St. Modwen Homes

Land North of Rounds Gardens, Rugby

Transport Assessment

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Project Code: 05554

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1 Introduction

1.1 Overview

1.1.1 PJA has been commissioned by St. Modwen Homes to prepare a Transport Assessment (TA) to support a full planning application for the residential development of 134 dwellings on Land North of Rounds Gardens, Rugby.

1.2 Report Purpose

1.2.1 This TA aims to identify the travel patterns associated with the proposed development, and examine the likely transport implications of these on the surrounding area.

1.2.2 A separate Travel Plan (TP) has been prepared in conjunction with this report to accompany the planning application. The overarching objective of the TP is to reduce the number of single occupancy vehicle journeys to and from the development.

1.3 Scoping Discussions

1.3.1 In advance of this TA being prepared, scoping discussions were held with Warwickshire County Council highways (WCC). The key points are summarised below:

- Elements to underpin the assessment of a one-way system options for Princes Street area are:
  - Existing traffic flows, speeds & turning movements;
  - Existing routes and journey times to/from key trip destinations/origins;
  - Existing parking capacity and utilisation informed by an overnight and daytime parking survey;
  - Existing TROs;
  - Forecast impact of the one-way system on routes and journey times to/from key trip destinations/origins (incl. to the strategic highway links such as A4071 etc.);
  - Forecast traffic flows, speeds and turning movements for the one-way system; and
  - Swept path and any changes to TROs
- An RSA of the proposed one-way system and Willans Place access will be required.
- The internal layout will need to meet WCC Design Guide Standards.
- The internal layout will be consistent with 20mph operation and will be “self-enforcing”.
- The provision of direct and safe routes to/from public transport services for active travel will be considered.

1.4 Report Structure

1.4.1 The remainder of this report is structured as follows:

- **Section 2** provides a summary of the relevant local, regional, and national policy documents;
- **Section 3** describes the existing situation in terms of the highway network, access to local facilities, collision data and multi-modal accessibility;
- **Section 4** provides details of the proposed development;
- **Section 5** presents the travel demand;
- **Section 6** sets out the assessment of highway impact that has been undertaken; and
- **Section 7** summarises and concludes the report.

2 Policy Context

2.1 Overview

2.1.1 This chapter sets out the policy context in relation to the site at a national, regional, and local level. The summary at the end of the chapter demonstrates 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 December 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 108 to 117 of the NPPF with paragraph 108 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 This Transport Assessment demonstrates that the development complies with paragraph 109, which 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 114 of the NPPF relates to considering development proposals 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 This Transport Assessment looks to demonstrate that the development complies with paragraph 115, which 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 This planning application responds to paragraph 117, by providing a Transport Assessment and Travel Plan:

"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 proposed can be assessed."

Planning Practice Guidance (2014)

2.2.7 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).

2.2.8 The PPG goes on to say 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."

Decarbonising Transport: A Better, Greener Britian (2021)

2.2.9 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.

2.2.10 The strategy sets 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, ad 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.

LTN 1/20 (2020)

2.2.11 LTN 1/20 provides national guidance to local authorities on delivering high quality, cycle infrastructure. The guidance consists of five overarching design principles:

- **Coherent** – Cycle networks should be planned and designed to allow people to reach their day to day destinations easily, along routes that connect, are simple to navigate and are of a consistently high quality;
- **Direct** – Cycle routes should be at least as direct – and preferably more direct – than those available for private motor vehicles;
- **Safe** – Not only must cycle infrastructure be safe, but it should also be perceived to be safe so that more people feel able to cycle;
- **Comfortable** - Comfortable conditions of cycling require routes with good quality, well-maintained smooth surfaces, adequate width for the volume of users, minimal stopping and starting and avoiding steep gradients; and
- **Attractive** – Cycle infrastructure should help to deliver public spaces that are well designed and finished in attractive materials and be places that people want to spend time using.

2.2.12 There is an expectation that local authorities will demonstrate that they have given due consideration to this guidance when designing new cycling schemes.

2.2.13 Paragraph 14.1.4 states that:

'Requirements should include the provision of new cycle routes connecting to and through development and enhancing the provision for cycling when making alterations to links and junctions on existing highways.'

2.2.14 It is recognised that new housing development provides an opportunity to create new and improved cycle infrastructure.

Gear Change (2020)

2.2.15 Gear Change sets out the future vision for cycling and walking in England, with the vision that half of all journeys in towns and cities will be walked or cycled by 2030.

2.2.16 Four themes have been identified, they are:

1 **Better streets for cycling and people** – to be achieved through providing safe, continuous, direct routes for cycling in towns and cities, physically separated from pedestrians and vehicle motor traffic, serving routes people want to go to.

2 **Putting cycling and walking at the heart of transport, place-making, and health policy** – to be achieved through creating a long-term cycling and walking programme and budget, improvements to public transport and cycling usage, and ensuring that all new housing and business developments are built around making sustainable travel the first choice for journeys.

3 **Empowering and encouraging local authorities** – to be achieved by significantly increasing funding for local authorities, as well as offering improved capacity, assistance, and powers for local authorities. Schemes will only be funded if they meet the new standards.

4 **We will enable people to cycle and protect them when they cycle** – to be achieved by offering cycle training to everyone who wants to undertake it, combating cycle theft, make legal changes to protect vulnerable road users, consulting on updates to The Highway Code to strengthen and improve safety for all road users, and establish a national electrically-assisted bike support programme.

Manual for Streets / Manual for Streets 2

2.2.17 Manual for Streets (MfS1) and Manual for Streets 2 (MfS2) are documents used predominantly in the design, construction, adoption, and maintenance of new residential streets. MfS2 explains how the principles of MfS1 can be applied more widely.

2.2.18 MfS and MfS2 aims to assist in the creation of streets that:

- Help to build and strengthen the communities they serve;
- Meet the needs of all users, by embodying the principles of inclusive design
- Form part of a well-connected network;
- Are attractive and have their own distinctive identity;
- Are cost-effective to construct and maintain; and
- Are safe.

2.3 Regional Policy

Warwickshire County Council – Council Plan 2022-2027 (2022)

2.3.1 The Warwickshire County Council – Council Plan (WCP) sets out the council's plan to meeting challenges surrounding; carbon net zero, providing affordable and sustainable homes, reimaging their town centres, keeping their communities strong, increasing health, living standards and educational opportunities for children, the digital revolution, and traditional public service delivering models and funding no longer being capable of meeting need in a world that reflects these changes.

2.3.2 The strategic priorities for Warwickshire are focused on having a thriving economy, a high standard of living for residents, and a sustainable future. Following this, seven areas of focus have been identified within the WCP as follows:

5 '*Create vibrant places with safe and inclusive communities;*

6 *Deliver major infrastructure, digital connectivity and improved transport options;*

7 *Promote inclusive, sustainable economic growth, successful business, good quality jobs and future skills*

8 *Tackle climate change, promote biodiversity and deliver on our commitment to Net Zero;*

9 *Deliver our Child Friendly Warwickshire strategy – Happy, healthy, safe children*

10 *Through education, improve life opportunities for children, young people and those with special educational needs and disabilities; and*

11 *Support people to live healthy, happy, and independent lives and work with partners to reduce health inequalities.'*

2.3.3 The WCP states the future outlook of Warwickshire's transport network. It promises a fit-for-purpose, well-connected, in a good condition, utilises green technology and is safe for users transport network. It will be easier to make more sustainable journeys such as walking, cycling and using public transport.

Warwickshire Local Transport Plan

2.3.4 The fourth Warwickshire Local Transport Plan (LTP4) was adopted in 2023 and sets out the transport policies and strategies for the county.

2.3.5 The key themes for LTP4 are as follows:

1 '***Environment*** *– Travel choices which contribute to Carbon Net Zero and leave no negative impacts on our environment;*

2 ***Wellbeing*** *– A range of transport options which provide safety, comfort and health for users and those affected by transport;*

3 ***Place*** *– Urban and rural areas, and the connections between them, where transport choices work sustainably with the local environment; and*

4 ***Economy*** *– A modern, flexible economy which is supported and strengthen by transport options.*

2.3.6 LTP4 states the travel choices hierarchy for Warwickshire, which prioritises active travel, followed by public transport and lastly private vehicles.

2.3.7 Policy Position PT4 refers to new developments and connectivity to public transport services and states how new developments must ensure they maximise their opportunities to provide excellent access to the public transport network, taking into account potential demand from new development.

2.3.8 Policy Position MV1 relates to using Warwickshire's influence with partners to provide a modern fit-for-purpose route network which will be able to deal with changes in order to adapt to pressures from development, such as the transport needs of new housing.

2.3.9 Policy Position MS1 refers to increasing sustainable development and travel and states:

'WCC will encourage sustainable development through the promotion of public and community transport, the provision of cycling and pedestrian facilities and traffic management measures. Where feasible and appropriate, and in collaboration with local communities, space will be allocated to more sustainable travel options.

Working with communities, the district and borough councils, external organisations and developers, we will use our influence to put pressure on how new developments are shaped, so that the transport options which serve them are as environmentally beneficial as possible. We will take evidence-based decisions which may include requirements for transport assessments, travel plans, modelling assessments and other appropriate data.'

2.3.10 Policy Position MS4 relates to robust data-led decision making in assessing new developments, which may include requirements from developers for transport assessments, travel plans, modelling assessments and other appropriate data. Micro-simulation modelling in Transport Assessments should, where appropriate, be in accordance with WCC Modelling Protocol.

2.3.11 Policy Position MS5 refers to construction being to the best available standards, ensuring that new highways, including those built by developers, are constructed to the best available standards and are expected to follow the Warwickshire Design Guide.

2.3.12 Policy Position MS6 relates to influencing planning authorities and developers, and WCC will try to influence and support development in ways which provide better, safer, more sustainable transport options. WCC will continue to require contributions from developers which include: road safety

audits, school travel plans and promoting safer routes to schools, encouraging better walking and cycling connections and accessibility for disabled people, transport assessments or transport statements for new developments.

Warwickshire Design Guide

2.3.13 The Warwickshire Design Guide provides direction and guidance to developers and designers when planning and delivering highway infrastructure improvements to WCC's highway network.

2.3.14 The document contains information on the whole process of planning and delivering highway infrastructure, from pre-application advice, design, technical approval through to delivery.

2.4 Local Policy

Rugby Borough Council Local Plan (2019)

2.4.1 The Rugby Borough Council Local Plan (LP) sets out the council's policies and proposals to support the development of Rugby Borough through to 2031. The LP sets out the long-term spatial vision for the Borough, and the delivery of this vision through promoting, distributing and delivering sustainable development.

2.4.2 Policy GP1 states that planning applications that accord with the policies in the LP (and where relevant Neighbourhood Plans) will be approved without delay unless any material considerations indicate otherwise.

2.4.3 Policy GP2 sets out the settlement hierarchy for Rugby Borough, with the highest priority being given to developments within Rugby town.

1.1.1 Policy D1 relates to transport and states:

- Development will be permitted where sustainable modes of transport are prioritised and measures designed to mitigate transport impacts are provided, and proposals should have regard to the Sustainable Transport Strategy.
- All large scale developments which result in the generation of significant traffic movements, should be supported by a Transport Assessment and where necessary a Travel Plan, to demonstrate practical and effective measures to be taken to mitigate the adverse impacts of traffic. This must consider:
  - The impact of the proposal upon existing infrastructure;
  - How the site will connect safely to public transport;
  - Safe and convenient access to pedestrians and cyclists;

- Potential impact of having goods vehicles accessing the site, including during construction; and
- The entering into of bus and/or freight partnerships with the County Council and/or third parties.

- Proposals should be considered in the light of the transport mitigation measures identified in the Infrastructure Delivery Plan, and other localised impacts as identified in transport assessments and statements.

1.1.2 Appendix 3 of the LP is the Infrastructure Delivery Plan (IDP) which provides information on what additional infrastructure and service needs are required to support and accommodate the level of development and growth proposed in the LP. The transport section of the IDP includes information on how to identify the transport infrastructure required to support growth. The Council will liaise with WCC to determine what infrastructure upgrades could be facilitated through developer funding and other measures so sites have appropriate access to sustainable transport. Local pedestrian and cycle links will generally either by negotiated as part of S106, or identified through the Neighbourhood Plan process.

2.4.4 Appendix 5 of the LP specifies parking standards for Rugby Borough Council based on two accessibility areas, with reduced car parking levels being required within the high access area. The proposed development is located within the high access area.

Table 2-1: Parking Standards

Unit Type	Car Parking Standard (Low Access)	Car Parking Standard (High Access)	Cycle Parking Standard (minimum)
Houses			
1-2 bed units	1.5 spaces/unit	0.75 spaces/unit	1/unit secure & undercover
3 bed units	2 spaces/unit	1 space/unit	1/unit secure & undercover
4 bed units	3 spaces/unit	2 spaces/unit	1/unit secure & undercover
Apartments			
Studio units	1 space/unit	0.5 space/unit	1/unit secure & undercover
1-2 bed units	1.5 spaces/unit	0.75 space/unit	1/unit secure & undercover
3+ bed units	2 spaces/unit	2 spaces/unit	1/unit secure & undercover

2.4.5 The parking standards state that where a garage is provided, each garage will be designated as one car space plus one cycle space. At least 1 long-term (secure/undercover) cycle space per development should be provided. The standards also take into account visitor parking.

Rugby Borough Council Local Plan – Sustainable Transport Strategy (2017)

2.4.6 The sustainable transport strategy supports the Rugby Borough Council Local Plan, and both informs the preparation and delivery of the plan. It states plans surrounding active travel and public

transport in relation to Rugby Borough, including suggesting improvements to the current infrastructure and delivery, and where relevant contributions towards this.

2.5 Summary

2.5.1 The development proposals, and this report, have been prepared with specific regard to the policy direction on a national, regional, and local level.

2.5.2 On a national level, this document seeks to demonstrate that the proposals comply with the NPPF by exploring opportunities for use of sustainable travel modes, to minimise the requirement for residents to travel by private car.

3 Baseline Transport Conditions

3.1 Overview

3.1.1 This section provides a summary of the baseline transport conditions in the site's vicinity, including details on walking and cycling routes, highway safety, public transport, and the surrounding highway network.

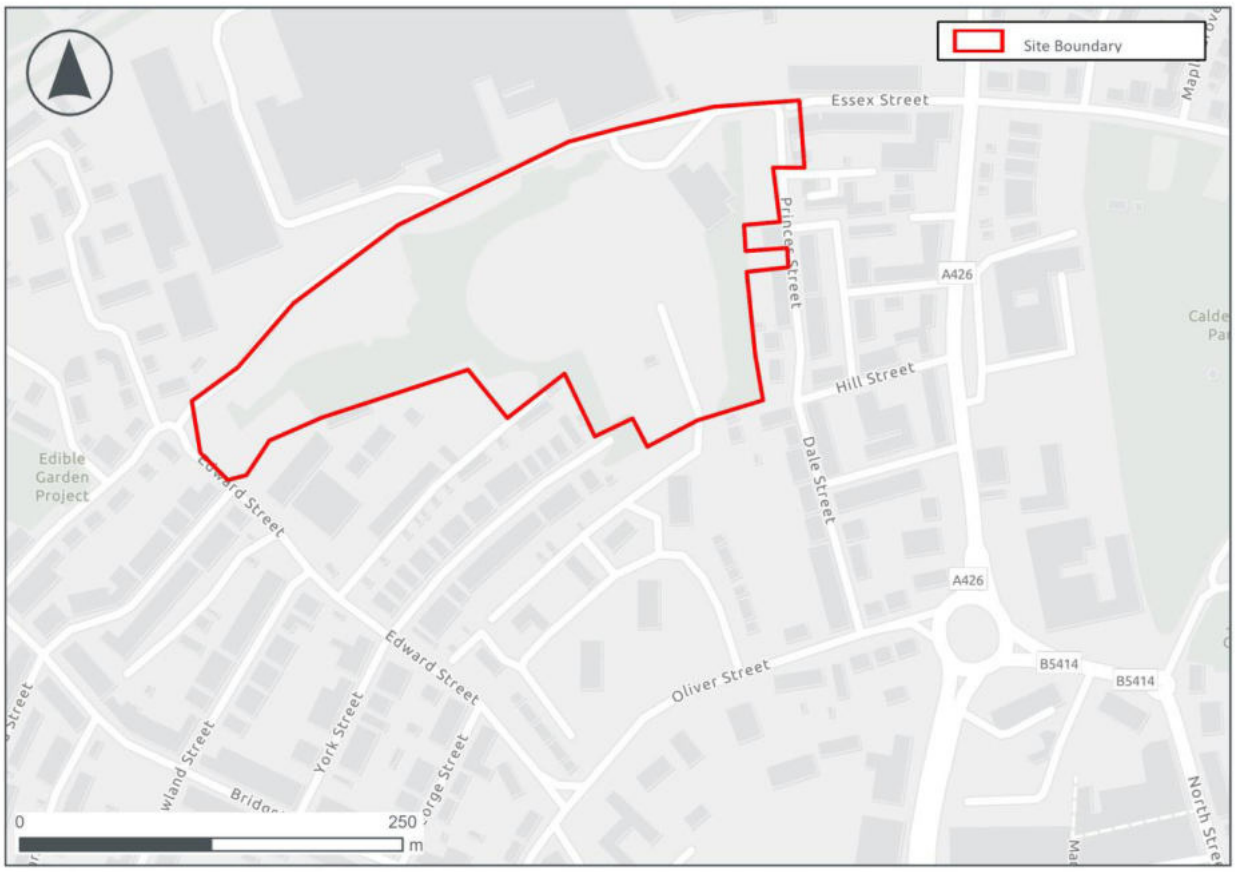
3.2 Site Context

3.2.1 The site is located approximately 1km to the north-west of Rugby Town Centre and is bound by the GE Power site to the north, community/cultural/sui generis uses and residential properties to the south west, and residential properties to the east. The site location is illustrated in Figure 3-1.

3.2.2 The site has frontage to the existing highway network at Willans Place and Edward Street in the north-western corner of the site and Princes Street in the north-eastern corner.

3.2.3 As part of the wider redevelopment of the area, the land to the south of the site is proposed to be brought forward for residential development in the future by Rugby Borough Council (RBC) under a separate planning application. This RBC land was previously occupied by vacant dwellings which have since been demolished.

Figure 3-1: Site Location



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

3.3 Local Highway Network

Princes Street

3.3.1 Princes Street is a single carriageway road which bounds the eastern edge of the site. At its northern end it forms a dead end with the former access gates to the GE Power site and an access to a private residential road on the eastern side properties. It is subject to a 30mph speed limit.

3.3.2 Princes Street measures between approximately 6m-6.5m in width. Various TROs in the form of double yellow lines and parking restrictions are provided along the road. On street parking is subject to permit control. A drawing detailing existing TROs in the area is provided in **Appendix A**.

Dale Street

3.3.3 Dale Street is a single carriageway road, approximately 6m in width, which routes from Hill Street to Oliver Street. It bounds the southern parcel of land planned by RBC for future development. It is subject to a 30mph speed limit. Various TROs in the form of double yellow lines and parking restrictions are provided along the road (detailed in **Appendix A)**.

Hill Street

3.3.4 Hill Steet is a single carriageway road, approximately 6m in width, which connects the A426 to a priority junction with Princes Street/Dale Street. Beyond the junction with Princes Street/Dale Street, the road continues for approximately 20m to private garages. It is subject to a 30mph speed limit. Various TROs in the form of double yellow lines and parking restrictions are provided along the road.

King Street/Duke Street

3.3.5 King Street is a single carriageway which provides an alternative route from the northern end of Princes Street through to the Hill Street. Duke Street is a short single carriageway linking King Street with the A426. Both are subject to a 30mph speed limit.

3.3.6 Both roads measure approximately 5.9m-6.2m in width. Various TROs in the form of double yellow lines and parking restrictions are provided along the roads.

Willans Place

3.3.7 Willans place is a short single carriageway no-through-road which is the former western access to the GE Power site. It is subject to a 30mph speed limit and measures approximately 5.8m in width.

Edward Street

3.3.8 Edward Street is a single carriageway road which bounds part of the western edge of the site. It connects Willans Place/Gladstone Street south towards Oliver Street. It is subject to a 30mph speed limit.

3.3.9 Edward Street varies in width, between 5.8m close to the Willans Place junction and upwards of 10m close to the Oliver Street junction where the road widens to multiple lanes and a bell-mouth junction. Lit footways are provided throughout. TROs in the form of double yellow lines and traffic calming in the form of speed bumps are provided along almost the entirety of the road.

