Wain Estates (Land) Limited

Land North of Wilderness Lane, Great Barr

Transport Assessment

October 2023

Project Code: 07381

PJA
pja.co.uk

Version Control and Approval

Version	Date	Main Contributor	Issued by	Approved by
A – Draft for Client	01 September 2023	BT	JO	NM
B – Draft for Client	12 October 2023	JO	JO	ME
C – Final Draft	18 October 2023	JO/GC	JO	ME
D – Final Draft	19 October 2023	JO/GC	JO	ME
E – Submission Version	30 October 2023	JO	JO	ME

Prepared for

Nicholas Mills
Strategic Planning Manager
Wain Estates (Land) Limited

Contents

List of Tables

List of Figures

Appendices

1 Introduction

1.1 Overview

1.1.1 PJA has been commissioned by Wain Estates (Land) Limited to provide transport advice in relation to an outline planning application (with all matters reserved except for access) for a residential development of Land North of Wilderness Lane, Great Barr.

1.1.2 The applicant, Wain Estates (Land) Limited, is submitting a planning application to the site for the development of up to 150 new dwellings, a countryside park, and associated works.

1.1.3 An indicative framework masterplan is provided in **Appendix A.**

1.2 Scoping Discussions

1.2.1 Pre-application scoping comments have been received from Sandwell Metropolitan Borough Council (SMBC), in their capacity as local highway authority. These are summarised in Table 1-1.

Table 1-1: Pre-application scoping comments

SMBC Comments	PJA Response
Any proposed schemes should be designed to the highway standards detailed in appendix 3 of the residential developers guide	• The proposed vehicular access has been designed in line with the SMBC Highways Design Guide. Further details are provided in **Chapter 5** of this report.
Given the number of dwellings proposed, access roads should be designed as regular residential roads.	
The required visibility splays are also detailed in appendix 3.	
The accesses should be designed as 20mph roads with vertical traffic calming measures.	• This will be taken into consideration at the detailed design stage, as part of any future reserved matters application.
Due to the number of dwellings proposed highways would prefer to see two vehicular access into the site	• It is not considered that a development of this scale would justify the provision of two vehicular access points. However, the indicative location of an emergency access has been identified onto A34 Birmingham Road as shown on the indicative masterplan in **Appendix A.** • The detailed design for the internal layout will be considered as part of any future reserved matters application, however the illustrative layout incorporates loops within the indicative highway alignment to accommodate alternative vehicle access should the main access become blocked. • Capacity modelling of the site access onto Wilderness Lane has been undertaken which shows that the junction is forecast to operate well within capacity with minimal queueing and delay.
Highways would recommend that any Transport Consultants appointed should contact highway to scope out the TA and to confirm junction required for analysis.	• This Transport Assessment sets out the results of junction capacity modelling undertaken for a series of junctions within the vicinity of the site for the network peak periods. These have been undertaken based on surveys conducted in September 2023. The findings of the assessment are provided in **Chapter 7.**

SMBC Comments	PJA Response
Accident analysis data should be sourced from TfWM not crash Map.	• The assessment of road safety contained within this report is based on data obtained from TfWM.
100% parking provision should be provided for residents. Spaces sizes are detailed in the attached. No more than 5 dwellings can be served from a private drive and no more than 3/4 driveways	• This will be taken into consideration at the detailed design stage, as part of any future reserved matters application.
Further details will be required as to the proposed use of the countryside park, and if this use will generate trip rates and parking demand similar to Sandwell Valley etc.	• The proposed countryside park will provide green space for use by local residents, existing and proposed. On this basis, it is not considered that it will generate vehicle demand. Further details are provided within **Chapter 6** of this report.

1.3 Report Purpose

1.3.1 This Transport Assessment (TA) identifies the travel patterns associated with the development and examines the likely implications for the surrounding area. This TA has been prepared in accordance with "*Travel Plans, Transport Assessments and Statements in decision-making"* (PPG, 2014).

1.3.2 A separate Framework Travel Plan (FTP) has been prepared in conjunction with this report to accompany the application.

1.4 Report Structure

1.4.1 The remainder of this report is structured as follows:

- **Chapter 2** provides a summary of the local, regional, and national policy and guidance documents relevant to the development;
- **Chapter 3 and 4** describes the existing and future situation in terms of multi-modal accessibility, collision data and highway network;
- **Chapter 5** outlines the details of the proposed development, including high level details of multi-modal access arrangements;
- **Chapter 6** summarises the multi-modal trip generation, distribution, and assignment for the site;
- **Chapter 7 and 8** presents the findings of active travel, public transport, and traffic impact assessments, including junction capacity modelling and considers impact of the development on the off-site transport networks; and
- **Chapter 9** summarises the findings and draws conclusions.

2 Policy Context

2.1 Introduction

2.1.1 This chapter sets out the policy context in relation to the site at a national, regional, and local level. The summary section at the end of this chapter details how the development accords with these policies.

2.2 National Policy

National Planning Policy Framework (2023)

2.2.1 The National Planning Policy Framework (NPPF) was updated in September 2023 and sets out the Government's wider planning policies. The presumption in favour of sustainable development remains at its core, with greater emphasis on creating attractive infrastructure through a design-led approach.

2.2.2 Policies aimed at promoting sustainable development are covered within section 9, paragraphs 104 to 113 of the NPPF with paragraph 104 stating that:

"*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."

2.2.3 Paragraph 105 states:

"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are, or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However,

opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."

2.2.4 Paragraph 110 of the NPPF relates to assessment of sites for allocation, or specific planning applications and states that:

"a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users;

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."

2.2.5 Paragraph 111 states:

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

2.2.6 Paragraph 112 relates to pedestrian/cycle priority and access to public transport, and states that that developments should:

(a) give priority first to pedestrian and cycle movements, both within the scheme and neighbouring areas; and second – so far as possible – to facilitate access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

(b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

(c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

(d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

(e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

2.2.7 Paragraph 113 states:

"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposals can be assessed."

Planning Practice Guidance (PPG) (2014)

2.2.8 PPG 2014 stipulates that the scope and level of detail in a Transport Assessment or Statement will vary from site to site, but the following should be considered when settling the scope of the proposed assessment:

- *"Information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport);*
- *Information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
- *Data about existing public transport provision, including provision / frequency of services and proposed public transport changes;*
- *A qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*
- *An assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);*
- *Data about the current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions of the highway network;*
- *An analysis of the injury collision records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high collision area;*
- *An assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
- *Measures to improve the accessibility of the location (such as provision / enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*
- *A description of parking facilities in the area and the parking strategy of the development;*
- *Ways of encouraging environmental sustainability by reducing the need to travel; and*

- *Measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads). "*

2.2.9 The PPG goes on to state that:

"*In general, assessments should be based on normal traffic flow and usage conditions (e.g. non-school holiday periods, typical weather conditions) but it may be necessary to consider the implications for any regular peak traffic and usage periods (such as rush hours). Projections should use local traffic forecasts such as TEMPRO drawing where necessary on National Road Traffic Forecasts for traffic data."*

Department for Transport (DfT) Decarbonising Transport: A Better, Greener Britain (2021)

2.2.10 This document sets out the government's commitments and actions needed to decarbonise the UK transport system. It follows on from '*Decarbonising Transport: Setting the Challenge*' which was published in March 2020 and set out the scale of additional resources needed in the transport sector to achieve net carbon zero, across all industries, by 2050.

2.2.11 The Strategy gets out a number of strategic priorities, with those of relevance to the development being:

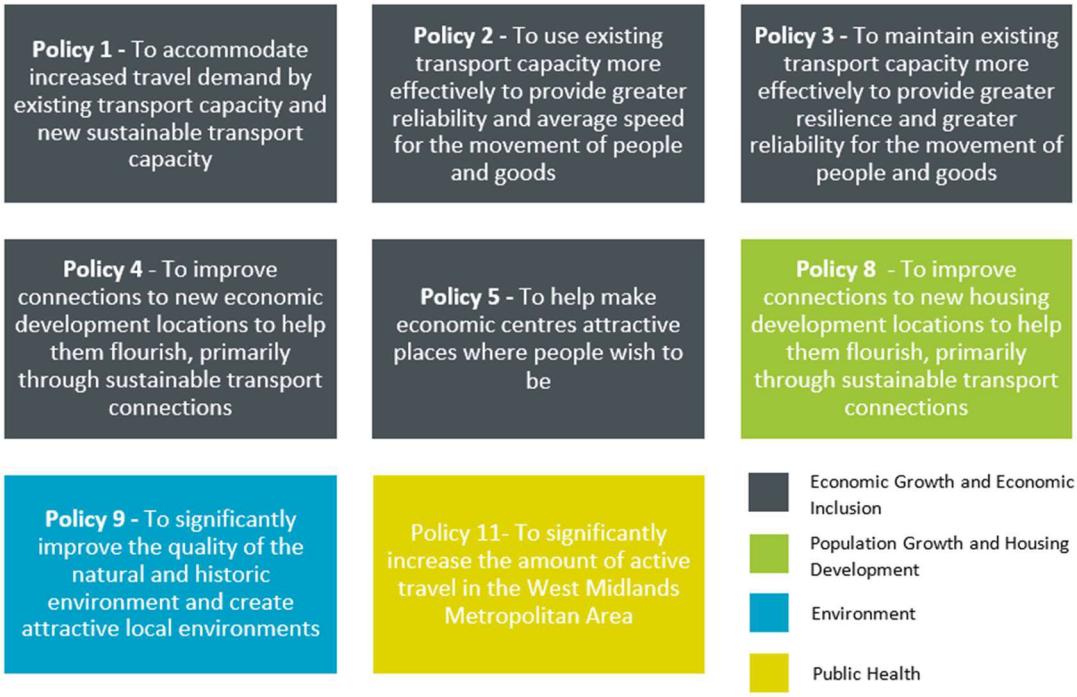
- **Accelerating modal shift to public and active transport** – achieved by providing cohesive, widely available, net zero public transport network, using technology to help reduce carbon footprint, and public transport or active travel will be the first choice for daily activities; and
- **Decarbonising Road Transport** – achieved by phasing out all non-zero emission road vehicles by 2040 and ensuring infrastructure is not a barrier to the zero emission transition.

2.3 Regional Policy & Guidance

Movement for Growth: The West Midlands Strategic Transport Plan (2015)

2.3.1 This document provides a transport strategy for the wider West Midlands Metropolitan Area, and forms the current Local Transport Plan (LTP) for the region. It sets out the long-term approach to guide improvements in the region over a 20-year period.

2.3.2 There are nine objectives for the Strategic Transport Plan, which are supported by 15 transport policies. Those of relevance to the proposed development are set out below:



WM2041: WMCA Climate Action Plan Green Paper

2.3.3 This document, prepared by West Midlands Combined Authority (WMCA) sets out a range of actions to address the climate crisis with inclusivity, prosperity, and fairness at the fore. As a Green Paper, it is not policy, but rather sets out a series of proposals for further iteration and discussion.

2.3.4 Central to addressing the climate crisis, the Green Paper sets out a range of example actions for five, five to fifteen and the last five years. Relevant example actions are as follows:

- Changing economy without leaving anyone behind:
  - Expanding low emission places in line with upgrades to transport network (first 5 years);
  - Review Movement for Growth to ensure availability of credible, sustainable public transport and balance delivery of goods with the need to create safe spaces for people to walk and cycle (first 5 years);
  - Expand 'Mobility Credits' vehicle scrappage scheme to the whole region (5 – 15 years)
  - The sale of petrol and diesel vehicles is banned by 2040, in line with national targets (last 5 years);
- Use industrial past to create zero carbon future;
  - Provision of new metro lines and Sprint bus rapid transit routes (first 5 years);
  - Reallocate highway space to walking, cycling and mass transit (first 5 years);
  - Reallocate parking spaces to car sharing and electric vehicles (first 5 years);

- Provide fewer parking spaces in new developments , particularly in city centres where public transport access is greatest (first 5 years).

Reimagining Transport in the West Midlands: West Midlands Local Transport Plan 5 (LTP5)

2.3.5 Transport for West Midlands (TfWM), the transport arm of WMCA, are currently preparing an updated LTP that sets out the policies to promote safe, integrate, efficient and economic transport, to, from and within, the seven metropolitan boroughs of the West Midlands. LTP5 will be made up of a series of documents, including a Core Strategy, Big Moves policies, Area Strategies and an Implementation Plan.

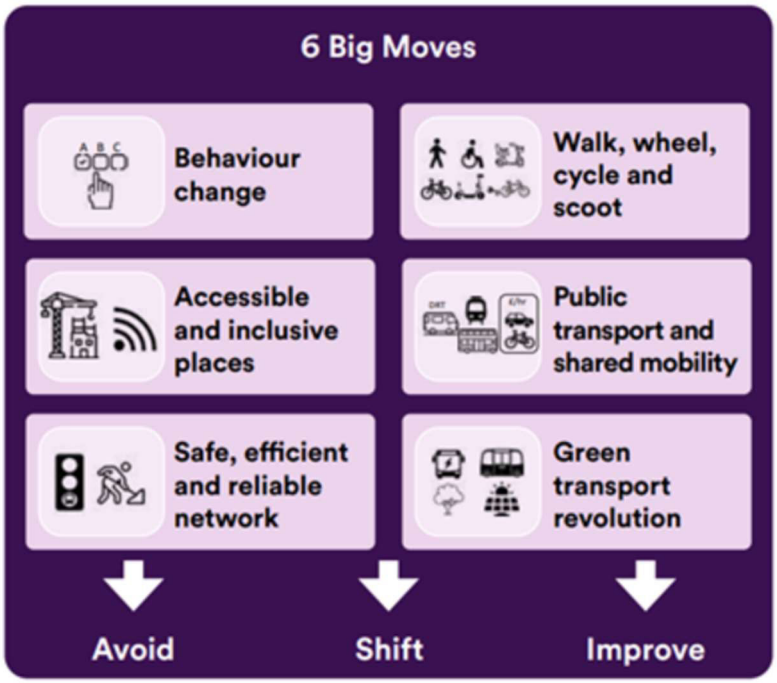
Core Strategy

2.3.6 The Core Strategy for the WMLTP5 has been agreed and was published in 2023. The document details the overarching aims, vision, approach and framework for transport action in the region up to the end of 2041.

2.3.7 The vision is to decarbonise the transport system and promote the use of sustainable travel modes over the private car. Improving accessibility, reducing traffic, and electrifying the transport system will help deliver a city with better streets, growing opportunities, affordable and dependable travel and a better quality of life. The vision for travel hinges around reducing distances and trips made by cars and making access to opportunities without a car a reality. Walking and wheeling will play a key part in achieving 15-minute neighbourhoods, which are central to the vision of the LTP.

2.3.8 To achieve this vision, the Core Strategy identifies '6 big moves', which are being consulted on by TfWM, as shown in Figure 2-1.

Figure 2-1: West Midlands LTP5 "Big Moves"



Big Moves

2.3.9 A Big Moves Summary Document is currently being consulted on by TfWM. For each Big Move, it sets out the principles, policies and specific interventions that will be needed to achieve the vision set out within the Core Strategy.

2.3.10 **Big Move 1** is "*Behaviour change"*, which aims to reduce car dependency by understanding and changing travel patterns and behaviour. This requires engagement with businesses, residents and leaders to understand current issues and future opportunities for modal shift. Improvements to transport access and reliability must be made to ensure that the private vehicle is no longer perceived to be the only, most efficient, or most reliable option for local and regional journeys.

2.3.11 This will be achieved by focussing on the following elements, of relevance to the development:

- Understanding the users of public transport networks including their needs, barriers faced and choices and influences. This will be inclusive of all users;
- Managing demand for public transport; and
- Engaging with the public on problems and opportunities of current and future transport networks and making them part of the decision-making process.

2.3.12 **Big Move 2** is *"Accessible and inclusive places",* which focuses on making local and regional areas reachable by methods other than the private car. Moving away from car-centric development will create more active, sustainable and thriving communities which are inclusive to all.

2.3.13 The document states that well-designed communities will be close to sustainable transport, facilities and services, within a 15-minute neighbourhood, reducing the need for vehicle trips and allowing for a better environment for walking and cycling.

2.3.14 The plan states the scenario that would come to fruition if the plan is successful is:

"All communities have excellent walking, cycling and public transport access to local schools, shops, healthcare and leisure activities so that most local trips are made by sustainable modes of transport. As a result, neighbourhoods have less traffic, better air quality and people are more physically activity because they can safely and easily walk, wheel and cycle for everyday journeys.."

2.3.15 **Big Move 3** is "*Walk, wheel, cycle and scoot*", which aims to provide the best possible accessible walking, cycling and scooter facilities, integrated with the wider transport network, that are compliant with LTN 1/20. Key policies for TfWM and its partners to deliver this ambition, of relevance to the site are:

- Work with communities and key stakeholders to identify a coherent network of segregated routes which connect existing communities and new developments with key destinations;
- Design coherent, direct, safe comfortable and attractive routes which meet or exceed LTN 1/20 design standards; and
- Develop coherent education, awareness raising and promotional activities to support use of these modes.

2.3.16 **Big Move 4** is *"Public Transport and Shared Mobility"* which focuses on the interconnectivity of the public transport system and the adoption of appropriate, area-specific modes that contribute to a wider robust transport network. A coherent system will focus on easy-to-understand routes, reliable services, integrated ticketing and comfortable, accessible vehicles.

2.3.17 Where applicable, shared mobility such as bike hire or car clubs will be considered. Mobility hubs and transport interchanges will play a key role in facilitating easy transit between modes and regions. The aim can be summarised in the following aspiration:

"The West Midlands has a public transport system that fulfils our goal of being a 45-minute region of connected 15-minute neighbourhoods. All residents can live good lives without needing to own a car"

2.3.18 **Big Move 5** is *"Safe, efficient and reliable network"* focuses on delivering a network of roads and public transport systems where users can navigate with the expectation that they are on a safe, reliable and sustainable mode of transport. Developers will be encouraged to create a safe environment that contributes towards the ambitions for the region.

2.3.19 **Big Move** 6 is *"Green transport revolution"* and relates to responding to the climate crisis by rethinking all elements of development and construction. Reducing the impact of development on the environment before, during and after construction is imperative and a cohesive strategy is needed to oversee land-use change. Provision for electric vehicles, embracing new technology, innovation and respecting existing land use are stated as key to achieving the vision for the LTP.

West Midlands Local Transport Plan Green Paper (2021)

2.3.20 This Green Paper was published in 2021 to enable discussion around a new LTP, and enables WMCA to engage with people, businesses, and other key stakeholders across the region. As a Green Paper, it is not policy, but rather sets out a series of proposals for further iteration and discussion.

2.3.21 The Green Paper identified five Motives for Change to frame the challenges of transport and its involvement with inclusive growth. These motives are as follows:

1 **Sustaining economic success** – delivering transformative benefits to the economy by maximising the benefit of existing infrastructure, minimising external costs of transport, levelling up mobility for those without car access, ensuring that transport supports investment in places across the West Midlands;

2 **Creating a fairer society** – more equitable access to transport services and information, reducing negative impacts of pollution and rebalancing mobility to support those who are currently marginalised;

3 **Supporting local communities and places** – increasing access to local opportunities, safe streets, sustainable local connections and supporting changes to land use through "20-minute neighbourhoods";

4 **Becoming more active** – reducing the number of inactive residents in the West Midlands, making region safer and more convenient for walking to sustain healthier habits; and

5 **Tacking the climate emergency** – reducing carbon emissions through favouring ultra-low emission vehicles and behavioural shifts to more sustainable uses of transport.

2.4 Local Policy

Black Country Core Strategy (2011-2026)

2.4.1 The Black Country Core Strategy (BCCS) was adopted in 2011 and set out a vision for the Black Country by 2026. It established clear directions for change in order to transform the region, which includes Wolverhampton, Walsall, Sandwell, and Dudley.

2.4.2 Within the Core Strategy, each region developed their own Local Plans which were prepared to cover specific areas within the region in further detail. Each district had a vision, with relevant aspect from the Sandwell Plan (2008) are detailed below:

- *"People will choose Sandwell for their home, their job and their leisure."*
- *"An inspiring place, easy to get around, with quality homes, schools, shops and great places to go. "*
- *"The creation of a strong and healthy society alongside a sustainable economy."*

2.4.3 Relevant policies include:

CSP2 - Development Outside the Growth Network

2.4.4 This focuses on redeveloping land away from regional growth centres including those on the Green Belt in a way that is efficient, maximises land use but is also sympathetic to the wider environment. Areas will provide:

- A strong Green Belt to promote urban renaissance within the urban area and provide easy access to the countryside for urban residents where the landscape, nature conservation and agricultural land will be protected and enhanced where practical and possible;
- A mix of good quality residential areas where people choose to live;
- A strong network of green infrastructure, centres, and community facilities;
- Strong and seamless links to regenerated areas in Regeneration Corridors and;
- A constant supply of small-scale development opportunities.

CSP5 - Transport Strategy

2.4.5 This focuses on providing the future transport network that adapts to and addresses future mobility. It states that new developments should be located along transport networks that are efficient and sustainable and encourage sustainable lifestyles. The following outcomes are sought:

- Providing communities with improved access to employment, residential services and other facilities and amenities, with travel choices that are attractive, viable and sustainable; and
- Containing congestion by developing and managing transport networks to operate more efficiently.

DEL1 - Infrastructure Provision

2.4.6 This focuses on ensuring that:

"All new developments should be supported by the necessary on and off-site infrastructure to serve the development, mitigate its impacts on the environment, and ensure that the development is sustainable and contributes to the proper planning of the wider area."

HOU1 - Delivering Sustainable Housing Growth

2.4.7 This policy seeks to oversee at least 63,000 new homes over the planning period through a mix of committed, allocated and strategic sites that focuses on regeneration corridors and centres. It states that consideration will also be given elsewhere in the Black Country through allocations and planning permissions on suitable sites.

TRAN1 - Priorities for the Development of the Transport Network

2.4.8 This policy focuses on the delivery of an improved and integrated transport network both within the Black Country and in links with regional and national networks. The A34 corridor is identified as a corridor that will support rapid transit, with improvements to road networks, bus routes and rail seen as imperative to delivering a coherent and sustainable transport network. Specifically for developers it states:

"All new developments will address the transport network and provide adequate access for all modes, including walking, cycling and public transport."

"It is vital that new development has access to high quality public transport facilities and services from the outset as this will ensure that people travelling to and from these areas do not establish unsustainable travel patterns due to the initial absence of good public transport."

TRAN2 Managing Transport Impacts of New Development

2.4.9 This policy identifies that it is essential that new developments demonstrate their minimal or manageable travel and transportation impacts together with proposals for mitigation. It is important that accessibility by a choice of sustainable modes of transport is maximised at all developments. Transport Assessments and Travel Plans produced by developers are noted as essential to bring about sustainable travel solutions and help deliver spatial objectives:

"Planning permission will not be granted for development proposals that are likely to have significant transport implications unless applications are accompanied by proposals to provide an acceptable level of accessibility and safety by all modes of transport to and from all parts of a development including, in particular, access by walking, cycling, public transport and car sharing."

TRAN4 Creating Coherent Networks for Cycling and for Walking

2.4.10 This policy enforces the aim of encouraging modal shift by providing a good network of walking and cycling routes, including upgrading existing infrastructure and providing new infrastructure as part of new development. This is with the aim of:

"Creating an environment that encourages sustainable travel requires new developments to link to existing walking and cycling networks. The links should be safe, direct and not impeded by

infrastructure provided for other forms of transport. Where possible, existing links including the canal network should be enhanced and the networks extended to serve new developments. New developments should have good walking and cycling links to public transport nodes and interchanges."

Black Country Plan (BCP)

2.4.11 The BCP 2039 was intended to replace the BCCS and create a common strategy for the region. Work on the production of the BCP officially ceased in October 2022. Since then, each of the councils have been working to prepare their own Local Plans.

Sandwell Local Plan (SLP) and Local Plan Review

2.4.12 Sandwell Council are reviewing the current Sandwell Local Plan which was adopted in 2012 and covered the period 2006 -2026. This existing Local Plan is now obsolete and following the failure of regional planning policy, (BCCS) a new local plan is required.

