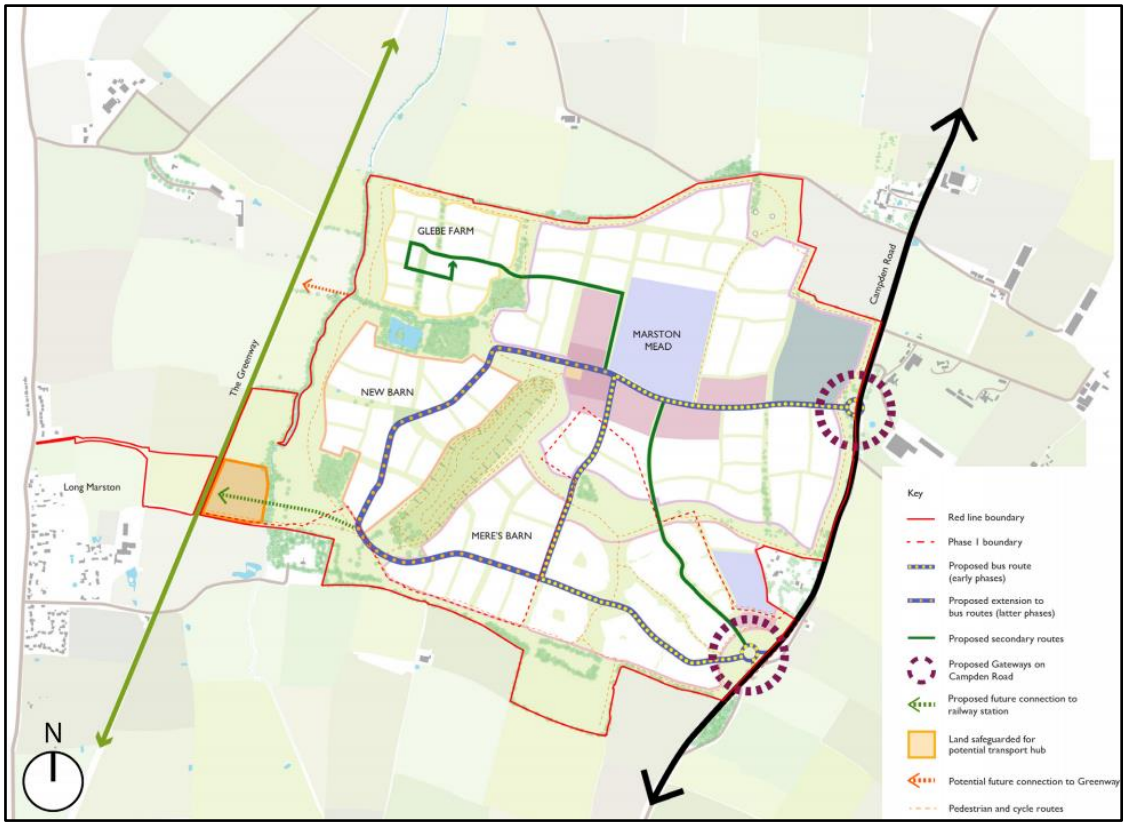
Phase 1 (400 homes) was granted outline planning permission in February 2017 and reserved matters approval in March 2019. Construction started in early 2020. An outline planning application for Phase 2 (3,100) homes was submitted in 2018, with the outcome pending.

[8] *Long Marston Airfield Garden Village – Framework Masterplan Supplementary Planning Document*, Stratford-on-Avon District Council, February 2018. Available online - https://www.stratford.gov.uk/doc/206807/name/Long%20Marston%20Airfield%20SPD%20Feb%202018.pdf (Accessed on 03/05/22)

Internal Transport Network

The SPD sets out the following in relation to Transport Connectivity, illustrated in **Figure 2.2**.

Figure 2.2 LMA Internal Site Plan



Source: https://www.stratford.gov.uk/doc/206807/name/Long%20Marston%20Airfield%20SPD%20Feb%202018.pdf

- **Access -** The B4632 Campden Road will form the point of vehicular access for the Garden Village. Two new junctions will be provided which will form each end of a spine road for the Garden Village in the form a tree lined avenue which should take into account location of services, lighting columns and highway visibility splay and knit together the different neighbourhoods of the indicative masterplan. The spine road will be 6.1m-7.3m in width (widened on bends to accommodate buses), incorporate natural traffic calming measures and will form the most legible vehicular route through the Garden Village.
- **Pedestrian and cycle routes** - routes shall link to the existing PRoWs, public transport hubs, to the Greenway to the west and Campden Road to the east and all community facilities and employment land. The routes will be segregated from motorised traffic where possible and appropriate. A shared use foot/cycleways should be 3 metres wide and footways should be 2 metres wide. In order to encourage their use in all weathers, formal pedestrian and cycle routes which are not next to a carriageway should be constructed in a bound surface treatment (e.g. tarmac).
- **Cycle infrastructure** - The provision of low speed or traffic calmed 'safe routes' will enable cyclists to mix with vehicles with minimal hazard. Dedicated off-road cycle routes will prioritise cycling and promote sustainable travel. Secure (communal or private) provision should also be made for cycle parking at key destinations, such as at parks, public open spaces, employment sites, school and at the larger play areas. Electric bicycles will also be supported by the provision of charging points

- **Bus infrastructure** - the Garden Village will provide public transport services and infrastructure that will include: general purpose highways to the appropriate standard for buses; high quality bus stops and lay-bys at suitable locations; public information systems; and the maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m. The stops should incorporate high quality waiting environments (including good quality seating, timetable displays and potentially real time information).

Transport Strategy Initiatives

- **Integration of new and existing active travel network** - A pedestrian and cycle connection to the Greenway is proposed to link the Garden Village with Stratford-on-Avon as a direct sustainable route.
- **A potential new railway station** - Initial steps have been taken to examine the potential of re-instating the railway but much more detailed assessment would need to be carried out to determine whether providing services between Stratford and Honeybourne (and beyond) would be viable. However, the route is safeguarded in the Core Strategy. In addition, Proposal LMA in the Core Strategy identifies an area of the LMA site adjacent to the Greenway as safeguarded for the possible provision of a new railway station. Options for re-opening the route are subject to further assessment, but could range from a tramway or light-rail option to a heavy- rail option linking into the existing network.
- **Cycling-friendly environment -** The provision of low speed or traffic-calmed 'safe routes' will enable cyclists to mix with vehicles with minimal hazard. Dedicated off-road cycle routes will prioritise cycling and promote sustainable travel.
- **Convenient access to public transport** - The developers, in partnership with Warwickshire County Council and local public transport operators, must ensure that public transport is seen by every resident and visitor as an attractive and viable alternative to use of the private car; therefore the Garden Village will provide public transport services and infrastructure, that will include: general purpose highways to the appropriate standard for buses; high quality bus stops and lay-bys at suitable locations; public information systems; and the maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m.
- **Car-sharing scheme** - Specific measures to maximise sustainable forms of travel, including car share databases (such as the Car Share Warwickshire initiative), car clubs and offer discounted vouchers for public transport trips. Modal split targets should be set that are both ambitious and achievable. Car sharing will be encouraged by providing car park areas for car sharers, and these will be located in prominent, attractive positions;
- **Electric Vehicle charging facilities** - Electric vehicle charging points (EVCPs) for general use should be provided in suitable locations across the Garden Village, including as part of any parking provision for the village centre. 7KW power cable supply should be provided throughout the site to ensure the future provision of EVCPs for all residential and non-residential buildings.

Due to the funding issues with the delivery of the SWRR, as well wider questions as to whether a major new road is the right solution and the longer term impact on travel patterns wrought by the COVID-19 pandemic, the planning authority has recently commissioned a study to identify a 'vision and validate' approach rather than 'predict and provide'. The study approach is in line with Homes England's shift in approach to delivering other garden communities away and is consistent with the recent Royal Town Planning Institute's

(RTPI) *Net Zero Transport Report*[9] which advocates the following Sustainable Accessibility and Mobility (SAM) Framework:

1. Substitute Trips: replace the need to travel beyond your community
2. Shift Modes: for longer trips, use active, public and shared forms of transport
3. Switch Fuels: for any trips that must be made by car, ensure the vehicle is zero emission

A vision and validate approach is also advocated in the Department for Transport *Decarbonisation of Transport*[10] Publication which states the following.

"*We need to move away from transport planning based on predicting future demand to provide capacity ('predict and provide') to planning that sets an outcome communities want to achieve and provides the transport solutions to deliver those outcomes (sometimes referred to as 'vision and validate').*" (p158)

The Sustainable Transport Vision Study for LMA Garden Village is ongoing and explores the following:

- Changes to trip generation, assignment and distribution assumptions in relation to the scale and opportunities for: trip internalization and trip substitution; and modal shift; and
- Challenge to the way congestion is dealt with in traffic modelling and in appraising acceptability of transport solutions.

Bailrigg Garden Village, Lancaster

Overview:

Bailrigg is located to the south of the City of Lancaster in the Lancashire ceremonial county, North West England. The site is adjacent to major north-south connection routes, including the West Coast Main Line that connects Lancaster to London and Scotland. The site is further bounded by A588 to its west, A6 and M6 to its east that runs to adjacent towns and cities including Preston and Manchester to its south, Kendal and Carlisle to its north.

[9] *Net Zero Transport*, RTPI, January 2021 – available online - https://www.rtpi.org.uk/research/2020/june/net-zero-transport-the-role-of-spatial-planning-and-place-based-solutions/ (Accessed 03/05/22)
[10] *Decarbonising Transport – A Better, Greener* Britain, Department for Transport, 2021. Available online - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf (Accessed 03/05/22)

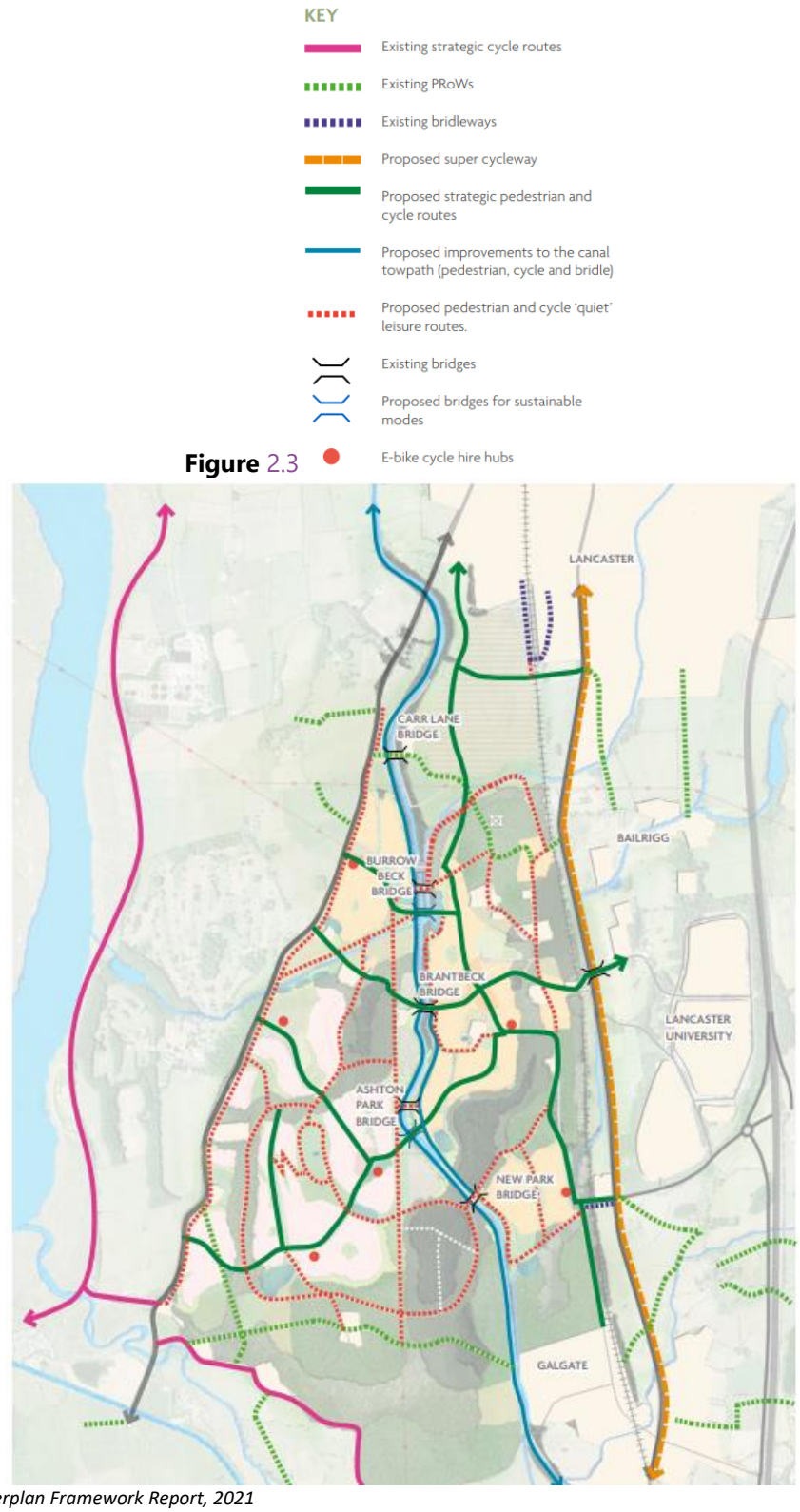


Figure 2.3

Source: Draft Masterplan Framework Report, 2021

shows the location plan, sourced from the *Bailrigg Garden Village Draft Masterplan Framework*[11].

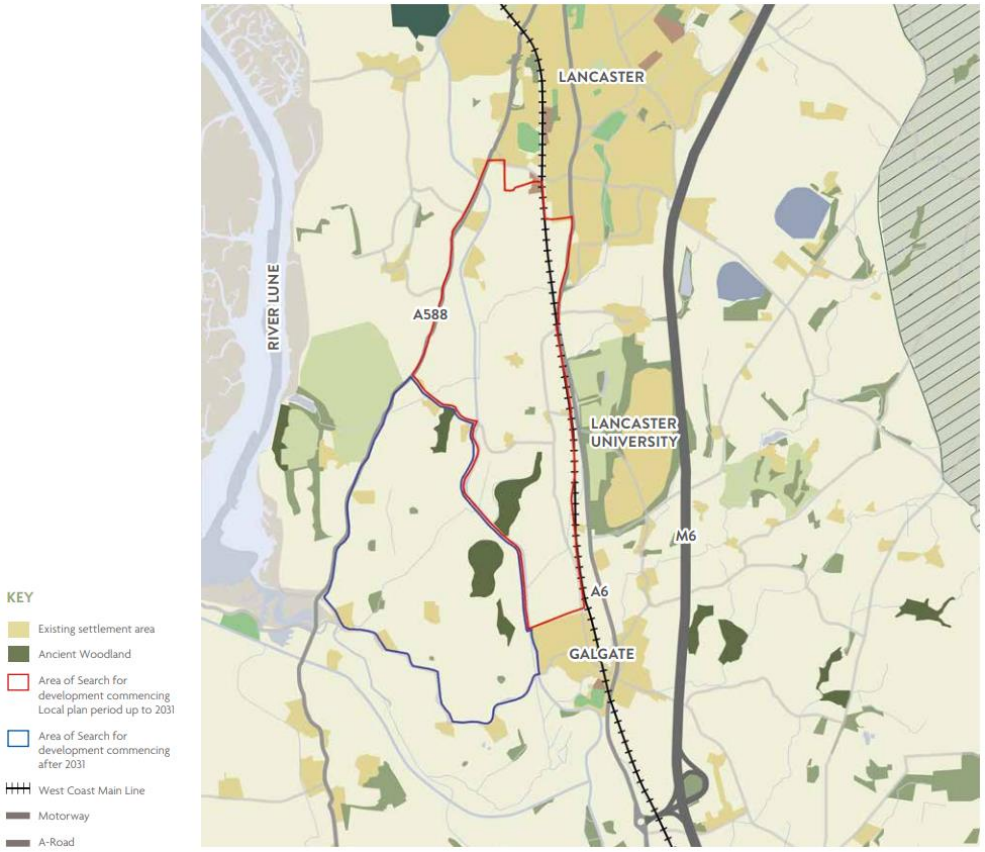
Bailrigg was identified as a site for a Garden Village development in January 2017. Lancaster City Council adopted a new Local Plan in July 2020 which identified a Broad Location for Growth to the south of Lancaster

[11] *Bailrigg Garden Village Draft Masterplan Framework*, Lancaster City Council, JTP, Farrer Huxley, ACA, Expedition Engineering, December 2021. Available online - 01696_Spatial-Masterplan-Framework-Document_RevC_S_Part1.pdf (jtp.co.uk) and 01696_Spatial-Masterplan-Framework-Document_RevC_S_Part2.pdf (jtp.co.uk) (Accessed on 03/05/22)

that included the site of the Bailrigg Garden Village. The Local Plan anticipates that the Garden Village will create a high-quality living environment place and community of 3,500 – 5,000 new houses with employment opportunities. In 2019 the project secured a Homes England Housing Infrastructure Fund (HIF) grant to enable the delivery of housing through sustainable infrastructure.

Bailrigg Garden Village is similar to ST15 as it is on the outskirts of the city of Lancaster and in close proximity to Lancaster University, but is segregated from these locations by the M6.

Figure 2.3 Bailrigg Garden Village Location



Source: Draft Masterplan Framework Report, 2021

Internal Transport Network

The Bailrigg Garden Village sustainable movements plan provided in the Draft Masterplan Framework is shown in **Figure 2.4**. A summary of the internal transport network proposals is provided below.

- **Design** – Structure around compact, walkable neighbourhoods which have good access to local amenities, and that deliver health and wellbeing benefits to local communities. Prioritise people over cars. Support electrification of transport by providing a network of high-speed charging points.

  Limit vehicle access and choose parking location carefully in order to maximise use of space for homes, as well as green and communal spaces.

  Minimise car parking and give priority to accessible parking and shared transport platforms. Include mobility hubs at the outskirts of each of the Bailrigg Garden Village centres, to provide access to EV car clubs, bike hire, click & collect lockers and logistics/delivery services.

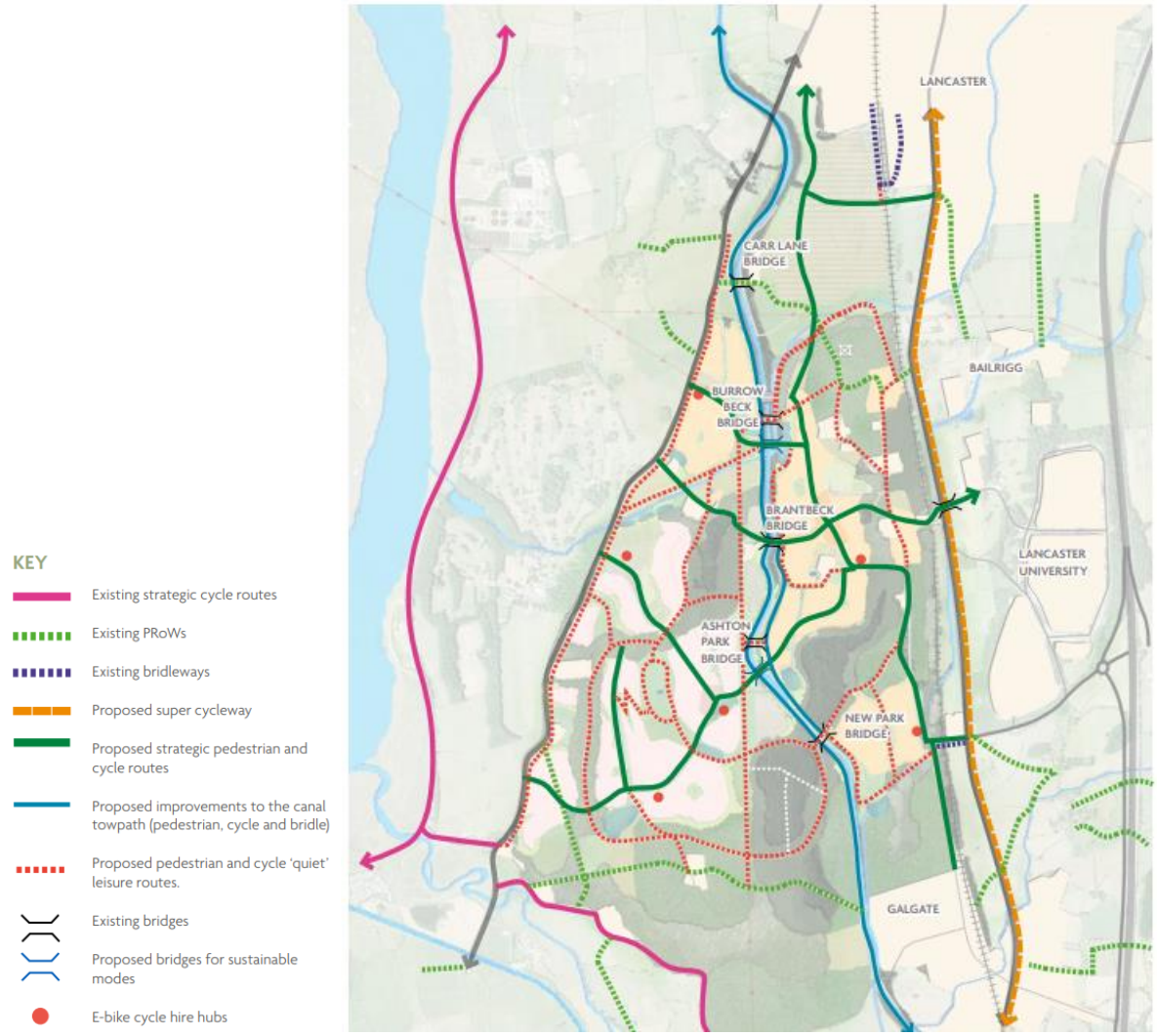
- **Pedestrian and cycle routes -** Create excellent walking and cycling routes as part of a network of green infrastructure. Ensure streets and pathways follow landscape contours to facilitate ease of cycling, walking and drainage.

  Promote and provide infrastructure to enable a modal shift towards active and low carbon travel.

- **Bus infrastructure -** bus stops within 300m of every home. Masterplan design encourages use of Mobility as a Service (MaaS) and e-mobility services through embedded digital connectivity.

Links between cycling infrastructure and bus infrastructure to enable cyclists to easily become bus users and vice versa.

Figure 2.4 Bailrigg Garden Village Sustainable Movements



Source: Draft Masterplan Framework Report, 2021

Transport Strategy Initiatives

- **Reconfiguration of M6 Junction 33 and Link Road –** A new linking route, funded by a Homes England HIF grant will form a highways spine for the garden village. In places this route can take the form of a principal street providing the village heart with its lifeblood and connecting the garden village to the surrounding destinations.
- **Sustainable movement travel by bus -** Testing and working closely with Lancashire County on a number of primary bus route options. A core sustainable movement route to advantage bus, cycle and pedestrian movements over car traffic. Routing through the garden village will be an extension to the existing bus network and serve the new garden village.
- **Cycle Superhighway –** this will link South Lancaster Strategic Growth Area (incorporates the Bailrigg GV) and the city centre, Lancaster University's Health Innovation Campus and the university itself. This will pave the way to transform it into a key sustainable travel corridor.
- **Canal Walk Development** - The canal offers a possible concept of waterfront living, recreation and transport, albeit any water taxi to the city will require to be subsidised. It could be a place

where people and wildlife can thrive, a place that is sustainable and eco-friendly, with cycle tracks and walkways.

- **Park and Ride -** Further measures as part of the Department for Transport Safer Roads Fund to include safety improvements at the Pointer Roundabout and average speed cameras between Galgate and the Pointer Roundabout to provide a safer environment along the A6 will be brought forward because funding has been secured. There is the potential for a P&R facility in the vicinity of the reconfigured Junction 33 which will be evaluated in the future if deemed to be required.