Gladstone Street

3.3.10 Gladstone Street is a single carriageway road which connects Willans Place/Edward Street west towards Avenue Road, acting as an extension of Edward Street. It is subject to a 30mph speed limit.

3.3.11 Gladstone Street varies in width, between 5.5m-6m. Minimal TROs are provided, with double yellow lines at the Avenue Road priority junction and some H-Bar markings provided at key driveways. There are no traffic calming measures.

A426

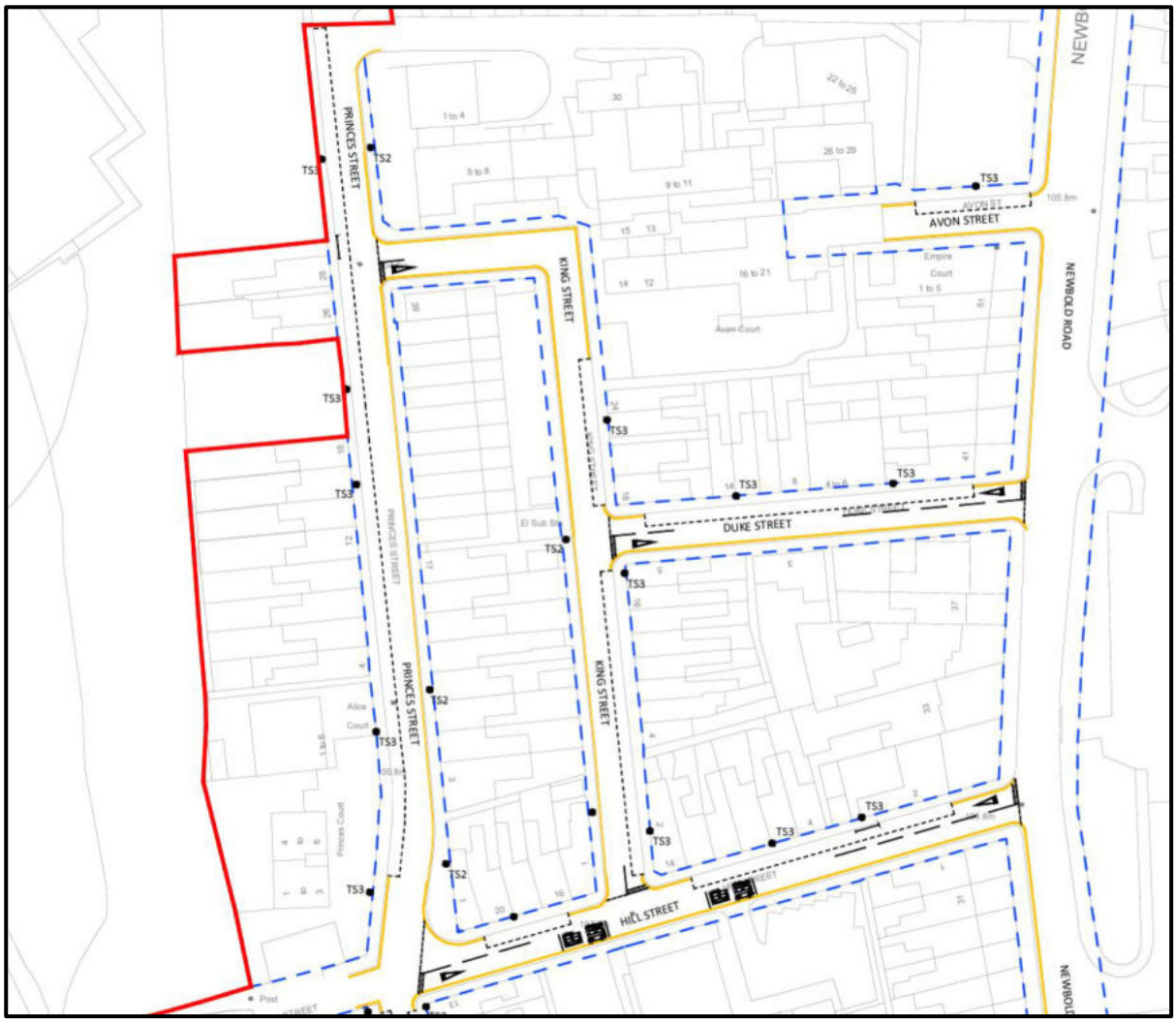
3.3.12 The A426 forms a main through route from Rugby Town Centre. To the north it connects to the M6 at Junction 1, A5 at Gibbet Roundabout and M1 at Junction 20. To the south it connects to the A45 at Dunchurch and continues through to Oxfordshire.

3.3.13 Within Rugby the road is subject to a 30mph speed limit. North of the A426/Oliver Street roundabout, it is a single carriageway. South of the A426/Oliver Street roundabout, the road is a dual carriageway until its junction with the A428/B4642. The road features street lighting and various TROs prohibiting parking.

Traffic Regulation Orders and Parking Restrictions

3.3.14 As noted above, there are various Traffic Regulation Orders (TROs) and parking restrictions in the vicinity of the site, which have been illustrated in Figure 3-2 and included in **Appendix A**.

Figure 3-2: TROs and Parking Restrictions



3.4 Active Travel Facilities

Walking

Princes Street

3.4.1 Along Princes Street, footways measuring between 1.2-1.5m are provided on both sides of the road. Drop kerbs are provided at some driveways. A short section of wider footway is provided on the eastern side of the road at the Hill Street priority junction. There is no provision at the junctions of King Street or Hill Street.

Dale Street

3.4.2 Along Dale Street, footways measuring approximately 1.5m are provided on both sides of the road. Dropped kerbs are provided at the priority junction with St John Street, and drop kerbs with tactile paving are provided at the priority junction with Oliver Street.

Hill Street

3.4.3 Along Hill Street, footways measuring approximately 1-1.5m are provided on both sides of the road. Drop kerbs are provided at the priority junction with King Street, and drop kerbs with tactile paving are provided at the priority junction with the A426. Drop kerbs are also provided at the access to industrial units on the south side of the road.

King Street

3.4.4 Along King Street, footways measuring approximately 1-1.5m are provided on both sides of the road. Drop kerbs are provided at the priority junctions with Hill Street and Duke Street as well as private driveways.

Duke Street

3.4.5 Along Duke Street, footways measuring approximately 1m are provided on the northern side of the road and footways approximately 1.5m are provided on the south side of the road. Drop kerbs are provided at the priority junctions with King Street, and drop kerbs/tactile paving are provided at the priority junction with the A426.

Willans Place

3.4.6 Along Willans Place, a footway of varying widths is provided on the northern side of the road. At its narrowest this is approximately 1m although the footway widens at the junction with Izod Road/Edward Street. This footway also connects to the Newbold Footpath.

3.4.7 To the south, a footway approximately 1.5m wide is provided for a short distance towards the former GE site. This routes from a footway from Edward Street which is separated from the carriageway by a verge. The same footway splits with a route north towards Willans Place where a crossing with drop kerbs/tactile paving is provided.

Edward Street

3.4.8 On the western side of Edward Street, there is continuous footway provision between Willans Place and Oliver Street which measures between 1.5-2m. Drop kerbs with tactile paving are provided at the junction with Victoria Avenue, the access road to garages between Victoria Avenue/Rowland Street, Rowland Street and George Street. At Oliver Street, drop kerbs are provided at the junction.

3.4.9 The footway from the Newbold Footpath/Willans Place joins the eastern side of Edward Street and forms a continuous footway between 1.5-2m south. A crossing is provided here with drop kerbs/tactile paving. North of George Street, another crossing with drop kerbs/tactile paving are provided along with a traffic island.

3.4.10 Between George Street and Oliver Street on the eastern side of the road, the footway provision stops, although pedestrian connections are provided south via on and off-street footways within Rounds Gardens. Drop kerbs and tactile paving are provided at the priority junctions with York Street and the access road garages north of York Street.

Oliver Street

3.4.11 Along Oliver Street, footways are provided on both sides of the road. A crossing with drop kerbs/tactile paving and a traffic island is provided opposite the footway existing Rounds Gardens. An alternative signalised crossing is provided approximately 40m of the Rounds Gardens priority junction. To the south along Oliver Street, signalised crossings are provided south of Bridget Street and at Lawford Road

Gladstone Street

3.4.12 Along Gladstone Street, footways measuring approximately 1.5m are provided on both sides of the road. There is some widening of the footways around the Willans Place/Izod Road junctions. Drop kerbs with tactile paving are provided at the Izod Road junction and on Gladstone Street to the west of Izod Road. Further crossings with drop kerbs/tactile paving are provided on Follager Road and at the Avenue Road priority junction.

A426

3.4.13 Along the A426, footways of varying widths are provided on both sides of the road. This feeds into wider footway provision towards Rugby town centre and local amenities. Crossings with drop kerbs/tactile paving are provided at most junctions with other roads. There are several crossings between Essex Street and the roundabout with Oliver Street Evreux Way as follows:

- Drop kerbs/tactile paving with a traffic island to the north of Essex Street
- A signalised crossing approximately 25m south of Duke Street
- A signalised crossing approximately 50m south of St John Street
- Drop kerbs are provided on each arm of the A426/Oliver Street roundabout

Public Rights of Way

3.4.14 A number of Public Rights of Way (PRoW) are provided within Rugby which are shown in the Warwickshire County Council Public Rights of Way Map. Within the vicinity of the site, the following footpath links are provided and shown in Figure 3-3 :

- A footpath linking Hill Street and York Street/Blackman Way to the south of the site;
- The Newbold Footpath linking Willans Place to Avon Mill Lane, the A4071 and Newbold on Avon;
- A footpath linking Lancaster Road and Evreux Way/North Street adjacent to Caldecott Park; and
- A footpath linking Oliver Street west of Rounds Gardens to Bridget Street.

Cycling

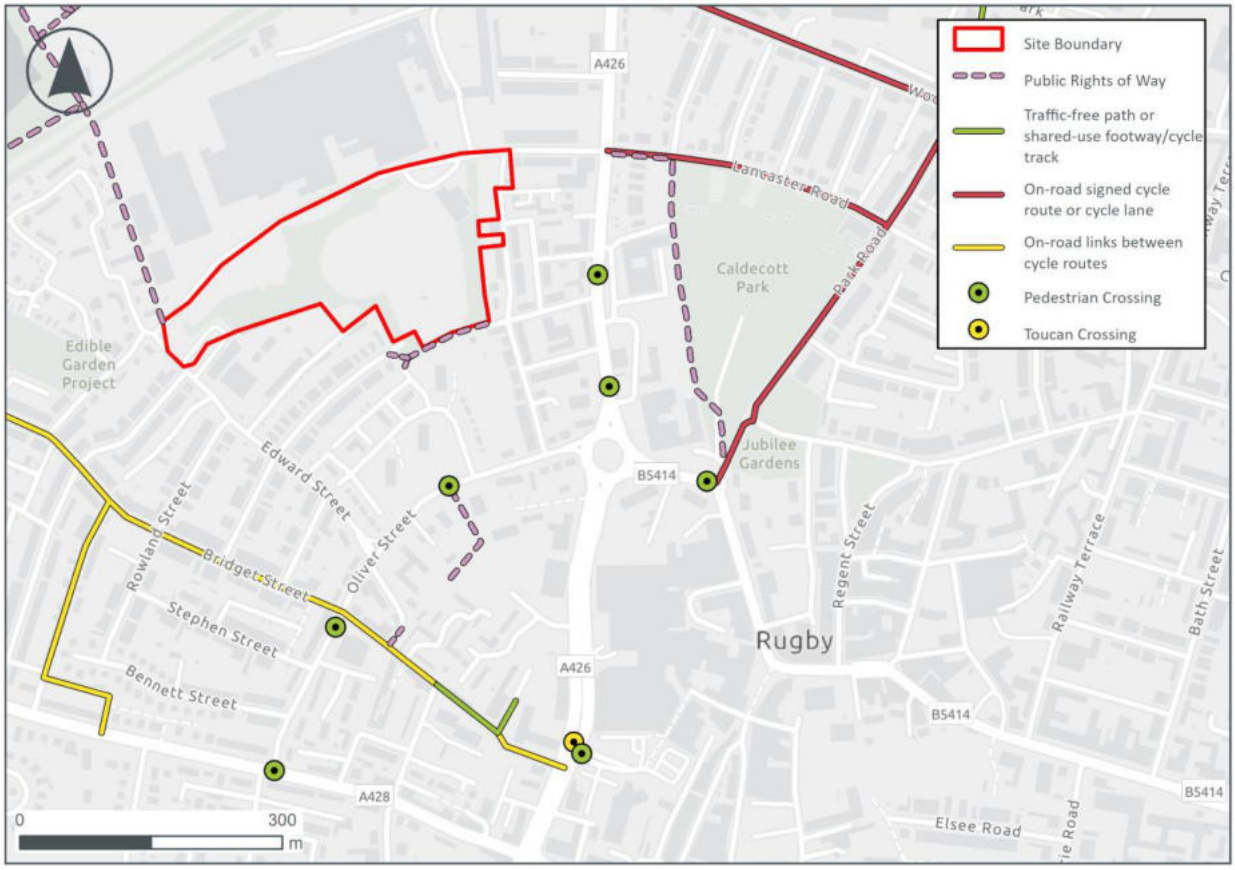
Current

3.4.15 There is limited cycle infrastructure in vicinity of the site, but does include:

- Bridget Street (to the south-west of Edward Street) which is noted as an 'On-road links between cycle routes' in the WCC Rugby Cycle Map with a 'Traffic-free path or shared-use footway/cycle track' connecting through to West Leyes and the A426 Corporation Street;
- A pelican crossing point across the A426 opposite West Leyes gives access to Rugby town Centre and Rugby Central Shopping Centre;
- Lancaster Road, Wood Street and Park Road (to the east of the A426) which are noted as an 'On-road signed cycle route or cycle lane' on the WCC Rugby Cycle Map;
- Cycle parking at the Hill Street Youth & Community Centre and the Warwickshire Police Station on the A426.

3.4.16 These are shown in Figure 3-3.

Figure 3-3: Pedestrian and Cycle Infrastructure



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3.4.17 An audit of the quality of the walking and cycling infrastructure has been undertaken in greater detail and presented in Section 3.6 of this report.

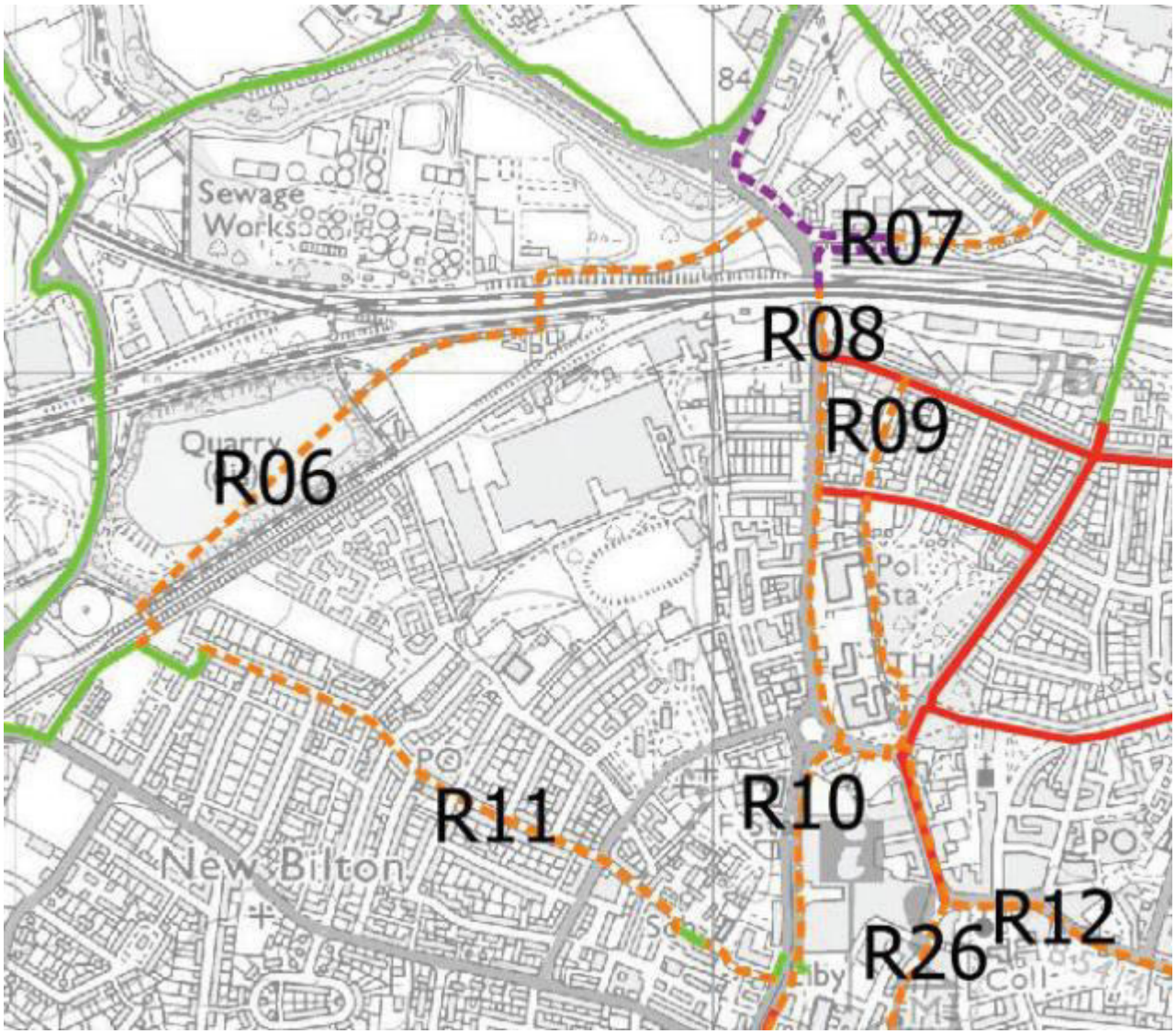
Future

3.4.18 Within the Warwickshire Local Cycling and Walking Infrastructure Plan, new and upgraded walking and cycling infrastructure are planned on several routes in the town. Figure 3-4 and Table 3-1 summarise proposals within the vicinity of the site.

Table 3-1: LCWIP Route Upgrades

Potential Scheme	Type
R06 - Bridleway (New Bilton - Newbold Road)	Cycle track/path on open space
R08 - A426 Newbold Road	Widened/upgraded footway adjacent to road
R09 - Caldecott Park and Poplar Grove	Cycle track/path on open space and on-carriageway rout
R10 - A426 (Asda - Evreux Way)	Widened/upgraded footway adjacent to road
R11 - A428 Lawford Road parallel back street route	Cycle track/path on open space and on-carriageway route

Figure 3-4: LCWIP routes [Extract]



3.5 Accessibility

Walking Guidance

3.5.1 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 metres, respectively. It should however be noted that journeys of a longer length are often undertaken.

3.5.2 For non-commuter journeys, the Guidance suggests that walk distances of up to 1,200 metres can be considered as a preferred maximum, with the 'desirable' and 'acceptable' distances being 400

and 800 metres, respectively. Again, it should be noted that journeys of a longer length are often undertaken.

3.5.3 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.

3.5.4 Guidance on Local Cycling and Walking Infrastructure Plans (LCWIPs) from the Department for Transport (DfT) suggests that typically, walking trips are up to 2km.

