Client:

Richborough

Project:

Land east of Rugby Road
Clifton upon Dunsmore

Project No:

T25501

Report Title:

Transport Assessment

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Rev:	A
Date:	13/06/25

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1.0 Introduction

Background

1.1 Hub Transport Planning Ltd has been commissioned by Richborough to provide transport advice for a proposed residential development on land east of Rugby Road, Clifton upon Dunsmore, Rugby.

1.2 The site location is shown in **Figure 1.1**.

1.3 This Transport Assessment (TA) has been prepared to support an outline planning application for up to 160 residential dwellings, with all matters reserved except for access.

Structure of the Report

1.4 This report is intended to present and assess the relevant highway elements of the proposed development to Warwickshire County Council (WCC), as the Local Highway Authority, with an assessment of the potential level of impact on the local highway network.

1.5 Following this introduction, the report is set out as follows:

- Section 2.0 – Planning Policy and Guidance;
- Section 3.0 – Planning Context;
- Section 4.0 – Baseline Conditions;
- Section 5.0 – Development Proposals;
- Section 6.0 – Trip Generation, Distribution and Assignment;
- Section 7.0 – Traffic Impact;
- Section 8.0 – Summary and Conclusion.

Limitations of the Report

1.6 This report has been undertaken at the request of Richborough, thus should not be entrusted to any third party without written permission from Hub Transport Planning Ltd. However, should any information contained within this report be used by any unauthorised third party, it is done so entirely at their own risk and shall not be the responsibility of Hub Transport Planning Ltd.

1.7 This report has been compiled using data from a number of external sources (such as TRICS, traffic count data and public transport information); these sources are considered to be trustworthy and therefore the data provided is considered to be accurate and relevant at the time of preparing this report.

2.0 Planning Context

2.1 Hub produced a Transport Assessment Scoping Report (TASR) for WCC in June 2021, outlining the principles of the proposed development and the proposed methodology for assessment.

2.2 WCC provided a response to the TASR on 31/06/2021 (Document Ref: R460). The key comments are summarised below with the full response included at **Appendix A**.

- Requested that all trip rates, trip generation, distribution and assignment is undertaken in accordance with the WCC Modelling Protocol. All junction assessments should be informed by assignment of trips within the Rugby Wide Area (RWA) S-Paramics model.
- Concerns regarding the accessibility of the site by walking and cycling given its proximity above a 2.0km walking distance to some local facilities, existing obstruction of footways on Rugby Road to the south of the site, variable footway widths (especially at the locations of the disused railway bridge and canal bridge), and lack of crossing points.
- The applicant should investigate the potential for further cycle improvements off the highway should land ownership allow or should the applicant be able to negotiate an agreement with the landowner(s).
    - Short section of path from the south of the new development onto the Houlton Way cycle track, to enable safe access, avoiding the narrow footways, pavement parking and traffic on Rugby Road.
    - Short section of path from the north of the new development to safely connect with Shuttleworth Road / South Road (alternatively a longer link across the recreation ground to Main Street would link to the local primary school).
- Improvements to the existing eastbound and westbound bus stops approx. 100m to the east of the proposed site access junction along Rugby Road (either through S278 or S106, or both) and S106 contributions to improved bus services could be requested.
- Concerns relating to the proposed access arrangements, including:
    - Minimum clearance of 15.0 metres should be provided between the near side of a vehicular access onto the major road and the Give-Way line at an adjacent junction with a minor road/side road.
    - Concerns that vehicles may not be able to adequately indicate their intention to perform a right-turn manoeuvre immediately after turning into the site access road from Rugby Road.
    - Concern that refuse vehicles egressing Newall Close will not be able to straighten up on the site access road before the junction stop line with Rugby Road.
    - WCC advised that Newall Close should be widened to a minimum width of 5.0m following a swept path analysis.

2.3 In response to WCC on the modelling methodology, Hub produced a Modelling Briefing Note outlining the intention to use the RWA S-Paramics model. The methodology presented within the Note was agreed with by WCC. The Modelling Briefing Note and WCC response is included at **Appendix B** and **Appendix C**, respectively.

2.4 It should be noted that a Stage 1 Road Safety Audit (RSA) was undertaken following WCC's request in their TASR response which is included at **Appendix D**. Following the RSA, amendments have been made to the site access arrangement which addresses both recommendations from the RSA, and comments from WCC.

2.5 The amended site access arrangement is presented in **Drawing T21542.001 rev C**.

3.0 Planning Policy and Guidance

Introduction

3.1 A review of key national, regional and local policies that are relevant to the proposed development has been undertaken and is presented in this chapter.

National Planning Policy Framework

3.2 The National Planning Policy Framework (NPPF), published by the Ministry of Housing, Communities and Local Government, and most recently updated in December 2024, is the statutory national planning document for England.

3.3 The paragraphs that are most applicable to the proposed development are 109, 112, 115, 117 and 118. These are summarised in **Table 1**.

Table 1: Relevant NPPF Policies

Paragraph Ref	Description
109	Transport Issues should be considered from the earliest stages of plan-making and development proposals, so that: • the potential impacts of development on transport networks can be addressed; • opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to scale, location or density of development that can be accommodated; • opportunities to promote walking, cycling and public transport use are identified and pursued; • the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigation of any adverse effects, and for net environmental gains; and • patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.
112	If setting local parking standards for residential and non-residential development, policies should consider: • the accessibility of the development; • the type, mix and use of development; • the availability of and opportunities for public transport; • local car ownership levels; and • the need to ensure an adequate provision of spaces for changing plug-in and other ultra-low emission vehicles.
115	In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that: • sustainable transport modes are prioritised and account for the vision of the site, type of development and its location; • safe and suitable access to the site can be achieved for all users; • the design of streets, parking areas, other transport elements and the content of associated standards reflects the current national guidance including, the National Design Guide and the National Model Design Code; 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.

Paragraph Ref	Description
116	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.
117	Within this context [related to Paragraph 116], applications for developments should: • give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitate access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use; • address the needs of people with disabilities and reduced mobility in relation to all modes of transport; • create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards; • allow for the efficient delivery of goods, and access by service and emergency vehicles; and • be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.
118	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 proposal can be assessed.

Warwickshire Local Transport Plan 4 (LTP4)

3.4 WCC's LTP4, adopted in July 2023, sets out the Council's overall transport strategy and policies of how the transport network will be managed and improved.

3.5 The LTP4 document focuses on creating a sustainable transport network and emphasises trips to be made by more sustainable modes such as active travel and public transport.

3.6 The transportation and highway policies that are most applicable to the proposed development are outlined in **Table 2**.

Table 2: Relevant Warwickshire County Council LTP4 Policies

Section	Description
Vision	The vision for LTP4 is to support the priority outcomes of WCC, as outlined within their Council Plan. These included: Following stakeholder and public engagement, the four key themes have been used to guide policies in LTP4. These are: • Environment: Travel Choices which contribute to Carbon Net Zero and leave no negative impacts on the environment. • Wellbeing: A range of transport options which provide safety comfort and health for users and those affected by transport. • Place: Urban and rural areas, and the connections between them, where transport choices work sustainably with the local environment. • Economy: A modern, flexible economy which is supported and strengthened by transport options. To address the key themes, LTP4 presents a travel hierarchy to deliver sustainable travel through Warwickshire without impacting on economic vitality. These are listed in order of priority – Active Travel, Public Transport and Private Vehicles.
Active Travel Strategy	Policy Position AT1 – Improve accessibility and attractiveness of active travel options

Section	Description
	• "*The council will seek to promote the attractiveness of active travel options by improving the facilities that enable and increase access to them. We will do this through our own interventions and by influencing the planning and development process*."
Public Transport Strategy	Policy Position PT4 – New developments and connectivity to public transport services • "*WCC will work with colleagues in the local district and borough planning departments to ensure that new development maximise their opportunities to provide excellent access to the public transport network, taking into account potential demand from new development*. • *"Where possible and appropriate we will secure developer funding towards the cost of public transport improvements."*
Motor Vehicle	Policy Position MV3 – Maximise funding opportunities • "*WCC will seek to maximise developer contributions, where appropriate, to fund sustainable improvements both to the network itself and to provide alternative transport options to car use in order to deal with the impact of developments*."
Managing Space	Policy Position MS2 – Travel options which are accessible to all • *"In its role as Highway Authority, WCC will strive to ensure that all developments are accessible, that designs and layouts contribute to the local area and that improved connectivity to footways, cycleways and public transport are incorporated*." Policy Positions MS4 – Robust data-led develop making in assessing new developments • "*We will take evidence-based decisions which may include requirements from developers for transport assessments, travel plans, modelling assessments and other appropriate data. These decisions require specific technical data, such as the use of micro-simulation modelling techniques to support Transport Assessments, where appropriate, in accordance with our Modelling Protocol*." Policy Position MS5 – Construction to best available standards • *"We will ensure that new highways, including those built by developers, are constructed to the best available standards. Developers will be expected to follow the Warwickshire Design Guide, which provides detail of build quality*." Policy Position MS6 – Influencing Planning Authorities and Developers • *"...we are consulted on most development proposals and will use these opportunities to influence and support development in ways which provide better, safer, more sustainable transport options. We will use this influence to maintain efficient travel on major roads in the county.* • *"Using planning law, we will create binding legal agreements that require developers to make contributions with the aim of improving travel infrastructure in the county."*
Safer Travel	Policy Position ST4 – Road engineering design to align with appropriate quality standards • *"Our Engineering Design Services (EDS) teams will continue to ensure that all new road construction in Warwickshire and improvements to existing road layouts will be carried out in accordance with the latest, most appropriate British construction and road design standards.* • *"EDS will engage with the road safety auditing process as part of the initial design and in the pre- and post-construction stages of projects. This will ensure that safety remains at the forefront of all design decisions."*

Warwickshire Design Guide

3.7 The Warwickshire Design Guide is the leading guidance document for highways design in Warwickshire for new developments. The design guide has been prepared to guide developers and designers when planning and delivering highway infrastructure within Warwickshire.

3.8 The validation requirements set out within 'Part 1 – Pre-application Development Management' states that a Transport Assessment will be required to accompany a planning application for developments that have significant transport implications and will require the use of microsimulation modelling.

3.9 Whilst there is no further definition of 'significant' within the design guide, and using an element of professional judgement, a Transport Assessment has been considered appropriate to support the proposed number of dwellings.

3.10 Further use of the design guide will be undertaken as the proposals evolve to the detailed planning stage. The final proposals will be designed in accordance with the technical specifications presented within the design guide including, but not limited to, internal road layout, parking arrangements, and servicing and delivery provision.

Rugby Local Cycling and Walking Infrastructure Plan

3.11 The Warwickshire Local Cycling and Walking Infrastructure Plan (LCWIP), approved in 2024, is the long term, county wide plan for walking, wheeling and cycling route investment.

3.12 The aim of the Warwickshire LCWIP is:

"To create a safe and attractive environment for walking, wheeling and cycling, so that they become the natural choices for shorter journeys and outdoor recreation in Warwickshire".

3.13 The LCWIP provides individual reports for each of the five districts and boroughs within Warwickshire which includes individual network plans and schemes. This includes an individual plan for Rugby borough.

3.14 The LCWIP has identified the following potential cycling/walking routes within the vicinity of the site:

- R05: Butlers Leap (Footway/cycleway adjacent to road);
- R13: Clifton Road (Murray Road – Houlton Way) – Footway/cycleway adjacent to road and crossing; and,
- R47: Park Connector (Coton Park – Clifton) – Path/cycle track through open space.

3.15 This report considers the Rugby LCWIP routes and their potential use by future residents of the proposed development.

Rugby Local Plan

3.16 The Rugby Borough Council (RBC) Local Plan, adopted in June 2019, sets out the Council's policies and proposals to support the development of the borough through to 2031.

3.17 The purpose of the Local Plan is to describe the type of place Rugby Borough is today, and the type of place they aspire to be in the future. The document provides a framework that will manage change and growth until 2031.

3.18 The key policies pertaining to transportation and highways are summarised in **Table 3**.

Table 3: Relevant Rugby Local Plan Policies

Policy	Description
Policy D1: Transport	Policy D1 states that all large-scale developments that result in signification traffic movements should be accompanied by a Transport Assessment as part of the planning application, and a Travel Plan where necessary. Specifically, they 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 heavy goods vehicles accessing the site, including during construction*" Smaller scale development must be accompanied by a Transport Statement which should address: • "*Opportunities for sustainable transport to serve the proposed development;* • *Whether safe and sustainable access to the site can be achieved; and* • *Whether improvements can be undertaken that cost effectively mitigate the impacts of the development*"
Policy D2: Parking Facilities	Policy D2 states that planning permission will only be granted for developments that incorporate adequate and satisfactory parking facilities for all vehicles, including cars, motorcycles and for people with disabilities, in line with the Borough Council's Standards. In addition, provision should be made for electric and/or hybrid vehicle charging points as part of all new development.
Policy D3: Infrastructure and Implementation	Policy D3 states that new development will be dependent on sufficient capacity being available in existing infrastructure, or measures being proposed which mitigate the development's impact. Additionally, developer contributions may be sought to fund any new infrastructure required to mitigate development impacts.

Parking Standards

3.19 WCC state within their design guide (Part 3: Street Design) that all parking standards are set by the five local authorities including RBC.

3.20 RBC set out their parking standards within Appendix 5 of their Local Plan. The site is situated in what is designated as a 'Low Access Zone' within the parking standards, i.e. outside of an area with greater opportunities to access all forms of transport modes including public transport and walking and cycling.

3.21 On that basis, the parking standards for C3 Residential Dwellings is summarised in **Table 4**.

Table 4: Rugby Borough Council Parking Standards

Dwelling House	Parking Standards	
	Car Parking	Cycle Parking (Minimum)
1-2 Bed Units	1.5 spaces per unit	1 space per unit secure and sheltered
3 Bed Units	2 spaces per unit	1 space per unit secure and sheltered
4 Bed Units	3 spaces per unit	1 space per unit secure and sheltered

3.22 The Local Plan states that the parking standards are guidance figures and are not expressed as a maximum.

3.23 Considering the proposed development is seeking outline permission with all matters reserved except for access, the detailed schedule of accommodation remains to be detailed as part of a full planning application. Once the detailed schedule of accommodation is known, a full assessment of parking requirements can be submitted.

4.0 Baseline Conditions

Site Location

4.1 The site is situated on land east of Rugby Road, c.0.7km south of Clifton upon Dunsmore, and c.2.4km north of Rugby. The site is bound by residential dwellings and playing fields to the north and west, and agricultural land to the east and south.

4.2 A site visit was undertaken on 24th March 2025 to observe the existing conditions of the local highway network surrounding the site, as well as to confirm measurements of local roads, footways and verges.

Existing Highway Network

Rugby Road

4.3 Rugby Road is a local distributor road c.7.0m in width and mainly serves residential uses via direct accesses in the vicinity of the site.

4.4 Rugby Road routes north to south, connecting to Main Street within Clifton upon Dunsmore to the north, and to the Butlers Leap/Houlton Way signalised crossroads to the south via Clifton Road. At the junction, Clifton Road facilitates onward connections into Rugby.

4.5 A footway with streetlighting is present on the southern side of Rugby Road, c.1.8m-2.0m in width, providing a continuous connection to Clifton upon Dunsmore. To the south, footway widths are generally c.1.8m-2.2m in width, although they become narrower (c.1.2m) over the bridge adjacent Vicarage Hill immediately south of the site.

4.6 In the vicinity of the site, Rugby Road is subject to a 30mph speed limit before transitioning into a 20mph zone as it enters Clifton upon Dunsmore, c.300m to the north of the junction with Newall Close; it is also traffic-calmed with speed cushions.

Newall Close

4.7 Newall Close is a residential access road c.4.8m in width and provides access to 18 residential dwellings; it currently forms a priority T-Junction with Rugby Road.

4.8 There is a footway present to the south of Newall Close of varying width, which ties into existing footways on the southern side of Rugby Road at the junction.

4.9 The footway crossover at Newall Close at the junction with Rugby Road includes dropped kerbs and tactile paving to facilitate access for users with limited mobility and visual impairments.

Highway Safety

4.10 To establish existing safety conditions in the vicinity of the site access junction, an initial request for Personal Injury Accident (PIA) data was made to WCC for the most recent five years of available data (2020-2024, inclusive). In accordance with the Department for Transport (DfT) guidance, all PIAs within a 300m radius of the proposed site access have been included within the assessment.

4.11 The raw PIA data is included in **Appendix E**.

4.12 **Table 5** summarises the number of PIAs by year and severity.

Table 5: Total PIAs in the immediate vicinity of the site (2020 - 2024, inclusive)

Year	Slight	Serious	Fatal	Total
2020	0	0	0	**0**
2021	0	0	0	**0**
2022	1	0	0	**1**
2023	0	0	0	**0**
2024	0	0	0	**0**
Total	**1**	**0**	**0**	**1**

4.13 **Table 5** demonstrates that only one PIA has been recorded within a 300m radius of the site access within the most recent five years. The PIA occurred on Rugby Road to the north of the site access on Thursday 5th May 2022 with weather conditions being recorded as dry, and 'Fine without high winds'. The PIA was classified as 'Slight'.

4.14 From interrogation of the data, the PIA was due to an overtaking manoeuvre not being performed correctly and was not because of the configuration of the local highway.

4.15 Whilst all PIAs are regrettable, it is considered that there is no inherent highway safety issue within the vicinity of the site access; however, further highway safety analysis will be provided in due course once the modelling results have been analysed.

Accessibility by Walking

4.16 Walking and cycling provide important alternatives to cars and should also be encouraged to form part of longer trips via public transport. The Chartered Institute of Highways and Transportation (CIHT) has prepared several guidance documents that provide advice for sustainable travel infrastructure provision within new developments. The suggested walking distances to key facilities (e.g. healthcare, shops) are presented in **Table 6**.

Table 6: Suggested Walking Distances (CIHT Guidelines)

	Town Centre (m)	Commuting/Schools/ Sightseeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

4.17 In addition to the CIHT guidance, Manual for Streets (MfS) and the National Design Guide (2021) states that 'walkable neighbourhoods' are typically characterised by having a range of facilities within 10 minutes (up to about 800m) walking distance of residential areas which may be accessed comfortably on foot.

4.18 MfS also states that the 800m walking distance is not an upper limit and references the former Planning Policy Note 13: Transport (PPG13) guidance in respect of walking replacing short car trips, particularly those under 2km.

4.19 Table NTS0303 from the 2023 National Travel Survey (released August 2024) indicates that the national average walking trip distance in 2023 was 0.7 miles or 1.12km.

4.20 The 2023 National Travel Survey (Table NTS0308) also shows that walking was the most frequent mode used for short trips, with 81% of trips under one mile (1.6km) being completed by foot in 2023, which is very similar to 2022 (83%) and 2021 (82%).

Local Facilities and Accessibility

4.21 As previously discussed, a footway with streetlighting is present on the southern side of Rugby Road, providing connections into Clifton upon Dunsmore to the north. To the south, footways are present on the southbound side of Rugby Road before a second footway is also provided on the northbound side of the carriageway to the south of the railway bridge. Beyond this, footways are present on Clifton Road and Butlers Leap to facilitate walking journeys into Rugby.

4.22 There is a network of Public Rights of Way (PRoW) in the form of Public Footpaths within the vicinity of the site. Specifically, PRoW R116 runs north to south to the east of the site, and PRoW R114 runs east to west to the north of the site.

4.23 In addition, the Oxford Canal runs north to south within the immediate vicinity of the site with a towpath running alongside. Access to the canal towpath can be achieved via step access from the canal bridge on Vicarage Hill, and via a designated footpath from the Butlers Leap/Houlton Way junction.

4.24 Collectively, the PRoWs and canal towpath provide traffic free routes for pedestrians and are likely to be used for leisure purposes, albeit some parts may only be accessible during certain periods of the year.

4.25 The 800m, 1.2km and 2.0km walking distances from the site are provided in **Figure 4.1**. The walking distances are taken from the centre of the site, and also consider potential off-site improvement schemes, presented later in this report.

4.26 There are a number of local facilities within the upper 2.0km walking distance of the site that could be used by local residents on a day-to-day basis which are all accessible via the local footway network.

4.27 The local facilities within the vicinity of the site are presented in **Figure 4.2** and detailed in **Table 7**.

Table 7: Local Facilities

Local Facility (Figure Reference)	Distance
Community Facilities	
Townsend Memorial Hall **(C1)**	1.0km
St Mary's Church **(C2)**	1.0km
Royal Mail **(C3)**	2.0km
Education	
Clifton upon Dunsmore C of E Primary School **(E1)**	750m
St Andrews Benn C of E Primary School **(E2)**	1.9km
Rugby College **(E3)**	2.2km
Employment	
Butlers Leap Industrial Estate **(EMP1)**	890m-1.5km

Local Facility (Figure Reference)	Distance
Healthcare	
Rugby Pharmacy **(H1)**	2.7km
Leisure	
Bouhgton Road Recreation Ground **(L1)**	1.2km
Clifton upon Dunsmore Children's Park **(L2)**	700m
Clifton Village Football Pitch **(L3)**	750m
Rugby Golf Club (**L4**)	900m
Rugby Town FC **(L5)**	1.6km
Retail	
The Lounge Bar and Kitchen **(R1)**	550m
Clifton Village Stores **(R2)**	900m
Pin Chocolate Beauty Salon **(R3)**	900m
The Bull Inn **(R4)**	900m
The Clifton Inn **(R5)**	1.2km
Premier Supermarket **(R6)**	1.2km
Barber Shop **(R7)**	1.2km
Londis **(R8)**	1.8km

N.B. Many facilities will also act as an employment facility

4.28 Whilst it is noted that Rugby Town Centre is situated slightly above the upper walking limit (at a distance of 2.4km), it provides access to a significant number of facilities across all criteria, thus it is reasonable to assume that some residents may still use walking as the main form of transport to access these facilities.

Accessibility by Cycling

4.29 There is potential for short car trips to be substituted for cycle trips, and for longer trips to be substituted by a combination of cycle and public transport trips.

4.30 The CIHT Planning for Cycling document (2014) states that "The majority of cycling trips are for short distances, with 80% being less than five miles and with 40% being less than two miles. However, the majority of trips by all modes are also short distances (67% are less than five miles, and 38% are less than two miles); therefore, the bicycle is a potential mode for many of these trips (DfT, 2014a)."

4.31 The second Cycling and Walking Investment Strategy published by DfT in 2022 does not specifically reference the statement in Paragraph 4.30, however one of the main objectives is to increase the percentage of short journeys (i.e. those under five miles) in towns and cities that are walked or cycled from 41% in 2018/19 to 46% in 2025.

4.32 The 2023 National Travel Survey also shows that the average cycle trip distance (for all purposes) was three miles (or 4.8km).