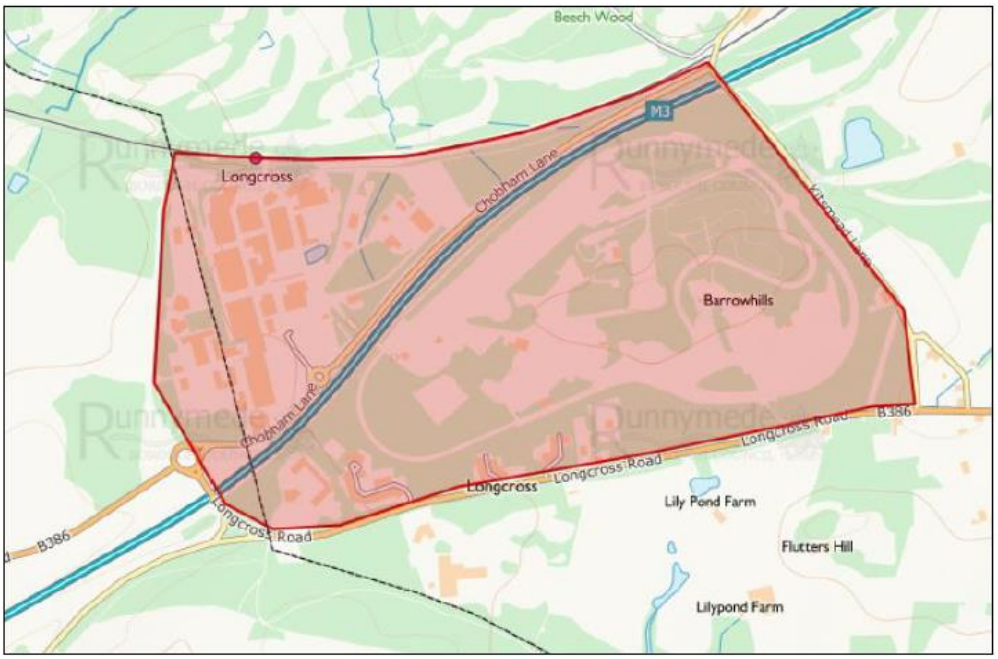
Longcross Garden Village, Runnymede

Overview

Longcross is situated in Runnymede Borough, Surrey, approximately 5km to the west of Chertsey, 3km to the south-east of Sunningdale, 2km to the north of Chobham and 13.5km northeast of Heathrow Airport. The site is split into two areas, Longcross ,North and South separated by the M3 Motorway. Longcross North benefits from an existing railway station and has planning permission for employment and 200 residential dwellings. There is an outline planning application with Runnymede Borough Council (RBC) for Longcross South for 1,500 residential dwellings, primary school, The north and south sites will be linked over the motorway via two pedestrian vehicle bridges. Suitable Alternative Natural Greenspace (SANG) has also been identified around the site.

The location of Longcross site is shown in **Figure 2.5** (sourced from According to the *Longcross Garden Village Infrastructure and Viability Assessment*[12]).

Figure 2.5 Longcross Site Location



Source: https://www.runnymede.gov.uk/downloads/file/1065/aecom-longcross

[12] *Longcross Garden Village Infrastructure and Viability Assessment*, AECOM, 2017. Available online - https://www.runnymede.gov.uk/downloads/file/1065/aecom-longcross (Accessed 03/05/22)

Transport Strategy Initiatives

According to the *Longcross Garden Village Transport Assessment*[13], RPS, 2022, the transport network will include:

- **Walking** – the masterplan shows a network of paths within the development and entire Longcross South development will be within 20 minutes walking time of the local centre, which will include the primary school.
- **Cycle routes –** the masterplan shows a network of share use cycle paths and leisure cycle routes. Sustainable transport route over the M3 to provide access to Longcross rail station. In addition, a 3m shared use cycle/footway has been provided on Chobham Lane into the site to the junction with Kitsmead Lane where it will link with the existing on-road route connecting with Virginia Water. Cycle parking will be provided at key destination and interchange points.
- **Upgrade rail station -** Provision is made in the Section 106 agreement for the northern site to upgrade Longcross rail station. These enhancements include improvements to access the rail station via the site and safety and provision for waiting passengers. In addition, additional train services in both directions are assumed.
- **Regional Bus** – funding for permanent bus services linking with Longcross railway station and neighbouring settlements including Woking.
- **Local Bus** – potential extensions of existing services.
- **Internal Hopper Bus –** to be provided within the Longcross South development, initially operating as a 'hail and ride' service. As part of Travel Plan monitoring, consideration will be given to making the service more flexible, such as a Demand Response Service, booked via a mobile application.
- **Yellow Bus initiative** - serves the nearest secondary school to the site, whilst this does not currently provide services to Longcross, future demand could facilitate this. The S106 agreement for the north of the site includes £150,000 to be paid to Runnymede Council towards the provision of school buses which could be used for this purpose and further contributions towards the Yellow Bus initiative could come forward from the south site.

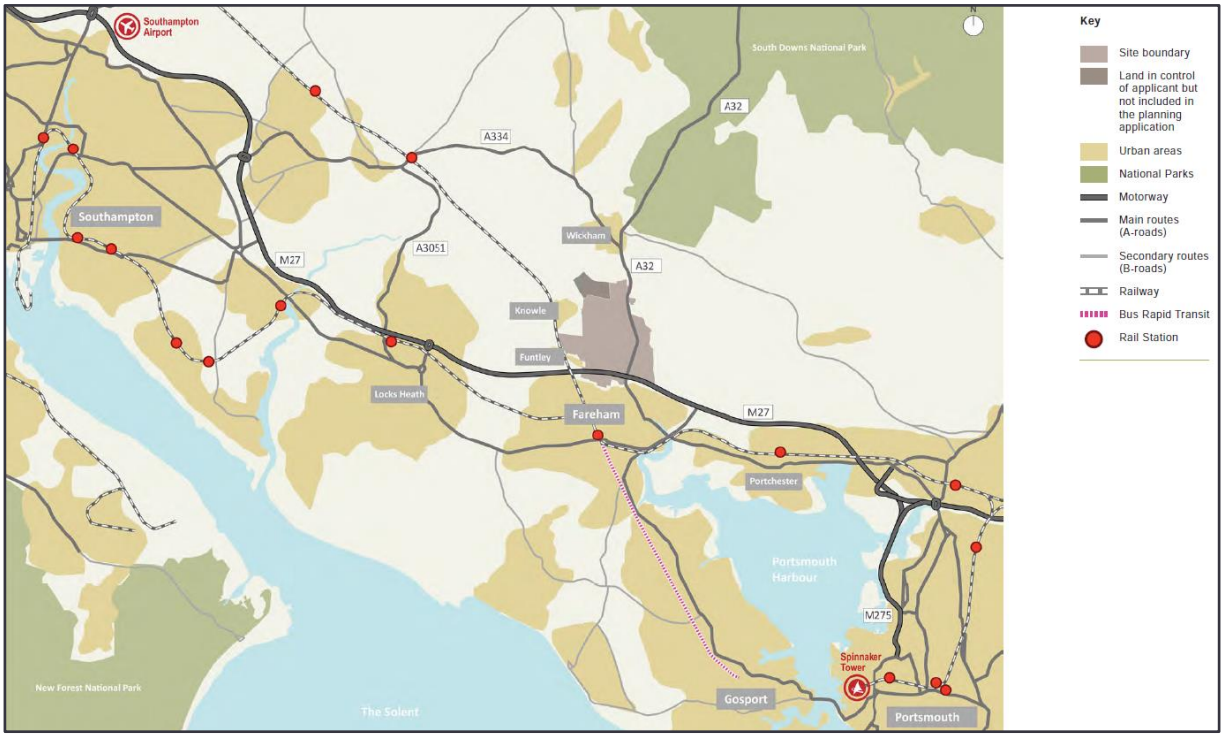
Welborne Garden Village

Overview:

Fareham Borough Council approved an Outline Planning Application for Welbourne Garden Village on 23 July 2021. The proposal will provide a new community of up to 6,000 homes, a district and local village centre, commercial, industrial, warehousing and employment space, and works to M27 Junction 10 and the A32. A HIF grant was awarded to Hampshire County Council to cover part of the M27 Junction 10 upgrade costs which will need to be paid back by the Welborne Garden Village development over time. The remaining balance of up to £50m will also be met by the development, so Welborne will ultimately be paying for the junction in its entirety. Welborne is a critical element of the Fareham Development Plan and is an important component of the South Hampshire Strategy. It is located largely north of the M27 at Junction 10 – east and west of the A32, as shown in **Figure 2.6** which is sourced from the Welbourne website - https://welborne.co.uk/. The boundary of the application also extends to the south of the M27, as part of the delivery of Green Infrastructure.

[13] *Longcross Garden Village Transport Assessment*, RPS, February 2022. Available online - ViewDocument (runnymede.gov.uk) (Accessed 03/05/22)

Figure 2.6 Welborne Development Location



Source: https://welborne.co.uk/

Transport Strategy Initiatives

- **Strategic highway solution** - Providing an "all-moves" solution at Junction 10 of the M27 represents a key component of an appropriate strategic highway solution for Welborne. Welborne will be connected to the wider area via a new Junction 10 on the M27 and by new and existing road junctions with the A32. Other off-site junctions will be improved as part of the mitigation.

- **On-site highways** – there will be a network of new roads to connect to the existing A32: Welborne Way will provide an alternative route to the A32 particularly to serve traffic from the north wishing to reach M27 Junction 10, together with accompanying adjacent pedestrian and cycle provision; Broadway will be a dual carriageway providing a connection from the A32 towards M27 Junction 10. Off- carriageway pedestrian and cycle facilities will be provided adjacent to Broadway; Welborne Approach will be a dual carriageway to the south, connecting to M27 Junction 10. An off carriageway cycle / footway will be provided adjacent to the south bound carriageway, giving linkages towards Fareham via the routes through Fareham Common SANGS; Central Avenue will provide a further connection to the A32, adding resilience to the highway network. It will also provide vehicular access for the District Centre and surrounding uses; High Street will also provide access the District Centre, but it will not be a through route for traffic and will be for bus services.

- **Bus Services** - A circular (clock wise) bus route has been developed, allowing penetration within a significant proportion of the Site. Bus priority measures are proposed from the A32 into the areas of the Site designated for employment use and also through the District Centre. The design of the streets that will serve the bus route (North Drive, Dashwood Avenue and Welborne Approach) will be addressed by way of the Welborne Street's Manual, to be dealt with at the Reserved Matters Stage. It is proposed that from the early stage of the development a high-frequency bus rapid transit (BRT) service will be in operation between Welborne and Fareham Railway Station / Fareham Town Centre

- **Improvement on pedestrian and cycle access -** Create safe pedestrian and cycle access across the A32, improving east-west movement across the site, and also north-south including making use of connections over and under the M27. Provide a clear hierarchy of attractive and convenient streets and routes to promote walking and cycling between homes and the District and Village Centres.
- **Walkable neighbourhoods -** Welborne will provide a range of formal and informal green spaces near new homes for contemplation, play and recreation. As far as possible, all dwellings will be located within 200m of the proposed Green Infrastructure (GI) network. Welborne will ensure that residents will be able to easily access green space near their homes and other new green spaces within Welborne on foot or by cycle, via the street network and new or existing footpath and cycle routes.
- **New route connected to village centres -** Provide a new north-south route to encourage movement through Welborne and to support the District and Village Centres which are located on this route.

2.5 Oxfordshire Garden Village

Overview:

The Oxfordshire Garden Village is located north of the village of Eynsham and the A40, west of Oxford and east of Witney and is an allocated site in the West Oxfordshire Local Plan 2031 for 2,200 homes, 40ha of employment, a 1,000 space Park and Ride and two primary schools. The Park and Ride is part of an Oxfordshire County Council (OCC) initiative which includes a bus lane and improved cycle lane on the A40 and will be funded by a HIF grant from Homes England.

The nearest rail station is Hanborough in the village of Long Hanborough to the north and there is a secondary school in Eynsham, as well as local employment and retail.

It is noted that there is also the West Eynsham Strategic Development Area located on the southern side of the A40 to the west of Eynsham. This will provide 1,000 homes, a primary school and a spine road link through the site.

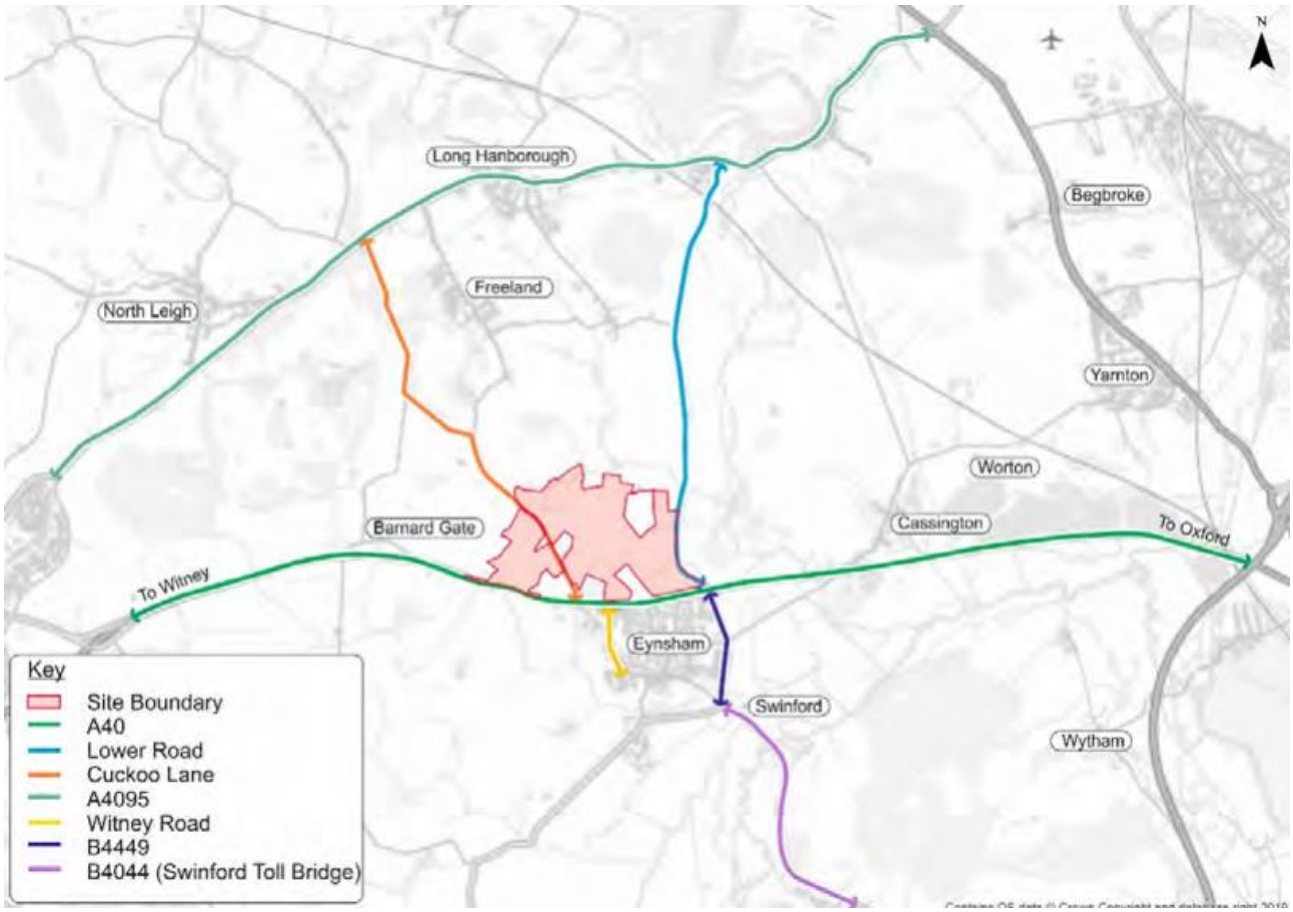
An outline planning application was submitted to West Oxfordshire District Council in 2020 for the housing, employment and primary schools and access onto the A40 and adjacent roads.

The location of the site is shown in

Figure *2.7***,** sourced from the *Oxford Garden Village Transport Assessment*, Stantec, 2020.[14]

[14] *Oxford Garden Village Transport Assessment*, Stantec, 2020. Available online - https://publicaccess.westoxon.gov.uk/online-applications/files/1D9A051FF4A2471A363159D8B347BA0F/pdf/20_01734_OUT-TRANSPORT_ASSESSMENT-856882.pdf (Accessed 03/05/22)

Figure 2.7 Oxford Garden Village Location



Source: *Oxford Garden Village Transport Assessment,* Stantec, 2020

Transport Strategy Initiatives

The site will benefit from the adjacent Park and Ride and bus lanes on the A40 which will be delivered by Oxfordshire County Council. Transport Strategy initiatives that the site will deliver are identified below.

- **Walking and cycling** – permeable network within the site;
- **Walking and cycling connectivity across A40** – the site will provide a financial contribution to OCC towards a grade separated foot/cycle connection to Eynsham to provide connectivity between the communities and to facilities such as the secondary school, and also to local pedestrian routes in Eynsham towards the secondary school and village centre,
- **Cycle** – the site will provide funding for a cycle route on Lower Road to Long Hanborough to provide connectivity to Hanborough rail station there. The site will also provide a financial contribution to the B4044 cycle route to Botley via Swinford Toll Bridge, an OCC initiative.

Cycle hire stations will be provided across the garden village in addition to Hanborough rail station.

- **Bus services** – bus priority links between the Park and Ride and the site will be provided, and the spine road through the site will designed to accommodate buses. A contribution towards bus services to Oxford will be provided.
- **Public transport connectivity to Hanborough rail station** – via a community bus service by a not-for-profit organisation or a shared taxi arrangement.
- **Car club** – car club spaces will be provided in line with the phased construction and occupation of the site.
- **Innovation** – the developer will support any OCC led trial of MaaS which will be integrated into the public transport strategy for the site. There will be provision of superfast broadband to encourage homeworking and reduce the need to travel. Electric vehicle technologies will be incorporated into the design, as will autonomous/connected vehicles in the later stages of the site construction if applicable.
- **Highway connections** – the main site access will be via a new roundabout on the A40 shared with the West Eynsham SDA. Other accesses will be provided off Cuckoo Lane and Lower Road.

2.6 Key Conclusions

A summary of the proposals for the Garden Village case studies is provided in **Table 2.1**. Key conclusions that relate to the ST15 Sustainable Transport Strategy are as follows:

- **Location and connectivity** – garden villages are defined as discrete new settlements but have a location near to key destinations such as employment, rail stations, etc with existing or opportunity to provide connectivity for sustainable transport modes is critical. As will be identified in Chapter 4, ST15 provides this opportunity as the University of York and the Science Park are within the south-eastern arc of York, and there are also Park and Rides off the A64 that provide connections to the city centre and to further afield.
- **Masterplanning design**– a garden village needs to have a mix of uses to be self-sustaining and minimise the need to travel. The positioning of education, local centre and employment land uses should enable walkable neighbourhoods.
- **Active Travel** – the garden village needs to be well connected by sustainable transport networks which provide safe, direct, convenient and inclusive route for pedestrians and cyclists. The street design process should apply a user hierarchy with pedestrians at the top of and considered first.
- **Public transport services and connectivity** – the garden village needs to be served by high quality public transport, most likely buses, from the outset to offer a viable alternative to car use.
- **Transport must be future-proofed** – garden villages need to provide technology-focused initiatives to ensure that the transport systems are maintained and fit for the future, including infrastructure for electric vehicles, micro-mobility technology (such as e-bikes and e-scooters), mobility hubs in new development and demand responsive services.

Table 2.1 Summary of Garden Village Case Study Examples

	Summary of Garden Village	Location	Key internal initiatives	Key external initiatives
Long Marston Airfield, Stratford-on-Avon	Planning permission for: • Phase 1 – 400 homes Outline planning application for Phase 2: • 3,100 homes • 13ha of employment land • Local centre • Two primary schools • Secondary school.	4.8km south of Stratford-on-Avon Key existing transport links: • B4632 for vehicles • Greenway for cyclists and pedestrians Potential full or partial reinstatement Stratford-Honeybourne railway line	• 3m wide shared use foot/cycleways • Low speed/traffic calmed 'safe routes' • Cycle parking at key destinations • Electric bikes • Bus stops between 300m – 400m of housing • Electric vehicle charging facilities to be provided in suitable locations. 7kW power cable supply throughout the site.	• Pedestrian and cycle connection to the Greenway • Potential new railway station • High quality public transport to be an attractive and viable alternative to private car • Car sharing scheme
Bailrigg, Lancaster	• Up to 5,000 homes • Local centre • Employment • Two primary schools • Secondary school	South of City of Lancaster Bounded by A588 to its west, A6 and M6 to its east. Key existing transport links: • West Coast Main Line that connects Lancaster to London and Scotland • M6	• Compact walkable neighbourhoods • Prioritise people over cars • Network of high speed charging points to support electrification of transport • Minimise car parking • Mobility hubs at the outskirts of local centres to provide access to EV car clubs, bike hire, click and collect lockers • Walking and cycling routes as part of a network of green infrastructure • Bus stops within 300m of every home • MaaS and e-mobility services	• HIF grant for reconfiguration of M6 Junction 33 and new link road • Bus services to connect to key destinations • Cycle superhighway linking the site to the city centre and Lancaster University • Canal walk development, including cycle tracks, walkways and potential for water taxi • Park & Ride – potential for a facility in the vicinity of Junction 33.
Longcross, Runnymede, Surrey	Planning permission for Longcross North: • 200 homes • 79,000m^2 employment • 36,000m^2 data centre Outline planning application for Longcross South • 1,500 homes • Primary school • Village centre	North West Surrey, west of the towns of Egham, Chertsey and Addlestone. Key existing transport links: • Reading to London Waterloo railway line • M25 • M3 • Heathrow Airport	• Network of footpaths and whole of Longcross South will be within 20 minutes of local centre and primary school • Network of cycle routes within the site • Cycle parking at key destination and interchange points • Internal hopper bus, initially operating a 'hail and ride'	• Sustainable transport route over M3 to connect to Longcross rail station • 3m shared use cycle/footway on Chobham Lane to connect to Virginia Water • Funding for regional and local bus services to connect the site to Longcross railway station and neighbouring settlements including Woking • Upgrades to Longcross rail station to improve accessibility • Increased rail service frequencies at Longcross rail station

Welbourne Garden Village, Fareham	Planning permission for: • 6,000 homes • District centre • Village centre • Three primary schools • Secondary school	North of Fareham in Hampshire. Key existing transport links: • M27 (southern boundary)	• Network of new roads to connect the development to the A32 which will incorporate pedestrian and cycle infrastructure… • Circular bus route through the site, with bus rapid transit (BRT) in operation between the development and Fareham Railway Station and Fareham Town Centre. • Walkable neighbourhoods • Network of pedestrian and cycle infrastructure	• All moves solution at M27 Junction 10 • New road junctions with A32 • Off-site junction improvements • Cycle and pedestrian links to Fareham • Bus priority measures from the A32
Oxfordshire Cotswolds Garden Village, West Oxfrodshire	Outline planning application for: • 2,200 homes • Employment • Two primary schools	West Oxfordshire between Witney and Oxford. Key existing transport links: A40 • Shared use footway and cycle lane along the A40 • Frequent bus services along the A40 and B4044 to Botley Future transport links (delivered through HIF scheme): • Park and Ride to the east of the site • Bus lanes on the A40 and improved cycle lane	• Permeable network of walking and cycling routes within the site and walkable neighbourhoods • Cycle hire stations within the garden village • Bus priority links between the Park and Ride and the site and spine road through the site will accommodate buses • Car club spaces will be provided • Support for OCC MaaS trials • Electric vehicle technology will be incorporated int the design • Design for automated/connected vehicles in the later stages of development if applicable	• Financial contribution towards a grade-separated foot/cycle connection across the A40 to Eynsham and pedestrian routes within the village • Funding for a cycle route along Lower Road to the village of Long Hanborough and Hanborough rail station • Financial contribution to a cycle route along the B4044 to Botley • Financial contribution to bus services to Oxford • Bus connectivity to Hanborough rail station via a community bus or shared taxi arrangement

3. Policy and Guidance Review

In this chapter we provide an overview of the main national and local policy documents that will have a bearing on the Sustainable Transport Strategy for Site ST15.

