Land off Henthorn Road, Clitheroe

TRANSPORT ASSESSMENT

Report prepared for
Gladman Developments Ltd

December 2025

Report Reference 1677/3/A

ASHLEY HELME
ASSOCIATES

Transport Assessment

Land off Henthorn Road, Clitheroe

Client:	Gladman Developments Ltd
Report Ref:	1677/3/A
Status:	Final
Date:	December 2025

Ashley Helme Associates Ltd
76 Washway Road
SALE, Manchester
M33 7RE

Telephone
0161 972 0552

aha@ashleyhelme.co.uk
www.ashleyhelme.co.uk

Transport Assessment

Land off Henthorn Road, Clitheroe

Chapter

Figures

Tables

9.15 PICADY Analysis Results 2031 & 2036: SJ12

Drawings

1677/01/F	Proposed Site Access Arrangements
1677/02-11	Existing TA Study Junction Arrangements
1677/SP/01/A, 02/A & 03/A	Swept Path Analysis
1677/12/A	Proposed Improvement Scheme Henthorn Road/Thorn Street

Appendices

A	LCC MARIO Accident Plot (2020-2025)
B	Traffic Flows
C	Technical Filenote 1C
D	Lancashire County Council Consultation Response 11 March 2020
E	Lancashire County Council Consultation Response 4 June 2020
F	Technical Note 3 (24 June 2021)
G	Lancashire County Council Consultation Response 3 September 2021

1 Introduction

1.1 Ashley Helme Associates Limited (AHA) are appointed by Gladman Developments Ltd (GDL) to prepare a Transport Assessment (TA) report to support the planning application for residential development on land off Henthorn Road, Clitheroe (henceforth referred to as the Site). The location of the Site is indicated on Figure 1.1, in the context of the local highway network.

1.2 Proposed Development

1.2.1 The Site comprises two parcels of land to the north and south of Henthorn Road. Both areas of Site are presently agricultural/field land. The proposed development comprises up to **115** dwellings, as follows:

(i) Northern Site: 35 dwellings,
(ii) Southern Site: 80 dwellings.

1.3 AHA Past Involvement

1.3.1 AHA prepared the TA report (ref 1616/2/B) that accompanied the planning application for a residential scheme of 110 dwellings on a site to the north of the current application Site. This scheme (application ref 3/2018/08688) was promoted by GDL and was approved following an appeal. The approved scheme is referred to as **Phase 2**. The proposed GDL development is referred to as **Phase 3**.

1.3.2 GDL submitted a planning application (ref 19/0999/OUT) for Phase 3 in 2019. AHA prepared two TA reports for the Phase 3 application being:

(i) First: TA Report (ref 1677/1/A), October 2019, and
(ii) Second: TA Report (ref 1677/1/B), March 2020.

1.4 Lancashire County Council Consultation Responses

1.4.1 Lancashire County Council (LCC) are the highway authority for the roads in Clitheroe. LCC provided comments to the 2019 Phase 3 application in their consultation response of **11 March 2020** (included in **Appendix D**). A second TA report (ref 1677/1/B) was prepared to address issues raised by LCC, being:

(i) Proposed access arrangements,
(ii) Financial contribution towards the No C2 bus service,
(iii) Traffic impact assessment using recorded residential trip rates, and

(iii) Distribution of generated traffic.

1.4.2 LCC responded to the second TA report in their consultation response of **4 June 2024** (refer **Appendix E**). This raised concerns about the distribution of traffic to the Henthorn Road/Thorn Street junction and its functioning. In addition, the LCC response also provided commentary on:

(i) Funding of the C2 bus service,
(ii) Widening of Henthorn Road near to the Site access,
(iii) Financial contributions towards the upgrade of the local Public Rights of Way (PROW) network.

1.4.3 AHA prepared **Technical Note 3** (refer **Appendix F**) to respond to the points raised in the LCC consultation response of 4 June 2021. LCC reviewed the TN3 and concluded, in their response of **3 September 2024** (refer **Appendix G**) that they would raise **no objection** to the proposed development subject mitigation measures and a number of conditions.

1.4.4 In summary, this TA report fully considers:

(i) AHA First TA report (ref 1677/1/A),
(ii) LCC consultation response (11 March 2020),
(iii) AHA Second TA report (ref 1677/1/B),
(iv) LCC consultation response (4 June 2020),
(v) AHA Technical Note 3,
(vi) LCC consultation response (3 September 2021).

1.5 Scope of the Report

1.5.1 The transport policy context for the proposed development is outlined in Chapter 2. The principles of the access strategy adopted for the proposed development are also discussed in Chapter 2, and this provides the means to achieve transport policy objectives. It is fundamental to the approach of the applicant, as represented in this TA, that a holistic view is taken of the consideration of access to the proposed development by all modes of transport.

1.5.2 The issues addressed within the TA fall broadly into the following areas:

- Accessibility by non-car modes, and
- The vehicular traffic impact on the operational performance of the local highway network, assessed quantitatively for the TA defined study network.

1.5.3 The local highway network is described in Chapter 3. The proposed Site access arrangements are outlined in Chapter 4.

1.5.4 The transport sustainability of the proposed development is a key issue, as set out in the National Planning Policy Framework (NPPF, December 2024), and also Planning Practice Guidance (PPG, March 2014). Accessibility issues are identified in Chapter 2, and an accessibility appraisal of the Site by non-car modes is presented in Chapters 5 (Walk & Cycle) and 6 (Public Transport), using an accessibility mapping methodology.