4.33 The Department for Transportation (DfT) Cycling and Walking Investment Strategy (2017) also refers to the threshold of five miles (or 8km), stating that *"two out of every three personal trips are within five miles – an achievable distance to cycle for most people, with many shorter journeys also suitable for walking."*

4.34 Therefore, it is reasonable to consider cycling as a viable mode of travel for distances up to 8km.

4.35 There is no designated cycle infrastructure on Rugby Road, however, given that it is subject to a 30mph speed limit in the vicinity of the site, which then reduces to 20mph on approach to Clifton upon Dunsmore, it is considered an appropriate route for most cyclists.

4.36 To the south, there is a designated shared footway/cycleway which runs alongside Houlton Way. This provides a continuous traffic-free route to Houlton in the south.

4.37 National Cycle Network (NCN) Route 41 is situated c.1.3km to the west of the site and provides a traffic-free route within the vicinity of Rugby. Further afield, NCN Route 41 connects to Royal Leamington Spa via a combination of on-road and traffic-free routes.

4.38 NCN route 50 is also accessible c.8.0km to the east of the site which is predominantly an on-road cycle route connecting Daventry in the south and Leicester in the north (via NCN Route 6).

4.39 To the west, the towpath provided alongside the Oxford Canal provides a traffic-free route for cyclists to access both local and regional locations.

4.40 Given the low designated speed limits on the local highway network in the vicinity of the site, as well as the wider proposed cycle infrastructure designated under the Rugby LCWIP, it is considered that the local area is suitable for cyclists of all abilities.

4.41 The LCWIP schemes near to the proposed development, as referenced in Section 3.0 of this report, are presented in *Figure R13 – Indicative Cycle Network for North and East Rugby* in the Rugby LCWIP.

4.42 The proposed LCWIP routes are likely to improve existing and future residents' ability to walk and cycle around the area and may encourage modal shift from less sustainable modes of transport.

4.43 Further information on potential off-site mitigation measures in relation to the LCWIP routes are presented within Section 5.

4.44 The 5.0km and 8.0km cycling distances are presented in **Figure 4.3**. The cycling distances are taken from the centre of the site.

Accessibility by Bus

4.45 Bus stops are situated within the vicinity of the site on Rugby Road, Clifton Road and Butlers Leap; all within a 400m walking distance from the centre of the site.

4.46 The nearest bus stops are situated on Rugby Road to the north of the proposed site access and facilitate access to the L1 and number 9 (northbound only) bus services. Both the northbound and southbound bus stops are flag and pole signs and do not currently provide timetable information. The southbound bus stop is connected to the site via a continuous footway on Rugby Road, whilst the northbound bus stop is situated on a section of tarmac within the highway verge.

4.47 Both the eastbound and westbound bus stops situated along Butlers Leap serve the adjacent industrial units and provides access to the number 96 bus service. The westbound bus stop is connected to the site via a lit footway, whilst the eastbound bus stop is situated within the adjacent verge. Both bus stops are unmarked with no physical infrastructure.

4.48 The northbound and southbound bus stops situated on Clifton Road provides access to the L1 and number 9 bus services. Both stops contain bus shelters and framing for timetable information. Both bus stops are accessible via

footways running alongside Clifton Road, with a pedestrian crossing facilitated with dropped kerb tactile paving immediately south of the southbound bus stop.

4.49 Collectively, all bus stops provide local and regional connections to Rugby, Lilbourne, and Northampton.

4.50 **Table 8** presents the nearest local bus stops and their level of service. Bus service frequency has been taken from bustimes.org.

Table 8: Local Bus Service Frequency

Bus Stop (code)	Route (Operator)	Frequency (approx.)		
		Mon – Fri	Sat	Sun
Rugby Road northbound (waramwga)	L1 – Rugby – Lilbourne (**Lilbourne Community Bus**)	One service per day (Mon, Wed, Fri) (12:08)	One service per day (16:38)	No Service
	9 – Rugby – Woodlands (**Flexibus**)	Eight services per day (09:06, 10,20, 11:32, 12:44, 13:56, 15:08, 16:27, 17:57)	Eight services per day (09:06, 10:20, 11:32, 12:44, 13:56, 15:08, 16:26, 17:57)	No Service
Rugby Road southbound (warapwpt)	L1 - Lilbourne – Rugby (**Lilbourne Community Bus**)	One service per day (Mon, Wed, Fri) (09:36)	One service per day (13:51)	No Service
Clifton Road southbound (warapwmt)	9 – Woodlands – Rugby (**Flexibus**)	Eight services per day (09:06, 10,20, 11:32, 12:44, 13:56, 15:08, 16:27, 17:57)	Eight services per day (09:06, 10:20, 11:32, 12:44, 13:56, 15:08, 16:26, 17:57)	No Service
Butlers Leap westbound (wardmpdp)	96 – Northampton – Rugby – Rokeby Estate (**Stagecoach Midlands**)	Two services per hour First service: 06:29 Last Service: 20:55	Two services per hour First service: 06:29 Last service: 20:55	No Service
Butlers Leap eastbound (wardmpdt)	96 – Rokeby Estate – Rugby – Northampton (**Stagecoach Midlands**)	Two services per hour First service: 05:33 Last service: 19:44	Two services per hour First service: 06:34 Last service: 19:44	No Service

N.B. Number 9 bus service southbound does not stop on Rugby Road, only Clifton Road.

4.51 **Table 8** demonstrates that across all three bus stops, there is generally a minimum of two bus services per hour to local and regional destinations across both peak hours. Therefore, future residents of the site could use local bus services as a regular method of travel, especially for commuting trips.

Accessibility by Rail

4.52 Rugby railway station is situated c.2.0km to the south of the site and can be accessed via footways along Rugby Road, Butlers Leap and Mill Road.

4.53 Rugby railway station contains 723 vehicle parking spaces (28 accessible) across three car parks, and 350 cycle parking spaces (Compounds, stands and racks).

4.54 The station facilitates connections to local and regional destinations, as well as major national destinations via frequent rail services. These include London, Birmingham, Manchester and Crewe.

4.55 **Table 9** presents the key railway services from Rugby Railway Station and their frequency. Rail service frequency has been taken from Trainline.

Table 9: Local Rail Service Frequency

Destination (stops)	Average Frequency	Approx. Journey Time	First and Last Direct Services					
			Monday to Friday		Saturday		Sunday	
			Departures	Arrivals*	Departures	Arrivals*	Departures	Arrivals*
London Euston (Lond Buckby, Northampton, Wolverton, Milton Keynes, Bletchley, Leighton Buzzard)	5 per hour (Mon – Sat) 4 per hour (Sun)	1 Hour, 33 Minutes (Maximum)	First Service: 05:52 Last Service 23:45	First Service: 05:31 Last Service 23:30	First Service 05:46 Last Service 22:46	First Service 05:39 Last Service 21:42	First Service 9:00 Last Service 23:44	First Service 07:24 Last Service 23:24
Birmingham New Street (Coventry, Canley, Tile Hill, Berkswell, Hamton-in-Arden, Birmingham International)	4 per hour (Mon-Sat) 4 per hour (Sun)	0 Hours, 43 Minutes (Maximum)	First Service: 05:37 Last Service 23:34	First Service 05:30 Last Service 23:11	First Service 05:33 Last Service 23:16	First Service 05:35 Last Service 22:51	First Service 08:57 Last Service 23:43	First Service 08:26 Last Service 22:56
Manchester Picadilly (Stoke-on-Trent, Macclesfield, Stockport)	1 per hour (Mon-Sat) 1 per hour (Sun)	1 Hour, 21 Minutes (Maximum)	First Service: 07:44 Last Service 23:11	First Service 05:05 Last Service 19:15	First Service 07:44 Last Service 19:47	First Service 05:05 Last Service 18:55	First Service 13:47 Last Service 23:18	First Service 10:35 Last Service 20:55
Crewe (Nuneaton, Atherstone, Polesworth, Tamworth, Lichfield, Rugeley, Stafford)	2 per hour (Mon-Sat) 2 per hour (Mon-Sat)	1 Hour, 53 Minutes (Maximum)	First Service: 05:43 Last Service 22:42	First Service 05:10 Last Service 22:13	First Service 05:43 Last Service 21:46	First Service 05:25 Last Service 20:44	First Service 09:15 Last Service 23:18	First Service 09:43 Last Service 21:54

* Arrival services are the departure times to Rugby from destination

4.56 **Table 9** demonstrates that Rugby railway station facilitates frequent rail connections to key regional and national destinations.

4.57 Given the proximity of the station to the site, it is considered that rail will provide a viable mode of travel for future residents of the site, particularly as part of a multi-modal method of travel, given the cycling distance is reasonable and bus service 96 stops immediately outside the station.

Summary

4.58 This section demonstrates that future residents of the site will be able to travel by several sustainable travel options. Notably, future residents could walk or cycle to local facilities within Clifton upon Dunsmore and parts of Rugby, should they wish to do so.

4.59 Additionally, local public transport provides access to destinations further afield, including Northampton, Birmingham, London and Manchester via bus and rail, which could be used as part of multi-modal journeys.

5.0 Development Proposals

Access Arrangements

5.1 Access to the site will be taken from Rugby Road to the north of the site through the reconfiguration of the existing Rugby Road/Newall Close priority T-Junction.

5.2 The access road will run south from Rugby Road into the site with a new priority T-Junction created between Newall Close and the site access road. This will make Newall Close the minor arm, with vehicles giving way to traffic on the site access road.

5.3 The site access from Rugby Road will provide a wide bellmouth narrowing within the site to a carriageway width of 5.5m and eastern and western radii of 10.0m and 6.0m onto Rugby Road, respectively. A shared footway/cycleway will be provided on either side of the access road, measuring 3.0m in width, tying into footways on Rugby Road with transitions provided to guide cyclists into/from the highway. A pedestrian refuge, with dropped kerb tactile paving, will be provided within the bell mouth to facilitate pedestrian crossing.

5.4 The site access road and Newall Close priority junction will have a carriageway width of 5.0m, and 6.0m and 8.0m northern and southern radii onto the site access road. A footway measuring c.2.0m wide will be provided and tie into the proposed shared footway/cycleway on the access road and a footway/cycleway crossover with dropped kerb tactile paving will be provided across Newall Close.

5.5 The access arrangements are reflective of comments made by WCC in response to the initial TASR, as well as recommendations made within the RSA1. On that basis, the access is considered suitable for a development of this nature, scale and location.

Visibility Requirements

5.6 Visibility from the proposed site access onto Rugby Road are based on the prevailing speed limit of 30mph along Rugby Road and MfS visibility requirements, resulting in splays of 2.4m x 59m.

5.7 From Newall Close, full visibility of the Rugby Road/Site access junction can be achieved, as well as a 2.4m x 59m visibility splay to the south.

5.8 The detailed site access arrangements are presented in **Drawing T21542.001 rev C.**

Parking Requirements

Vehicle Parking

5.9 Parking will be provided in accordance with RBC's parking standards for C3 Residential Dwellings in a 'Low access Zone' and designed in accordance with WCC's design guide (Part 3: Street Design).

5.10 Once the detailed schedule of accommodation is known, a full assessment of parking requirements can be submitted as part of a full planning application.

5.11 As part of detailed proposals, consideration will be given to Electric Vehicle (EV) charging infrastructure.

Cycle Parking

5.12 Resident cycle parking will be provided at a rate of one per dwelling, with all cycle parking spaces being sheltered and secured such as within a cycle locker, garage and/or storage.

5.13 Further details of cycle parking will be provided as part of a full planning application.

Servicing and Deliveries

5.14 Servicing and delivery vehicles will access the site via the proposed site access.

5.15 The proposed site access design is able to accommodate the largest regular vehicle to enter the site as demonstrated by vehicle swept path analysis undertaken of a 11.7m refuse vehicle, presented in **Drawing T21516.002 rev C**.

5.16 The analysis demonstrates that a refuse vehicle can access and egress the site safely in a forward gear in both directions along Rugby Road.

5.17 The internal road layout will be designed in accordance with the WCC Design Guide with suitable road widths, footway widths, turning heads and any necessary bend widening. All turning heads will be designed to accommodate an efficient 3-point manoeuvre of a refuse vehicle to ensure that it can access and egress internal roads in a forward gear.

5.18 Refuse collection will be in the form of standard kerbside collection for all roads adoptable to the standards provided within the WCC Design Guide. Any private drives integrated into the site layout will be considerate of the WCC guidance, with dedicated bin collection points situated within a 30m distance to the furthest residential property from the adoptable highway, and within 25m of the back of a refuse vehicle in accordance with Building Standards Document H ‘Drainage and Waste Disposal’.

5.19 The internal road layout will be designed to ensure that a fire tender is not required to reverse more than 20m and that fire officers will not have to carry equipment more than 45m, in accordance with Building Regulations Document B ‘Fire Safety’.

Off-Site Improvements

5.20 Within their response to the TASR, WCC requested the following off-site mitigations to be explored:

- Short section of path from the south of the new development onto the Houlton Way cycle track, to enable safe access, avoiding the narrow footways, pavement parking and traffic on Rugby Road; and,
- Short section of path from the north of the new development to safely connect with Shuttleworth Road/South Road (alternatively a longer link across the recreation ground to Main Street would link to the local primary school).

Off-site improvements to Houlton Way

5.21 The land south of the application site is outside of the control of the Applicant. The proposed development can provide a connection to the southern boundary, and a connection to Houlton Way will need to be provided by others.

Off-site improvements to Rugby Road

5.22 Consideration has been given to the existing walking and cycling infrastructure to the south of the site along Rugby Road, due to some restrictions caused by the width of the bridge and vehicles parked on the kerbside that were observed during the site visit.

5.23 Options are being explored to widen the footway along Rugby Road and provide a form of crossing to improve connectivity to the south, this includes the option of signalising the bridge to facilitate widening the footway.

5.24 The preferred option will be confirmed following review of the modelling outputs from the RWA model.

Northern off-site improvements

5.25 The proposed development can provide a connection to the northern boundary with the playing fields.

5.26 There is an existing access into the playing fields from Shuttleworth Road, and thus the site can connect through the playing fields to the local highway network into the centre of the village.

5.27 The access at the boundary of the playing fields would create a more direct route into Clifton upon Dunsmore from the site via Main Street and an existing pedestrian cut through west of Allans Lane, as opposed to the connection via Rugby Road.

Public Transport Contributions

5.28 It is noted that WCC, in response to the TASR, have requested improvements to the northbound and southbound bus stops on Rugby Road.

5.29 In addition to bus stop improvements, other improvements could be to deliver a form of pedestrian crossing across Rugby Road, such as dropped kerb tactile paving to create better access to the northbound bus stop given there are no footways on the northern side of Rugby Road.

5.30 A potential scheme will be provided following review of the modelling outputs as part of a forthcoming Transport Assessment Addendum (TAA) report.

5.31 With regards to potential bus service contributions, it is noted that the number 9 bus service does not currently stop at the southbound bus stop on Rugby Road, with the nearest southbound stop for the service being situated on Clifton Road. Contributions towards the number 9 bus service calling at the Rugby Road southbound bus stop could be made along with a contribution towards an additional midweek peak hour(s) service across both bus stops.

5.32 We welcome further discussions with WCC regarding this matter.

LCWIP Contributions

5.33 As previously discussed, there are several proposed LCWIP schemes within the vicinity of the site. As previously highlighted, these are:

- R05: Butlers Leap (Footway/cycleway adjacent to road);
- R13: Clifton Road (Murray Road – Houlton Way) – Footway/cycleway adjacent to road and crossing; and,
- R47: Park Connector (Coton Park – Clifton) – Path/cycle track through open space.

5.34 LCWIP scheme R05 proposes a continuous east-west connection from the junction with Houlton Way (connecting to the existing shared footway/cycleway) to the junction with Mill Road in the west.

5.35 LCWIP scheme R13 proposes a connection from the junction with Houlton Way (connecting to the existing shared footway/cycleway) to the junction with the B5414 in the south in Rugby.

5.36 LCWIP scheme R47 proposes a partially off-road path/cycle track through Coton Park, connecting to Clifton Upon Dunsmore via Station Road.

5.37 Whilst every effort has been made to provide a continuous connection the proposed LCWIP routes from the site; given the constraints around adjacent third-party land ownership, and the physical constraints of the disused railway bridge and canal bridge, it is likely that only a suitable connection can be made for pedestrians as opposed to pedestrians and cyclists, collectively.

5.38 In addition to the potential mitigation measures outlined in this section, contributions are also proposed to help fund the LCWIP schemes to allow WCC to bring them forward and encourage wider walking and cycling within the area.

5.39 We welcome further discussions with WCC on this particular matter.

6.0 Resident Welcome Packs

Introduction

6.1 Within the Warwickshire Design Guide *Part 1 – Pre-application Development Management* document, Paragraph 1.5.2 states:

"The Highway Authority does not require the provision of travel plans for residential developments at present, due to the ability to enforce such documents. However, a contribution will be sought for the provision of Warwickshire Welcome Packs to each new household in a development of 10 dwellings and over."

6.2 It is not clear whether WCC have their own Welcome Pack templates to be adapted to the location and context of the site. On that basis, potential information to include within a Welcome Pack has been set out within this section, although we welcome confirmation from WCC on this matter.

Purpose of a Resident Welcome Pack

6.3 Welcome Packs are a package of information on travel options for a new site/development, to assist residents with planning journeys from their new home.

6.4 The aim of the Welcome Packs is to reduce single occupancy car trips by switching to more sustainable modes of transport such as walking, cycling, public transport and car sharing.

6.5 The benefit of providing a Welcome Pack is that not only does it help a resident settle into their new surroundings, but in highways and transportation terms, it helps to create a culture of sustainable travel from the earliest point of occupation.

Contents of a Resident Welcome Pack

6.6 Whilst a Welcome Pack could include a variety of information regarding a site/development, information relating solely to transportation and travel should be included as its own standalone section, or as its own standalone document.

6.7 The travel information presented within a Welcome Pack would include the following:

- Introduction – Setting out the purpose of the Welcome Pack and welcoming residents to the site, and their new home.
- Walking and Cycling – Will provide information on local walking and cycling routes within the vicinity of the site, along with the local facilities that can be reached.

  In addition, promotion of walking and cycling initiatives can be highlighted to incentivise residents to take up walking and cycling, regularly, as a preferred method of travel for shorter journeys.
- Bus – Will provide information on the nearest bus stops and their associated bus services, including the most up to date timetable information at the time of producing the Welcome Pack, operators, pricing, and links to ticket concessions.
- Train – Information provided on local rail travel from Rugby station, including walking routes to get to the station, destinations reachable from the station, timetable information, and amenities provided at the station.

- Car sharing – Information on the benefits of car sharing will be provided, as well as platforms to coordinate car sharing journeys.

6.8 An example of the site specific information that could be included within a Welcome Pack , has been included at **Appendix F**.

7.0 Trip Generation, Distribution and Assignment

Trip Generation

7.1 To understand the potential impact of the proposed development, a TRICS assessment has been undertaken

7.2 Following submission of the TASR, WCC requested additional traffic modelling data to feed into the Rugby Wide Area (RWA) S-Paramics model. Specifically, the following information on trip rates was requested:

- Vehicle trip rates and trip generation for the AM (07:00-10:00) and PM (16:00-19:00) periods to analyse the full impact of the development during pre-peak, peak and post peak periods.
- Data range to exclude Covid-19 periods.
- Data to be presented for neutral weekdays, Tuesday to Thursday, thus excluding Monday and Friday surveys.
- Include any assumptions on parameters used.

7.3 As requested, a TRICS assessment in line with the WCC Modelling Protocol Advice Note – Model Licensing (Last updated: October 2023) has been undertaken using the latest TRICS database (7.11.4).

7.4 It should be noted that at the time of writing, the trip generation presented within the Modelling Briefing Note was based on 180 dwellings. The subsequent modelling work will be based on trip generation for 160 dwellings.

7.5 The full TRICS assumptions are included within the Modelling Briefing Note presented at **Appendix B**. It should be noted that WCC agreed with the trip generation methodology and the subsequent trip generation presented.

7.6 The total vehicular trip generation calculated from TRICS for the midweek period is presented in **Table 10** and **Table 11** for the highway network peak hours and 6-hour model periods, respectively.

Table 10: Trip Generation (Midweek AM & PM Peak hour) - 160 Dwellings

Peak Period	Trip Rate (per dwelling)		Trips		Total
	In	Out	In	Out	
AM (08:00-09:00)	0.146	0.361	23	58	**81**
PM (17:00-18:00)	0.331	0.158	53	25	**78**

NB: Figures subject to rounding

Table 11: Trip Generation (Midweek AM & PM Peak Periods 6-Hour) - 160 Dwellings

Peak Period	Trip Rate (per dwelling)		Trips		Total
	In	Out	In	Out	
AM (07:00-10:00)	0.373	0.828	60	132	**192**
PM (16:00-19:00)	0.867	0.475	139	76	**215**

NB: Figures subject to rounding

Trip Distribution and Assignment

7.7 As requested by WCC, Mobile Network Data (MND) was obtained for LSOA E01031129 within which the site is located. This provided distribution proportions to feed into the RWA S-Paramics model as required under the WCC Modelling Protocol Advice Note 005 – Mobile Network Data document.

7.8 From initial contact with WCC, the RWA S-Paramics model was being updated and would not be ready for immediate use; at the time of writing, it is understood that the model is currently in the final stages of validation and sign off and therefore is still not available to use.

7.9 Considering this, all modelling work and junction assessments will be submitted to WCC as part of a forthcoming TAA report.

8.0 Traffic Impact

8.1 As previously stated, all modelling work will be provided as part of a forthcoming TAA report following review of the RWA S-Paramics model, which will identify any off-site junctions that require assessment.

8.2 However, as part of this TA, an initial assessment has been undertaken of the site access junction which will be updated following review of the modelling outputs.

Assessment Scenarios

8.3 In order to align with the RWA S-Paramics model, the assessment scenarios are based upon those expected to be included within the updated model. These include:

- 2031 Reference Case
- 2045 Reference Case

8.4 Therefore, following scenarios have been assessed for both the AM and PM peaks:

- 2031 Base Year
- 2031 Base Year + Proposed Development
- 2045 Base Year
- 2045 Base Year + Proposed Development

8.5 Once the modelling work has been undertaken, any adjustments to the modelled scenarios for the site access junction can be made and provided as part of the TAA report.

TEMPro Growth Factors

8.6 Manual Classified Counts were undertaken at the Rugby Road/Newall Close junction on 8th February 2023 during the morning (07:00-10:00) and afternoon/evening (14:00-19:00) periods to obtain turning volumes and queuing data for model validation purposes.

8.7 The peak hour AM and PM flows were identified as 08:00-09:00 and 16:00-17:00 and have therefore been used to underpin the assessments. The PM peak broadly corresponds with the traditional highway network peak hour (17:00-18:00), however this will be updated once the modelling outputs are reviewed.