3.1 Introduction

The following sections set out a summary of key aspects in the main national and local policy documents that will influence the delivery of Site ST15.

3.2 National Planning Policy Framework

The Ministry of Housing, Communities and Local Government (MHCLG) published the National Planning Policy Framework (NPPF) in 2012. There have since been revisions to the document in 2014, 2018, 2019 and 2021. In terms of transport, the revised documents see little change from the 2012 document, with sustainable development remaining at the heart of the NPPF. Notwithstanding that the Local Plan is being examined against the NPPF 2012, the NPPF 2021 will be a material consideration upon adoption of the plan and masterplanning of ST15 and as such key considerations are detailed in this section.

The NPPF specifies a presumption in favour of sustainable development, an approach which should be followed by local planning authorities in their plan making and decision taking. Decision takers at every level are encouraged, where appropriate, to consider favourably applications for sustainable development and an emphasis is also made within the NPPF on local planning authorities working proactively with applicants at pre-application stage to secure this.

Paragraph 104 on the NPPF 2021[15] states:

"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

a) the potential impacts of development on transport networks can be addressed;

b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;

c) opportunities to promote walking, cycling and public transport use are identified and pursued;

d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and

e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places."

The NPPF identifies the need to favour sustainable transport modes to enhance travel choice, and to locate developments that generate significant movement where the need to travel will be minimised and the use of sustainable transport modes can be maximised.

[15] National Planning Policy Framework, Ministry of Housing, Communities and Local Government, July 2021. Available online - National Planning Policy Framework (publishing.service.gov.uk) (Accessed on 03/05/22)

The NPPF sets out that all developments that generate significant amounts of movement should be supported by a Transport Statement or a TA and a Travel Plan (paragraph 113), the latter being identified as a key tool to deliver sustainable transport objectives.

With specific regards to highway considerations in decision making, the NPPF (Paragraph 111) states:

"Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".

It should be noted that 'severe' is not defined and it is for the LTA and National Highways to consider whether the impact of a development is 'severe'.

3.3 City of York Local Plan – Publication Draft (February 2018)

City Of York's Local Plan[Error! Bookmark not defined.] submitted for examination on 25th May 2018 and is being examined under transitional arrangement.

The key development and design principles for Site ST15 are set out in **Policy SS13: Land West of Elvington Lane**. This identifies that the site will provide a balanced mix of high quality housing as well as an associated local centre, community facilities and an excellent network of green infrastructure. It is expected that the site will be masterplanned and delivered in a phased approach within a comprehensive framework.

In Policy SS13, it is recognised that a key challenge is sustainable transport and road capacity. Masterplanning is expected to create a compact, walk (cycle) able place which encourages sustainable internal trips to education, community facilities, shops and employment opportunities. The site will need to provide these facilities which should be within 5 to 10 minutes' walk of residents.

Policy SS13 identifies that public transport access will be essential through the provision of a south-east to north-west public transport route through the site, achieving accessibility within 400m of a public transport route for residents and occupant. The bus routes serving the site could also improve access to Elvington village centre using public transport if some or all of the bus services to ST15 are extended there.

In addition, the site will need to provide sustainable transport links to existing pedestrian and cycle networks (e.g. those to the University/ Heslington) and have a suitable internal layout to maximise walking and cycling permeability. External link opportunities are identified as a quality cycle route into the city centre via Langwith Stray/Long Lane/Common Lane and onward routes from Heslington could use the existing network of routes between York University and the city centre.

The development will need to exploit shared infrastructure opportunities with the University of York, Science Park and Sports Village and have a joined up transport approach with other potential developments in the city including the University Expansion Site (ST27). The provision of a new grade separated junction (GSJ) onto the A64 would remain essential infrastructure for any development in this location, for vehicles, but also potentially accommodate buses and walk/ cycle trips.

The site is expected to require high frequency public transport services based on the overall target of 15% journeys by bus. This target is ambitious. Similar developments typically see a bus mode share of 3-5%. Elvington ward currently has a bus mode share of 6%, although this is likely to include a number of park and ride trips using Grimston Bar. However, modelling suggests around 25% of the trips which originate in ST15 will destinate at the University. Given the ideal distance for these to be undertaken by bus, and the University's high level of control of on-campus parking, the 15% mode share to bus appears reasonable. In order to minimise car use the development would need a robust transport strategy documenting alternative routes including for buses, walking and cycling.

Policy SS13 set out key design principles for the site. Those relevant to transport are as follows.

ix. *"Provide an appropriate range of shops, services and facilities including social infrastructure such as health, social, leisure, cultural and community uses to meet the needs of future residents, made early in the scheme's phasing in order to allow the establishment of a new sustainable community. This should be principally focused around a new local centre.*

x. *Deliver new on-site education provision to meet nursery, primary and potentially secondary demand, to be assessed based on generated need. New nursery, primary and potentially secondary provision will be required to serve the earliest phases of development.*

xi. *Demonstrate that all transport issues have been addressed, in consultation with the Council and Highways England* [now National Highways] *as necessary, to ensure sustainable transport provision at the site is achievable. The impacts of the site individually and cumulatively with site's ST7, ST8, ST9, ST14, ST27, ST35 and ST36 should be addressed.*

xii. *Ensure provision of necessary transport infrastructure to access the site with primary access via the A64 (as shown on the proposals map) and a potential secondary access via Elvington Lane. The capacity of the local highway network including Elvington Lane and junctions is limited.*

xiii. *Retain Common Lane/Long Lane/Langwith Stray as cycle/pedestrian routes only to ensure protection of the character of Heslington Village. These routes are very lightly trafficked roads, and could provide pleasant cycle and pedestrian routes from the site to Heslington. It is essential that there is no vehicular transport access to Heslington village along these routes to ensure the setting of Heslington village is maintained.*

xiv. *Explore the potential for local bridleways (e.g. Fordlands Road/ Forest Lane) running through or near the site to be used as cycle routes.*

xv. *Provide dedicated secure access for existing local residents and landowners to be agreed with the community of Heslington. Appropriate solutions would need to ensure access is preserved for existing residents and landowners developed in consultation with the community of Heslington.*

xvi. *Deliver high quality, frequent and accessible public transport services through the whole site which provide links to new community facilities, as well as to York city centre and other appropriate service hubs, including University of York. A public transport hub at the local centre should provide appropriate local interchange and waiting facilities for new residents. It is envisaged such measures will enable upwards of 15% of trips to be undertaken using public transport.*

xvii. *Optimise pedestrian and cycle integration, connection and accessibility in and out of the site and connectivity to the city and surrounding area creating well-connected internal streets and walkable neighbourhoods, to encourage the maximum take-up of these more 'active' forms of transport (walking and cycling).*

xviii. *Exploit synergies with the proposed university expansion in terms of site servicing including transport, energy and waste."*

3.4 City of York Local Transport Plan 2011 – 2031 (LTP3)

LTP3[16] sets out policies and measures that will contribute to the city's economic prosperity over the next 20 years, whilst meeting challenging national and local targets for reducing emissions.

The LTP vision for transport is as follows.

[16] *Local Transport Plan 2011 – 2031*, City of York Council. Available online - https://www.york.gov.uk/downloads/file/258/ltp3 (Accessed 03/05/22)

"To enable everyone to undertake their activities in the most sustainable way and to have a transport system that:

- *Has people walking, cycling and using public transport more;*
- *Makes York easier to get around with reliable and sustainable links within its own area, to adjacent areas and cities and the rest of the UK;*
- *Enables people to travel in safety, comfort and security, whatever form of transport they use;*
- *Provides equal access to opportunities for employment, education, training, good health and leisure for all, and*
- *Addresses the transport-related climate change and local air quality issues in York."*

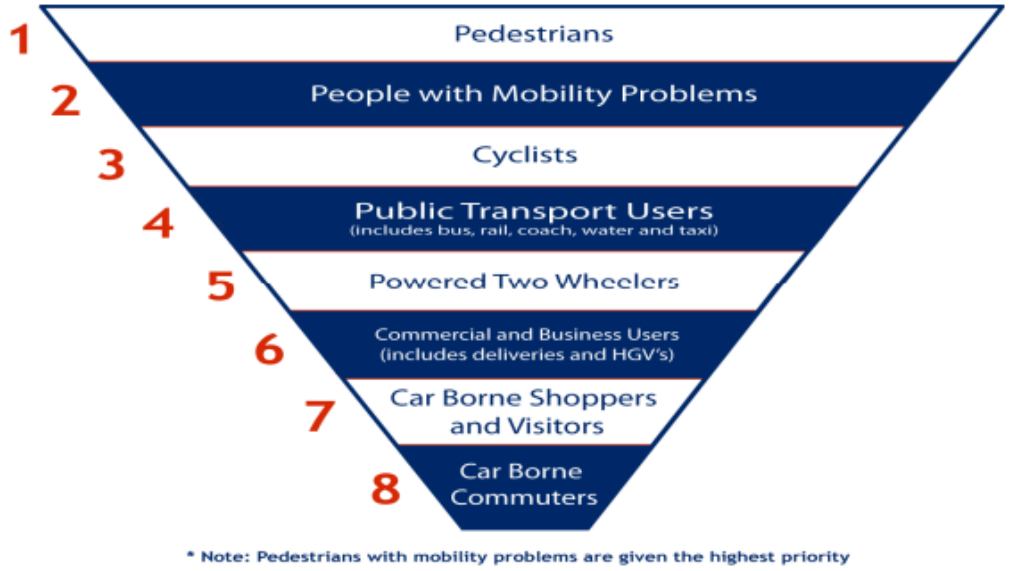
To achieve this vision, the transport strategy and key outcomes for the City of York within LTP3 has been developed under five themes as shown below.

Five Themes	Key Outcomes
Quality Alternatives	Comprehensive cycling and walking network
	Better quality and more reliable public transport
	Enhanced Park & Ride facilities
Strategic Links	Well maintained and managed strategic transport network
	New cycling and walking links between residential (urban & rural) and employment areas.
	Better rail services and connections
	Selective enhancements to the existing road network to increase capacity and improve safety
Behavioural Change	Greater awareness of options available for sustainable modes of travel (travel planning)
	Increased levels of sustainable travel to all key education, employment, leisure and retail destinations
	Improved road safety awareness
	People being more healthy and active
Transport Emissions	Reduced vehicle emissions
	Improved air quality
Public streets and spaces	Enhanced and safer walking and cycling access in public spaces, streets and developments
	Fewer vehicles travelling through and around the city centre
	Safer roads with fewer casualties
	Developments integrated into and enhancing the sustainable transport network

Source: City of York Local Transport Plan 2011 – 2031 (page iv)

LTP3 identifies that York was one of the first local authorities to adopt a 'Hierarchy of Transport Users' which sets the order of priority in assessing the needs of various transport users when considering putting any transport network, highway or land use proposal. The hierarchy, which is shown below, was a successful policy in LTP1 and LTP2 and will continue in LTP3.

Figure 1.2: Hierarchy of Transport Users



Source: City of York Local Transport Plan 2011 – 2031 (page 4)

3.5 Bus Service Improvement Plan, October 2021

The *Bus Service Improvement Plan* (BSIP)[17], which responds to the DfT's challenge to LTAs set out in the National Bus Strategy of March 2021, sets out how York will continue its long-standing programme to improve bus services in York to encourage continued and greater use of the bus network.

The BSIP identifies a number of key statistics and information.

- Pre-covid, the buses carried nearly 16 million trips in 2018/19, 4 million (25%) of which were on York's Park and Ride (P&R) network. This represents a growth of 60% over the Year 2000 total of 10 million trips.
- 8% of journeys to work in York are on the bus, compared to 3% nationally.
- The University of York, York College and York St John University are all on high frequency bus routes, and the city centre is at the heart of many high frequency routes, making bus an important means for people to access jobs, training opportunities, further and higher education.
- Research has shown that 25% of people in the centre of York got there by bus; meanwhile other research has shown that bus passengers are responsible for between 25% and 33% of expenditure in city centres, with an average spend per trip of £54. If these figures were applied to the number of visitor trips to York each year (approximately 8 million), a spend of around £100 million per year is implied, with spending by residents of York, who use the bus to get into the city centre, additional to this figure.
- Studies of travel behaviour have shown that people are more likely to adopt walking and cycling as their main means of getting around if a good bus service is also available – even if they only use it when the weather is poor or they have something heavy to carry.

The BSIP sets the following objectives for bus services in York:

[17] *Bus Service Improvement Plan*, City of York Council, October 2021. Available online - https://democracy.york.gov.uk/documents/s152872/Annex%20A%20York%20BSIP.pdf (Accessed on 03/05/22)

- Inclusive - minimising social exclusion by offering easy, comprehensive and cheap transport around the city
- Accessible to all – easy to use by everyone in the city, including people with impaired mobility or senses
- Efficient – punctual, reliable, frequent and a fast way to travel around York
- Complementary to our strategies to reduce carbon emissions in York and develop our economy
- Attractive – enough to mean driving is not the default option for many trips in York
- Welcoming – to our many visitors, whether they are coming to York for a day at the races or a four year degree course
- A source of pride for the city and its residents

The BSIP sets out a number of targets and commitments to achieve the objectives. In relation to new development, the BSIP lists a number of considerations regarding the implications for bus services in York:

- *How can effective local services be provided to/ from the new developments? What principles should underline service planning? What do the developers need to provide to allow delivery of effective bus services?*
- *How can residents of the new developments and employees at new employment be incentivised to use bus services, particularly, what facilities should be provided for bus passengers in the new developments, and what ticketing can be provided to encourage take-up?*
- *How can bus services in York allow people from the new developments to not just access the city centre by bus, but interchange to access a range of job opportunities, training locations and services across the city, using different bus services?*
- *How can the bus best get people to the railway station for onward travel beyond York?*
- *Is there a role for longer distance services directly connecting some of the developments with locations further afield – for example, between the new development at Langwith and central Leeds?*
- *How can bus services be delivered, given the phasing of developments with houses being built over several years, and full build out perhaps taking 10 years or more?*

The following policies on serving new developments by bus are relevant to Site ST15.

- Commitment D1 is that CYC will work with developers to establish bus priority into any new development in York, to make buses as time competitive as reasonably possible with private cars. This could include, for example, segregated, grade separated, crossing points of York's outer ring road for bus services into York city centre from new developments outside of the outer ring road. A precedent for this is the bus priorities being provided as part of the York Central development.
- Commitment D6 is that new developments have a clearly identifiable "Public Transport Hub" which will be in the centre of the new developments, co-located with the principal trip generators in each development – for example, schools and nurseries, GP's surgeries, shops. The hubs will be equipped with very high-quality bus stops, comprising, but not limited to, a heated shelter, real time information, information boards, and machines for purchasing bus tickets off the bus.
- Commitment D7 is that as a general design guideline, the services provided to large new developments will be developed to be as attractive as the nearest Park and Ride alternative. As

such they will not only include substantial priority within the development and linking the development to the existing road network (as set out in Commitment D1), but should also include priorities, many of them new, on the existing road network. BRT may be appropriate for the larger developments.

- Under Commitment D8, developers will be encouraged to make full use of ICT in any new property to make real time information available to new residents.
- Commitment D9 acknowledges the importance of attractive ticketing offers to new residents (or new employees at employment sites) in encouraging people to use the bus. The QBP will work with developers to provide a range of tickets which will encourage early use of the bus service, but will retain bus users on the network over the longer term. This is likely to include developing AllYork tickets for purchase off the bus, and a range of other products – for example, for scholar travel and carnet/ stored value products, as well as single operator products.

3.6 Key Conclusions

York's policy environment is broadly supportive of sustainable travel interventions for ST15, with a well-developed sustainable transport asset base and ingrained habits of ST use in the city. The measures identified within Local Plan Policy SS13 are consistent with the LTP vision for transport which is to have people walking, cycling and using public transport more. Key conclusions that relate to the ST15 Sustainable Transport Strategy are as follows:

- **Masterplanning design** - Policy SS13 specifies that the Site will need to provide an appropriate range of shops, services and community uses to meet the needs of residents and that these facilities, as well as education will be expected to be within a 5 – 10 minute walk of residents in order to encourage sustainable internal trips. As set out in the BSIP, a high quality public transport/ sustainable mobility hub should be co-located with the schools, retail, etc and bus priority should be incorporated into street design to make buses time competitive with cars.
- **Active Travel** – Policy SS13 identifies that Common Lane/Long Lane/Langwith Stray to be used as a cycle/pedestrian route to minimise impact on the village of Heslington.
- **Public Transport** – Policy SS13 that to achieve 15% of trips by public transport, high quality, frequent and accessible (bus) services are required to provide links within the Site and to the city centre and other key destinations, including the University of York. Synergies with the university should be exploited. Services should comply with the objectives set out in the BSIP.

4. Context and Site Analysis for ST15

In this chapter we consider the supply of transport in the area of ST15 and how it is currently used.

4.1 Introduction

Context and site analysis has been undertaken to gain an understanding of the opportunities and constraints of the site and its transport connections to York and to neighbouring communities. This has been informed by a review of available material and reports, including the Local Plan policy and transport evidence base, as well as the following.

- Audits of the transport network relevant to the site to understand the vehicular and active travel access opportunities, PRoWs/A64 crossings, existing constraints and quality of the transport network.
- Multi-modal spatial analysis of pedestrian, cycle and bus routes based on journey times/distances.
- Demand Analysis - analysis of pre-Covid-19 travel and access patterns to include developing multi-modal travel time isochrones (bus, cycle, car, walk) to understand the catchments and desire lines to key employers, education and transport hubs. This is based on 2011 Census and data from the City of York Council Smart Travel Evolution Programme (STEP) traffic and public transport model. The STEP model is based on 2019 data which is still fit for purpose as whilst the impact of Covid-19 has changed travel patterns, they are likely to revert back to something similar to 2019 patterns over time.

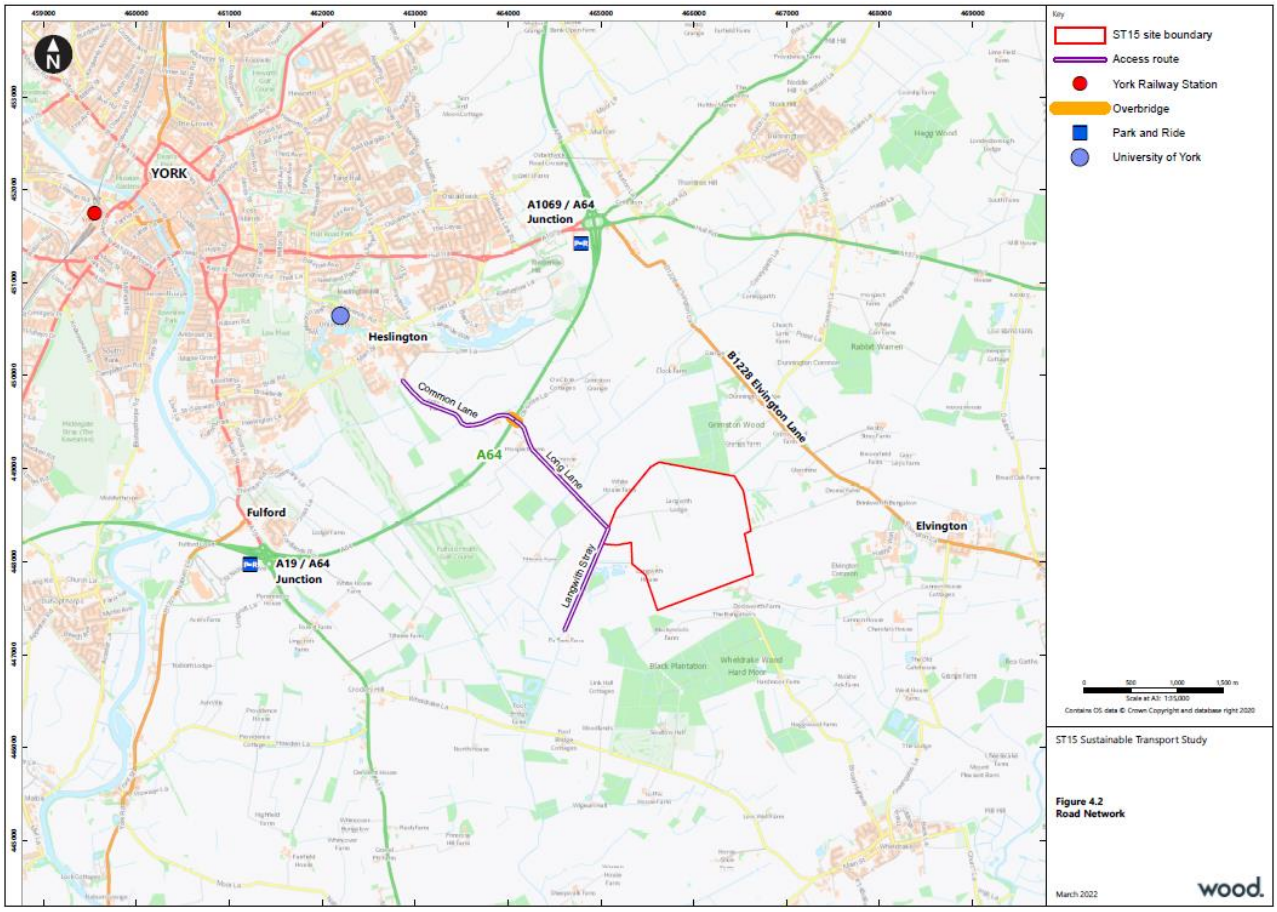
4.2 Site Location and Access

ST15 lies to the southeast of the City of York, outside of the A64 city ring road, approximately 3.74 miles from the centre of York and 30 miles away from Leeds to the southwest. It is located west of Elvington Airfield and the Airfield Business Park, with the villages of Elvington to the east, Wheldrake to the southeast, Heslington to the north and Fulford to the west.

Vehicular Access

The nearest road is Elvington Lane, which connects Elvington village and the access to York from A1079/A64 junction. **Figure 4.1** shows the geographical layout and transport network near the site. As shown in Figure 4.1, vehicular access to York from the Site is achievable via Langwith Stray, Long Lane and Common Lane and an overbridge across the A64, into Heslington Village. Long Lane and Common Lane are single lane carriageways with widths of around 2.-6m – 4.1m and a derestricted speed limit of 60mph. Long Lane is 1.9km long and Common Lane is 1.4km long up to where it connects with Heslington Village. Neither road has separate pedestrian or cycle provision. The speed limit on Common Lane reduces to 30mph on the outskirts of Heslington and the road becomes Main Street within Heslington. A footway is provided on the eastern side and there is some street lighting. A road sign in Heslington indicates that Common Lane routeing south is a dead end. This is because the route provides access to a few private properties and Langwith Lakes (off Langwith Stray). Langwith Lakes comprises four coarse fishing lakes which can be booked by individuals and also for club matches. Traffic flows along the route are therefore low.

Figure 4.1 Location of ST15 and Current Transport Network Near the Site



The images below show the typical characteristics of Long Lane and Common Lane.

Views of Long Lane

Image Source: Google StreetView

Views of A64 Overbridge and Common Lane

Image Source: Google StreetView

Local Services and Facilities

ST15 will provide primary schools and a local centre which will include retail, GP surgery and community facilities. The nearest secondary schools are Fulford School, approximately 4.7km (3 miles) as the crow flies from the centre of the Site and Archbishop Holgate's School, approximately 3.8km (2.4 miles). The University of York Campus East is approximately 3km (1.9 miles) and the University of York Halifax College is 3.42 (2.1 miles). The Science Park is 3.9km (2.4 miles), the Sports Centre is 4.1km (2.6 mile, the city centre is 5.8km (3.6 miles) and the rail station is 7km (4.4 miles).

4.3 Active Travel

A description of the connectivity by active travel modes – cycling and walking is provided below.

Figure 4.2 shows the PRoWs including footpaths and bridleways in the vicinity of the site.