1.5.5 The planning application is supported by the Travel Plan (TP) report. Chapter 7 outlines the principles of the TP. A summary indication is included in Chapter 7 of the Action Plan for the Travel Plan. This includes measures that are to be implemented prior to first occupation of the development, as well as subsequent and on-going measures/initiatives. A separate Travel Plan document is submitted as part of the planning application, and is complementary to the TA report.

1.5.6 The estimation of the development generated traffic and associated 'With Development' traffic flows are presented in Chapter 8. Modelling of the impact of development traffic on the highway network is described in Chapter 9.

1.5.7 The conclusions of the TA are presented in Chapter 10.

2 Policies & Principles of Access Strategy

2.1 A holistic approach is adopted for the desired access strategy. Due cognisance is taken of a range of relevant policy documents and considerations that represent current national and local policies. These include:

- National Planning Policy Framework (NPPF), December 2024,
- Planning Practice Guidance (PPG), March 2014,
- Ribble Valley BC Core Strategy 2008-2028,
- Lancashire County Council Local Transport Plan 2011-2021.

2.2 A general thrust of current national and local policies is to promote and deliver sustainable transport objectives, and this is a key factor in defining the access strategy for the proposed development.

2.3 There are a range of documents that provide advice and guidance identifying that the historic approach of adopting rigid highway design standards and considering this in isolation is not appropriate or desirable in today's world. This includes, for example, Manual for Streets (MfS) and the associated Manual for Streets 2 (MfS2).

2.4 NPPF: Achieving Sustainable Transport

2.4.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied. The latest version of NPPF was released in December 2024.

2.4.2 NPPF: Achieving Sustainable Transport

2.4.2.1 Paragraph 7 of NPPF sets out that:

"The purpose of the planning system is to contribute to the achievement of sustainable development, including the provision of homes, commercial development and supporting infrastructure in a sustainable manner. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs. At a similarly high level, members of the United Nations – including the United Kingdom – have agreed to pursue the 17 Global Goals for Sustainable Development in the period to 2031. These address social progress, economic well-being and environmental protection."

2.4.2.2 In paragraph 10, NPPF makes it clear that:

*"So that sustainable development is pursued in a positive way, at the heart of the Framework is a **presumption in favour of sustainable development."***

2.4.3 Promoting Sustainable Transport

2.4.3.1 The Government's commitment to sustainable transport is emphasised in NPPF. Paragraph 109 advises development promoters to consider transport issues from the earliest stages of plan-making and development proposals using a **vision-led** approach, so that:

"a) making transport considerations an important part of early engagement with local communities;

b) ensuring patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places;

c) understanding and addressing the potential impacts of development on transport networks;

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

e) identifying and pursuing opportunities to promote walking, cycling and public transport use; and

f) identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains.''

2.4.3.2 This is expanded in paragraph 110, which states:

*"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable **transport solutions will vary between urban and rural areas**, and this should be taken into account in both plan-making and decision-making."* (AHA emphasis).

The proposed development respects and reflects this NPPF transport sustainability related objective.

2.4.3.3 NPPF states in paragraph 115 that:

"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;

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

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

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

2.4.3.4 NPPF makes it clear in paragraph 116 that:

''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, following mitigation, would be* ***severe****, taking into account all reasonable future scenarios.''* (AHA emphasis).

2.4.3.5 NPPF offers specific transport advice with respect to development proposals. In paragraph 117, NPPF sets out that development should:

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

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

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

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

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

2.4.3.6 NPPF sets out the documents that should be prepared for major developments. In paragraph 118, NPPF advises:

"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* ***vision-led transport statement*** *or* ***transport assessment*** *so that the likely impacts of the proposal can be assessed and monitored."* (AHA emphasis).

2.5 PPG

2.5.1 The Department for Communities and Local Government (DCLG) launched the Planning Practice Guidance (PPG) web-based resource on 6 March 2014. The PPG includes advice on when transport assessments and transport statements are required, and what they should contain.

2.5.2 The PPG states that:

"Travel Plans, Transport Assessments and Statements can positively contribute to:

- *encouraging sustainable travel;*
- *lessening traffic generation and its detrimental impacts;*
- *reducing carbon emissions and climate impacts;*
- *creating accessible, connected, inclusive communities;*
- *improving health outcomes and quality of life;*
- *improving road safety; and*
- *reducing the need for new development to increase existing road capacity or provide new roads."*

2.5.3 With respect to Transport Assessments and Statements, PPG sets out that:

''The key issues to consider at the start of preparing a Transport Assessment or Statement may include:

- *the planning context of the development proposal;*
- *appropriate study parameters (i.e. area, scope and duration of study);*
- *assessment of public transport capacity, walking/ cycling capacity and road network capacity;*

- *road trip generation and trip distribution methodologies and/or assumptions about the development proposal;*
- *measures to promote sustainable travel;*
- *safety implications of development; and*
- *mitigation measures (where applicable) – including scope and implementation strategy.''*

2.5.4 With respect to Travel Plans, PPG sets out that:

''Travel Plans should set explicit outcomes rather than just identify processes to be followed (such as encouraging active travel or supporting the use of low emission vehicles). They should address all journeys resulting from a proposed development by anyone who may need to visit or stay and they should seek to fit in with wider strategies for transport in the area.

They should evaluate and consider:

- *benchmark travel data including trip generation databases;*
- *information concerning the nature of the proposed development and the forecast level of trips by all modes of transport likely to be associated with the development;*
- *relevant information about existing travel habits in the surrounding area;*
- *proposals to reduce the need for travel to and from the site via all modes of transport; and*
- *provision of improved public transport services.''*

2.6 Ribble Valley Borough Council: Core Strategy 2008-2028

2.6.1 The Ribble Valley Borough Council (RVBC) Core Strategy was adopted on 14 December 2014. The Core Strategy is the central document to the Local Development Framework and establishes the vision, underlying objectives and key principles that the Council will follow to guide development in the Borough. Although it is used to aid the assessment of planning applications its primary function is to set a more strategic level of planning policy for the area.