8.8 The TRICS exercise identifies the PM peak movements for the proposed development as 17:00-18:00, however for the purpose of this initial assessment, the PM peak development flows have been assessed against the observed local highway network PM peak (16:00-17:00), for robustness.

8.9 The MCC data for the Rugby Road/Newall Close junction is included at **Appendix G**.

8.10 The 2023 baseline peak flows have been uplifted to a 2031 and 2045 future year using NTM adjusted growth factors obtained from the TEMPro database for MSOA Rugby 001 in which the site is situated. These are included at **Appendix H**.

Committed Development

8.11 It should be noted that as part of the pre-application and scoping stage, no specific committed developments were requested for modelling purposes by WCC, however it is likely that these may be picked up within the RWA S-Paramics Model. This will be confirmed as part of the TAA report.

Junction Assessments

Site Access

8.12 The site access has been modelled using a PICADY assessment within the Junctions 11 software package.

8.13 To understand where the proposed development traffic will assign via Rugby Road, a distribution exercise was undertaken using Census 2011 Method of Travel to Work data for MSOA Rugby 011. Based on the distribution it is likely that the traffic will assign as follows:

- Rugby Road North: 20%
- Rugby Road South: 80%

8.14 **Table 12** summarises the results of the modelling work with the full junction output included within **Appendix I**.

Table 12: Site Access PICADY Results

Approach	AM Peak 08:00 – 09:00			PM Peak 16:00-17:00		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
2031 Base + Proposed Development						
Rugby Road South	0.08	0	6	0.03	0	5
Site Access (Right Turners)	0.05	0	10	0.02	0	10
Site Access (Left Turners)	0.05	0	5	0.11	0	5
2045 Base + Proposed Development						
Rugby Road South	0.09	0	6	0.03	0	6
Site Access (Right Turners)	0.05	0	11	0.02	0	10
Site Access (Left Turners)	0.05	0	5	0.11	0	5

8.15 **Table 12** demonstrates that the site access junction will operate with significant spare capacity during both future years, with negligible queues delays.

9.0 Summary and Conclusion

9.1 Hub Transport Planning Ltd has been commissioned by Richborough to provide transport advice for a proposed residential development on land east of Rugby Road, Clifton upon Dunsmore, Rugby.

9.2 This Transport Assessment has been prepared to support an outline planning application for up to 160 residential dwellings.

9.3 Residents will be able to make journeys to facilities within Clifton upon Dunsmore and Rugby via active travel modes such as walking and cycling. Local bus services also provide connections into Rugby town centre which offers a range of facilities typically found within a major urban centre, such as retail, employment and leisure uses.

9.4 Residents are afforded onward regional and national connections from Rugby railway station which can be accessed by walking, cycling or bus.

9.5 A review of Personal Injury Accidents obtained from WCC demonstrates that only one PIA has been recorded within a 300m radius of the site access junction within the most recent five years of available data, which will be reviewed further following the results of the modelling work.

9.6 As part of the proposals, off-site improvements are being considered to improve accessibility to local facilities for future residents and will be refined once the modelling results are known.

9.1 The proposed site access will be from Rugby Road and will have a carriageway width of 5.5m and eastern and western radii of 10m and 6.0m onto Rugby Road, respectively.

9.2 Shared footway/cycleway provision will be delivered on either side of the access road, measuring 3.0m in width, tying into the existing infrastructure on Rugby Road. A pedestrian refuge, with dropped kerb tactile paving, will be provided within the bellmouth to facilitate pedestrian crossing.

9.3 The reconfigured site access road and Newall Close priority junction will have a carriageway width of 5.0m, and 6.0m and 8.0m northern and southern radii onto the site access road. A footway measuring 2.0m in width will be provided along Newall Close and tie into the proposed shared footway/cycleway on the site access road along with a footway/cycleway crossover with dropped kerb tactile paving at the bellmouth.

9.4 An initial site access assessment has been undertaken using PICADY which demonstrates that it will be able to comfortably accommodate the proposed development traffic with negligible queuing and delays.

Conclusion

9.5 The National Planning Policy Framework (NPPF) states that opportunities to promote sustainable transport modes should be taken up and that safe and suitable access to the site is achieved for all users.

9.6 The development is located to make use of existing infrastructure and services and is suitable in transport terms; it will promote the use of sustainable modes of transport, and the site will provide safe and suitable access for all users.

9.7 An addendum report will be submitted in due course to present the modelling work, update the site access assessment work and set out the impacts of the proposed development across the local highway network.

9.8 In addition, it will also provide additional details regarding the connectivity improvements proposed for the site.

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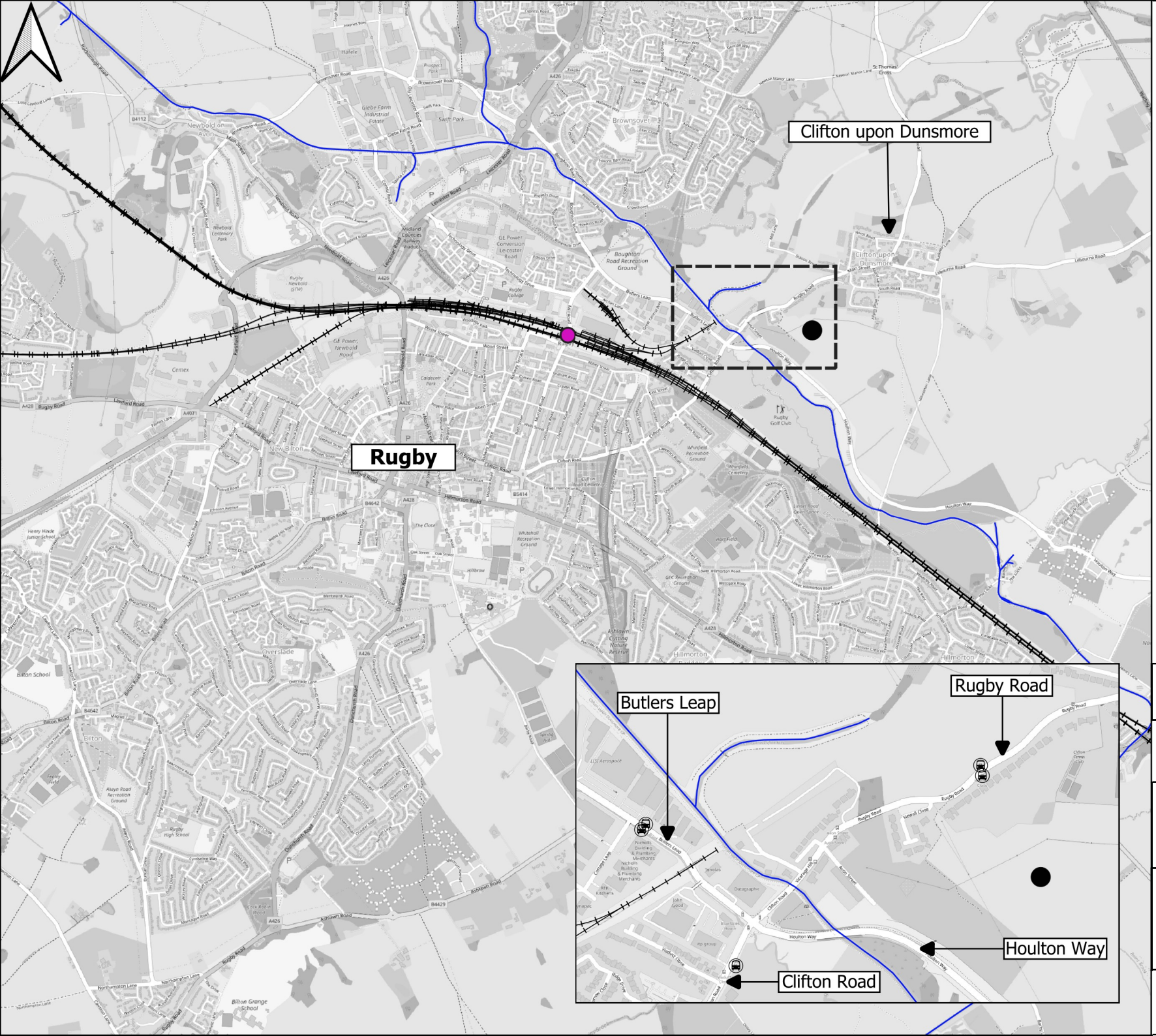
Figures



Legend

- Site Location
- Bus Stop
- Railway Station
- Railway Network
- Canal Network

Figure 1.1 - Site Location

Richborough

hub TRANSPORT PLANNING LTD

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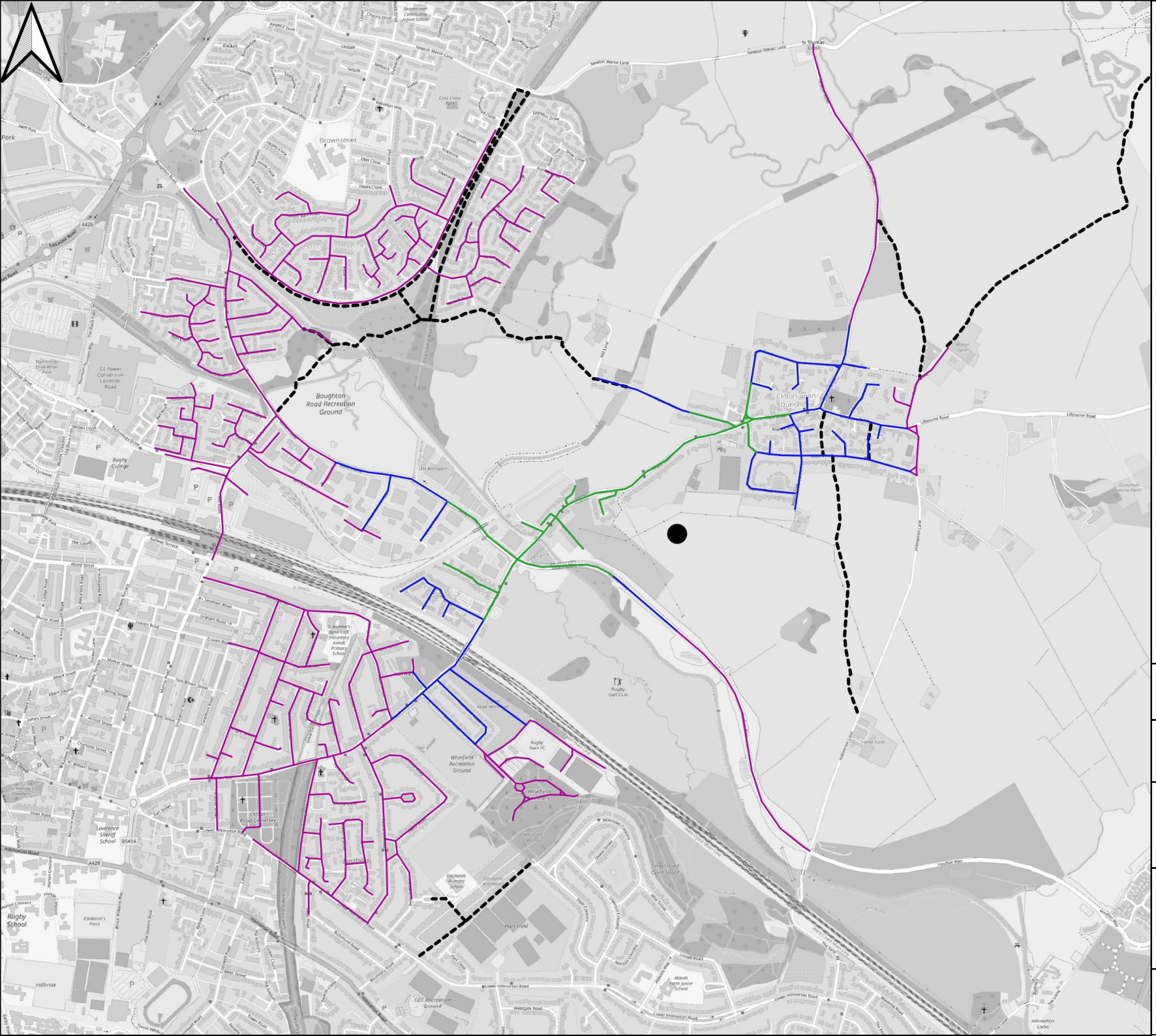
0 0.7 1.4 km



Legend

- Site Location

Walking Distances

- 800m
- 1.2km
- 2.0km

PRoW

- Public Footpath

Figure 4.1 - Walking Distances

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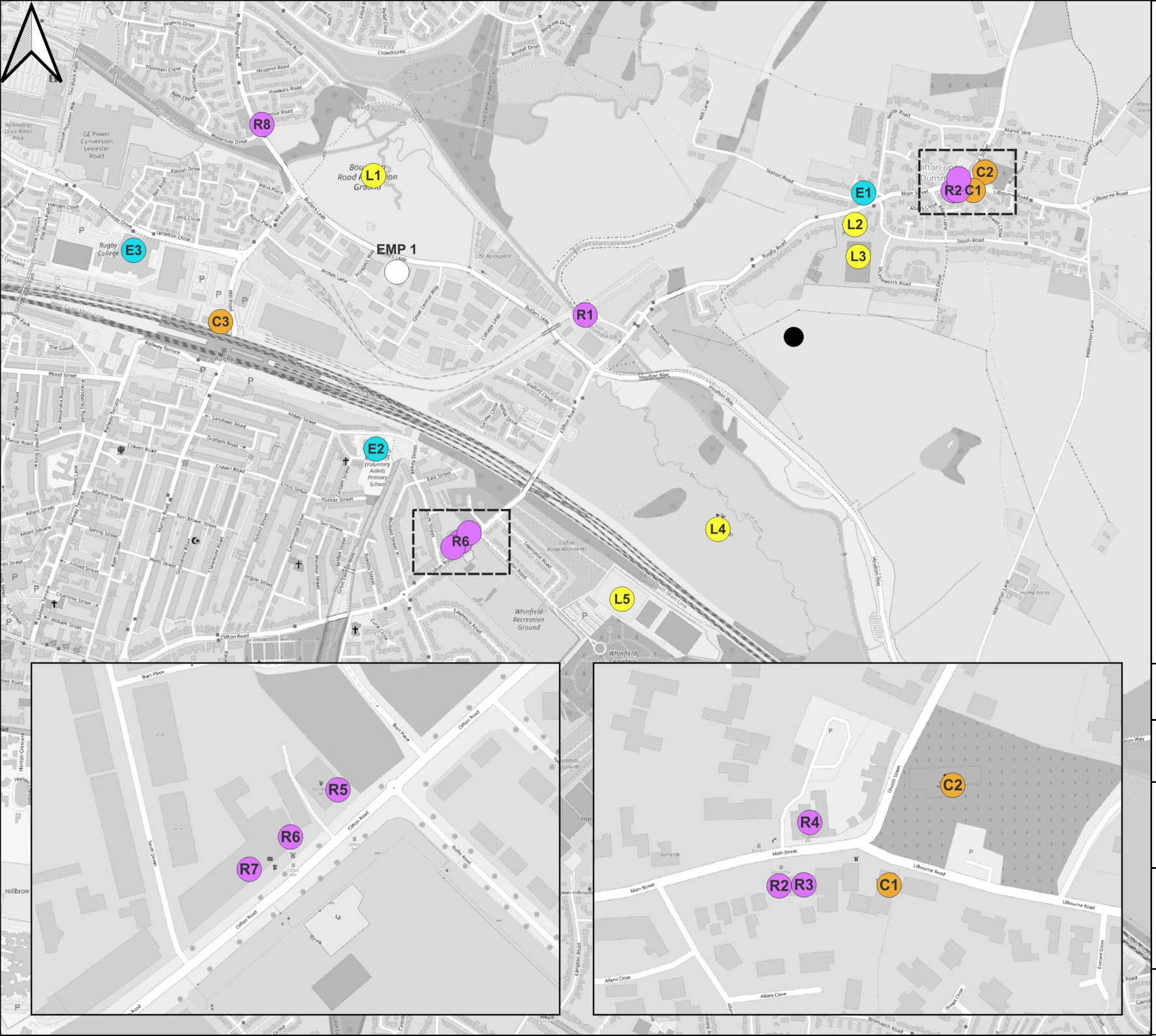
0 400 800 m



Legend

- Site Location
- Community
- Education
- Employment
- Healthcare
- Leisure
- Retail

Figure 4.2 - Local Facilities

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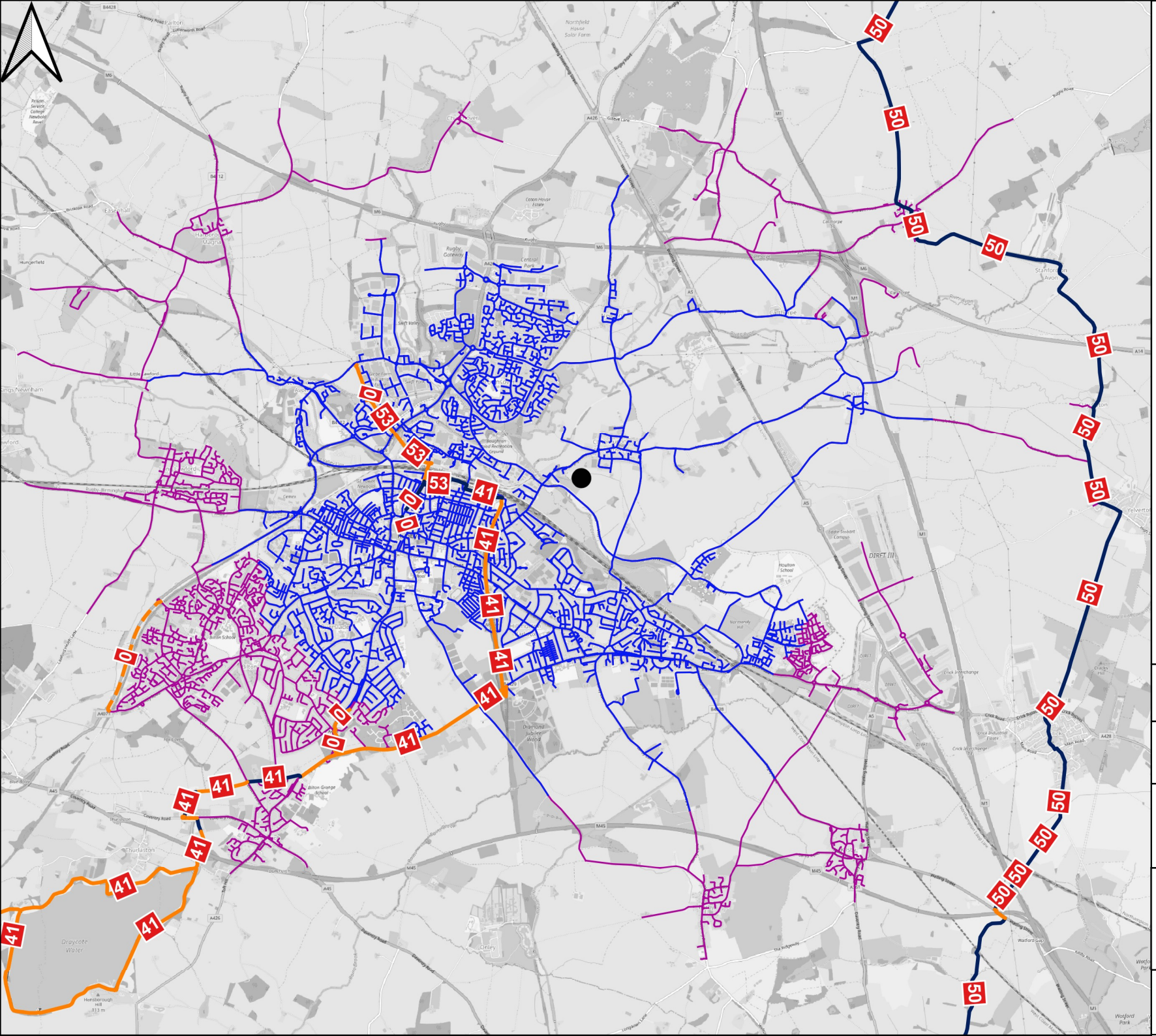
0 300 600 m



Legend

- Site Location

National Cycle Network

- On-Road Route on NCN
- Traffic-Free Route not on NC
- Traffic-Free Route on NCN

Cycling Distances

- 5.0km
- 8.0km

Figure 4.3 - Cycling Distances

Richborough

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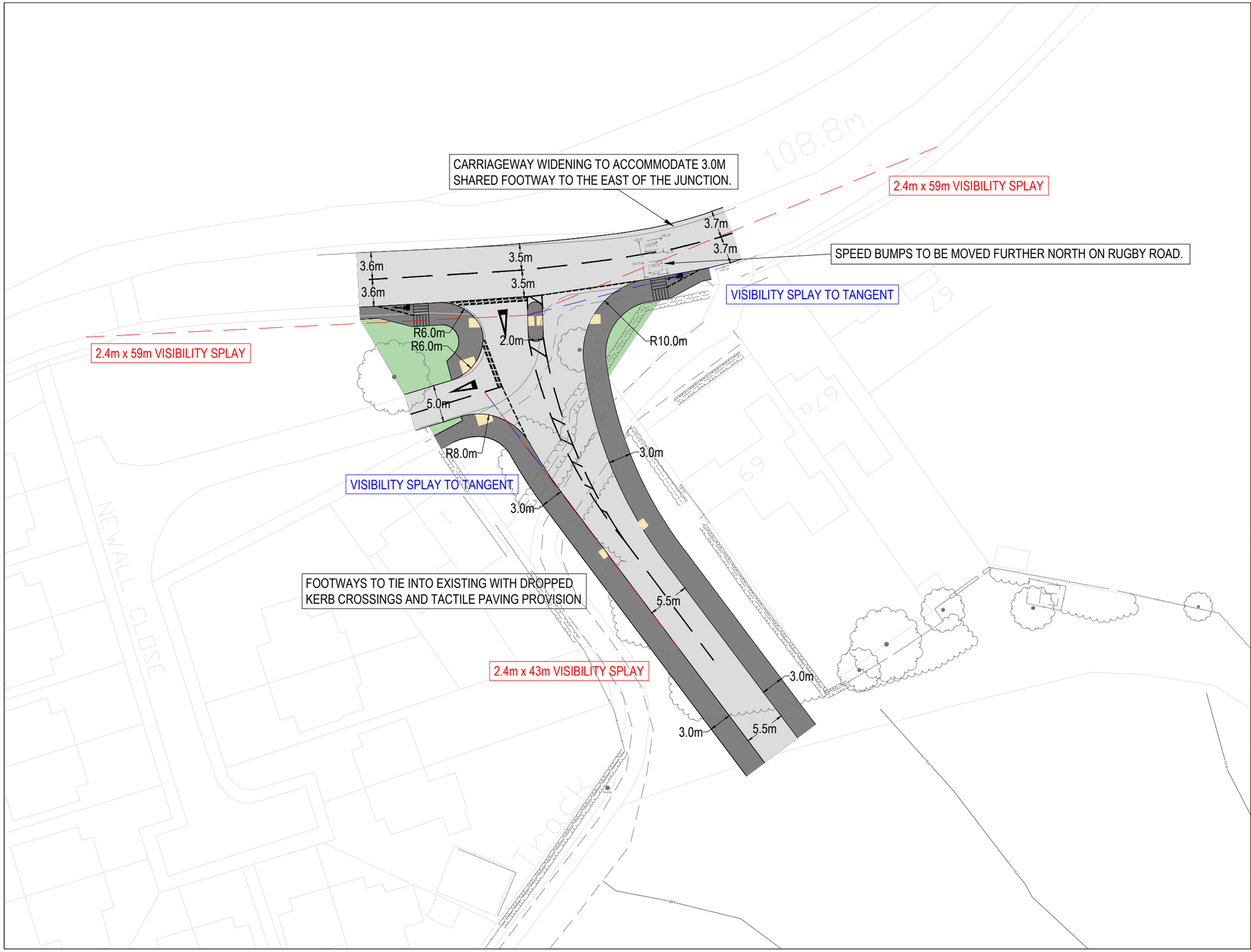
0 1.5 3 km

Drawings



1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.