There is a bridleway network which provides access to Fulford and Heslington via two overbridges of the A64. The route is from the southern end of Langwith Stray at Fir Tinn Farm, onto bridleway 7/12/10 along the eastern side of Heslington Common which is also part of the Fulford Golf Club course and bridleways 7/3/30 and 7/14/20 along the northern side of the Common. There is then the option of travelling to Heslington via an overbridge of the A64 and into Heslington on bridleways 7/3/20 and 7/4/10. The alternative is to travel to Fulford by using bridleway 5/15/10 which runs parallel to the A64 for a section and then onto Forest Lane (bridleways S/19/20) to access the overbridge near the A64/A19 junction. Forest Lane becomes Fordlands Road, from where it is possible to access the A19 and also Fulford School.

There are footpaths that connect into the bridleways and information on walking routes that can be taken can be found in the CYC *Walks in York – Fulford and Heslington*[18] document. The route is about 4.75 miles long (two hours) starting from Fulford (long walk) via Forest Lane to reach Heslington Tillmire, also passing by White House Farm, Tillmire Farm and Golf Course.

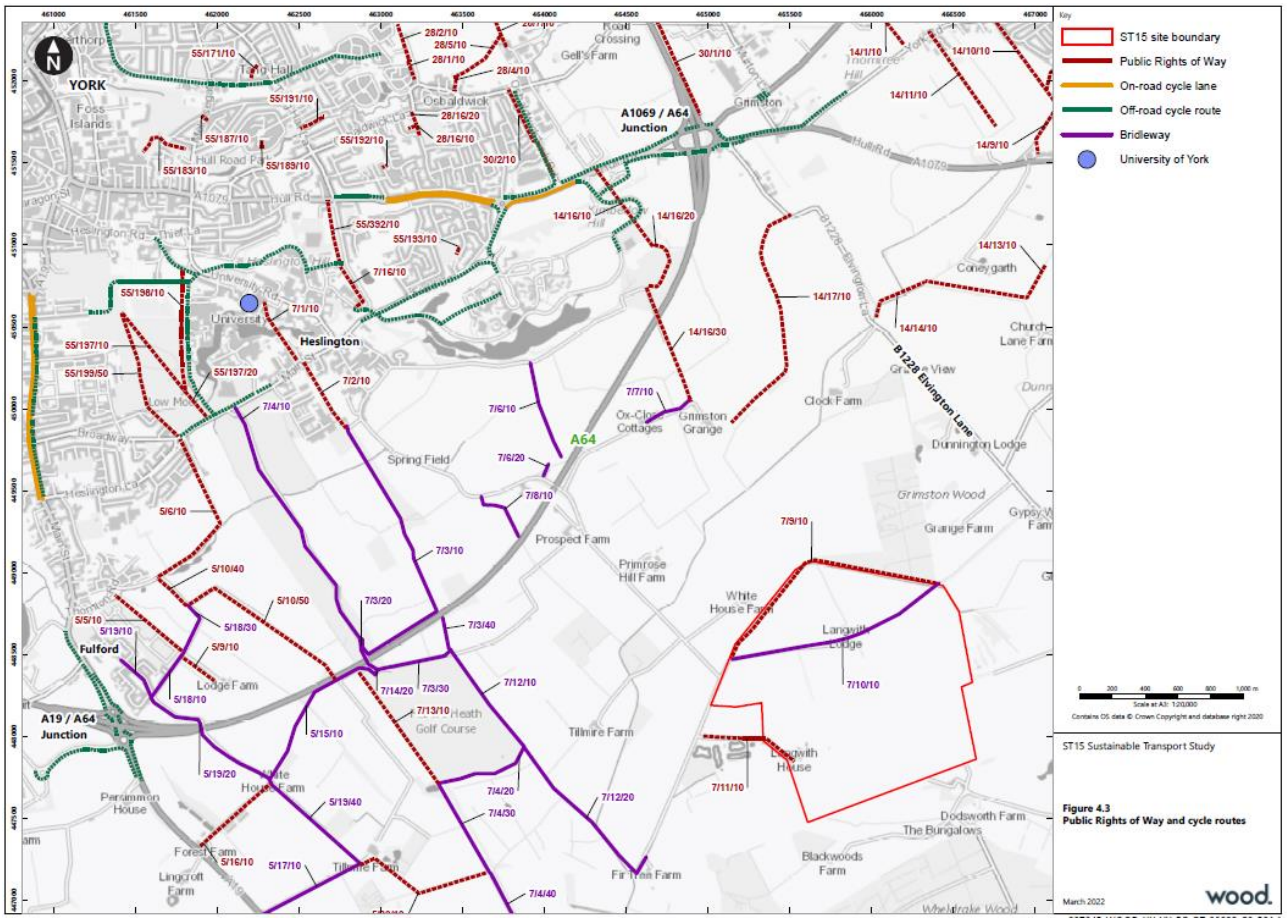
There is no existing dedicated cycle infrastructure between the site and York. Although it has very low traffic flows, Long Lane/Common Lane is currently a poor cycling environment due to its narrowness and permitted speed limit of 60mph.

[18] *Walks in York – Fulford and Heslington*, CYC. Available online - https://www.york.gov.uk/downloads/file/3922/walking-map-of-fulford-and-heslington-4-3-4-miles (Accessed 03/05/22)

The bridleway network is a cycle route option, however as it is not surfaced, it would be difficult for cyclists to use particularly during the winter and wet weather.

It is noted that the University of York encourages cycle travel to its campuses. As set out in its Travel Plan Strategy (2015 – 2020), there are 5,406 cycle parking spaces available including 2,000 secure and covered areas have been provided across the University to support long and short-stay cycle parking. The uptake of initiatives including Free Cycle Hire, Love to Ride scheme, Cycle Cashback also encourages students to choose to cycle. There are a number of off road and on road cycle routes between Heslington and the University and to the city centre.

Figure 4.2 Current Cycle Routes and Public Rights of Way

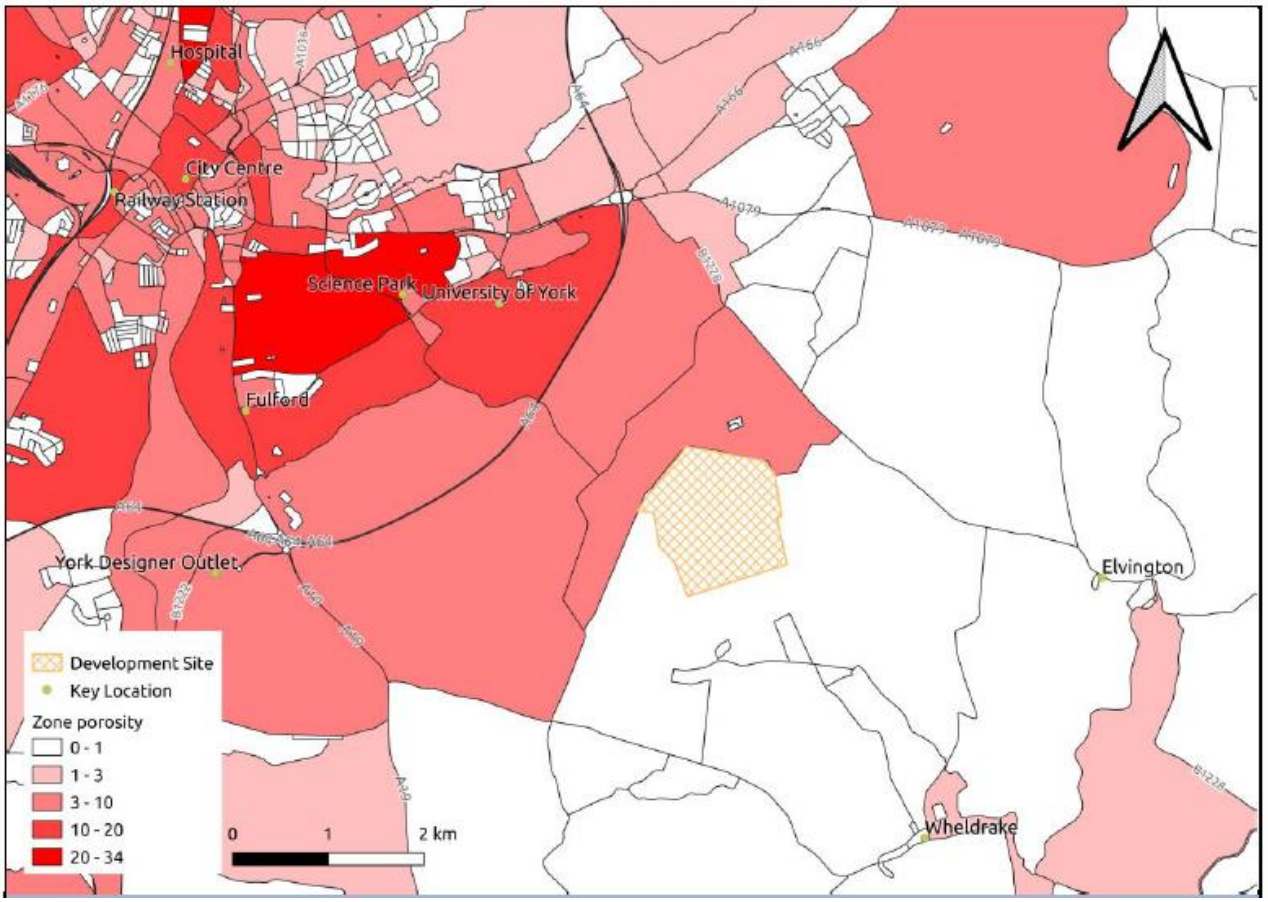


Active Travel Porosity

Figure 4.3 shows analysis of the provision of active travel infrastructure based on PRoWs, cycle routes, road crossings, etc. The boundaries of each zone are defined by physical barriers (e.g. roads or waterways). The colour of each zone indicates its porosity (i.e. the number of entry points into that zone for an active traveller).

Figure 4.3 shows that the zones to the south of the site have low porosity. This indicates difficulty travelling to Wheldrake and Elvington. The zones to the west and north of the site have medium porosity. This indicates active travellers can travel to the York Designer Outlet, University of York, Science Park, Fulford and inner area of the City of York. However, there are limited locations for crossing the A19 and A64. There is high porosity in the zones surrounding the Science Park, University of Yok, Fulford, Railway Station and City Centre. This indicates ease of access to these key locations once in the City of York's urbanised area using existing paths and routes.

Figure 4.3 Active Travel Porosity



Contains OS data © Crown copyright and database right 2021

4.4 Public Transport

Bus

Bus services 36/X36 and 196 route from Elvington to York. Both services are subsidised. **Table 4.1** shows the service frequency and route description for the bus routes to Elvington (although there are other bus routes on Hull Road, such as the 46/X46 which could potentially serve ST15 via a detour). Bus services timetable and service level might differ due to COVID-19. provide services between Fulford, Heslington, Elvington and York city centre.

Table 4.1 Bus Services Along Elvington Lane

Bus services	Operator	Frequency	Route Description
X36/36	York Pullman	5 services every 2 hrs (approx.) Monday to Friday 3 services every 2 hours (approx.) Saturday No service on Sundays or bank holidays	Sutton Upon Derwent – York Railway Station
196	York Pullman	-One return journey on Thursdays only.	Aughton - York

Figure 4.4 shows the routes of the two services, as well as other routes within the southeast of the city.

Figure 4.4 Bus Services X36/36 and 196 Routes

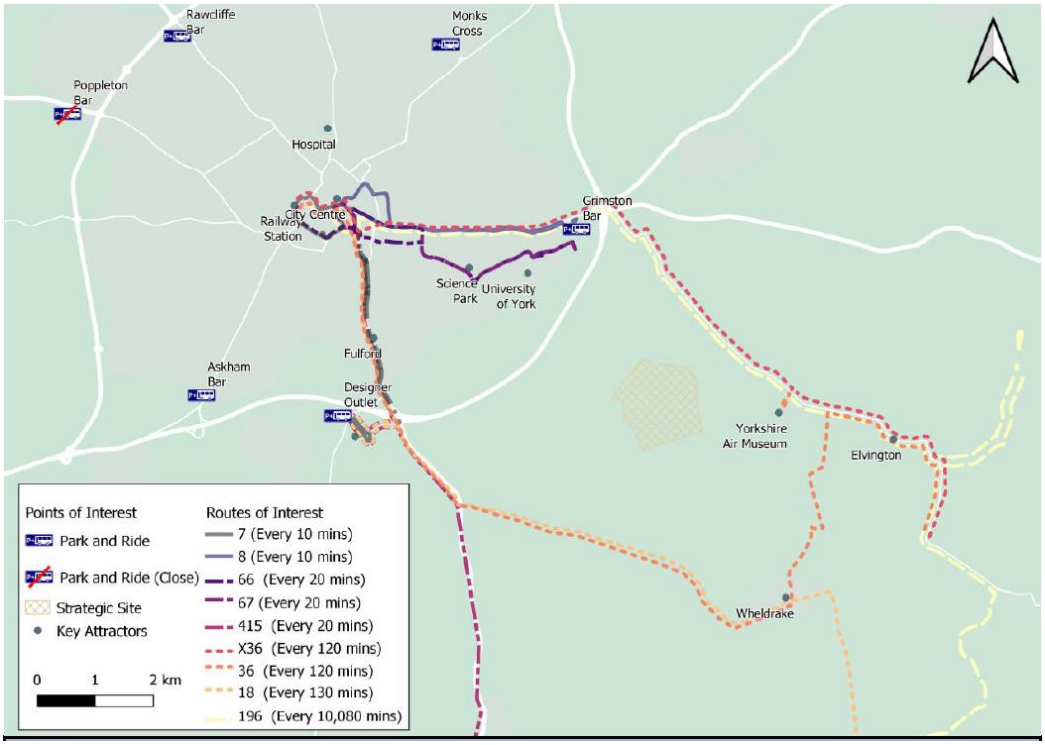
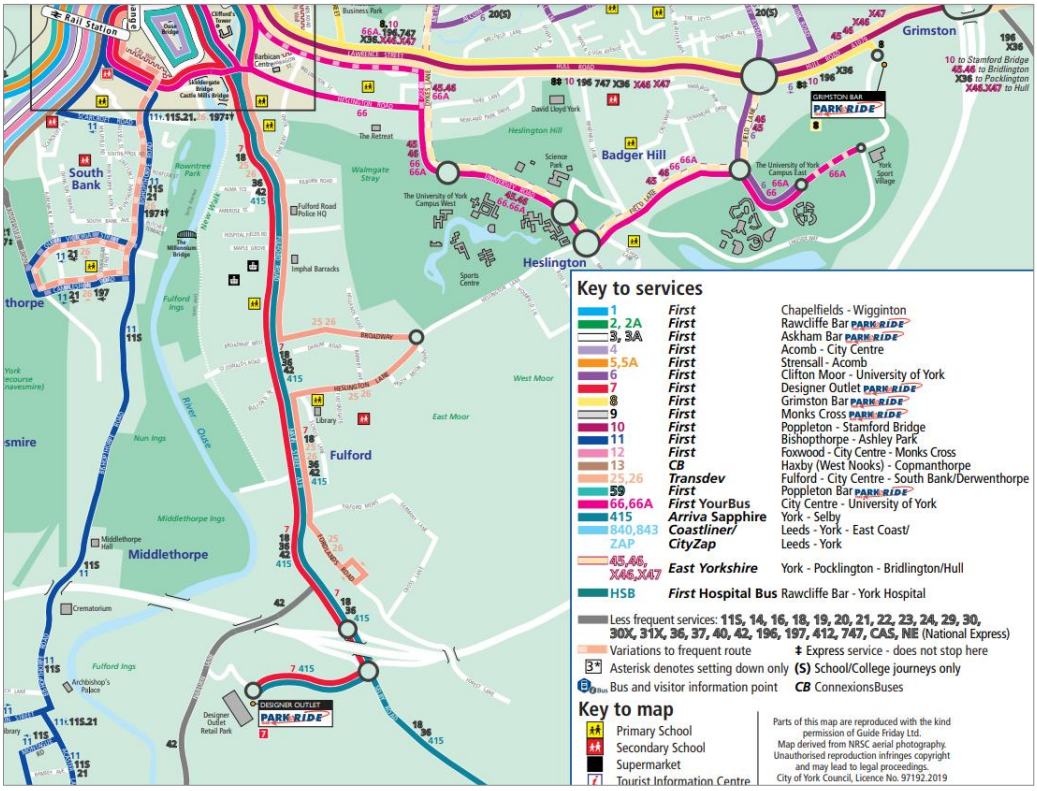


Figure 4.5 shows all the bus service routes in York between the city centre and the south eastern arc.

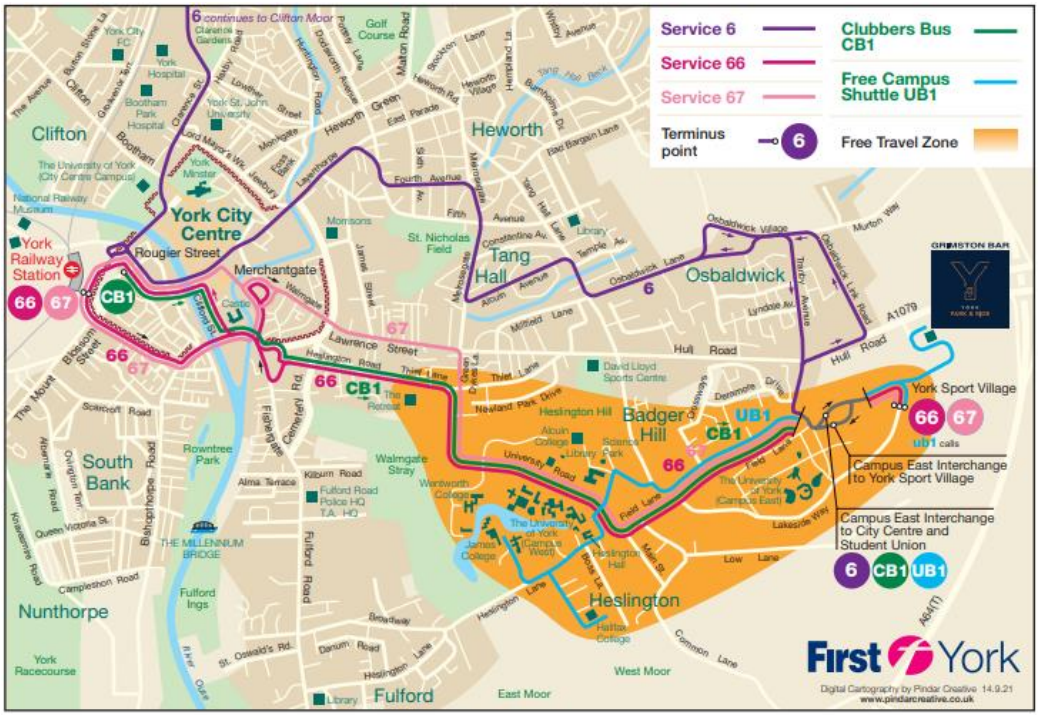
Figure 4.5 York Bus Route Map



Source: https://www.itravelyork.info/downloads/file/2/york-bus-route-map

There is also a number of bus services will reach the University of York, including two free campus shuttle UB1 and UB2 and a free travel zone, the routes of which are shown in **Figure 4.6.**

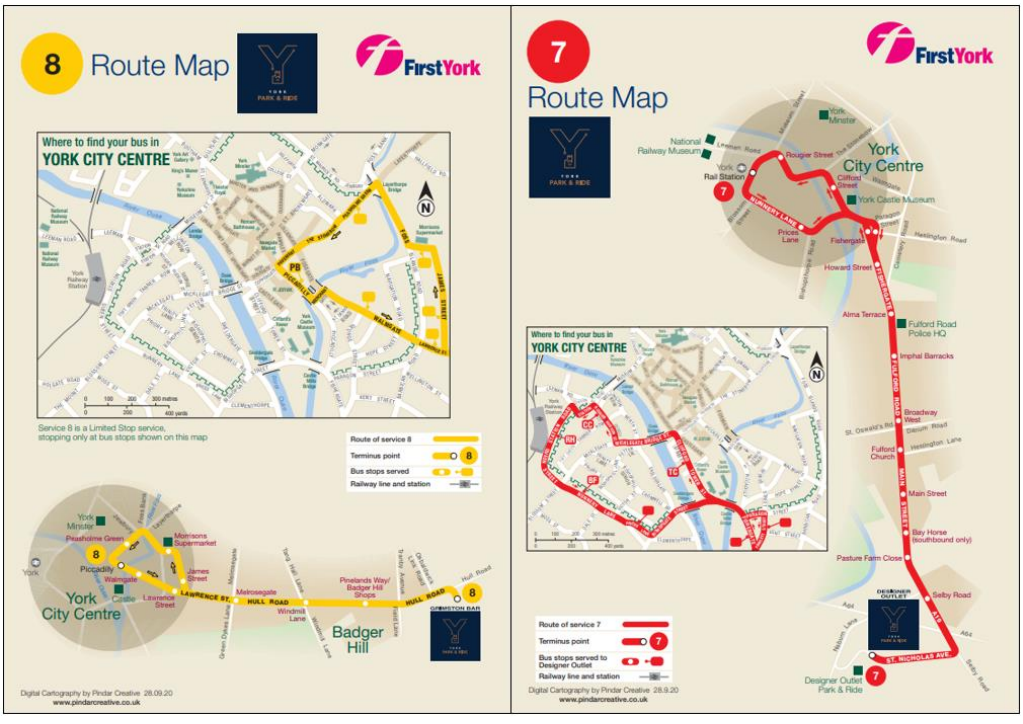
Figure 4.6 First York University Services



Source: https:// https://www.york.ac.uk/media/abouttheuniversity/investinginourcampus/Uni_of_York_Network_Map1.pdf

There are two P&R facilities available around off the A64 to the south east of the city – Grimston Bar P&R to the north and Designer Outlet P&R to the west. The Grimston Bar P&R is located at A64/A1079 junction, with the capacity of 920 parking spaces. Designer Outlet P&R is located near A19/A64 junction and has a capacity of 600 parking spaces, although these are shared with the Designer Outlet and become crowded at peak times (e.g. the run up to Christmas). **Figure 4.7** shows the P&R bus services to the city centre, bus service 7 starting from Designer Outlet P&R and bus service 8 starting from Grimston Bar P&R.

Figure 4.7 Park and Ride Bus Route Map



Source: https://www.itravelyork.info/park-and-ride/park-and-ride-map-for-york

Based on the current highway and bus network, multimodal travel options that could be used between the site and York are as follows.

- Cycling to bus – cycle along the bridleways to reach Fulford or Heslington village and then either park cycle at the Designer Outlet and use bus services 7 or 414 to city centre or park at the University of York or Grimston Bar to use bus services 66, 66X (limited times), N66 (night services), 67, 6, 8 (P & R) to arrive at York railway station or city centre.
- Walking to bus - same routes as above although the distance to the bus stops are relatively long for walking option. To use the bus services of 66, 66X, N66, 67 or 6 near the University area would be recommended to minimize the walking distance.

However, both these options are unattractive, and a frequent and high quality bus service needs to be provided into ST15 as the site becomes occupied.

Rail

Until 1968 a rail line passed approximately 2km from the southern edge of the site. This line, which was operated by the Derwent Valley Light Railway Company and was constructed to light railway standards ran from Cliffe Common in Selby to Layerthorpe in York. During the second half of the 20th century the connectors to the British Rail network were lost at both ends of the DVLR line and it is assessed as impractical to reopen the line now to serve Langwith – so this option is discounted. Consequently, anyone from the site wishing to travel by rail would need to access the network at York or another existing rural station outside the city, or the station at Haxby which is being developed.

The City of York railway station lies on the East Coast Main Line and is approximately 7km from the centre of the site (as the crow flies). The station provides passenger services in the directions of Edinburgh and London. York is on the Trans Pennine rail service route between Scarborough and Leeds/ Bradford/ Manchester/ Liverpool. There are services to Harrogate, Hull, Selby, Teeside and the cross-country route to South Yorkshire, the Midlands and the South-West. There are approximately 160 trains per day to Leeds with a minimum journey time of 21 minutes.

Within the York railway station, there are 626 cycle parking spaces and 80 secure stands. The cycle storage space is also equipped with CCTV for secure cycle parking. Cycle hiring is also available to facilitate the sustainable travelling options. Car parking at station includes the station car park (604 with 6 accessible spaces available) and station short stay car park (30 with 6 accessible spaces available). Currently there are no electric vehicle charging facilities within the station parking.