2.6.2 The Core Strategy sets out the Council's position with regard to transport in in Key Statement DMI2. This states that:

''KEY STATEMENT DMI2: TRANSPORT CONSIDERATIONS

New development should be located to minimise the need to travel. Also it should incorporate good access by foot and cycle and have convenient links to public transport to reduce the need for travel by private car. In general, schemes offering opportunities for more sustainable means of transport and sustainable travel improvements will be supported. Sites

for potential future railway stations at Chatburn and Gisburn will be protected from inappropriate development.

Major applications should always be accompanied by a comprehensive travel plan."

2.6.3 The Council's position on transport is expanded further in Policy DMG3, which states:

"POLICY DMG3: TRANSPORT AND MOBILITY

In making decisions on development proposals the local planning authority will, in addition to assessing proposals within the context of the development strategy, attach considerable weight to:

The availability and adequacy of public transport and associated infrastructure to serve those moving to and from the development –

1. *The relationship of the site to the primary route network and the strategic road network.*
2. *The provision made for access to the development by pedestrian, cyclists and those with reduced mobility.*

3. *Proposals which promote development within existing developed areas or extensions to them at locations which are highly accessible by means other than the private car.*

4. *Proposals which locate major generators of travel demand in existing centres which are highly accessible by means other than the private car.*

5. *Proposals which strengthen existing town and village centres which offer a range of everyday community shopping and employment opportunities by protecting and enhancing their vitality and viability.*

6. *Proposals which locate development in areas which maintain and improve choice for people to walk, cycle or catch public transport rather than drive between homes and facilities which they need to visit regularly.*

7. *Proposals which limit parking provision for developments and other on or off street parking provision to discourage reliance on the car for work and other journeys where there are effective alternatives.*

All major proposals should offer opportunities for increased use of, or the improved provision of, bus and rail facilities. All development proposals will be required to provide adequate car parking and servicing space in line with currently approved standards. …"

2.6.4 The Council's position on footpaths and bridleways is set out in DMB5. This states that:

"POLICY DMB5: FOOTPATHS AND BRIDLEWAYS

The Borough Council will seek to ensure the retention, maintenance and improvement of by-ways and un-surfaced/unclassified roads as part of the public rights of way network. In situations where a public right of way will inevitably become less attractive (due to adjacent/surrounding development), the policy should require compensatory enhancements such that there is a net improvement to the public right of way network. The Borough Council will, unless suitable mitigation measures are made, protect from the development footpaths which:

1. *Provide a link between towns/villages and attractive open land;*
2. *Link with the Ribble Way footpath;*
3. *Are associated to the local nature reserves; and*
4. *Are heavily used."*

2.7 Lancashire Local Transport Plan (LTP) 2011-2021

2.7.1 Lancashire County Council (LCC) is the local highway authority, and has responsibility for the development and delivery of the Local Transport Plan (LTP).

2.7.2 Blackburn with Darwen Council, Blackpool Council and Lancashire County Council are working together to develop a new joint Local Transport Plan (LTP4). The consultation process closed on 30 November 2025 and the councils are analysing the feedback received. The publication of a final LTP is expected in 2026. Until it is adopted, LTP3 remains valid.

2.7.3 The key themes and objectives of the LTP are:

Theme	**Objective**
Connectivity & accessibility	• Better public transport connections between key centres. • Transport networks that are accessible and inclusive for all.
Mode shift & carbon efficiency	• Quicker and more convenient public transport journeys in our cities, towns and rural areas • Walking and cycling as a more attractive choice for shorter journeys.

	• Fewer car, van and HGV miles travelled. • Much greater use of low-carbon vehicles
People & places	• Fewer people killed or injured on our local roads. • Less noise and emissions from traffic. • Improved quality and attractiveness of places. • High quality and sustainable design of transport assets.
Assets & efficiency	• Transport assets that are properly maintained. • New infrastructure delivering environmental net gains. • Transport networks that are more resilient to extreme weather events. • Less traffic congestion on our local roads

2.8 Principles of the Access Strategy

2.8.1 The access strategy for the development provides the means to achieve the identified policy objectives by optimising the opportunity for access to/from the Site by non-car modes. This is in accordance with all local and national policies.

2.8.2 The accessibility of the Site for those travelling on foot and cycle is reviewed in Chapter 5, and takes account of the existing and proposed facilities. The current accessibility of the Site by public transport is outlined in Chapter 6 herein, together with the development proposals for public transport. The proposed development takes account of the needs of the mobility impaired.

2.8.3 The Access Strategy for the development is cohesive, reflecting the need to appropriately consider and enable provision for the movement of people and goods. This is in accordance with the aims and spirit of NPPF. This includes considering, inter alia:

- Permeability of the Site from/connection to the surrounding locality, for all modes of transport, motorised and non-motorised,
- External linkage to the Site. The corresponding internal access/routing details are to be addressed in subsequent reserved matters application(s),
- Internal access arrangements, all to be the subject of reserved matters application(s), should minimise distance travelled by all modes (where appropriate),
- Emergency access requirements must be met.

2.9.4 The development proposals adopt an integrated approach to managing travel demand, offering safe and sustainable access for all by a choice of sustainable transport alternatives, between homes and employment and a range of services and facilities, such as retail, health, education, and leisure.