REV	DESCRIPTION	DATE	BY	AUTH
C	ADDITION OF 3.0M WIDE SHARED FOOTWAY/CYCLEWAY AND TIED TO TOPO SURVEY.	12.06.25	MJ	JP
B	MINOR AMENDMENTS FOLLOWING STAGE 1 ROAD SAFETY AUDIT	29.06.22	JC	JP
A	AMENDMENTS TO LAYOUT FOLLOWING COMMENTS FROM WCC	04.02.22	JC	JP

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T : 0121 454 5530

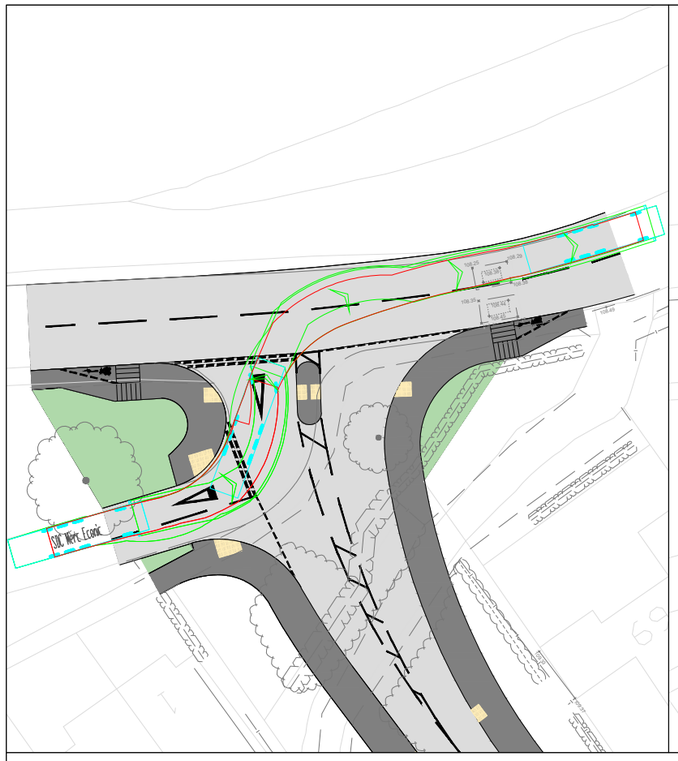
CLIENT
RICHBOROUGH

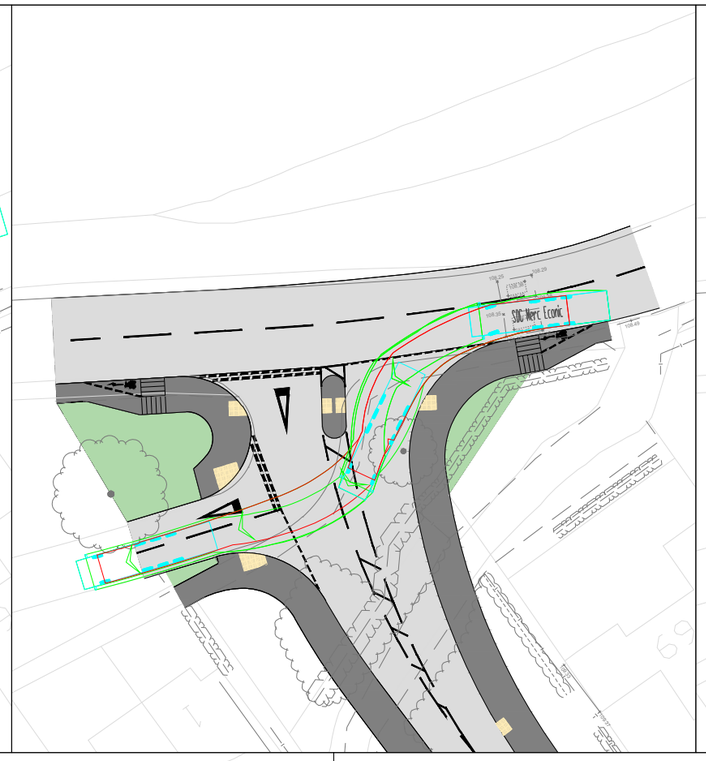
PROJECT
CLIFTON UPON DUNSMORE

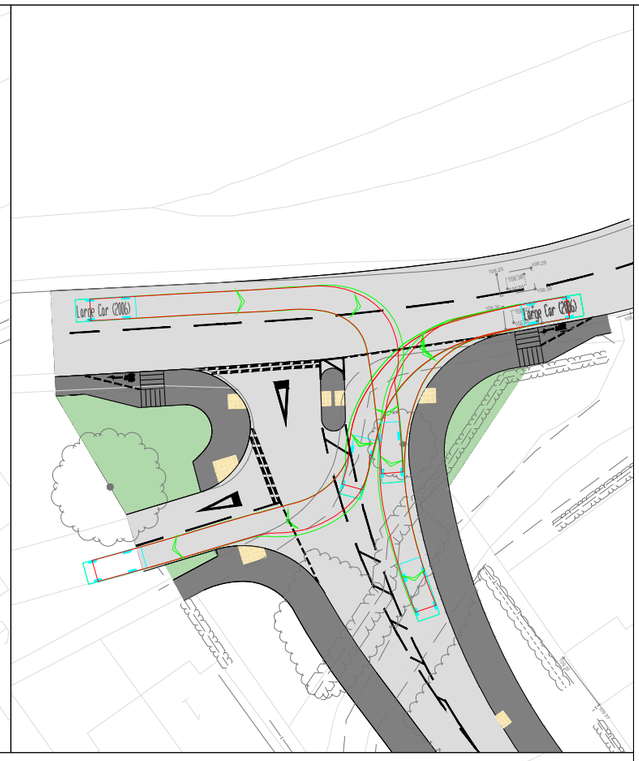
TITLE
PROPOSED SITE ACCESS JUNCTION WITH VISIBILITY SPLAYS

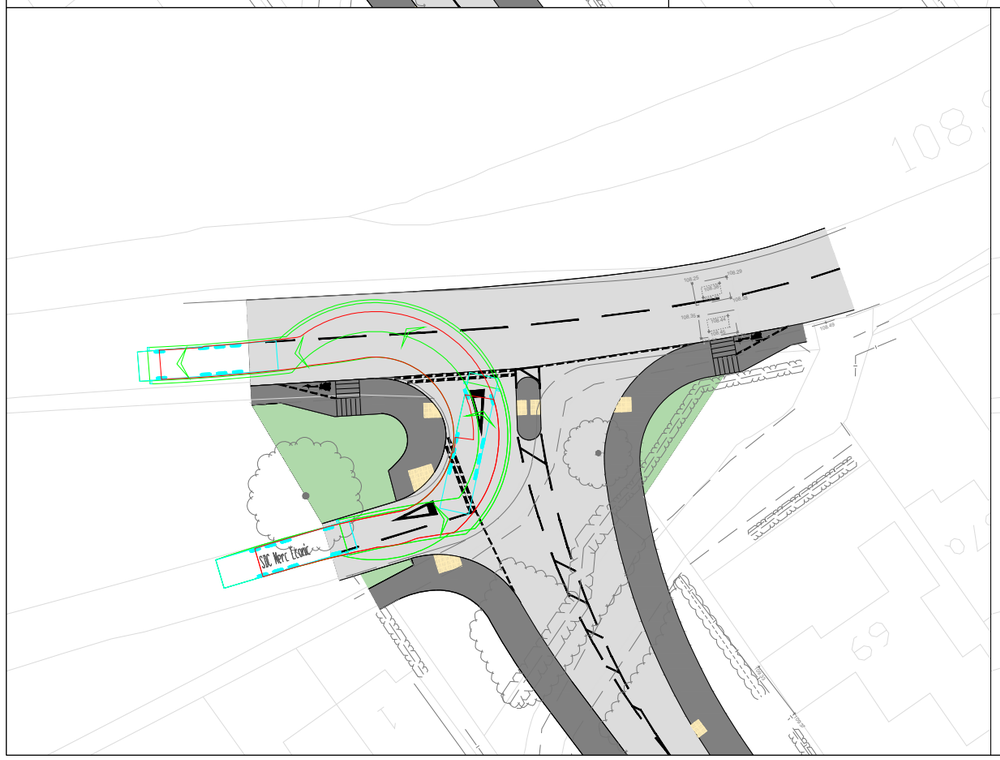
DRAWN	AUTHORISED	SCALE	SHEET SIZE	DATE
JP	GM	1:500	A3	26.05.21

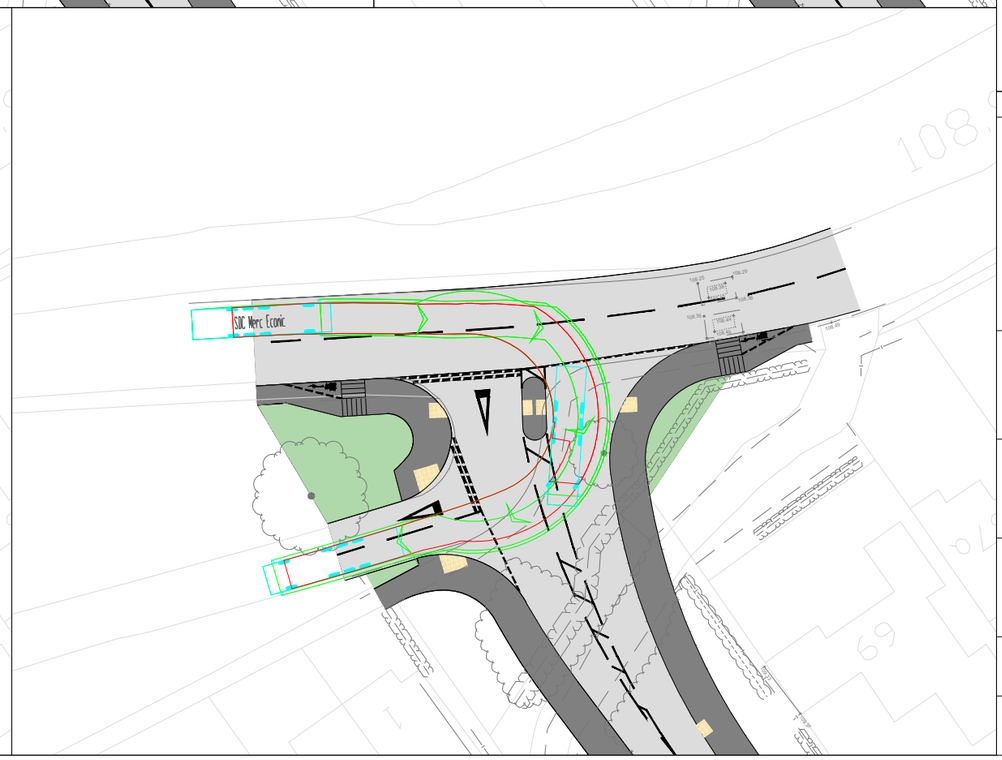
PROJECT NO.	DRAWING NO.	REV
T21542	001	C



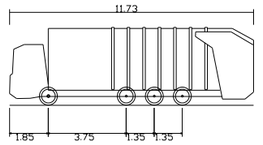




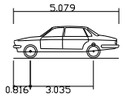




1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.



SDC Merc Econic	
Overall Length	11.730m
Overall Width	2.490m
Overall Body Height	3.749m
Min Body Ground Clearance	0.302m
Track Width	2.490m
Lock to lock time	4.00s
Max Steering Angle (Virtual)	33.00°



Large Car (2006)	
Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.900m

REV	DESCRIPTION	DATE	BY	AUTH
C	ADDITION OF 3.0M WIDE SHARED FOOTWAY/CYCLEWAY AND TIED TO TOPO SURVEY.	12.06.25	MJ	JP
B	MINOR AMENDMENTS FOLLOWING STAGE 1 ROAD SAFETY AUDIT	29.06.23	JC	JP
A	VEHICLE SWEPT PATHS UPDATED USING MERCEDES ECONIC REFUSE VEHICLE	14.06.23	JC	JP

Hub Transport Planning Ltd
Radclyffe House
66/68 Hagley Road
Edgbaston
Birmingham
West Midlands
B16 8PF

T : 0121 454 5530

CLIENT
RICHBOROUGH

PROJECT
CLIFTON UPON DUNSMORE

TITLE
PROPOSED SITE ACCESS JUNCTION SWEPT PATH ANALYSIS

DRAWN	AUTHORISED	SCALE	SHEET SIZE	DATE
JC	JP	1:500	A3	04.02.22

PROJECT NO.	DRAWING NO.	REV
T21542	002	C

Appendix A

WCC Consultation Response to TASR

Your ref:
My ref: R460

Communities

PO Box 43
Shire Hall
Warwick
CV34 4SX

Tel: (01926) 476974
Fax: (01926) 412641
johnglendinning@warwickshire.gov.uk
www.warwickshire.gov.uk

James Parker
Hub Transport Planning Ltd
Radcliffe House
Hagley Road
Birmingham
B16 8PF

(By Email)

31st August 2021

Dear Mr Parker,

PROPOSAL: Residential development of up to 180 dwellings.
LOCATION: Land south and east of Rugby Road, Clifton-upon-Dunsmore.

Warwickshire County Council, hereby known as the 'Highway Authority', has undertaken assessment of the above proposal, including a site visit on Friday 13th August 2021. Our comments are as follows:

The application site is accessed from the public highway C213 Rugby Road, a single carriageway road with a speed limit of 30mph.

Trip generation / distribution / modelling issues:

The Highway Authority has reviewed Transport Assessment Scoping Note (TASN) reference T21542. A note is attached in relation to the methodological approach advised with regard to trip generation, distribution and modelling matters.

Non-motorised transport:

With regard to walking and cycling, it is noted that Table 2 of the TASN does not include access to the nearest health centre or secondary school, both of which are over 2km from the site, beyond a comfortable walking distance. It is however considered that they are likely to be within a reasonable cycling distance, as are many locations of employment and leisure.

Whilst the TASR suggests that 'footways… on the southern side of Rugby Road… are continuous and of sufficient width' and 'the local area is considered suitable for on-road cycling', the Highway Authority has concerns with regard to some aspects of the existing walking and cycling infrastructure in the vicinity of the site and likely to be used by residents of the proposed development:

Working for Warwickshire

The footways to the south-west of the site on the C213 in the direction of Rugby are variable in width, with the width constrained at the locations of the disused railway bridge and canal bridge, and observations suggest that footway parking affects the usable width of the footway in other locations along this route variably throughout the day. The footway in this direction is also only continuous by virtue of crossing the carriageway, however it is unclear whether a suitable and safe facility exists to do so.

Given the gradient and volume of traffic on the C213 in the direction of Rugby, the Highway Authority also has concerns as to whether this would be a suitable section of road to encourage additional on-road cycling. The constraining factors of existing bridge infrastructure and adopted highway widths as discussed in relation to walking may lead to difficulty in providing improvements to modern standards.

The above notwithstanding, early work on the emerging Warwickshire Local Cycling and Walking Infrastructure Plan has identified potential for cycle route improvements to routes where the proposed development would be likely to generate demand for travel. These include:

- A potential cycle route along C213 Clifton Road between Houlton Way and town centre. (This route is subject to a forthcoming review involving SUSTRANS).
- A potential cycle route along D3114 Butler's Leap.
- Walking and cycling 'park connector routes' through Whinfield Park, and links between Lower Hilmorton Road/Lansdowne Road (Eastlands Primary School)/Fleet Crescent. (These routes are also being promoted by Rugby Borough Council).

Further to the above potential schemes within the highway, it is advised that the applicant could investigate the potential for further cycle route improvements off the highway should land ownership allow or should the applicant be able to negotiate an agreement with the appropriate landowner(s) for their construction. Potential links are described below, and indicated on the appended plan along with the highway routes:

- A short section of path from the south of the new development onto the Houlton Way cycle track, to enable safe access, avoiding the narrow footways, pavement parking and traffic on Rugby Road.
- A short section of path from the north of the new development to safely connect with Shuttleworth Road/ South Road (alternatively a longer link across the recreation ground to Main Street would link to the local primary school)

The above issues should be explored in the TA, which should make recommendations with regard to the appropriateness of any walking and cycling infrastructure and improvements, and should be included within the brief of any Road Safety Audit (RSA) work to be undertaken. As per the considerations below of the access junction, it is advised that any audit brief(s) should be agreed beforehand with the Highway Authority.

Public transport:

It is advised that the Highway Authority will be likely to seek improvement to the existing pair of bus stops approximately 100 metres east of the proposed site access junction on C213 Rugby Road as part of S278 works or S106 contributions or a combination of both, and that S106 contribution to improved bus services may also be requested. I am awaiting comments from colleagues dealing with public transport matters, and will provide an update to you in due course.

Proposed access arrangements:

The Highway Authority has significant initial concerns in relation to the design of the proposed access junction, as set out below:

- The proposal indicates a compound form of junction, with D3116 Newall Close retained as a minor arm from the site access road, which would itself be a minor arm of the junction from C213 Rugby Road. The Highway Authority advises that a minimum clearance of 15.0 metres should be provided between the nearest side of a vehicular access on the major road and the Give Way line at any adjacent junction with the minor road/side road. This does not appear to be possible and is a concern for multiple reasons, including:
- Road safety concerns as vehicles may not be able to adequately indicate their intention to perform a right-turn manoeuvre immediately after turning into the site from Rugby Road.
- Concerns over swept paths, particularly for large vehicles. The Highway Authority advises that the junctions should be spaced appropriately to ensure that the largest proposed vehicle, when egressing the retained Newall Close minor arm, can straighten up before turning onto Rugby Road and vice versa.
- The retained Newall Close minor arm of the junction has a carriageway width of 4.5 metres. The Highway Authority advises that the carriageway should have a minimum width of 5.0 metres, or greater if required after appraisal of the swept path analyses. This widening is likely to further exacerbate the junction spacing issues discussed above.
- The footway on Rugby Road west of the proposed access road would not continue into the site, so pedestrians on the west side of the access road would have to either cross the access road twice or walk via the existing footways on Newall Close in order to walk toward Rugby, a deviation from the pedestrian desire line. It is recommended that this arrangement should be revisited.

It is advised at present that the junction arrangements as set out in the TASN would be a matter of objection from the Highway Authority, and that significant improvement is likely to be required for the junction to be deemed acceptable. Comprehensive swept path analysis will be required including the largest vehicles such as refuse collection and fire tenders likely to use the proposed junction. It is advised that the design should be improved prior to RSA, and that a Stage 1 RSA will subsequently be required for submission at planning stage, with the audit brief to be agreed beforehand with the Highway Authority.

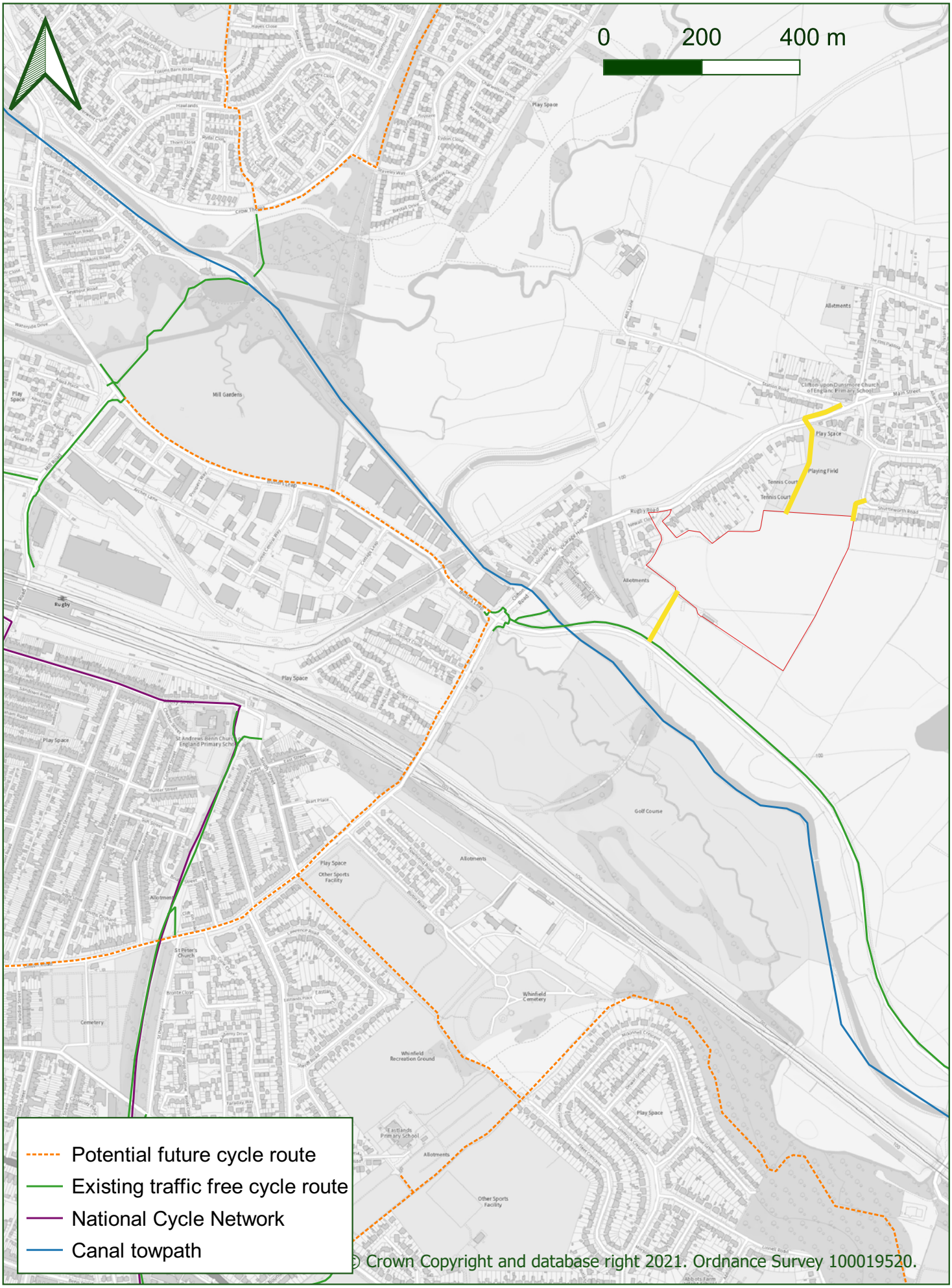
Summary:

At present the Highway Authority has concerns with regard to several aspects of the proposal, and it is advised that these should be resolved prior to the submission of any planning application for the proposed development.