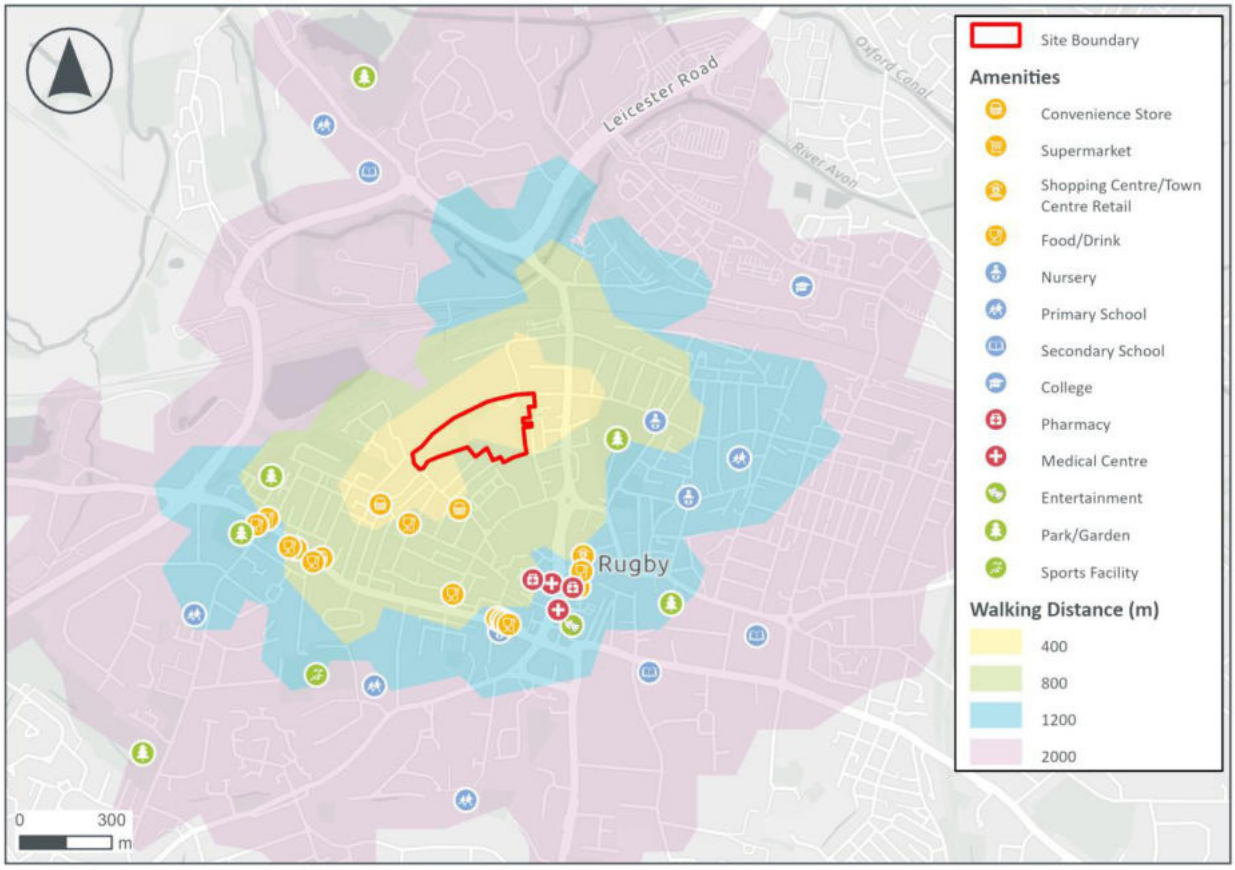
3.5.5 Assuming a typical walking speed of approximately 1.4m/s, Table 3-2 summarises the broad walk journey times that can fall under each category.

Table 3-2: IHT Guidelines

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

3.5.6 A walking isochrone, demonstrating the areas accessible by foot within 500m, 1,000m and 2,000m is provided in Figure 3-5 below.

Figure 3-5: Walking Distance Isochrone and Local Amenities



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Cycling Guidance

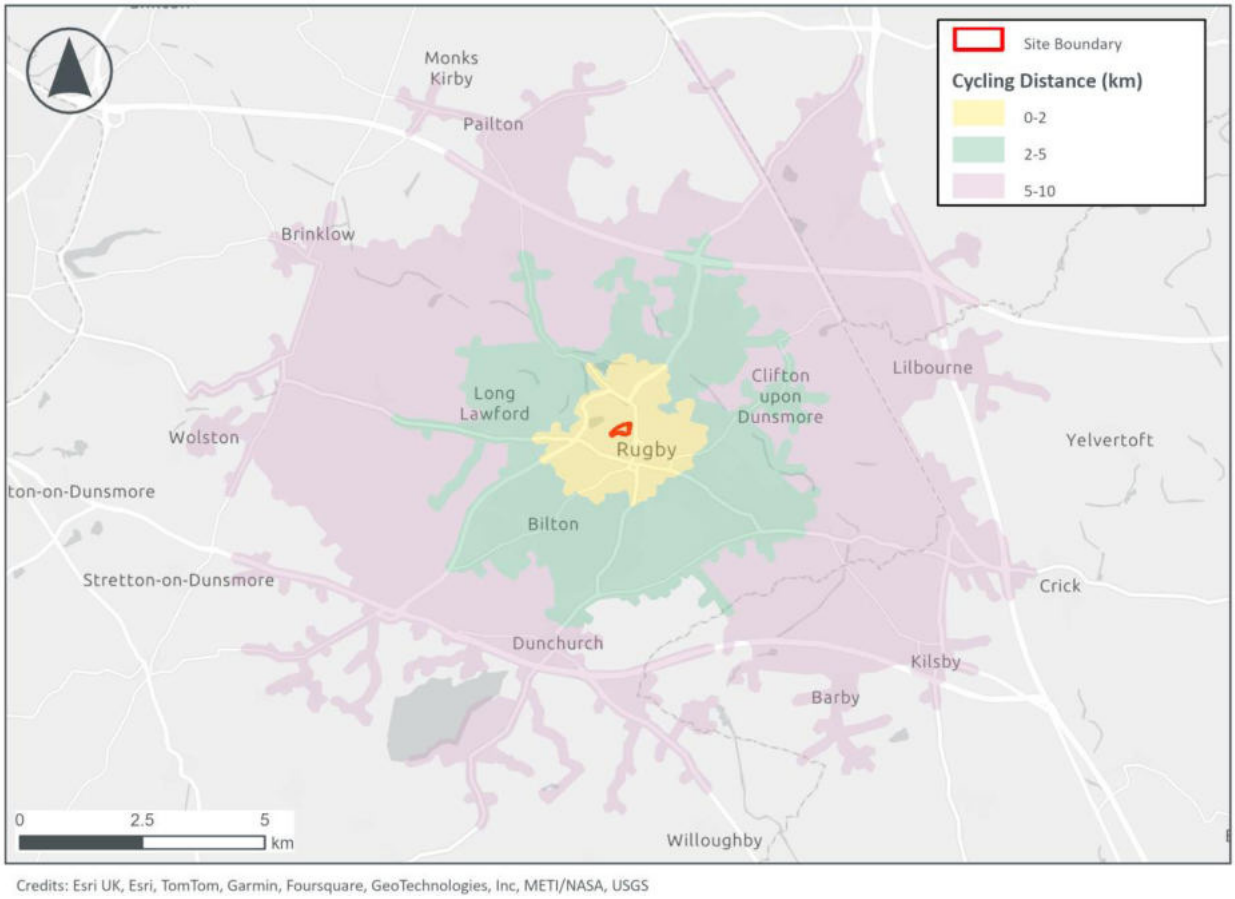
3.5.7 Guidance on Local Cycling and Walking Infrastructure Plans (LCWIPs) from the Department for Transport (DfT) states that:

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

3.5.8 Guidance on Local Cycling and Walking Infrastructure Plans (LCWIPs) from the Department for Transport (DfT), states that it is possible for cycling to replace trips made by other modes of transport, typically up to 10km. However, it also outlines that some individuals may be able to cycle further.

3.5.9 A cycling isochrone from the centre of the site is provided below in Figure 3-6 . This demonstrates that the whole of Rugby Town Centre and surrounding suburbs are accessible within a 2km cycling distance. Surrounding villages such as Long Lawford, Clifton upon Dunsmore and Bilton are within a 5km cycling distance. Within 10km, further rural areas in Warwickshire are accessible.

Figure 3-6: Cycling Distance Isochrone



Local Amenities

3.5.10 Table 3-3 and Figure 3-5 and summarises the local facilities that are located within the vicinity of the site and provides an approximate distance, walking time and indication of whether the facility falls within the IHT guidance. This has been based upon a point at the centre of the proposed development and includes a 190m / 3 minute addition to the recorded distances.

3.5.11 Due to the proximity to a number of amenities in Rugby Town Centre, only key amenities have been summarised.

Table 3-3: Local Amenities

Facility Type	Facility Name	Distance from Centre of Site	Walking time (mins)	IHT Standard	Cycle Time
Education	Caldecote Day Nursery	790m	11	Acceptable	3
	The Rugby Montessori Nursery School	990m	15	Acceptable	4
	Wellingtons Regent Place Day Nursery	1km	15	Preferred Maximum	4

Facility Type	Facility Name	Distance from Centre of Site	Walking time (mins)	IHT Standard	Cycle Time
	Northlands Primary School	1.2km	17	Preferred Maximum	4
	St Oswald's C of E Academy	1.3km	18	Preferred Maximum	5
	St. Matthew's Bloxam C of E Primary School	1.3km	18	Preferred Maximum	7
	Rugby School	1.3km	18	Preferred Maximum	7
	Lawrence Sheriff School	1.5km	21	Preferred Maximum	8
	Avon Valley School And Performing Arts College	1.6km	23	Preferred Maximum	9
	Oakfield Primary Academy	1.7km	24	Preferred Maximum	9
	Rugby College	1.8km	26	Preferred Maximum	9
	Riverside Academy	1.9km	26	Preferred Maximum	10
Retail	Reena off License and News	440m	7	Acceptable	1
	New Bilton Stores	470m	7	Acceptable	1
	Various - Rugby Town Centre	640m-1.2km	11-18	Acceptable	2-5
	Co-operative Food	740m	11	Acceptable	2
	Londis	790m	11	Acceptable	2
	ASDA	940m	14	Preferred Maximum	3
	Premier	990m	15	Preferred Maximum	4
Food/Drink	Sun Shing	540m	8	Acceptable	2
	Various – Rugby Town Centre	640m-1.2km	10-18	Acceptable-Preferred Maximum	2-5
	The Holly Bush	740m	10	Acceptable	2
	China Palace	790m	12	Acceptable	3
	Subway	790m	11	Acceptable	3
	Arnies Batch Bar	840m	13	Preferred Maximum	3
	Royal Oak	890m	13	Preferred Maximum	3
	Rugby's Fish Bar	940m	14	Preferred Maximum	4
	Spices of Rugby	990m	14	Preferred Maximum	4
	Franklin's Sandwich Shop	990m	14	Preferred Maximum	4
Medical	Westside Medical Centre	840m	12	Preferred Maximum	4

Facility Type	Facility Name	Distance from Centre of Site	Walking time (mins)	IHT Standard	Cycle Time
	Rowlands Pharmacy	940m	14	Preferred Maximum	4
	Central Surgery	940m	14	Preferred Maximum	4
	ASDA Pharmacy	940m	14	Preferred Maximum	4
Leisure	Caldecott Park	740m	11	Acceptable	2
	Jubilee Recreation Ground	790m	11	Acceptable	2
	Rugby Art Gallery and Museum	990m	13	Acceptable	3
	New Bilton Recreation Ground	990m	13	Acceptable	3
	St Andrew's Garden	1.2km	16	Preferred Maximum	5
	Hillmorton FC	1.2km	16	Preferred Maximum	5
	Rugby Cricket and Football Clubs	1.4km	20	Preferred Maximum	6
	Addison Road Recreation Ground	1.7km	24	Preferred Maximum	6
	Newbold Quarry Nature Reserve	1.9km	26	Preferred Maximum	7

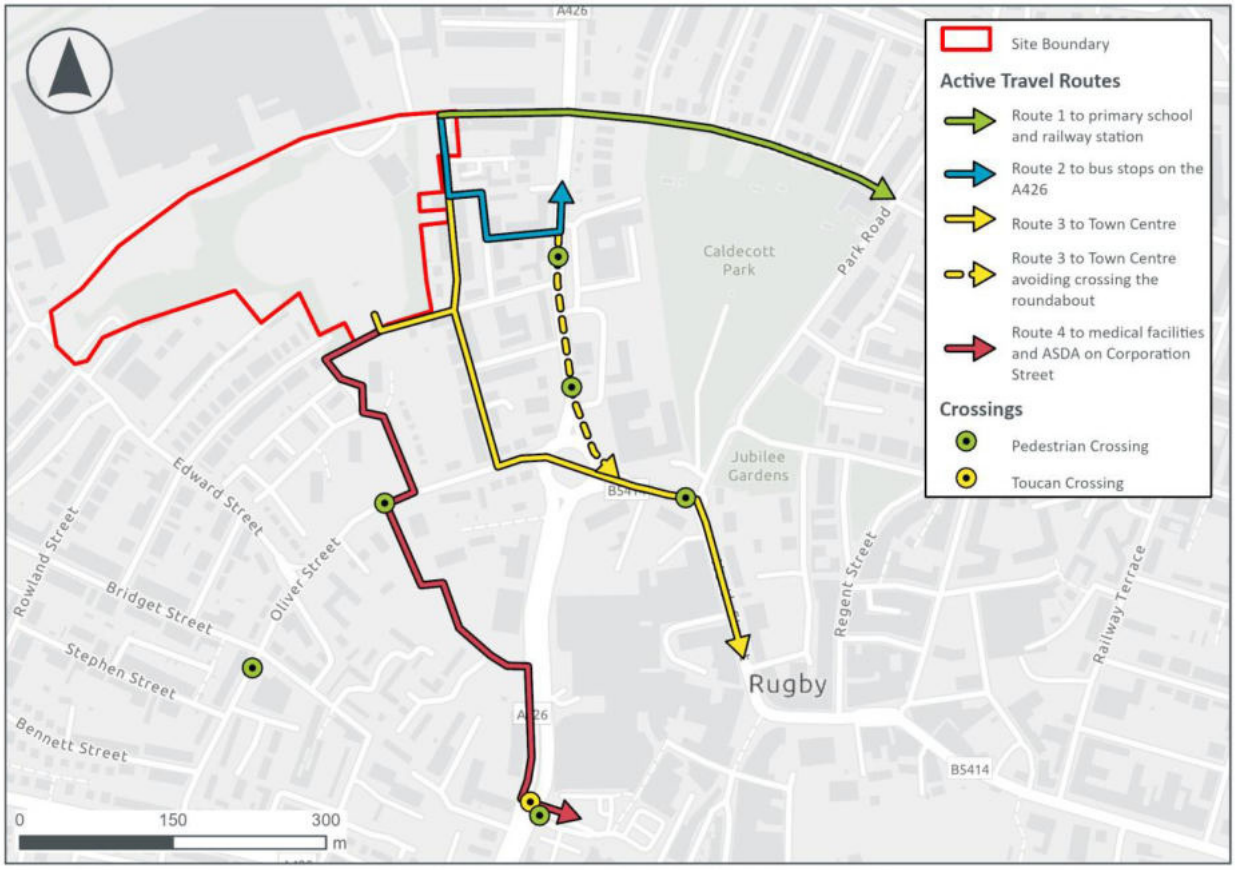
3.5.12 A selection of schools, retail, leisure and medical facilities are within an acceptable distance of the site. Local centres on Lawford Road and within Rugby Town Centre offers a wide selection of amenities within 2km of the site.

3.6 Route Audit

3.6.1 The infrastructure along key routes between the proposed development and local amenities has been considered in more detail below. The following routes have been considered as shown in Figure 3-7:

- Route 1 – Princes Street to Northlands Primary School via Lancaster Road;
- Route 2 – Princes Street to bus stops on the A426;
- Route 3 – Princes Street/Pedestrian Access to Rugby Town Centre; and
- Route 4 – Princes Street/Pedestrian Access to medical facilities and ASDA on Corporation Street

Figure 3-7: Active Travel Routes Overview



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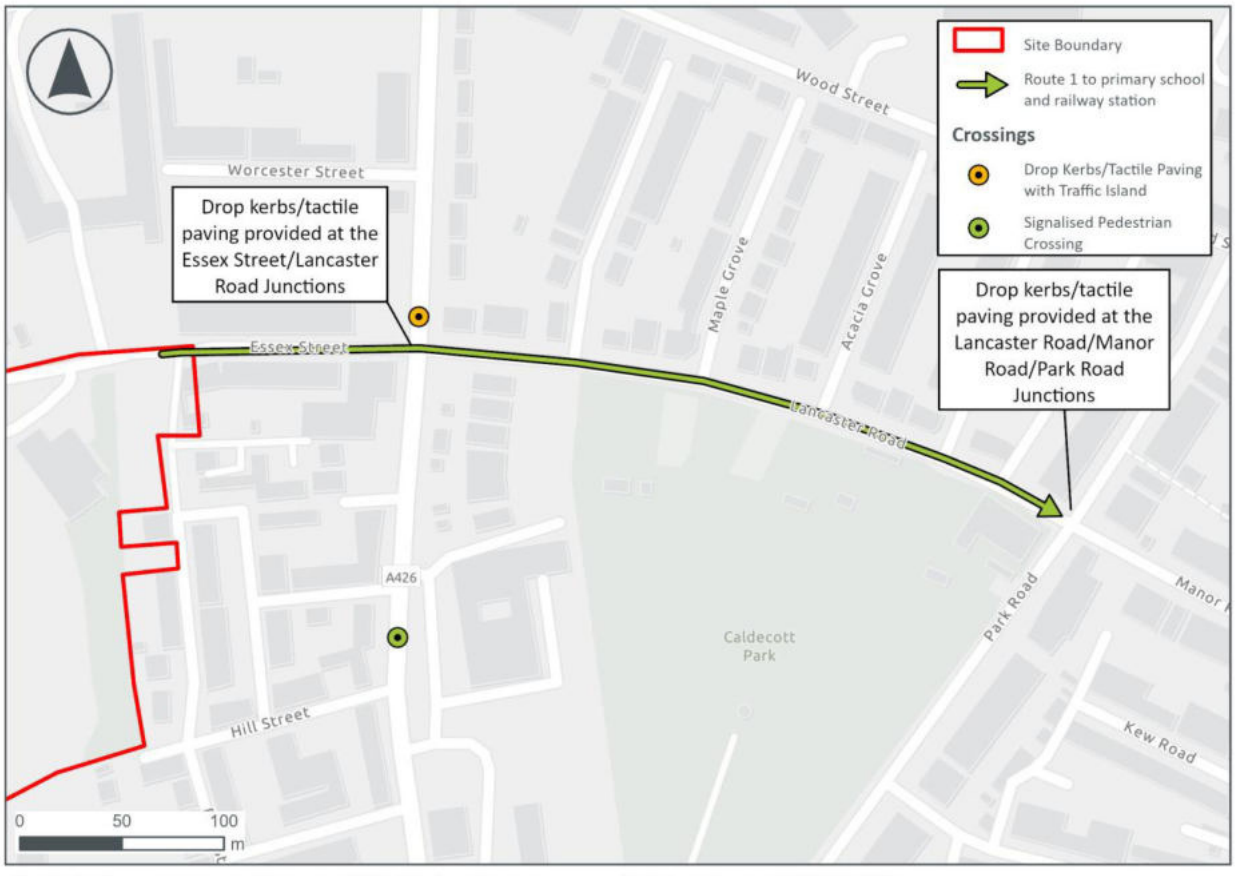
Route 1

3.6.2 Table 3-4 and Figure 3-8 provide a summary of Active Travel Route 1 between Princes Street/Essex Street and local schools and facilities.

Table 3-4: Route 1 audit

Route	Description	Pedestrian Infrastructure	Cycle Infrastructure
1	Provides access to facilities to the north of Rugby such as the catchment primary school (Northlands). This also routes towards the railway station.	Lit footways are provided along both sides of Essex Street, Lancaster Road and Manor Road. Footways vary in width, between 1.5m and 3m. Dropped kerbs are provided at the Essex Street/A426, Lancaster Road/A426 and the Lancaster Road/Manor Road/Park Road junctions. Drop kerbs are generally provided along Lancaster Road with some tactile paving provision. Drop kerb provision is generally provided on urban roads throughout the town centre. The A426 can be crossed via a traffic island to the north of Essex Street which is also provided with drop kerbs/tactile paving. An alternative signalised crossing is available north of Hill Street. The A426 is subject to a 30mph speed limit and experiences daily volumes of in excess of 8000 vehicles per day. Based on LTN 1/20 Table 10/2 the most appropriate type of crossing would be a signalised crossing.	Lancaster Road is marked as a signed cycle route from the A426 towards the Town Centre. It also has a 20mph speed restriction with alternative routes provided through Caldecott Park.