CYC is also developing the Park and Ride network to provide more effective connections to the rail network (for instance, through linking the Grimston Bar service through to the Rail Station and allowing overnight parking at the park and ride sites).

4.5 Travel Time Analysis

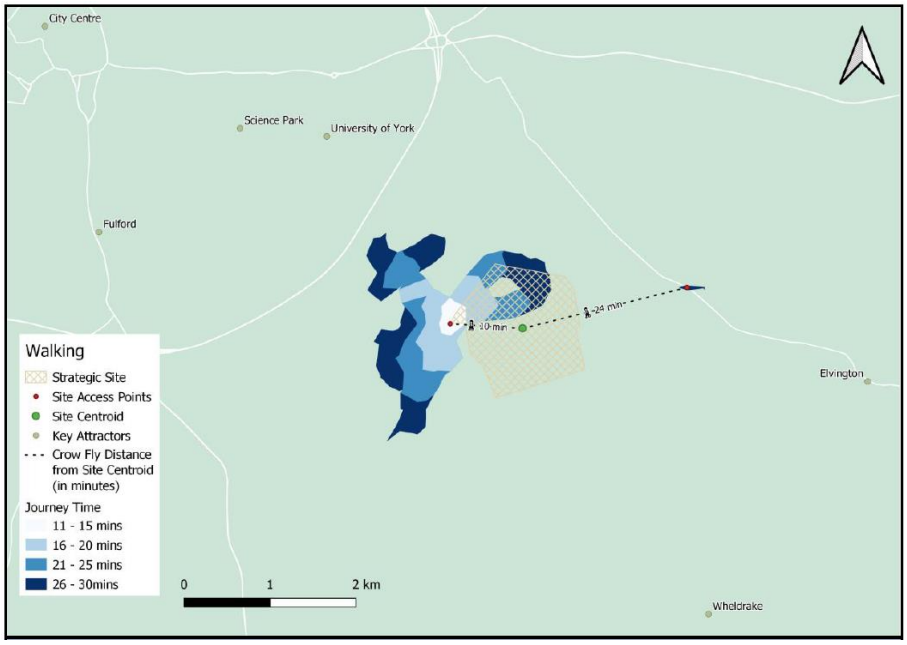
Travel time analysis by form of transport has been undertaken based on the infrastructure and services currently available. The isochrone origins are calculated from the Site access points which are the closest strategic locations to the Site on the pre-existing network. The journey time includes the 'crow flies' time from the centre of the Site (the Site Centroid) to the Site access points.

Walking

Figure 4.8 shows that none of the key locations, such as the University of York, the Science Park, Fulford, the city centre and railway station, etc, are accessible within 30 minutes walking from the Site centroid. This assumes a walking speed of 5kmph.

It can be concluded that walking will not be a viable form of transport to external trip attracters. However, walking will be extremely important for travel within the Site itself, to local attractors such as the schools and the local centre, and to bus stops for onward travel outside of ST15.

Figure 4.8 Travel Times by Walking

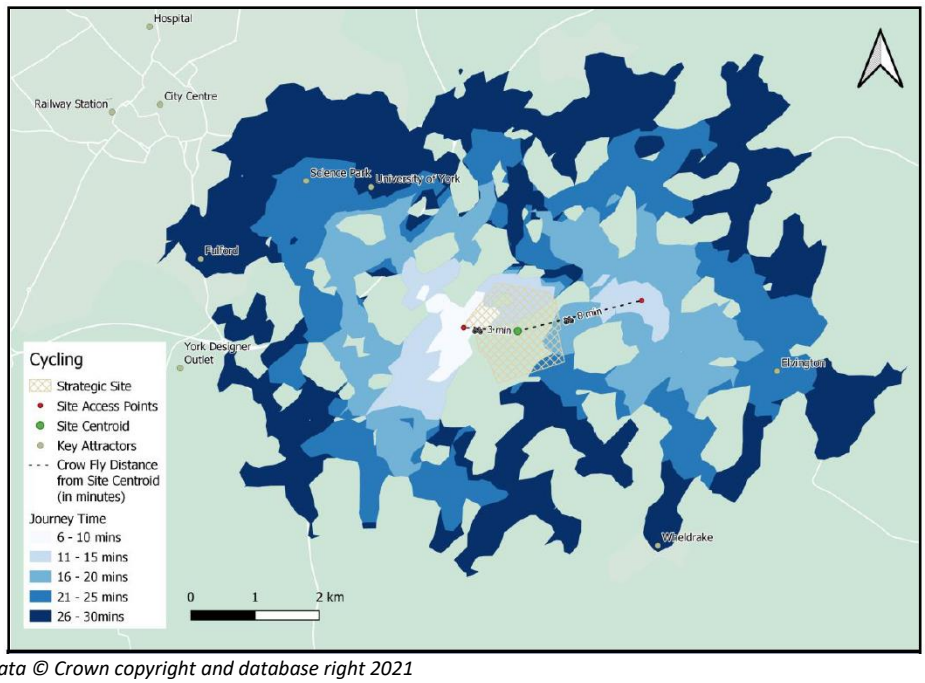


Contains OS data © Crown copyright and database right 2021

Cycling

Figure 4.9 shows that many key locations, including the University of York and the Science Park, are within 30 minutes of cycling time based on actual routes and speeds of approximately 12kmh (7.5mph). However, this does not include the city centre or the railway station, which would entail an additional 5 – 10 minutes journey time.

Figure 4.9 Travel Times by Cycling



Contains OS data © Crown copyright and database right 2021

It can be concluded that cycling is a viable form of transport for the major trip attracters in the south and southeast of the city, particularly the University of York, but is less so for the centre of the city and locations to the west and north. Cycling will be extremely important for travel within the Site itself, to local attractors such as the schools and the local centre, as well as to bus stops for onward travel outside of ST15.

Bus with Walking

Bus with walking is currently not a viable travel option given that there are no bus services within 1 km of the site, and some parts of the site are 2-3km from the nearest existing bus stop. The only service which can be reached within a feasible walking distance is the infrequent service on Elvington Lane which is inadequate for commuting purposes.

Policy SS13 sets out a need for a high frequency service into the site. Therefore, a completely new service (which may be provided by extending an existing service, on a new segregated route, is required to comply with the policy.

Travel Times by Mode Comparison

The table below summarises which key locations can currently be reached within a timeframe and mode combination.

Key Location	30 minutes' walk	30 minutes' cycle	30 minutes' bus and walk
Wheldrake	✕	✓	✕
Elvington	✕	✓	✕
University of York	✕	✓	✕
Science Park	✕	✓	✕
Fulford	✕	✓	✕
York Designer Outlet	✕	✕	✕
City Centre	✕	✕	✕
Railway Station	✕	✕	✕
Hospital	✕	✕	✕

4.6 Travel Analysis - Demand for Travel

In this section we consider demand for transport in the context of York's urban area.

Analysis has also been undertaken on the demand for travel based on travel to work patterns from the 2011 Census based on lower super output areas (LSOAs) which are small areas designed to be of a similar population size with an average of 1,500 residents or 650 households. Travel for other journey purposes is not included as it is not part of the Census.

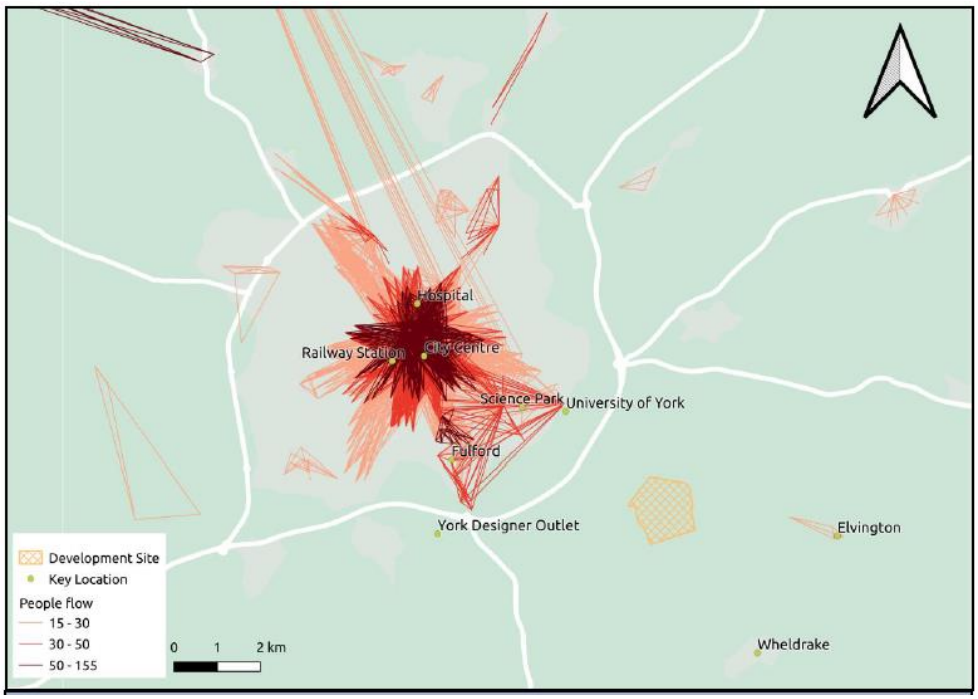
Walking

Figure 4.10 shows that the majority of substantial commuter walking flows are within the City of York's urban area as there are clear transport hubs within this area. Primarily this is the inner area surrounding the Hospital, Railway Station and City Centre. However, many commutes also begin or end close to Fulford, the Science Park and University of York.

In general, substantial walking commutes are under four kilometres (2.5 miles). This suggests trips of this length are most desirable for walking.

There are few substantial commuter flows with a trip end outside of the City of York's urbanised area. There are few substantial commuter flows with a trip end in the area surrounding the site, Elvington or Wheldrake.

Figure 4.10 Demand for Travel - Walking

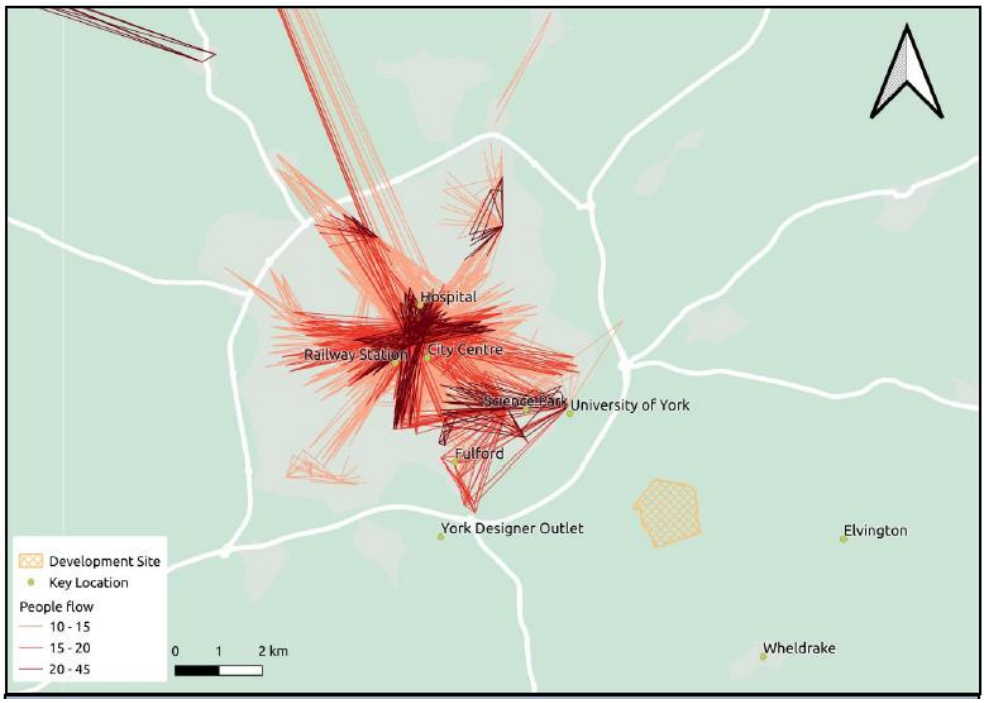


Contains OS data © Crown copyright and database right 2021

Cycling

Figure 4.11 shows the demand for travel by cycle. This shows that the majority of commuter flows by cycle are within the City of York's urbanised area.

Figure 4.11 Demand for Travel - Cycling



Contains OS data © Crown copyright and database right 2021

In general, the analysis of the 2011 Census data shows:

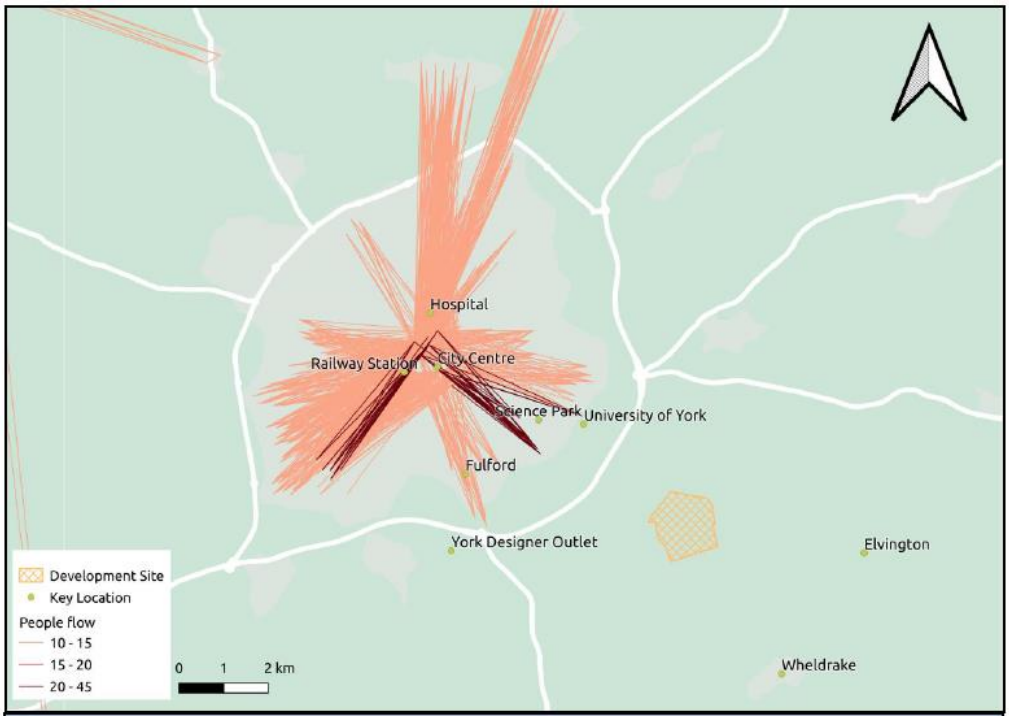
- substantial cycling flows contain fewer commuters than substantial walking flows;
- a substantial cycling flow is of greater length than a substantial walking flow;
- substantial cycling flows are between 3 and 8km (2 to 5 miles) which suggests that trips of this length are most desirable for cycling; and
- there are no substantial walk/ cycle commuter flows with a trip end in the area surrounding the site, Elvington or Wheldrake (either as an origin or destination).

Bus

Figure 4.12 shows the demand for travel by bus. In general, this shows:

- The majority of substantial commuter flows are within the City of York's urban area;
- The flows with the greatest number of people are approximately 3.5km (2.2 miles) in length;
- There are no substantial commuter flows with a trip end in the area surrounding the site, Elvington or Wheldrake, although it should be noted that flows of less than 10 people are excluded.

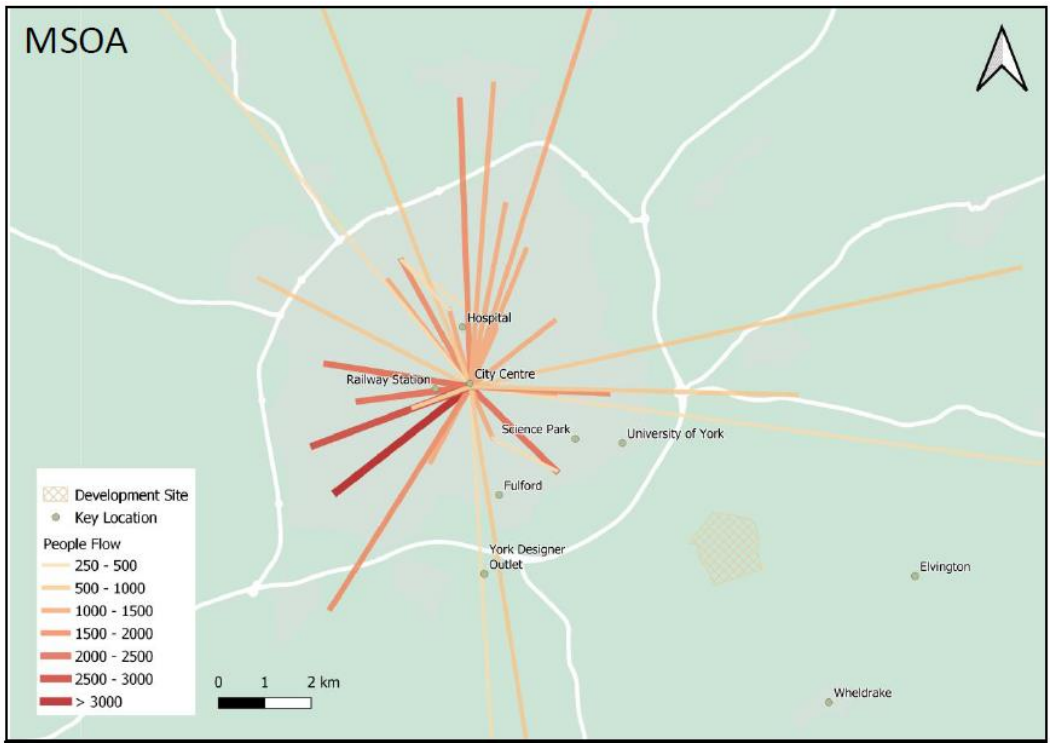
Figure 4.12 Demand for Travel - Bus (Interzonal)



Contains OS data © Crown copyright and database right 2021

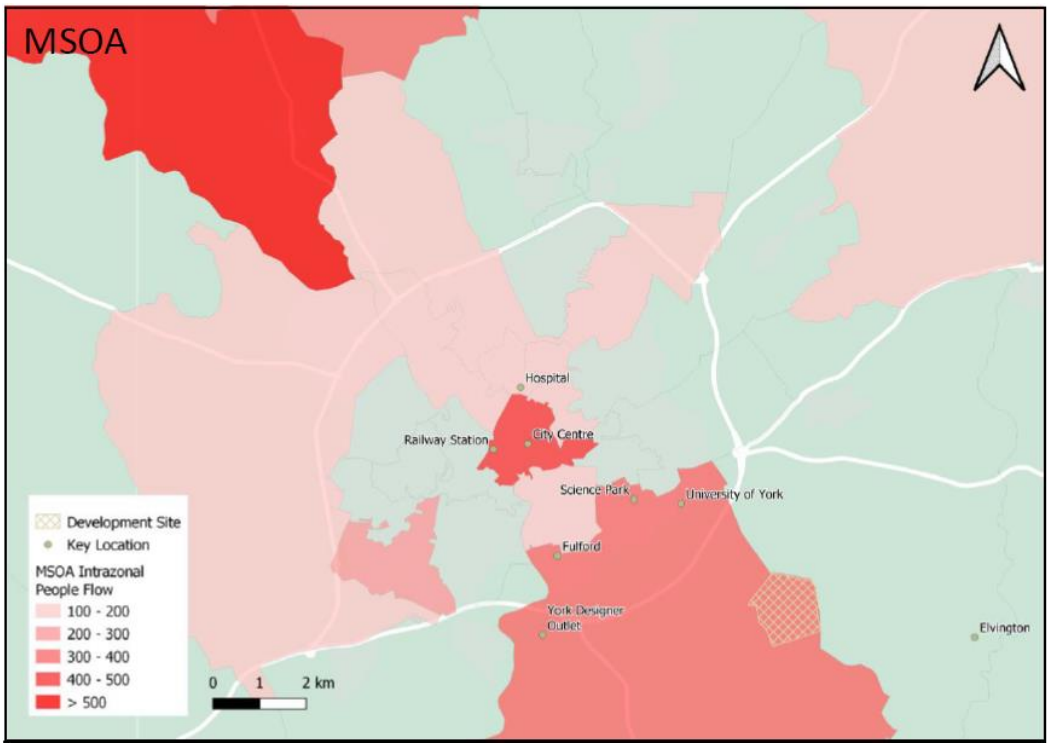
Further analysis of the 2011 Census data has been undertaken by looking at the Middle Layer Super Output Areas (MSOA) which are built from groups of contiguous LSOAs and have a minimum population of 5,000 and an average of 7,200. **Figure 4.13** shows people flows from 250 to over 3,000 and indicates flows to the MOSOAs containing Poppleton, Dunnington, Bishopthorpe and Selby.

Figure 4.13 Demand for Travel - Bus (MSOA – Interzonal)



Some of the MSOA trips are intrazonal, as illustrated in **Figure 4.14**. In the case of the city centre MSOA, these trips will be a maximum of 2km.

Figure 4.14 Demand for Travel - Bus (MSOA – Intrazonal)

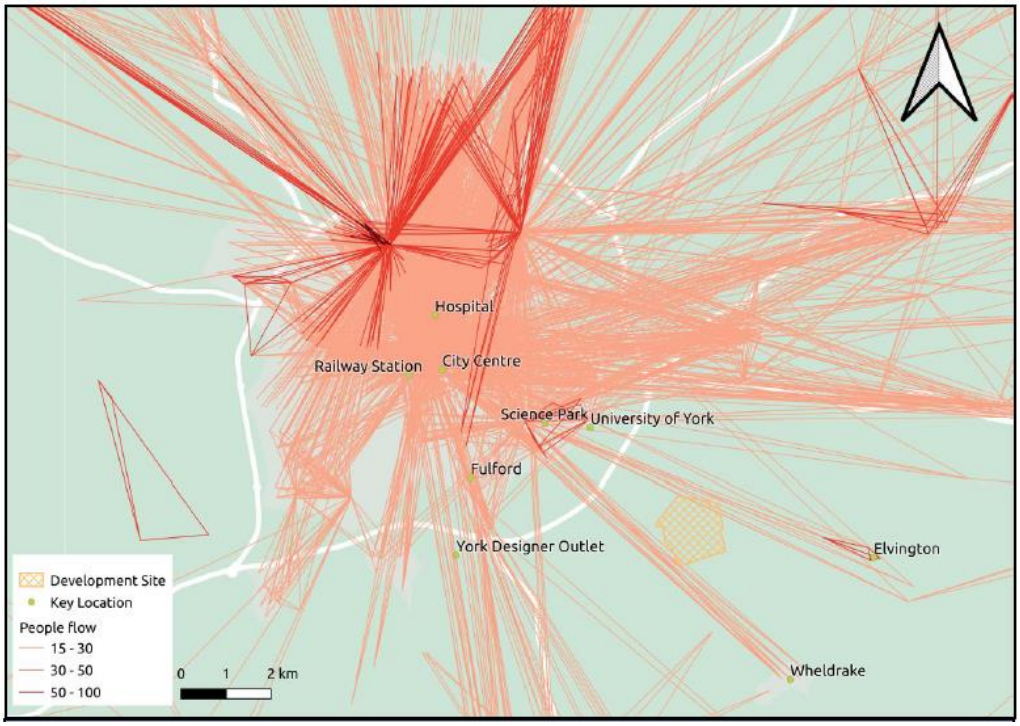


Car

Figure 4.15 shows the demand for travel by car. This shows that there are many substantial commuter flows with trip ends outside the City of York's urban area and suggests that the car is the most popular choice for commuting into the city from rural outskirts. The car trip distribution is clearly much more polycentric than the bus distribution, which is much more focussed on the city centre. The car flows chart shows substantial flows to Clifton Moor and Monks Cross, for example, these being the locations of major supermarkets and multiple large non food retailers, as well as significant employment.