Yours sincerely,

John Glendinning

John Glendinning
Development Group



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LCWIP: Clifton on Dunsmore connections

Date: 20/08/2021 Contact: 01926 413950 alisonkennedy@warwickshire.gov.uk

Warwickshire County Council

Note for Hub Transport Planning Ltd
Lands at Clifton-upon-Dunsmore
WCC Transport Planning
24/08/2021

This note is presented as a response for the Transport Assessment Scoping Report submitted by Hub Transport Planning Ltd in representation of Richborough Estates for the proposed residential development at land south of Clifton-upon-Dunsmore. This note should be read along the WCC Modelling Protocol and Advice Notes which can be found in:

https://www.warwickshire.gov.uk/modelling-surveys/traffic-modelling-development-assessments/1

1. **Trip Rates**

   Please resubmit considering the following comments:

   - Hourly vehicle trip generation should be presented for the full AM (7 to 10 hrs) and PM (16 to 19 hrs) periods to analyse the full impact of the development during pre-peak, peak and post-peak periods.
   - Data Range cannot include Covid-19 period. Please check warning on TRICS.
   - Data should be presented for neutral weekdays (Tue – Thu) excluding Mon/Fri data.
   - Please justify any other assumptions (these can be included):
     - Selection of sites between 50 and 300 dwellings,
     - Not including Population < 1 Mile: 1,000 or Less,
     - Car ownership > 1.0.
   - Please refer to our Modelling Protocol for further guidance.

2. **Trip distribution**

   Trip distribution should be done using the MND as indicated in WCC Modelling Protocol, please submit your request for the MND in our portal:
   https://www.warwickshire.gov.uk/modelling-surveys

   Please consult WCC Modelling Protocol Advice Note 005 – Mobile Network Data for further guidance.

3. **Modelling Scenarios**

   As the development exceeds the 6-hour trip generation threshold and it is located in a sensitive area, WCC will require use of Rugby Wide Area (RWA) S-Paramics model for Microsimulation. The Modelling Scenarios must include:

   - 2026 Reference Case
   - 2026 Reference Case + Development
   - 2031 Reference Case

- 2031 Reference Case + Development
- 2031 Local Plan
- 2031 Local Plan + Development

Please consult WCC Modelling Protocol Advice Note 002 – Expected Model Scenarios for further guidance.

Please apply for a Modelling Traffic Licence within WCC Traffic Modelling webpage upon agreement of the assumptions. Further information on fees and the Licence Agreement can be found in WCC Traffic modelling and surveys webpage:
https://www.warwickshire.gov.uk/modelling-surveys

4. Results and Assessment

Results must be presented according to WCC Modelling Protocol Advice Note 003 – Model Analysis and Reporting.

5. Further Considerations

The TA needs to consider development impact at the St. Thomas Cross junction Newton Manor Lane/Newton Road to the north of Clifton village in terms of capacity and safety. This junction which is included in the RWA model is of local concern and likely to become much busier due to major committed developments at Houlton and DIRFT III.

In addition to the S-Paramics RWA model assessment, LinSig assessment will be required at the junctions listed below for the scenarios listed in Section 3 above using flow outputs from the S-Paramics model (using either 'demand flows' or 'modelled flows plus end queues' whichever is highest). WCC has approved LinSig models for these junctions which may be purchased from WCC Traffic Control and Information Systems (TCIS) on request.

- Butlers Leap/Clifton Road/Houlton Way (4 arm signalised junction)
- Hillmorton Lane/Houlton Way (4 arm signalised junction)
- The Kent/Hillmorton Lane (shuttle signals)

Appendix B

Modelling Briefing Note

Technical Note 1

Floor 1B
4 Temple Row
Birmingham
B2 5HG

Project Number:	T25501
Project:	Clifton upon Dunsmore
Title:	Modelling Briefing Note
Date:	23rd January 2025
Prepared By:	Matt Johnson
Revision:	

Background

1.1 Hub Transport Planning has been commissioned by Richborough to provide transport advice for a proposed application to deliver up to 180 residential dwellings on land to the south of Rugby Road, Clifton upon Dunsmore.

1.2 Following submission of our Transport Assessment Scoping Report (TASR), the consultation response from Warwickshire County Council (WCC) requested additional traffic modelling data to feed into the Rugby Wide Area (RWA) S-Paramics model. Specifically, the following information on trip rates was requested:

- Vehicle trip rates and trip generation for the AM (07:00-10:00) and PM (16:00-19:00) periods to analyse the full impact of the development during pre-peak, peak and post-peak periods.
- Data range to exclude Covid-19 periods.
- Data to be presented for neutral weekdays, Tuesday to Thursday, thus excluding Monday and Friday surveys.
- Include any assumptions on parameters used.

1.3 The full response from WCC is included at **Appendix A**.

1.4 This note sets out the TRICS assessment, as per WCC's request, as well as the proposed approach to the next stage following agreement with WCC.

TRICS Assessment and Trip Generation

1.5 As requested, we have undertaken a TRICS assessment in line with the WCC Modelling Protocol Advice Note 000 – Model Licensing (Last updated: October 2023), using the latest TRICS database (7.11.4).

1.6 The WCC advice note requests that any TRICS assessment work should consider the guidance presented within the WCC Modelling Protocol. In addition to the requests outlined within the modelling protocol, the assessment has also been undertaken in accordance with the TRICS Good Practice Guidance.

1.7 Given the time that has passed since the initial TRICS assessment presented in the TASR, a more up to date assessment has been undertaken as part of this note.

1.8 The full TRICS output is provided at **Appendix B**.

1.9 The parameters and assumptions used for the TRICS assessment are as follows:

- Sites from Great Britain only (excluding Greater London and Northern Ireland).

- Selected Locations – Suburban Area, Edge of Town.
- No. Dwellings Range: 50-300 (Average: 181).
- Population above 5 miles: all sites below 250,000.
- Tuesday – Thursday (Monday, Friday and weekends excluded).
- Date Range: 01/01/16 – 18/09/2024.
- All surveys undertaken during the Covid-19 lockdown periods have been removed.

1.10 A high-level review of the 2021 Census dataset 'No. of usual residents in households and communal establishments' (population) at the MSOA level indicates that the population within roughly five miles of the site is under 250,000 people, hence all survey sites above this threshold have been removed. In total, this only removed three sites.

1.11 Similarly, a high-level analysis of the 2021 Census dataset 'Car and Van availability' shows that there is a mix of car ownership within MSOAs within five miles of the site, including households with no cars or vans. On that basis, all available surveys were included

1.12 The total vehicular trip generation calculated from TRICS for the midweek period is presented in **Table 1** and **Table 2** for the highway network peak hours and 6-hour model periods, respectively.

Table 1: Trip Generation (Midweek AM & PM Peak Hour) - 180 Dwellings

Peak Period	Trip Rate (per dwelling)		Trips		Total
	In	Out	In	Out	
AM (08:00-09:00)	0.146	0.361	26	65	**91**
PM (17:00-18:00)	0.331	0.158	60	28	**88**

N.B: Figures subject to rounding

Table 2: Trip Generation (Midweek AM & PM Peak Periods 3-Hour) - 180 Dwellings

Peak Period	Trip Rate (per dwelling)		Trips		Total
	In	Out	In	Out	
AM (07:00-10:00)	0.373	0.828	67	149	**216**
PM (16:00-19:00)	0.867	0.475	156	86	**242**

N.B: Figures subject to rounding

1.13 As can be seen, there is forecast to be a total of 458 vehicle trips during the Midweek 6-hour period (07:00-10:00 & 16:00-19:00), meaning the proposed development would fall within Model License Fee Band A – "*A development that generates fewer than 850 trips*".

WCC Local Plan Trip Rates and Trip Generation

1.14 From previous experience of working with WCC, we are aware of typical 'per dwelling' residential trip rates that are included within Table 7 of the 'Strategic Transport Assessment Modelling Analysis and Overview' Document (2016), produced in combination with Rugby Borough Council, for the total 6-hour model periods.

1.15 These trip rates are typically used as a consistent forecasting method for each Local Plan option for residential sites.

1.16 Notwithstanding the TRICS assessment presented within this note, a trip generation assessment for the 6-hour model period using the WCC residential trip rates has been undertaken and is summarised in **Table 3**, along with the net difference to the TRICS assessment.

Table 3: WCC Trip Generation (Midweek AM & PM Peak Periods 3-Hour) - 180 Dwellings

Peak Period	Trip Rate (per dwelling)		Trips		Total
	In	Out	In	Out	
AM (07:00-10:00)	0.32	1.03	58	185	**243**
TRICS Net Difference	**-0.053**	**+0.202**	**-8**	**+30**	**+27**
PM (16:00-19:00)	1.19	0.34	214	61	**275**
TRICS Net Difference	**+0.323**	**-0.135**	**+48**	**-20**	**+34**

N.B: Figures subject to rounding

1.17 **Table 3** demonstrates that the use of the WCC Local Plan trip rates creates a larger trip generation for each 3-hour AM and PM model period equating to a total of 518 vehicular trips, roughly 61 additional trips, over the total 6-hour period.

1.18 Even with the use of the WCC local plan trip rates, the total vehicular trips generated would still fall within the Model License Fee Band A.

Next Steps

1.19 We will discuss the above trip rates and subsequent trip generation with WCC to agree the appropriate trip generation for modelling assessment in due course.

1.20 Following confirmation of trip rates and trip generation, we will commission the WCC model and obtain the Mobile Network Data for distribution purposes, as per the modelling protocol outlined within WCC's response in August 2021.

1.21 We acknowledge the consideration of potential local junction assessments for the modelling scenarios included within the (RWA) S-Paramics model. We will review the initial flow outputs from the model and confirm with WCC the requirements for specific junction assessments as part of the subsequent Transport Assessment report.

Appendix A

WCC TASR Response (24/08/2021)

Note for Hub Transport Planning Ltd
Lands at Clifton-upon-Dunsmore
WCC Transport Planning
24/08/2021

This note is presented as a response for the Transport Assessment Scoping Report submitted by Hub Transport Planning Ltd in representation of Richborough Estates for the proposed residential development at land south of Clifton-upon-Dunsmore. This note should be read along the WCC Modelling Protocol and Advice Notes which can be found in:

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- Hillmorton Lane/Houlton Way (4 arm signalised junction)
- The Kent/Hillmorton Lane (shuttle signals)

Appendix B

TRICS Output

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	CT	CENTRAL BEDFORDSHIRE	1 days
	ES	EAST SUSSEX	4 days
	HC	HAMPSHIRE	4 days
	HF	HERTFORDSHIRE	1 days
	KC	KENT	3 days
	SC	SURREY	2 days
	WS	WEST SUSSEX	5 days
03	SOUTH WEST		
	DC	DORSET	1 days
04	EAST ANGLIA		
	NF	NORFOLK	11 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days
09	NORTH		
	IM	ISLE OF MAN	1 days
11	SCOTLAND		
	AS	ABERDEENSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 73 to 300 (units:)
Range Selected by User: 65 to 300 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 18/09/24

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	16 days
Wednesday	10 days
Thursday	9 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	31 days
Directional ATC Count	4 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	34

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	30
Village	1
Out of Town	2
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	7 days - Selected
Servicing vehicles Excluded	56 days - Selected

Secondary Filtering selection:

Use Class:

C3	35 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	5 days
5,001 to 10,000	10 days
10,001 to 15,000	12 days
15,001 to 20,000	6 days
20,001 to 25,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	8 days
25,001 to 50,000	6 days
50,001 to 75,000	6 days
75,001 to 100,000	4 days
100,001 to 125,000	3 days
125,001 to 250,000	8 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	30 days
1.6 to 2.0	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	30 days
No	5 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	35 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 AS-03-A-02 MIXED HOUSES ABERDEENSHIRE
FARROCHIE ROAD
STONEHAVEN

Edge of Town
Residential Zone
Total No of Dwellings: 131
Survey date: WEDNESDAY *20/04/22* *Survey Type: MANUAL*

2 CT-03-A-03 MIXED HOUSES CENTRAL BEDFORDSHIRE
ARLESEY ROAD
STOTFOLD

Edge of Town
Residential Zone
Total No of Dwellings: 73
Survey date: TUESDAY *27/06/23* *Survey Type: MANUAL*

3 DC-03-A-11 MIXED HOUSES DORSET
A350
SHAFTESBURY

Edge of Town
No Sub Category
Total No of Dwellings: 141
Survey date: TUESDAY *31/10/23* *Survey Type: MANUAL*

4 ES-03-A-07 MIXED HOUSES & FLATS EAST SUSSEX
NEW ROAD
HAILSHAM
HELLINGLY
Edge of Town
Residential Zone
Total No of Dwellings: 91
Survey date: THURSDAY *07/11/19* *Survey Type: MANUAL*

5 ES-03-A-08 MIXED HOUSES & FLATS EAST SUSSEX
WRESTWOOD ROAD
BEXHILL

Edge of Town
Residential Zone
Total No of Dwellings: 110
Survey date: WEDNESDAY *12/10/22* *Survey Type: MANUAL*

6 ES-03-A-10 MIXED HOUSES & FLATS EAST SUSSEX
WATERGATE
BEXHILL-ON-SEA

Edge of Town
Residential Zone
Total No of Dwellings: 139
Survey date: THURSDAY *28/09/23* *Survey Type: MANUAL*

7 ES-03-A-14 MIXED HOUSES & FLATS EAST SUSSEX
RATTLE ROAD
NEAR EASTBOURNE
STONE CROSS
Edge of Town
Residential Zone
Total No of Dwellings: 120
Survey date: TUESDAY *30/04/24* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 HC-03-A-27 MIXED HOUSES HAMPSHIRE
DAIRY ROAD
ANDOVER

Edge of Town
Residential Zone
Total No of Dwellings: 73
Survey date: TUESDAY *16/11/21* *Survey Type: MANUAL*

9 HC-03-A-35 MIXED HOUSES & FLATS HAMPSHIRE
EAGLE AVENUE
WATERLOOVILLE
LOVEDEAN
Edge of Town
Residential Zone
Total No of Dwellings: 289
Survey date: TUESDAY *31/10/23* *Survey Type: MANUAL*

10 HC-03-A-36 MIXED HOUSES & FLATS HAMPSHIRE
HAVANT ROAD
EMSWORTH

Edge of Town
Residential Zone
Total No of Dwellings: 145
Survey date: TUESDAY *12/09/23* *Survey Type: MANUAL*

11 HC-03-A-38 MIXED HOUSES & FLATS HAMPSHIRE
CROW LANE
RINGWOOD
CROW
Edge of Town
Residential Zone
Total No of Dwellings: 195
Survey date: WEDNESDAY *26/06/24* *Survey Type: MANUAL*

12 HF-03-A-06 MIXED HOUSES & FLATS HERTFORDSHIRE
A505
ROYSTON

Edge of Town
Residential Zone
Total No of Dwellings: 180
Survey date: TUESDAY *28/11/23* *Survey Type: MANUAL*

13 IM-03-A-06 MIXED HOUSES ISLE OF MAN
MOORAGH PROMENADE
RAMSEY

Edge of Town
Residential Zone
Total No of Dwellings: 129
Survey date: THURSDAY *23/05/24* *Survey Type: MANUAL*

14 KC-03-A-07 MIXED HOUSES KENT
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total No of Dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

15 KC-03-A-10 MIXED HOUSES KENT
HEADCORN ROAD
STAPLEHURST

Edge of Town
Residential Zone
Total No of Dwellings: 106
Survey date: TUESDAY *09/05/23* *Survey Type: MANUAL*

16 KC-03-A-12 MIXED HOUSES & FLATS KENT
WESTERN LINK
FAVERSHAM
DAVINGTON
Edge of Town
Residential Zone
Total No of Dwellings: 186
Survey date: TUESDAY *19/09/23* *Survey Type: MANUAL*

17 NF-03-A-07 MIXED HOUSES & FLATS NORFOLK
SILFIELD ROAD
WYMONDHAM

Edge of Town
Out of Town
Total No of Dwellings: 297
Survey date: THURSDAY *19/09/19* *Survey Type: DIRECTIONAL ATC COUNT*

18 NF-03-A-13 MIXED HOUSES NORFOLK
BEAUFORT WAY
GREAT YARMOUTH
BRADWELL
Edge of Town
Residential Zone
Total No of Dwellings: 198
Survey date: TUESDAY *11/09/18* *Survey Type: DIRECTIONAL ATC COUNT*

19 NF-03-A-30 MIXED HOUSES NORFOLK
BRANDON ROAD
SWAFFHAM

Edge of Town
Residential Zone
Total No of Dwellings: 266
Survey date: THURSDAY *23/09/21* *Survey Type: MANUAL*

20 NF-03-A-32 MIXED HOUSES & FLATS NORFOLK
HUNSTANTON ROAD
HUNSTANTON

Edge of Town
Residential Zone
Total No of Dwellings: 164
Survey date: WEDNESDAY *21/09/22* *Survey Type: DIRECTIONAL ATC COUNT*

21 NF-03-A-33 MIXED HOUSES NORFOLK
LONDON ROAD
ATTLEBOROUGH

Edge of Town
Residential Zone
Total No of Dwellings: 143
Survey date: THURSDAY *29/09/22* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

22 NF-03-A-34 MIXED HOUSES NORFOLK
NORWICH ROAD
SWAFFHAM

Edge of Town
Out of Town
Total No of Dwellings: 80
Survey date: TUESDAY *27/09/22* *Survey Type: MANUAL*

23 NF-03-A-35 MIXED HOUSES & FLATS NORFOLK
REPTON AVENUE
NORWICH

Edge of Town
Residential Zone
Total No of Dwellings: 116
Survey date: WEDNESDAY *28/09/22* *Survey Type: MANUAL*

24 NF-03-A-36 MIXED HOUSES NORFOLK
LONDON ROAD
WYMONDHAM

Edge of Town
No Sub Category
Total No of Dwellings: 75
Survey date: THURSDAY *29/09/22* *Survey Type: MANUAL*

25 NF-03-A-39 MIXED HOUSES NORFOLK
HEATH DRIVE
HOLT

Edge of Town
Residential Zone
Total No of Dwellings: 212
Survey date: TUESDAY *27/09/22* *Survey Type: MANUAL*

26 NF-03-A-47 MIXED HOUSES & FLATS NORFOLK
BURGH ROAD
AYLSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 300
Survey date: WEDNESDAY *21/09/22* *Survey Type: DIRECTIONAL ATC COUNT*

27 NF-03-A-52 MIXED HOUSES NORFOLK
LYNNSPORT WAY
KING'S LYNN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 130
Survey date: TUESDAY *07/11/23* *Survey Type: MANUAL*

28 SC-03-A-11 MIXED HOUSES SURREY
FOLLY HILL
FARNHAM

Edge of Town
Residential Zone
Total No of Dwellings: 96
Survey date: TUESDAY *14/05/24* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

29 SC-03-A-12 MIXED HOUSES & FLATS SURREY
AARONS HILL
GODALMING

Edge of Town
Residential Zone
Total No of Dwellings: 252
Survey date: WEDNESDAY 12/06/24 Survey Type: MANUAL

30 ST-03-A-07 DETACHED & SEMI-DETACHED STAFFORDSHIRE
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total No of Dwellings: 248
Survey date: WEDNESDAY 22/11/17 Survey Type: MANUAL

31 WS-03-A-08 MIXED HOUSES WEST SUSSEX
ROUNDSTONE LANE
ANGMERING

Edge of Town
Residential Zone
Total No of Dwellings: 180
Survey date: THURSDAY 19/04/18 Survey Type: MANUAL

32 WS-03-A-14 MIXED HOUSES WEST SUSSEX
TODDINGTON LANE
LITTLEHAMPTON
WICK
Edge of Town
Residential Zone
Total No of Dwellings: 117
Survey date: WEDNESDAY 20/10/21 Survey Type: MANUAL

33 WS-03-A-22 MIXED HOUSES & FLATS WEST SUSSEX
SHOPWHYKE ROAD
CHICHESTER

Edge of Town
Residential Zone
Total No of Dwellings: 129
Survey date: TUESDAY 19/03/24 Survey Type: MANUAL

34 WS-03-A-23 MIXED HOUSES & FLATS WEST SUSSEX
TURNERS HILL ROAD
EAST GRINSTEAD

Edge of Town
Residential Zone
Total No of Dwellings: 197
Survey date: TUESDAY 14/05/24 Survey Type: MANUAL

35 WS-03-A-24 MIXED HOUSES WEST SUSSEX
MADGWICK LANE
CHICHESTER
WESTHAMPNETT
Edge of Town
Village
Total No of Dwellings: 300
Survey date: THURSDAY 23/05/24 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SF-03-A-09	Covid-19
SF-03-A-10	Covid-19
WS-03-A-13	Covid-19

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	35	168	0.092	35	168	0.302	35	168	0.394
08:00 - 09:00	35	168	0.146	35	168	0.361	35	168	0.507
09:00 - 10:00	35	168	0.135	35	168	0.165	35	168	0.300
10:00 - 11:00	35	168	0.122	35	168	0.146	35	168	0.268
11:00 - 12:00	35	168	0.132	35	168	0.138	35	168	0.270
12:00 - 13:00	35	168	0.148	35	168	0.136	35	168	0.284
13:00 - 14:00	35	168	0.152	35	168	0.149	35	168	0.301
14:00 - 15:00	35	168	0.157	35	168	0.178	35	168	0.335
15:00 - 16:00	35	168	0.270	35	168	0.179	35	168	0.449
16:00 - 17:00	35	168	0.271	35	168	0.175	35	168	0.446
17:00 - 18:00	35	168	0.331	35	168	0.158	35	168	0.489
18:00 - 19:00	35	168	0.265	35	168	0.142	35	168	0.407
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.221			2.229			4.450

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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Parameter summary

Trip rate parameter range selected:	73 - 300 (units:)
Survey date date range:	01/01/16 - 18/09/24
Number of weekdays (Monday-Friday):	37
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	20
Surveys manually removed from selection:	3

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix C

WCC Response to Modelling Briefing Note

From:	Matthew Johnson
To:	Matthew Johnson
Subject:	FW: Clifton upon Dunsmore
Date:	11 February 2025 11:15:44
Attachments:	image002.png
Sensitivity:	Confidential

From: Steve Harrison <steveharrison@warwickshire.gov.uk>
Sent: 03 February 2025 08:00
To: James Parker <James@hubtransportplanning.co.uk>
Subject: RE: Clifton upon Dunsmore
Sensitivity: Confidential

OFFICIAL - Sensitive

Morning James
Further to previous email, please see WCC Transport Planning Team *comments and* ***requests*** in respect of the traffic modelling for this proposed development.