2.10 Summary

2.10.1 In summary, the development proposal respects and promotes the principles of transport sustainability, and is consistent with national and local transport policy objectives.

3 Highway Network

3.1 The location of the Site is indicated on Figure 1.1 in the context of the local highway network.

3.2 The Site consists of two land parcels located either side of Henthorn Road, which is public highway.

3.3 Henthorn Road

3.3.1 The northern boundary of the Southern Site is about 200m south of the junction with Blakewater Road. The recently completed Phase 2 residential scheme (Miller Homes) has widened the Henthorn Road carriageway to 5.5m and introduced a 2.0m wide footway on the north side of Henthorn Road between the Phase 2 access and Blakewater Road (total distance of 100m).

3.3.2 Existing infrastructure to the north of the application Site, on Henthorn Road takes the form of a typical residential road with footways on both sides. This section of Henthorn Road is generally fronted by residential properties and benefits from street lighting.

3.3.3 Both sections of Henthorn Road are subject to a 20mph speed limit.

3.4 Study Network

3.4.1 Traffic generated by the Site will pass through the following junctions that comprise the TA study network of junctions:

REF	JUNCTION	CONTROL
SJ1	Lancaster Drive/Edisford Road	Priority control
SJ2	Seedall Avenue/Edisford Road	Priority control
SJ3	Faraday Avenue/Edisford Road	Priority control
SJ4	Thorn Street/Bawdlands	Priority control
SJ5	Henthorn Road/Bawdlands	Priority control
SJ6	Henthorn Road/Eshton Terrace/Thorn Street	Priority control
SJ7	Station Road/Parson Lane	Mini-roundabout
SJ8	Lowergate/Moor Lane/Woone Lane	Mini-roundabout/ Priority control
SJ9	Castle View/Parson Lane	Priority control
SJ10	Greenacre Street/Woone Lane/Eshton Terrace	Priority control
SJ11	Whalley Road/Greenacre Street	Priority control
SJ12	Primrose Road/A671 Whalley Road	Priority control.

3.4.2 This is identical to the network agreed in the TA report (ref 1616/2/B) that accompanied the planning application for the permitted Phase 2 residential scheme on Henthorn Road (ref 3/2018/08688).

3.4.3 The TA network of study junctions is presented on Figure 3.1. The local highway authority, Lancashire County Council (LCC), is responsible for all of the TA study junctions. LCC did not request any additional junctions in their consultation responses and, therefore, it is assumed that the TA study network is **agreed**.

3.5 Existing Junction Geometry

3.5.1 The existing study network junctions are presented on the following drawings:

REF	JUNCTION	DRAWING
SJ1	Lancaster Drive/Edisford Road	Drg No 1677/02
SJ2	Seedall Avenue/Edisford Road	Drg No 1677/03
SJ3	Faraday Avenue/Edisford Road	Drg No 1677/04
SJ4	Thorn Street/Bawdlands	Drg No 1677/05
SJ5	Henthorn Road/Bawdlands	Drg No 1677/05
SJ6	Henthorn Road/Eshton Terrace/Thorn Street	Drg No 1677/05
SJ7	Station Road/Parson Lane	Drg No 1677/06
SJ8	Lowergate/Moor Lane/Woone Lane	Drg No 1677/07
SJ9	Castle View/Parson Lane	Drg No 1677/08
SJ10	Greenacre Street/Woone Lane/Eshton Terrace	Drg No 1677/09
SJ11	Whalley Road/Greenacre Street	Drg No 1677/10
SJ12	Primrose Road/A671 Whalley Road	Drg No 1677/11.

3.5.2 SJ1: Lancaster Drive/Edisford Road

3.5.2.1 SJ1 is located north east of the proposed Site access. SJ1 operates as a priority controlled 'T' junction formed by the intersection of Edisford Road and Lancaster Drive. Lancaster Drive forms the minor arm of the junction. The layout of SJ1 is presented on **Drg No 1677/02**.

3.5.2.2 The junction is located within a 30mph speed limit. A 20mph speed limit applies to Lancaster Drive immediately to the south of the junction. There is footway provision around all of the junction. The junction benefits from lighting. There are 2no bus stops on Edisford Road at:

(i) Eastbound services: north side of Edisford Road, 15m west of Lancaster Drive,
(ii) Westbound services: south side of Edisford Road, 20m east of Lancaster Drive.

3.5.3 SJ2: Seedall Avenue/Edisford Road

3.5.3.1 SJ2 is located approximately 270m east of SJ1, and is a priority controlled 'T' junction. Seedall Avenue forms the minor arm of the junction. The existing junction arrangements are presented on **Drg No 1677/03**.

3.5.3.2 The junction is located within a 30mph speed limit. The junction is near to Edisford Primary School and a 20mph speed limit is applied (by flashing lights) to Edisford Road at school start and finish times.

3.5.3.3 There is footway provision around all of the junction and street lighting is present.

3.5.4 SJ3: Faraday Avenue/Edisford Road

3.5.4.1 SJ3 is located about 150m east of SJ2 and is a 3-arm priority controlled 'T' junction. Faraday Avenue forms the minor arm of the junction. The existing junction arrangements are presented on **Drg No 1677/04**.

3.5.4.2 The junction is located within a 30mph speed limit and there is footway provision around all of the junction. Street lighting is also present.

3.5.5 SJ4: Thorn Street/Bawdlands

3.5.5.1 SJ4 is located circa 1400m from the proposed Site access. It is also located in close proximity to SJ5 & 6. The existing junction arrangements are presented on **Drg No 1677/05**.