Figure 3-8: Active Travel Route 1



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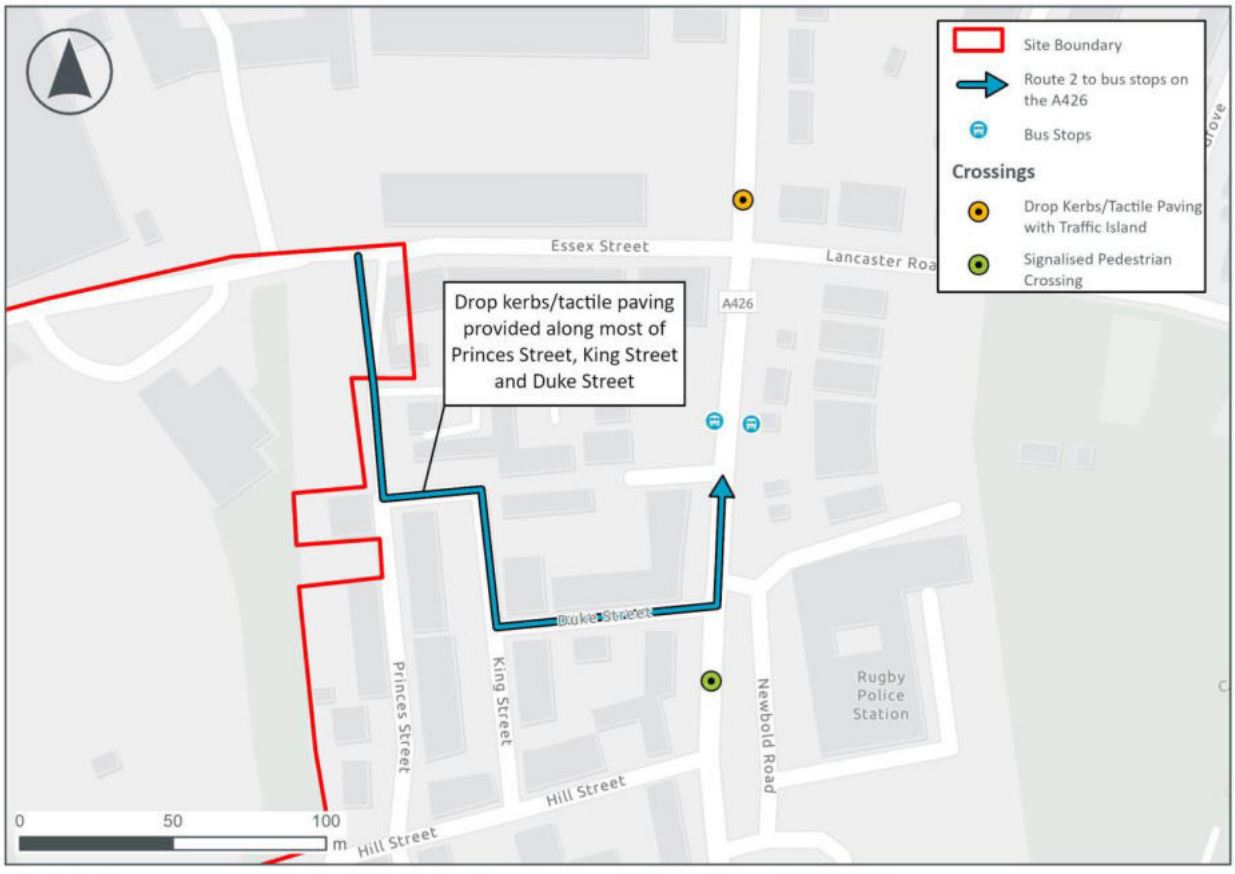
Route 2

3.6.3 Table 3-5 and Figure 3-9 provide a summary of Active Travel Route 2 between Princes Street bus stops on the A426.

Table 3-5: Route 2 audit

Route	Description	Pedestrian Infrastructure	Cycle Infrastructure
2	Provides access to bus stops on the A426 via Princes Street, Duke Street and King Street.	Lit footways are provided along both sides of Princes Street, King Street and Duke Street. These range from 1-1.5m wide. Dropped kerbs are provided at various points at access to driveways. A crossing with dropped kerbs/tactile paving is provided at the Duke Street junction. The A426 can be crossed a signalised crossing south of Duke Street.	There is no cycling infrastructure on this route although. All roads are subject to a 30mph speed limit and are lightly trafficked. The limited road geometry presence of on-street parking make these roads suitable for cycling in mixed-traffic.

Figure 3-9: Active Travel Route 2



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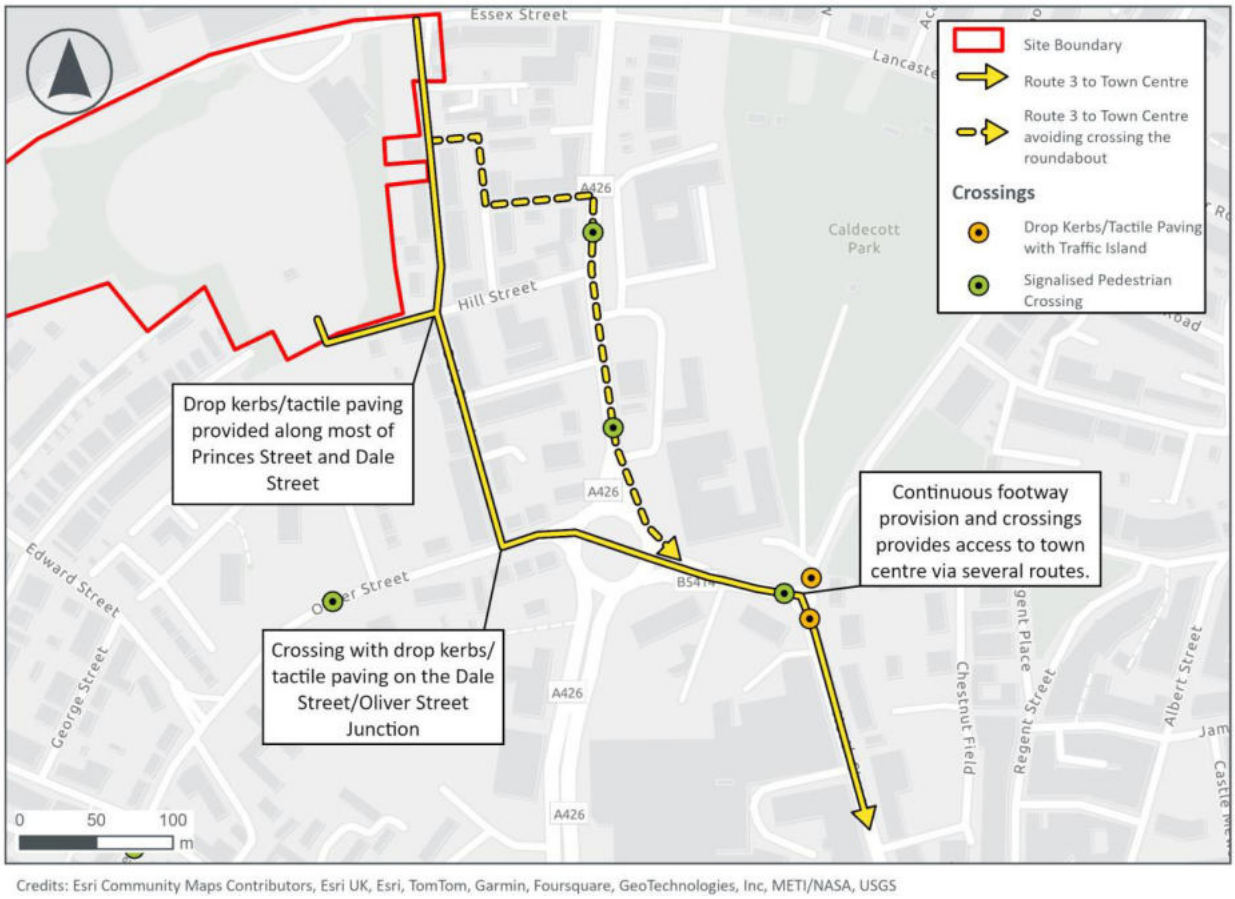
Route 3

3.6.4 Table 3-6 and Figure 3-10 provide a summary of Active Travel Route 3 between Princes Street and Rugby Town Centre.

Table 3-6: Route 3 audit

Route	Description	Pedestrian Infrastructure	Cycle Infrastructure
3	Provides access to Rugby Town Centre from either Princes Street of the Dale Street/York Street footpath accesses. From Princes Street there is the option for an alternative route along the A426.	Lit footways are provided along both sides of Princes Street and Dale Street down to the junction with Oliver Street. This includes drop kerbs at the Hill Street, St John Street and Oliver Street junctions. The footpath between York Street and Dale street is unlit and joints the western side of Dale Street/Princes Street. There are no drop kerbs to other footways from the western side of the road. Footway provision along Oliver Street connects to the A426 roundabout. Here drop kerbs route onto traffic islands on each arm of the roundabout offering multiple routes across to Evreux Way and Corporation Street. At the Evreux Way/Park Road roundabout a signalised crossing is provided on the western approach arm. Traffic island crossings with drop kerbs tactile/paving are provided on both other arms allowing access to either side of North Street and the Town Centre. An alternative route along the A426 via King Street and Duke Street/Hill Street avoids crossing the A426 roundabout. The A426 has lit footways on either side with drop kerbs/tactile paving at most junctions. It can be crossed a signalised crossing south of Duke Street and north of the A426 roundabout.	There is no cycling infrastructure on this route although all roads are subject to a 30mph speed limit and are lightly trafficked. The limited road geometry presence of on-street parking make these roads suitable for cycling in mixed-traffic.

Figure 3-10: Active Travel Route 3



Route 4

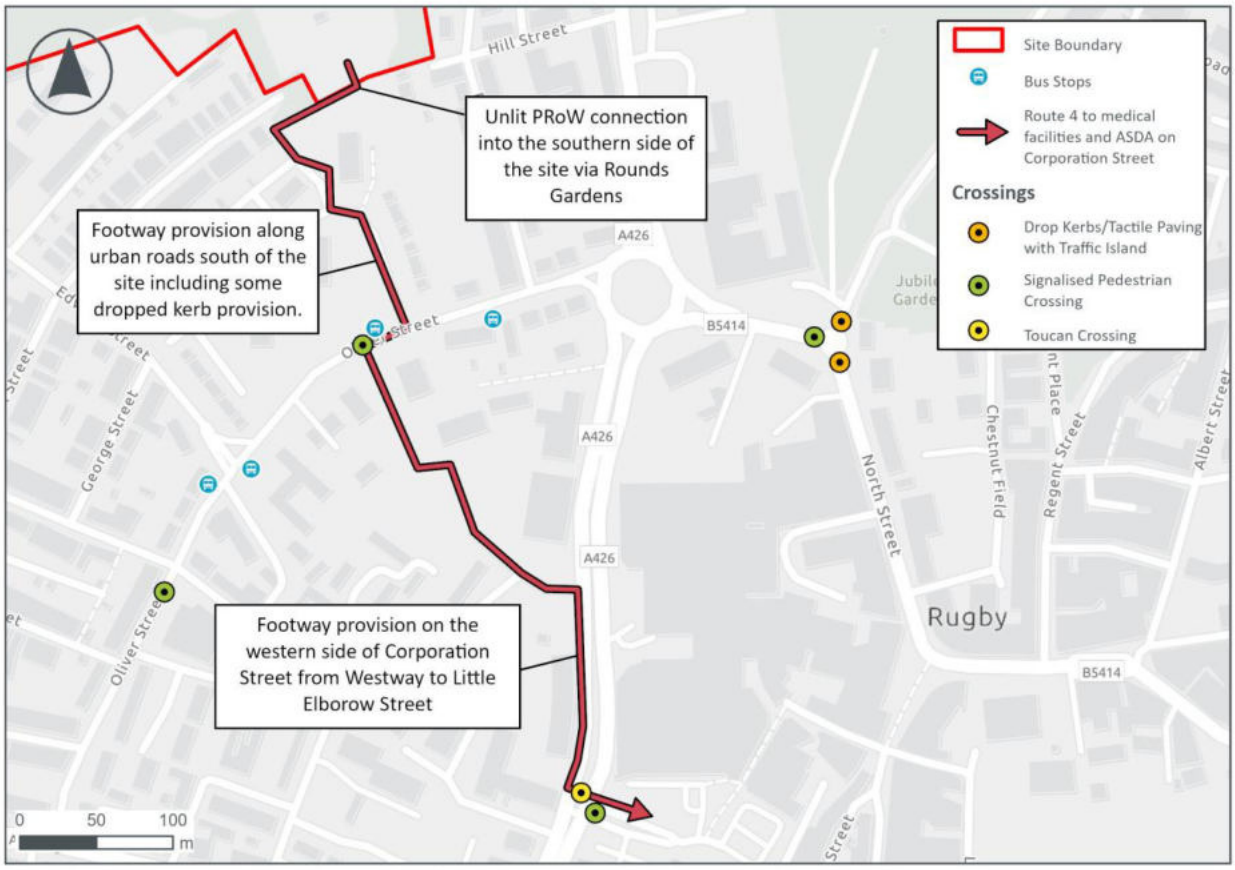
3.6.5 Table 3-7 and Figure 3-11 provide a summary of Active Travel Route 4 between Princes Street and medical facilities and ASDA on Corporation Street.

Table 3-7: Route 4 audit

Route	Description	Pedestrian Infrastructure	Cycle Infrastructure
4	Provides access to Rugby Town Centre and medical and retail opportunities on Corporation Street.	Access to the site is via an unlit Public Right of Way linking Dale Street and York Street. The PRoW connects through to footway provision at Blackman Way and Rounds Gardens. Demolition work currently underway at Rounds Gardens has resulted in intermittent footway provision on the right hand side of the road. This route south to Oliver Street where a crossing with drop kerbs and tactile paving is provided. The footway routes onto footway provision on the northern side of Oliver Street which is approximately 2m wide.	There is no cycling infrastructure on this northern part of the route although all roads are light trafficked and have urban speed limits appropriate for cycling. Cycling is prohibited on the footpath between Oliver Street and Corporation street. A toucan crossing allows a continuous cycle route across Corporation Street to the town centre.

		Approximately 40m west of Rounds Gardens, a signalised pedestrian crossing is provided which gives access to the southern footway and a PRoW through to Westway/Corporation Street or Briget Street. Bus stops are also accessible on Oliver Street. A PRoW and connecting footpaths provide unlit access through to Westway Car Park footway provision on the eastern side of Westway. At the junction of Westway and Corporation Street, a crossing with drop kerbs/tactile paving gives access to the western side of Corporation Street southwards. Footways are provided south to Little Elborow Street where medical facilities mentioned in Section 3.5 are located. A Toucan crossing to the north of the junction gives access for pedestrians and cyclists to footways on the northern side of Little Elborow Street. A further signalised pedestrian crossing gives access to the south side of little Elborow Street and south along the eastern side of Corporation Street.	

Figure 3-11: Active Travel Route 4



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3.7 Public Transport

Bus

Western Parcel

3.7.1 The nearest bus stops to the western part of the site (Willans Place) are located on Oliver Street, approximately 450m to the south of the site. The westbound stop is provided with a flag and pole with timetable board. There is no flag or pole provided eastbound. The bus service at this stop continues along Oliver Street and Lawford Road where additional stops are located.

Eastern Parcel

3.7.2 The nearest bus stops to the eastern part of the site (Princes Street) are located on the A426 Newbold Road, approximately 250m to the east of the site. Both stops are provided with a flag and pole with timetable board.

3.7.3 An alternative service is available on Oliver Street from bus stops located at:

- Dale Street (300m) - westbound only provided with a flag, pole and timetable board.
- Rounds Gardens (400m) - eastbound only provided with a flag, pole, timetable board and shelter.

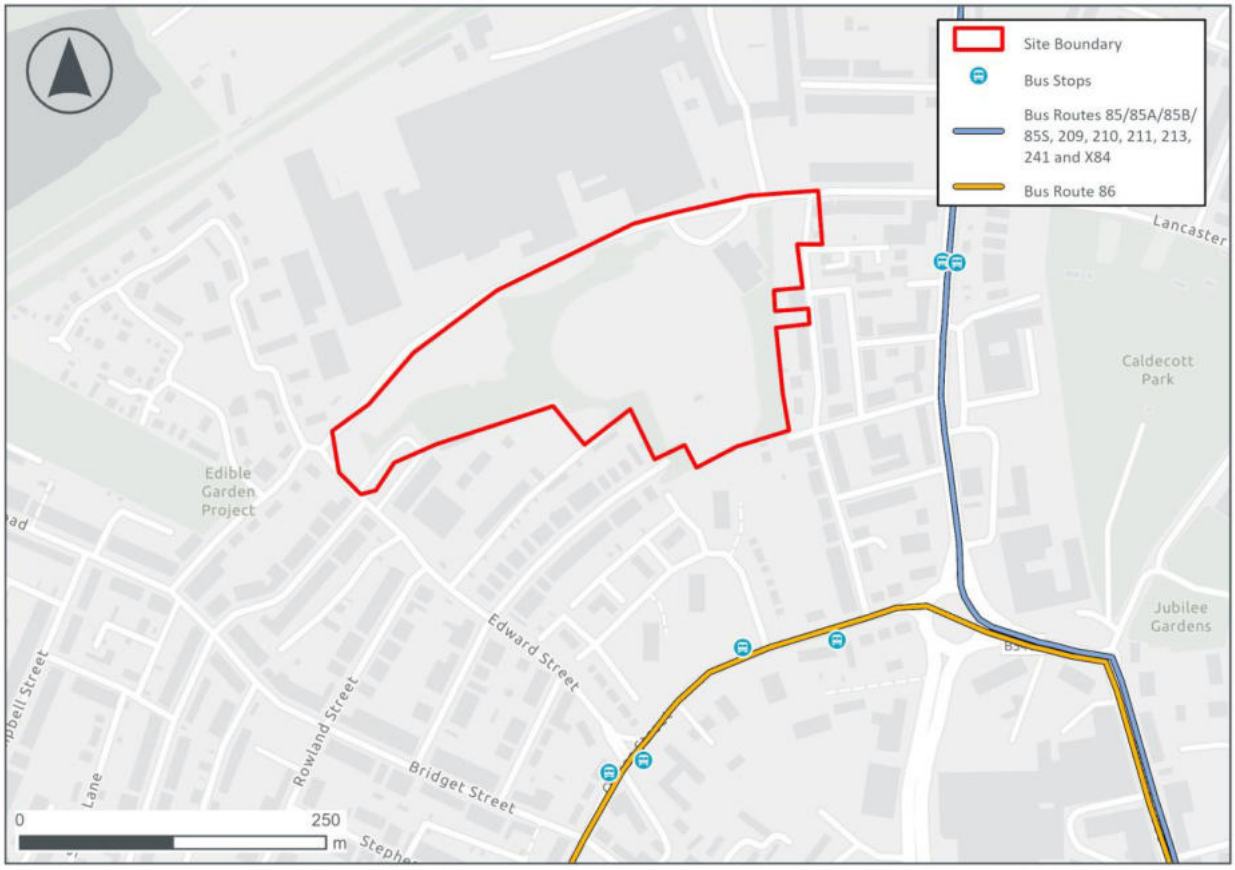
3.7.4 Service provision for both parcels is summarised in Table 3-8 and Figure 3-12.

Table 3-8: Bus Services

Site Access	Bus Stop	Route number	Operator	Route	Days of Operation	Frequency
Willans Place	Oliver Street at Edward Street	86	Stagecoach Midlands	Rugby – Long Lawford – Wolston – Binley - Coventry	Monday - Saturday	Hourly
Princes Street	Oliver Street at Rounds Gardens/Dale Street				Sunday	Every two hours
	A426	85	National Express Coventry/National Express West Midlands	Rugby – Harborough Magma – Pailton - Monks Kirkby – Brinklow – University Hospital - Coventry	Monday-Saturday	Every two hours (hourly AM/PM peak)
		85A	Stagecoach Midlands	Rugby – Harborough Magma – Pailton - Brinklow – University Hospital - Coventry	Sundays	Every two hours
		85B	National Express Coventry/National Express West Midlands	Rugby – Harborough Magma – Brinklow – University Hospital - Coventry	Monday-Friday	3 per day
		85S		Rugby – Harborough Magma – Pailton - Monks Kirkby – Brinklow – University Hospital - Coventry	Monday-Friday	One AM and 2 PM school journeys per day
		209	Coventry Minibuses	Elliots Fields – Rugby – Long Lawford – (Princethorpe)	Wednesdays	One return journey
			National Express Accessible Transport		Fridays	
		210		Rugby – Harborough Magma – Pailton - Monks Kirkby – Hinckley	Mondays	

Site Access	Bus Stop	Route number	Operator	Route	Days of Operation	Frequency
		211		Rugby - Willey	Tuesdays	
		213		Rugby – Harborough Magma – Pailton - Bedworth	Tuesdays	
		241		Rugby – Harborough Magma – Pailton - Nuneaton	Wednesdays	
		X84	Arriva Midlands	Rugby – Magna Park – Lutterworth – Narborough - Leicester	Monday-Saturday	Hourly
				Rugby – Magna Park – Lutterworth	Sunday	3 per day

Figure 3-12: Bus Stops



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Rail

3.7.5 Rugby railway station is located to the east of the site on the West Coast Main Line. It is approximately 1.4km from Princes Street or 1.9km from Willans Place via the A426 and Lancaster Road.