2.4.13 The council undertook public consultation in early 2023 on the "*Sandwell Local Plan: Issues and Options Review*", which forms the scoping exercise for the new Local Plan. Within this consultation report, it states that given the work that had already been undertaken on the former BCP for evidence gathering, policy writing and public consultation, Sandwell Council see merit in retaining and adapting some of these policies within the new Local Plan. These are therefore reflected in the draft objectives noted within the public consultation document. Those of relevance to the development are as follows:

- **Objective 1** - Ensure new development takes a proactive approach to climate change mitigation, adaptation and carbon reduction, and that development is resilient to climate change.
- **Objective 2** - Deliver sustainable development in locations where people can access jobs and services, delivering wider positive social and economic outcomes and protecting and enhancing local built and natural environments.
- **Objective 7** - Require new development to deliver a high standard of design reflecting local character and distinctiveness and that creates greener and safer places that people feel proud to live and work in.
- **Objective 8** - Ensure new development and open spaces support health and wellbeing for all, reduce health inequalities and encourage active and healthy lifestyles.
- **Objective 11** - Ensure development is supported by essential infrastructure and services and promotes safe movement and more sustainable modes of travel through promoting greener travel networks for walking, cycling and public transport.

Sandwell Site Allocations and Delivery Development Plan Document

2.4.14 The Sandwell Site Allocations and Delivery Development Plan Document (SAD) was developed in 2012 to guide development within the Borough until 2021. This was done by providing allocations and local policies in areas where housing growth may emerge. The following policies are relevant to the development:

SAD H2 – Housing Windfall

2.4.15 This policy acknowledges that proposals for residential development on unallocated greenfield land will only be considered where:

- The site is not protected as community open space and is deemed low quality, low value within the Council's Green Space Audit; or,
- The site is a piece of Council-owned land that is deemed surplus to requirements; or,
- The development of the site will bring an under-used piece of land back into beneficial use; or,
- The development of the site is infill and will meet the requirements of other policies and guidance within the LDF.

SAD TRAN 3 – Car Parking

2.4.16 This relates to car parking for new developments and establishing parking standards. It states that a flexible approach should be taken when determining car parking provision for new housing, for example, reduced levels of car parking provision can be accepted, particularly where development is close to quality public transport.

2.5 Summary

2.5.1 This report, and the development proposals, have been prepared in line with national, regional, and local policy guidance as summarised in Table 2-1.

Table 2-1: Adopted Policy Compliance Summary

Policy Document	Summary of Compliance
National Policy	
National Planning Policy Framework (NPPF)	• In conjunction with the highly sustainable location of the site and presence of a range of existing sustainable travel modes within the vicinity of the site, the integrated transport strategy for the development will **maximise opportunities for access to sustainable travel**; • The access proposals outlined within this Transport Assessment demonstrate that **safe and suitable access to the site can be achieved for all users;** • This Transport Assessment and Transport Statement, along with the proposed Transport Assessment Addendum, assess the likely impacts of the proposals.
DfT Decarbonising Transport: A Better, Greener Britain	• The integrated transport strategy for the site will **prioritise pedestrians and cyclists**, and will help **active travel and public transport to be the first choice for daily activities**; and • Consideration will be given as part of any future reserved matters application to the **provision of electric vehicle charging infrastructure** to align with the decarbonisation agenda.

Policy Document	Summary of Compliance
Regional Policy	
Movement for Growth: The West Midlands Strategic Transport Plan (LTP)	• The site is located in a sustainable location **with convenient access to a range of existing amenities** within walking and cycling distance of the site, which will **encourage use of active travel.** • An integrated transport strategy has been developed which provides **new active travel connections** through the site for the benefit of existing and future residents. • There are committed improvement schemes (e.g. SPRINT) to sustainable transport infrastructure within the vicinity of the site which will provide **greater journey time reliability.**
WM2041: WMCA Climate Action Plan Green Paper	• The development will deliver benefits to the **local** economy by maximising the existing infrastructure, improving access to local facilities, and ensuring that the development is supported by transport investment. • The site is adjacent to existing high-quality bus and future SPRINT routes which will help support a transition to net zero. • Priority has been given to pedestrian and cyclists through provision of **multiple access points with high quality infrastructure through the site.** • Consideration will be given as part of any future reserved matters application to the **provision of electric vehicle charging infrastructure** to align with the decarbonisation agenda.
Local Policy	
Black Country Core Strategy (2011-2026)	• The site facilitates improved access to local amenities and employment through connections to existing sustainable transport infrastructure, and provision of high-quality on-site facilities for pedestrians and cyclists. • The **integrated transport strategy** for the site has been developed to identify the off-site infrastructure required to **serve the development and mitigate its impact on the environment**, including **safe and direct links to existing walking and cycling networks and public transport nodes.** • The development is adjacent to the A34 SPRINT corridor from the outset, to ensure **sustainable trip making by public transport can be accommodated from initial occupation.**

3 Baseline Transport Conditions

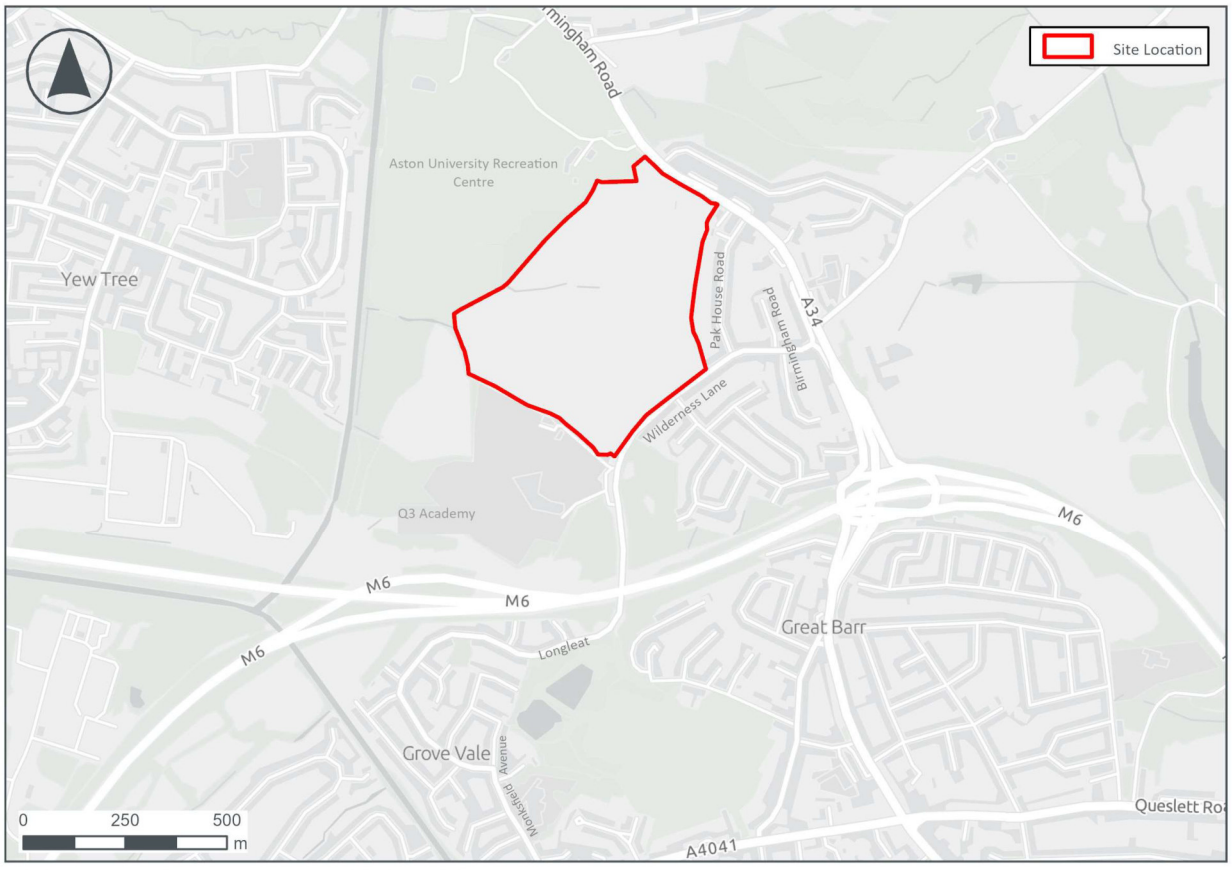
3.1 Introduction

3.1.1 This chapter provides a summary of the existing transport conditions at the site and on the surrounding highway network.

3.2 Site Location

3.2.1 As shown in Figure 3-1 the site is located in the north of Great Barr and is bounded by A34 Birmingham Road and existing residential areas to the north, Wilderness Lane and Q3 Academy to the east and south, and Aston University Recreation Centre to the north-west. The site, and surrounding area to the south-west is designated as a SINC. In addition, the site and surrounding area is also within the Green Belt.

Figure 3-1: Site Location and Local Highway Network



Credits: Contains OS data © Crown Copyright and database right 2023

3.3 Local Highway Network

Wilderness Lane

3.3.1 Wilderness Lane extends westwards from the A34 Birmingham Road to the south of the site. The road provides access to residential dwellings and Q3 Academy before joining Longleat to the south of the M6. The road measures approximately 6m in width in residential areas and is subject to a 30mph speed limit. Outside the Q3 Academy School, the road widens to approximately 7m and is subject to a 20mph speed limit.

3.3.2 Lit footways measuring approximately 1.5m-2m are generally provided on both sides of the carriageway, with the exception of the site frontage where there is no footway present on the northern edge of the carriageway.

3.3.3 The area surrounding Q3 Academy is designated as a '*School Zone'* and is also a Red Route, which means that no stopping is permitted in this area Monday-Friday between 7am-7pm. Speed cushions and raised tables are present at regular intervals along the frontage of the school, and '*School Keep Clear'* markings are provided for an approximate total of 150m on the northern side of the carriageway along the frontage of the school. A one-way drop off/pick up loop is provided in front of the school, which has double yellow lines on the southern side of the road, and parking bays and school bus stops on the northern side of the carriageway.

3.3.4 Excluding the 'School Zone', Wilderness Lane is generally unrestricted for parking.

3.3.5 Wilderness Lane forms a series of simple priority junctions along its length with Ravenhurst Drive, Gleneagles Drive, Peak House Road, and Sycamore Road.

Longleat

3.3.6 Longleat is an extension of Wilderness Lane, forming a priority junction with Monksfield Avenue at its southern extent. It provides access to Red House Park and adjacent residential areas. Within the vicinity of the motorway bridge and Red House Park the carriageway measures approximately 7m in width, including a hatched central reservation. This section is subject to a 20mph speed restriction. Approximately 60m east of Ragley Drive, the speed limit increases to 30mph, and from this point southwards, the carriageway measures approximately 6m in width.

3.3.7 A lit footway of up to approximately 4m in width is provided from Wilderness Lane along the south side of the carriageway to Red House Park. For the remainder of Longleat, lit footways measuring approximately 1.5m-2m are generally provided on both sides of the carriageway, with no formal crossing points present.

3.3.8 Longleat forms a series of simple priority junctions with residential cul-de-sacs.

3.3.9 Parking is generally unrestricted on side roads with the exception of double yellow lines protecting priority junctions and private garages.

Monksfield Avenue

3.3.10 Monksfield Avenue connects Longleat to the A4041 Newton Road and provides access to surrounding residential areas and Grove Vale Primary School. The carriageway measures approximately 7m wide and is subject to a 30mph speed limit.

3.3.11 Lit footways between 1.5-2.5m wide are provided along both sides of the road. A zebra crossing is provided opposite Elm Drive to facilitate access to Grove Valey Primary School.

3.3.12 Outside Grove Vale Primary School, '*School Keep Clear'* markings are present for approximately 115m between Woburn Crescent and Dale Close. The area between Woburn Crescent and Wakelam Gardens is also designated as a "*School Zone"*. Single yellow lines prohibit parking and stopping 8am and 4pm, Monday-Friday on the between Newton Road and Elm Drive on the eastern edge of the carriageway, and Wakelam Gardens and Elm Road on the western side. Apart from these areas, parking on Monksfield Avenue is unrestricted on both sides of the carriageway.

Peak House Road

3.3.13 Peak House Road forms the minor arm of a priority junction with Wilderness Lane at its southern extent, and A34 Birmingham Road at its northern extent (left-in, left-out only). The carriageway measures approximately 6m in width and is subject to a 30mph speed limit.

3.3.14 Lit footways measuring approximately 2m-3m are provided on both sides of the carriageway, with no formal crossing points present although dropped kerbs are provided at all properties and at the priority junction with the A34 Birmingham Road.

3.3.15 Parking is unrestricted except for around the junction with A34 Birmingham Road where double yellow lines are provided.

Birmingham Road

3.3.16 Birmingham Road is a residential access road that runs parallel to A34 Birmingham Road. At its northern and southern extent, it forms priority junctions with A34 Birmingham Road, however at its southern extent there is no vehicular access provided onto A34 Birmingham Road.

3.3.17 The carriageway measures approximately 5m in width and has a speed limit of 30mph.

3.3.18 Lit footways between 2-2.5m wide are provided along the western side of the carriage south of Wilderness Lane. North of Wilderness Lane, lit footways are provided on both sides of the

carriageway measuring between 1.5-2.5m, including a link to an underpass underneath A34 Birmingham Road.

3.3.19 Parking is generally unrestricted, apart from on approach to priority junctions with Wilderness Lane and A34 Birmingham Road where double yellow lines restrict parking.

A34 Birmingham Road/Walsall Road

3.3.20 The A34 extends in a north-south alignment between Walsall and Scott Arms as Birmingham Road, and between Scott Arms and Perry Barr as Walsall Road. In the vicinity of the site, the A34 Birmingham Road comprises a dual carriageway, with a nearside bus lane provided on both sides of the carriageway implemented as Phase 1 of the TfWM SPRINT Corridor.

3.3.21 It is subject to a 30mph speed limit. Excluding the bus lane, the carriageway measures approximately 6.5m on each side, with widening on the approach to junctions. Traffic is separated by a central reservation varying between approximately 2 and 4m in width. It also has a red route designation, which restricts parking and stopping at all times.

3.3.22 Lit footways are provided on both sides of the carriageway, with widths varying between approximately 2.5m and 5m.

3.3.23 To the north, the bus lane ends at the junction with Beacon Road, and it narrows to a single carriageway. Lit footways generally continue to be provided, tying into several signalised pedestrian crossings at key junctions.

3.3.24 To the south through Scott Arms, the A34 Walsall Road remains as a dual carriageway separated by a central reservation with a 30mph speed limit, with widening through large junctions such as M6 Junction 7 and Scott Arms. Lit footways are generally provided tying into several signalised pedestrian crossings, and a pedestrian overbridge for east-west pedestrian movements south of M6 Junction 7.

A4041 Newton Road/Queslett Road

3.3.25 The A4041 extends in an east-west alignment between West Bromwich and Streetly. At Scott Arms it forms a crossroads with the A34. Within the vicinity of Great Barr, the A4041 it is a dual carriageway, with a speed limit of 40mph. Through the Scott Arms, junction the speed limit reduces to 30mph. Traffic is separated by a central reservation varying between approximately 3m and 7m in width. It also has a red route designation, which restricts parking and stopping at all times.

3.3.26 Lit footways are provided on both sides of the carriageway, with widths varying between approximately 3m-4m wide.

Chapel Lane

3.3.27 Chapel Lane provides a connection north from A34 Birmingham Road to Barr Beacon. At A34 Birmingham Road, it forms a four-arm signalised junction, and is approximately 7m in width. To the north-east, it reduces to approximately 6m and then becomes a rural lane of varying widths.

3.3.28 It is subject to a 30mph speed limit between the A34 and Coronation Road. Traffic calming in the form of priority build-outs and road humps are present within the 20mph zone between Coronation Road and north of St Margaret's Church. HGVs over 7.5 tonnes are also restricted northbound, except for loading.

3.3.29 Lit footways are provided on both sides of the carriageway measuring approximately 1 - 2m in width up to the Holiday Inn access road. North of this access, footways are provided on the western side of the carriageway only, providing access to adjacent residential areas and Great Barr Golf Club. Parking is generally unrestricted, except for around junctions where double yellow lines are provided.

M6

3.3.30 M6 Junction 7 is located to the south of the site and provides access to the Strategic Road Network (SRN). The M6 is the main route north from Rugby to Birmingham, Stafford, the North-West and Scotland. To the west of the site, Junction 8 interchanges with the M5 which routes south towards Bristol and the west. To the south and east, there are connections with the M1 to London, and M42 for Tamworth and Warwickshire.

3.4 Accessibility

3.4.1 There are various guidance documents that provide guidance for appropriate walking distances for access to local amenities and facilities:

- Guidance provided by the Institution of Highways and Transportation (IHT) in their publication '*Guidelines for Providing for Journeys on Foot'* (2000) suggests that in terms of commuting, walking to school and recreational journeys; walk distances of up to 2,000 metres can be considered as a preferred maximum with '*desirable'* and '*acceptable'* distances being 500 and 1,000, respectively. It should however be noted that journeys of a longer length are often undertaken. For non-commuter journeys, the Guidance suggests that walk distances of up to 1,200m can be considered as a preferred maximum, with the '*desirable'* and '*acceptable'* distances being 400 and 800m respectively. Again, it should be noted that journeys of a longer length are often undertaken.
- The Walkable Neighbourhood (a concept explained in Manual for Streets) is characterised by having a number of facilities within an 800m walking distance (10 minutes) which can be

accessed comfortably on foot. There are however opportunities to reduce the need to travel by car for even greater distances of up to 2km. This can be achieved through the creation of good quality linkages between new developments and existing facilities.

- The Active Travel England (ATE) Planning Assessment Toolkit notes that to "pass" there must be a sufficient number and range of local facilities within 800m walking distance of all areas of the site via an accessible walking route.
- Guidance on Local Cycling and Walking Infrastructure Plans (LCWIPs) from the Department for Transport (DfT) suggests that typically, walking trips are up to 2km.

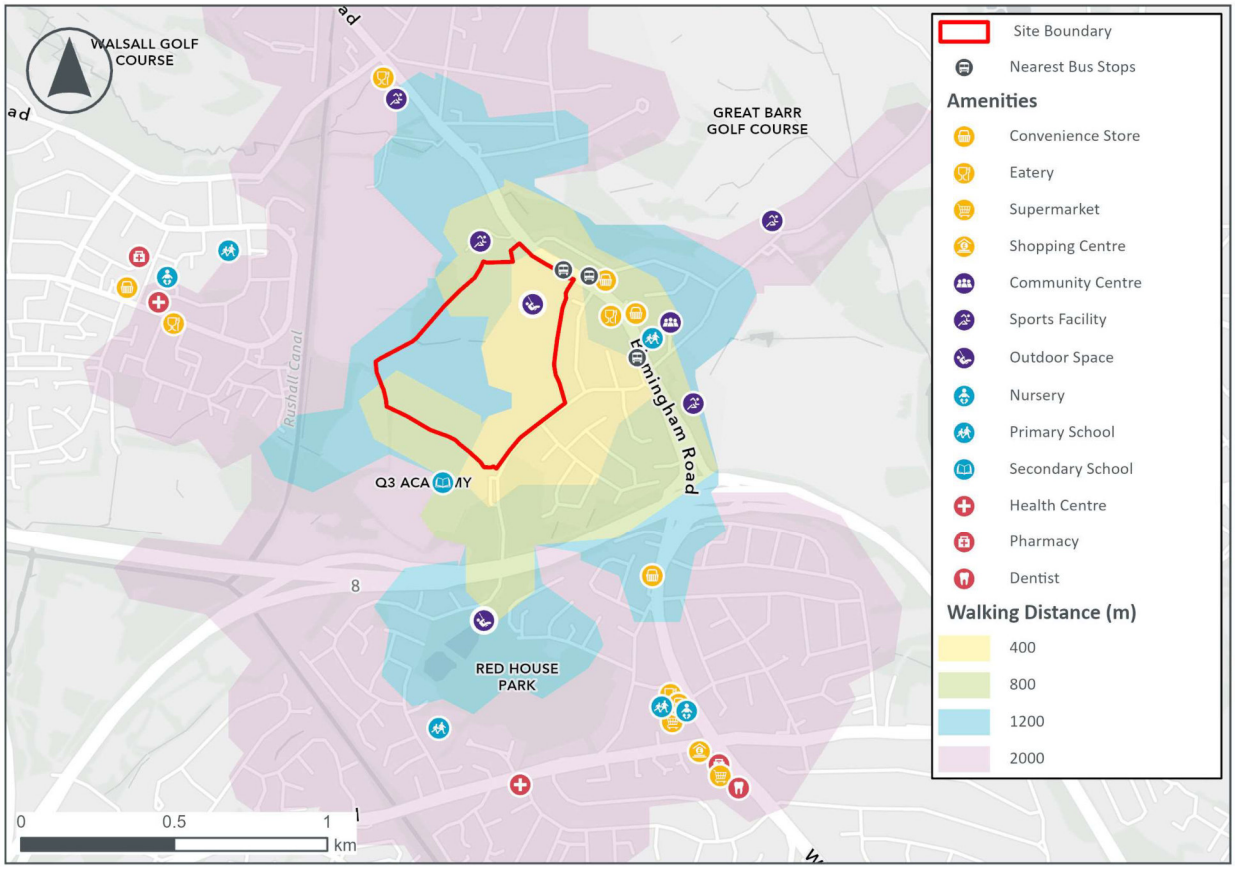
3.4.2 Assuming a typical walking speed of approximately 1.4m/s, Table 3-1 summarises the broad walk journey times that can fall under each category, based on the IHT guidelines.

Table 3-1: Walking Journey Distance and Time Thresholds (IHT Guidelines)

IHT Standard	Distance (m)		Walking Time (minutes)	
	Commuting, Walking to School and Recreation	Other, noncommuter journeys	Commuting, Walking to School and Recreation	Other, noncommuter journeys
Desirable	500	400	6	5
Acceptable	1000	800	13	10
Preferred Maximum	2000	1200	25	15

3.4.3 Figure 3-2 shows the local facilities that are located within the vicinity of the site and Table 3-2 provides an approximate distance, walking time and indication of whether the facility falls within the IHT guidance. Within this table, distances have been measured from an indicative point in the centre of the site to each facility, via the closest access point (Wilderness Lane and A34 Birmingham Road). Public rights of way (PRoW) have been included within this assessment.

Figure 3-2: Local Amenities



Credits: Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS, Contains OS data © Crown Copyright 2023, Open Government License

Table 3-2: Local Amenities

Amenity	Location	Distance from Site	Walking Time (minutes)	Cycling Time (minutes)*	IHT Guidance	ATE Planning Assessment Toolkit Guidance
Outdoor Space	On Site	320m	4	1	Desirable	Within 800m - Pass
Secondary School	Q3 Academy School - Wilderness Lane	550m	7	2	Acceptable	Within 800m - Pass
Convenience Store	Shell	610m	7	2	Acceptable	Within 800m - Pass
Primary School	St Margaret's CofE Primary School - Birmingham Road	670m	8	3	Acceptable	Within 800m - Pass
Convenience Store	Beacon Express - Birmingham Road	670m	8	3	Acceptable	Within 800m - Pass
Sports Facility	You Fit Birmingham @ Holiday Inn	690m	8	3	Acceptable	Within 800m - Pass

Amenity	Location	Distance from Site	Walking Time (minutes)	Cycling Time (minutes)*	IHT Guidance	ATE Planning Assessment Toolkit Guidance
Eateries	Various - Birmingham Road	730m	9	3	Acceptable	Within 800m - Pass
Sports Facility	Aston University Recreation Centre	770m	9	3	Acceptable	Within 800m - Pass
Community Centre	Great Barr Community Hub - Vicarage Rise	900m	11	3	Preferred Maximum	-
Convenience Store	ESSO MFG Great Barr	1.1km	14	4	Preferred Maximum	-
Sports Facility	Handsworth Rugby Union Football Club	1.2km	14	5	Preferred Maximum	-
Outdoor Space	Red House Park	1.2km	15	5	Preferred Maximum	-
Eatery	The Bell	1.3km	15	5	-	-
Sports Facility	Great Barr Golf Club	1.4km	16	5	Preferred Maximum	-
Primary School	Grove Vale Primary School - Monksfield Avenue	1.5km	17	5	Preferred Maximum	-
Medical Practice	Park House Surgery - Newton Road	1.6km	18	6	-	-
Primary School	Holy Name Catholic Primary School	1.6km	19	6	Preferred Maximum	-
Convenience Stores	Cross Lane	1.6km	19	6	-	-
Eateries	Cross Lane	1.6km	19	6	-	-
Nursery	Fairytales Nursery - Great Barr	1.6km	19	6	Preferred Maximum	-
Supermarket	LIDL Newton Road	1.6km	19	6	-	-
Pharmacy	Well Pharmacy	1.8km	21	7	-	-
Shopping Centre and Local Centre	Scott Arms	1.8km	22	7	-	-
Supermarket	Scott Arms	1.9km	22	7	-	-
Dentist	Scott Arms Dental Practice	1.9km	22	7	-	-
Eatery	The Archers Public House	1.9km	22	7	-	-

Amenity	Location	Distance from Site	Walking Time (minutes)	Cycling Time (minutes)*	IHT Guidance	ATE Planning Assessment Toolkit Guidance
Medical Practice	Yew Tree Healthy Living Centre - Redwood Road	2.0km	23	7	-	-
Primary School	Park Hall Primary School - Park Hall Road	2.0km	24	8	Preferred Maximum	-
Nursery	Park Hall Infant Academy - Park Hall Road	2.0km	24	8	Preferred Maximum	-
Convenience Stores	Redwood Road	2.1km	25	8	-	-
Primary School	Yew Tree Primary School - Birchfield Way	2.1km	25	8	-	-
Nursery	Little Saplings Childcare Centres - Plane Tree Road	2.1km	25	8	-	-
Pharmacy	Yew Tree Pharmacy - Redwood Road	2.2km	26	8	-	-

*Assuming a cycle speed of 4.4m/s.