Given the site is outside of the urban area, this data suggests that car travel will be a popular mode choice for commuting unless the desirability of other modes is enhanced.

Figure 4.15 Demand for Travel - Car



Contains OS data © Crown copyright and database right 2021

4.7 Strategic Traffic Modelling

The evidence base for the Draft Local Plan includes a Transport Topic Paper[19] which reports the findings of a refresh of the York strategic transport model to test the impacts of the Local Plan growth on the York transport network and included infrastructure expected to be implemented by the forecast year of 2032/33. This includes the A64 grade separated junction required to deliver ST15.

The conclusions from the traffic modelling include the following:

- For the baseline year of 2016, the majority of the network appears to operate above 50% (or even above 75%) of free flow speeds
- Much of the A1237 outer ring road (ORR), the inner ring road (IRR) and the key southern and western radial routes into the city centre appear to operate at below 50% of the free-flow speed;

[19] *City of York Local Plan Submission Draft – Transport Topic Paper*, CYC, April 2018. Available online - https://www.york.gov.uk/downloads/file/1654/sd076-city-of-york-transport-topic-paper-2018- (Accessed on 03/05/22)

- In the future year (2032/33) with the Local Plan growth, journey times are generally expected to increase. The majority of the forecast journey time increases are relatively modest (i.e. < 2 mins.), but a number of key routes have bigger increases, such as Fulford Road in the south of the city which has an increase of approximately +4 mins in the AM Peak and +4.5 mins in the PM peak on the inbound lane. The main parts of the network forecast to be impacted includes the A64, and Fulford Road,

CYC has also commissioned a new transport model (in VISUM) - the Smart Travel Evolution Programme (STEP) which will monitor and enable analysis of real-time journey information to improve travel in York. The approach will monitor traffic and use 'urban traffic control' (UTC) systems to adjust traffic signals to improve transport flow on the network. STEP will also generate a multi-layered, real-time model of traffic, public transport and air quality data, allowing York to prepare for connected and autonomous vehicles.

The development of STEP has required the creation of a new transport model (vehicles and public transport) which has a 2019 baseline and a future scenario of 2040 which is the basis for testing the impacts of the Local Plan growth. With respect to ST15, **Table 4.1**shows the trip assumptions by form of transport which have been used in the transport model. This includes the assumption that 15% will travel by bus.

Table 4.1 ST15 Trip Rates

		AM Peak Hour			Inter Peak Hour			PM Peak Hour		
		In	Out	Two-way	In	Out	Two-way	In	Out	Two-way
Person trip rate	Private dwellings	0.176	0.572	0.748	0.24	0.23	0.47	0.399	0.195	0.594
Person trips	3,300 dwellings	581	1,888	2,468	792	759	1551	1,317	644	1,960
Car driver	68%	395	1,284	1,679	539	516	1,055	895	438	1,333
Car Passenger	6%	32	105	137	44	42	86	73	36	109
Pedestrians	5%	30	99	129	41	40	81	69	34	103
PT Users	15%	87	283	370	119	114	233	198	97	294
Bicycle	5%	31	101	132	42	41	83	70	34	105
Motorcycle	1%	6	19	25	8	8	16	13	7	20

Table 4.1 shows that in the AM peak hour, 1,679 trips from ST15 will be by car and 370 will be by public transport. Assuming that this is by bus, this would require a minimum of six buses in the AM peak hour based on 60 passengers per bus. This level of demand suggests that there is clear potential for a viable bus network from the site.

4.8 Key Conclusions

Based on the information and analysis, the following conclusions can be derived.

- The site is in a rural area, with the majority of demand for travel expected to be to within the City of York's urban area. Current travel patterns show that, whilst active travel is a popular mode choice within the city, travel to and from the surrounding area is mostly done by car. Meeting the targets set in the Local Plan policy for ST15 will require significant interventions to provide effective bus services, and also active mode, particularly cycling, infrastructure for trips off the development. However, the high forecast level of trips to the University of York suggests that the 15% mode share to bus is achievable.
- The proposed road links will well connect the site with the region's road network, but it is necessary to mitigate, as far as possible, the number of car trips on and off the site in order to manage the adverse impact on the surrounding road network, particularly the A64

- Owing to the distances involved, walking is unlikely to be a viable transport option for key destinations external to the Site. The University of York campus is 3km (1.9 miles) from the centroid of ST15 as the crow flies, so could attract a limited number of walking trips particularly in summer months. However, walking will be an extremely important component of the sustainable transport strategy within the Site itself, especially for trips to bus stops etc.
- With current infrastructure, cycling is unlikely to meet much of the site's travel demand. However, if dedicated cycle links to University of York/ Heslington/ University Science Park, Wheldrake are installed then this is much more likely. These links should ideally be all-weather and lit.
- Bus with walking is currently not a viable travel option given that there are no bus services within 1 km of the site, and some parts of the site are 2-3km from the nearest existing bus stop. Policy SS13 sets out a need for a high frequency service into the site. Therefore, a completely new service, or extension of an existing high frequency service, on a new segregated route, is required to comply with the policy.
- Travel to the nearby key city, Leeds, is well facilitated by either road travel or the regular train service from City of York railway station. If journey time from the site to the station can be brought to 20 minutes, for example by an express bus service, journey times could be comparable and hence encourage use of sustainable modes. An alternative would be to develop an express bus service directly from ST15 to Leeds. Potentially, this could serve other strategic sites around York and/ or the Park and Ride terminals.

5. Trends in Travel Behaviour and Transport Technology

In this chapter we consider the trends in travel behaviour and the changes in transport technology that should be considered in the ST15

5.1 Introduction

There is a growing recognition that people will move around in very different ways in the future and that the Site should be 'future proofed' as far as possible. The following section in this chapter considers changing trends in travel behaviour and transport technology and inclusion in the ST15 Sustainable Transport Strategy.

5.2 Changing Trends in Travel Behaviour and Transport Technology

In recent years there has been significant change in technological advances and social, economic and environmental conditions which influence travel behaviour. There is a growing body of evidence that the traditional approach to transport planning using the "predict and provide" process of basing future transport needs on past trends is flawed as travel trends are changing. The problem with this approach is that providing infrastructure that meets previous predicted needs rather than the transport needs of the future can lead to the over provision of highway capacity which in turn 'induces' travel demand. Providing for vehicles is often at the expense of walking and cycling infrastructure or public transport services. This is either because providing for vehicles starves sustainable modes of funds or physical space (e.g. bus/ cycle lanes). The following sections provide a summary of the evidence presented in three recent reports.

ALL CHANGE? The First Report of the Commission on Travel Demand -The future of travel demand and the implications for policy and planning, Commission on Travel Demand, May 2018[20]

The All Change report was based on 12 months of research, and evidence gathering from across the UK and Europe found that assumptions developed during decades of planning for growing car ownership which underpins the traditional understanding of travel demand growth have become limited and sometimes incorrect. Key findings include:

- Since the mid-1990s there has been a 20% reduction in commute trips per week;
- 18-30 year-old males travel 50% fewer miles than they did in 1995;
- In the 1990s 80% of people were driving by the age of 30, this is now by the age of 45;
- In the 1980s traffic grew by 50% whereas in the decade to 2016 it grew by 2%; and
- There are 16% fewer trips than 1996, due to societal shifts in work and shopping; changing demographics; increased urbanisation; and the opportunities provided by communication technologies and the digital age.

The report remarks that future demand policies should be led by asking "what sort of places do we want to live in, what kind of activities do we need to travel for and what actions need to be taken"? By planning

[20] *ALL CHANGE? The First Report of the Commission on Travel Demand The future of travel demand and the implications for policy and planning*, Commission on Travel Demand, May 2018. Available online - http://www.demand.ac.uk/wp-content/uploads/2018/04/FutureTravel_report_final.pdf (Accessed on 03/05/22)

differently, lower and more sustainable levels of travel demand than have previously been observed are being created. These questions need to be asked in the planning of any new development.

The report also sets out the key transportation technologies that have the potential to transform the way we travel which have been described as the Three Revolutions.

- Electrification of the vehicle fleet – will reduce cost per mile of driving, which may result in additional travel.
- Automation of the driving task – will open up greater possibilities to people who find accessing the transport system difficult.
- Widespread adoption of shared mobility – increased sharing of vehicles, such as Liftshare, Lyft and Uber. Share mobility could trigger a shift away from car ownership. In 2007 there were 32,000 car club members and by 2017, this had increased to nearly 250,000. We would expect this trend to continue as ST15 is developed.

TRICS Guidance Note on Changes in Travel Behaviour, July 2019[21]

The TRICS report makes reference to the All Change report and provides the following summary on changes in trends which impact on travel and vehicular trips on the road network. It is worth noting that this research was released pre-Covid. Many of the changes which have recently been seen as resulting from the Covid pandemic (e.g. more working from home by those able to do that) were in fact presenting before Covid – although the pandemic may have accelerated their adoption.

- **Retail:** Online shopping is growing at around 10-12% per annum and there has been a 25% decrease in physical shopping trips over the past 20 years and a 16% decline in distance travelled.
- **Travelling less:** 16% fewer trips are made now than in 1996. The number of motorised trips undertaken per year is 14% less than in 2002. Person miles are 10% less than in 2002 and people are spending 22 hours less time travelling per annum than in 2005, and less than at the start of the 1990s.
- **Travel to work:** The DfT's review of travel to work trends in 2017 revealed that there was a substantial decrease in commuting trips between 1988/92 and 2013/2014, from 7.1 journeys per worker per week down to 5.7 journeys. Work patterns are changing and this needs to be reflected in the planning process, for example, working from home is growing.
- **Age differences:** Over 65s are using their cars more than previous older cohorts but have different trip patterns from those who work which will affect peak hour trip rates. Younger people are far less likely to have a driving license and subsequently drive less than previous generations. Over a 20 year period the proportion of 17 -20 year olds holding a driving license has dropped from nearly one half to less than a third. Younger generations are travelling 20% less (17-34 years) and 35-64 year olds are travelling 10% less.
- **Socio-economic conditions affecting travel choices:** A decline in home ownership, a rise in lower paid, less secure jobs and a decline in disposable income all affect travel and housing choices. Economic and social circumstances have changed and expectations of transport and patterns of living have evolved.
- **Geographical differences:** Shire towns, resorts and rural areas still show the highest mileage and more limited reductions than urban areas, where densities are higher and travel choices are more prevalent.

[21] *ST15 Sustainable Transport Strategy*, TRICS, Basford Powers, August 2019. Available online - http://www.trics.org/img/change-in-travel-behaviour-published-version.pdf (Accessed 03/05/22)

- **Changing transport technologies:** Electric vehicles, connected and autonomous vehicles and shared mobility will all influence travel patterns, although the extent of this is currently unknown. There are no 'right' answers and historic evidence will provide only limited insight.
- **Cycling and walking:** The number of miles cycled in 2016, 3.5 billion, is around 23% above the figure ten years before, and 6.3% more than the miles cycled in 2015. The figure for 2016 is about the same as in 2014, which was the highest since 1987. According to National Travel Survey data, walking trips under 1 mile have gone up 23% between 2005 and 2017.
- **Rail travel:** There has been an increase in rail trips by 56% and a 23% increase in the distance travelled by rail which continued through the 2009-2012 recession period. London Underground saw the first decline in passenger numbers in 2017 of 2%. Rail patronage is also showing signs of slowing in other parts of the country. Area or corridor specific understanding of the changing role of rail is required.

The TRICS report includes historical analysis of the TRICS Database to see how vehicular (car) trip rates have changed from 1999 - 2003 to 2014 - 2018, with a focus on food superstore, offices and residential private dwellings due to the availability of survey data. The findings were as follows:

- **Shopping:** The survey data shows a significant decline in total person trip rates and total vehicle trip rates on a Friday AM and PM peak. There has been a 50% decrease in 12 hour vehicle trip rates on a Friday and 20% decrease on a Saturday between 1999 – 2003 and 2014 – 2018.
- **Office:** The weekday peak decline in trip rates is 32% and across the whole day the decline is 39%. There is little change in vehicle trips rates between 1999 – 2003 and 2014 – 2018 over a 12 hour period but a marked decrease between 2009 – 2013 and 2014 – 2018 of nearly 25%.
- **Private residential:** Total vehicle trips have reduced in both the AM and PM peak hours since 1999, with nearly a 10% reduction over a 12 hour period.

The report concludes that the changes in travel trends will enable a move away from "predict and provide" appraisal techniques to "decide and provide" and that decision makers developers need to ensure that the right type of infrastructure is designed into the proposed development and assessed thoroughly so that any transport schemes support access and mobility needs.

Future of Mobility: Urban Strategy, DfT, 2019[22]

The Government has launched a Future of Mobility programme, starting with an urban strategy which sets out the principles that will guide the approach to emerging mobility technologies and services. The future of rural mobility will be launched in due course. However, given the peri-urban location of ST15, it is reasonable to assume that many of the points raised below will apply to it.

The document sets out how the following changes in transport technology are transforming transport and creating new opportunities.

- **Data and internet connectivity:** Information on congestion, parking availability, bus times are allowing travellers to plan multi-stage journeys with confidence and on the go.
- **Transport is becoming increasingly automated:** UK companies are at the forefront of research and development into connected automated vehicles (CAV) and several projects will deploy self-driving vehicles on road or public spaces in the UK by 2021.

[22] *Future of Mobility: Urban Strategy - Moving Britain Ahead*, DfT, March 2019. Available online - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf (Accessed 03/05/22)

- **Cleaner transport:** Increases in electric vehicles and low emission vehicles supported by the Government's Road to Zero Strategy which aims to see at least half of new cars to be ultra-low emission by 2030.
- **Emerging new modes:** Technology such as drones, and availability of micro-mobility (electric scooters, electrically assisted pedal cycles (e-bikes) and e-cargo bikes) is enabling new ways of transporting people and goods.

The document also sets out changes in demand for transport and how significant changes in demographic, economic and behavioural trends are changing how and why we travel.

- **Falling travel demand at an individual level:** Between 1995 and 2014, while England's population grew by 11% and employment grew by 18%, commuting journeys fell by 16%. Reasons for this include increases in flexible working, working from home, and part-time and self-employment.
- **Shopping trips have decreased** by 30% over the past decade, coinciding with a rise in online shopping.
- **Travel choices show clear generational differences:** Younger people are less likely to own cars than previous generations and are driving less, due to factors such as staying in education for longer, moving into long-term employment and starting families later, as well as the cost of driving. Older people are driving more.
- **Shared mobility** such as ride-sharing and dynamic demand responsive transport is becoming more prevalent.

The document sets out nine key principles to shape the future of urban mobility and to guide Government decision-making, industry and local authorities:

- Safety - new modes and services must be safe;
- Inclusivity - benefits of innovation must be available to all;
- Active Travel - must remain the best options for short urban journeys;
- Mass Transit - must remain fundamental to an efficient transport system;
- Environment - new services must lead the transition to zero emissions;
- Innovation - must help to reduce congestion;
- Market Value - must be open to stimulate innovation and give the best deal to consumers;
- Integration - new services must be part of an integrated transport system combining multiple tmodes;
- Data - must be shared.

The Urban Strategy emphasises the need to respond to opportunities and embrace innovative technologies, but also to understand the potential risks and the fact that there will be unknown and unpredictable changes ahead.

5.3 Key Conclusions

The following are key considerations for the ST15 Sustainable Transport Strategy:

- The travel trends suggest that there is a reduction in driving amongst all but the older age group and the decline in home ownership and disposable income and greater shared living has had an impact

on car ownership and car use amongst young people. It is therefore important that there is easy access via short journeys to services and facilities, and for longer journeys, alternative forms of transport are available, such as public transport and cycle infrastructure.

- Increased levels of working of home which have been accelerated by the Covid pandemic needs to be supported by well-designed homes, superfast broadband, and access to local shops and services to reduce the need to travel outside of the Site.
- With respect to electrification, the number of hybrids and electric vehicles (EVs) in the UK has grown and the provision of EV charging infrastructure is a key concern for local highway authorities. There will be a need to ensure that there are sufficient charge points within the garden village and that the design of new residential developments includes allowance for EV charging within the home.
- There has been a growth in popularity of e-scooters and e-bikes, and consideration should be given to the appropriateness of a hire scheme on ST15.
- Automated vehicle (AV) technology is still at development and testing stage, but will need to be taken into consideration as part of the design of infrastructure for new developments in the near future.
- Shared mobility – sharing of vehicles can help reduce peak hour congestion. The main types of shared mobility are listed below, all of which are appropriate for the ST15 Sustainable Transport Strategy:
    - Car share – when two or more people travel together by car for all or part of a trip. Online car sharing apps and programmes are readily available where car drivers or car passengers can be matched to a lift sharer or can request a lift for specific journeys.
    - Car clubs - short-term car rental services that allow members access to locally parked cars and pay by the minute, hour or day. Car clubs offer an alternative model to private car ownership
    - Shared taxi – this offers the convenience of a taxi, i.e. a door-to-door journey, although will take longer due to multiple passenger drop-offs/pick-ups, but would enable fares to be shared and thus users incur a significantly lower price
    - Mobility as a Service (MaaS) - the integration of various forms of transport services into a single mobility service accessible on demand.

Substantial advances in bus technology, including electric fleets, real time passenger information, ticketing, demand responsive services are appropriate for the ST15 Sustainable Transport Strategy.

6. ST15 Sustainable Transport Strategy

In this chapter we set out the key objectives and design principles for the ST15 Sustainable Transport Strategy based on policy requirements, garden community guidelines and the Site context.

6.1 Introduction

The garden village guidance, as summarised in Chapter 2, emphasises that the garden community ethos is to achieve high levels of sustainable travel through good design that enables active travel and through viable public transport from the outset.

This will also be of benefit to the road network as the results from traffic modelling indicate that, based on the 'traditional' approach to estimating traffic growth and traffic generation, there will be additional congestion and delay on the key corridors near to ST15, including the A64. Therefore, it is important that the use and impact of the private car is kept to a minimum and that active travel (walking, cycling, riding) and public transport is achieved, particularly for relatively short journeys and to key destinations including York University, the Science Park, the Park and Ride sites, etc.

6.2 Objectives for ST15 Sustainable Transport Strategy

It is recognised that people will move around in very different ways in the future - changes in the nature of working and shopping, new technologies and behaviours are already having an impact on how transport is planned and used. It has been established that travel behaviours of young adults are changing, with lower numbers of driving licences and car ownership compared to the 1990s and greater openness to vehicle sharing which new technology will increasingly facilitate.

The current COVID-19 pandemic has disrupted travel patterns in a significant way and any future planning will need to take account of the potential for permanent habit changes and commuting trends. It is not possible to predict any outcomes of this effect at this early stage, there is a need to remain flexible and responsive to the changing external environment, and the danger of assuming that the post-pandemic reality will be a 'back to normal' scenario.

The objectives for ST15 need to comply with the policy and vision within LTP3 and Draft Local Plan Policy SS13. What needs to be avoided is a car dependent settlement that is based around the needs of car users, that undermines the benefits of bus improvement and active travel schemes.

The objectives for ST15 are:

- To create a sustainable community where walking, cycling and the use of public transport are the prime modes of choice for the new residents;
- To achieve a public transport target of 15% mode share;
- To provide a digitally connected development that enables work from home or work from local hub;
- To create a development which, by its best practice design principles, facilitates and encourages active and healthy travel, within inter-generational communities; and
- To design a future-proofed settlement that can respond to technological and societal change.

6.3 Key Sustainable Transport Design Principles

To achieve this, a set of key principles have been identified which need to be embedded in the design of the development so that travel by foot, cycle and public transport become the ethos of the new community.

Movement and Connectivity within ST15

Movement within the site must be prioritised for sustainable modes, and follow the LTP3 hierarchy of users with pedestrians taking priority:

- Walking, cycling and bus must be the modes of choice for travel around ST15 in preference to using a car. Design within the Site needs to accommodate walking extremely well, avoiding severance and making the development very porous for those on foot. The needs of the mobility impaired must also be at the forefront of site and street design. LTN1/20 should be applied to design.
- The design of ST15 must ensure permeability of walking and cycling routes to link key destinations, providing the best balance between short, safe and attractive routes.

Connectivity outside ST15

There needs to be multi modal connectivity to key locations outside of ST15 which needs to be of a quality and frequency to ensure alternative transport options to private car is a viable travel choice for residents and occupants of the site.

- Walking – the site analysis has concluded that the walking distances and journey times from the site to key locations are long and therefore this transport option is unlikely to be a key priority for connectivity. However, provision does need to be made and can be shared with cycle routes. In addition, there does need to be good connectivity with the surrounding villages of Elvington, Wheldrake and Heslington for those travelling to ST15 as a destination (e.g. for school or employment).
- Cycling – the site analysis concluded that cycling could be a viable option for sustainable transport and connectivity via existing routes such as Common Lane/Long Lane needs to be facilitated by the development. This is particularly important for access to the nearest secondary schools, the University and the Science Park as being key trip attractors near to the Site.
- Bus services – a key requirement will be enhanced and/or new bus services to ensure regular and frequent connections between the site and the key locations and achieve the modal target of 15% as identified in Draft Local Plan Policy SS13. Achieving this target will need premium, high quality services to attract commuters, as well as regular services. This could entail Bus Rapid Transit (BRT), providing as a minimum, bus priority at key locations.

7. Strategy for Active Travel

In this chapter we set out the key components for active travel within and the Site and to external destinations.

7.1 Introduction

A key consideration for the design of the ST15 is that prioritisation should be given to active travel modes - walking and cycling and that the user hierarchy in LTP3 should be followed, with pedestrians taking priority. Typical distance for the active travel modes are set out below.

- Walking as a mode of travel predominates for journeys of one mile and less than two miles. The 2017 National Travel Survey[23] statistics reports 24% of trips were under one mile and 81% of these were undertaken by foot. As concluded at the end of Chapter 4, it is unlikely that walking will be a transport option for key destinations external to the Site given the distances involved. However, it will be extremely important for internal trips within the Site, especially to the services and facilities to be provided (education, retail, GP surgery, community uses), to bus stops, and for leisure purposes.
- Cycling is more convenient than walking for longer journeys, typically of up to five miles for regular journeys, and a number of key destinations in York are achievable within a 30 minute journey time based on speeds of 12kmh (7.5mph) which equates to approximately 6km (3.75 miles), as shown in Figure 4.9. The city centre and rail station are within the five-mile distance. It should be noted that e-bikes extend the distance that people may be willing to travel.

In addition to being a means of getting from 'a-to-b', walking and cycling journeys bring a range of benefits including improved physical and mental health, a better quality of life, an improved environment and increased productivity.

7.2 Key Design Requirements

Walking and cycling as forms of transport have many similarities, both delivering health benefits for users and the environment and sharing barriers to take up, such as fast traffic speeds, poor infrastructure and safety concerns. Routes should be easily accessible for all including wheelchair, pushchair and adapted bike users, to ensure that the aspirations of ST15 to be an active, inter-generational development are realised. The requirements of people with sensory-needs e.g. visual and hearing impairments must also be considered. The needs of horse riders and ensuring that bridleways in the area are accessible and well-connected will also be important.

The design of the active travel network should adhere to appropriate design standards, guidelines and local policy documents. There is a wealth of documents and the following have been considered for this strategy.

- *Planning for Walking*, Chartered Institution of Highways and Transportation (CIHT), April 2015[24]- this provides information on the legal and regulatory context for walking and guidance on developing strategy and plans for walking which are applicable to LTAs and developers.