Kind Regards

Steve

From: Paul Kinsella paulkinsella@warwickshire.gov.uk
Sent: 31 January 2025 09:35
Subject: Land south and east of Rugby Road, Clifton-upon-Dunsmore

OFFICIAL - Sensitive

Hi Steve,

I've read through the technical note provided by Hub for this development at Clifton, which focuses mainly on the trip generation. They have used TRICS to estimate trip generation, based on reasonable parameters. I've compared these to trip rates that we derived from recent surveys of Coton Park, as a local proxy site, and the TRICS rates are comparable though slightly higher. I'm happy in this case that TRICS trip rates are robust and can be used for this assessment.

They have proposed using our Mobile Network Data (MND) for trip distribution, which we agree with. A suitable proxy LSOA for the site should be identified for the MND analysis, I would suggest Rugby 014D (LSOA code E01031129) which covers the whole of Clifton-upon-Dunsmore and the proposed site. MND can be requested here:
https://forms.office.com/Pages/ResponsePage.aspx?id=BqqwiCdZu0uok4nMJxOsgnaRk9B4sFZJsaBJHA54qpRUMENPRzU2Slg2SlE1NVVGNkhTMVIwSUJSRiQlQCN0PWcu

They have proposed using the Rugby Wide Area (RWA) Paramics model for assessment and this is agreed. However, our RWA model is in the process of being updated and we expect the new model to be ready for use by the end of March this year. Our preference would be for them to use the new model when it is ready. They can apply for a model licence here:

https://forms.office.com/Pages/ResponsePage.aspx?id=BqqwiCdZu0uok4nMJxOsghVsmhB5IilDsMTrwrAdVcBUREY5MEc5TjQ3WERFRURWTE1QQ1paWTJYWSQlQCN0PWcu

Based on the trip generation presented the licence fee would fall into Band A.

Any areas of significant impact identified through the Paramics modelling may require further assessment such as isolated junction modelling or confidence interval analysis. However, as a minimum, we request that the following junctions are assessed:

- *Butlers Leap/Clifton Road/Houlton Way (4 arm signalised junction)*
- *Hillmorton Lane/Houlton Way (4 arm signalised junction)*
- *The Kent/Hillmorton Lane (shuttle signals)*
- *Newton Road/Newton Manor Lane (St Thomas Cross junction)*
- *Newall Close/Rugby Road*

I understand that TCIS have Linsig models of both the Butlers Leap and Hillmorton Lane junctions and we would prefer these to be used, so Gafoor Din should be contacted for access to these models. There may also be a model of the The Kent shuttle signals available.

*With regards to access, I understand that there will be a single vehicular access onto Newall Close, which then forms a priority junction with Rugby Road? I initially thought there was to be another access onto Houlton Way, but this may only be pedestrian access**. I would be grateful if the applicant could confirm the access arrangements.***

Kind regards,

Paul

Paul Kinsella
Principal Transport Planner
Transport and Highways

From: James Parker <James@hubtransportplanning.co.uk>
Sent: 24 January 2025 12:43
To: Steve Harrison <steveharrison@warwickshire.gov.uk>
Cc: Matthew Johnson <Matt@hubtransportplanning.co.uk>
Subject: Clifton upon Dunsmore

Hi Steve,

In respect of the Clifton upon Dunsmore site, I have attached your previous pre-app response in regards the access and the RSA (which I have attached to assist you) – James Corbett is no longer with us, so please just reply to me and Matt (copied in) – thanks.

I have also attached our RSA and the updated site access drawing to assist you (as discussed) – the drawing references will change for the eventual application, simply because the original project is now four years old, so we will simply update to a 2025

project (just to let you know) – it will be the same design in principle as that shown here though.

We are now at the stage of wanting to get the modelling underway, so have prepared the modelling scoping note which I have also attached – if you could make sure this is forwarded to the relevant officer/team, or advise who this needs to be sent to, we can get this agreed in due course and the modelling under way.

Many thanks.

Regards,

James Parker
Director
DD. 0121 661 4870 **M.** 07792 970487 **W.** www.hubtransportplanning.co.uk

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Appendix D

Road Safety Audit (Stage 1)

LAND REAR OF NEWALL CLOSE, CLIFTON-UPON-DUNSMORE, WARWICKSHIRE

PROPOSED HIGHWAY WORKS

STAGE 1

ROAD SAFETY AUDIT REPORT

REQUESTED BY:
HUB TRANSPORT PLANNING

JUNE 2023

RKS Associates

Project:	Land Rear of Newall Close, Clifton-upon-Dunsmore, Warwickshire Proposed Highway Works
Client:	Hub Transport Planning
Document:	Stage 1 Road Safety Audit
RKS Associates Ref:	VRP1575 - RSA 1
Issue date:	19th June 2023
Status:	Final
Authorised by:	VP/WP

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RKS Associates

11 Falconer Road
Bushey
Hertfordshire
WD23 3AQ

CONTENTS

Appendices

1 INTRODUCTION

1.1 This report results from a Stage 1 Road Safety Audit carried out on the proposed highway works associated with a residential development on land to the rear of Newall Close, Clifton-upon-Dunsmore in Warwickshire. The proposed development comprises of 180 residential dwellings of mixed tenure.

1.2 The highway works include the provision of a new access road serving the development, which has a 5.5m wide carriageway and a continuous 2m footway along either side of the carriageway. The highway works also include amendments to the Newall Close/Rugby Road junction, which involve widening and reconfiguring the existing junction and the introduction of a central refuge island incorporating pedestrian crossing facilities. The proposed layout will result in the existing access serving residential properties on Newall Close (cul-de-sac) forming a minor arm of a priority junction with the proposed access road being the major arm.

1.3 Rugby Road in the vicinity of Newall Close is a single two-way carriageway aligned in an east to west direction with a grass verge along the northern side and continuous pedestrian footway along its southern side. The carriageway is lit and it is subject to 30mph speed limit with traffic calming features in the form of speed cushions located along its length. Newall Close is a two-way road, it is a cul-de-sac serving residential properties and it connects with Rugby Road at a simple priority junction where Newall Close is the minor arm.

1.4 Hub Transport Planning has supplied the following information upon which this Stage 1 RSA is based:

- Stage 1 Road Safety Audit Brief prepared by Hub Transport Planning Reference: T21542 containing traffic surveys and personal injury collision data;
- Hub Transport Planning Drawing Number: T21542-001 Revision A – Proposed Site Access Layout with Visibility Splays; and
- Hub Transport Planning Drawing Number: T21542-002 Revision A – Proposed Site Access Swept Path Analysis.

1.5 The main parties to this Road Safety Audit include the following:

Road Safety Audit Team Leader	Vimal Patel BEng (Hons), GMICE, FIHE, HE Cert Comp, Reg RSA (IHE)
Road Safety Audit Team Member	Wendy Palmer MCIHT, MSoRSA, FIHE, HE Cert Comp
Local Highway Authority	Warwickshire County Council
Design Organisation	Hub Transport Planning

1.6 The Audit was undertaken following examination of the submitted documents, and a site visit undertaken on Thursday 15th June 2023 between the hours of 11am and midday. The weather was sunny with a dry road surface, traffic and pedestrian flows were light and no cyclists were observed travelling along Rugby Road during the site inspection.

Terms of Reference

1.7 The Audit Team is independent of the project design team and has no other involvement with the project. This Stage 1 RSA has been undertaken in accordance with the relevant sections of GG-119, part of the Design Manual for Roads and Bridges (DMRB).

1.8 The Safety Audit Team has examined only matters relating to road safety implications of the scheme and has not verified compliance of the design to any other criteria. The Audit Team has not been made aware of any Departures from Standard. All the problems identified in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and to minimise accident occurrence for all users. The location of the problems identified in this Safety Audit is shown in Appendix A where the reference numbers relate to the problems identified in this report.

1.9 The recommendations in this report are aimed at addressing the identified road safety problems; however, there may be other alternative acceptable ways to overcome a specific problem, when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities. The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit and would encourage the Designer to consult them on this matter.

1.10 The LHA response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the Local Highway Authority on completion.

Traffic Data

1.11 The Road Safety Audit Brief provided by the design engineers contains details of traffic surveys undertaken in February 2023. The traffic surveys indicate that a total of 7 departures and 5 arrivals from Newall Close during the AM and PM peak hours respectively with a maximum of queue length of 1 vehicle. The traffic generation assessment indicates that the proposed development is likely to generate up to 93 and 94 two-way trips during the AM and PM peak periods respectively.

Collision Data

1.12 The Personal Injury Collision (PIC) information from the publicly available collision data contained on the *Crashmap* database (*www.crashmap.co.uk*) contained in the Stage 1 Road Safety Audit Brief indicates that no collisions have occurred along Rugby Road in the vicinity of Newall Close in the 5-year period up to December 2021.

2 ITEMS RAISED AT STAGE 1 ROAD SAFETY AUDIT

2.1 **Problem:**
Summary: Potential hazard and risk of collisions associated with localised flooding
Location: Newall Close/Rugby Road junction

Drainage details have not been provided and it is therefore not possible for the Audit Team to ascertain whether there will be any safety issues associated with surface water drainage. Observations during the site inspection noted that surface water drainage gullies are located along the northern side of Rugby Road in the vicinity of Newall Close junction. The retention of the drainage gullies may cause a hazard particularly for powered two-wheelers and cyclists. Furthermore, the absence of appropriate surface water drainage may lead to localised flooding which may cause loss of control collisions or create a hazard for non-motorised users, particularly during icy conditions.

Recommendation:
Ensure that the detailed design incorporates adequate surface water drainage to mitigate localised flooding/ponding, and that existing surface water drainage is relocated away from the junction.

2.2 **Problem:**
Summary: Potential risk of pedestrian trip/slip/fall injuries
Location: Newall Close cul-de-sac

The proposed uncontrolled pedestrian crossing facility across Newall Close cul-de-sac is set back from its junction with the new access road. There is concern that the natural pedestrian desire line for pedestrians access the proposed development will be across the junction. Consequently, pedestrians crossing at the junction are at greater risk of a trip/fall injury as they negotiate full height kerbs.

Recommendation:
The proposed uncontrolled pedestrian crossing facility across Newall Close cul-de-sac should be relocated closer to the proposed access road junction to accord with the natural pedestrian crossing desire line.

2.3 **Problem:**
Summary: Potential risk of failure to give way collisions
Location: Newall Close cul-de-sac /Development Access Road

The proposed layout results in Newall Close cul-de-sac forming a minor arm of the priority junction with the development access road. The absence of give-way markings on Newall Close cul-de-sac may result in potential collisions associated with vehicles failing to give way to traffic travelling along the access road.

Recommendation:
Ensure that give-way marking are provided on Newall Close cul-de-sac entry onto the proposed development access road.

3 AUDIT TEAM STATEMENT

3.1 We certify that this audit has been carried out in accordance with GG-119 of Design Manual for Roads & Bridges Volume 5 Section 2 - Road Safety Audits. Its sole purpose being to identify features of the scheme that could be removed or modified to improve safety. No member of the Audit Team has been involved in the scheme design.

Audit Team Leader

Vimal Patel
BEng (Hons), GMICE, FIHE, RegRSA (IHE), HE Cert Comp

Signed: 

Date: 19th June 2023

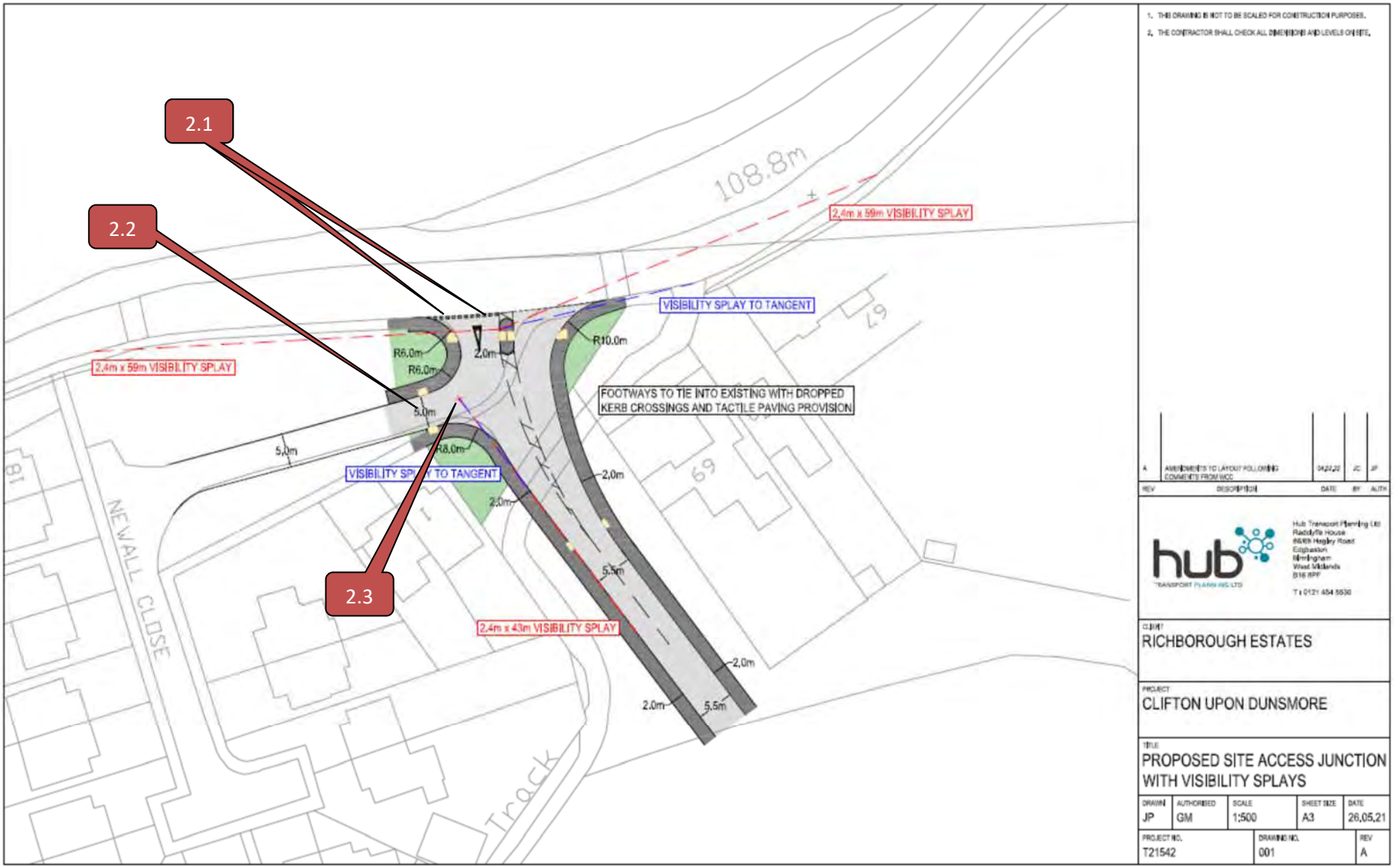
Audit Team Member

Wendy Palmer
MCIHT, MSoRSA, FIHE, HE Cert Comp

Signed: 

Date: 19th June 2023

Appendix A


2.1
2.2
2.3
108.8m
2.4m x 59m VISIBILITY SPLAY
VISIBILITY SPLAY TO TANGENT
R10.0m
R6.0m
R6.0m
2.0m
2.4m x 59m VISIBILITY SPLAY
FOOTWAYS TO TIE INTO EXISTING WITH DROPPED KERB CROSSINGS AND TACTILE PAVING PROVISION
5.0m
5.0m
R8.0m
VISIBILITY SPLAY TO TANGENT
2.0m
2.0m
5.5m
2.4m x 43m VISIBILITY SPLAY
2.0m
2.0m
5.5m
NEWALL CLOSE
Track
49
69
1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.
A AMENDMENTS TO LAYOUT FOLLOWING COMMENTS FROM WCC 04/22/22 JC JP
REV DESCRIPTION DATE BY AUTH
hub
Hub Transport Planning Ltd
Radclyffe House
66/68 Hagley Road
Edgbaston
Birmingham
West Midlands
B16 8PF
T: 0121 454 5530
CLIENT
RICHBOROUGH ESTATES
PROJECT
CLIFTON UPON DUNSMORE
TITLE
PROPOSED SITE ACCESS JUNCTION WITH VISIBILITY SPLAYS
DRAWN JP
AUTHORISED GM
SCALE 1:500
SHEET SIZE A3
DATE 26.05.21
PROJECT NO. T21542
DRAWING NO. 001
REV A

Appendix B

Item No.	Audit Team Recommendation(s)	Designer's Response
2.1	Ensure that the detailed design incorporates adequate surface water drainage to mitigate localised flooding/ponding, and that existing surface water drainage is relocated away from the junction.	Recommendation Accepted. Surface water drainage will be considered at detailed design stage.
2.2	The proposed uncontrolled pedestrian crossing facility across Newall Close cul-de-sac should be relocated closer to the proposed access road junction to accord with the natural pedestrian crossing desire line.	Recommendation accepted. The proposed uncontrolled crossing has been relocated closer to the natural desire line. See **Drawing T21542.001 rev B.**
2.3	Ensure that give-way markings are provided on Newall Close cull-de-sac entry onto the proposed development access road.	Recommendation accepted. Give-way markings have been provided on Newall Close. See **Drawing T21542.001 rev B.**

Designer's Statement:

I certify that I have considered the items that have arisen in the Stage 1 Road Safety Audit Report and my response to its recommendations are set out above.

..... Date:
Designer

Project Sponsor/ Client Organisation Statement:

I accept/do not accept the Designer's Response (please delete as appropriate)

..... Date:

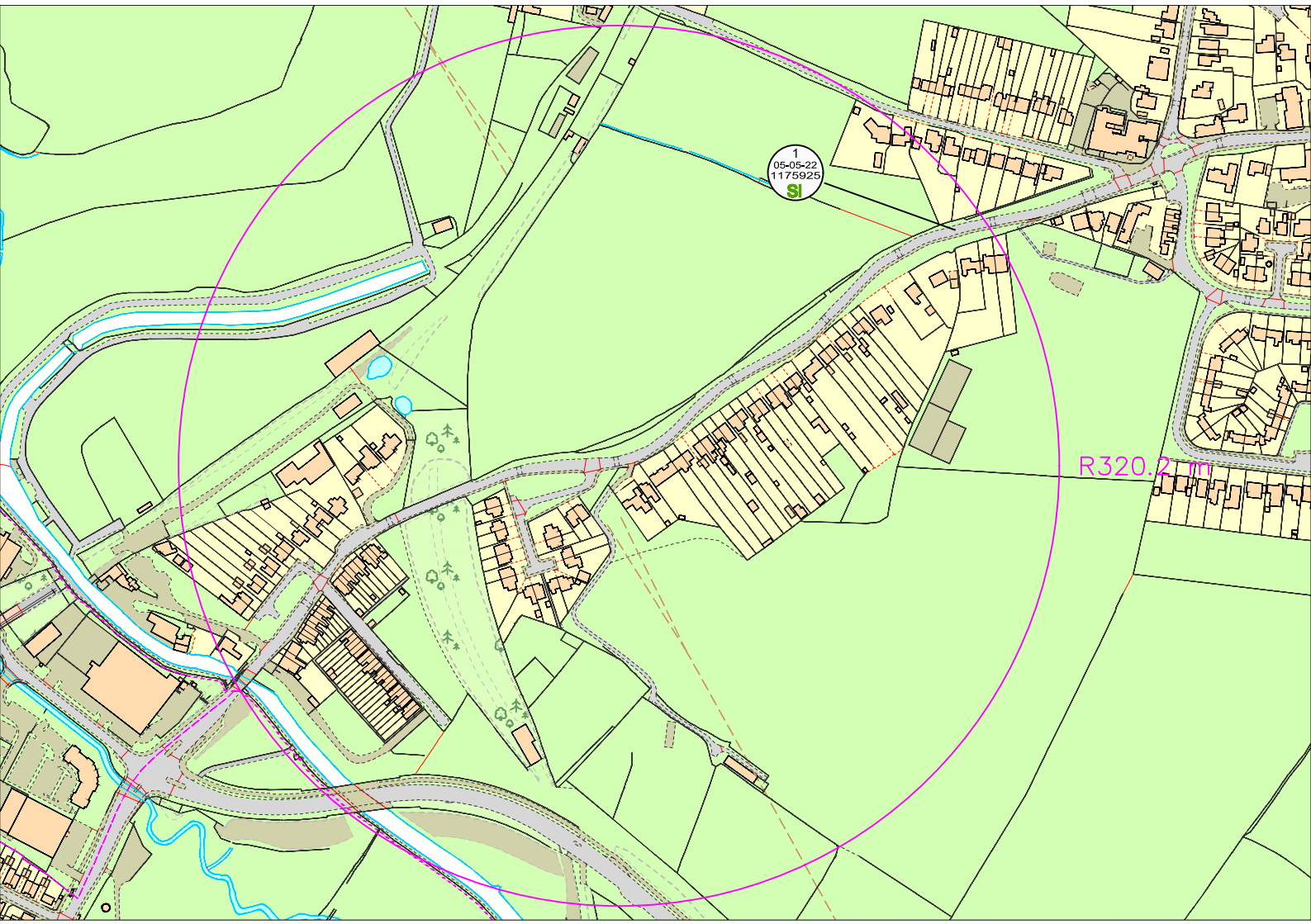
Appendix E

Personal Injury Accident Data

Clifton Upon Dunsmore 01/01/2020 - 14/01/2025
05 May 2022 to 05 May 2022

Report produced: 11/02/2025

Road Safety Intelligence Team
Tel: 01926 412740
Email: rsinfo@warwickshire.gov.uk


1
05-05-22
1175925
SI
R320.2 m

ALL ROAD USERS - ACCIDENTS

Year	Fatal	Serious	Slight	Total
2022	0	0	1	1

Month	Fatal	Serious	Slight	Total
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	1	1
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0

Day	Fatal	Serious	Slight	Total
Sunday	0	0	0	0
Monday	0	0	0	0
Tuesday	0	0	0	0
Wednesday	0	0	0	0
Thursday	0	0	1	1
Friday	0	0	0	0
Saturday	0	0	0	0