3.4.4 Table 3-2 indicates that there are a range of amenities located within an acceptable walking distance of the site. Many of these are within 800m of the site, which is the stated threshold provided with ATE Planning Assessment Toolkit.

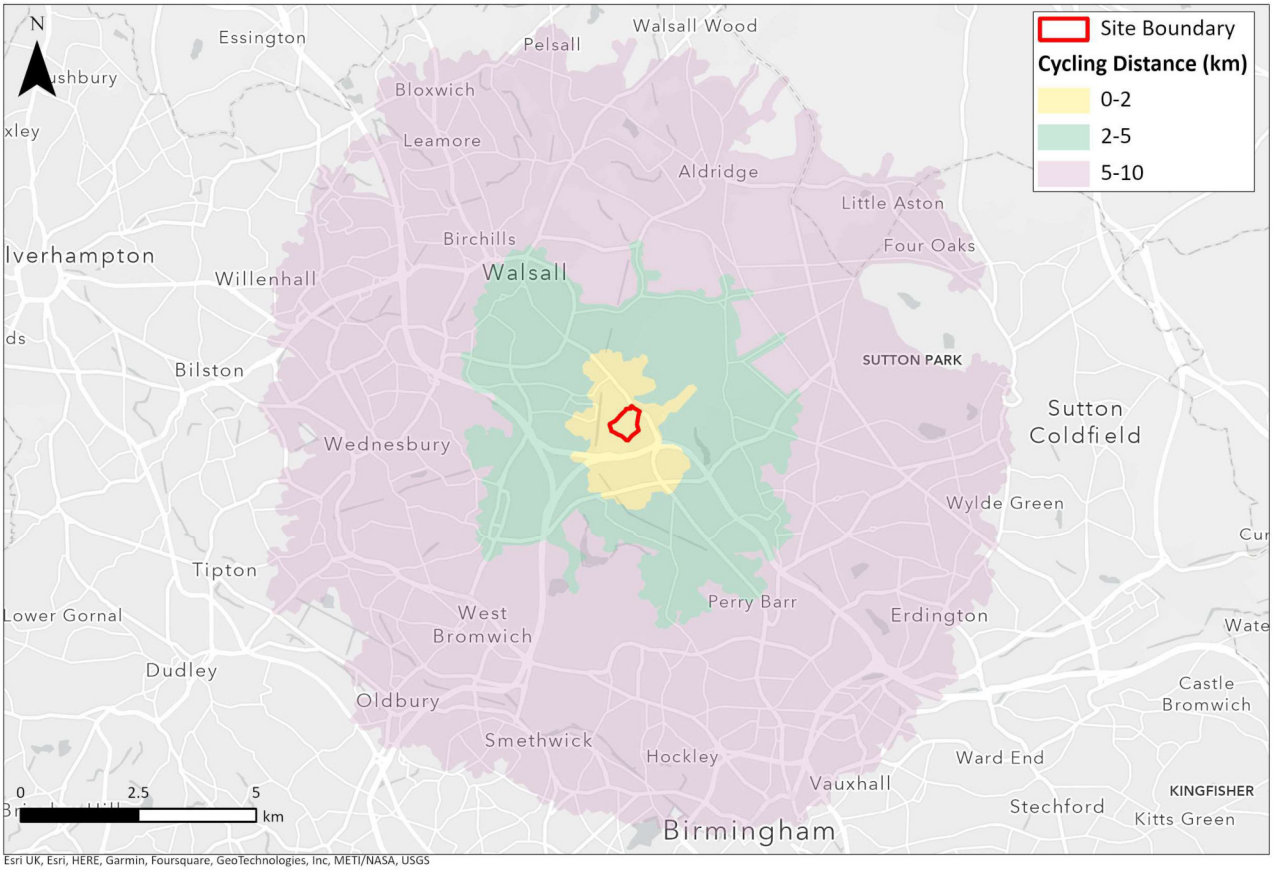
3.4.5 Guidance on Local Cycling and Walking Infrastructure Plans (LCWIPs) from the Department for Transport (DfT) states that:

'Cycling has the potential to replace trips made by other modes, typically up to 10km, although some people will cycle greater distances.

3.4.6 The isochrone in Figure 3-3 shows there are a range of areas within 10km of the site offering retail, leisure and employment opportunities.

3.4.7 The area that is accessible within a 10km cycling distance shows that there are a range of areas within retail, leisure and employment opportunities. Within 8km, approximately a 30-minute cycle ride, it is possible to reach Walsall and Perry Barr, with onward connections southwards towards Birmingham City Centre.

Figure 3-3: Cycling Isochrone

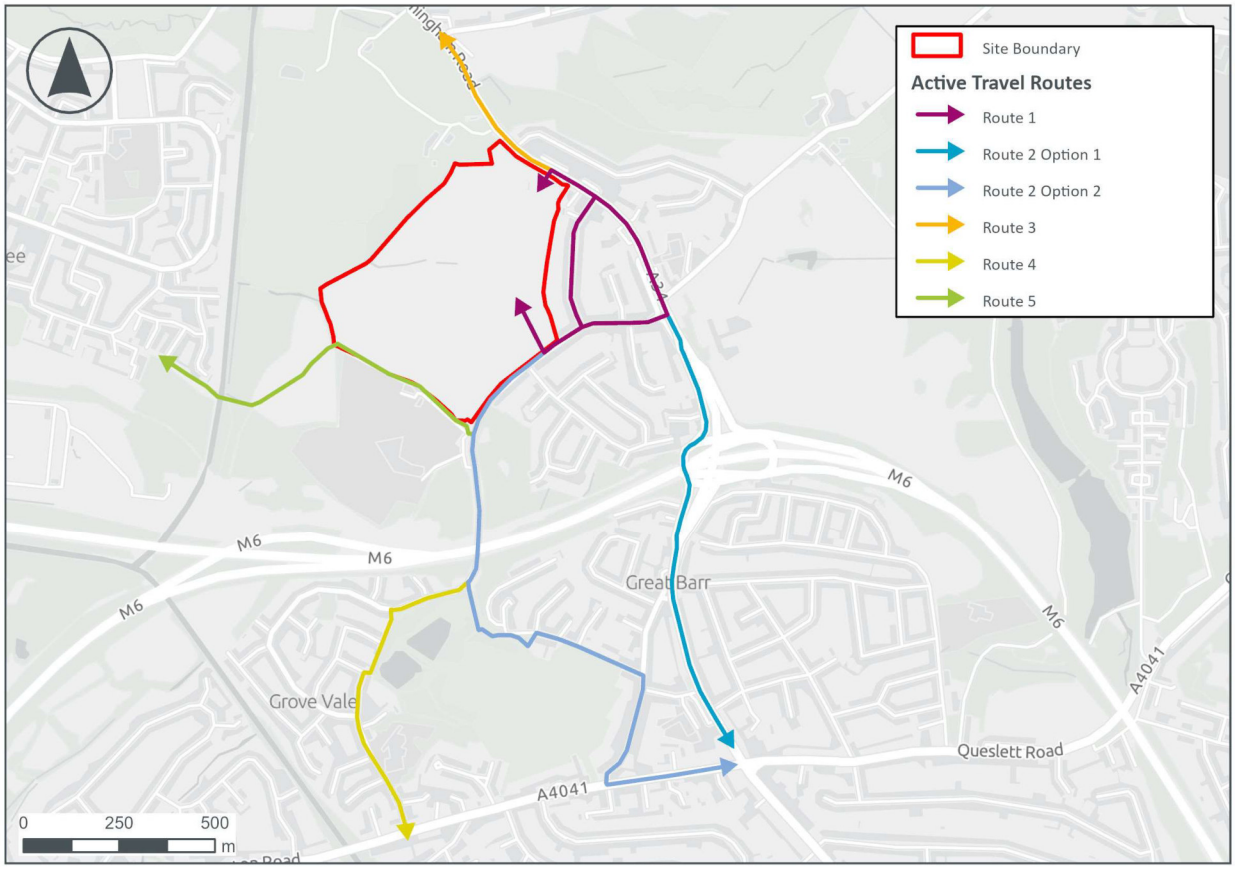


3.4.8 This section has demonstrated that there are a range of facilities and employment opportunities within acceptable walking and cycling distance of the site, meeting criteria set out within the ATE Planning Toolkit.

3.5 Pedestrian / Cycle Facilities

3.5.1 Based on the findings of multiple site visits and a desktop assessment, a series of routes have been identified between the development site and the local amenities and facilities noted in the previous sections of this chapter. The pedestrian and cycle facilities along each of these routes is summarised below in Table 3-3, and the routes shown spatially in Figure 3-4.

Figure 3-4: Key Pedestrian/Cycle Routes



Credits: Contains OS data © Crown Copyright and database right 2023

Table 3-3: Pedestrian and cycle facilities on key desire lines

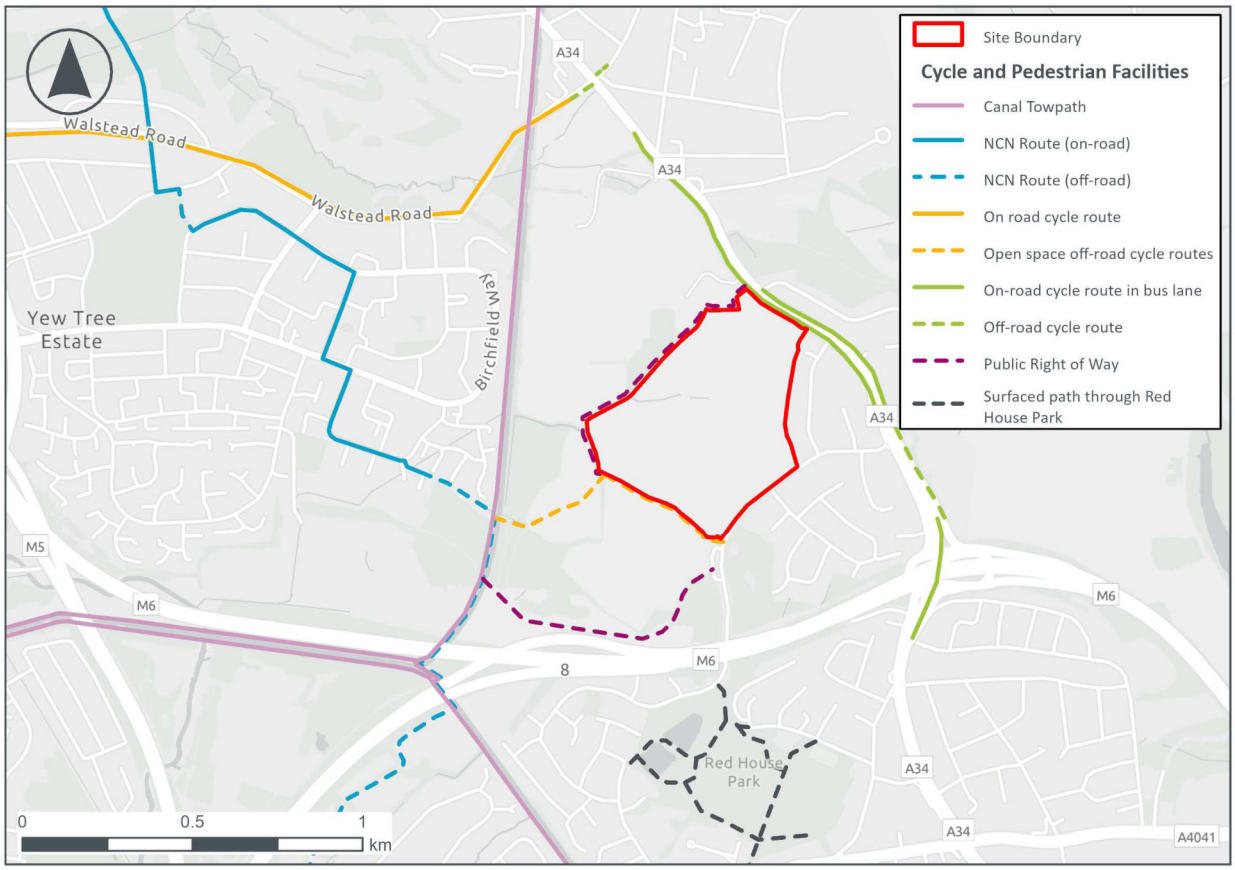
Route	Description	Pedestrian Infrastructure	Cycle Infrastructure
1	Provides access to local amenities and nearest bus stops located in Great Barr, accessed from A34 Birmingham Road Two routes are available: Option 1) Wilderness Lane & Peak House Road; and Option 2) Wilderness Lane and Birmingham Road.	• Lit footways are provided along the northern side of Wilderness Lane to the south of the site, and both sides of Peak House Road of approximately 2-3m in width. During the site visits, footways on Peak House Road were observed to be partially obstructed by on-street parking. • Dropped kerbs are provided along Peak House Road, and dropped kerbs and tactile paving are provided at the junction with A34 Birmingham to assist crossing movements. These tie into the lit footway on the southern side of the carriageway on A34 Birmingham Road, which is between approximately 2-5m in width. • Approximately 70m east of the junction with Peak House Road, there is a staggered signalised pedestrian crossing on A34 Birmingham Road, facilitating access to local amenities on the northern side of the carriageway. • An alternative route is available via Wilderness Lane and Birmingham Road. On this route, there are two crossing options for A34 Birmingham Road – a poorly lit underpass or at-grade staggered signalised pedestrian crossing. These are accessed from dropped kerb crossings on Birmingham Road.	• There is no dedicated cycle infrastructure on Wilderness Lane and Peak House Road. • Via either route, cyclists would be required to dismount to cross A34 Birmingham Road at the signalised pedestrian crossings/underpass. There are no toucan crossings within the vicinity of the site on A34 Birmingham Road. • Cyclists are permitted to use the bus lanes along A34 Birmingham Road within the vicinity of the site, all of which have dropped kerbs from which cyclists could access this provision.
2	Provides access to local amenities located in Scott Arms, accessed from either A34 Birmingham Road on A4041, and onwards towards Birmingham City Centre and Perry Barr. Two routes are available: Option 1) Wilderness Lane & A34 Birmingham Road (via M6 Junction 7); and Option 2) Wilderness Lane, Red House Park & A4041.	• Lit footways are provided on both sides of Wilderness Lane to the north of the site of approximately 1.5m in width, accessed via dropped kerbs providing access to private driveways. • These tie into the lit footways on the western side of Birmingham Road, and the western side of M6 Junction 7, measuring approximately 1.5m in width. Dropped kerbs are provided across priority junctions along the length of A34 Birmingham Road south of M6 Junction 7. • Signalised crossings are provided across all arms of the Scott Arms junction, facilitating direct access to local facilities. • An alternative route is available via Wilderness Lane and Red House Park. No footway is provided along the site frontage on the northern side of Wilderness Lane, however dropped kerbs for private	• There is no dedicated cycle infrastructure on Wilderness Lane and Peak House Road. • Via A34 Birmingham Road, to travel southbound cyclists would be required to dismount to cross A34 Birmingham Road at the signalised pedestrian crossings/underpass. There are no toucan crossings within the vicinity of the site on A34 Birmingham Road. • Cyclists are permitted to use the bus lanes along A34 Birmingham Road within the vicinity of the site, all of which have dropped kerbs from which cyclists could

Route	Description	Pedestrian Infrastructure	Cycle Infrastructure
		driveways provide access to the footway on the southern side of the carriageway. • A lit footway is provided along Wilderness Lane to the access to Red House Park. Within Red House Park, a network of paved shared-use paths and unpaved footpaths allow access to Hill Lane. These are unlit. This feeds into a network of lit footways along the south side of Hill Lane, and along both sides of Page's Lane, Cross Lane and Newton Road.	access this provision. As shown below, these are intermittent within the vicinity of the site, and do not provide a continuous connection for cyclists in both directions travelling between the site and Scott Arms, or for longer distance trips towards Perry Barr and Birmingham City Centre. • An alternative route is available via Wilderness Lane and Red House Park. Red House Park provides a series of unlit, surfaced off-road links through to Hill Lane. It is considered Hill Lane could accommodate on-carriageway cycling, connecting onto Cross Lane which provides access to local facilities in Scott Arms.
3	Provides access to local amenities located to the north of the site, accessed via A34 Birmingham Road, and onwards towards Walsall.	• Lit footways are provided along the northern side of Wilderness Lane to the south of the site, and both sides of Peak House Road of approximately 2m in width. During the site visits, footways on Peak House Road were observed to be partially obstructed by on-street parking. • Dropped kerbs are provided along Peak House Road, tying into the footway on the western side of the A34 Birmingham Road. • Signalised crossing facilities are located south of Merrion's Close, at Beacon Road and on all arms of Walstead Road/Bell Road crossroads. • An alternative route, more suitable for leisure trips, would be via the Beacon Way, a PRoW designated as a long-distance path, which currently routes along the northern boundary of the site. This is unsurfaced and unlit.	• There is no dedicated cycle infrastructure on Wilderness Lane and Peak House Road. • Travelling southbound cyclists would be required to dismount to cross A34 Birmingham Road at the signalised pedestrian crossings, to access Peak House Road. • Cyclists are permitted to use the bus lanes along A34 Birmingham Road within the vicinity of the site, all of which have dropped kerbs from which cyclists could access this provision.
4	Provides access to Grove Vale Primary School and onwards towards West Bromwich.	• No footway is provided along the site frontage on the northern side of Wilderness Lane, however dropped kerbs for private driveways	• There is no dedicated infrastructure for cyclists on Wilderness Lane, Longleat and Monksfield Avenue.

Route	Description	Pedestrian Infrastructure	Cycle Infrastructure
		provide access to the footway on the southern side of the carriageway. • Lit footways are provided on both sides of the carriageway along Longleat and Monksfield Avenue. Dropped kerbs are provided across most priority junctions on this route. • This route has a steep gradient, going downhill from the site towards Grove Vale Primary School, which may be unsuitable for cycling. • Alternative routes are available via footpaths, which are partially lit and run parallel to Red House Park, and unlit routes through Red House Park.	• This route has a steep gradient, going downhill from the site towards Grove Vale Primary School, which may be unsuitable for some cyclists. • On A4041, an eastbound on-street cycle lane is marked, however this terminates at the junction with Monksfield Avenue. There is no dedicated cycle infrastructure for westbound trips towards West Bromwich.
5	Provides access to local amenities within Yew Tree, to the north-west of the site.	• A Public Rights of Way (PRoW) bounds the site to the south, which connects Wilderness Lane to the Rushall Canal Towpath and residential areas in Yew Tree. This is surfaced and lit, but has limited natural surveillance. • This ties into footways within residential areas in Yew Tree, which have dropped kerbs at regular intervals.	• A Public Rights of Way (PRoW) bounds the site to the south, which connects Wilderness Lane to the Rushall Canal Towpath and residential areas in Yew Tree. This is surfaced and lit, but has limited natural surveillance. This can be used by cycles, but has a barrier restricting access for motorised vehicles and adaptive cycles. • This ties into NCN5 along the Rushall Canal. The canal route provides an off-road cycle route to towards Tame Bridge Parkway Railway Station (approx. 3.3km – 11 mins), Friar Park and Wednesbury (approx. 3km-5km – 11mins-19mins), Perry Barr (approx. 5km – 19 mins) and Daisy Bank (approx. 3km – 11 mins), however these routes are mostly unlit with limited natural surveillance.

3.5.2 A summary of the cycle infrastructure referenced in Table 3-3 is provided in Figure 3-5.

Figure 3-5: Cycle infrastructure within the vicinity of the site



Credits: Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

3.6 Public Transport

Bus

3.6.1 The nearest bus stops serving a regular route are located on the A34 Birmingham Road north of Peak House Road, approximately 500m east of the centre of the site. These stops have seating, waiting shelters and timetable provision for passengers. National Express West Midlands route 51 serves these stops and others along the A34 Birmingham Road, and connects Birmingham, Perry Barr, Great Barr and Walsall.

3.6.2 National Express West Midlands route X51 mirrors route 51 but provides a limited-stop service between Birmingham and Walsall with extensions to Cannock. The closest bus stops served are at Chapel Lane, 600m to the east of the site via Wilderness Lane/Birmingham Road. These stops were upgraded as part of Phase 1 of the SPRINT bus corridor which coincided with road widening, bus lanes and bus priority junctions along the A34 to improve journey times.

3.6.3 Additional school transport is available:

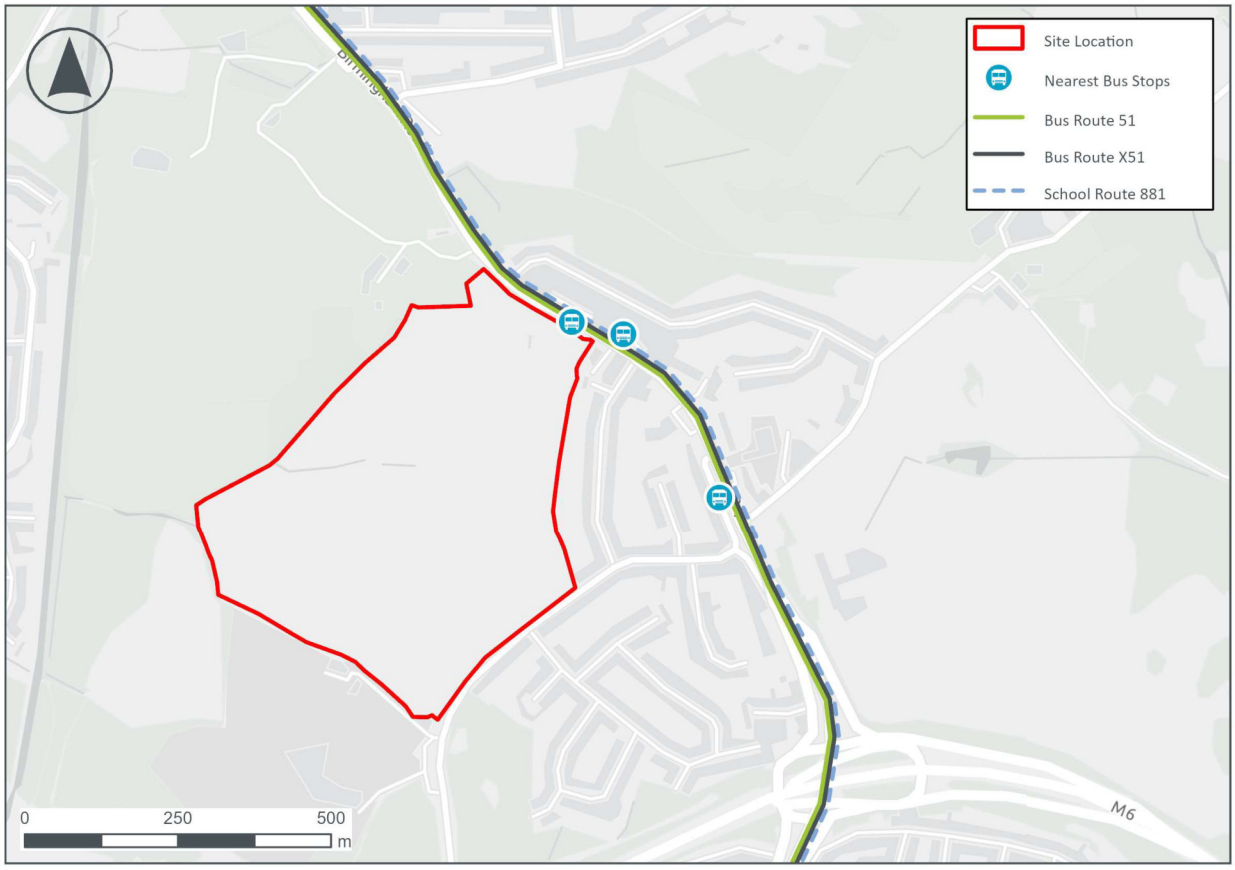
- From stops along the A34, National Express West Midlands route 881 provides school transport to Barr Beacon School.