3.5.5.2 SJ4 is a priority controlled 'T' junction, with Thorn Street forming the minor arm. Bawdlands is subject to a 30mph speed limit. A 20mph speed limit applies to Thorn Street. There is footway provision and street lighting present at the junction.

3.5.6 SJ5: Henthorn Road/Bawdlands

3.5.6.1 SJ5 is located a short distance east of SJ4 and is a priority controlled 'T' junction, with Henthorn Road forming the minor arm. The existing junction arrangements are presented on **Drg No 1677/05.**

3.5.6.2 The junction is located within a 20mph speed limit, although a 30mph speed limit applies to Bawdlands immediately to the west of Henthorn Road. There is footway provision around the junction and street lighting is present.

3.5.7 SJ6: Henthorn Road/Eshton Terrace/Thorn Street

3.5.7.1 SJ6 is located directly south of SJ5 and is a priority-controlled crossroads, formed by the intersection of Henthorn Road, Thorn Street and Eshton Terrace. The layout of SJ6 is indicated on **Drg No 1677/05**.

3.5.7.2 Thorn Street and Eshton Terrace form the minor arms of the junction. There is a 'stop' line on the Eshton Terrace arm of the junction. The junction is located within a 20mph speed limit. There are footways on all arms of the junction and street lighting is present.

3.5.8 SJ7: Station Road/Parson Lane

3.5.8.1 SJ7 is located circa 415m northeast of SJ5. SJ7 is a 3-arm mini roundabout. The existing junction arrangements are shown on **Drg No 1677/06**.

3.5.8.2 The Parson Lane (E) arm of SJ7 operates one-way in the westbound direction. This means that only movements towards the junction are permitted on this arm.

3.5.8.3 The junction is subject to 'No Waiting' and loading restrictions. On land at the northeast sector of the roundabout, between Station Road and the one-way section of Parson Lane, there is a permit holders' car park. This operates with one-way entry from Station Road and one-way exit onto Parson Lane (E).

3.5.9 SJ8: Lowergate/Moor Lane/Woone Lane

3.5.9.1 SJ8 is a 4-arm mini-roundabout and is located south-east of SJ7. The existing junction arrangements are shown on **Drg No 1677/07**.

3.5.9.2 The permitted movements at the junction are as follows:

(i) Lowergate: one-way southbound (ie towards junction),
(ii) Moor Lane (S): northbound and southbound (ie no restriction),
(iii) Woone Lane: one-way northbound (ie towards junction),
(iv) Moor Lane (N): one-way northbound (ie away from junction).

Right turn movements between Lowergate and Moor Lane (N) take place at location north of the roundabout. These movements are not permitted at the mini-roundabout.

3.5.9.3 There are 'No Waiting' restrictions at the junction. There are northbound and southbound cycle lanes along Moor Lane (S). There is footway provision around the junction. A pedestrian refuge, with dropped kerbs and tactile paving, is provided between the Moor Lane (N) and Lowergate arms of the junction. The junction benefits from street lighting.

3.5.10 SJ9: Castle View/Parson Lane

3.5.10.1 SJ9 is located approximately 170m south-west of SJ7 and is a three-arm priority controlled 'T' junction. The existing junction arrangements are presented on **Drg No 1677/08**.

3.5.10.2 The junction is located within a 20mph speed limit. There are 'No Waiting' restrictions on the major arm of the junction. There is footway provision on the north side of the major arm and the minor arm and street lighting is present.

3.5.11 SJ10: Greenacre Street/Woone Lane/Eshton Terrace

3.5.11.1 SJ10 is a 4-arm priority-controlled crossroads junction. The permitted movements at the junction are as follows:

(i) Greenacre Street: one-way westbound (ie towards junction),
(ii) Woone Lane (S): northbound and southbound (ie no restriction),
(iii) Eshton Terrace: eastbound and westbound (ie no restriction),
(iv) Woone Lane (N): one-way northbound (ie away from junction).

Woone Lane (S) is controlled by a stop line at the junction. The existing junction arrangements are shown on **Drg No 1677/09**.

3.5.11.2 The junction is subject to a 20mph speed limit. There is footway around all of the junction and the junction benefits from street lighting.

3.5.12 SJ11: Whalley Road/Greenacre Street

3.5.12.1 SJ11 is approximately 150m east of SJ10 and is a 3-arm 'T' junction. Greenacre Street forms the minor arm of the junction and operates in a one-way westbound direction (ie away from the junction). The existing junction arrangements are shown on **Drg No 1677/10**.

3.5.12.2 There are 'No Waiting' restrictions at SJ11. There is footway around all of the junction. To the south of Greenacre Street, there is a puffin crossing on Whalley Road (S).

3.5.13 SJ12: Primrose Road/A671 Whalley Road

3.5.13.1 SJ12 is a priority controlled three-arm 'T' junction, circa 610m from the SJ11. The existing junction arrangements are presented on **Drg No 1677/11**.

3.5.13.2 Primrose Road forms the minor arm of the junction. The junction is located within a 30mph speed limit.

3.5.13.3 There is a northbound cycle lane on Whalley Road (N). There is footway provision around the junction and street lighting is present.

3.5.14 Level Crossing

3.5.14.1 Between SJ6 and SJ10, there is a level crossing on Thorn Street (to the west of the railway line) and Eshton Terrace (to the east of the railway line). There is a 'Keep Clear' road marking on the Thorn Street eastbound approach to the level crossing, just west of Franklin Street. There is full barrier control of the level crossing and cameras assist with the control of the crossing.