3.7.6 The station has extensive cycle storage space with two cycle hubs (200 spaces total), on-platform storage (64 spaces on both Platforms 2 and 4) and additional cycle parking in the car parks (16 spaces). There are 57 car parking spaces. It is staffed Monday – Sunday.

3.7.7 Services are provided by Avanti West Coast and London Northwestern Railway. A summary of key destinations and services are highlighted below:

Table 3-9: Rail Services

Operator	Destination	Frequency
London Northwestern Railway	Coventry Birmingham International Marston Green Birmingham New Street	2 trains per hour
	Nuneaton Tamworth Lichfield Rugeley Stafford Crewe	1 train per hour
	Milton Keynes London Euston	3 trains per hour
	Northampton Leighton Buzzard	2 trains per hour
Avanti West Coast	Milton Keynes Watford Junction London Euston	Up to three trains per hour
	Stoke-upon-Trent Macclesfield Stockport Manchester	1 train per hour
	Coventry Birmingham International Birmingham New Street	2-3 trains per hour
	Wolverhampton Stafford Crewe Warrington Wigan Preston Lancaster Oxenholme Penrith Carlisle	1 train per hour
	Edinburgh	Every two hours

Operator	Destination	Frequency
	Glasgow	
	Blackpool North	Two trains per day
	Shrewsbury	One train per day

3.8 Highway Safety

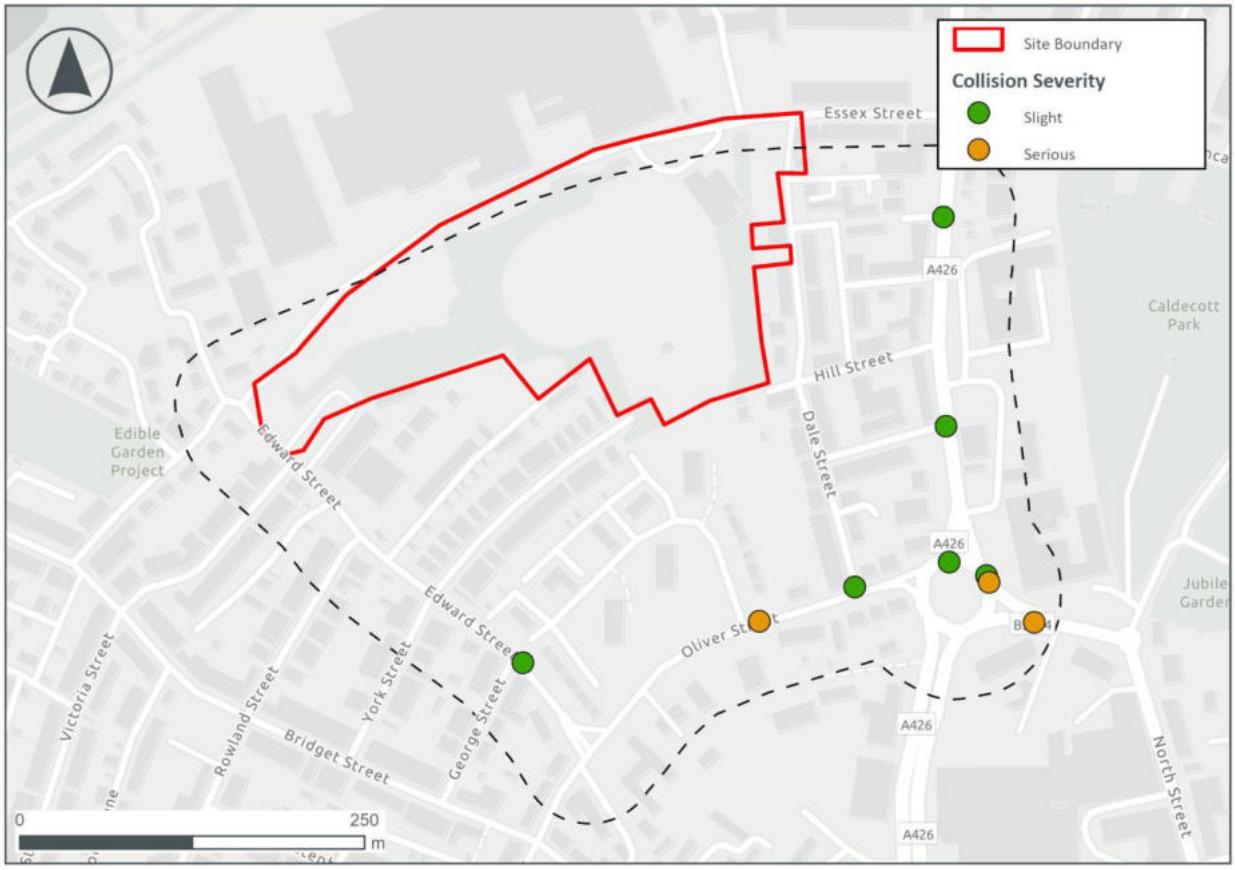
3.8.1 In order to determine whether there are any highway safety issues that may be exacerbated by the proposed expansion, Personal Injury Collision (PIC) data has been provided by WCC for the latest five-year period available (01/12/2018 - 19/12/2023). The full data set is included in **Appendix B**.

3.8.2 There has been a total of nine collisions across the whole study area within a five year period, six of which were recorded as slight and three of which were recorded as serious. This is shown in Table 3-10.

Table 3-10: Collision Data

Junction/Link	Number of collisions				Sensitive Road User Involvement			
	Slight	Serious	Fatal	Total	Pedestrian	Cyclist	Motorcyclist	Total
A426/Avon Street	1	0	0	**1**	0	1	1	**2**
A426/St John Street	1	0	0	**1**	0	0	0	**0**
A426 Roundabout	2	2	0	**4**	1	0	1	**2**
Oliver Street/Dale Street	1	0	0	**1**	1	0	0	**1**
Edward Street/George Street	1	0	0	**1**	0	0	0	**0**
Oliver Street between Rounds Gardens and Dale Street	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**0**
Total	**6**	**3**	**0**	**9**	**2**	**1**	**3**	**6**

Figure 3-13: Collision Data



A426/Avon Street

3.8.3 At the junction with the A426 and Avon Street, one slight collision occurred. It involved a bicycle exiting Avon Street and colliding with a scooter. No causational factor was given although the report mentions driving under the influence of alcohol.

A426/St John Street

3.8.4 At the junction with the A426 and St John Street, one slight collision occurred. It involved one car rear-ending another car as they were exiting St John Street. No causational factor was given.

A426 Roundabout

3.8.5 At the A426 roundabout, four collisions have been recorded. Two collisions occurred on the eastern side of the roundabout near the northern entry arm. The first was recorded as slight and involved a car travelling eastbound colliding with another car travelling southbound. One casualty was recorded with no sensitive users involved and no factor given.

3.8.6 The other incident occurred in a similar location and was recorded as serious. It involved a car which was turning west from the A426 onto Oliver Street colliding with a motorcycle. The causational factor given was a right turn manoeuvre.

3.8.7 Elsewhere on the roundabout, two other collisions were recorded. One slight incident was recorded and involved one car. The factor given was a positive breath test.

3.8.8 One serious collision occurred on the eastern arm of the roundabout on Evreux Way. It involved a single vehicle and pedestrian.

Oliver Street/Dale Street

3.8.9 At the junction with the Olver Street and Dale Street, one slight collision occurred. It involved car reversing into a pedestrian and driving off. No causational factor was given.

Edward Street/George Street

3.8.10 At the junction with Edward Street and George Street, one slight collision occurred. It involved two cars, one of which was travelling northbound and collided with a parked vehicle. The incident recorded one casualty and involved no sensitive users. No causational factor was given although the report mentions driving under the influence of alcohol.

Oliver Street between Rounds Gardens and Dale Street

3.8.11 Along Oliver Street between Rounds Gardens and Dale Street, one serious collision occurred. It involved a car exiting a private driveway with restricted view colliding with a motorcycle. No causational factor was given.

Summary

3.8.12 A total of nine collisions have been recorded within the study area and time frame used. Three involved motorcycles, two involved pedestrians and one involved a cyclist. There is no evidence of clustering of sensitive users within the study area and timeframe used.

3.8.13 There is also no evidence of special clustering within the study area. Collisions largely occurred at junctions. The two collisions in a similar location on the A426 roundabout were making different moves.

3.8.14 It is therefore not considered that there are any highway safety issues that would be affected by the development.

3.9 Summary

3.9.1 In summary, a review of the baseline transport connections has demonstrated the following:

- The site is located within walking distance of a range of local facilities within surrounding local areas and Rugby Town Centre;
- These are accessible via key Active Travel Routes which are facilitated by a network of walking and cycling infrastructure;
- There are frequent bus services providing connection from the site to Rugby town Centre, Coventry, Leicester and surrounding urban areas. Rugby railway station has frequent services to Coventry, Birmingham, London, the North-West and Scotland; and
- There are no highway safety implications which would be exacerbated by proposed development.

4 Development Proposals

4.1 Proposed Development

4.1.1 This TA accompanies a full planning application for the development of 134 residential dwellings. The exact development mix has been summarised below and a site plan is provided in **Appendix C.**

Open Market

- 5x 1-bed apartments;
- 15 x 2-bed apartments;
- 35 x 2-bed houses;
- 57 x 3-bed houses; and
- 22 x 4-bed houses.

4.2 Vehicle Access

4.2.1 The development is proposed to comprise two development parcels, each independently accessed, as follows. Further information on each access is given below.

- East Parcel – access via an extension to Princes Street – serving 85 properties; and
- West Parcel – access via an extension to Willans Place – serving 49 properties.

Princes Street Access

4.2.2 Access is sought from an extension of Princes Street into the site. The access road will be 5.5m in width with footways on both sides. Double yellow line TROs will be implemented around the bend in the road to prevent inappropriate parking.

Willans Place Access

4.2.3 Access is sought via an extension of Willans Place into the site, The access road will be 5.5m in width with footways on both sides of the carriageway. At the Willins Place/Edward Street junction, visibility splays of 2.4x25m (in accordance with a 20mph speed) are provided. A drawing of the access arrangement has been included in **Appendix D.**

Servicing and Swept Path Analysis

4.2.4 The accesses have been designed to accommodate refuse and emergency service vehicles. A swept path analysis demonstrates that each access can sufficiently accommodate all movements. The swept path analysis drawing is contained within **Appendix E.**

Road Safety Audit

4.2.5 At the time of writing a Stage 1 Road Safety Audit (RSA) was being undertaken on both access designs, as requested by WCC during pre-application discussions. The RSA results and Designers Response will be shared with WCC when available.

4.3 Active Travel Strategy

4.3.1 Figure 4-1 below illustrates the proposed active travel strategy, and more detail is provided below.

Figure 4-1: Proposed Pedestrian/Cycle Strategy

Pedestrian Access

4.3.2 Pedestrian access will be provided in several locations as follows.

- 2m footways provided on both sides of the road at each of the vehicle access points (Willans Place and Princes Street);
- A 2m footway connection onto Essex Street to the north;
- A 2m footway connection onto the bridleway that bounds the southern edge of the site; and
- A 3m shared footway/cycleway will be provided through the centre of the site, providing a pedestrian/cycle connection between the two development parcels.

Cycle Strategy

4.3.3 The following cycle infrastructure will be provided on site:

- Given the number of dwellings served from each access point, the access roads are considered to be quiet roads, suitable for on-road cycling. Vehicle trips will be less than 2000 per day and speeds restrained to 20mph through design measures. The roads are therefore suitable for on street cycling in accordance with Figure 4.1 of LTN 1/20 guidance; and
- A 3m shared footway/cycleway will be provided through the centre of the site, providing a pedestrian/cycle connection between the two development parcels.

Off-Site Improvements

A426 Pedestrian Crossing

4.3.4 It is noted that the main crossing point across the A426 in proximity to the site is an uncontrolled pedestrian crossing with refuge in the vicinity of Essex Street. During scoping discussions, WCC requested that consideration be given to the potential to signalise this crossing point. The potential for improvements at this crossing point will be discussed with WCC during the determination period.

LCWIPs and PROWs

4.3.5 Potential improvements to the PROW network and contributions towards LCWIP schemes will be discussed with WCC during the determination period.

4.4 Internal Layout

4.4.1 The internal layout has been designed in accordance with the Warwickshire Design Guide Part 3 – Street Design (Residential), and includes the following street types and is based upon a 20mph design speed.

- Primary Road – 5.5m in width with 2m footways on both sides; and
- Private Driveway/Parking Courtyards – 4.5-7.3m shared space.

4.4.2 Drawings illustrating the internal tracking of a fire tender and refuse vehicle manoeuvring through the site and internal visibility has been included in **Appendix F.**

4.4.3 Walking and cycling routes will be accessible between each parcel of housing within the development providing east-west connections throughout Rugby and surrounding areas.

4.5 One-Way System

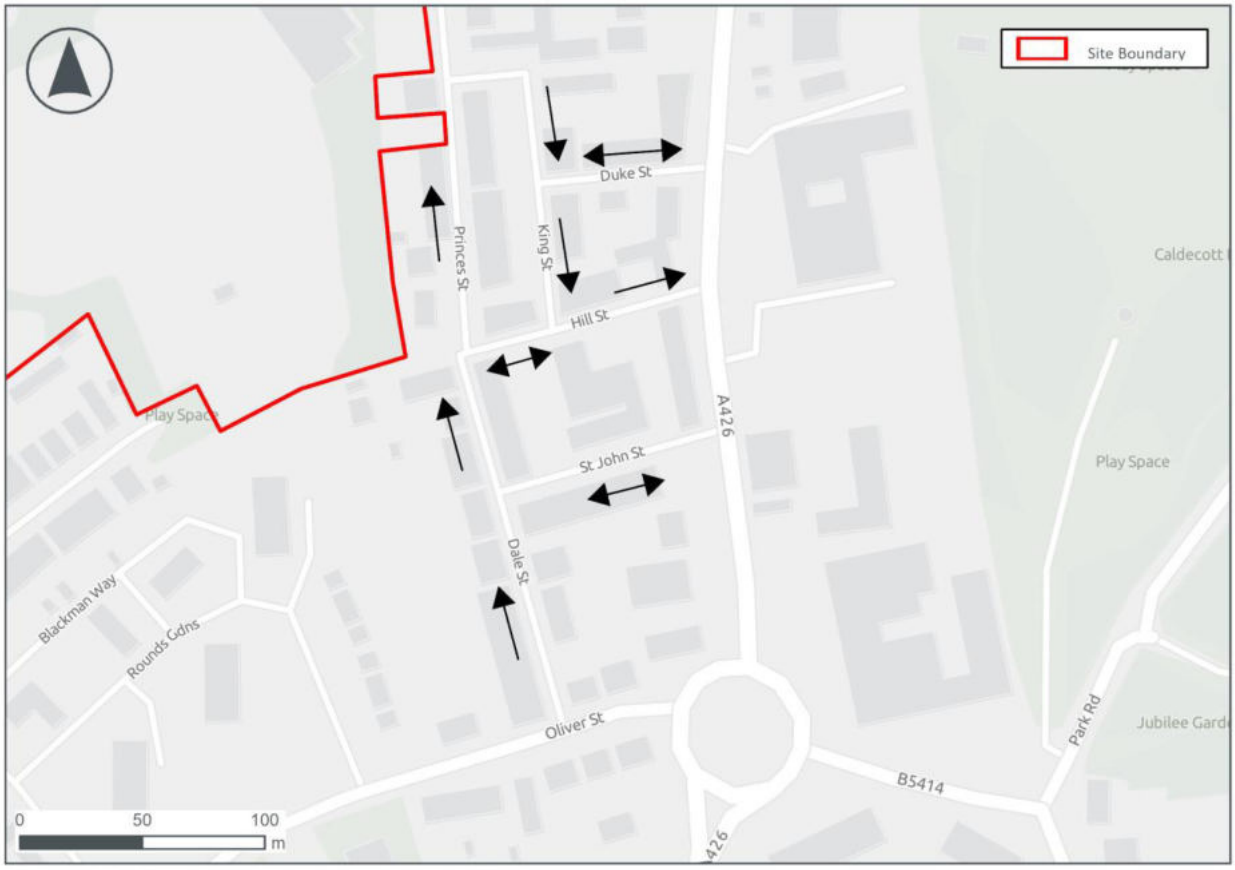
4.5.1 Access to the eastern part of the site will be via Princes Street and adjacent roads. Sections of these roads are restricted to one-way working at times due to the presence of on-street parking. As agreed during scoping discussions with WCC highways, additional demand as a result of the development will result in a potential highway safety issue due to the need for vehicles to stop and reverse where road space is restricted.

4.5.2 Therefore, to enable safe access to the eastern part of the site, the roads to the east of the site are proposed to be converted to a mix of one and two-way roads to prevent instances of vehicles having to stop and reverse. The following changes will be made as shown in Figure 4-2.

- Dale Street will be one-way northbound from Oliver Street to Princes Street
- Princes Street will be one-way northbound from Hill Street to King Street
- King Street will be southbound from Princes Street to Hill Street
- Hill Street will be eastbound only from Dale Street/Princes Street to the A426
- Duke Street will remain two-way
- St John Street will remain two-way

4.5.3 To support the one-way system alterations to the TROs are proposed with the removal of on-street parking bays for 42m on the western side of Princes Street.

Figure 4-2: Proposed One-Way System



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Traffic Flows

4.5.4 Existing traffic flows for the AM, PM and Daily peak periods, as record by traffic surveys on the links mentioned above as well as the Edward Street/Gladstone Street/Izod Road are shown in Figure 4-2 and Included in **Appendix G**.

4.5.5 The traffic surveys identify that the roads east of the site are lightly trafficked with a maximum of 35 two-way vehicle movements in the AM peak, 27 in the PM peak and 412 daily vehicle movements (recorded on Dale Street).

4.5.6 Link flows extracted from the strategic modelling (see Section 6) identify that in the future, with the one-way system in operation, the roads east of the site would continue to be lightly trafficked, with decreases in vehicle flows recorded on Dale Street, Princes Street and St John Street.

Swept Path Analysis

4.5.7 Swept Path analysis has been undertaken on the proposed one-way system to ensure that access is retained for servicing vehicles, and a drawing illustrating the manoeuvres is provided as **Appendix E.**

Implications on Parking

Current Parking Levels

4.5.8 Parking beat surveys have been undertaken to understand existing levels of parking on all roads between the proposed site and the A426 and the area in the vicinity of the Willans Place access. Parking beat surveys were undertaken as follows:

- Overnight surveys undertaken in October 2023, covering the period of maximum demand between 22:00-06:00; and
- Additional daytime surveys undertaken in January 2024 at the request of WCC.

4.5.9 The overnight survey results are summarised in Table 4-1 below, and full outputs provided in **Appendix H**.

Table 4-1: Parking Beat Survey Results – Overnight Period of Maximum Demand

Link	Total Capacity	Parking Occupancy	Remaining Capacity
Dale Street (East)	19	17	2
Dale Street (West)	25	19	6
Duke Street (North)	10	11	-1
Duke Street (South)	0	0	0
Edward Street (East)	0	1	-1
Edward Street (West)	4	0	4
Gladstone Street (North)	1	1	0
Gladstone Street (South)	5	3	2
Hill Street (North)	10	10	0
Hill Street (South)	0	0	0
King Street (East)	15	13	2
King Street (North)	5	5	0
King Street (South)	0	0	0
King Street (West)	12	0	12
Princes Street (East)	0	0	0
Princes Street (West)	22	19	3
St John Street (North)	13	9	4
St John Street (South)	16	13	3
Willans Place (North)	0	0	0

Link	Total Capacity	Parking Occupancy	Remaining Capacity
Willans Place (South)	3	0	3
Grand Total	**160**	**121**	**39**

4.5.10 Table 4-2 summarises the results of the daytime surveys, and full outputs provided in **Appendix H**. Levels of parking during the daytime are lower than during the nighttime, are within the local parking capacity. The overnight survey period of 22:00-06:00 still represents the periods of maximum parking demand.