Ped Crossing	Fatal	Serious	Slight	Total
Not at crossing	0	0	1	1
Zebra	0	0	0	0
Pelican	0	0	0	0
Ped Phase	0	0	0	0
Footbridge	0	0	0	0
Refuge	0	0	0	0
Unknown	0	0	0	0

Bends (Veh Totals)	Fatal	Serious	Slight	Total
Left Hand Bend	0	0	0	0
Right Hand Bend	0	0	0	0

Time	Fatal	Serious	Slight	Total
0000-0059	0	0	0	0
0100-0159	0	0	0	0
0200-0259	0	0	0	0
0300-0359	0	0	0	0
0400-0459	0	0	0	0
0500-0559	0	0	0	0
0600-0659	0	0	0	0
0700-0759	0	0	0	0
0800-0859	0	0	0	0
0900-0959	0	0	0	0
1000-1059	0	0	0	0
1100-1159	0	0	0	0
1200-1259	0	0	0	0
1300-1359	0	0	1	1
1400-1459	0	0	0	0
1500-1559	0	0	0	0
1600-1659	0	0	0	0
1700-1759	0	0	0	0
1800-1859	0	0	0	0
1900-1959	0	0	0	0
2000-2059	0	0	0	0
2100-2159	0	0	0	0
2200-2259	0	0	0	0
2300-2359	0	0	0	0

Lighting	Fatal	Serious	Slight	Total
Daylight	0	0	1	1
Darkness	0	0	0	0

Weather	Fatal	Serious	Slight	Total
Fine without high winds	0	0	1	1
Raining without high winds	0	0	0	0
Snowing without high winds	0	0	0	0
Fine with high winds	0	0	0	0
Raining with high winds	0	0	0	0
Snowing with high winds	0	0	0	0
Fog or mist - if hazard	0	0	0	0
Other	0	0	0	0
Unknown	0	0	0	0

Road Surface	Fatal	Serious	Slight	Total
Dry	0	0	1	1
Wet/Damp	0	0	0	0
Snow	0	0	0	0
Frost/Ice	0	0	0	0
Flood	0	0	0	0
Unknown	0	0	0	0

District	Fatal	Serious	Slight	Total
Rugby	0	0	1	1

Road Class	Fatal	Serious	Slight	Total
M	0	0	0	0
A(M)	0	0	0	0
A	0	0	0	0
B	0	0	0	0
Other	0	0	1	1

Speed Limit	Fatal	Serious	Slight	Total
20	0	0	0	0
30	0	0	1	1
40	0	0	0	0
50	0	0	0	0
60	0	0	0	0
70	0	0	0	0

Obstruction (Veh Totals)	Fatal	Serious	Slight	Total
Sign/Signal	0	0	0	0
Lamp Post	0	0	0	0
Pole	0	0	0	0
Tree	0	0	0	0
Bus Stop	0	0	0	0
Barrier	0	0	0	0
Other	0	0	0	0

Junction Type	Fatal	Serious	Slight	Total
Not at Junction	0	0	1	1
Roundabout	0	0	0	0
Mini R'about	0	0	0	0
T or Staggered	0	0	0	0
Slip Road	0	0	0	0
Crossroads	0	0	0	0
Multiple Junct	0	0	0	0
Private Drive	0	0	0	0
Other Junction	0	0	0	0
Unknown	0	0	0	0

ALL ROAD USERS - CASUALTIES

Year	Fatal	Serious	Slight	Total
2022	0	0	1	1

Month	Fatal	Serious	Slight	Total
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	1	1
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0

Day	Fatal	Serious	Slight	Total
Sunday	0	0	0	0
Monday	0	0	0	0
Tuesday	0	0	0	0
Wednesday	0	0	0	0
Thursday	0	0	1	1
Friday	0	0	0	0
Saturday	0	0	0	0

Ped Crossing	Fatal	Serious	Slight	Total
Not at crossing	0	0	1	1
Zebra	0	0	0	0
Pelican	0	0	0	0
Ped Phase	0	0	0	0
Footbridge	0	0	0	0
Refuge	0	0	0	0
Unknown	0	0	0	0

Bends	Fatal	Serious	Slight	Total
Left Hand Bend	0	0	0	0
Right Hand Bend	0	0	0	0

Casualty Age	Fatal	Serious	Slight	Total
0 - 5	0	0	0	0
6 - 10	0	0	0	0
11 - 16	0	0	0	0
17 - 25	0	0	0	0
26 - 35	0	0	0	0
36 - 45	0	0	0	0
46 - 55	0	0	1	1
56 - 64	0	0	0	0
65+	0	0	0	0
Unknown	0	0	0	0

Time	Fatal	Serious	Slight	Total
0000-0059	0	0	0	0
0100-0159	0	0	0	0
0200-0259	0	0	0	0
0300-0359	0	0	0	0
0400-0459	0	0	0	0
0500-0559	0	0	0	0
0600-0659	0	0	0	0
0700-0759	0	0	0	0
0800-0859	0	0	0	0
0900-0959	0	0	0	0
1000-1059	0	0	0	0
1100-1159	0	0	0	0
1200-1259	0	0	0	0
1300-1359	0	0	1	1
1400-1459	0	0	0	0
1500-1559	0	0	0	0
1600-1659	0	0	0	0
1700-1759	0	0	0	0
1800-1859	0	0	0	0
1900-1959	0	0	0	0
2000-2059	0	0	0	0
2100-2159	0	0	0	0
2200-2259	0	0	0	0
2300-2359	0	0	0	0

Lighting	Fatal	Serious	Slight	Total
Daylight	0	0	1	1
Darkness	0	0	0	0

Weather	Fatal	Serious	Slight	Total
Fine without high winds	0	0	1	1
Raining without high winds	0	0	0	0
Snowing without high winds	0	0	0	0
Fine with high winds	0	0	0	0
Raining with high winds	0	0	0	0
Snowing with high winds	0	0	0	0
Fog or mist - if hazard	0	0	0	0
Other	0	0	0	0
Unknown	0	0	0	0

Road Surface	Fatal	Serious	Slight	Total
Dry	0	0	1	1
Wet/Damp	0	0	0	0
Snow	0	0	0	0
Frost/Ice	0	0	0	0
Flood	0	0	0	0
Unknown	0	0	0	0

District	Fatal	Serious	Slight	Total
Rugby	0	0	1	1

Road Class	Fatal	Serious	Slight	Total
M	0	0	0	0
A(M)	0	0	0	0
A	0	0	0	0
B	0	0	0	0
Other	0	0	1	1

Speed Limit	Fatal	Serious	Slight	Total
20	0	0	0	0
30	0	0	1	1
40	0	0	0	0
50	0	0	0	0
60	0	0	0	0
70	0	0	0	0

Obstruction	Fatal	Serious	Slight	Total
Sign/Signal	0	0	0	0
Lamp Post	0	0	0	0
Pole	0	0	0	0
Tree	0	0	0	0
Bus Stop	0	0	0	0
Barrier	0	0	0	0
Other	0	0	0	0

Junction Type	Fatal	Serious	Slight	Total
Not at Junction	0	0	1	1
Roundabout	0	0	0	0
Mini R'about	0	0	0	0
T or Staggered	0	0	0	0
Slip Road	0	0	0	0
Crossroads	0	0	0	0
Multiple Junct	0	0	0	0
Private Drive	0	0	0	0
Other Junction	0	0	0	0
Unknown	0	0	0	0

D-PRINT CRASH REPORT

11 February 2025
13:58:10

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
1	**Road No U** **Grid 452697E** **Section** **Ref 276278N**	SLIGHT	05/05/2022	5	13:50	Daylight	Dry	Fine		O/TAKE	
	RUGBY ROAD, NEAR J/W STATION ROAD, CLIFTON UPON DUNSMORE, WARWICKSHIRE								Rugby		

	SINGLE ONLINE HOME - As I was driving along Clifton upon Dunsmore a grey Hyundai overtook me and as he did he drove too close to my car and hit it then drove off	Veh1, car, SW → NE Veh2, car, SW → NE	Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

Appendix F

Resident Welcome Pack

Clifton upon Dunsmore Welcome Pack

Floor 1B
4 Temple Row
Birmingham
B2 5HG

Introduction

Welcome to your new home.

{Developer Name} are here to help you settle into your new home and make your move to Clifton upon Dunsmore as smooth as possible.

The best time to reconsider how you travel, whether as a commuter or for leisure purposes, is when you move house.

This Welcome Pack is designed to help you save money, improve your personal health and cut your carbon emissions by informing you of all the potential travel options that are available to you in your new home in Clifton upon Dunsmore. It will provide travel information for all your travel requirements and will also provide details of the Travel Plan Coordinator for the site, who will be able to answer travel queries and assist you and your family in finding the most suitable transport options for whatever journey you wish to undertake.

This welcome pack also contains links to bus maps and timetable information for local bus services; walking and cycling maps across the local area; and additional travel information to help you choose more sustainable transport options for your journeys.

Journey planning information for Warwickshire via public transport, walking, and cycling is available at: https://www.warwickshire.gov.uk/homepage/378/journey-planner

Walking and Cycling

Access to and from the site by foot is available from the site access junction with Rugby Road. Pedestrian footways are available along the southern side of Rugby Road, providing access to local facilities within the area.

From the site, the footways provide a link towards Clifton upon Dunsmore and Rugby. From here, various local facilities can be accessed along Main Street, Clifton Road and Butlers Leap, including local primary schools, shops and community facilities.

The road network in Clifton upon Dunsmore is considered safe and suitable for cyclists of varying abilities, allowing residents to access local facilities within the village via cycling. Further afield, National Cycle Network (NCN) Route 41 provides a traffic-free route through Rugby. Further afield, NCN Route 41 connects to Royal Leamington Spa via a combination of on-road and traffic-free routes

There are plenty of campaigns which promote and provide information on walking and cycling, a list of which can be found overleaf:

- Bike Week - https://www.cyclinguk.org/bikeweek
- Cycle to Work Day - https://www.cyclescheme.co.uk/cycletoworkday
- National Walking Month - https://www.livingstreets.org.uk/get-involved/national-walking-month/
- Clean Air Day - https://www.actionforcleanair.org.uk/campaigns/clean-air-day

Taking part in these campaigns can really show the benefits of active travel, so why not get involved?

Further information on walking and cycling in Warwickshire can be found at: https://www.warwickshire.gov.uk/activetravel

Bus

The number 9 bus service runs from the northbound bus stop located along Rugby Road, and the southbound bus stop located along Clifton Road, just a short walk from your home.

The number 9 bus service runs between Rugby and Woodlands. This service operates eight services per day during the week and on Saturdays.

In addition, the bus stops along Butlers Leap are served by the number 96 bus service, which runs between Northampton and Rokeby Estate via Rugby, running twice an hour on weekdays and Saturdays.

For further information on these bus services, including up to date timetables, please visit https://www.flexi-bus.co.uk/9Jan19newest.pdf; and https://www.stagecoachbus.com/routes/midlands/96/rugby-northampton/XLAO096.O

Stagecoach offers a variety of discounted tickets on bus services, including those for students and young people, as well as bus passes for the day, week, 4-week, and off-peak periods. More information can be found at https://www.stagecoachbus.com/promos-and-offers/midlands/guide-to-tickets#tab3

Travel by Train

Rugby Railway Station is approximately 2km from the site and can be accessed from the site by footways along Butlers Leap and Mill Road. The station benefits from 723 car park spaces and 350 cycle spaces.

The station runs services to a wide range of local, regional and national destinations, including London, Birmingham, Manchester and Crewe amongst others. Services are operated by Avanti West Coast and West Midlands Trains.

Each operator has specific conditions regarding bicycles on trains, and you may have to reserve in advance or check the time of day you travel as capacity is limited.

Timetable information can be found on the websites of each rail operator:

https://www.avantiwestcoast.co.uk/travel-information/plan-your-journey/timetables
https://www.londonnorthwesternrailway.co.uk/travel-information/journey-planning/train-timetables-and-schedules

Clifton upon Dunsmore Welcome Pack

Sustainable Car Journeys

Car sharing can significantly reduce your travel costs, the more people who join car share schemes, the more effective they will become.

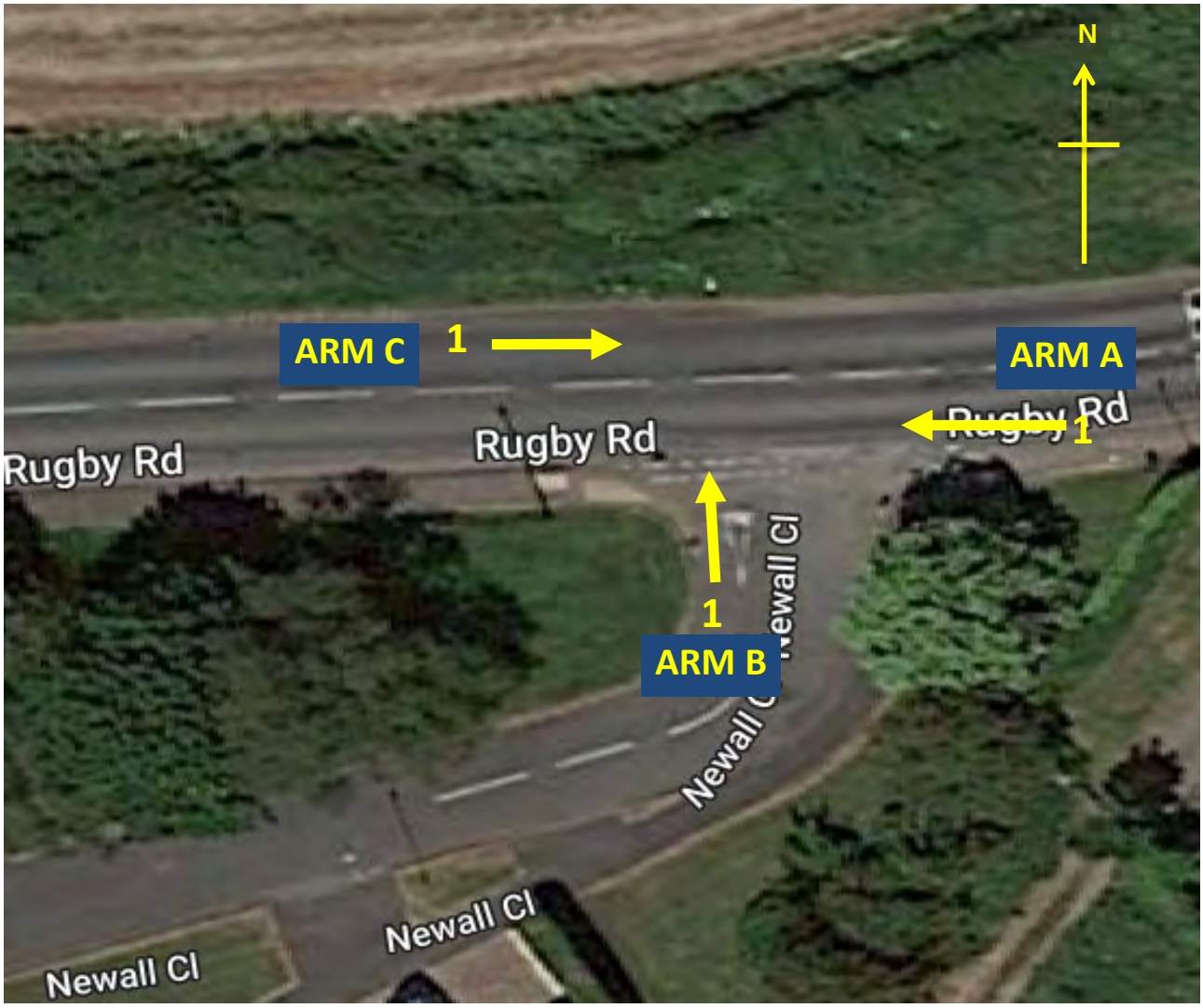
An online platform that can be used to coordinate trips is liftshare, a free to join database open to anyone whether or not you own a car. Once you have registered you will be able to see details of people either offering to share a lift, requiring a lift or offering seats in their car to others wanting a lift. Individuals can then contact each other to come to a suitable arrangement. The database is available at: https://liftshare.com/uk

If you own or are planning to purchase an electric vehicle, there are many options available to charge your vehicle when you're out and about. Electric vehicle charging points can be found throughout Rugby, allowing you to charge your electric vehicle whilst working or visiting surrounding areas. You can see where your nearest charging point is by visiting https://www.zap-map.com/live/.

Appendix G

Traffic Survey Data

SITE:		DATE:
1	AUTO SURVEYS LTD	08/02/2023
LOCATION:		**DAY:**
RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W)		WEDNESDAY



JOB TITLE:		JOB NUMBER:
CLIFTON UPON DUNSMORE		12000

MANUAL CLASSIFIED COUNTS

JOB REF: 12000

JOB NAME: CLIFTON UPON DUNSMORE

SITE: 1 **DATE:** 08/02/2023

LOCATION: RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W) **DAY:** WEDNESDAY

TIME	A TO B FROM RUGBY ROAD (E) TO NEWALL CLOSE								A TO C FROM RUGBY ROAD (E) TO RUGBY ROAD (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	0	0	0	0	0	0	0	0	13	5	0	0	0	0	0	18
07:15	0	0	0	0	0	0	0	0	44	10	0	0	0	0	0	54
07:30	0	0	0	0	0	0	0	0	36	5	0	0	0	0	1	42
07:45	0	0	0	0	0	0	0	0	55	12	0	0	1	0	1	69
H/TOT	0	0	0	0	0	0	0	0	148	32	0	0	1	0	2	183
08:00	0	0	0	0	0	0	0	0	56	9	0	0	1	0	0	66
08:15	1	0	0	0	0	0	0	1	68	12	1	0	0	0	2	83
08:30	0	0	0	0	0	0	0	0	47	8	0	0	0	0	0	55
08:45	2	0	0	0	0	0	0	2	65	7	0	1	0	0	1	74
H/TOT	3	0	0	0	0	0	0	3	236	36	1	1	1	0	3	278
09:00	0	0	0	0	0	0	0	0	44	6	0	0	0	0	0	50
09:15	0	0	0	0	0	0	0	0	30	8	0	0	1	0	1	40
09:30	0	0	0	0	0	0	0	0	30	9	0	0	0	0	1	40
09:45	0	0	0	0	0	0	0	0	29	8	0	0	0	0	1	38
H/TOT	0	0	0	0	0	0	0	0	133	31	0	0	1	0	3	168
P/TOT	3	0	0	0	0	0	0	3	517	99	1	1	3	0	8	629

MANUAL CLASSIFIED COUNTS

JOB REF: 12000

JOB NAME: CLIFTON UPON DUNSMORE

SITE: 1 **DATE:** 08/02/2023

LOCATION: RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W) **DAY:** WEDNESDAY

TIME	A TO B FROM RUGBY ROAD (E) TO NEWALL CLOSE								A TO C FROM RUGBY ROAD (E) TO RUGBY ROAD (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
14:00	0	0	0	0	0	0	0	0	39	5	0	0	0	0	0	44
14:15	0	0	0	0	0	0	0	0	46	3	0	0	0	0	0	49
14:30	1	0	0	0	0	0	0	1	32	7	2	0	0	0	0	41
14:45	0	0	0	0	0	0	0	0	17	6	0	0	1	0	0	24
H/TOT	1	0	0	0	0	0	0	1	134	21	2	0	1	0	0	158
15:00	0	0	0	0	0	0	0	0	38	9	0	0	0	0	0	47
15:15	1	0	0	0	0	0	0	1	40	7	0	0	0	0	0	47
15:30	0	0	0	0	0	0	0	0	54	6	0	0	1	0	0	61
15:45	0	0	0	0	0	0	0	0	28	6	1	0	0	0	0	35
H/TOT	1	0	0	0	0	0	0	1	160	28	1	0	1	0	0	190
16:00	0	0	0	0	0	0	0	0	32	7	1	0	0	1	0	41
16:15	1	0	0	0	0	0	0	1	30	9	0	0	0	0	0	39
16:30	1	0	0	0	0	0	0	1	31	3	1	0	0	0	0	35
16:45	0	0	0	0	0	0	0	0	28	7	0	0	0	0	0	35
H/TOT	2	0	0	0	0	0	0	2	121	26	2	0	0	1	0	150
17:00	1	0	0	0	0	0	0	1	24	3	0	0	0	1	0	28
17:15	0	0	0	0	0	0	0	0	29	4	0	0	0	1	1	35
17:30	1	0	0	0	0	0	0	1	36	2	0	0	0	2	0	40
17:45	0	0	0	0	0	0	0	0	30	2	0	0	0	0	0	32
H/TOT	2	0	0	0	0	0	0	2	119	11	0	0	0	4	1	135
18:00	0	1	0	0	0	0	0	1	37	3	0	0	0	0	0	40
18:15	0	0	0	0	0	0	0	0	31	1	0	0	0	0	0	32
18:30	1	0	0	0	0	0	0	1	30	2	0	0	0	0	0	32
18:45	1	0	0	0	0	0	0	1	25	1	0	0	0	0	0	26
H/TOT	2	1	0	0	0	0	0	3	123	7	0	0	0	0	0	130
P/TOT	8	1	0	0	0	0	0	9	657	93	5	0	2	5	1	763

MANUAL CLASSIFIED COUNTS

JOB REF: 12000

JOB NAME: CLIFTON UPON DUNSMORE

SITE: 1 **DATE:** 08/02/2023

LOCATION: RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W) **DAY:** WEDNESDAY

TIME	B TO A FROM NEWALL CLOSE TO RUGBY ROAD (E)								B TO C FROM NEWALL CLOSE TO RUGBY ROAD (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
07:15	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
08:00	3	0	0	0	0	0	0	3	1	0	0	0	0	0	0	1
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
08:45	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
H/TOT	5	0	0	0	0	0	0	5	2	0	0	0	0	0	0	2
09:00	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
09:15	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
09:45	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1
H/TOT	2	1	0	0	0	0	0	3	3	0	0	0	0	0	0	3
P/TOT	8	1	0	0	0	0	0	9	6	0	0	0	0	0	0	6

MANUAL CLASSIFIED COUNTS

JOB REF: 12000

JOB NAME: CLIFTON UPON DUNSMORE

SITE: 1 **DATE:** 08/02/2023

LOCATION: RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W) **DAY:** WEDNESDAY

TIME	B TO A FROM NEWALL CLOSE TO RUGBY ROAD (E)								B TO C FROM NEWALL CLOSE TO RUGBY ROAD (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
14:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
14:15	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
H/TOT	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
15:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
16:00	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
18:00	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
18:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
H/TOT	1	0	0	0	0	0	0	1	3	1	0	0	0	0	0	4
P/TOT	3	0	0	0	0	0	0	3	12	1	0	0	0	0	0	13

MANUAL CLASSIFIED COUNTS

JOB REF: 12000

JOB NAME: CLIFTON UPON DUNSMORE

SITE: 1 **DATE:** 08/02/2023

LOCATION: RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W) **DAY:** WEDNESDAY