3.6.4 A summary of the existing services available from these stops is presented in Table 3-4. The proximity of these stops in relation to the site is shown in Figure 3-6.

Table 3-4: Bus service summary

Number	Closest Stop to Site	Provider	Route	Frequency	Days of Operation
51	A34 Birmingham Road	National Express West Midlands	Birmingham – Perry Barr – Great Barr - Walsall	Monday-Saturday daytime - every 12 Minutes Early morning/late evenings and Sundays – every 30 minutes	Monday-Sunday
X51	A34 Chapel Lane		Birmingham – Perry Barr – Great Barr – Walsall - Cannock	Monday-Saturday daytime - every 10 Minutes Early morning/late evenings – every 15-30 minutes Sunday – every 30 minutes	
881	A34 Birmingham Road		Barr Beacon School – Scott Arms – Great Barr – Bescot - Walsall	Two morning and two afternoon services	Monday – Friday term days only

Figure 3-6: Local bus infrastructure and routes



Rail

3.6.5 The nearest railway station is Tame Bridge Parkway which is located approximately 3.3km west of the site. The station has 27 cycle storage spaces and 231 car parking spaces. It is staffed Monday – Sunday.

3.6.6 London Northwestern Railway and West Midlands Railway operate services Monday – Sunday from the station. A summary of key destinations are highlighted below:

- Birmingham New Steet (5 train per hour)
- Birmingham International (2 trains per hour)
- Walsall (4 trains per hour)
- Rugeley (2 trains per hour)
- Wolverhampton (3 trains per hour)
- Stafford, Stoke-on-Trent and Crewe (1 train per hour)

3.6.7 Walsall Station is 5.2km away and is located 300m from Walsall Bus Station. The station is served by stopping services to Birmingham and Wolverhampton, and regional services to Rugeley and Birmingham International. Perry Barr station is 5.5km away to the south and is served by local stopping services to Walsall and Wolverhampton. Both are 15 minutes from the site by the 51/X51 bus routes.

Summary

3.6.8 This section has demonstrated that the site is highly accessible by local bus routes. The site is within a short walking distance of existing bus services along A34 Birmingham Road which operate at a 12-minute frequency throughout the day in both directions. The X51 service is available from Chapel Lane providing an express service to Walsall, Perry Barr and Birmingham every 10 minutes. The nearest railway stations offer frequent local and regional services Monday-Sunday and are accessible via sustainable travel modes.

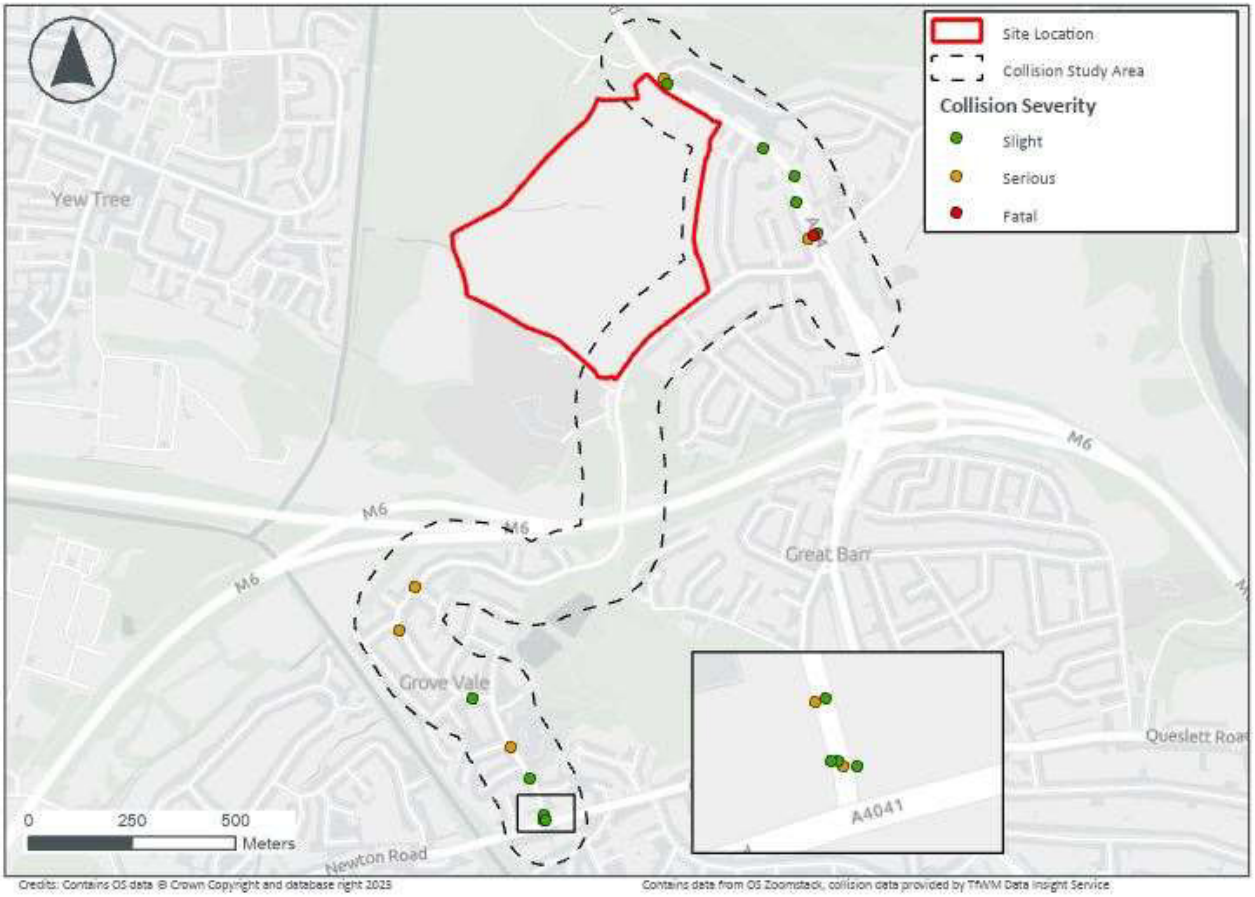
3.7 Highway Safety

3.7.1 In order to establish whether there are any safety concerns on the local highway network that could be exacerbated by the proposed development, collision records for the most recently available five-year period (01/01/2018-01/01/2023) has been sourced from TfWM. A summary is shown in Table 3-5 and Figure 3-7 and full records are included within **Appendix B.**

Table 3-5: Collision Data

Junction/Link		Collision Severity				Sensitive User Involvement			
		Slight	Serious	Fatal	Total	Pedestrian	Pedal Cyclist	Motor Cyclist	Total
Longleat between Red House Park and Monksfield Avenue	Link	1	2	0	**3**	1	0	0	**1**
Monksfield Avenue between Longleat and A4041 Newton Road	Link	1	1	0	**2**	2	0	0	**2**
A4041 Newton Road/Monksfield Avenue	Junction	4	2	0	**6**	0	0	2	**2**
M6 J7 northbound slip/ A34 Birmingham Road	Junction	1	0	0	**1**	0	0	0	**0**
Birmingham Road between Wilderness Lane and A34 Birmingham Road	Link	1	1	0	**2**	1	0	0	**1**
A34 Birmingham Road north of Chapel Lane Junction	Link	1	0	1	**2**	1	0	0	**1**
A34 between Birmingham Road and Peak House Road	Link	2	0	0	**2**	0	0	0	**0**
A34 Birmingham Road/Merrion's Close	Link	1	1	0	**2**	0	0	0	**0**
Total		**12**	**7**	**1**	**20**	**5**	**0**	**2**	**7**

Figure 3-7: Collision Map



3.7.2 This data shows that within the last five years in the study area, 20 collisions were recorded, 12 slight, seven serious and one fatal. In locations with more than one collision, a summary of the data is provided below.

Longleat

3.7.3 On Longleat, three collisions were reported, two recorded as serious and one as slight in severity. These three collisions all occurred in different locations along the link.

3.7.4 One of the serious collisions is reported to have involved two cars with the contributing factors being speeding and careless driving. The other involved a single car with the contributing factor being sudden braking. Neither involved sensitive users.

3.7.5 The slight collision involved a collision between a pedestrian and vehicle, with the contributing factor reported as a failure to look properly.

Monksfield Avenue

3.7.6 Along Monksfield Avenue, one slight and one serious collision were recorded. These two collisions both occurred in different locations along the link.

3.7.7 The serious collision involved a car and pedestrian and occurred outside Grove Vale Primary School. The contributing factor reported was a failure to look properly (pedestrian). The incident is reported to have involved a collision between a pedestrian and a vehicle reversing off a private driveway.

3.7.8 The slight collision involved a car and pedestrian and occurred south of Dale Close with the contributing factor reported as a failure to look properly and following too close.

A4041 Newton Road/Monksfield Avenue

3.7.9 At the junction with the A4041 Newton Road and Monksfield Avenue, six collisions were recorded. Four of these were reported as slight and two as serious.

3.7.10 The slight collisions had reported contributory factors of junction overshoots and failing to look properly. None involved sensitive users. Three involved cars turning right from Monksfield Avenue into the westbound A4041 Newton Road and hitting cars travelling eastbound along the A4041 Newton Road. One involved a rear shunt of two cars turning right.

3.7.11 Both serious collisions involved motorcyclists and contributing factors were reported as failing to look properly and failing to judge speed. One involved a southbound car which moved off and hit a motorcyclist which was heading north. The other involved a motorcyclist turning right which hit one car travelling east, and the other west, along the A4041 Newton Road.

Birmingham Road between Wilderness Lane and A34 Birmingham Road

3.7.12 Along Birmingham Road between its junctions with Wilderness Lane and the A34 Birmingham Road, one slight and one serious collision were recorded.

3.7.13 The slight collision is reported to have involved a car with the contributing factor being excessive speed. No sensitive users were involved.

3.7.14 The serious collision involved a car and pedestrian and the contributing factor was reported as a failure to look properly.

A34 Birmingham Road north of Chapel Lane

3.7.15 On A34 Birmingham Road north of Chapel Lane, one slight and one fatal collision were recorded. The slight collision involved a lane changing manoeuvre between a car and goods vehicle travelling north with no sensitive users.

3.7.16 The fatal collision occurred during the day and involved a van and an elderly pedestrian. The reported contributing factor was a failure to look properly.

3.7.17 In 2020, average speed cameras (ASCs) were installed on major A-roads across the West Midlands, including this section of A34 Birmingham Road. It is understood that these were installed to improve road safety and reduce instances of speeding. It is considered that the implementation of these cameras have changed the road environment in which this collision occurred and will contribute to improved road safety.

3.7.18 Along the A34 Birmingham Road between Birmingham Road and Peak House Lane, two slight collisions were recorded. One involved two cars travelling north which collided after a changing lane manoeuvre. The other is reported to have involved one car moving off and colliding with a vehicle travelling straight ahead. Both incidents involved excessive speed but no sensitive users. Both collisions are reported to have involved poor turning manoeuvres and a failure to look properly.

A34 Birmingham Road/Merrion's Close

3.7.19 At the junction of A34 Birmingham Road and Merrion's Close, one slight and one serious incident occurred. The slight collision involved a car travelling straight ahead on the southbound carriageway colliding with the rear of a car doing a U-turn. No contributory factors were reported.

3.7.20 The serious incident is reported to have involved a car which was travelling straight ahead southbound colliding with a goods moving off southbound. The contributory factors were reckless driving and excessive speed. Neither involved sensitive users.

Summary

3.7.21 No collisions were recorded along Wilderness Lane or Peak House Road within the latest five-year period available.

3.7.22 Some collision clustering occurred at the junction with Monksfield Avenue and the A4041 Newton Road. Five of the six collisions involved cars turning right from Monksfield Avenue into the A4041 Newton Road and colliding with vehicle travelling east along the A4041. One of these was serious and involved a motorcycle. The other serious incident involved a motorcyclist heading north. It should be noted that this occurred over a five year period, a rate of one collision per year.

3.7.23 Although it is understood that other collisions involved vulnerable road users and were recorded as slight, serious and one as fatal, it is considered that there appear to be no significant clusters for these collisions elsewhere on the network.

3.7.24 Given the low level of spatial clustering over the most recent five-year period and severity classification of the collisions within the study area, it is not considered that there are any existing road safety issues that would need to be addressed as a part of the development of this site.

3.8 Summary

3.8.1 The review has demonstrated that:

- The site is located in an accessible location with convenient access to a range of existing local facilities including schools, shops and medical facilities.
- Facilities along the Birmingham Road, at Yew Tree and Scott Arms are accessible via a good network of walking and cycling routes, and public transport.
- The site is also accessible by public transport, with the nearest bus stops located on the A34 Birmingham Road adjacent to the site. The main bus service available (51) provides access to Walsall to the north, and Perry Barr and Birmingham to the south, and operates at a regular frequency throughout the week. An express service (X51) is available from bus stops in the centre of Great Barr, providing a limited stop service between Walsall and Birmingham.
- A review of collision data in the vicinity of the site, for the latest five year period available, has found that no collisions occurred along Wilderness Lane or Peak House Road. One fatal incident occurred at the A34/Chapel Lane crossing and six collisions occurred at the A4041 Newton Road/Monksfield Avenue Junction. No other areas of significant clustering occurred.

4 Future Sustainable Travel Infrastructure

4.1 Introduction

4.1.1 This chapter provides a summary of the future sustainable travel infrastructure that will be available near the site and on the surrounding highway network, as part of committed or aspirational schemes.

4.2 Future Sustainable Travel Infrastructure

Walking and Cycling

4.2.1 Within the West Midlands Local Cycling and Walking Infrastructure Plan (LCWIP), the A34 between Perry Barr and Walsall is set out as a regional priority route after the successful completion of the section from Birmingham to Perry Barr. It is understood that designs of these routes will focus on fully inclusive, segregated two-way cycle tracks with priority crossings. This route is within Phase 1 delivery of the West Midlands LCWIP. This improvement would be relevant to Routes 1 and 2 outlined in Table 3-3.

4.2.2 The Sandwell LCWIP sets out 15 cycle routes and six walking zones to support modal shift to active modes based on highest cycle and walking demand across the borough. Cycle Route 15 (Newton Road to A34 via Wilderness Lane) is identified within the Sandwell LCWIP, linking into the existing cycle route along A4041, NCN Route 5, an off-road cycle route along Dudley Canal and the proposed SPRINT bus route along the A34.

4.2.3 Potential improvements along this route identified in the Sandwell LCWIP include speed reduction measures, multiple toucan crossings and raised table tiger crossings. The cycle route itself could be a mixture of segregated cycle route, two-way cycle track, segregated paths, and a quiet way (lightly segregated cycle route). This improvement would be relevant to Routes 3, 4 and 5 outlined in Table 3-3. A route extract is shown in Figure 4-1.

Figure 4-1: Sandwell LCWIP Route 15

Public Transport

4.2.4 Transport for West Midlands (TfWM) are developing a bus rapid transit scheme (SPRINT) along the A34 Birmingham Road, past the development site. This has seen the construction of a dedicated bus lane through this section of the A34 Birmingham Road, in both directions. It should be noted that the bus lane in the northbound direction was already provided on this section of the A34.

4.2.5 This route will connect Birmingham with Walsall, and once complete will connect to the HS2 station at Curzon Street. The route will be completed over two phases, as follows:

- **Phase 1** – road widening, bus lanes and bus priority junctions along the A45 and A34 with 76 new shelters installed (already been completed).
- **Phase 2** – to begin in 2024 with the moving/completing new bus shelters and improvements to junctions along the A45 and A34. No further improvements are planned near the site.

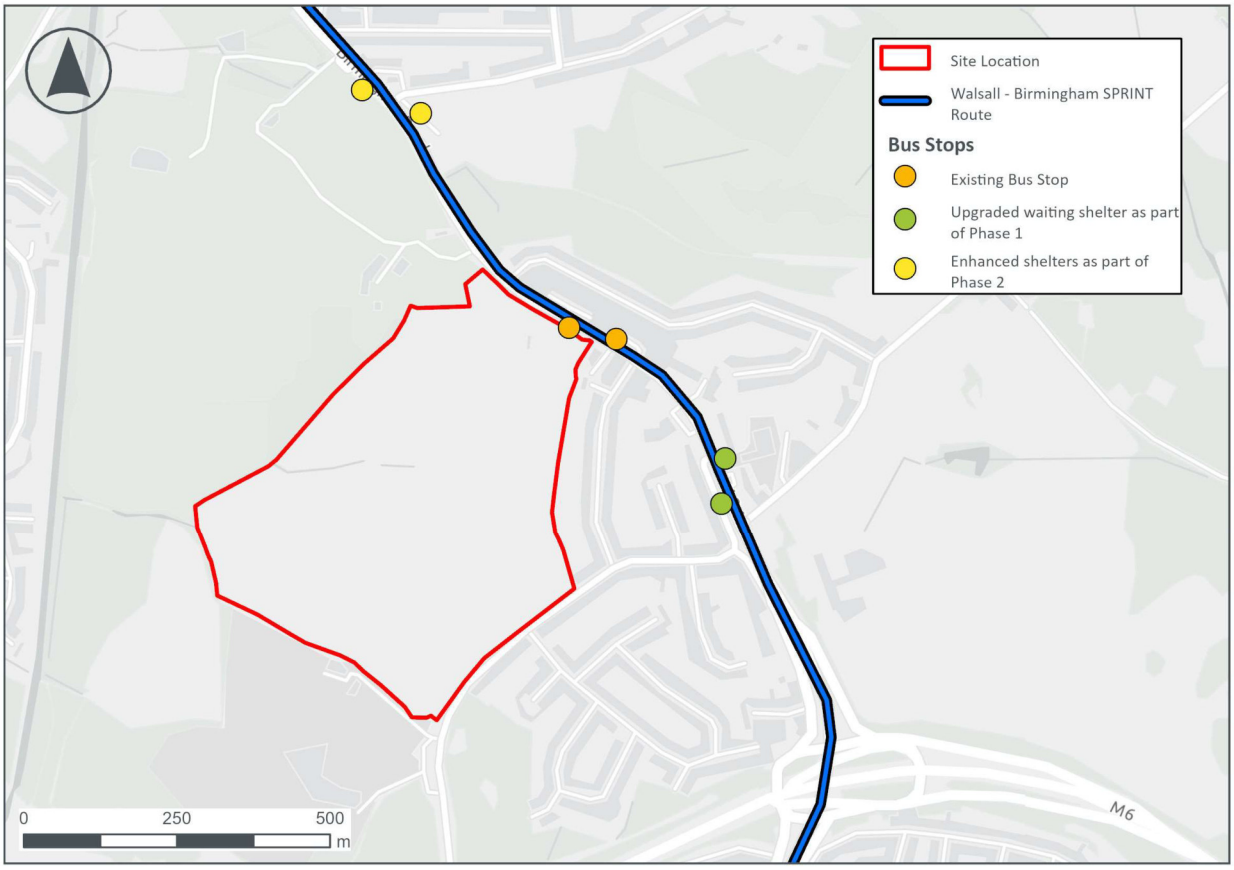
4.2.6 The majority of the infrastructure along the frontage of the site is either an existing bus lane, or a bus lane that has been delivered in Phase 1. The stops at Chapel Lane have been upgraded to meet

SPRINT specifications as part of Phase 1. As part of Phase 2, no further improvements are proposed, although enhanced bus shelters will be installed at Skip Lane.[1]

4.2.7 The SPRINT route will effectively replace service X51 and will serve stops at Chapel Lane. Route 51 will continue to serve stops at Merrion's Close and Skip Lane with all buses along the corridor benefiting from better journey times and improved reliability.

4.2.8 The location of the existing and upgraded stops within the vicinity of the site are shown in Figure 4-2.

Figure 4-2: SPRINT Bus Corridor



4.3 Summary

4.3.1 This section has demonstrated that:

- Within the West Midlands LCWIP, the A34 is proposed to be upgraded with fully inclusive, segregated two-way cycle tracks with priority crossings. This improvement would be relevant to Routes 1 and 2 outlined in Table 3-3 or Section 3.

[1] https://tfwmlegacy.cmail19.com/t/d-e-vadkn-thiikdkyo-o/

- Within the Sandwell LCWIP, Wilderness Lane is outlined as route 15 from Newton Road to the A34. Measures in include speed reduction measures, toucan crossings and raised table tiger crossings with a mix of segregated cycle routes, two-way cycle tracks, segregated paths, and a quiet way. This improvement would be relevant to Routes 3, 4 and 5 outlined in Table 3-3.
- As part of the West Midlands SPRINT corridor, the A34 has been upgraded with bus lanes and waiting shelters at Chapel Lane as part of Phase 1. Phase 2 will complete the route with new shelters and upgraded junctions.

5 Development Proposals

5.1 Introduction

5.1.1 It is proposed to develop the site to provide an accessible countryside park with ecological enhancement, and up to 150 dwellings along the eastern and northern boundary of the site. This chapter provides a summary of the development proposals, transport strategy and multi-modal access arrangements.

5.2 Development Description

5.2.1 The applicant is submitting an outline planning application (with all matters reserved except for access) for the development of up to 150 new dwellings, a countryside park, and associated works.

5.2.2 An indicative framework masterplan is provided in **Appendix A.**

5.3 Transport Strategy

5.3.1 A transport strategy has been developed for the site, which responds to the local context and the key themes contained within the adopted policy documents set out in Chapter 2 of this report.

5.3.2 From a transport perspective, the development aims to:

> Promote the use of sustainable transport modes, which are **coherent, comfortable, direct, safe, and attractive** for use by all users of the site. The site has been designed to **give priority to active travel modes and access to public transport infrastructure**, by tying into existing infrastructure networks and also improving access to leisure routes within and beyond the site. Together, this will ensure that there is **reduced dependency on the private vehicle**, particularly for local trip making.

On-Site Strategy

5.3.3 A summary of the on-site multi-modal access and movement principles are shown on the indicative framework masterplan in **Appendix A,** and illustrative masterplan that accompanies this application.

Pedestrian/Cycle Access

5.3.4 The following infrastructure will be provided on-site to facilitate access to and from the site for pedestrians and cyclists:

- 2m footway at the site access, to tie into existing footway provision to the north of the site on Wilderness Lane;

- 2m footway along Wilderness Lane to tie into an uncontrolled crossing, with dropped kerbs and tactile paving (approximately 20m south-west of the site access junction) located on the desire line to provide access to Q3 Academy, and existing residential areas and local amenities to the south of the site.
- Multiple pedestrian/cycle access points from A34 Birmingham Road to provide access to existing public transport infrastructure, residential areas, and local amenities to the north and east of the site.
- Pedestrian/cycle access point from the pedestrian/cycle route along the southern boundary of the site to provide access to existing residential areas and local amenities to the south and west of the site.

5.3.5 The internal site layout will be subject to a future reserved matters application; however, it is proposed to accommodate the following on-site infrastructure:

- **Relocation of the Beacon Way Long Distance Path (LDP)** to within the site, along its north-western boundary, providing a high-quality connection for pedestrians between A34 Birmingham Road and the existing PRoW network to the west of the site.
- A series of **informal footpaths** through the site, to connect the relocated Beacon Way LDP to the main access point onto Wilderness Lane, and pedestrian/cycle access point onto the existing pedestrian/cycle route along the southern boundary of the site.
- **Footways will be provided adjacent to the main vehicle route** through the development, connecting into pedestrian access points and residential dwellings.
- A **dedicated cycle facility will be provided through the site**, to provide a direct, traffic-free route for cyclists between A34 Birmingham Road and Wilderness Lane. This would be designed in line with LTN 1/20 requirements. At the southern extent of the site, it is envisaged this would route parallel to Wilderness Lane and tie into the pedestrian/cycle access point onto the existing pedestrian/cycle route along the southern boundary of the site.