Table 4-2: Parking Beat Survey Results – overnight and daytime parking comparison

Link	Total Capacity	Parking Occupancy												
		07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	22:00 - 06:00
Total	160	121	102	80	86	93	90	86	86	78	86	91	105	121

Changes to Parking Levels

4.5.11 The proposed changes to TROs and parking in Princes Street in order to implement the one-way system are as follows:

- The removal of parking bays on the western side of Princes Street (total 42m of public parking bay removed) resulting in the reduction of available parking capacity by eight spaces;
- The addition of one marked on-street parking bay for private use by plot 96; and
- The addition of three off-street parking bays for private use by plots 82-84.

4.5.12 Overall, the proposed development results in a reduction in eight public parking spaces along Princes Street.

Table 4-3: Parking Beat Survey Results with changes to parking

Link	Removed Parking	Revised Capacity	Parking Occupancy (as surveyed)	Remaining Capacity
Dale Street (East)	-	19	17	2
Dale Street (West)	-	25	19	6
Duke Street (North)	-	10	11	-1
Duke Street (South)	-	0	0	0
Edward Street (East)	-	0	1	-1
Edward Street (West)	-	4	0	4
Gladstone Street (North)	-	1	1	0

Link	Removed Parking	Revised Capacity	Parking Occupancy (as surveyed)	Remaining Capacity
Gladstone Street (South)	-	5	3	2
Hill Street (North)	-	10	10	0
Hill Street (South)	-	0	0	0
King Street (East)	-	15	13	2
King Street (North)	-	5	5	0
King Street (South)	-	0	0	0
King Street (West)	-	12	0	12
Princes Street (East)	-	0	0	0
Princes Street (West)	8	14	19	-5
St John Street (North)	-	13	9	4
St John Street (South)	-	16	13	3
Willans Place (North)	-	0	0	0
Willans Place (South)	-	3	0	3
Grand Total	**-**	**152**	**121**	**31**

4.5.13 Table 4-3 demonstrates that with changes to parking as a result of the development, the demand for parking on Princes Street would outweigh availability. However, there is sufficient spare capacity on adjacent streets including King Street and Dale Street to accommodate demand.

4.6 Parking

Parking Standards

4.6.1 Parking standards relevant to the site are set out within the Rugby Local Plan Appendix 5. The proposed development is located within the 'high access' area, and the relevant standards are summarised in Table 2-1.

Parking Provision

4.6.2 Based on parking numbers provided within drawing R9112-RLA-23-XX-DR-A-2200-P14 Proposed Site Plan, Figure 4-3 summarises whether the parking provision meets the parking standards set out in Section 2.

Table 4-4: Total Parking Against Standards

Unit Type	Plot	On-street parking spaces	Off-street parking spaces	Car Ports	Total Spaces	Meets Standards?
1 bed apartments (5 total)	9-10	0	1	1	**4**	Yes
	114-116	0	0	1	**3**	Yes

2 bed apartments (15 total)	8	0	1	1	**2**	Yes
	69-80	0	9 unallocated between all apartments	0	**9**	Yes
	121-122	0	0	1	**2**	Yes
2 bed house (35 total)	13 23-24, 27-28 38-39 46-48 54-57, 59 65-67 89-92 123, 125, 127-128	0	2	0	**52**	Yes
	15	2	0	0	**2**	Yes
	82-84 96	1	0	0	**4**	Yes
	97	0	2	0	**2**	Yes
	111-112	0	0	1	**2**	Yes
	124	0	0	2	**2**	Yes
3 bed house (57 total)	1 16, 19 81 99	2	0	0	**10**	Yes
	2-3, 6-7	0	1	0	**4**	Yes
	4-5 11-12, 14, 17-18 20-22, 25, 29 32-33, 37 44-45 50-51, 53, 58 60, 62-64, 68 85-87 93-95, 98 100-101, 108-110, 119 126	0	2	0	**79**	Yes
	102-107	1	0	0	**6**	Yes
	113	0	1	1	**2**	Yes
4 bed house (22 total)	30-31, 34-36 49 52 61 88 117-118 129-134	0	2	1	**51**	Yes
	40-43	0	2	0	**8**	Yes
	120	0	0	2	**2**	Yes
Total	-	-	-	-	**246**	**-**

4.6.3 Table 4-4 shows that there will be a total of 246 parking spaces provided by the development. All housing types meet parking standards set out in Section 2 of this report.

Cycle Parking

4.6.4 The standards require one secure and undercover cycle space per unit. Secure cycle parking will be provided at each property within the garages or sheds, or within a communal store for apartments.

Electric Vehicle parking

4.6.5 The Rugby Local Plan does not specify a required standard for electric vehicle parking. Notwithstanding this, it is proposed that a charge point will be provided for each dwelling.

5 Travel Demand

5.1 Introduction

5.1.1 This chapter summarises the methodology for establishing trip generation associated with the development proposals. Trip generation and distribution have been derived for the AM and PM peak periods (08:00-09:00 and 17:00-18:00 respectively).

5.2 Vehicle Trips

Trip Generation

5.2.1 In order to identify the likely vehicle trip generation associated with the development, residential trip rates have been extracted from TRICS v7.10.3, under the following parameters:

- **Land Use** – 03/A Residential Houses Privately Owned;
- **Regions** – All excluding Greater London, Ireland, Wales and Scotland;
- **Selection by** – number of dwellings (50-500)
- **Location Types** – Edge of Town Centre, Suburban Area and Edge of Town locations only.
- **Day of Week** – Monday – Friday

5.2.2 The development will comprise of 134 dwellings, however in order to allow for any changes to the layout a development quantum of 142 dwellings has been used, divided between the eastern and western parcels as shown in Table 5-1.

Table 5-1: Development Split by Parcel

	Number of Dwellings	%
Western site	53	37%
Eastern site	89	63%
Total	**142**	**100%**

5.2.3 Table 5-2 below summarises the trip rates and subsequent trip generation for the site.

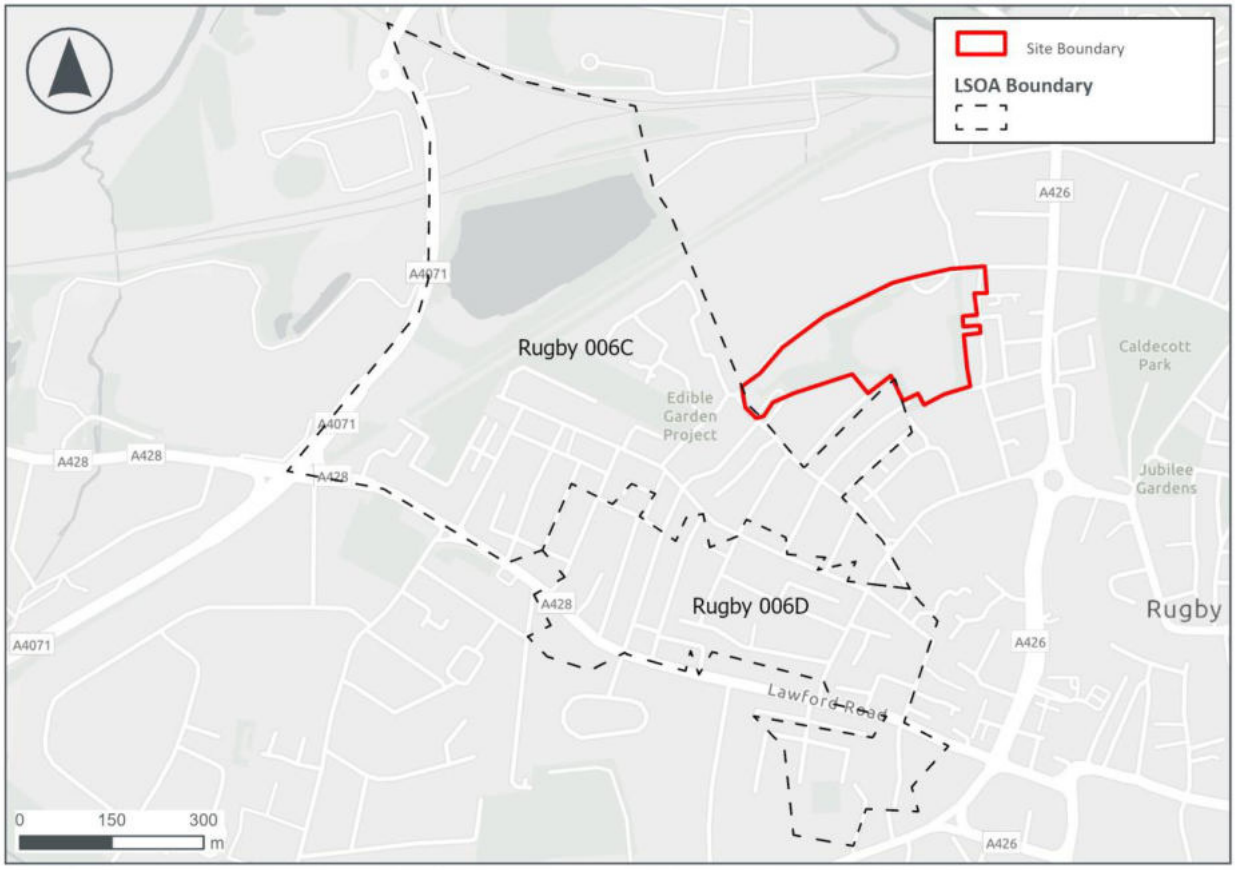
Table 5-2: Proposed Trip Generation

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
TRICS Trip Rate (per dwelling)	0.13	0.37	0.50	0.35	0.15	0.50
Trip Rate (western parcel of 53 dwellings)	7	20	27	18	8	27
Trip Rate (eastern parcel of 89 dwellings)	12	33	45	31	14	45
Total	18	53	71	49	22	71

Trip Distribution and Assignment

5.2.4 The trip distribution of trips has been informed by 2022/2023 WCC mobile network data for the Rugby 006C and 006D LSOA areas, which were agreed with WCC as being a suitable proxy for the proposed development. Distribution plots have been included in **Appendix I.** An average of the distributions for the LSOA 006C and 006D were calculated by SLR and applied to the development trip generation.

Figure 5-1: LSOA Boundaries



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5.2.5 The assignment of trips have been undertaken within the Rugby Wide Area Model.

5.3 Multi-Modal Trip Generation

Trip Generation

5.3.1 In order to understand the potential multi-modal trip generation, mode splits have been applied proportionately to the vehicle trip generation of the site. The site is located within the Rugby 003 Middle Super Output Area (MSOA). The modal split for journeys to work have been obtained from the 2011 Census in order to establish the existing commuting patterns in the local area.

Table 5-3: Multimodal Trip Generation*

Mode	Mode Share (%)	AM		PM	
		Arrive	Depart	Arrive	Depart
Train	3.3%	1	3	3	1
Bus, minibus or coach	3.7%	2	4	3	2
Taxi	0.4%	0	0	0	0
Motorcycle, scooter or moped	0.9%	0	1	1	0
Driving a car or van	54.6%	18	53	49	22
Passenger in a car or van	8.5%	3	8	8	3
Bicycle	3.7%	1	4	3	1
On foot	24.5%	8	24	22	10
Total	**100.0%**	**34**	**96**	**90**	**40**

* Mode share for Underground, metro, light rail or tram and Other method of travel to work have been omitted due to their low mode share %.

Trip Distribution and Assignment

5.3.2 The walking/cycling trips and bus trips as identified above, have been distributed across the network, between the key local destinations and assigned to each of the key routes identified in Section 3.6. National Travel Survey (NTS 2022, Table 0409) identifies that 19% of walk trips are made for education purposes, 74% for retail/leisure and 6% for employment. Of cycle trips, the NTS data identifies that 13% of trips are for education, 55% retail/leisure and 32% employment. The walk/cycle trips have been split between routes based on the journey purposes and facilities accessible on each route. The trips have been split between routes as follows:

- Route 1 – trips for an education journey purpose;
- Route 3 – trips for a retail/leisure and employment journey purpose, to be split proportionately between routes 3 & 4. Based on an indicative attraction between destinations, it is assumed that 66% of the retail/leisure and employment trips will be applied to this route.
- Route 4 – trips for a retail/leisure and employment journey purpose, to be split proportionately between routes 3 & 4. Based on an indicative attraction between destinations, it is assumed that 33% or the retail/leisure and employment trips will be applied to this route.

Table 5-4: Active Travel Route Assignment*

Route	Proportion of Walking Trips	Proportion of Cycling Trips	Proportion of Bus Trips
Route 1 – Princes Street to Northlands Primary School via Lancaster Road	19%	13%	-
Route 2 – Princes Street to bus stops on the A426	-	-	75%
Route 3 – Princes Street/Pedestrian Access to Rugby Town Centre	54%	58%	-

Route	Proportion of Walking Trips	Proportion of Cycling Trips	Proportion of Bus Trips
Route 4 – Princes Street/Pedestrian Access to medical facilities and ASDA on Corporation Street	27%	29%	25%
Total	100%	100%	100%

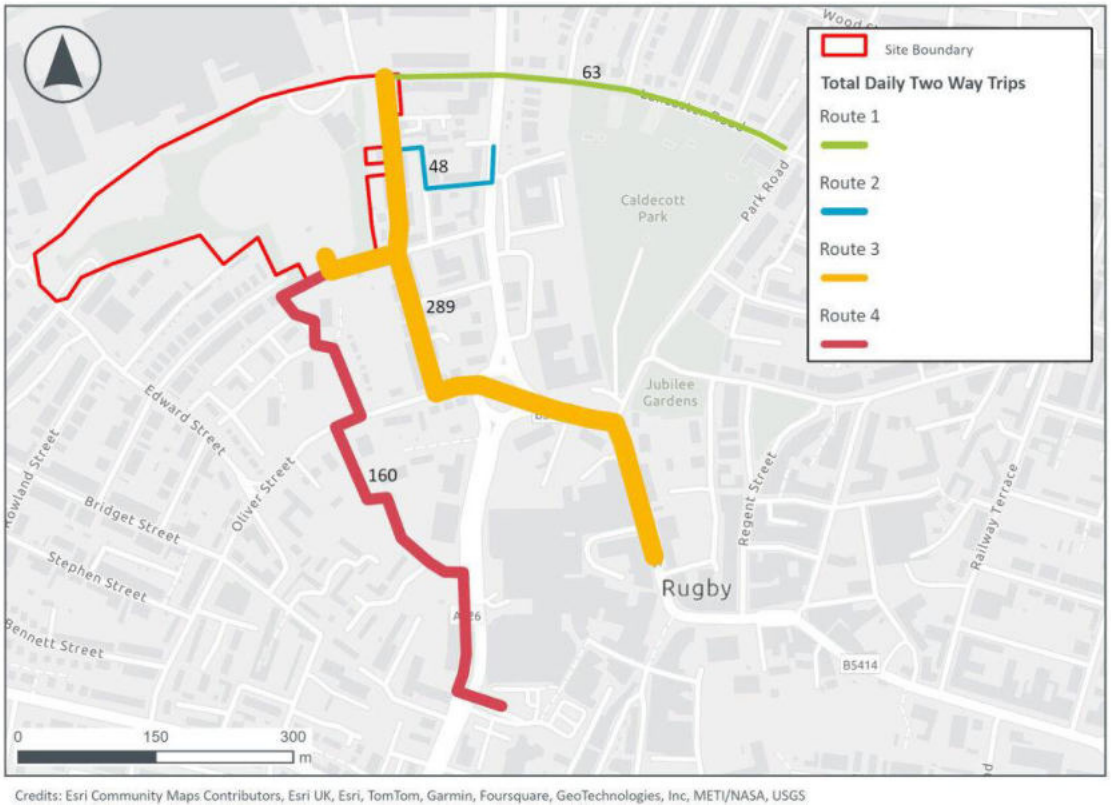
5.3.3 The resultant assignment of trips is summarised in Table 5-5 below.

Table 5-5: Pedestrian/Cycle Trips Assignment *

Route	Two-Way Pedestrian Trips			Two-Way Cycle Trips			Two-Way Bus Trips		
	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
Total	**32**	**32**	**431**	**5**	**5**	**65**	**5**	**5**	**65**
Route 1 – Princes Street to Northlands Primary School via Lancaster Road	4	4	55	1	1	8	-	-	-
Route 2 – Princes Street to bus stops on the A426	-	-	-	-	-	-	4	4	48
Route 3 – Princes Street/Pedestrian Access to Rugby Town Centre	19	19	251	3	3	38	-	-	-
Route 4 – Princes Street/Pedestrian Access to medical facilities and ASDA on Corporation Street	9	9	125	1	1	19	1	1	16

*Numbers have been rounded

Figure 5-2: Total Daily Two Way Trips



6 Strategic Modelling

6.1 Overview

6.1.1 This section provides a summary of the strategic traffic modelling that has been undertaken to assess the impact of the proposed development.

6.1.2 As agreed with WCC, strategic modelling has been undertaken by SLR to assess the impact of up to 142 dwellings using the Rugby Wide Area Model (RWA Model).

6.2 Model Overview

6.2.1 The extent of the RWA model is illustrated in Figure 6-1 and any changes made as part of this application are detailed in the subsequent sections.

Figure 6-1: RWA Model Extent and Development Location (Figure 1, SLR Assumptions Technical Note)

Reconfiguration

6.2.2 In order to understand the impact of reconfiguring the local road network to provide a one-way system, the base model has been amended and recalibrated using Manual Classified Turning Count (MCC)data. MCC data was undertaken in November 2023 at eight sites, as illustrated in Figure 6-2 below. The base model has been updated to include additional detail around Princes Street, Duke Street, King Street, Hill Street and Dale Street. Full details are included in the SLR Technical Note of Base Model Reconfiguration, **Appendix J.**

Figure 6-2: MCC Survey Locations

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Assumptions

6.2.3 The assumptions applied relating to the inclusion of the proposed development within the RWA have been summarised below. A detailed technical note, prepared by SLR, has been included in **Appendix K.**

6.2.4 Development to be served by two access points – Willans Place and Princes Street. Both configured as priority junctions.

One-way system implemented to mitigate anticipated issues with on street parking. Strategy to align with current refuse vehicle routing.

Development comprising a total of 142 dwellings, split between access points.

6.3 Model Scenarios

6.3.1 The following scenarios have been assessed:

- 2031 Reference Case;
- 2031 Reference Case + Development;
- 2031 Local Plan; and
- 2031 Local Plan + Development.

6.3.2 Table 6-1 summarises the elements included within each scenario, and further information is provided below.

Table 6-1: Scenarios - Included Elements

Element		Scenario			
		2031 Reference Case	2031 Reference Case + Development	2031 Local Plan	2031 Local Plan + Development
RWA Model – Forecast to 2031					
Local Plan Model - 2031					
Committed/Future Development	Committed Developments				
	Local Plan Sites				
Proposed Development	Residential Dwellings Travel Demand				
	One-Way System Mitigation				

Included	
Not Included	

2031 Reference Case

6.3.3 The 2031 reference case scenario uses the RWA, is forecast to a 2031 future year to tie into the current Local Plan horizon, and includes all committed developments and infrastructure proposals. This scenario represents the baseline to compare the impact of development against.

2031 Reference Case + Development

6.3.4 The travel demand associated with the proposed development and proposed one-way system to the east of the site have been added to the '2031 Reference Case' scenario to identify the impact of the development.

2031 Local Plan

6.3.5 The Reference Case testing noted above identifies site specific impacts predicted as a result of the development. It is understood that the magnitude and location of impacts may be subject to change once the development proposals are considered alongside broader Local Plan proposals. As such, a sensitivity test has been undertaken to demonstrate the impact of the development when considered alongside the broader Local Plan proposals.

6.3.6 This scenario utilises the latest WCC 2031 Local Plan model. Given that it doesn't represent the current commitments, it is proposed as a sensitivity test, for information only. This scenario forms the baseline for the sensitivity test.

2031 Local Plan + Development

6.3.7 The travel demand associated with the proposed development and proposed one-way system to the east of the site have been added to the '2031 Local Plan' scenario to identify the impact of the development.