3.6 Personal Injury Collisions (PIC)

3.6.1 The LCC MARIO database holds PIC records for the roads across Lancashire, including Clitheroe. The MARIO records covering the TA study area, for the most recently available 5-year period, are presented in **Appendix A**.

3.6.2 Distribution of PICs

3.6.2.1 A summary of the LCC MARIO PIC data is set out below:

	2020	2021	2022	2023	2024	2025	**TOTAL**
Henthorn Road (near Site)	-	-	-	-	-	1	**1**
SJ1	-	-	-	1	-	-	**1**
SJ2	-	1	-	-	-	1	**2**
SJ3	-	-	-	-	-	-	**0**
SJ4	-	-	1	1	-	-	**2**
SJ5	-	-	-	-	-	-	**0**
SJ6	1	-	-	1	1	2	**5**
SJ7	-	-	-	-	-	-	**0**
SJ8	-	-	-	1	1	-	**2**
SJ9	-	-	1	-	-	-	**1**
SJ10	-	1	-	-	-	-	**1**
SJ11	-	-	1	-	-	-	**1**
SJ12	-	-	-	-	-	-	**0**
Railway Level Crossing	-	-	-	-	-	1	**1**
TOTAL	**1**	**2**	**3**	**4**	**2**	**5**	**17**

3.6.3 Severity

3.6.3.1 The severity of the recorded PICs is set out below:

	Slight	Serious	Fatal
Henthorn Road (near Site)	1	-	-
SJ1	1	-	-
SJ2	1	1	-
SJ3	-	-	-
SJ4	1	1	-
SJ5	-	-	-
SJ6	4	1	-
SJ7	-	-	-
SJ8	-	2	-
SJ9	1	-	-
SJ10	1	-	-
SJ11	1	-	-
SJ12	-	-	-
Railway Level Crossing	1	-	-
TOTAL	**12**	**5**	**0**

3.6.4 Summary

3.6.4.1 It is demonstrated that there is a low level of accident occurrence across the TA study network. It is concluded that whilst all accidents are regrettable, there is **no** accident pattern at the TA study junctions that gives rise to the need for accident remediation measures.

4 Proposed Site Access Arrangements

4.1 Design Philosophy

4.1.1 It is now accepted that the way a new residential scheme relates to its surrounding area is key to its success. Guidance on the design of residential developments is set out in documents such Manual for Streets (MfS). This advocates that residential design should:

- Be based on a hierarchical design process placing pedestrians at the top.
- Recognise that streets fulfil a community function with spaces for social interaction.
- Create an inclusive environment that recognises the needs of all ages and abilities.
- Focus on pedestrian desire lines.
- Create a permeable network of streets with strong connectivity to a range of routes.

4.1.2 The starting point of a new residential scheme is to first identify the existing places/amenities near to the site and their relative importance. Then, from this, form an understanding of how an area works to enable proposed points of connection and linkage to be identified, both within and outside the site, so that important desire lines are achieved. MfS recognises that:

- A permeable and well-connected movement network can positively affect how much people walk or cycle or use public transport which helps to achieve a sustainable environment and good quality of life for its community,

- A good range of local amenities within easy access of residents can help to create a walkable neighbourhood, and

- Walking and cycling are important modes of travel, offering a more sustainable alternative to the car, making a positive contribution to the overall character of the place, public health and to tackle climate change through carbon emissions reductions.

4.1.3 MfS advocates residential design that creates walkable neighbourhoods. MfS sets out in para 4.4.1 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 residents may access comfortably on foot. However, this is not an upper limit and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2km. MfS encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents."

4.1.4 A holistic approach to the Site access arrangements is at the core of the development Site access strategy. Thus, there is a cohesive 'package' of development access arrangements for differing modes of travel, comprising, walk, cycle, bus and motor vehicles. Further information about walk and cycle modes is presented in Chapter 5, and about public transport in Chapter 6.

4.2 Site Access Strategy

4.2.1 The planning application seeks outline consent with all matters reserved, except access. The access strategy for vehicles, cyclists and pedestrians, as follows:

Northern Site

- Vehicles: Accessed through Phase 2
- Cycles: Accessed through Phase 2 and Henthorn Road,
- Pedestrians: Accessed through Phase 2 and Henthorn Road,
- Emergency: Henthorn Road.

Southern Site

- Vehicles: Henthorn Road
- Cycles: Henthorn Road,
- Pedestrians: Henthorn Road.

4.3 Design Considerations

4.3.1 Design Guidance

4.3.1.1 The design guidance considered includes Manual for Streets 1 (MfS1), MfS2 and the Design Manual for Roads and Bridges (DMRB).

4.3.1.2 MfS2 states that:

"*…most MfS advice can be applied to a highway regardless of speed limit.* ***It is therefore recommended that as a starting point for any scheme affecting non-trunk roads, designers should start with MfS.***" (para 1.3.2)

Henthorn Road is not a trunk road.

4.3.1.3 MfS continues in para 1.3.3:

*"Where designers do refer to DMRB for detailed technical guidance on specific aspects, for example on strategic inter-urban and non-trunk roads, it is recommended that they **bear in mind the key principles of MfS**, and apply DMRB in a way that **respects local context**. It is further recommended that DMRB or other standards and guidance is **only used** when the guidance contained in MfS is not sufficient or where particular evidence leads a designer to conclude that MfS is not applicable."*

4.4 Site Access Design Criteria

4.4.1 Speed Survey

4.4.1.1 In the vicinity of the Site, Henthorn Road is subject to a 20mph speed limit.

4.4.1.2 To assist with the design of the Site access junction, the applicant commissioned an Automatic Traffic Count (ATC) survey on Henthorn Road in the vicinity of the Site. This involved the installation of pneumatic tubes across Henthorn Road. The survey was undertaken between 5 and 11 November 2024 (inclusive) and recorded data over the full 24-hour period of each survey day.