5.3.6 There are currently no public walking or cycling routes through the site, and so the above provision will also improve access to local amenities and public transport infrastructure for existing residents in the locality as follows:

- A more direct route for residential areas surrounding A34 Birmingham Road north of Merrion's Close to Q3 Academy Great Barr, via the diverted Beacon Way LDP, proposed cycle route through the site or the footways within the site; and
- A more direct route for pedestrians from areas west of Rushall Canal such as Yew Tree, The Delves, Fulbrook, to access A34 SPRINT routes and local amenities / facilities in Great Barr, including St Margaret's C of E Primary School, Aston University Recreation Centre, and Merrions Wood.

5.3.7 Together, this infrastructure will provide a series of high-quality routes for pedestrians and cyclists within the site, to facilitate onwards access to existing public transport infrastructure and local amenities within the vicinity of the site, and also provide access to the on-site countryside park. They will also provide more convenient access to local facilities in Great Barr for active travel modes than the private car.

5.3.8 This infrastructure will also tie into future planned and aspirational improvements within the vicinity of the site, as outlined in Chapter 4, such as A34 SPRINT and LCWIP routes along Wilderness Lane. It is considered that the proposed infrastructure is adequate and suitable to accommodate the additional trips generated by the development. Further details regarding how these tie into the wider integrated transport strategy for the site are provided in **Chapter 7,** and volume of pedestrian and cycle activity generated by the site is set out in **Chapter 6.**

Vehicular Access

5.3.9 It is proposed to provide vehicular access to the site via a new simple priority junction onto Wilderness Lane, as shown in Drawing 07381-CI-A-0001 in **Appendix C**.

5.3.10 Drawing 07381-CI-A-0001 shows that the junction can be delivered wholly within land owned by the applicant and land within the highway boundary.

5.3.11 85th percentile speeds for Wilderness Lane have been derived from Automatic Traffic Count (ATC) data recorded on the week commencing 14th September 2023 for a seven-day period. The full ATC data is included in **Appendix D**. A summary of the recorded 85th percentile speeds, based on data recorded across the seven-day survey period, are as follows:

- Westbound: 33.5mph; and
- Eastbound: 33.3mph.

5.3.12 Drawing 07381-CI-A-0001 shows that based on these 85th percentile speeds and parameters contained within Manual for Streets, visibility splays can be accommodated at the junction within the site boundary and/or land within the highway boundary, subject to some vegetation removal along the frontage of the site.

Off-Site Integrated Transport Strategy

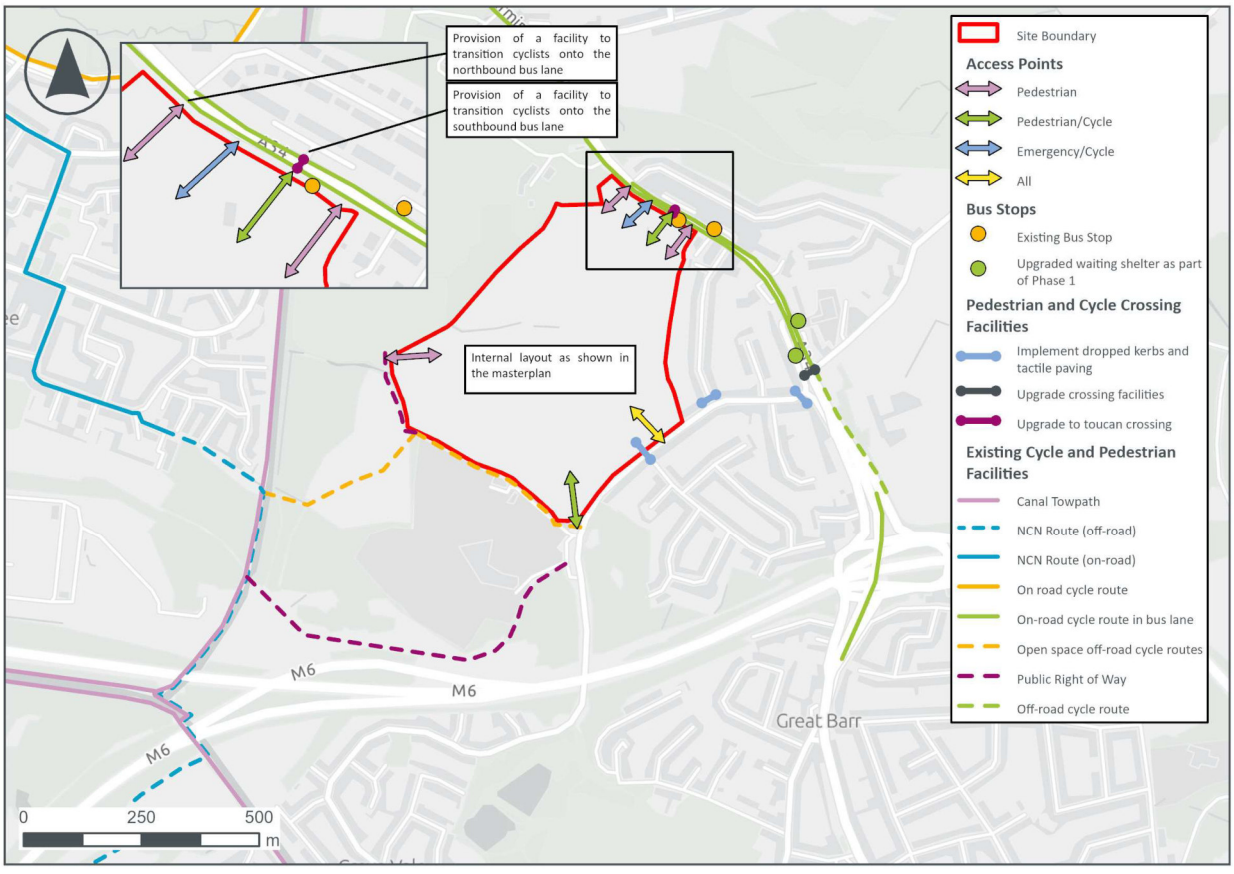
5.3.13 To reflect desire lines, routes to local amenities, and committed and existing sustainable transport infrastructure within the vicinity of the site, an off-site integrated transport strategy has been developed. This is summarised in Figure 5-1, and detailed below:

- It is proposed to upgrade the existing pedestrian crossing on the frontage of the site on A34 Birmingham Road to a toucan crossing. This will ensure that cyclists are able to access the

existing southbound bus lane on A34 Birmingham Road from the site. The crossing would be upgraded to be fully LTN 1/20 compliant.

- In close proximity to the cycle accesses to the site onto A34 Birmingham Road, a facility will be provided to transition cyclists into the northbound and southbound bus lanes. This is likely to be a dropped kerb, with appropriate markings;
- It is proposed to upgrade the existing pedestrian crossing on A34 Birmingham Road, north of Chapel Lane, to be fully LTN 1/20 compliant, to ensure a direct, safe and coherent route is provided to local facilities in Great Barr, including St Margaret's C of E Primary School.
- A series of dropped kerbs with tactile paving will be implemented along Wilderness Lane to ensure there is suitable crossing infrastructure for pedestrians along desire lines towards Great Barr and Scott Arms.
- Any further requirements for improvements to off-site pedestrian and cycle infrastructure will be discussed with the local highway authority.

Figure 5-1: Off-Site Integrated Transport Strategy



Credits: Contains OS data © Crown Copyright and database right 2023 Contains data from OS Zoomstack

5.4 Internal Layout and Servicing

5.4.1 Servicing shall be undertaken within the curtilage of the site. Swept path analysis has been undertaken to demonstrate that a fire tender, removals van and refuse vehicle can enter and exit the site in forward gear. Drawing showing this analysis are provided in **Appendix C.**

5.4.2 Further details of the proposed internal layout would be agreed with the local highway authority, Sandwell Metropolitan Borough Council (SMBC), at Reserved Matters stage.

5.5 Parking Provision

5.5.1 On-site parking provision (vehicle, cycle storage and EV charging) will be agreed with SMBC at detailed application stage.

5.5.2 Consideration will be given to this provision in the context of local parking standards, set out within Appendix 3 of the SMBC Revised Residential Design Guide Supplementary Planning Document (2014).

6 Travel Demand

6.1 Introduction

6.1.1 A bespoke multi-modal travel demand model has been prepared to forecast the number of trips generated by the development during weekday peak periods for vehicles, in addition to an average weekday for pedestrians, cyclists and public transport. This chapter provides a summary of the methodology used to develop this model, and the outputs, by mode.

6.2 Scope of Assessment

6.2.1 The development comprises of up to 150 dwellings and an accessible countryside park. For the purposes of this assessment, only the travel demand associated with the residential element of the development proposals has been quantified.

6.2.2 It is anticipated that the countryside park will provide green space facilities for future and existing local residents to access on foot. The on-site layout will be designed to maximise permeability of the site for pedestrians, with appropriate walking routes through the countryside park. On this basis, no further consideration within this report has been given as to the travel demand associated with this land use.

6.3 Trip Generation

Vehicle Trip Generation

6.3.1 To derive the vehicle trip generation for the proposed development, an ATC has been undertaken on Sycamore Road in the week commencing 14th September 2023, for a seven-day period, and factored for the proposed quantum of development. The full ATC data is included in **Appendix E**.

6.3.2 Sycamore Road is a residential cul-de-sac that provides access to 252 existing residential dwellings directly to the south-east of the development site. Given the spatial proximity to the development, type of residential dwellings and comparable access to sustainable travel modes, it is considered that this area has comparable travel patterns to the proposed development. A summary of the vehicle trip rates for this existing area is set out in Table 6-2.

6.3.3 During the site visits, it was observed that some car parking associated with Q3 Academy occurs at the northern extent of Sycamore Road. It should therefore be noted that the figures presented in the tables associated with these surveys may therefore provide an overestimate of the vehicle trip generation for the existing residential area.

Table 6-1: Sycamore Road – Automatic Traffic Count Summary and Trip Rates

	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			12hr AAWT (07:00 – 19:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Recorded Total Vehicle Trips (weekday average)	57	99	**156**	83	54	**137**	646	641	**1,287**
Vehicle Trip Rate (based on 252 dwellings)	0.225	0.394	**0.618**	0.330	0.214	**0.544**	2.562	2.545	**5.107**

6.3.4 The resultant vehicle trip generation for the proposed development, based on these trip rates is set out in Table 6-2.

Table 6-2: Vehicle Trip Generation – Proposed Development (150 dwellings)

	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			12hr AAWT (07:00 – 19:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Vehicle Trip Rate	0.225	0.394	**0.618**	0.330	0.214	**0.544**	2.562	2.545	**5.107**
Trip Generation (150 dwellings)	34	59	**93**	50	32	**82**	384	382	**766**

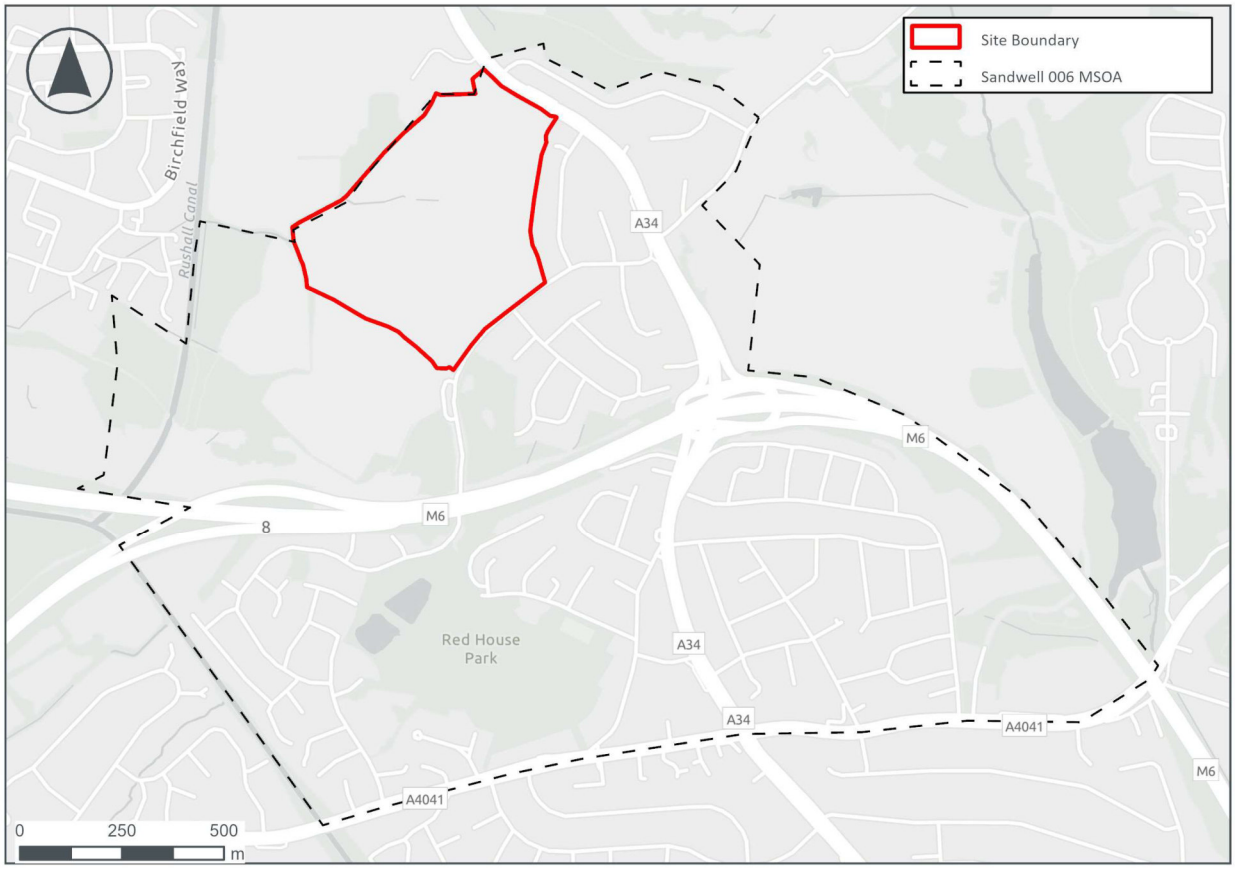
6.3.5 In terms of vehicle trip generation, Table 6-2 shows that the site is forecast to generate 93 and 82 two-way vehicle trips in the Morning and Evening peaks, respectively.

Person & Multi-Modal Trip Generation

6.3.6 To derive the person and multi-modal trip generation, mode share data by trip purpose has been extracted from TEMPro v8.0, for a base year of 2023 using the "*Core*" scenario.

6.3.7 For the purposes of this assessment, this data has been extracted for the Middle Super Output Area (MSOA) in which the site is located, Sandwell 006. The spatial coverage of Sandwell 006 MSOA is shown in Figure 6-1, and includes the site, as well as existing residential areas to the south of the site, and south of the M6. On this basis, it is therefore considered that this data provides a suitable representation of likely travel patterns for the proposed development.

Figure 6-1: Sandwell 006 MSOA



Credits: Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

6.3.8 A summary of the modal splits, by mode is set out in Table 6-3 for the Morning and Evening peak periods and average weekday, respectively.

Table 6-3: Modal Splits – Sandwell 006 (2023)

	Morning Peak		Evening Peak		Average Weekday	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Pedestrian	31%	21%	15%	20%	21%	21%
Cyclists	1%	1%	2%	2%	1%	1%
Car Driver	32%	46%	51%	41%	43%	43%
Car Passenger	20%	21%	22%	25%	23%	23%
Bus	16%	10%	8%	10%	10%	10%
Rail	1%	3%	2%	2%	2%	2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

6.3.9 The outputs from TEMPRo for Sandwell 006 MSOA forecast that a proportion of trips generated by the site would be undertaken by rail. The development site is approximately 3.3km from the nearest railway station, and therefore it is considered that the potential for considerable use of this mode will be limited. Therefore, for the purposes of this assessment, it is assumed that there will be no

demand for rail generated by the site. Trips previously forecast to use these modes have been proportionately re-distributed across all other modes.

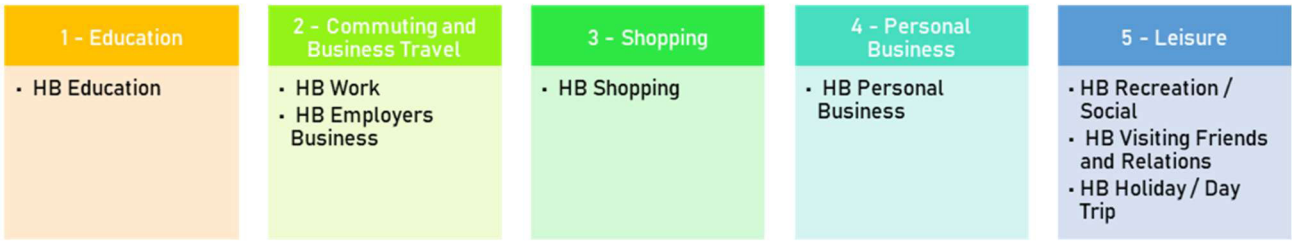
6.3.10 The resultant modal splits used within this assessment are set out in for the Morning and Evening peak period, and average weekday, respectively.

Table 6-4: Assessed Modal Splits

	Morning Peak		Evening Peak		Average Weekday	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Pedestrian	31%	21%	16%	20%	21%	21%
Cyclists	1%	1%	2%	2%	1%	1%
Car Driver	32%	46%	51%	42%	43%	43%
Car Passenger	21%	21%	23%	25%	23%	23%
Bus	16%	10%	8%	11%	11%	11%
Rail	0%	0%	0%	0%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

6.3.11 TEMPro provides details of the number of Home-Based (HB) and Non-Home-Based (NHB) trips, by purpose and mode for each MSOA. As this site is a residential site, only HB trips have been considered within this assessment, and have been grouped into five main trip purposes as summarised in Figure 6-2. These groupings have been created based on the likely destinations of the trips.

Figure 6-2: Trip Purpose Groupings



6.3.12 The resultant trip generation, by mode and purpose is set out in Table 6-5 to Table 6-7. Full calculations are provided in **Appendix F.**

Table 6-5: Multi-modal trip generation, by purpose (Morning Peak)

	1 - Education		2 - Commuting & Business		3 - Shopping		4 - Personal Business		5 - Leisure	
	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure
Pedestrian	27	19	3	4	1	3	1	1	1	1
Cyclist	0	0	0	1	0	0	0	0	0	0
Car Driver	9	8	16	39	3	6	1	3	5	4
Car Passenger	15	14	2	5	1	2	1	3	3	2
Bus	11	6	4	5	1	1	0	0	2	1
Total	**61**	**66**	**25**	**55**	**6**	**11**	**4**	**7**	**9**	**7**

Table 6-6: Multi-modal trip generation, by purpose (Evening Peak)

	1 - Education		2 - Commuting & Business		3 - Shopping		4 - Personal Business		5 - Leisure	
	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure
Pedestrian	3	5	3	2	3	3	2	1	4	4
Cyclist	0	0	0	0	0	0	0	0	1	1
Car Driver	3	2	25	11	7	5	3	2	12	12
Car Passenger	3	3	4	2	3	3	2	2	10	11
Bus	1	2	3	3	1	1	1	0	2	2
Total	**9**	**12**	**36**	**18**	**15**	**11**	**7**	**5**	**29**	**30**

Table 6-7: Multi-modal trip generation, by purpose (Average Weekday)

	1 - Education		2 - Commuting & Business		3 - Shopping		4 - Personal Business		5 - Leisure	
	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure
Pedestrian	90	84	20	21	31	34	14	15	34	34
Cyclist	1	1	2	2	1	1	0	0	9	8
Car Driver	42	40	132	140	63	65	27	28	118	109
Car Passenger	49	47	20	21	30	33	17	19	92	86
Bus	32	38	22	23	15	17	6	6	20	20
Total	**211**	**198**	**201**	**210**	**139**	**147**	**64**	**69**	**274**	**258**

6.3.13 A summary of the total trip generation, by mode is provided in Table 6-8.

Table 6-8: Multi-Modal Trip Generation Summary

	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			Average Weekday (07:00 – 19:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Pedestrian	33	27	60	16	16	31	190	188	378
Cyclist	1	1	2	2	1	3	12	12	24
Car Driver	34	59	93	50	32	82	384	382	766
Car Passenger	22	27	49	22	20	41	209	207	415
Bus	17	13	29	8	8	16	95	94	189
Total	**105**	**127**	**232**	**97**	**77**	**173**	**890**	**882**	**1,772**

HGV Trip Generation

6.3.14 Given the residential nature of the site, it is forecast that a small proportion of trips generated by the site will be HGVs, related to servicing and personal deliveries. HGV trip rates have therefore been extracted from the ATC data collected on Sycamore Road.

6.3.15 The resultant trip rates and HGV trip generation for 150 dwellings is set out in in Table 6-9.

Table 6-9: HGV Trip Rates & Trip Generation

	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			12hr AAWT (07:00 – 19:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
HGV Trip Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.001	0.03	0.04
HGV Trip Generation (150 dwellings)	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**5**

6.3.16 Table 6-9 shows that the site is forecast to generate no HGV trips in the Morning and Evening peak periods, and five two-way HGV trips across a 12-hour weekday period.

6.4 Trip Distribution

HGV

6.4.1 For the purposes of this assessment, it is assumed that HGVs have the same trip distribution and assignment as general traffic generated by the site, set out below.

All Vehicles

6.4.2 The vehicle trip distribution has been derived separately for each trip purpose, as set out below. Calculations are set out in **Appendix F.**

1 - Education

6.4.3 To identify the destinations of education trips undertaken by private vehicle, an assessment of the likely demand generated by the site, by age group, has been undertaken using the following data:

- 2020 mid-year population estimates for the MSOA the site is located within, Sandwell 006 (Office for National Statistics, Table SAPE23DT2)
- Household composition from 2021 Census for the MSOA the site is located within, Sandwell 006 (Office for National Statistics, Dataset ID TS003).

6.4.4 Based on this data, the resultant number of estimated pupils on-site, by age group is set out in Table 6-10.

Table 6-10: Pupils per household

	Sandwell 006 Middle Super Output Area			Proposed Development		
	Households	Residents	Pupils per household	Households	Estimated pupils on-site	% of education trips
All ages	2,720	-	-	175	-	-
Children aged 5-10	-	354	**0.1**	-	23	**33%**
Children aged 11-16	-	582	**0.2**	-	37	**54%**
Children aged 17-18	-	140	**0.1**	-	9	**13%**

6.4.5 The nearest primary and secondary schools (with post-16 provision) within the vicinity of the site were identified, and a gravity model created to quantify the number of vehicle trips generated to each school. The gravity model takes into consideration the distance from the centre of the site to the facility (as the crow flies) and the capacity of each school. For vehicle trips, this has been inversely weighted such that schools which are further away have a higher proportion of vehicle trips routing to them.

2 – Commuting and Business Travel

6.4.6 To calculate the distribution of these trips, 2011 Census Journey to Work data for Sandwell 006 MSOA has been extracted.

6.4.7 Data for car trips from Sandwell 006 MSOA as a place of residents have been extracted from 2011 Census Table WU03EW (Location of usual resident and place of work by method of travel to work).

3, 4, 5 – Shopping, Personal Business and Leisure

6.4.8 For the purposes of trip distribution, trips from these three trip purposes have been grouped together. This is considered appropriate as the destinations which provide these facilities are likely to be co-located.

6.4.9 The National Travel Survey (NTS) provides data for the average trip time, by purpose and region. For these trip purposes, a summary of the data for the West Midlands over the last three survey years is provided in Table 6-11.