6.4 Model Results

Overview

6.4.1 The impact of the proposed development has been analysed against the 2031 Reference Case and 2031 Local Plan scenarios as baselines using a variety of model outputs for the three-hour AM and PM modelled periods (07:00-10:00 and 16:00-19:00) and AM and PM peak periods (08:00-09:00 and 17:00-18:00) where relevant. A summary of the following elements is given below, and full Results Summary technical note, prepared by SLR is provided in **Appendix L.**

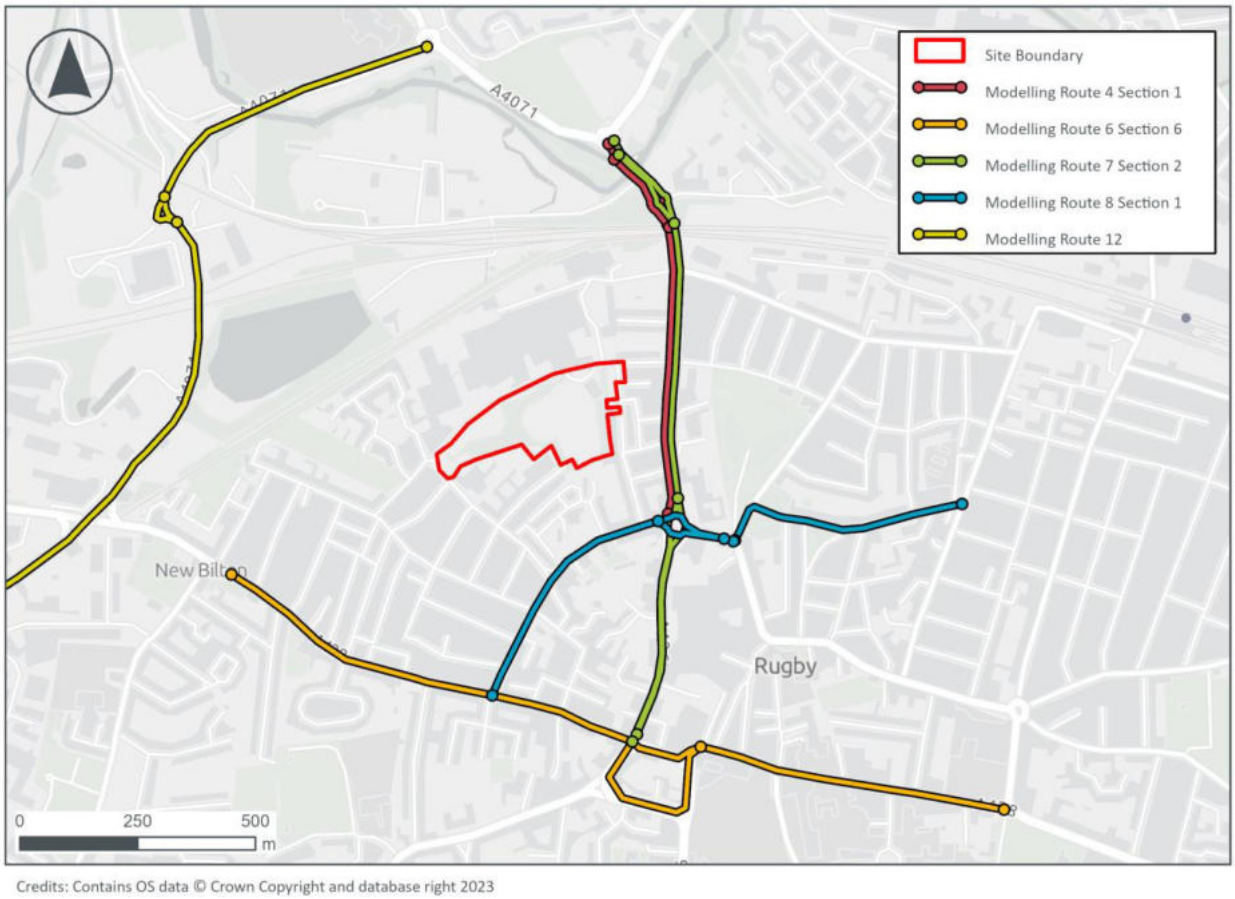
Overall Network Mean Delay(s);

- Average Delay (seconds) on selected routes (see Appendix C for Route List Diagrams). Those most pertinent to the proposed development site are listed below and shown in Figure 6-3:
  - Route 6 Section 2 (Lawford Road between A426 and A4071)
  - Route 4 Section 1 (A426 between Oliver Street roundabout and Newbould Road)
  - Route 7 Section 2 (A426 between the gyratory and Newbould Road)
  - Route 8 Section 1 (Oliver Street)

- Route 12 (A4071)

- Average Hourly Maximum Queue Length (vehicles) at the following junctions:
  - A426/Oliver Street/Evreux Way Roundabout

Figure 6-3: Modelling Routes



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Network Wide Delay

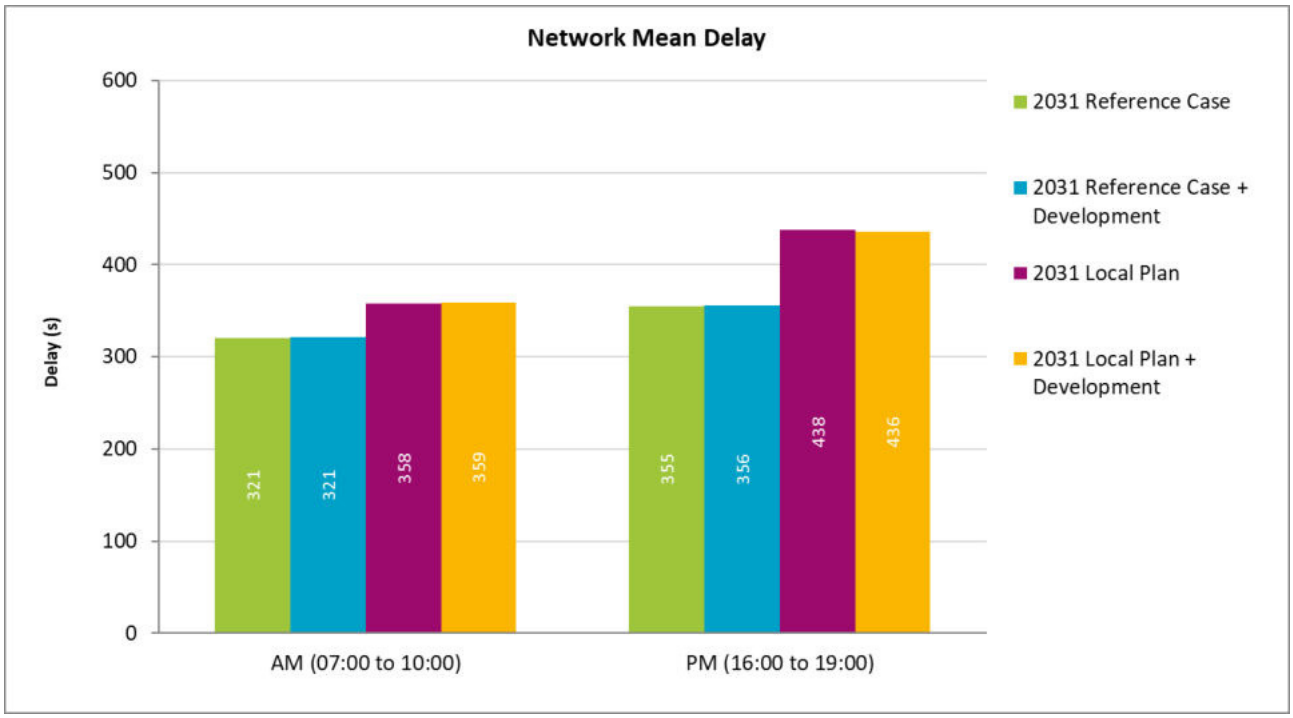
6.4.2 A comparison of each scenario has been undertaken to determine the impact of the proposed development on the wider network. The mean delay, mean speed and total completed trips across the network are summarised in Table 6-2 and Figure 6-4 below.

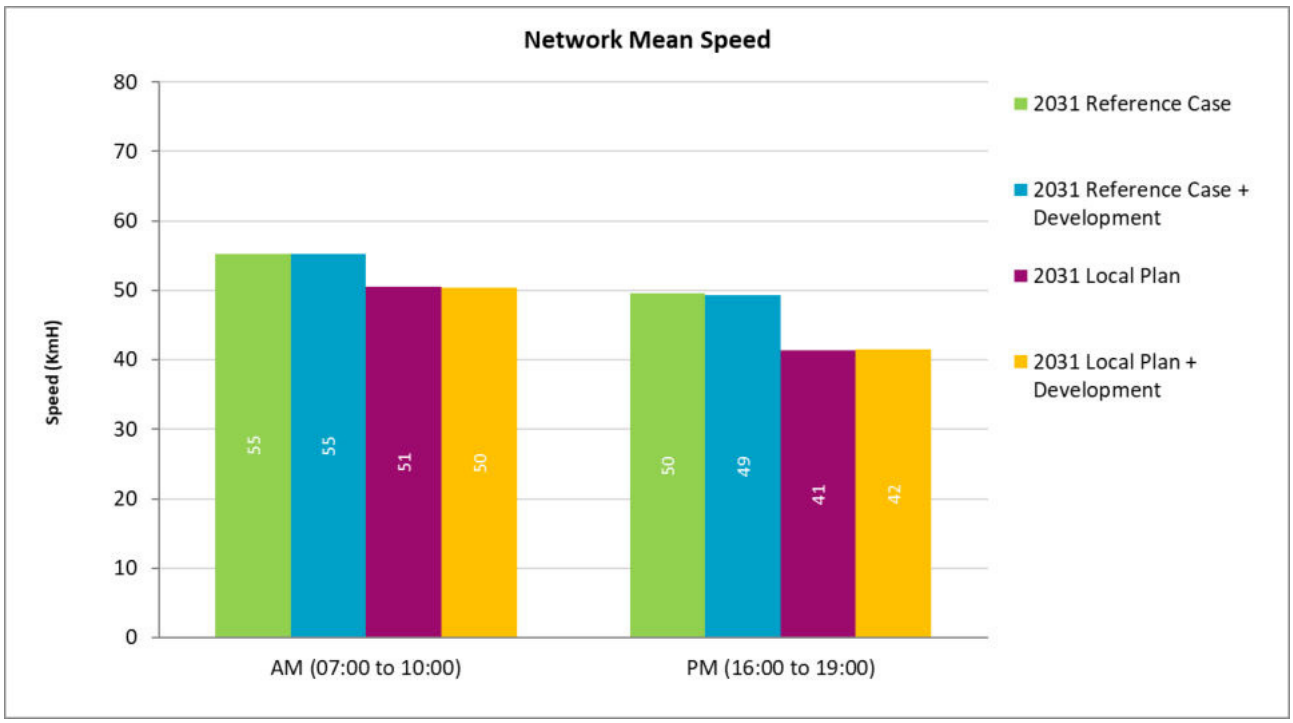
Table 6-2: Wider Network Results

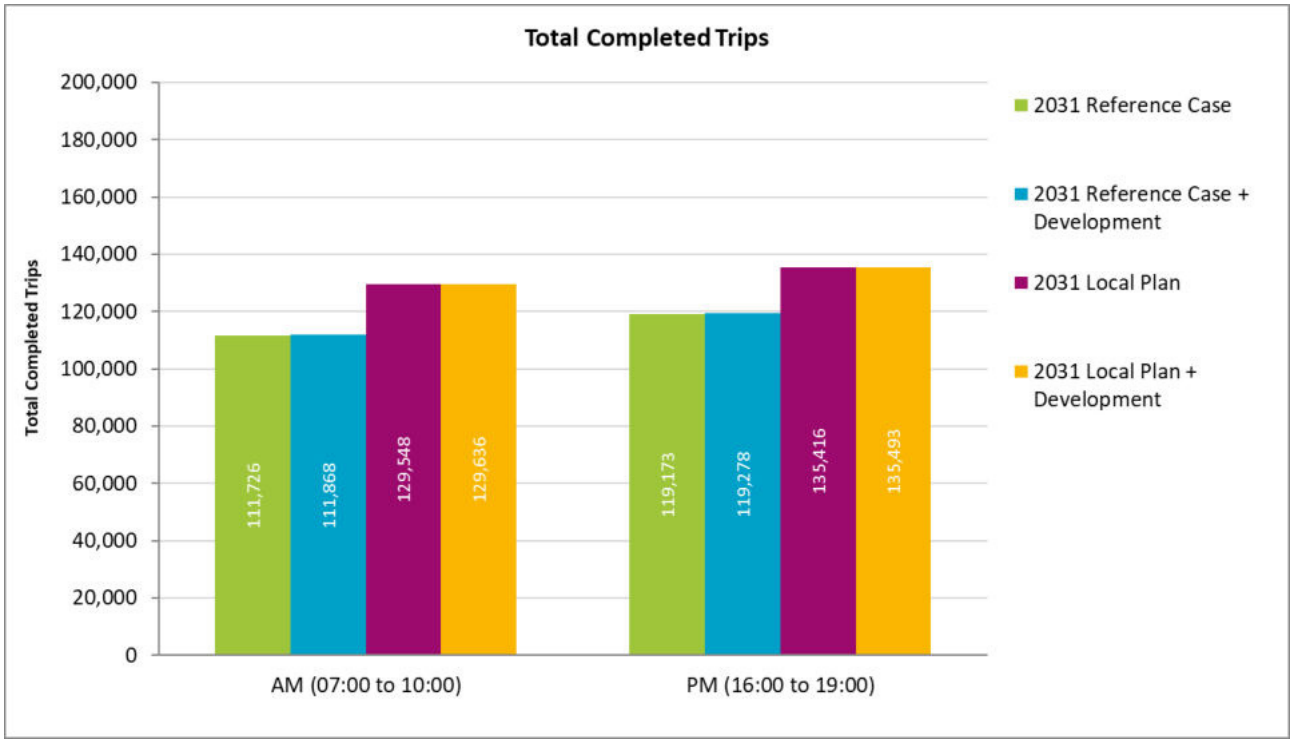
	Network Mean Delay (s)		Network Mean Speed (KmH)		Total Completed Trips	
	AM (0700 to 1000)	PM (1600 to 1900)	AM (0700 to 1000)	PM (1600 to 1900)	AM (0700 to 1000)	PM (1600 to 1900)
2031 Reference Case	321	355	55	50	111726	119173
2031 Reference Case + Development	321	356	55	49	111868	119278
2031 Local Plan	358	438	51	41	129548	135416

2031 Local Plan + Development	359	436	50	42	129636	135493

Figure 6-4: Overall Network Statistics







6.4.3 When compared to the Reference Case, the proposed development results in a negligible increase in delay (no increase in the AM peak, and one second in the PM peak) and a negligible decrease in network speed (no decrease in the AM peak, one km per hour in the PM peak).

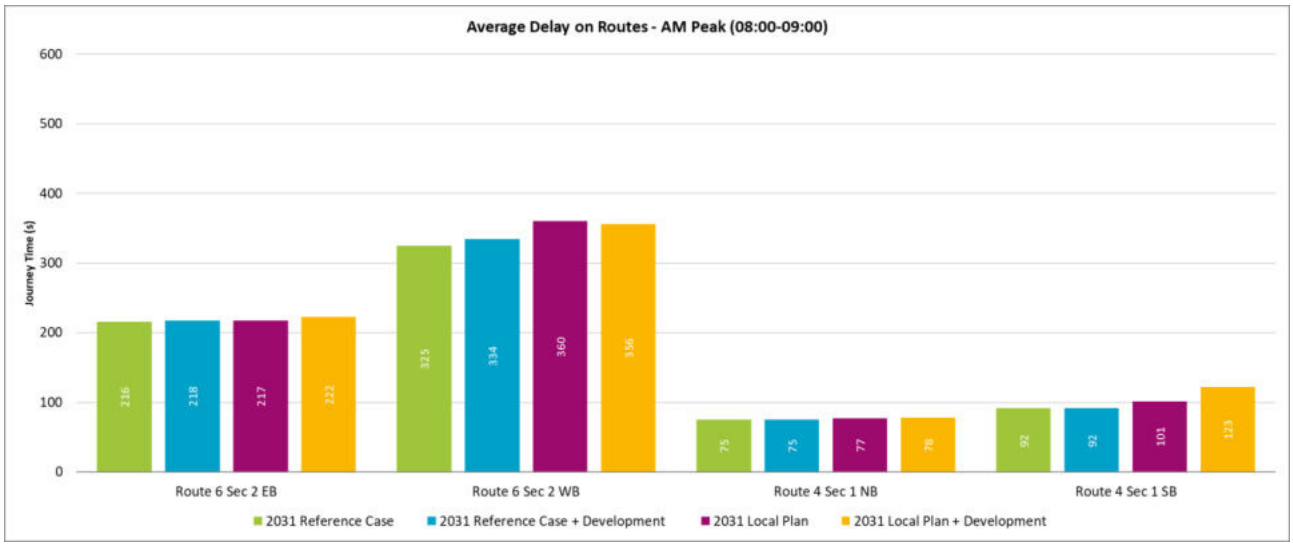
6.4.4 When compared to the Local Plan scenario, the proposed development again results in a negligible impact on delay and network speed.

Route Delay

6.4.5 Further analysis has been undertaken by comparing the average delay for the following routes, for the AM and PM peak periods (08:00-09:00 and 17:00-18:00).

- Route 6 Section 2 (Lawford Road between A426 and A4071)
- Route 4 Section 1 (A426 between Oliver Street roundabout and Newbould Road)
- Route 7 Section 2 (A426 between the gyratory and Newbould Road)
- Route 8 Section 1 (Oliver Street)
- Route 12 (A4071)

Figure 6-5: Average Delay on Routes – AM Peak



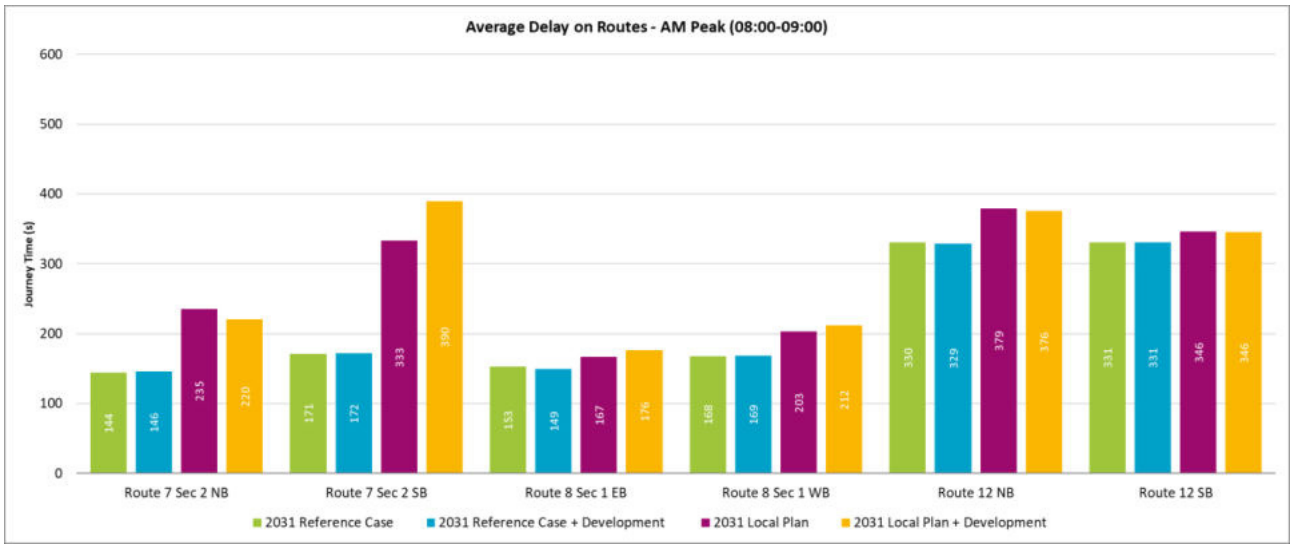
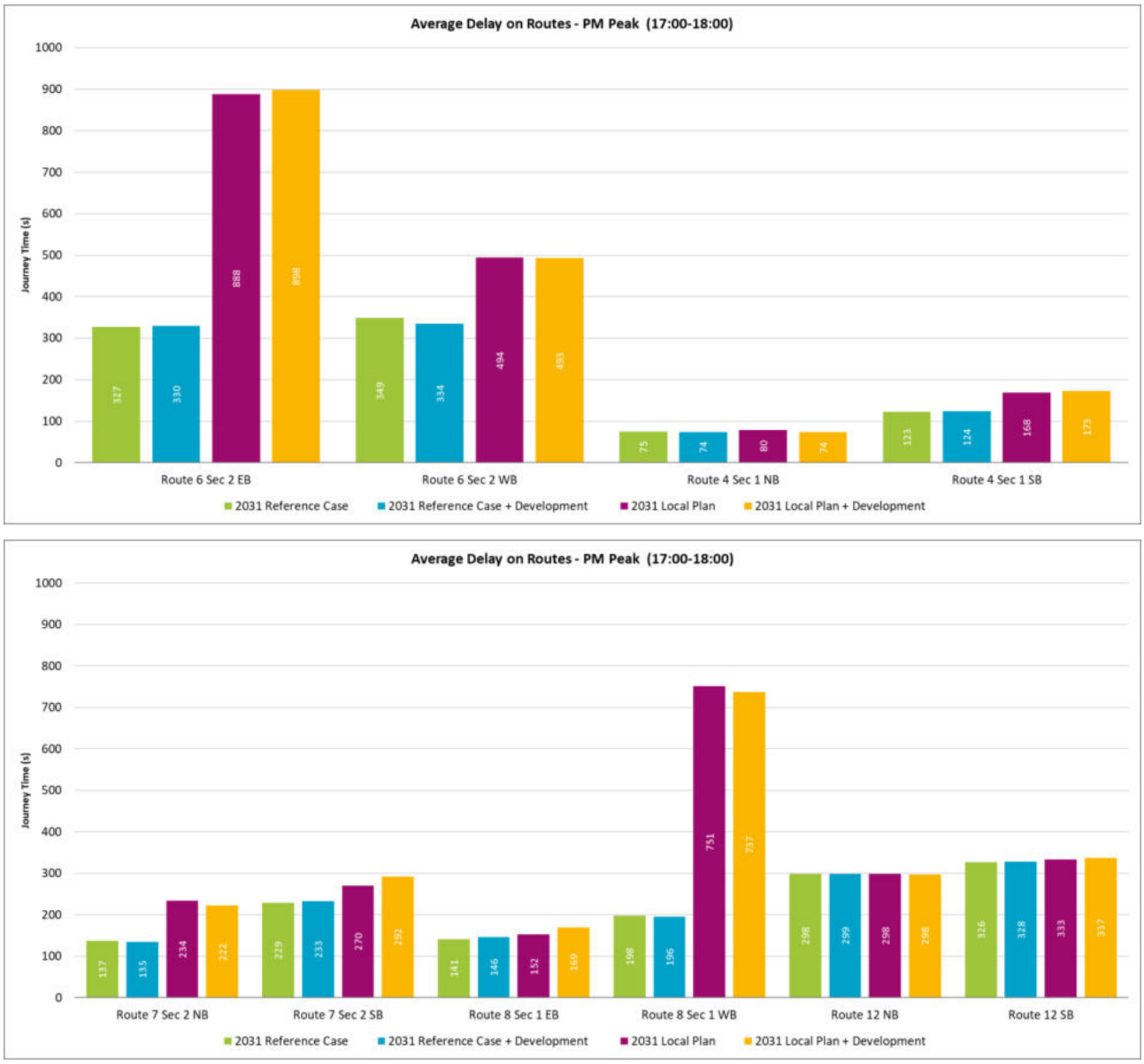