TIME	C TO A FROM RUGBY ROAD (W) TO RUGBY ROAD (E)								C TO B FROM RUGBY ROAD (W) TO NEWALL CLOSE							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	24	2	0	0	0	0	0	26	0	0	0	0	0	0	0	0
07:15	26	3	0	0	0	0	0	29	0	0	0	0	0	0	0	0
07:30	41	3	0	0	1	0	0	45	0	0	0	0	0	0	0	0
07:45	46	9	0	0	1	1	1	58	0	0	0	0	0	0	0	0
H/TOT	137	17	0	0	2	1	1	158	0	0	0	0	0	0	0	0
08:00	49	10	0	0	0	1	1	61	0	0	0	0	0	0	0	0
08:15	46	8	0	0	0	0	0	54	0	0	0	0	0	0	0	0
08:30	69	17	3	0	0	0	0	89	1	0	0	0	0	0	0	1
08:45	64	6	0	0	0	0	0	70	1	0	0	0	0	0	0	1
H/TOT	228	41	3	0	0	1	1	274	2	0	0	0	0	0	0	2
09:00	31	6	1	0	3	0	0	41	1	0	0	0	0	0	0	1
09:15	25	12	0	0	0	0	0	37	0	1	0	0	0	0	0	1
09:30	22	14	1	0	0	0	0	37	0	0	0	0	0	0	0	0
09:45	24	17	0	0	0	0	1	42	1	0	0	0	0	0	0	1
H/TOT	102	49	2	0	3	0	1	157	2	1	0	0	0	0	0	3
P/TOT	467	107	5	0	5	2	3	589	4	1	0	0	0	0	0	5

MANUAL CLASSIFIED COUNTS

JOB REF: 12000

JOB NAME: CLIFTON UPON DUNSMORE

SITE: 1 **DATE:** 08/02/2023

LOCATION: RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W) **DAY:** WEDNESDAY

TIME	C TO A FROM RUGBY ROAD (W) TO RUGBY ROAD (E)								C TO B FROM RUGBY ROAD (W) TO NEWALL CLOSE							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
14:00	24	7	0	0	0	0	0	31	0	0	0	0	0	0	0	0
14:15	43	6	0	1	0	0	0	50	1	0	0	0	0	0	0	1
14:30	45	18	2	0	0	0	1	66	0	0	0	0	0	0	0	0
14:45	57	9	0	0	1	0	0	67	3	0	0	0	0	0	0	3
H/TOT	169	40	2	1	1	0	1	214	4	0	0	0	0	0	0	4
15:00	57	18	0	0	0	0	1	76	0	0	0	0	0	0	0	0
15:15	55	9	0	0	1	0	1	66	1	0	0	0	0	0	0	1
15:30	46	13	2	0	0	1	0	62	0	0	0	0	0	0	0	0
15:45	54	12	0	0	2	0	0	68	2	0	0	0	0	0	0	2
H/TOT	212	52	2	0	3	1	2	272	3	0	0	0	0	0	0	3
16:00	71	16	1	0	0	0	0	88	1	0	0	0	0	0	0	1
16:15	60	6	0	0	4	0	0	70	0	0	0	0	0	0	0	0
16:30	63	9	0	0	1	0	1	74	0	0	0	0	0	0	0	0
16:45	72	14	0	0	0	0	2	88	0	0	0	0	0	0	0	0
H/TOT	266	45	1	0	5	0	3	320	1	0	0	0	0	0	0	1
17:00	87	9	0	0	0	0	1	97	2	0	0	0	0	0	0	2
17:15	63	12	0	0	0	0	0	75	0	0	0	0	0	0	0	0
17:30	74	9	0	0	0	0	0	83	2	0	0	0	0	0	0	2
17:45	61	6	0	0	1	0	1	69	0	0	0	0	0	0	0	0
H/TOT	285	36	0	0	1	0	2	324	4	0	0	0	0	0	0	4
18:00	47	2	0	0	0	0	1	50	2	0	0	0	0	0	0	2
18:15	40	3	0	0	0	0	0	43	2	0	0	0	0	0	0	2
18:30	33	1	0	0	0	0	0	34	0	0	0	0	0	0	0	0
18:45	32	2	0	0	0	0	0	34	0	0	0	0	0	0	0	0
H/TOT	152	8	0	0	0	0	1	161	4	0	0	0	0	0	0	4
P/TOT	1084	181	5	1	10	1	9	1291	16	0	0	0	0	0	0	16

QUEUE LENGTHS

JOB REF: 12000

JOB NAME: CLIFTON UPON DUNSMORE

SITE: 1 **DATE:** 08/02/2023

LOCATION: RUGBY ROAD (E) / NEWALL CLOSE / RUGBY ROAD (W) **DAY:** WEDNESDAY

NOTE: Queue Lengths recorded by the number of vehicles queuing at each 5-minute interval, by lane

TIME	ARM A RUGBY ROAD (E) LANE 1	ARM B NEWALL CLOSE LANE 1	ARM C RUGBY ROAD (W) LANE 1
07:00	0	0	0
07:05	0	0	0
07:10	0	0	0
07:15	0	0	0
07:20	0	0	0
07:25	0	0	0
07:30	0	0	0
07:35	0	0	0
07:40	0	0	0
07:45	0	0	0
07:50	0	0	0
07:55	0	0	0
08:00	0	0	0
08:05	0	0	0
08:10	0	1	0
08:15	0	0	0
08:20	0	0	0
08:25	0	0	0
08:30	0	0	0
08:35	0	0	0
08:40	0	0	0
08:45	0	0	0
08:50	0	1	0
08:55	0	0	0
09:00	0	0	0
09:05	0	0	0
09:10	0	0	0
09:15	0	1	0
09:20	0	0	0
09:25	0	0	0
09:30	0	0	0
09:35	0	0	0
09:40	0	0	0
09:45	0	0	0
09:50	0	1	0
09:55	0	0	0

TIME	ARM A RUGBY ROAD (E) LANE 1	ARM B NEWALL CLOSE LANE 1	ARM C RUGBY ROAD (W) LANE 1
14:00	0	0	0
14:05	0	0	0
14:10	0	0	0
14:15	0	0	0
14:20	0	0	0
14:25	0	0	0
14:30	0	0	0
14:35	0	0	0
14:40	0	0	0
14:45	0	0	0
14:50	0	0	0
14:55	0	0	0
15:00	0	0	0
15:05	0	0	0
15:10	0	0	0
15:15	0	0	0
15:20	0	0	0
15:25	0	0	0
15:30	0	0	0
15:35	0	0	0
15:40	0	0	0
15:45	0	0	0
15:50	0	0	0
15:55	0	0	0
16:00	0	0	0
16:05	0	0	0
16:10	0	0	0
16:15	0	0	0
16:20	0	0	0
16:25	0	0	0
16:30	0	1	0
16:35	0	1	0
16:40	0	1	0
16:45	0	1	0
16:50	0	1	0
16:55	0	1	0
17:00	0	1	0
17:05	0	1	0
17:10	0	1	0
17:15	0	1	0
17:20	0	1	0
17:25	0	1	0
17:30	0	1	0
17:35	0	1	0
17:40	0	1	0
17:45	0	1	0
17:50	0	1	0
17:55	0	1	0
18:00	0	1	0
18:05	0	1	0
18:10	0	1	0
18:15	0	1	0
18:20	0	1	0
18:25	0	1	0
18:30	0	0	0
18:35	0	0	0
18:40	0	0	0
18:45	0	0	0
18:50	0	0	0
18:55	0	0	0

Appendix H

TEMPro Growth Factors

Period	NTM Adjusted Factor
2023-2031 AM	1.0707
2023-2031 PM	1.0753
2023-2045 AM	1.1500
2023-2045 PM	1.1608
2031 AADT	1.0811
2045 AADT	1.1784

Growth Factor (2031 Data/2023 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	1.0536	1.0526

Future Year (2031) - Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	216	283

Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	4,024	5,382

Future Year (2031)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	4,240	5,666

Growth Factor (2031 Data/2023 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	1.0563	1.0589

Future Year (2031) - Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	310	247

Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	5,510	4,186

Future Year (2031)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	5,820	4,432

Growth Factor (2045 Data/2023 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	1.0959	1.1092

Future Year (2045) - Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	386	588

Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	4,024	5,382

Future Year (2045)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	4,410	5,970

Growth Factor (2045 Data/2023 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	1.1155	1.1102

Future Year (2045) - Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	636	461

Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	5,510	4,186

Future Year (2045)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	6,146	4,647

Growth Factor (2031 Data/2023 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	1.0631	1.0636

Future Year (2031) - Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	1,144	1,123

Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	18,130	17,646

Future Year (2031)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	19,274	18,769

Growth Factor (2045 Data/2023 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	1.1291	1.1303

Future Year (2045) - Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	2,340	2,300

Base Year (2023)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	18,130	17,646

Future Year (2045)

Area Description		All purposes	
Level	Name	Origin	Destination
E02006492	Rugby 001	20,470	19,945

Appendix I

Junction Assessment Outputs

Junctions 11

PICADY 11 - Priority Intersection Module

Version: 11.0.0.2177
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Filename: T25501 Site Access.j11
Path: C:\Users\MatthewJohnson\Hub Transport Planning Ltd\Hub Transport Planning - General\Projects\T25501 Clifton upon Dunsmore\Modelling\Picady
Report generation date: 10/06/2025 13:06:20

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2031 - Base + Development									
Stream B-C	D1	0.1	6.23	0.08	A	D2	0.0	5.43	0.03	A
Stream B-A		0.1	10.49	0.05	B		0.0	9.85	0.02	A
Stream C-AB		0.1	5.25	0.05	A		0.2	5.11	0.11	A
	2045 - Base + Development									
Stream B-C	D3	0.1	6.30	0.09	A	D4	0.0	5.58	0.03	A
Stream B-A		0.1	10.77	0.05	B		0.0	9.88	0.02	A
Stream C-AB		0.1	5.19	0.05	A		0.2	5.05	0.11	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

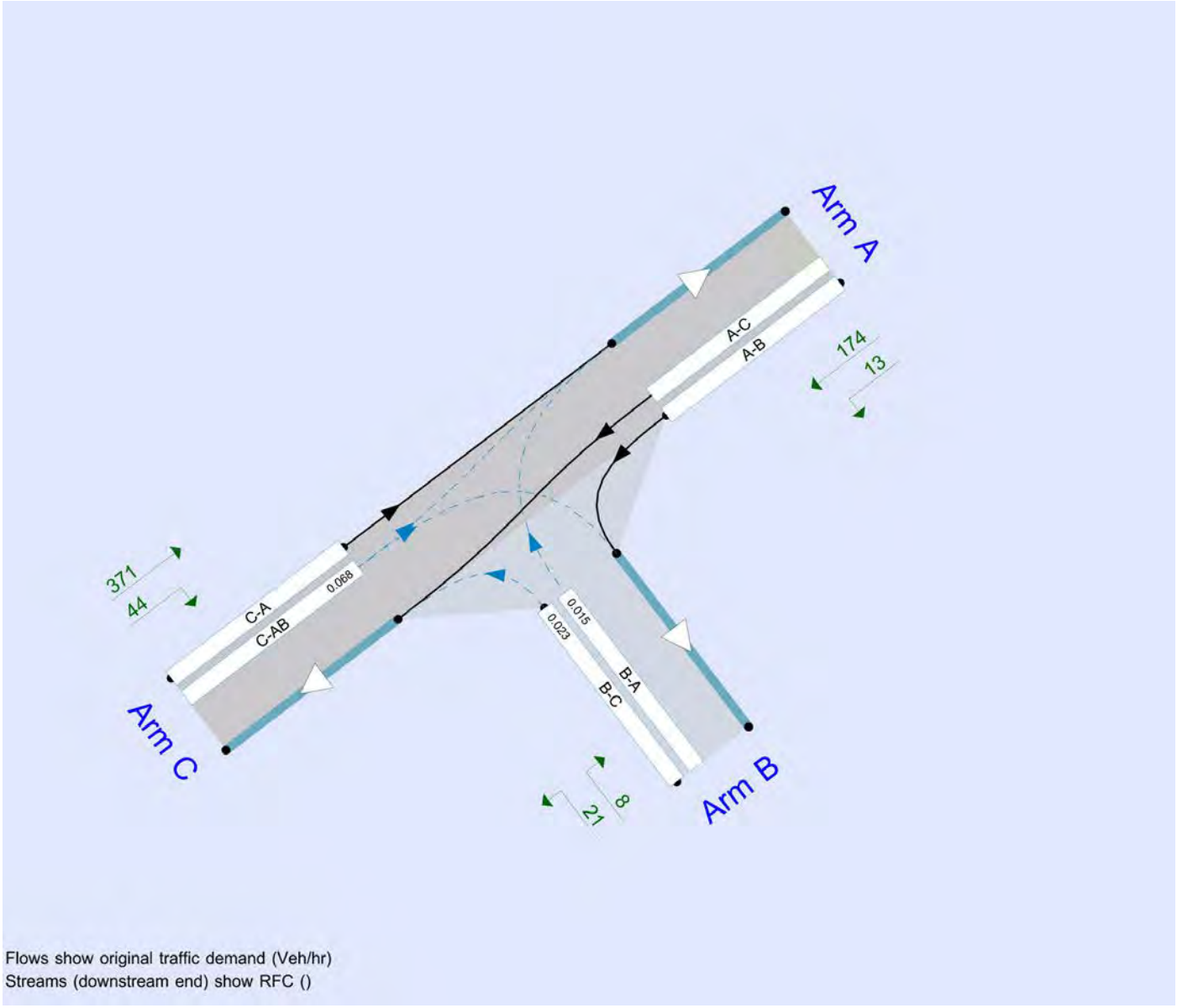
File summary

File Description

Title	Rugby Road / Site Access
Location	Clifton upon Dunsmore
Site number	
Date	25/03/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	T25501
Enumerator	AzureAD\MatthewJohnson
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031	Base + Development	AM	ONE HOUR	00:00	01:30	15
D2	2031	Base + Development	PM	ONE HOUR	00:00	01:30	15
D3	2045	Base + Development	AM	ONE HOUR	00:00	01:30	15
D4	2045	Base + Development	PM	ONE HOUR	00:00	01:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 | Base + Development | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Rugby Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.95	A

Arms

Arms

Arm	Name	Description	Arm type
A	Rugby Road N		Major
B	Site Access		Minor
C	Rugby Road S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			64.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	5.82	4.93	4.45	3.90	✓	2.00	54	58

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	484	0.084	0.213	0.134	0.304
B-C	730	0.107	0.271	-	-
C-B	611	0.226	0.226	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031	Base + Development	AM	ONE HOUR	00:00	01:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	306	100.000
B		✓	65	100.000
C		✓	314	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	8	298
	B	17	0	48
	C	293	21	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.08	6.23	0.1	A
B-A	0.05	10.49	0.1	B
C-AB	0.05	5.25	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	0.00	663	0.055	36	0.1	5.743	A
B-A	13	0.00	400	0.032	13	0.0	9.280	A
C-AB	23	0.00	710	0.032	23	0.0	5.240	A
C-A	213	0.00			213			
A-B	6	0.00			6			
A-C	224	0.00			224			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	43	0.00	649	0.066	43	0.1	5.938	A
B-A	15	0.00	384	0.040	15	0.0	9.754	A
C-AB	30	0.00	731	0.041	30	0.1	5.136	A
C-A	253	0.00			253			
A-B	7	0.00			7			
A-C	268	0.00			268			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	53	0.00	631	0.084	53	0.1	6.227	A
B-A	19	0.00	362	0.052	19	0.1	10.487	B
C-AB	40	0.00	760	0.053	40	0.1	5.002	A
C-A	305	0.00			305			
A-B	9	0.00			9			
A-C	328	0.00			328			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	53	0.00	631	0.084	53	0.1	6.228	A
B-A	19	0.00	362	0.052	19	0.1	10.489	B
C-AB	40	0.00	760	0.053	40	0.1	5.004	A
C-A	305	0.00			305			
A-B	9	0.00			9			
A-C	328	0.00			328			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	43	0.00	649	0.066	43	0.1	5.941	A
B-A	15	0.00	384	0.040	15	0.0	9.756	A
C-AB	30	0.00	731	0.041	30	0.1	5.139	A
C-A	253	0.00			253			
A-B	7	0.00			7			
A-C	268	0.00			268			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	0.00	662	0.055	36	0.1	5.751	A
B-A	13	0.00	401	0.032	13	0.0	9.286	A
C-AB	23	0.00	710	0.032	23	0.0	5.245	A
C-A	213	0.00			213			
A-B	6	0.00			6			
A-C	224	0.00			224			

2031 | Base + Development | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Rugby Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.92	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2031	Base + Development	PM	ONE HOUR	00:00	01:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	174	100.000
B		✓	27	100.000
C		✓	387	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	13	161
	B	6	0	21
	C	344	43	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.03	5.43	0.0	A
B-A	0.02	9.85	0.0	A
C-AB	0.11	5.11	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	0.00	703	0.022	16	0.0	5.236	A
B-A	5	0.00	405	0.011	4	0.0	8.984	A
C-AB	49	0.00	755	0.065	49	0.1	5.097	A
C-A	242	0.00			242			
A-B	10	0.00			10			
A-C	121	0.00			121			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	0.00	696	0.027	19	0.0	5.316	A
B-A	5	0.00	391	0.014	5	0.0	9.328	A
C-AB	64	0.00	784	0.082	64	0.2	5.001	A
C-A	284	0.00			284			
A-B	12	0.00			12			
A-C	145	0.00			145			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	0.00	686	0.034	23	0.0	5.430	A
B-A	7	0.00	372	0.018	7	0.0	9.846	A
C-AB	88	0.00	824	0.107	88	0.2	4.888	A
C-A	338	0.00			338			
A-B	14	0.00			14			
A-C	177	0.00			177			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	0.00	686	0.034	23	0.0	5.431	A
B-A	7	0.00	372	0.018	7	0.0	9.847	A
C-AB	88	0.00	824	0.107	88	0.2	4.892	A
C-A	338	0.00			338			
A-B	14	0.00			14			
A-C	177	0.00			177			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	0.00	696	0.027	19	0.0	5.318	A
B-A	5	0.00	391	0.014	5	0.0	9.331	A
C-AB	64	0.00	784	0.082	64	0.2	5.014	A
C-A	284	0.00			284			
A-B	12	0.00			12			
A-C	145	0.00			145			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	0.00	703	0.022	16	0.0	5.240	A
B-A	5	0.00	405	0.011	5	0.0	8.986	A
C-AB	49	0.00	755	0.066	50	0.1	5.112	A
C-A	242	0.00			242			
A-B	10	0.00			10			
A-C	121	0.00			121			

2045 | Base + Development | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Rugby Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.92	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2045	Base + Development	AM	ONE HOUR	00:00	01:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	328	100.000
B		✓	66	100.000
C		✓	336	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	8	320
	B	17	0	49
	C	315	21	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.09	6.30	0.1	A
B-A	0.05	10.77	0.1	B
C-AB	0.05	5.19	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	0.00	659	0.056	37	0.1	5.784	A
B-A	13	0.00	394	0.032	13	0.0	9.437	A
C-AB	24	0.00	718	0.033	23	0.0	5.184	A
C-A	229	0.00			229			
A-B	6	0.00			6			
A-C	241	0.00			241			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	0.00	645	0.068	44	0.1	5.993	A
B-A	15	0.00	377	0.041	15	0.0	9.956	A
C-AB	31	0.00	740	0.041	31	0.1	5.072	A
C-A	271	0.00			271			
A-B	7	0.00			7			
A-C	288	0.00			288			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	0.00	625	0.086	54	0.1	6.303	A
B-A	19	0.00	353	0.053	19	0.1	10.772	B
C-AB	42	0.00	772	0.054	42	0.1	4.926	A
C-A	328	0.00			328			
A-B	9	0.00			9			
A-C	352	0.00			352			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	0.00	625	0.086	54	0.1	6.304	A
B-A	19	0.00	353	0.053	19	0.1	10.774	B
C-AB	42	0.00	773	0.055	42	0.1	4.931	A
C-A	328	0.00			328			
A-B	9	0.00			9			
A-C	352	0.00			352			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	0.00	645	0.068	44	0.1	5.998	A
B-A	15	0.00	377	0.041	15	0.0	9.960	A
C-AB	31	0.00	740	0.041	31	0.1	5.075	A
C-A	271	0.00			271			
A-B	7	0.00			7			
A-C	288	0.00			288			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	0.00	659	0.056	37	0.1	5.790	A
B-A	13	0.00	394	0.032	13	0.0	9.444	A
C-AB	24	0.00	718	0.033	24	0.0	5.187	A
C-A	229	0.00			229			
A-B	6	0.00			6			
A-C	241	0.00			241			

2045 | Base + Development | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Rugby Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.93	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2045	Base + Development	PM	ONE HOUR	00:00	01:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	187	100.000
B		✓	29	100.000
C		✓	415	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	13	174
	B	8	0	21
	C	371	44	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.03	5.58	0.0	A
B-A	0.02	9.88	0.0	A
C-AB	0.11	5.05	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	0.00	687	0.023	16	0.0	5.361	A
B-A	6	0.00	409	0.015	6	0.0	8.930	A
C-AB	52	0.00	767	0.068	52	0.1	5.034	A
C-A	260	0.00			260			
A-B	10	0.00			10			
A-C	131	0.00			131			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	0.00	679	0.028	19	0.0	5.450	A
B-A	7	0.00	394	0.018	7	0.0	9.308	A
C-AB	68	0.00	798	0.085	68	0.2	4.932	A
C-A	305	0.00			305			
A-B	12	0.00			12			
A-C	156	0.00			156			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	0.00	669	0.035	23	0.0	5.576	A
B-A	9	0.00	373	0.024	9	0.0	9.883	A
C-AB	94	0.00	842	0.112	94	0.2	4.813	A
C-A	362	0.00			362			
A-B	14	0.00			14			
A-C	192	0.00			192			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	0.00	669	0.035	23	0.0	5.577	A
B-A	9	0.00	373	0.024	9	0.0	9.884	A
C-AB	95	0.00	842	0.112	95	0.2	4.822	A
C-A	362	0.00			362			
A-B	14	0.00			14			
A-C	192	0.00			192			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	0.00	679	0.028	19	0.0	5.452	A
B-A	7	0.00	394	0.018	7	0.0	9.309	A
C-AB	68	0.00	798	0.086	69	0.2	4.944	A
C-A	305	0.00			305			
A-B	12	0.00			12			
A-C	156	0.00			156			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	0.00	687	0.023	16	0.0	5.364	A
B-A	6	0.00	409	0.015	6	0.0	8.934	A
C-AB	52	0.00	767	0.068	53	0.1	5.049	A
C-A	260	0.00			260			
A-B	10	0.00			10			
A-C	131	0.00			131			