Table 6-11: Average trip time (minutes) by journey purpose (West Midlands). Source: National Travel Survey

	Average trip time (minutes)		
	2018/19	2020	2021
Shopping	17	15	15
Other Escort	16	14	17
Personal Business	20	18	19
Visit friends at private home	27	27	24
Visit friends elsewhere	22	19	22
Sport/entertainment	23	20	21
Holiday/day trip	44	34	36
Other (including just walk)	21	23	25

6.4.10 Based on the data in Table 6-11, it is considered that consideration of destinations within a 15-minute drive of the site is appropriate. These were identified as follows:

- Online GIS software used to create 15-minute drive time isochrone from the site access point, taking into consideration "typical" traffic levels on a Wednesday at 08:00; and
- Identification of MSOAs within 15-minute drive time isochrone (either partially or wholly).

6.4.11 Data was extracted from the 2011 census (Table WP0605EW) for the workplace population, by industry, for each of the identified MSOAs. As a proxy for shopping, personal business and leisure uses, the workplace population employed within the wholesale and retail trade was extracted.

6.4.12 A gravity model was then prepared that took into consideration the distance from the site access (along the road network) and the number of people employed in each MSOA within the wholesale and retail trade. Both of these factors have been given equal weighting within this model.

Pedestrian & Cyclist

6.4.13 The pedestrian and cyclists trip distribution has been derived separately for each trip purpose, as set out below. Calculations are set out in **Appendix F.**

1 - Education

6.4.14 To identify the destinations of education trips undertaken by pedestrians and cyclists, the percentage of trips to each type of school (primary, secondary & post 16) was derived, as set out in Table 6-10.

6.4.15 The nearest primary and secondary schools (with post-16 provision) within the vicinity of the site were identified, and a gravity model created to quantify the number of pedestrian and cycle trips generated to each school. The gravity model takes into consideration the distance from the centre of the site to the facility (as the crow flies) and the capacity of each school. This model has been weighted such that schools that are closer have a higher proportion of pedestrian and cycle trips routing to them.

6.4.16 Barr Beacon School has been manually removed from this gravity model for pedestrian trips, as given the walking distances involved and existing infrastructure this is unlikely to be viable mode for trips generated by the site to this site.

2 – Commuting and Business Travel

6.4.17 To calculate the distribution of these trips, 2011 Census Journey to Work data for Sandwell 006 MSOA has been extracted.

6.4.18 Data for pedestrian and cycle trips from Sandwell 006 MSOA as a place of residence have been extracted from 2011 Census Table WU03EW (Location of usual residence and place of work by method of travel to work). For pedestrians, only locations with two or more trips have been included to ensure that only areas which are within walking distance of the site were included in the assessment.

3 – Shopping

6.4.19 To calculate the distribution of these trips, shopping destinations within 2km for pedestrians have been identified. A gravity model has been created for these locations to quantify the number of pedestrian trips to each location. The gravity model takes into consideration the distance from the centre of the site to each location (as the crow flies), weighted such that areas closer to the site will attract a higher proportion of pedestrian trips.

6.4.20 The travel demand model forecasts the site will generate one two-way cycling trip across an average weekday, so no further consideration has been given to the distribution of assignment of these trips.

4 – Personal Business

6.4.21 The National Travel Survey defined personal business as visits to services e.g., hairdressers, laundrettes, dry-clearers, betting shops, solicitors, banks, estate agents, libraries, churches, medical facilities, and eating and drinking establishments.

6.4.22 To calculate the distribution of these trips, destinations with these facilities have been identified within 2km for pedestrians. These have been identified as Great Barr Local Centre and Scott Arms. Scott Arms have a greater selection of these facilities, and so for the purposes of this assessment the following split of trips is assumed:

- Great Barr Local Centre – 25%
- Scott Arms – 75%

6.4.23 The travel demand model forecasts the site will generate one two-way cycling trip across an average weekday, so no further consideration has been given to the distribution of assignment of these trips.

5 - Leisure

6.4.24 For the sub-categories set out in Figure 6-2, the National Travel Survey defines these as:

- Social or entertainment – *"Visits to meet friends, relatives, or acquaintances, both at someone's home or at a pub, restaurant; all types of entertainment or sport, clubs, and voluntary work, non-vocational evening classes, political meetings".*
- Holidays or Day Trips – "*Trips (within GB) to or from any holiday (including stays of 4 or more nights with friends or relatives), or trips for pleasure (not otherwise classified as social or entertainment) within a single day".*

6.4.25 The nearest locations with facilities to meet this trip purpose within the vicinity of the site have been identified (within 2km for pedestrians and 8km for cyclists), and a gravity model created to quantify the number of pedestrian and cycle trips generated to each area. The gravity model takes into consideration the distance from the centre of the site to each area (as the crow flies) and a manual factor for the number of facilities in each area. Each of these factors are equally weighted within the gravity model. The resultant distribution to each of these is set out in Table 6-12.

Table 6-12: Pedestrian & Cycle Trips - Leisure Trip Distribution

Location	% of walking trips	% of cycling trips
Red House Park	7.7%	6.4%
Great Barr Local Centre	53.6%	38.5%
Scott Arms Local Centre	22.0%	18.3%
A34 Birmingham Road (e.g. Handsworth RUFC, Aston University Recreation Centre)	16.5%	18.3%
Walsall Town Centre	-	10.7%
Queslett Local Centre	-	7.7%
Total	**100%**	**100%**

6.5 Trip Assignment

Vehicle

6.5.1 Assumptions around vehicle trip assignment have been applied based on an MCC survey undertaken at the Wilderness Lane / Sycamore Road junction during peak periods in September 2023. Sycamore Road is a residential cul-de-sac that provides access to 252 existing residential dwellings directly to the south-east of the development site. Given the spatial proximity to the development, type of residential dwellings and comparable access to sustainable travel modes, it is considered that this area has comparable travel patterns and route choices to the proposed development.

6.5.2 A summary of the recorded directional splits to/from Sycamore Road and that forecast at the site access are set out in Table 6-13. This demonstrates that the directional splits are broadly comparable across both peaks, and therefore it is considered that the vehicle trip assignment provides a suitable forecast of likely travel patterns of the proposed development.

Table 6-13: Site Access Distribution – Validation Exercise

		Morning Peak (08:00 – 09:00)		Evening Peak (17:00 – 18:00)	
		To/From East	To/From West	To/From East	To/From West
Survey (Existing Residential Area)	Arrivals	64%	36%	83%	17%
	Departures	69%	31%	71%	29%
Proposed Development	Arrivals	69%	31%	76%	24%
	Departures	68%	32%	76%	24%

6.5.3 A summary of the methodology used to assign vehicle trips to each of the assessment routes, based on this MCC is provided in Table 6-14.

Table 6-14: Vehicle Trip Assignment Methodology

Trip Purpose	Methodology	Assumptions
1 – Education	• Manual assignment of trips based on peak hour journey times and layout of highway network.	• All vehicle trips routing to the north, assumed to access and egress site via Peak House Road. • In the Morning peak: a) 14% of arrivals traffic routing from A4041 Queslett Road or A34 (south of M6 Junction 7) is assumed to route via Wilderness Lane/A34 Birmingham Road and 86% via Longleat/Monksfield Avenue b) 31% of departures traffic routing to A4041 Queslett Road or A34 (south of M6 Junction 7) is assumed to route via Wilderness Lane/A34 Birmingham Road and 69% via Longleat/Monksfield Avenue • In the Evening peak: a) 71% of arrivals traffic routing from A4041 Queslett Road or A34 (south of M6 Junction 7) is assumed to route via Wilderness Lane/A34 Birmingham Road and 29% via Longleat/Monksfield Avenue b) 35% of departures traffic routing to A4041 Queslett Road or A34 (south of M6 Junction 7) is assumed to route via Wilderness Lane/A34 Birmingham Road and 65% via Longleat/Monksfield Avenue • 50% of vehicle trips arriving from the A34, south of M6 Junction 7, route via Birmingham Road and 50% via Peak House Road, across all assessment periods.
2 – Commuting & Business Travel	• Calculate routes between the site and population weighted centroids of trip origins using ArcGIS online route planning tool, which provides an "all or nothing" assignment where all journeys from a since origin follow the same route; • Conduct a manual check of assignment for larger, local MSOAs, based on peak hour journey times and layout of highway network	
3, 4, 5 - Shopping, Personal Business and Leisure		

6.5.4 Traffic flow diagrams showing the vehicle trip assignment across the local highway network for the Morning and Evening peak periods are provided in **Appendix G.**

Pedestrian & Cycle Trip Assignment

6.5.5 Pedestrian and cycle trips have been assigned onto the network based on the availability of suitable infrastructure, journey times and layout of the highway network. A summary of the number of pedestrian and cycle trips, by route is set out in Table 6-15 and Table 6-16 below. These align to the routes assessed in Chapter 3.

Table 6-15: Pedestrian trip assignment

Route	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			Average Weekday (07:00 – 19:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
1	11	10	21	8	7	16	85	86	170
2	3	4	7	4	4	8	36	37	74
3	0	0	0	1	1	1	6	6	11
4	18	13	31	2	4	6	61	56	117
5	1	1	2	0	0	0	3	3	6
Total	**33**	**27**	**60**	**16**	**16**	**31**	**190**	**188**	**378**

Table 6-16: Cyclist trip assignment

Route	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			Average Weekday (07:00 – 19:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
1	0	0	0	1	1	1	4	4	8
2	0	0	1	1	0	1	4	4	8
3	0	0	0	0	0	1	2	2	5
4	0	0	0	0	0	0	0	0	1
5	0	0	0	0	0	0	0	0	0
Total	**0**	**1**	**1**	**2**	**1**	**3**	**11**	**11**	**22**

7 Active Travel and Public Transport Impact Assessment

7.1 Introduction

7.1.1 This chapter of the report summarises the findings of multi-modal impact assessment for the local sustainable transport network and gives consideration to the requirements of the Active Travel England Planning Toolkit, in relation to the proposed development. It focuses specifically on active travel and public transport.

7.2 Active Travel Impact Assessment

Pedestrian

7.2.1 A qualitative assessment of the impact of the development on the off-site pedestrian networks is set out in Table 7-1. It is considered that once the on and off-site transport strategy has been implemented, these networks can accommodate the trips generated by the development.

Table 7-1: Active Travel Impact Assessment - Pedestrian

Route	Description	Two-way trips generated by development (12hr Average Weekday)	Commentary
Route 1	Provides access to local amenities and nearest bus stops located in Great Barr, accessed from A34 Birmingham Road. Three routes are available: Option 1) Wilderness Lane & Peak House Road; Option 2) Wilderness Lane and Birmingham Road; Option 3) A34 Birmingham Road.	170	• Development trips would be spread across three routes, depending on trip origin and destination. • To address the existing lack of footway along the site frontage on Wilderness Lane, it is proposed for the development to provide a footway link to tie into existing provision on the western side of Wilderness Lane. • It is also proposed for the development to provide tactile paving at junctions along this route as shown in Figure 5-1. • It is proposed to provide upgraded crossing facilities for pedestrians at the existing pedestrian crossing facilities on A34 Birmingham Road, north of Chapel Lane. • Following implementation of the improvements noted above, it is considered that the trips generated by the proposed development can be accommodated on these routes.
Route 2	Provides access to local amenities located in Scott Arms, accessed from either A34 Birmingham Road on A4041, and onwards towards Birmingham City Centre and Perry Barr. Two routes are available: Option 1) Wilderness Lane & A34 Birmingham Road (via M6 Junction 7); and	74	• Development trips would be spread across two routes, via A34 Birmingham Road or Red House Park. • To address the existing lack of footway along the site frontage on Wilderness Lane, it is proposed for the development to provide a footway link to tie into existing provision on the western side of Wilderness Lane. • It is also proposed for the development to provide tactile paving at junctions along this route as shown in Figure 5-1.

Route	Description	Two-way trips generated by development (12hr Average Weekday)	Commentary
	Option 2) Wilderness Lane, Red House Park & A4041.		• Beyond this, the existing network along this route provides suitable footway provision, with signalised crossings along desire lines Scott Arms to access surrounding facilities. • It is proposed for the development to provide a dropped kerb crossing with tactile paving to the west of the site access, to accommodate pedestrians routing via Red House Park towards Scott Arms. • Following implementation of the improvements noted above, it is considered that the trips generated by the proposed development can be accommodated on these routes.
Route 3	Provides access to local amenities located to the north of the site, accessed via A34 Birmingham Road, and onwards towards Walsall.	11	• Pedestrians are able to get direct access onto A34 Birmingham Road from the proposed pedestrian/cycle access(es) onto A34 Birmingham Road. • The existing network along this route provides suitable footway provision, with signalised crossings along desire lines to access facilities on the eastern side of the A34. • It is considered that the trips generated by the proposed development can be accommodated through existing infrastructure along these routes.
Route 4	Provides access to Q3 Academy, Grove Vale Primary School and onwards towards West Bromwich.	117	• To address the existing lack of footway along the site frontage on Wilderness Lane, it is proposed for the development will provide a dropped kerb crossing with tactile paving to the west of the site access. • It is also proposed to provide a route within the site, that directly tie into the pedestrian/cycle route between the site and Q3 Academy. This will provide direct access to the school from the site. • Beyond this, it is considered the existing network along this route provides suitable footway provision to accommodate the trips generated by the proposed development.
Route 5	Provides access to local amenities within Yew Tree, to the north-west of the site.	6	• To address the existing lack of footway along the site frontage on Wilderness Lane, it is proposed for the development will provide a dropped kerb crossing with tactile paving to the west of the site access. • It is also proposed to provide a route within the site, that directly tie into the pedestrian/cycle route between the site and Q3 Academy. This will provide direct access to facilities in Yew Tree. • Beyond this, it is considered the existing network along this route provides suitable footway provision to accommodate the trips generated by the proposed development.

Cyclist

7.2.2 A qualitative assessment of the impact of the development on the off-site cyclist networks is set out in Table 7-2. It is considered that once the on and off-site transport strategy has been implemented, these networks can accommodate the trips generated by the development.

Table 7-2: Active Travel Impact Assessment - Cyclist

Route	Description	Two-way trips generated by development (12hr Average Weekday)	Commentary
Route 1	Provides access to local amenities and nearest bus stops located in Great Barr, accessed from A34 Birmingham Road. Three routes are available: Option 1) Wilderness Lane & Peak House Road; Option 2) Wilderness Lane and Birmingham Road; Option 3) A34 Birmingham Road.	8	• Development trips would be spread across three routes, depending on trip origin and destination. • It is likely most cycle trips would route through the site, via existing bus lanes on A34 Birmingham Road. It is proposed to be provide suitable facilities to transition to/from the site into the existing bus lanes, and also to upgrade the existing signalised pedestrian crossing on the site frontage to a toucan crossing. • Following implementation of the improvements noted above, it is considered that the trips generated by the proposed development can be accommodated on these routes.
Route 2	Provides access to local amenities located in Scott Arms, accessed from either A34 Birmingham Road on A4041, and onwards towards Birmingham City Centre and Perry Barr. Two routes are available: Option 1) Wilderness Lane & A34 Birmingham Road (via M6 Junction 7); and Option 2) Wilderness Lane, Red House Park & A4041.	8	• Development trips would be spread across two routes, via A34 Birmingham Road or Red House Park. • It is proposed to be provide suitable facilities to transition to/from the site into the existing bus lanes on A34 Birmingham Road, and also to upgrade the existing signalised pedestrian crossing on the site frontage to a toucan crossing. • Following implementation of the improvements noted above, it is considered that the trips generated by the proposed development can be accommodated on these routes.
Route 3	Provides access to local amenities located to the north of the site, accessed via A34 Birmingham Road, and onwards towards Walsall.	5	• Cyclists are able to get direct access onto A34 Birmingham Road from the proposed pedestrian/cycle access(es) onto A34 Birmingham Road. • It is proposed to be provide suitable facilities to transition to/from the site into the existing bus lanes, and also to upgrade the existing signalised pedestrian crossing on the site frontage to a toucan crossing. • Following implementation of the improvements noted above, it is considered that the trips generated by the proposed development can be accommodated on these routes.
Route 4	Provides access to Q3 Academy, Grove Vale Primary School and onwards towards West Bromwich.	1	• To address the existing lack of footway along the site frontage on Wilderness Lane, it is proposed for the development will provide a dropped kerb crossing with tactile paving to the west of the site access. • It is also proposed to provide a route within the site, that directly tie into the pedestrian/cycle route between the site and Q3 Academy. This will provide direct access to the school from the site.

Route	Description	Two-way trips generated by development (12hr Average Weekday)	Commentary
			• Beyond this, it is considered the existing network along this route provides suitable provision to accommodate the trips generated by the proposed development.

Summary

To summarise the evidence and assessment undertaken for the proposed development in terms of active travel, a summary of provided below against the criteria within the Active Travel England (ATE) Planning Application Toolkit.

Table 7-3: ATE Planning Assessment Toolkit - Summary

ID	Criterion	Commentary
ATEPAF_101	Transport Assessment: Quantitative Analysis	Chapter 6 of this TA provides forecasts of the multi-modal trip generation for the development, and quantified the additional trip generation, distribution and assignment of these trips. This has informed consideration of the impacts of the development and the suitability of these routes to accommodate the trips generated by the proposed development.
ATEPAF_102	Transport Assessment: Qualitative Analysis	Chapter 3 of this TA has provided a qualitative analysis of the current infrastructure for pedestrians and cyclists, highlighting the deficiencies in surrounding infrastructure in line with policy and guidance contained in LTN 1/20.
ATEPAF_103	Local Amenities	Chapter 3 of this TA has given an assessment of the local amenities within 800m walking distance of the site, and the accessibility of the walking routes to these facilities. It is concluded that there is a sufficient number and range of essential facilities within 10 minutes, and that following the implementation of the development, and proposed off-site improvements, these will be accessible via a suitable walking route.
ATEPAF_104	Walking routes to a primary school	Chapter 3 of this TA provides an assessment of the walking routes to key local amenities, including the nearest primary schools. The route to St Margaret's Primary School is step-free, has a smooth even surface, street lighting and following implementation of the proposed off-site improvements will include appropriate crossings in line with LTN 1/20. Continuous footways are available along the whole route, with some localised narrowing, along Wilderness Lane, Birmingham Road, and A34 Birmingham Road.
ATEPAF_105	Walking routes to a food shop	Chapter 3 of this TA provides an assessment of walking routes to key local amenities, including the nearest food shop in Great Barr local centre. The route to this shop is step-free, has a smooth even surface, street lighting and following implementation of the proposed off-site improvements will include appropriate crossings in line with LTN 1/20. Continuous footways are available along the whole route, with some localised narrowing, along Wilderness Lane, Birmingham Road, and A34 Birmingham Road.
ATEPAF_106	Suitability for walking and wheeling (external to the site)	Chapter 3 of this TA has identified the key walking routes for the proposed development. Along these routes, where stepped sections are present, there are alternative routes for pedestrians available which have ramps or suitable surfacing.
ATEPAF_107	Safety at junctions (off-site)	No new or improved off-site junctions are proposed as part of the development, therefore this criterion is not considered to be relevant.
ATEPAF_108	Cycle routes to key destinations	Chapter 5 of this TA outlines the off-site active travel strategy for the proposed development. These are focussed along the cycle routes to key local destinations and

ID	Criterion	Commentary
ATEPAF_109	Cycle safety on links	will be progressed in further discussion with the local highway authority. Any proposed improvements would be delivered in line with LTN 1/20, where feasible.
ATEPAF_110	Crossings (external to the site)	Chapter 5 of this TA outlines the off-site active travel strategy for the proposed development. Locations of new or improved crossings have been identified, which are located along desire lines to key local destinations. Taking into consideration physical constraints, these have been designed to accord with LTN 1/20 guidance and highway standards.
ATEPAF_111	Shared use routes (external to the site)	Chapter 3 of this TA provides a summary of existing cycle infrastructure, which includes some shared use routes. This predominantly includes the route to the south of the site, towards Yew Tree. This route is c. 3m in width, which meets guidelines in LTN 1/20 for routes with less than 300 pedestrians and 300 cyclists per hour.
ATEPAF_112	Physical barriers for cycle users (on and off site)	Chapter 5 of this TA outlines the on- and off-site active travel strategy for the proposed development. Through further discussion with the local highway authority, it will be ensured that these are designed such that the Cycle Design Vehicle can be accommodated. On-site routes will be developed through the detailed design process, in line with LTN 1/20 guidance.
ATEPAF_113	Lighting (on and off site)	Chapter 3 provides an assessment of infrastructure available on the key walking routes to/from the proposed development. Where street lighting is not provided, Chapter 5 of this TA outlined the sections on which it is proposed to provide improvements, through discussion with the local highway authority. Proposals for street lighting on-site will be developed through the detailed design process.
ATEPAF_114	Walking routes to nearest transport nodes	Chapter 3 of this TA provides an assessment of walking routes to the nearest bus stops. The most frequent bus services are available from existing bus stops on A34 Birmingham Road. The route to these stops is step free, has a smooth-even surface, street lighting and following implementation of the proposed off-site improvements will include appropriate crossings in line with LTN 1/20. Continuous footways are available along the whole route, with some localised narrowing, along Wilderness Lane, Birmingham Road, and A34 Birmingham Road.
ATEPAF_115	Access and provision of public transport	Section 7.3 of this TA provides an assessment of the public transport connections to access the site. These provide effective and convenient links through proximity to existing bus routes of the 51 and X51, which are accessible within 360m of the nearest site access.
ATEPAF_116	Active travel infrastructure enabling use of public transport	This TA has provided a review of the facilities available at existing bus stops within the vicinity of the site. These include seating, lighting and adequate shelter to accommodate the proposed demand. Raised kerbs are provided to enable wheelchair user access, as well as service information and a bus cage/layby markings.
ATEPAF_117	Transport Assessment: Proposed Infrastructure	This TA has provided a clear description of the improvements that will be made to infrastructure and how this will enable an increase in walking and cycling rates.
ATEPAF_118	Site permeability	It is proposed to provide a series of routes and access points across the site for pedestrians and cyclists, which will reduce the length of routes for these modes and enable more direct access to local amenities by sustainable modes than the private car.
ATEPAF_119	Walking and cycling access	Chapter 5 provides an overview of the proposed access arrangements of the site. It is proposed to provide more accessible walking and cycling access points than motor vehicles.
ATEPAF_120	Future proofing and safeguarding	The proposed development enables and proposes walking and cycling routes up to the site boundary, connecting into existing off-site routes. However, it should be noted that there are no anticipated, planned, proposed to allocated development sites adjacent to the proposed development.
ATEPAF_121	Through traffic	It is proposed to only provide one vehicle access to the proposed development, and therefore it is not possible for car drivers to cut through the site whilst undertaking longer journeys.

ID	Criterion	Commentary
ATEPAF_122	Safety at junctions (internal to the site, including site access)	Internal site junctions, street geometry, internal pedestrian, car parking layout, cycle parking and cycle routes, and crossings would be designed as part of the detailed design process, and will take into consideration all relevant design guidance and policy, including Manual for Streets. Pedestrian and cycle routes through the site have been proposed that would serve as alternative routes to those that would otherwise be undertaken along the highway network.
ATEPAF_123	Design speed of new roads	
ATEPAF_124	Crossings (internal to the site)	
ATEPAF_125	Suitability for walking and wheeling (internal to the site)	
ATEPAF_126	Cycle safety on links (internal to the site)	
ATEPAF_127	Shared use routes (internal to the site)	
ATEPAF_130	Trip end facilities for cycling (Destinations)	The proposed development is not a destination, and therefore this criterion is not considered relevant.
ATEPAF_131	Travel Plan	A Framework Travel Plan has been provided setting out proposed measures and monitoring strategy. It includes a commitment to agree mode share targets following completion of baseline surveys.

7.3 Public Transport Impact Assessment

7.3.1 Section 3.6 of this TA provides a summary of the existing bus services which operate along A34 Birmingham Road. The X51 and 51 bus services route along the northern boundary of the site. The closest bus stops to the site are located on A34 Birmingham Road, adjacent to the proposed pedestrian/cycle access point and are equipped with seating, shelters, and timetable provision for passengers. These stops are served by the number 51 service, with X51 served from stops adjacent to Chapel Road, approximately 360m from the nearest site access.

7.3.2 These are high frequency bus services, with each service operating every 10 - 12 minutes Monday to Saturday, and every 30 minutes on a Sunday, and they provide a direct route to Walsall and Birmingham City Centre, via Perry Barr. Planned improvements as part of the Phase 2 A34 SPRINT proposals will improve bus journey times with savings of up to 22% on some routes[2]. All buses will be able to use the infrastructure which will improve reliability on the network and predictability of the service.