4.4.2 Vehicle Speeds: Average

4.4.2.1 The recorded 5-day off-peak average speeds are:

(i) Northbound: 27.1 mph;
(ii) Southbound: 27.5 mph.

4.4.3 Vehicle Speeds: 85th Percentile

4.4.3.1 The recorded 5-day off-peak 85%le speeds are:

(i) Northbound: 32.4 mph;
(ii) Southbound: 32.5 mph.

4.4.4 Weather Records

4.4.4.1 A review of the weather records for Clitheroe for the survey period (5-11 November 2024) shows that there were the following levels of rainfall:

(i) Tuesday 5 November 2024: 0.11mm,
(ii) Wednesday 6 November 2024: 0.02mm,
(iii) Thursday 7 November 2024: 0.12mm,
(iv) Friday 8 November 2024: 0.00mm. and

(v) Monday 11 November 2024: 0.00mm.

4.4.4.2 The recorded rainfall levels were all very low or zero. Consequently, it is reasonable to assume that the survey data reflects **dry** weather conditions.

4.4.5 Design Speeds

4.4.5.1 The consequent Design Speeds for the proposed Site access are:

(i) Northbound: 32.4 mph;
(ii) Southbound: 32.5 mph.

4.4.5.2 The Design Speeds for both northbound and southbound vehicles are both **below** the 37.5mph (60kph) threshold in MfS. Therefore, the design guidance in **MfS** is applicable for the Site access visibility splays.

4.4.6 Stopping Sight Distance

4.4.6.1 The visibility standards in MfS and MfS2 are based on Stopping Sight Distance (SSD). This is derived from the design speed together with assumptions regarding driver perception/reaction times and rate of deceleration. In more recent times there have been significant advances in motor vehicle design, particularly in braking, and these changes are recognised in MfS2, which assumes:

- Driver perception/reaction time: 1.5 seconds, and
- Deceleration rate: 4.41 m/s^2.

4.4.6.2 Based on the identified design speeds the calculated SSDs are:

DIRECTION	**DESIGN SPEED**	**(mph & m/s)**	**SSD(m)**
Northbound	32.4	14.484	46
Southbound	32.5	14.529	46.

4.4.6.4 The appropriate levels of visibility to be provided at the proposed Southern Site Access/Henthorn Road junction are:

(i) Visibility to the left: 2.4m x 46m, and
(ii) Visibility to the right: 2.4m x 46m.

4.4.7 Lancashire County Council Consultation Response 11 March 2020

4.4.7.1 The Site access drawing that accompanied the previous planning application (Drg No 1677/01/B) showed visibility splays of 2.4m x 46m (to the left) and 2.4m x 42m (to the right). The LCC consultation response (refer Appendix D) confirms that this level of visibility was acceptable to LCC. As the new visibility provision is the same to the left, and slightly more to the right, it is assumed that the proposed revised level of visibility is also acceptable to LCC.

4.5 Site Access Arrangements

4.5.1 The proposed Site access arrangements on Henthorn Road are shown on **Drg No 1677/01/F**.

4.5.2 The key features of the proposed Drg No 1677/01/F arrangements, and associated highway works, include:

Northern Site

- Northern Site to be accessed through the permitted Phase 2 development;
- Provide footway on the north side of Henthorn Road between the permitted Phase 2 access and the proposed Phase 3 footway/cycleway connection. New footway to be generally 2.0m wide although there is a slight reduction to 1.8m (minimum) over a 35m section where land availability is restricted;
- Pedestrian and cycle access also available through permitted Phase 2 development;
- Provide 3.75m wide footway/cycleway connection with Henthorn Road, which can function as an emergency access if required.

Southern Site

- Form new access on Henthorn Road to serve the Southern Site;
- Southern Access junction to operate under priority (give-way) control;
- Widen Henthorn Road carriageway to 5.5m between the permitted Phase 2 access and the proposed footpath/cycle access;
- Provide 2.0m wide footway on both sides of new Southern Site access road;
- Provide 2.0m wide footway on south side of Henthorn Road to connect with proposed Northern Site footway/cycleway and link to permitted Phase 2 footpath;
- Provide 2.4m x 46m visibility splay to the left for vehicles emerging from Site,

- Provide 2.4m x 46m visibility splay to the right for vehicles emerging from Site.

4.5.3 Lancashire County Council Consultation Response

4.5.3.1 The LCC 3 September 2021 consultation response (refer Appendix G) confirms their agreement as follows:

"*The Ashley Helme Associates drawing 'Proposed access arrangements' 1677/01 Rev A dated August 2019 is acceptable. The points where the internal footway and emergency/cycle route emerge onto Henthorn Road will need to have the required visibility splays. This can be dealt with by a condition which will cover all the new junctions on Henthorn Road.*"

4.5.3.2 The proposed Site access arrangements are shown on Drg No 1677/01/F. These are substantially similar to those previously agreed (Drg No 1677/01/A).

4.5.4 Swept Path Analysis

4.5.4.1 Swept path analysis of the proposed Southern Site Access/Henthorn Road is completed to examine if the junction can accommodate the tracking movements of larger vehicles. For this exercise, vehicles are adopted that might be generated by the proposed development, albeit on an occasional basis. The results are set out on the following drawings:

(ii)	9.57m Pantechnicon	**1677/SP/01/A**;
(ii)	10.14m Large Refuse Vehicle (3 axle)	**1677/SP/02/A**;
(iii)	8.68m Fire Appliance	**1677/SP/03/A**.