[23] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729521/national-travel-survey-2017.pdf (Accessed 03/05/22)
[24] https://www.ciht.org.uk/media/4465/planning_for_walking_-_long_-_april_2015.pdf (Accessed 03/05/22)

- *Guidelines for Providing for Journeys on* Foot, CIHT, 2000[25] - although over 20 years' old, this publication is still relevant today. It provides guidelines on planning for pedestrians, design principles and details, footway maintenance, promoting walking and appraisal and monitoring.
- *Design Manual for Roads and Bridges (DMRB CD 143 – Designing for walking, cycling and horse-riding*, National Highways, March 2021[26] - this document provides requirements and advice for the design of walking, cycling and horse-riding facilities on and/or adjacent to the motorway and all-purpose trunk road network. It is also applicable to local road networks.
- *Local Transport Note (LTN) 1/20 – Cycle Infrastructure Design*, DfT, July 2020[27] - this recent guidance document is for both LTAs and developers and reflects current best practice, standards and legal requirements. Inclusive cycling is an underlying theme throughout so that people cycling of all ages and abilities are considered. The design options include segregation from traffic, measures for cycling at junctions and roundabouts, and updated guidance on crossings, signal design and the associated traffic signs and road markings. It is the expectation of the LTA (and most LTAs around the country) that this design guidance is applied to the cycle infrastructure proposals for new development.
- *Manual for Streets*, MCLG, DfT, 2007[28] – a guidance document for the design and enhancement of lightly-trafficked residential streets with key principles that are applicable to other types of street, for example high streets and lightly-trafficked lanes in rural areas. This document challenged the traditional approach to road design for vehicular movement and focuses on the role of streets in creating a sense of place and community and prioritises pedestrians and cyclists above vehicles.
- *Manual for Streets 2 – Wider Application of the Principles*, CIHT, 2010[29] – this document forms a companion guide to MfS and explores in greater detail how and where its key principles can be applied to busier streets and non-trunk road, bridging the gap in design guidance between MfS and DMRB.

The guideline documents include the following good practice design principles for walking and cycling routes.

- **Coherence** – routeing within the developments needs to provide a comprehensive, permeable and logical network enabling easy access to the key destinations – schools, shops, community facilities and employment, as well as transport interchanges and bus stops. This includes connectivity to existing services and facilities in York. Good accessibility to public transport is likely to encourage its use and decrease reliance on the private car for longer journeys.
- **Directness** – routes and networks need to be direct and follow natural desire lines, enabling permeability within the development.
- **Safety** - research indicates that for many people, the biggest barrier to walking and cycling is concern for their safety. Good design can address this through separating routes from fast vehicle routes and/or by reducing vehicle speeds and flows, and by ensuring that routes are overlooked by housing, well-lit at times they are likely to be well-used, and should have clear exit and entrance points.

[25] http://www.hwa.uk.com/site/wp-content/uploads/2017/09/NR.4.3F-CIHT-Guidelines-for-Providing-Journeys-on-Foot-Chapter-3.pdf (Accessed 03/05/22)
[26] https://www.standardsforhighways.co.uk/dmrb/search/9b379a8b-b2e3-4ad3-8a93-ee4ea9c03f12 (Accessed 03/05/22)
[27] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951074/cycle-infrastructure-design-ltn-1-20.pdf (Accessed 03/05/22)
[28] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/341513/pdfmanforstreets.pdf (Accessed 03/05/22)
[29] https://tsrgd.co.uk/pdf/mfs/mfs2.pdf (Accessed 03/05/22)

- **Attractiveness** - routes that are attractive encourage more people to walk and cycle and contribute to the sense of place and overall quality of an area. Good design offers more than basic provision and should include a network of attractive streets with landscaping and public realm and connectivity to public open space and parks and recreation.
- **Comfort** – comfort for users is influenced by the design of the route, including width, gradient, quality of surfacing, street furniture, lighting and crossing points.

7.3 Internal Design

It is assumed that the design principles set out above and within the guidance documents will be used to ensure high quality design for pedestrians and cyclists is an essential feature of the internal design of ST15. The following aspects should be incorporated.

- As set out in Policy SS13, the masterplan should be designed around a movement and place framework which is based on a user hierarchy that places pedestrians at the top. This should provide a network of streets that provides permeability and connectivity to the main destinations and key desire lines for pedestrians and cyclists. Journey distances to the primary schools, retail, GP surgery and community uses should be kept to a minimum in order to encourage the maximum take-up of active travel forms of transport.
- Priority for pedestrians should be provided on side roads to help reinforce the road user hierarchy in Rule H2 of *The Highway Code*[30], and also LTP3. *The Highway Code* was recently updated and sets out in its introduction the hierarchy of road users, identifying the road users most likely to be injured in the event of a collision at the top of the hierarchy. This includes pedestrians and cyclists. Rule H2 identifies that drivers, motorcyclists, horse riders and cyclists should give way to pedestrians crossing or waiting to cross a road into which or from which the road user is turning.
- On busy streets, such as the spine road through the Site, segregated cycle and pedestrian facilities should be provided to comply with LTN 1/20. On side streets, with lower pedestrian and cycle flows, shared footway/cycleway facilities can be provided. Cycle parking to the appropriate CYC standards should be provided at key destinations within the Site, such as the primary schools, the retail, GP surgery and community uses, as well as public open space where appropriate. This should include provision for electric bikes and bike/ electric bike hire.
- Walking and cycling routes to the schools will need to comply with the design requirements set out above. The design of schools will need to complement the permeable network through the provision of site entrances at various points around the school sites in order to maximise the walkable neighbourhoods concept. In addition, consideration should be given to the need for 'School Streets'31 outside the schools, with temporary restrictions on motorised traffic during school drop-off and pick-up times so that the street becomes effectively a pedestrian and cycle only zone during that time period. Times for the restrictions are determined in agreement with the school. These can be for between 30-45 minutes and only on weekdays and term times. Enforcement of the temporary restriction can be done through use of bollards or automatic number plate recognition (ANPR) cameras.
- There are a number of public rights of way (PRoW) within ST15 (as shown in Figure 4.2) which should be preserved and enhanced as part of the masterplan design, with easy access for those living within and beyond ST15. The need for new road connections to cross existing PRoW must be minimised.

[30] *The Highway Code*, DfT, 25 March 2022. Available online - https://www.gov.uk/guidance/the-highway-code (Accessed 03/05/22)
[31] http://schoolstreets.org.uk/

Where this is necessary, suitable crossings must be provided with priority given to the PRoW users rather than to road users, where appropriate.

7.4 External Connectivity

Use of Long Lane and Common Lane for cyclists and pedestrians

As set out in Section 4.2, access from the Site to the centre of York can be achieved via Long Lane and Common Lane and an overbridge across the A64, into Heslington Village, as illustrated in **Figure 7.1**. This is a dead end route that provides access to a small number of properties and to Langwith Lakes. Although it has very low traffic flows, Long Lane/Common Lane is currently a poor cycling environment due to its narrowness and permitted speed limit of 60mph.

Draft Local Plan Policy SS13 xiii. specifies that Common Lane/Long Lane/Langwith Stray should be retained as cycle/pedestrian routes only to ensure protection of the character of Heslington Village and that it is essential that there is no vehicular transport access to Heslington Village along these routes. This should be interpreted as no vehicular access from ST15 to Heslington, as there will be a need for vehicles to continue to use the route for access purposes and for farmers to access fields.

In order to comply with Policy SS13, the following will be required.

- No vehicular connection to Langwith Stray from ST15, but there will need to be appropriate designed and clearly defined cycle and pedestrian links to the route within the Site.
- Within Heslington Village, there will need to be redesign of a short section of the road in the form of narrowing with signage to clearly define the road as a pedestrian and cycle route and for access only.
- A study into the conversion of the route for use by pedestrians and cyclist. This will include:
    - Investigation into the use of the route by vehicles to understand traffic volumes and types of vehicles.
    - Consultation with the owners of the properties with access off the route and with farmers who use the route to access fields in order to get their buy-in on its use for pedestrians and cyclists and the need for speeds to be low.
    - Comprehensive review of the route to gain an understanding of road widths, passing place locations, traffic speeds, forward visibilities, etc.
    - Identification of measures to create a safe environment, such as:
        - Reduced speed limit; traffic calming measures and features along the route to reinforce the reduced speed limit;
        - Road widening / passing places along sections where the road is narrow and there is insufficient width to pass a cycle;
        - Opportunities to prioritise use for cyclists and pedestrians; and
        - Opportunities to provide a road connection via ST15 to some properties, such as Langwith House Farm and Langwith Lakes.

Enhancement of bridleways for cycle use

As set out in Policy SS13, the potential for local bridleways running through or near the site to be used as cycle routes should be explored. A description of the bridleway network that provides a route to Heslington

and to Fulford from Langwith Stray near to ST15 is set out in Section 4.3. These routes are not surfaced and would be difficult for cyclists to regularly use particularly during the winter and wet weather and therefore would need to be enhanced. As Heslington will be accessed via Common Lane and Long Lane, consideration should be given to cycle route to Fulford, thereby giving access to key destinations within the area, such as Fulford School. Therefore, particular focus should be given to enhancement of the bridleway network route to Fulford, as illustrated in Figure 7.1. Enhancement considerations include the following.

- Surfacing to make the route useable all the year round. As the routes are bridleways, consideration will need to be given to surfacing that is suitable for use by horses, or segregation of the route if feasible.
- Ground based lighting, such as solar cat's eye-lighting which would not need cables to be fitted.
- Signage and way-marking.

8. Strategy for Public Transport

In this chapter we set out the key components for public transport within and the Site and to external destinations.

8.1 Introduction

York's emerging Local Plan will set out how the city will grow to accommodate additional jobs and households. shows the location of the principal developments in the city. A key role for the BSIP and York's Enhanced Partnership will be to ensure bus services for the new developments in York are as effective as they can be. The BSIP sets out a number of points in relation to bus services that could be applied to ST15:

- Targeted growth to 20 million passenger trips a year, by April 2025 – a 25% increase on the peak seen in 2017/18;
- Measures principally aimed at transferring car trips to bus, and/ or to reduce social exclusion;
- The draft Local Plan having an ambitious target for 15% mode share to bus for commute trips for key large developments provided through new, high quality dedicated services to the developments, potentially including bus rapid transit features, such as dedicated alignments;
- Commitment D1 to work with developers to establish bus priority into any new development and make buses as time competitive as reasonably possible with private cars (For example, segregated, grade separated, crossing points of York's outer ring road) 69% of respondents to the Local Transport Plan consultation said that a more extensive bus network would lead to them making more use of York's bus services.

8.2 Existing Bus Services

The following are key points regarding the existing provision:

- Existing bus services which travel on roads around the development site are not very accessible to the site itself
- The closest services require more than 45 minutes walk from the development site:
  - • Route 196 which is infrequent and operates once a week on Thursdays
  - • Route 18 which is infrequent and turns at the Yorkshire Air Museum
  - • Routes 66 and 67 terminate on the other side of the A64
- • The Designer Outlet and Grimston Bar Park & Rides are within a short drive of the site
- Routes 46/ X46 use the Hull Road, some distance from the site

Our key findings are that due to the infrequent nature of nearby bus services, we would propose operating a new or extended bus service(s) from the site.

8.3 Bus Service Proposals

The bus service proposals are based on the following assumptions:

1. The development aspires for a 15% public transport mode share
2. Any new or extended bus services will need to be flexible and phased over the life of the development build-out
3. Appropriate levels of public transport provision must be available as soon as the occupation of the residential site takes place, to ensure that all residents have the opportunity to use the facilities
4. Multiple bus strategies will be required in unison to meet the growing demand
5. Bus services will be integrated wherever possible with active travel corridors and mobility hubs
6. Stops will be strategically positioned within the development site to give the greatest coverage (e.g. all houses within 400m of a bus stop)

The key Service Access Criteria are as follows:

- Provide service within the site
- Provide access to the universities
- Provide access to the business park
- Provide access to services at the Park & Rides
- Provide direct access to the City Centre
- Provide access to the local area
- Provide access to the wider area

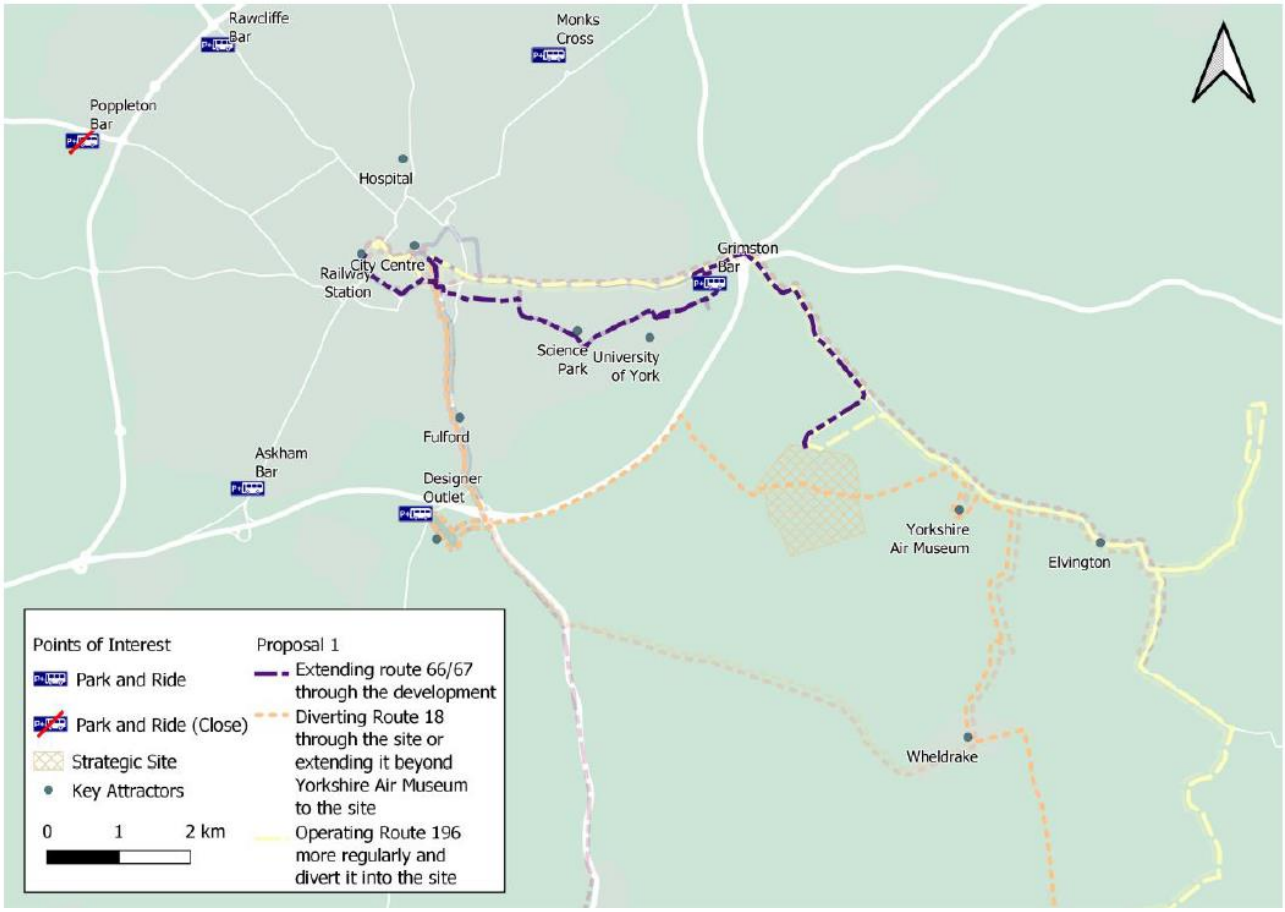
Proposal 1: Utilising Existing Bus Services

Although due to the infrequent nature of nearby bus services, we would propose operating a new bus service(s) from the site, the following service changes could be considered.

- Extending route 66 through the development (every 20 minutes)
- Extending route 67 through the development (every 20 minutes)
- Operating route 196 more regularly (every 60 minutes) and divert it into the site (Alignment matches key desire lines to the University and City Centre)
- Operating a limited stop express 196X to the site (every 60 minutes) at peak times
- Diverting route 18 through the site via new A64 junction (every 130 minutes)
- Operating a limited stop express 18X through the site via new A64 junction (every 60 minutes) at peak times
- Extending route 18 beyond Yorkshire Air Museum to the site (every 130 minutes)

Figure 8.1 illustrates the proposals.

Figure 8.1 Bus Proposal 1



The pros and cons of Proposal 1 are set out below. Our conclusion is that the Optimal solution would be either 1A or 1B providing a direct link to the university, accompanied by either 1D (196X) or 1F (18X) providing a direct express service to the City Centre, as well as 1G to provide services to local areas.

ROUTE PROPOSAL		PROS	CONS
1A. Extending route 66 to the site	A or B	Provides a direct link to University	Medium cost (ff)
1B. Extending route 67 to the site			
1C. Operating route 196 more regularly and divert it into the site	C or D	Provides a direct link to University & City on existing route alignment	High Cost (fff)
1D. Operating a limited stop express 196X to the site at peak times		See 1D, but with reduced journey times, due to fewer stops	Medium cost (ff) Peak only
1E. Diverting route 18 through the site via new A64 junction	E or F or G or G&F	18 currently replicates route 36 Very low additional cost (£) Direct link to City centre	18 would no longer serve Wheldrake etc.
1F. Operating a limited stop express 18X to the site at peak times		See 1F, but with reduced journey times, due to fewer stops	Peak only
1G. Extending route 18 beyond Yorkshire Air Museum to the site		Short low cost extension (£) Access to nearby communities	Indirect access to City Centre No access to Uni

Proposal 2: New Demand Responsive Bus Service

A Demand Responsive Bus Service linking the development to the University of York Campus, Science Park and Grimston Bar Park and Ride. We propose the service to:

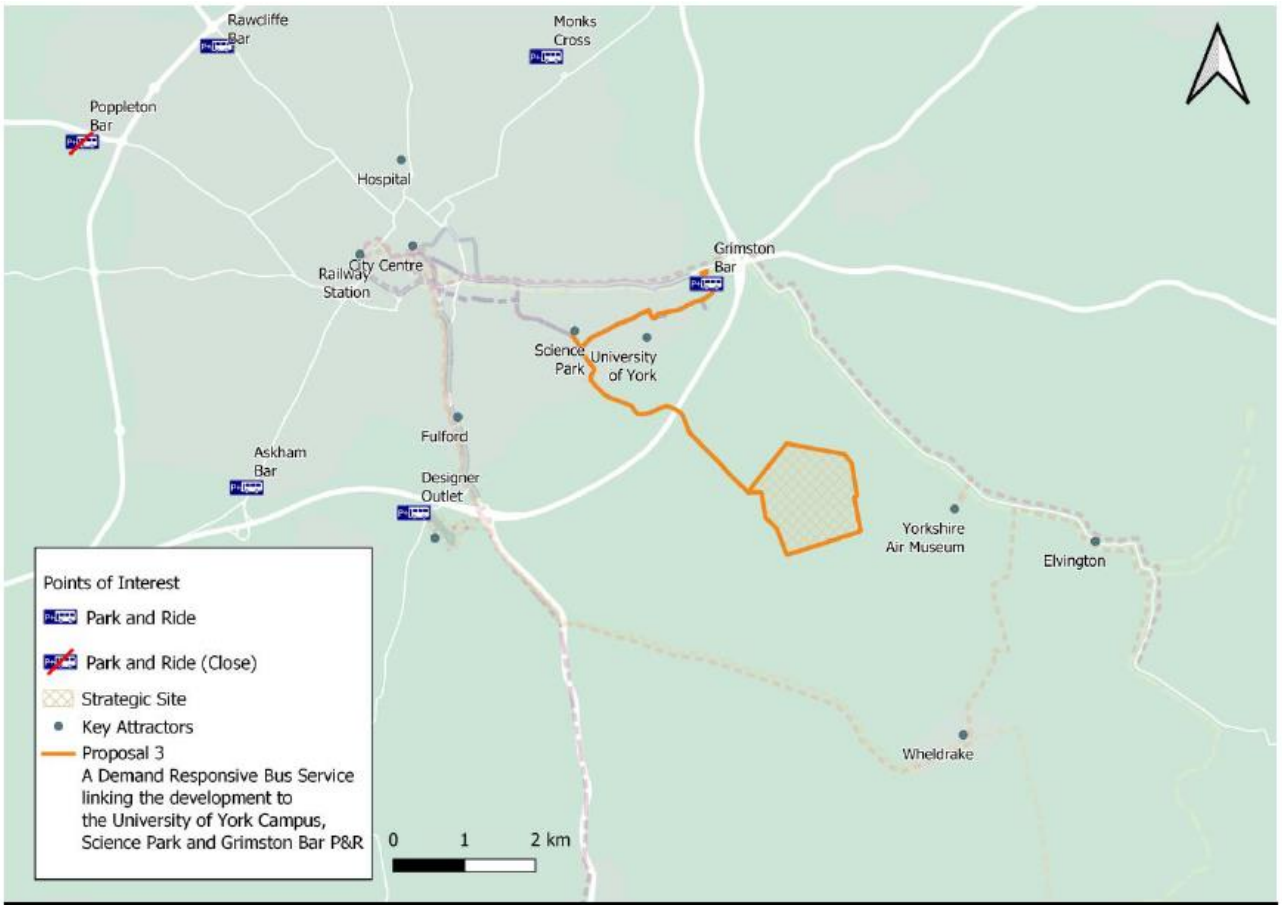
- Be fully accessible
- Use zero emission vehicles
- Have flexible stop at numerous designated safe locations within the site
- Have fixed stops outside the development serving the University of York Campus, Science Park and Grimston Bar Park & Ride

This could be the service that runs on the Busway (see Proposal 3).

This service would be an alternative to options 1A & 1B (extending route 66 or 67).

Figure 8.2 illustrates the proposals.

Figure 8.2 Bus Proposal 2



Proposal 2: New Busway

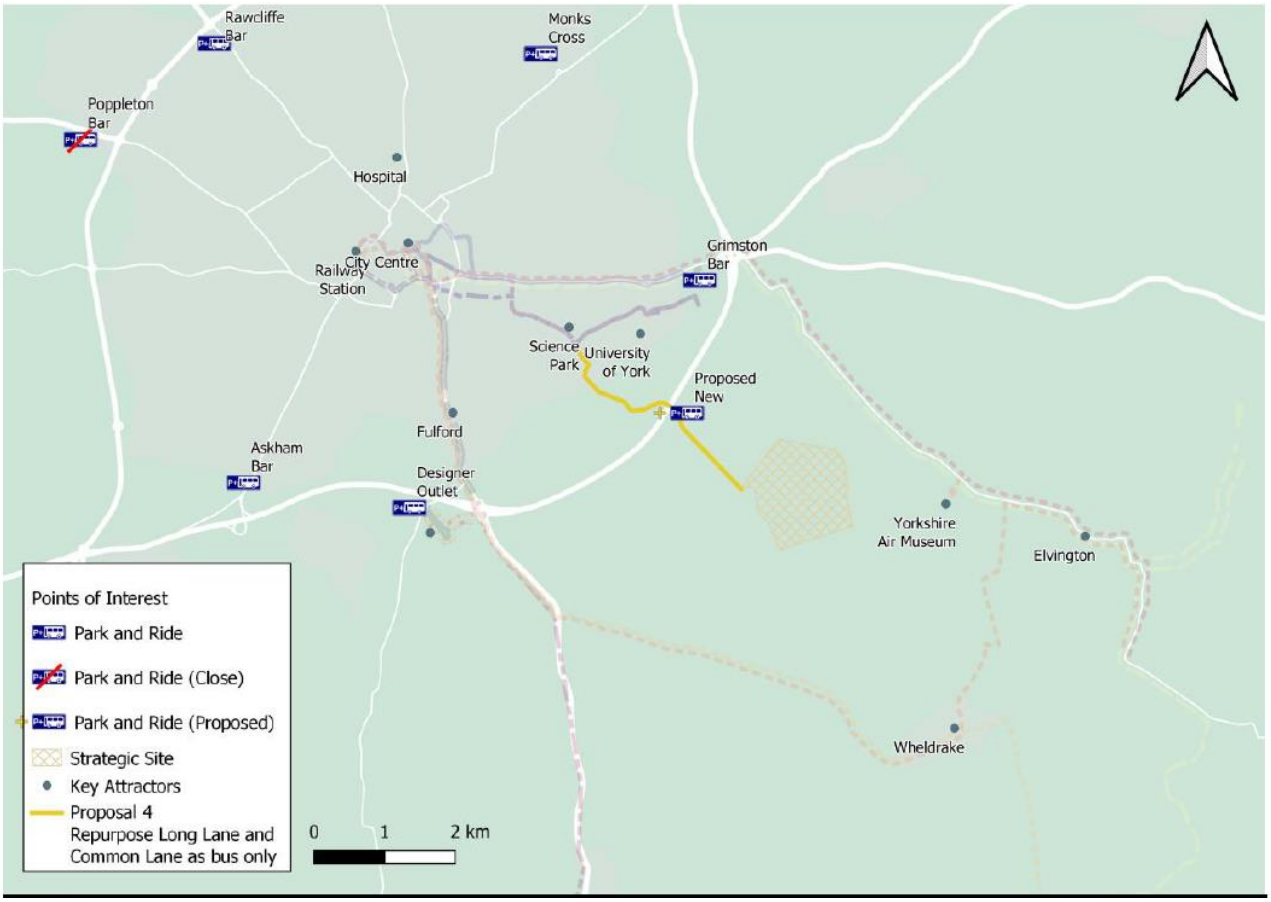
As outlined in the CYC draft Local Plan and BSIP, there is ambition to provide high quality dedicated services to new developments including Busways. A potential bus way from the development site could:

- Include bus priority on new link road to A64
- Have a Park & Ride off the A64 (at new junction)
- Create a new dedicated link to the University
- Trial the repurposing of the core section of University Road as bus only

Costs would be kept to a minimum so long as the bus lanes and P&R are planned into the Link Road and new junction.