7.3.3 It is proposed to provide a pedestrian/cycle access point onto A34 Birmingham Road adjacent to the closest bus stops to facilitate direct and convenient access to this existing infrastructure. There is an existing signalised crossing within approximately 40m of the proposed access point to facilitate access to the A34 Birmingham Road southbound bus stop. Both of these bus stops currently have seating, printed timetable information and bus cage markings.

[2] https://www.tfwm.org.uk/who-we-are/what-we-do/sprint-bus-priority-corridor/benefits-of-sprint/

7.3.4 Across an average weekday, the site is forecast to generate 189 two-way trips via public transport. This equates to approximately 95 people undertaking a return trip on public transport each day. It is considered that this existing and planned infrastructure will be able to accommodate the additional demand generated by the development.

7.4 Summary

7.4.1 This chapter has demonstrated that the implementation of the proposed improvements to active travel infrastructure within the vicinity of the site will ensure that the pedestrian and cycle trips generated by the development can be accommodated.

8 Traffic Impact Assessment

8.1 Introduction

8.1.1 This chapter of the report summarises the findings of the traffic impact assessment for the local highways network, in relation to the proposed development.

8.2 Methodology

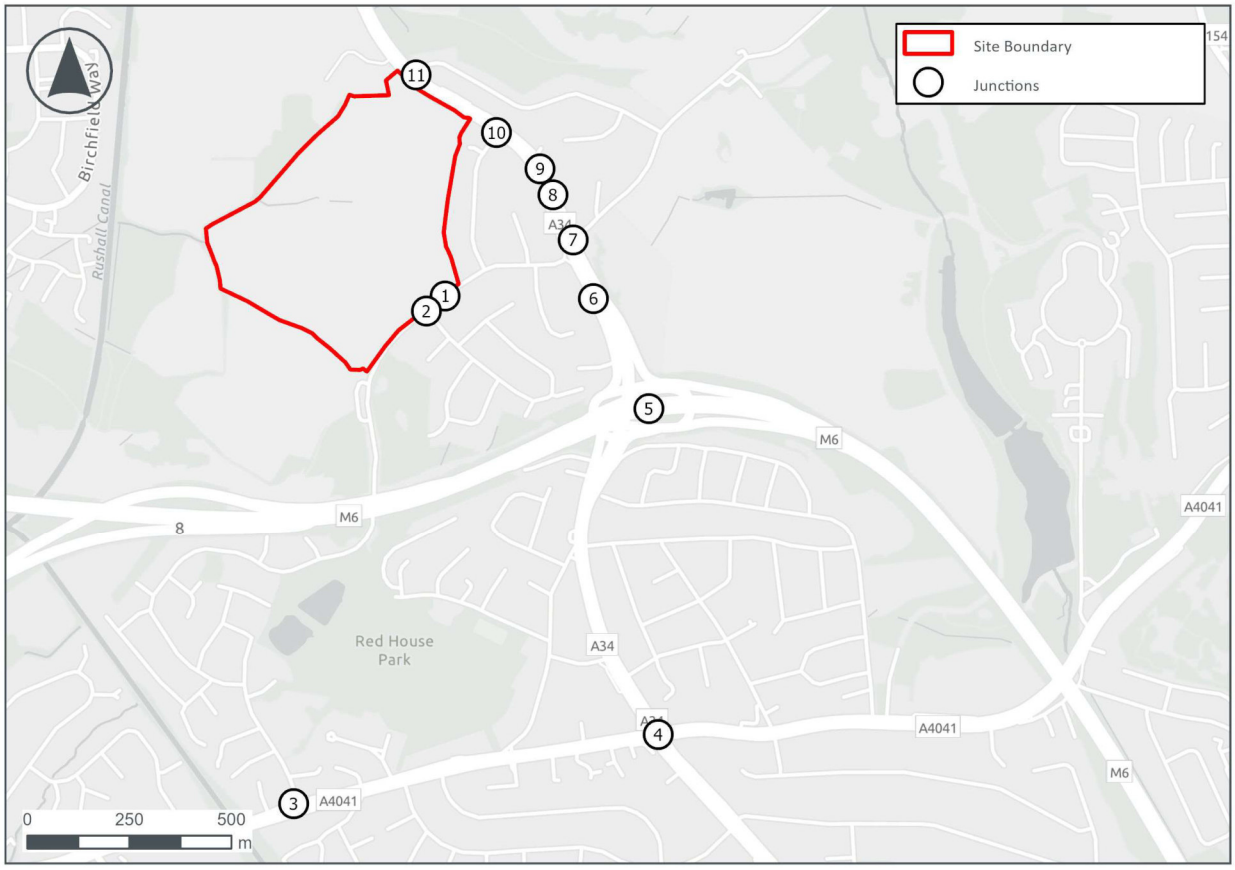
Study Area

8.2.1 Based on the outputs of the travel demand model summarised in Chapter 6 of this report, Table 8-1 sets out the number of two-way vehicle trips generated by the development through adjacent junctions. The spatial location of these junctions is shown in the following table and figure.

Table 8-1: Junction Capacity Assessment Study Area – Number of two-way vehicle trips through adjacent junctions

Junction	Weekday Morning Peak (two-way trips)	Weekday Evening Peak (two-way trips)	Capacity Modelling Undertaken?
1 – Site Access / Wilderness Lane	93	82	Yes
2 – Wilderness Lane / Sycamore Road	30	18	No
3 – Monksfield Avenue / Newton Road	27	17	No
4 – Scott Arms	28	26	No
5 – M6 Junction 7	37	36	No
6 - A34 Birmingham Road / Birmingham Road (S)	16	35	No
7 - A34 Birmingham Road / Chapel Lane	36	22	Yes
8 - A34 Birmingham Road / Birmingham Road (N)	34	30	Yes
9 - A34 Birmingham Road (U-turn bays)	40	30	Yes
10 - A34 Birmingham Road / Peak House Road	14	16	No
11 - A34 Birmingham Road / Merrion's Close	14	10	No

Figure 8-1: Traffic Impact Assessment - Study Area



8.2.2 The scope of capacity modelling is based on the number of development trips forecast to route through the junction during peak periods, in context of the volume of existing trips through a junction. On this basis, and as set out in Table 8-1, capacity models have been prepared of the following junctions:

- 1 - Wilderness Lane / Site Access;
- 7 – A34 Birmingham Road / Chapel Road;
- 8 – A34 Birmingham Road / Birmingham Road (N); and
- 9 – A34 Birmingham Road (u-turn bays).

Baseline Survey Data

8.2.3 Baseline surveys, in the form of Automatic Traffic Surveys (ATCs), Manual Classified Turning Counts with queue lengths (MCCs) and pedestrian crossing surveys were undertaken in for a seven day period starting 14th September 2023. MCC and pedestrian crossing surveys were undertaken on Thursday 14th September 2023. The results of these surveys are provided in **Appendix D.**

Assessment Years

8.2.4 The capacity of the local highway network will be assessed for the following years:

- Scenario 1 – 2023 Base
- Scenario 2 – 2028 Future Year; and
- Scenario 3 – 2028 Future Year + Development.

Traffic Growth

8.2.5 Background traffic growth between the survey year (2023) and assessment years listed above has been accounted for using a growth factors derived from TEMPro (v8.0) for the "Core" Common Assessment Scenario.

8.2.6 Factors have been calibrated with the National Transport Model (Core Common Assessment Scenario), based on Sandwell 006 MSOA for the weekday Morning and Evening peak periods. The parameters selected are outlined below:

- **Dataset**: 80
- **Dataset Scenario**: Core
- **Result Type:** Trips by time period
- **Trip purpose:** All purposes
- **Transport Mode:** Car Driver
- **Trip End Type:** Origin/Destination
- **Area/Road Type:** All Roads

Table 8-2: 2023 - 2028 TEMPro Growth Factors

	Average Growth Factor
Weekday Morning Peak	1.04546
Weekday Evening Peak	1.05000

8.3 Capacity Assessments

The capacity assessments have been broken down into two sets, the first being the Site Access junction (Junction 1), which has been assessed using the PICADY module of Junctions 10, and the second being a corridor model of the A34 Birmingham Road covering Junctions 7-9.

Junction 1 – Site Access

8.3.1 Capacity modelling for this junction has been undertaken using the PICADY module of Junctions 10. The modelling has been prepared on the assumption traffic flows in both peaks have a One Hour profile. Geometries have been taken from topographical mapping, and the site access design provided in **Appendix C.**

8.3.2 Table 8-3 presents a summary of the modelling undertaken at the site access in terms of queue length (Passenger Car Unit [PCU]), delay (seconds per PCU) and Ratio of Flow to Capacity (RFC). Full outputs are provided in **Appendix H.**

Table 8-3: Junction 1 - Modelling Summary

	Weekday Morning Peak (08:00 – 09:00)			Weekday Evening Peak (17:00 – 18:00)		
	RFC	Queue (PCU)	Delay (secs)	RFC	Queue (PCU)	Delay (secs)
Scenario 3 – 2028 Base + Development						
Site Access	0.12	0	8	0.06	0	6
Wilderness Lane (N)	0.05	0	5	0.08	0	5

8.3.3 This shows that the site access junction is forecast to operate well within capacity in the future year plus development scenario, with minimal queueing and delay.

Junction 7, 8 and 9 – A34 Birmingham Road Corridor

8.3.4 A corridor model has been constructed using the Vissim Microscopic Simulation modelling software covering junctions 7-9. The choice of Vissim was made because the A34 network has a mix of junction types, standalone pedestrian crossings, and because there are pockets in the central reservation allowing for U-turning traffic.

Basic Model Setup

8.3.5 The model has been developed using the following specification:

- Vissim Version – 2023.00-05;
- Simulation Periods
  - Morning Peak – 07:45-09:15; and
  - Evening Peak – 16:45-18:15.
- Evaluation Periods:
  - Morning Peak – 08:00-09:00; and
  - Evening Peak – 17:00-18:00hrs.
- Vehicle Types:
  - Light vehicles;
  - Buses;
  - HGVs; and
  - Pedestrians

8.3.6 The model simulation resolution is set at 10-time steps / second and the scenarios are run 10 times using different Random Seeds to reflect daily variation in traffic.

Traffic and Pedestrian Inputs

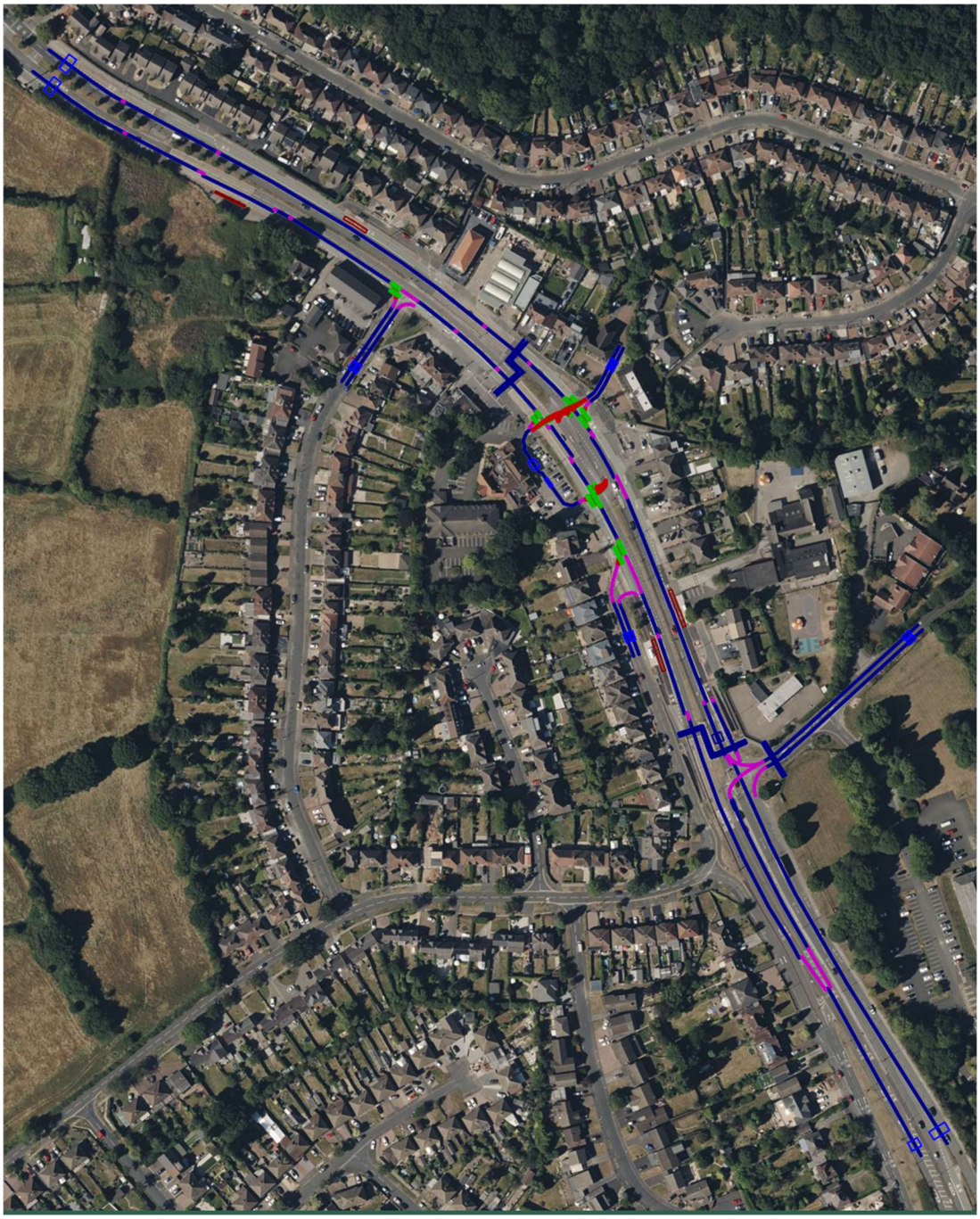
8.3.7 Background traffic data has been converted into peak hour matrices for each scenario for both 'Light' and 'Heavy' vehicle types. Development traffic has been converted into peak hour matrices for 'Light' vehicles only. These matrices have been used to create 15-minute warm-up and warm-down matrices for the model by multiply by 0.25.

8.3.8 Pedestrian inputs have been taken from the surveys for the peak hours in 15-minute periods. This data has been extrapolated to include the warm-up and warm-down periods by taking the adjacent 15 minute value in each case. Pedestrian flows associated with the proposed development have been extracted from the travel demand model summarised in previous chapters of this report. To reflect the multiple route choices available and provide a robust assessment, pedestrian demand from relevant routes has been added to both crossing points on A34 Birmingham Road.

Physical Model Scope

8.3.9 The physical scope of the model is illustrated in the following figure.

Figure 8-2: Physical Scope of Vissim Model



Priority Controlled Movements

8.3.10 All priority-controlled movements in the model are modelled using Conflict Areas. A keep-clear area is also modelled for the pedestrian crossing using Conflict Areas.

Signal Controlled Junction

8.3.11 The junction of A34 Birmingham Road and Chapel Lane operates under signal control. The model has been built based on assumptions as to how the junction operates using the video data captured during the traffic and pedestrian counts for the peak periods.

8.3.12 It has been assumed that the junction operates with four stages, namely:

- A34 Southbound
- A34 Southbound bus gate
- Chapel Land and A34 Northbound Right Turn and pedestrians across A34 Southbound
- Pedestrians across Chapel Lane.

8.3.13 It is known that the junction operates on Microprocessor Optimised Vehicle Actuation (MOVA) and this is reflected in the model through the use of Vehicle Actuated Programming (VAP) signal coding where each of the stages operate on demand detection and without a fixed cycle time.

Signal Controlled Crossings

8.3.14 Green invite times at pedestrian crossings have been set to five seconds for all crossings and the pedestrian clearance times have been set using the carriageway width and standard values in TAL 5/05.

8.3.15 The crossings have been set such that the minimum gap between pedestrian activations of 60 seconds. Pedestrian demands in the model are matched to the pedestrian counts and the crossings are activated on demand from those pedestrians.

Approach to Assessment

8.3.16 The network has been assessed using three outputs:

- Level of Service (LoS);
- Queueing data; and
- Network Statistics.

8.3.17 The model outputs have been set to report for the central peak hour only.

8.3.18 Level of Service (LoS) is a key indicator of operational performance for signal and priority-controlled junctions. Level of Service within Vissim is aligned to the standards set out in the US Highway Capacity Manual and an illustration of those values is provided in the following table.

Table 8-4: Highway Capacity Manual – Level of Service Standards

LOS		Definition	Typ. Illustration
Acceptable	A	Represents a free-flow operation. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	
	B	Represents reasonably free-flow operation. The ability to maneuver within the traffic stream is slightly restricted.	
	C	Represents a traffic flow with speeds near or at free-flow speed of the freeway. Ability to maneuver within the traffic stream is noticeably restricted.	
	D	Represents speeds that begin to decline with increased density. Ability to maneuver within the traffic stream is noticeably limited.	
Unacceptable	E	Represents operation at its capacity. Vehicles are closely spaced within the traffic stream and there are virtually no useable gaps to maneuver.	
	F	Represents a breakdown of vehicle flow. This condition exists within queues forming behind the breakdown points.	

8.3.19 Queuing data is outputted by the model as both 'Average' and 'Maximum' queues across the peak hour in metres.

8.3.20 Network Statistics give an indication of the overall operation of the network and can report a wide range of data. In this case, average speeds and average delay has been used to give an indication as to the impact of the development on the network.

Base Year Assessment

8.3.21 A comparison of modelled and surveyed queues at the signalised junction of A34 and Chapel Lane has been undertaken.

8.3.22 The following table illustrates both modelled average and maximum queues compared to surveyed average maximum and absolute maximum queues:

- For modelled queues:
  - The presented 'average' values are the average of queues measured each time step (10 per second) across the modelled peak hour for each movement.
  - The 'maximum' queues are the average of the absolute maximum queues each hour for each movement.
- For surveyed queues:
  - The 'Average Maximum' queue is an average of the maximum queue recorded across each five-minute period for that lane within the peak hour.
  - The 'Maximum' queue is the observed absolute maximum queue for that lane.

8.3.23 It is noted that the Vissim model collects queuing data when traffic speeds drop below 3.1mph ad stops collecting data when traffic speeds exceed 6.2mph. As such, 'rolling queues' where traffic moves slowly but above the aforementioned values are not captured by Vissim.

Table 8-5: Morning Peak – Queue Comparison – A34 / Chapel Lane

Arm	Lane	Modelled Queue (m) - 2023		Surveyed Queue (m) - 2023	
		Average	Maximum	Average Maximum	Maximum
A34 North	Bus	2	15	2	12
	2	13	104	64	78
	3			62	78
Chapel Lane	1	28	100	88	126
A34 South	1	8	50	34	66

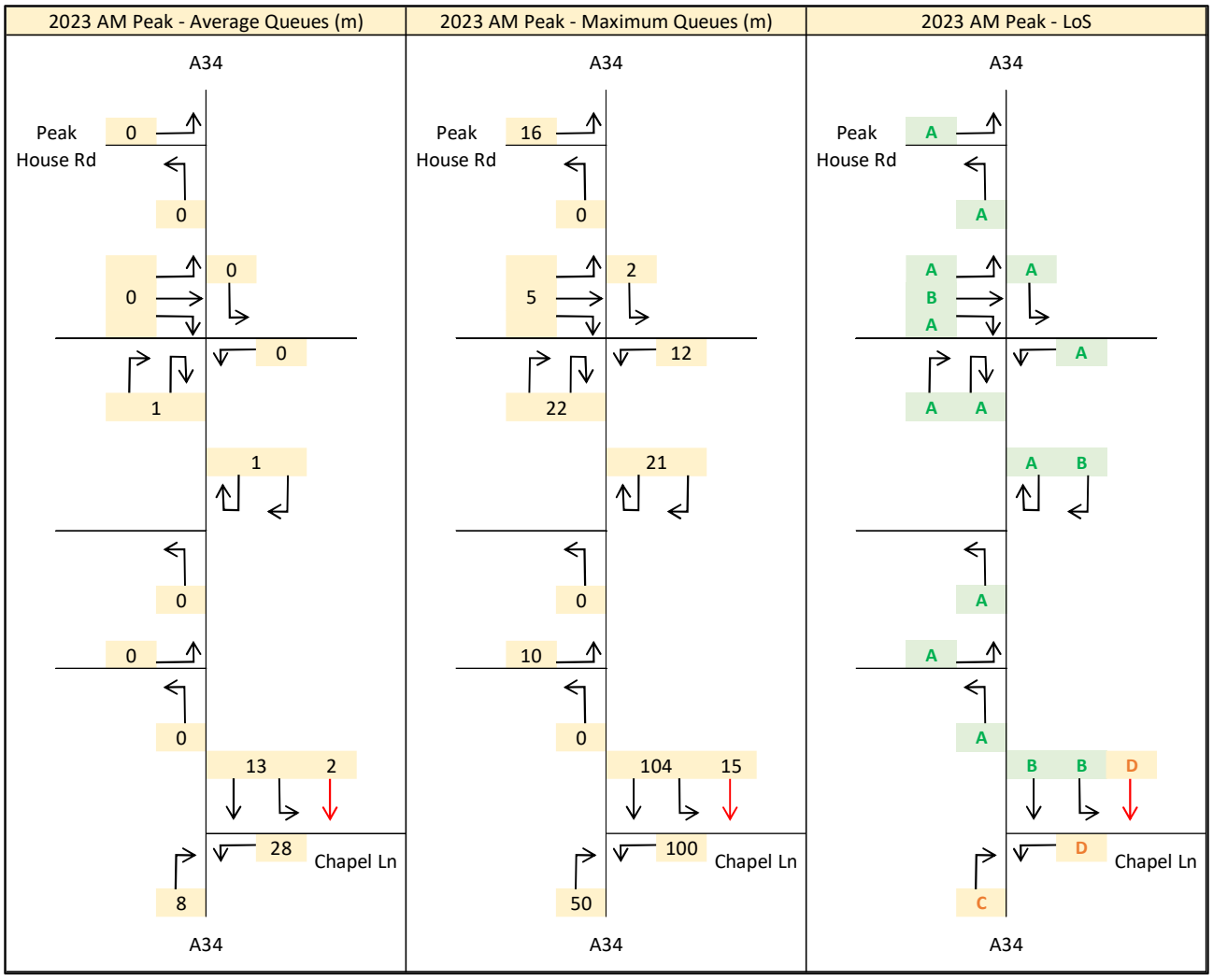
Table 8-6: Evening Peak – Queue Comparison – A34 / Chapel Lane

Arm	Lane	Modelled Queue (m) - 2023		Surveyed Queue (m) - 2023	
		Average	Maximum	Average Maximum	Maximum
A34 North	Bus	1	15	3	12
	2	18	96	51	72
	3			45	78
Chapel Lane	1	6	51	52	84
A34 South	1	15	100	68	102

8.3.24 It would be expected that the reported modelled maximum queues and the surveyed maximum queues be broadly comparable, and this can be seen to be the case in both peak periods. The model is therefore regarded as fit-for-purpose for the purpose of assessing the impact of the proposed development.