Figure 6-6: Average Delay on Routes – PM Peak



6.4.6 The results indicate that the average delay across specific routes, changes as follows:

When compared to the Reference Case:

- AM peak:
  - A negligible increase in delay of between one and nine seconds on Route 6 Section 2 (EB & WB), Route 7 Section 2 (EB & WB), Route 8 Section 1 (WB).
  - No change in delay on Route 4 Section 1 (EB & WB) and Route 12 (SB).
  - A negligible reduction in delay of between two and four seconds on Route 8 Section 1 (EB) and Route 12 (NB).

- PM peak:
  - A negligible increase in delay of between one and five seconds on Route 6 Section 2 (EB), Route 4 Section 1 (SB), Route 7 Section 2 (SB), Route 8 Section 1 (EB) and Route 12.
  - A negligible reduction in delay of between one and 14 seconds on Route 6 Section 2 (WB), Route 4 Section 1 (NB), Route 7 Section 2 (NB) and Route 8 Section 1 (WB).

When compared to the Local Plan Reference Case:

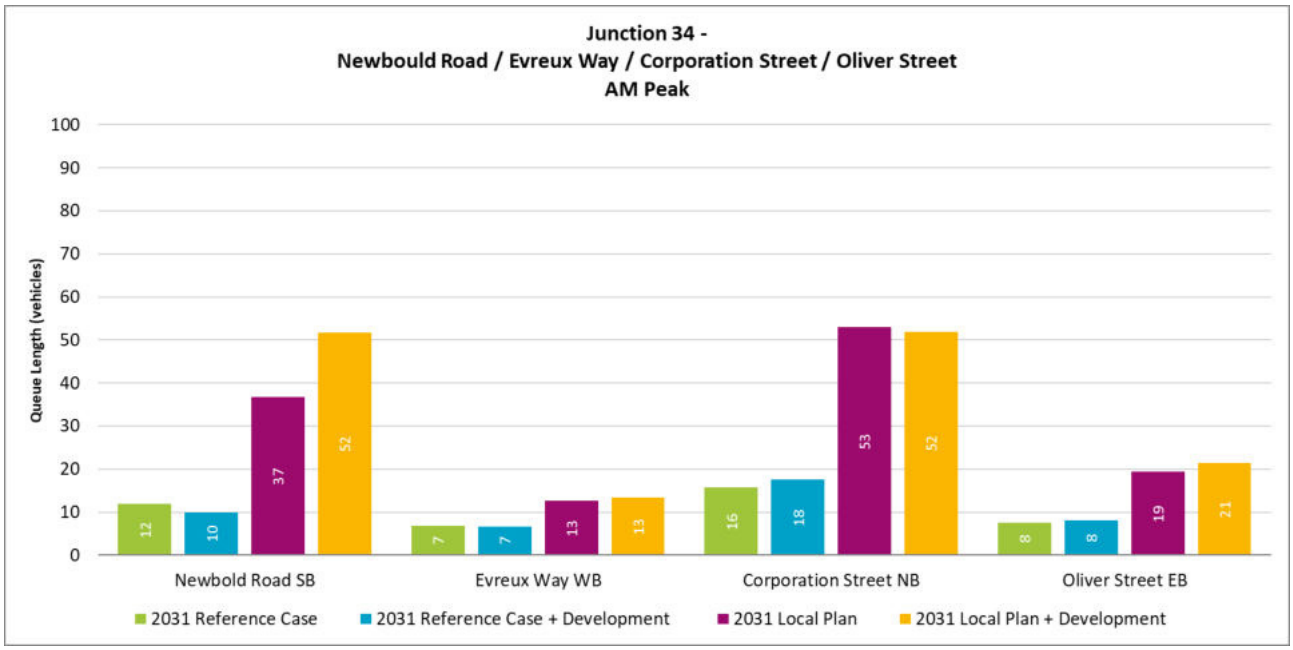
- AM peak:
  - A negligible increase in delay of between one and nine seconds on Route 6 Section 2 (EB), Route 8 Section 1 (EB & WB).
  - A minor increase in delay of between 21 and 57 seconds on Route 4 Section 1 (SB) and Route 7 Section 2 (SB).
  - No change in delay on Route 4 Section 1 (NB) and Route 12 (SB).
  - A minor reduction in delay of between three and 15 seconds on Route 6 Section 2 (WB), Route 7 Section 2 (NB) and Route 12 (NB).
- PM peak:
  - A negligible increase in delay of between three and ten seconds on Route 6 Section 2 (EB), Route 4 Section 1 (SB) and Route 12 (SB).
  - A minor increase in delay of between 17 and 22 seconds on Route 7 Section 2 (SB) and Route 8 Section 1 (EB).
  - No change in delay on Route 12 (NB).
  - A minor reduction in delay of between two and 15 seconds on Route 6 Section 2 (WB), Route 4 Section 1 (NB), Route 7 Section 2 (NB) and Route 8 Section 1 (WB).

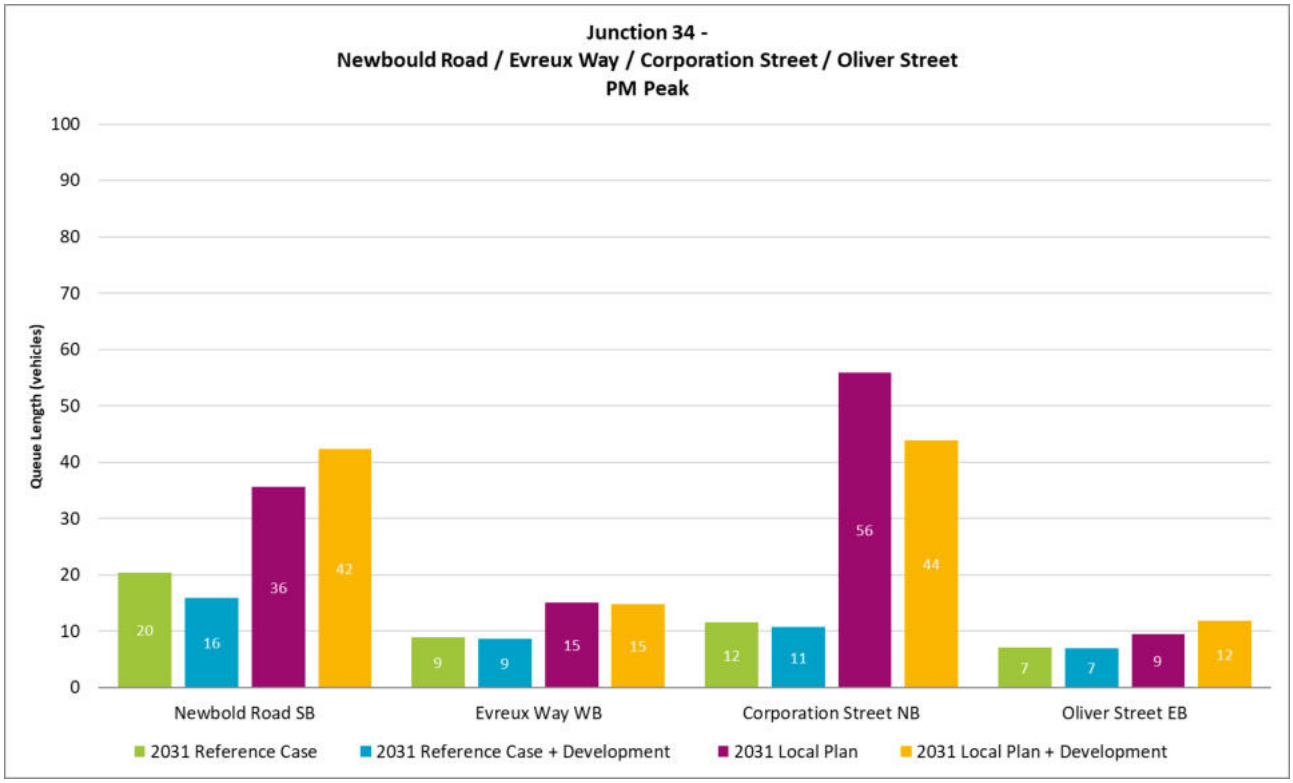
6.4.7 Overall, it is considered that the development will have a negligible impact on the delay of key routes in the vicinity of the site.

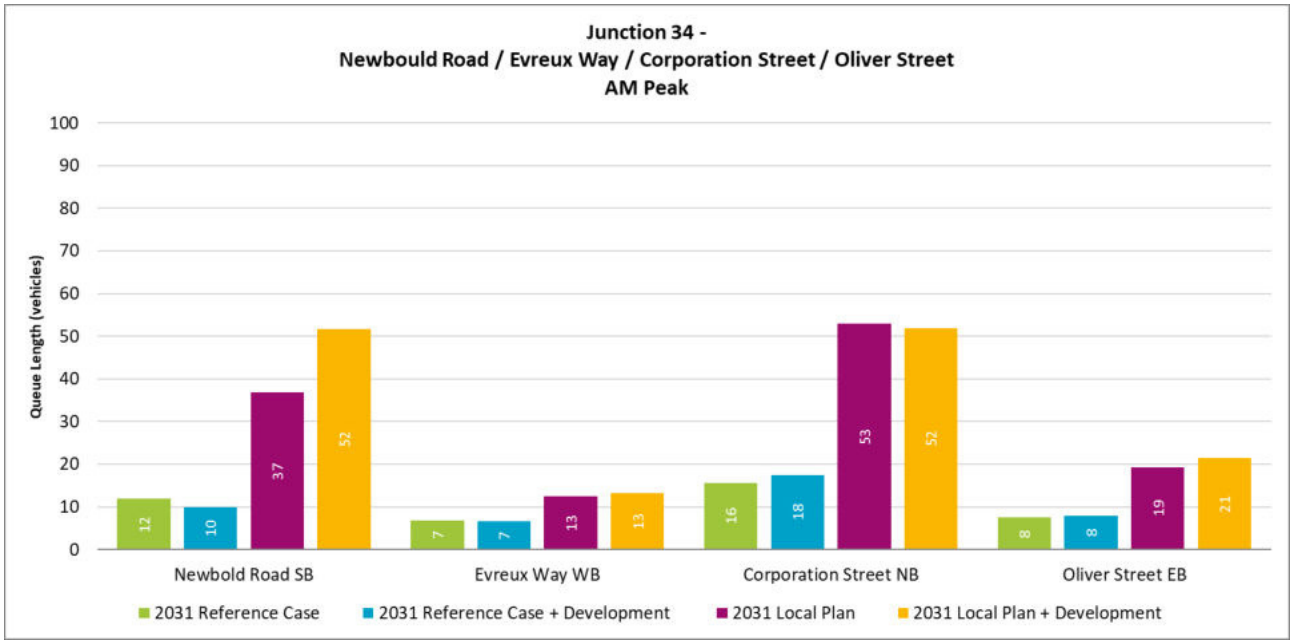
Queuing

6.4.8 The level of queuing at the A426/Oliver Street/Evreux Way Roundabout has been assessed for the AM (08:00-09:00) and PM (17:00-18:00) peak periods. Figure 6-7 illustrates the average maximum queue length at the junction.

Figure 6-7: Average Maximum Queue Lengths at A426/Oliver Street/Evreux Way Roundabout







6.4.9 The results indicate that there is no increase in total queuing at the junction in either the AM or PM peak when compared to the reference case. While the local plan scenario is provided as a sensitivity test, for information only, the results identify an increase of 17 vehicles queuing at the junction in the AM peak, and no increase in the PM peak.

6.4.10 On this basis, the proposed development is considered to have a negligible impact on the operation of the junction.

6.5 Summary

6.5.1 Strategic modelling has been undertaken for a 2031 scenario. An additional local plan scenario has been included as a sensitivity test, with results provided for information only. Analysis of the 2031 scenario indicates that:

- The proposed development has a negligible impact on delay and speed across the network;
- There is a negligible impact on delay on key routes in the vicinity of the site and towards the strategic road network; and
- There is a negligible impact in the reference case (core) scenario on the level of queuing at the A426/Oliver Street/Evreux Way roundabout.

7 Summary and Conclusion

7.1 Summary

7.1.1 PJA has been appointed by St. Modwen Homes to prepare a Transport Assessment in relation to full planning application for the residential development of 134 dwellings on Land North of Rounds Gardens, Rugby.

7.1.2 The proposed development will comprise two parcels, each with their own vehicle access point. Vehicle access will be sought as follows:

- East Parcel – access via an extension to Princes Street – serving 85 properties; and
- West Parcel – access via an extension to Willans Place into the site – serving 49 properties.

7.1.3 Pedestrian and cycle access will be provided throughout the site with a connection between the two parcels.

7.1.4 Other key elements of this report are summarised as follows:

- There are no existing road safety concerns which would need to be addressed by development proposals;
- The site is located within walking distance of a range of local facilities within surrounding local areas and Rugby Town Centre;
- These are accessible via key Active Travel Routes which are facilitated by a network of walking and cycling infrastructure;
- There are frequent bus services providing connection from the site to Rugby town Centre, Coventry, Leicester and surrounding urban areas. Rugby railway station has frequent services to Coventry, Birmingham, London, the North-West and Scotland;
- Parking provision on site will be provided in accordance with the standards;
- The development is anticipated to generate 71 two-way vehicle trips in the AM and PM peak periods, which have been assigned onto the highway network using 2022/2023 mobile network data provided by Warwickshire County Council;
- The impact of the development has been assessed using the Rugby Wide Area Model. The results indicate that the development will have a negligible impact on the operation of the highway network.

7.2 Conclusion

7.2.1 Paragraph 114 of the NPPF states that in assessing applications for development, it should be ensured that:

- Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- Safe and suitable access to the site can be achieved for all users; and
- 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.

7.2.2 Paragraph 115 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."

7.2.3 This report has demonstrated that the proposed development meets the above criteria and that the residual impacts of development are not severe. It is therefore concluded that there is no evidence that the proposed development should be prevented or refused on highways grounds.

Appendix A Existing TROs

CDM Note

These drawings have been produced with reference to the CDM Regulations 2015.
Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9.

Notes

1. Permission is granted to scale from this drawing for the purposes of Local Planning Authority approval only. For all other purposes do not scale from this drawing.
2. All dimensions in metres unless stated otherwise.
3. This drawing is based on topographical survey ref: 2807 received by Axis Surveys, dated July 2013 revision A.
   OS background is shown indicatively to cover un-surveyed areas in the topographical survey provided.
4. This drawing is not to be reproduced in any part or form without consent of PJA Civil Engineering Ltd. All copyright reserved.
5. The design details presented must be reviewed in conjunction with the wider site information and site constraints.
6. No liability will be accepted by PJA for negligence or otherwise in relation to the accuracy of the topographical survey and OS mapping which have been produced and received by Third parties and it's contents.
   PJA have not received the original data files.
7. Reproduction from the Ordnance Survey map with permission of the controller of His Majesty's Stationary Office.
8. The purpose of this drawing is to show the existing TRO markings within the surrounding areas of the proposed development.
   The drawing has been produced for information to support the planning application.
9. The design is Preliminary and subject to discussions with the local highway authorities (Warwickshire County Council). The drawing should not be used for tendering or construction purposes and requires further development as part of the pre-planning application and understanding of highway authority preferences, which vary between authority.
10. Site specific detailed surveys need to be carried out to confirm design information, which may impact the outline design proposals. These include, but are not limited to, ground conditions, groundwater levels, utilities, ecology, tree protection etc. Impacts related to other civils features have not been detailed and are subject to detailed design.
11. Any existing details which are shown on this drawing are for guidance only and are to be checked on site.
12. The proposals outlined are subject to Road Safety Audits.
13. The vehicle turning manoeuvres are presented on the supporting vehicle swept paths plan with reference 05554-CI-B-0010-11.
14. Reference of source data:
    - Topographical survey (2807) received by Axis Surveys, dated July 2013 rev A.
    - Planning application boundary (9865-SK04a Land at Newbold Road Rugby) received by St Modwen, dated March 21 rev a.
    - Masterplan (10689-2200 R9112-RLA-23-XX-DR-A-2200 P09 Proposed Site Plan) received on 8th January 2023.
    - Highway boundary ref:(Junction of Edward St - Princes St) received on 16th January 2024
15. The design criteria and philosophy is subject to local authority agreement.
16. Existing traffic regulation orders are as per Warwickshire County Council TRO map (https://maps.warwickshire.gov.uk/tro/), accessed on 12/01/2024.

Key

- At any time — TS1
- Mon - Sat 8 am - 6 pm — TS2
- P Mon - Sat 8 am - 8 pm, Permit holders R1 or 1 hour No return within 2 hours — TS3
- No stopping 7 am - 7 pm except buses — TS4
- Highway Boundary

Location Plan (1:2500)

Rev	Date	Revision Note	Drw	Chk	App
P03	23/01/2024	Notes updated	JAL	AN	JW
P02	17/01/2024	Highway boundary added	JAL	AN	JW
P01	12/01/2024	FIRST ISSUE	AP	AN	JW

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Client
St Modwen Homes

Project
Land North of Rounds Gardens Rugby

Title
Highway Improvement Works East Existing Traffic Regulation Orders

Drawing Issue Status
For Information

PJA Ref	Scale @ A1	Date
05554/F	1:500	12/01/2024

Drawing No.
05554-CI-F-0001

Revision
P03

Primary Contact
joe.wooldridge@pja.co.uk

File name C:\PJA\PHIL JONES ASSOCIATES\SHAREDDATA - 05554 NEWBOLD RUGBY\05554-B ENG\2 - DESIGN\DRAWINGS\CURRENT\05554-CI-F-0001 TRO EXISTING.DWG, printed on 23/01/2024 08:55:34, by Jack Lynk