Figure 8.3 illustrates the proposals.

Figure 8.3 Bus Proposal 3



Proposal 4: New Orbital Bus Services

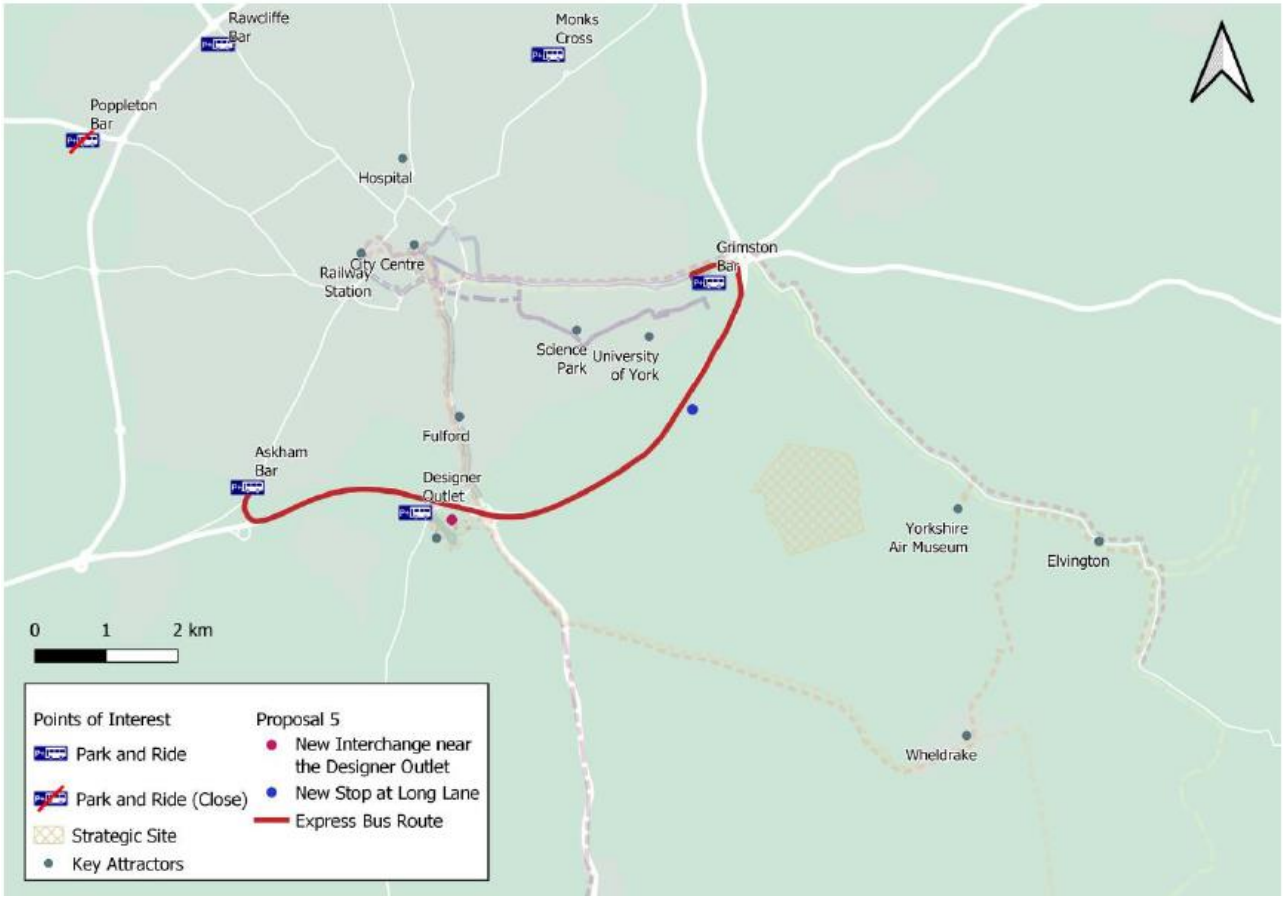
The A64 is a key transport asset and could potentially have an express bus route servicing the edge of the development:

- Operating from Ashman Bar to Grimston Bar Park & Rides (30min to hourly)
- Providing an interchange near the Designer Outlet
- Operating on widened shoulders acting as bus priority during peak times (therefore minimal civil works required)
- Calling at a new stop integrated with the new A64 junction, to access the development site by new bus services, DRT or the proposed Busway (or active travel)

As well as providing the site access to key orbital locations, the aim of this service is to reduce orbital trips on the A64, encouraging use of the Park & Rides. For example, a student could park at Askham and bus to the university. Potentially services could continue to Leeds or Hull if required.

Figure 8.4 illustrates the proposals.

Figure 8.4 Bus Proposal 4



The pros and cons of this proposal are set out below.

PROPOSAL	COST	PROS	CONS
1. Utilising Existing Bus Services	£	Would tie the site into the local network	Extending these routes would have a cost implication
2. New DRT Bus Service	££	Supports access to the university and local trips within the site, as well as accessibility needs	DRT's are generally quite expensive to operate, so would likely require a subsidy
3. New Busway	££	Direct link to the university and clear commitment to 15% mode share by PT	Minor civils would be required It would repurpose a key road through the university
4. New Orbital Bus Service	£££	This option provides east west connectivity to the site as well as broader network benefits	It would have limited stops Minor civils would be required to widen the A64 shoulder and add stops, as well as a potential new Park & Ride

Appraisal of Proposals

An appraisal of the proposals has been undertaken which considers the key Service Access Criteria and indicative costs of the services and the infrastructure requirements. These are provided below.

Service Access Criteria Assessment

PROPOSAL	WITHIN THE SITE	UNIVERSITIES	BUSINESS PARK	PARK & RIDES	CITY CENTRE	LOCAL AREA	WIDER AREA
1A. Extending route 66	✓✓	✓✓✓	✓✓✓	-	-	✓	✓✓
1B. Extending route 67	✓✓	✓✓✓	✓✓✓	-	-	✓	✓✓
1C. Operating route 196 more regularly	✓✓	✓	✓	✓✓✓	✓✓	✓	✓✓✓
1D. Express 196X (peak only)	✓	✓	✓	✓✓	✓✓✓	✓	✓✓
1E. Diverting route 18 via new A64 junction	✓✓✓	-	-	✓✓✓	✓✓	✓	✓✓✓
1F. Express 18X (peak only)	✓	-	-	✓✓	✓✓✓	✓✓	✓✓
1G. Extending route 18 beyond Yorkshire Air Museum	✓✓	-	-	✓	✓	✓✓✓	✓✓✓
2. New DRT Bus Service	✓✓✓	✓✓✓	✓✓✓	✓✓✓	-	✓✓	✓
3. New Busway	✓✓	✓✓✓	✓✓✓	✓✓	-	✓	✓
4. New Orbital Bus Service	-	✓	-	✓✓✓	✓	-	✓✓✓

Indicative Costs

PROPOSAL	SERVICES	INFRASTRUCTURE	TOTAL COST
1. Utilising Existing Bus Services	£	£	£
2. New DRT Bus Service	£££	£	££
3. New Busway	££	££	££
4. New Orbital Bus Service	££	£££	£££

A summary of the appraisal is provided below.

Summary of Appraisal

PROPOSAL	COST	PROS	CONS
1. Utilising Existing Bus Services	£	Would tie the site into the local network	Extending these routes would have a cost implication
2. New DRT Bus Service	££	Supports access to the university and local trips within the site, as well as accessibility needs	DRT's are generally quite expensive to operate, so would likely require a subsidy
3. New Busway	££	Direct link to the university and clear commitment to 15% mode share by PT	Minor civils would be required It would repurpose a key road through the university
4. New Orbital Bus Service	£££	This option provides east west connectivity to the site as well as broader network benefits	It would have limited stops Minor civils would be required to widen the A64 shoulder and add stops, as well as a potential new Park & Ride

8.4 Internal Arrangements

Spine Road Design

The publication by Stagecoach *Bus Services & Residential New Developments*, 2017[32] sets out engineering requirements for roads acting as bus routes. This identifies the following key requirements.

- Ideally bus routes should be designed with a standard minimum clear width of 6.5m; however, a clear consistent carriageway width of at least 6.2m with any on-street parking provided off-carriageway in parallel bays is suitable. This ensures that there is sufficient width for two-way traffic and will not result in delay of services. There needs to be localised widening on bends, based on vehicle tracking analysis of two buses passing in opposite directions. Bus vehicle tracking analysis should be based on the type of bus that will route through the Site.
- Alignment of the street should avoid needless and excessive changes in direction or priority as this will impact on journey times.
- Vertical deflection to achieve traffic calming should be avoided as this is uncomfortable for bus users.
- Bus stop build outs should be provided so that a bus can stop on the carriageway. These should have a between a 4m – 6m boarder length. Bus lay-bys are generally not appropriate within residential developments.

Bus Stops

Bus stops serving the Site must be safe, easily accessible and clearly signposted.

The 'catchment area' of a bus stop is typically 400m walking distance, about a 5 minute walk. This can be extended to 800m provided that they offer a high frequency ('turn-up-and-go') and reliable service, which is more akin to the walking distance for a train station. Safe and direct walking access to bus stops should be provided, along with clear signage.

Cyclists can travel longer distances to bus stops and secure cycle parking is an essential component of cycle/bus travel.

Bus stop locations and design will need to include the following:

- Strategic placement to maximise their accessibility, with excellent connections to the stops provided for pedestrians;
- Real time passenger information display, printed timetable and service information, a local map and wayfinding guidance;
- High visibility bus stop, flag and pole, where appropriate, and consistent branding. Seating and shelters where appropriate;
- Fibre connection where appropriate;
- An enhanced maintenance regime to maintain the quality feel of infrastructure investment;
- A higher kerb to reduce the step height between the bus and the footway, minimum 125mm;
- Higher quality footway and carriageway paving materials;

[32] *Bus Services & Residential New Developments,* Stagecoach, 2017. Available online - https://www.stagecoachgroup.com/~/media/Files/S/Stagecoach-Group/Attachments/pdf/bus-services-and-new-residential-developments.pdf (Accessed 03/05/22)

- A stop cage marking of sufficient length to enable bus access close to the kerb. Minimum of 15m per bus if unobstructed (to cater for maximum likely vehicle lengths and
- Secure cycle parking at key locations.

9. Strategy for Reducing the Need to Travel

In this chapter we set out the key components for reducing the need to travel by car within and the Site and to external destinations.

9.1 Introduction

Best practice place-making principles must be embedded within the planning and design of ST15 to ensure that opportunities to reduce the overall need to travel and to discourage local and off-site travel by car are maximised, thus ensuring alignment with the sustainable development principles of the NPPF. ST15 will deliver a mixed-use development which will reduce the need for out-commuting. Phasing of the development should ensure that delivery of the school and other mix of uses do not lag behind the delivery of housing to enable containment of trips through the course of build-out of the development.

9.2 Site Design to Reduce the Need to Travel by Car

It is important that compatible uses are located within walking distance from one-another, creating a sense of community and awareness of on-site services and facilities. This will maximise the opportunity for linked trips to be made by cycling and walking, and limit the need to travel elsewhere.

In support of this principle, the development should comprise a distinct local centre with the majority of housing within a 10 to 15 minute walk of these facilities. These services and facilities must be brought forward together in a timely manner and must be easily accessible by sustainable modes from all areas of the Site.

Shared facilities whereby buildings are available for different uses at different times of the day are also favoured throughout the development from a transport perspective as they encourage linked trips which again reduces the overall need to travel.

Ensuring that future-proofed digital infrastructure including high-quality broadband, provision of 5G and flexible working spaces are provided within the Garden Village, will also limit the need for people to travel for work purposes.

9.3 Car Parking

The level of car parking within the Site will be a significant factor in influencing future travel behaviour and the take-up of more sustainable travel choices. In addition, car parking has a significant land requirement and by limiting car parking this land can be put to better use - particularly when it is considered that a car is parked at home for 80% of the time on average and is only in use for around 4% of the time.

Developments with more car parking have residents who are more likely to own cars. Research conducted with London residents in 2013[33] found a clear relationship between the availability of car parking at new development and the levels of car ownership of its residents. The research into residential car parking as part of the London Plan evidence base, found that for all groups, and in all areas, people living in developments with more parking available had higher levels of car ownership than people living in developments with less parking. It was found that in developments with provision of up to 1 space per unit, car ownership varies

[33] Residential Car Parking Part of the London Plan evidence base, Transport for London (TfL), December 2017.

with the level of public transport connectivity – the greater the travel choice, the lower the car ownership. This was not the case for developments with more than 1 parking space per unit as access to public transport made relatively little difference to how many households choose to own at least one car.

Income was a key indicator of car ownership, but the effect of parking provision was found to be greater: in developments with 0.5 spaces per unit or less, only 56 per cent of people with a high income owned a car, whereas developments with more parking available, 83 per cent of people with a high income owned a car.

The study also found that as well as higher parking provision being associated with higher car ownership, higher levels of car ownership were associated with higher levels of car use with a clear linear relationship between the rate at which residents make car trips and the proportion of households that have access to a car.

Parking Standards

City of York Council's car and cycle parking standards can be found via the following link.

https://www.york.gov.uk/downloads/file/2813/the-local-plan-2005-appendix-e-car-and-cycle-parking-standards

Electric Vehicle Charging

Paragraph 112 of the NPPF states that new development should "*be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations*"[15]. From 2035, the Government are seeking a ban on selling new petrol, diesel or hybrid cars in the UK. On this basis, futureproofing new development is important because not only does it assist the transition to EVs, it also ensures any connection upgrades required as a result of an increased demand are done at the time of installation rather than as part of a retrofit.

Within the Site, all new homes should have access to at least one parking space with an EV charging point. Dwellings with a garage or dedicated parking space within its curtilage should have a charging point that is easily accessible from a dedicated parking bay. Dwellings without dedicated parking should have access to EV charging, which should be in a convenient location with no longer than a 5 minute walk (approximately 500 metres) from any property with non-allocated parking and their nearest EV charging point.

To support efficient servicing of EV charging spaces, careful consideration should be given from the early design stages to the location of street lights so that they can be conveniently located for charging purposes whilst reducing street clutter and minimising future maintenance costs. To ensure that energy supply to the lighting and earthing requirements are not compromised by future demand for EV charging, these should also be considered from the outset. More generally, the likely increase in energy demand as a result of future increases in EV charging must be anticipated as part of the development, and measures delivered to ensure sufficient electrical capacity within ST15 meet future demand. This may include providing additional capacity in the grid network and/or using solar car ports or other on-site generation initiatives combined with battery storage. EV charging units should be 'smart units' including capability for load balancing and demand management to reduce the impact on the local grid network.

9.4 Cycle Parking

Cycle parking is a key component in helping people choose to cycle parking needs to be designed early on in the masterplanning design process in order to ensure that sufficient provision is made. Having a bike in a convenient but secure location near the front door, nearer than any car, is a great way to make people use their bike automatically, particularly for local journeys to shops and other amenities Key criteria include.

- Conveniently sited – easy to access so that it encourages the use of a cycle as first choice for short trips rather than the car.
- Safe and secure - cycle parking should always be secure and give cyclists the confidence that their cycle will still be there when they return. The location should help users feel personally secure with good lighting and natural surveillance.
- Covered where possible for protection from the weather and as part of secure parking
- Fit for purpose – the recommended choice of rack is the 'Sheffield' type stand which provides good support and allows the cycle frame and at least one wheel (preferably both) to be secured.

Residential Cycle Parking

Cycle parking should be provided to the required provision set by the CYC parking standards.

Cycle parking for residents should be provided in a secure, covered and lockable enclosure, preferably within the footprint of the building. To promote ease of use and cycling as the modal choice the parking should usually be at the front of the building either in a specially constructed cycle shed or an easily accessible garage. The former should be designed with careful consideration in terms of its setting and urban design.

For houses with garages, the garage can be a convenient and secure place to park cycles if designed correctly. The size of the garage must allow cycles to be removed easily without first driving out any car parked within it.

For houses without a garage, cycle parking should be provided within the footprint of the dwelling, such as part of a porch, or as a freestanding secure shed of appropriate materials.

Where access to cycle parking is in a secure area, restricted to residents only, open stands that are covered are acceptable

Non-Residential Cycle Parking

Cycle parking should be provided to the required provision set by the CYC parking standards.

Cycle Parking at the Primary Schools

Secure, covered parking should be provided for the students and for the staff in locations it is overlooked by staff. The student parking should have sufficient space for cycles and scooters.

Other land-uses

Separate secure, covered cycle parking should be provided for staff. Customer/patient/visitor cycle parking should be conveniently located for building entrances and well overlooked and secure during opening times. Consideration should be given to accommodating larger models, such as cargo cycles.

On-street

Consideration should be given to the provision of on-street parking in the vicinity of the local centre, primary schools and the bus stops to ensure that internal travel by cycle is encouraged.

10. Framework Travel Plan

In this chapter we set out the key components for the Framework Travel Plan for ST15.

10.1 Introduction

A Travel Plan is a strategy that includes a package of actions and measures that seek to:

- Reduce reliance on the car through the reduction in the length and number of motorised journeys, in particular those carried out in single occupancy vehicles (SOV).
- Promote the use of alternative means of travel which are more sustainable, healthy and environmentally friendly.
- Reduce emissions.

A Framework (i.e. site-wide) Travel Plan will be required to act as an overarching document under which each land use will have a specific Travel Plan i.e. Residential and School Travel Plan. Under each specific land use Travel Plan, each site or occupier will have a Travel Plan which incorporates the objectives, targets and indicators of the Framework Travel Plan. An initial Framework Travel Plan will need to be produced to support the OPA.

A Transport Assessment will also be required to accompany the OPA. A Transport Assessment is a way of assessing the transport impacts of new development, identifying appropriate improvements to mitigate the impact, and to promote sustainable development. They are required for all developments which generate significant amounts of traffic movements.

The Framework Travel Plan for ST15 must be intrinsically linked to the Transport Assessment to which they relate, for example, the mode split and trip generation assumptions within the Transport Assessment must follow through into the Travel Plan. Initiatives and sustainable trip forecasts (mode split and vehicle numbers) within the Transport Assessment and Travel Plan will be secured through legal mechanisms; this is essential to ensure that there is not an unacceptable number of car trips generated on roads external or internal to the site, and to ensure that delivery of the site is based on a realistic Transport Assessment. The Travel Plan must set out additional initiatives that will be provided if monitoring shows that trip and mode split targets are not being achieved; these will also be secured through planning conditions.

As development progresses, each detailed planning application/reserved matters application will need to demonstrate how the development will contribute to sustainable travel and the mitigation of any significant traffic impacts. Subsidiary Travel Plans will therefore be required for individual land uses, to be submitted as part of the full planning application.

10.2 Travel Plan Co-ordination

An effective Travel Plan Co-ordinator (TPC) will need to be appointed to implement the Travel Plan. The role of the TPC will be to establish the full, overarching Travel Plan to ensure that it becomes integral to the occupants of the development from first occupation. This will require TPC involvement during the detailed design, pre-construction and construction stages.

10.3 Travel Plan Targets

The Framework Travel Plan for ST15 will need to set aims, objectives and targets to monitor the success of meeting the objectives. Targets should be **SMART** - **S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**ime-bound. Targets need to be presented in terms of mode split and absolute trip generation numbers for peak and off-peak hours and linked to phasing of build-out and land use type e.g. residential, schools, local centre, etc.

The targets should comply with Policy SS13 which identifies that 15% of external trips generated by ST15 will be by public transport. This has been reflected in the recent STEP modelling which assumed the following modal split for ST15:

- Car driver 68%
- Public Transport users 15%
- Car passengers 6%
- Cycle 5%
- Pedestrians 5%
- Motorcycle 1%

10.4 Travel Plan Measures

Travel Plan measures will comprise a combination of sustainable transport infrastructure provision, such as pedestrian and cycle routes, cycle parking, bus stops and Travel Demand Management (TDM) initiatives. TDM complements the provision of sustainable transport infrastructure to ensure that people are aware of the transport options available to them and to proactively support their travel choices.

TDM initiatives that should be provided within ST15 include:

- **Car Clubs** which reduce the need for private car ownership, providing flexibility without the need to maintain and service a vehicle. In York, Enterprise Car Club has a range of fuel-efficient cars and vans around the city that can be rented by the hour or the day number of vehicles around the city. A car club must be set up at the Garden Village, with an appropriate number of cars and spaces made available across the site. The fleet should comprise low carbon vehicles including electric vehicles, with supporting EV infrastructure provided.
- **A bike hire scheme including electric bikes** to be set up for trips within and beyond the Garden Village. This may include e-scooters if appropriate.
- **Car sharing schemes** using www.carshareyork.com.
- **Personalised journey planning** to include the provision and promotion of evolving smart technologies to enable real-time journey planning and car park management.
- **Incentivised travel initiatives** including bus discounts and bike vouchers.
- **Campaigns, marketing and associated initiatives.**
- **Appointment of a TPC** to oversee implementation of the Framework Travel Plan, and subsidiary Travel Plans.

10.5 Monitoring

Robust monitoring will be key to ensuring that the sustainable travel requirements of the Site are delivered, and the targets achieved. There will be a need to demonstrate at each phase of build-out that sustainable trip patterns are embedded.

The use of smart technologies to ensure accurate, real-time monitoring is available both during construction and post build-out will be a requirement. In addition, it must be clear from the Travel Plan how this information will enable further interventions to be delivered to influence travel behaviour if monitoring shows that this is required. Monitoring will need to consider the capture of data to include mode split; vehicle/pedestrian/cycle numbers; speed; journey time; and air quality. Monitoring should support flexibility within the Travel Plan to respond to the changes in the uptake of modes due to changing travel behaviours.

Monitoring should comprise regular formal monitoring that is reported to CYC and frequent informal monitoring.

Regular Monitoring

Regular monitoring will need to be agreed with CYC and should comprise the following.

- Annual questionnaire surveys of occupants, conducted by the TPC. The results of the surveys will be used to monitor the effectiveness of the Travel Plan and identify areas for improvement and measures to address this, for example increased promotion of the car share scheme, or improvements to the personalised travel planning approach.
- Vehicular Traffic Counts on the access roads to the development in order to monitor traffic generation from the development. This information should be provided via traffic counters installed on the access roads when they are built.

Informal Monitoring

In addition to the formal monitoring, the TPC will monitor the various travel plan measures, such as:

- levels of bus patronage on the development subsidised bus services and numbers of passengers boarding and alighting at bus stops within the site - information to be provided by the bus operator;
- the take up of the car sharing scheme and the demand for car parking spaces;
- the demand for cycle parking stands in communal areas;
- the use of site specific schemes; and
- levels of participation in TPC led promotional events.

The results of the monitoring are written up in an annual monitoring and review report to be submitted to CYC at an agreed date. This will evaluate progress against actions and targets and identify issues and remedial actions, such as:

- review of the bus service - vehicle type, routes and/or frequencies; and
- identification of targeted promotional activities.