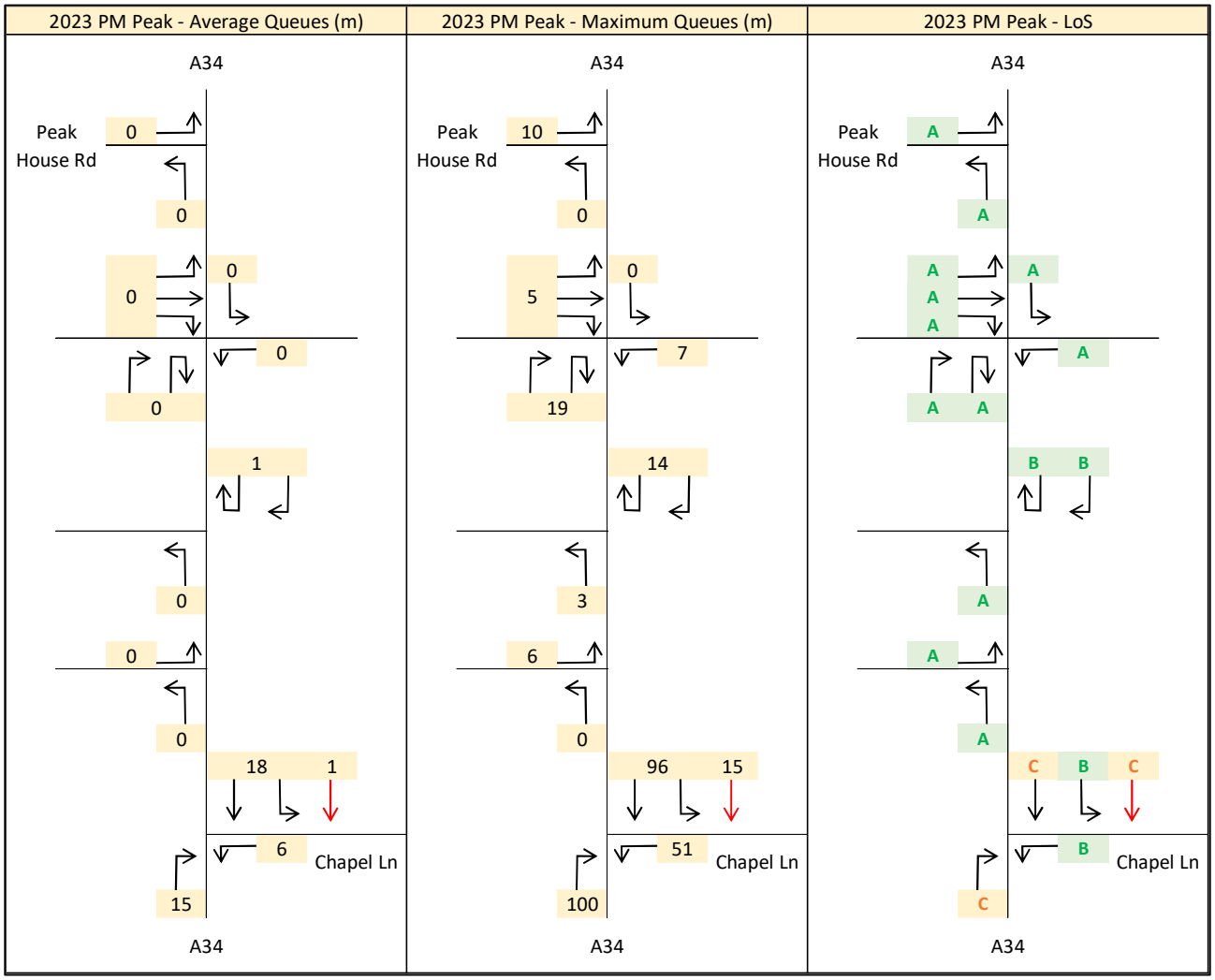
8.3.25 The following figures present queuing and LoS data for the 2023 base year.

Figure 8-3: 2023 Morning Peak Baseline Statistics



8.3.26 The above outputs indicate that the modelled network north of the A34/Chapel Lane junction operates with little delay and only short queueing in the Morning Peak. The model indicates that the junction of A34 and Chapel Lane operates with slightly longer queues and higher LoS values than the rest of the modelled network.

Figure 8-4: 2023 Evening Peak Baseline Statistics

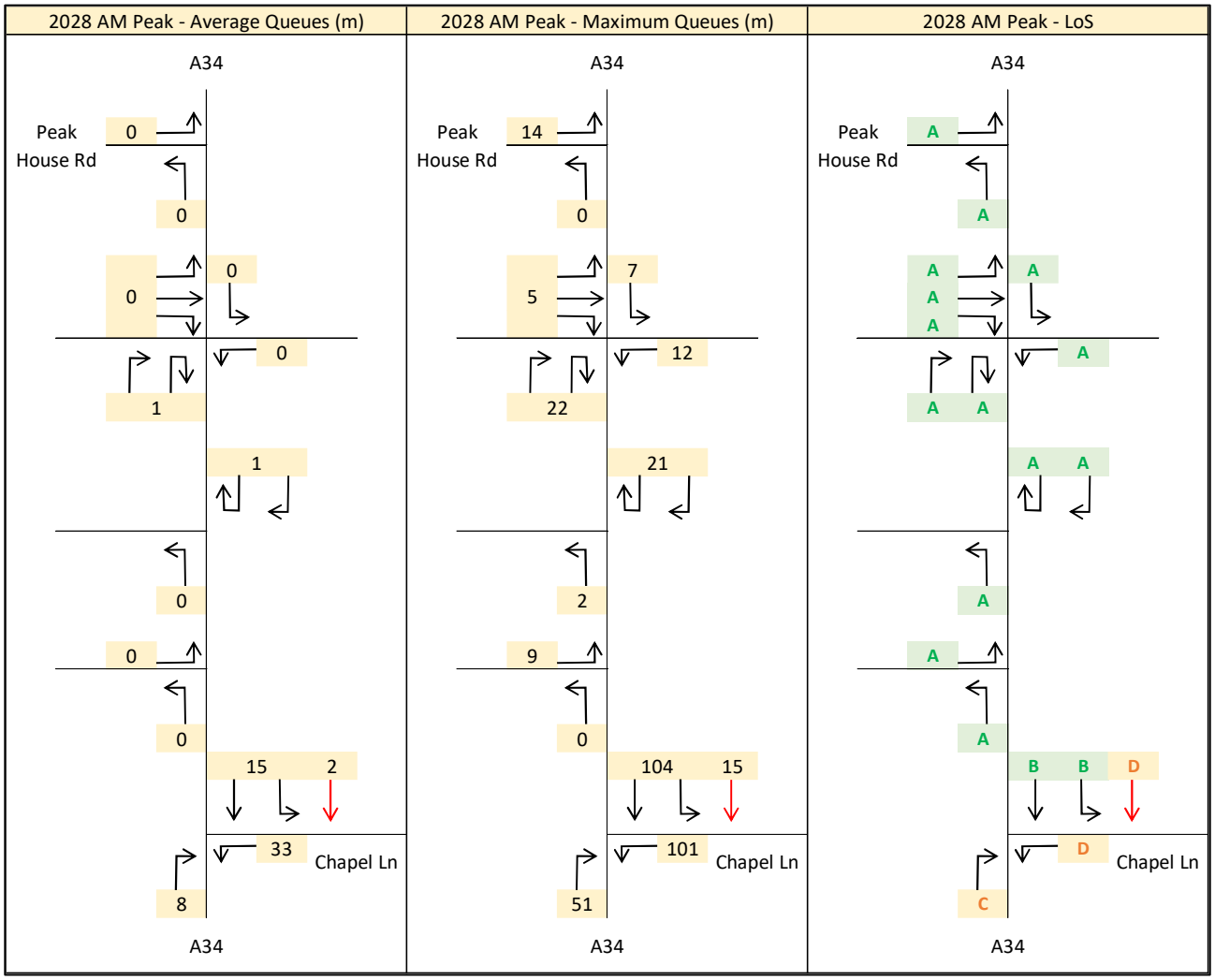


8.3.27 The above outputs indicate that the modelled network north of the A34/Chapel Lane junction operates with little delay and only short queueing in the Evening Peak. The model indicates that the junction of A34 and Chapel Lane operates with slightly longer queues and higher LoS values than the rest of the modelled network.

Future Year (2028) Assessment

8.3.28 The following figure presents queuing and LoS data for the 2028 Future Year in the Morning Peak without the development in place.

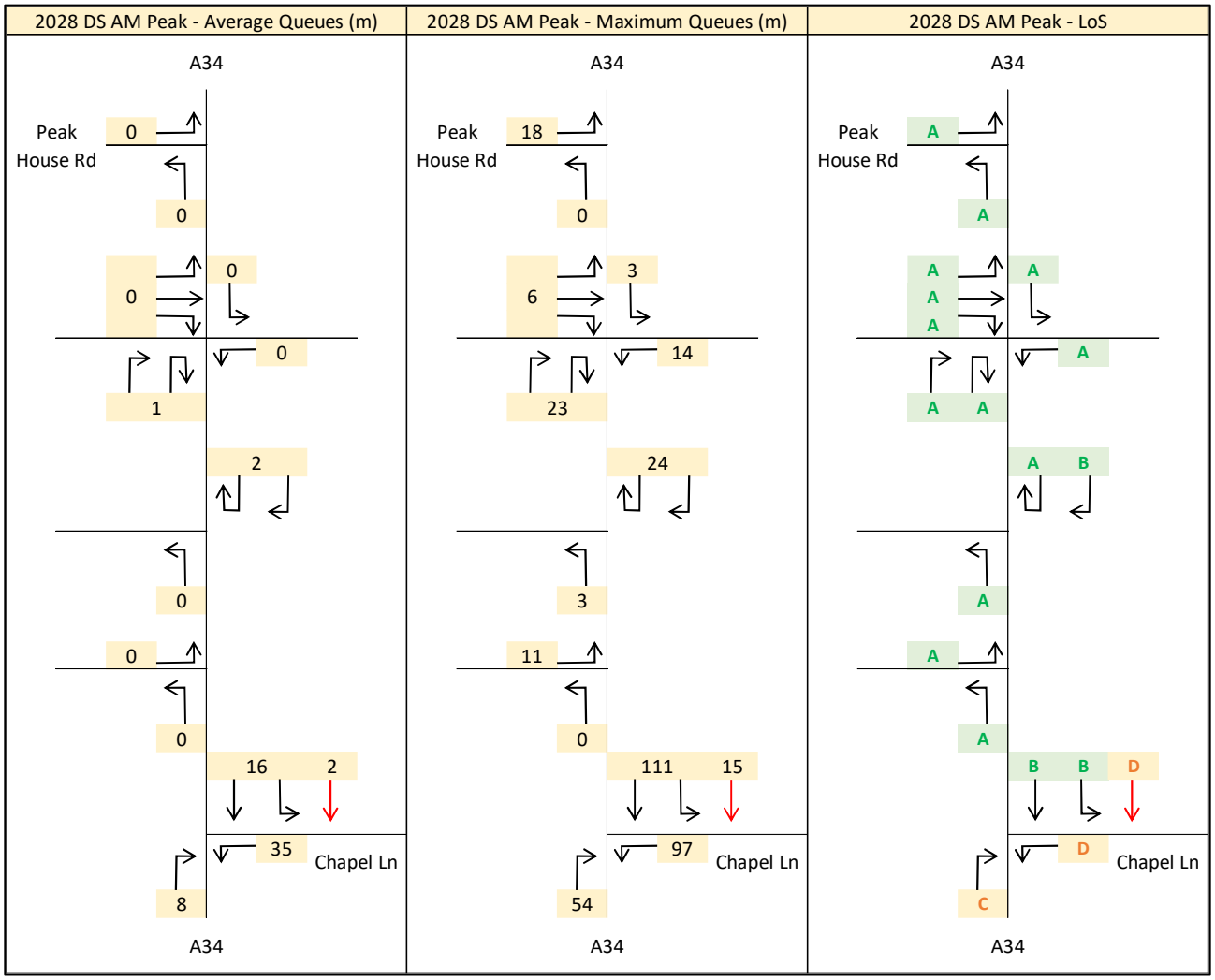
Figure 8-5: 2028 Morning Peak Baseline Statistics



8.3.29 The above indicates that the network is predicted to have similar levels of queueing and delay in 2028 to that predicted in the model for 2023.

8.3.30 The following figure presents queuing and LoS data for the 2028 Future Year in the Morning Peak with the development in place.

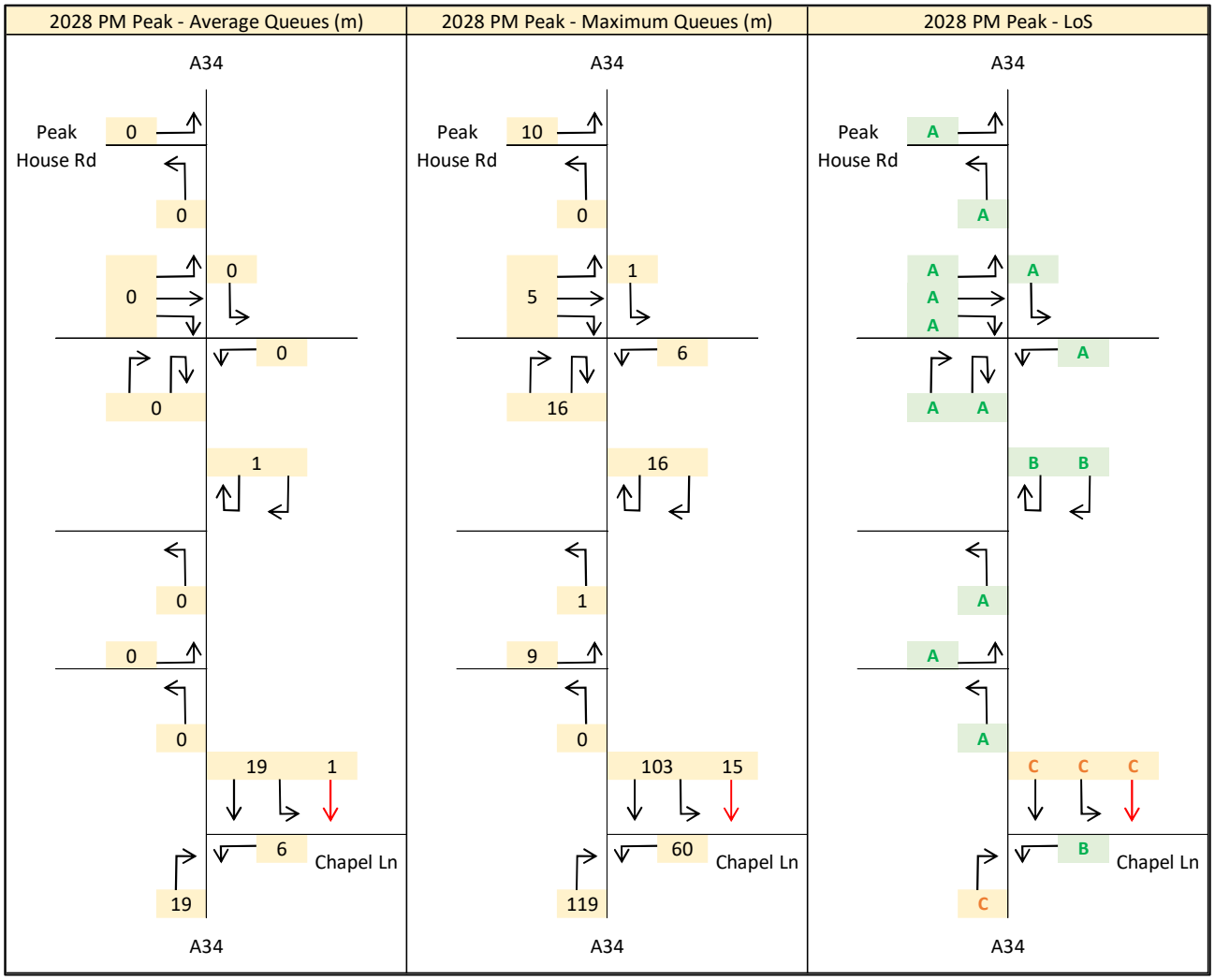
Figure 8-6: 2028 Morning Peak 'With Development' Statistics



8.3.31 The above indicates that the network is predicted to operate in a very similar manner to the baseline assessment for 2028 illustrating that the development impact is predicted to be minimal in the Morning Peak.

8.3.32 The following figure presents queuing and LoS data for the 2028 Future Year in the Evening Peak without the development in place.

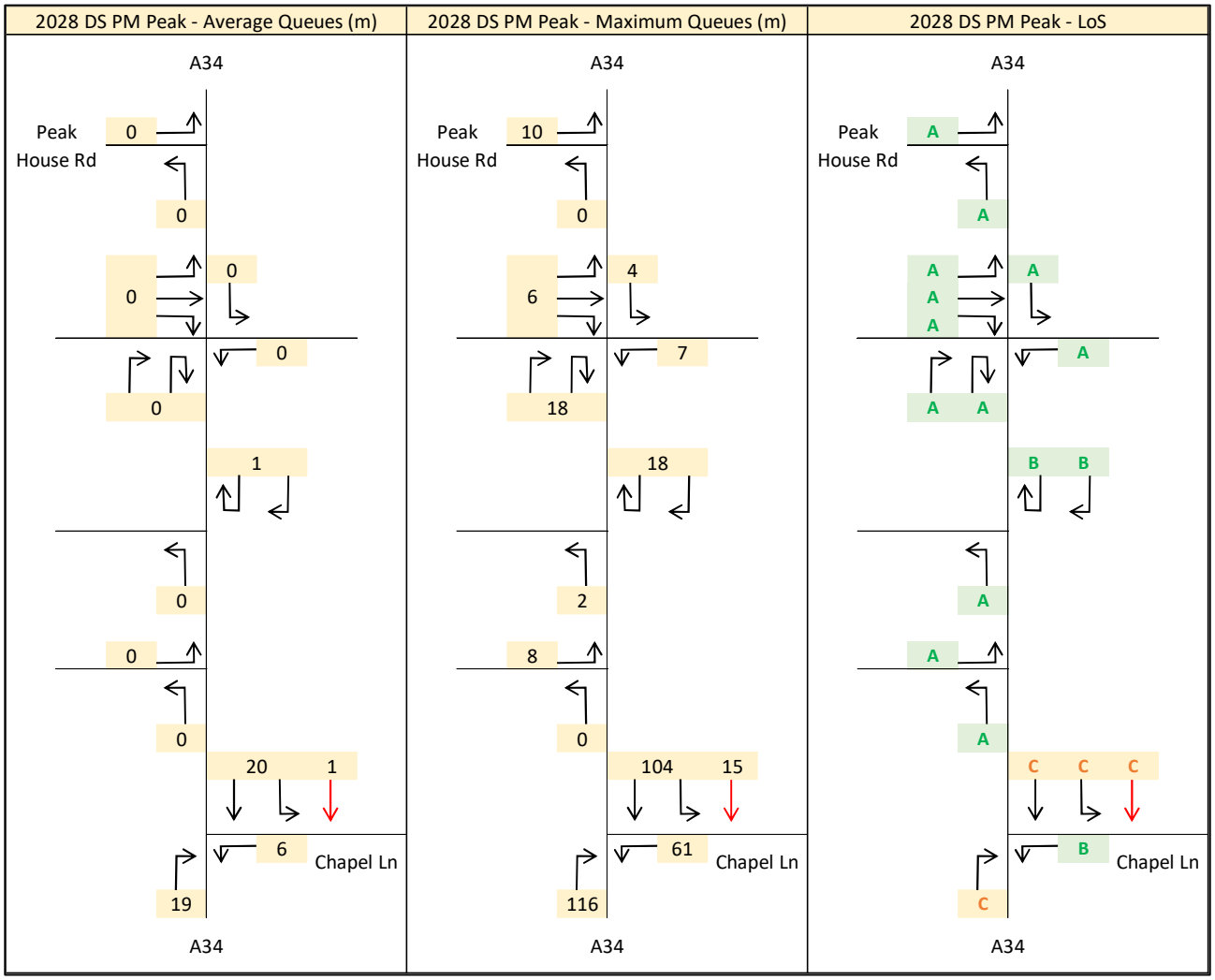
Figure 8-7: 2028 Evening Peak Baseline Statistics



8.3.33 The above indicates that the network is predicted to have similar levels of queueing and delay in 2028 to that predicted in the model for 2023.

8.3.34 The following figure presents queuing and LoS data for the 2028 Future Year in the Evening Peak with the development in place.

Figure 8-8: 2028 Evening Peak 'With Development' Statistics



8.3.35 The above indicates the network is predicted to operate in a very similar fashion in 2028 to the predicted operation for 2023. This reflects the relatively modest assumed level of transport growth in the modelled network.

8.3.36 The following table presents network statistics from the Vissim model in the form of predicted Delay, in seconds per vehicle, and predicted speed, in kilometres per hour.

Table 8-7: Network Statistics

	2028 Morning Peak			2028 Evening Peak		
	Future Year Base	Future Year Base + Development	Difference	Future Year Base	Future Year Base + Development	Difference
Delay (S)	23.1	23.7	**0.6**	22.9	23.0	**0.1**
Speed (mph)	14.8	14.6	**-0.2**	15.5	15.4	**0.1**

8.3.37 The table above indicates that the model predicts negligible changes in both delay and speed across both peak periods. It can therefore be concluded that the development has a minimal impact on the operation of this part of the local highway network.

8.4 Summary

8.4.1 Junction capacity modelling has been undertaken for key junctions on the local highway network. This assessment has demonstrated that the development is forecast to have a minimal impact in terms of both queueing and delay across both peak periods, across the modelled network.

9 Summary & Conclusions

9.1 Summary

9.1.1 PJA has been commissioned by Wain Estates (Land) Limited to provide transport advice in relation to an outline planning application (with all matters reserved except for access) for the development of up to 150 new dwellings, a countryside park, and associated works, at land north of Wilderness Lane, Great Barr.

9.1.2 This report considers the availability of sustainable transport modes and the impact the proposals will have on the surrounding transport network. The site is considered to be ideally located for residential use, with a wide range of local facilities being located within walking and cycling distance of the site, and convenient access to existing public transport infrastructure on A34 Birmingham Road.

9.1.3 It is proposed to provide vehicular access to the site from Wilderness Lane, pedestrian/cycle links to adjacent PRoW, and pedestrian, cycle, and emergency access onto A34 Birmingham Road. It is also proposed that the adjacent Beacon Way LDP will be re-aligned into the site, with access provided from A34 Birmingham Road.

9.1.4 Other key elements of this report are as follows:

- The development site is accessible on foot, by cycle and bus to surrounding local amenities and employment areas;
- Key pedestrian and cycle routes to/from the development have been identified and assessed for suitability to accommodate trips generated by the proposed development;
- There are no existing road safety concerns within the vicinity of the site which would need to be addressed as part of the development proposals;
- The development will generate additional trips on the local transport network. It is considered that the identified off-site improvements will ensure pedestrian and cycle trips can be accommodated, along key desire lines to local amenities and employment areas.
- Junction capacity modelling has been undertaken for key junctions on the local highway network. This assessment demonstrates that the development is forecast to have a minimal impact in terms of both queueing and delay across both peak periods.

9.2 Conclusions

9.2.1 The National Planning Policy Framework (NPPF) states that opportunities to promote sustainable transport modes should be taken up and that safe and suitable access to the site is achievable for all users. This report has demonstrated that the proposed development meets this criteria set out in NPPF.

9.2.2 Paragraph 111 of NPPF states:

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

9.2.3 This report has demonstrated the development is not forecast to have a severe residual cumulative impact on the road network, nor an unacceptable impact on highway safety. It is therefore considered that there is no evidence that the proposed development should be prevented or refused on highways grounds.

Appendix A Framework Masterplan

Appendix A Framework Masterplan

NOTES

This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without written consent of FPCR Environment and Design Ltd.

0 50 100 150 200m

N

Key

Site Boundary	27.00Ha
Proposed Residential Development	3.91Ha
Proposed Green Infrastructure (Includes indicative roads crossing green infrastructure)	23.09Ha

- Indicative main vehicular routes
- Indicative relocated Beacon Way
- Indicative segregated cycle link
- Indicative LEAP Play Area with 20m offset
- Proposed attenuation features
- Proposed vehicular access
- Indicative pedestrian / cycle access
- Indicative emergency / cycle access
- Existing vegetation
- Retained / existing moat
- Existing Public Right of Way / footpath
- Existing contours

rev	date	description	drn	chk
P11	27.10.2023	Plan updated to client comments.	OWB	KMN

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

FPCR Environment and Design Ltd
Lockington Hall
Lockington
Derby
DE74 2RH

t: 01509 672772
e: mail@fpcr.co.uk
w: www.fpcr.co.uk

client
Wain Estates

project
Land north of Wilderness Lane, Great Barr, Birmingham

drawing title
Development Framework Plan

scale	drn	chk	date created
1:2000 @ A2	OWB	KMN	27 JULY 2023

project number	status	issue
9364	S1	P11

document number
09364-FPCR-XX-ZZ-DR-L-0010
Project Code - Originator - Zone - Level - Type - Role - Drawing Number

File: K:\9300\9364\LANDS\Plans\9364-FPCR-XX-ZZ-DR-L-0010-P11-Framework Plan.vwx