4.5.4.2 The swept path analysis shown on Drg Nos 1677/SP/01/A, 02/A and 03/A confirms that all of the 'test' vehicles can complete all turns at the junctions.

4.6 Internal Roads

4.6.1 The internal road layout for the outline application is to be the subject of reserved matters application(s).

4.7 Mobility Impaired

4.7.1 The needs of those with mobility impairment are an important component of the detailed design of the development. This is advocated in NPPF (eg NPPF para 35, refer para 2.5.3 above). The detailed design of the internal layout of the development, which must be the subject of reserved matters approval, will describe the facilities to be provided on Site to assist

the mobility impaired, taking account of guidance and standards together with good practice and local/national policies.

5 Walk & Cycle

5.1 Walk

5.1.1 It is established and acknowledged that walking is the most important mode of travel at the local level, and offers the greatest potential to replace short car trips, particularly under 2km.

5.1.2 National Travel Survey (2024)

5.1.2.1 The National Travel Survey (NTS) provides data on travel by choice of mode. The NTS 2024 is the latest available data. NTS 2024 confirms that 29% of **all** trips are undertaken on foot. However, for trips less up to 1 mile (1.6km), 81% of journeys are carried out on foot.

5.1.2.2 The NTS establishes that:

(i) 25% of all trips were under 1 mile (1.6km) and 70% were under 5 miles (8km);
(ii) 81% of all trips under 1 mile are made by foot;
(iii) The average number of walk trips per person 2024 was 267;
(iv) Walking accounts for 29% of all trips and 4% of distance travelled;
(v) Education and Shopping trips account for 36% of all walk trips;
(vi) For children aged 5 to 10, 83% of trips less than a mile to school are made by foot. For children aged 11 to 16, this figure is 91%.

5.1.3 National Planning Policy Framework (NPPF) & The National Design Guide

5.1.3.1 NPPF defines sustainable transport modes as:

"*Any efficient, safe and accessible means of transport with overall low impact on the environment, including* ***walking*** *and cycling, ultra low and zero emission vehicles, car sharing and public transport.*" (AHA emphasis).

5.1.4 The National Design Guide

5.1.4.1 The National Design Guide sets out in paragraph 82 that:

"*Priority is given to* ***pedestrian*** *and cycle movements, subject to location and the potential to create connections.* ***Prioritising pedestrians*** *and cyclists mean creating routes that are* ***safe, direct, convenient and accessible for people of all abilities****. These are designed as part of attractive spaces with good sightlines, and well chosen junctions and crossings, so that people*

want to use them. Public rights of way are protected, enhanced and well-linked into the wider network of pedestrian and cycle routes." (AHA emphasis).

5.1.4.2 This expanded further in paragraph 83, which states:

"In well-designed places, people should not need to rely on the car for everyday journeys, including getting to workplaces, shops, schools and other facilities, open spaces or the natural environment. Safe and direct routes with visible destinations or clear signposting encourage ***people to walk*** *and cycle."!* (AHA emphasis).

5.1.5 Manual for Streets

5.1.5.1 The 'walkable neighbourhood' concept is set out in MfS1 and endorsed in MfS2. MfS1 explains that:

"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot. However, this is ***not an upper limit*** *and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km."* (MfS para 4.4.1, AHA emphasis).

5.1.6 CIHT Planning for Walking

5.1.6.1 The CIHT document 'Planning for Walking' (2015) sets out the following key points:

"• *Patterns of land use and, in particular, residential densities and mixed uses are the primary determinants of how much people walk. As towns and cities spread out, people make fewer short journeys. The current trend to higher density for new residential developments should encourage walking, if linked to provision of local destinations.*

- *Most short journeys are still made wholly on foot.*
- *Walking is also part of longer journeys. Very few trips by car or public transport are completed without some walking.*
- *Pedestrian "footfall" determines the viability of shops."*

5.1.6.2 The document also stresses:

"• *Walking contributes to physical and mental health.*

- *All streets in urban areas need to be designed to accommodate people who walk wherever they wish to go*

- *People travelling on foot want routes that are direct, as level as possible, enjoyable and have destinations in sight. Safe road crossings are an essential element of routes.*

• " *Walking" is best thought of as a nonvehicle movement including all forms of assistance, such as sticks, wheelchairs, baby buggies and pavement vehicles. Good provision for users requiring such forms of assistance helps everybody.*

- *Walking and cycling are often regarded as compatible. In reality, they are very different modes that will often require separate provision. Both benefit from reduced traffic speeds and reduced motor vehicle traffic flow.*

- The issue of pedestrians and pedal cyclists sharing space is contentious. There are perceived risks associated with cyclists sharing space with pedestrians, and it is not always realised that cyclists seriously injure several hundred pedestrians each year.

- Planners and traffic managers should appreciate that to encourage walking, motor vehicle traffic rather than pedestrians should, as far as possible, be required to avoid conflicts by diverting from direct routes and by changing elevation. Pedestrians wish to follow direct routes on a constant level."

5.1.7 CIHT Providing for Journeys on Foot

5.1.7.1 The CIHT document 'Providing for Journeys on Foot (2000) does not provide a definitive view of distances, but does suggest a preferred maximum distance of 800m for journeys to town centres and 2000m for walk commuting trips.

5.1.8 Walk Isochrones and Local Amenities

5.1.8.1 A 400m distance corresponds to a walk time of 5 minutes, based upon a typical normal walking speed. **Figures 5.1 and 5.2** presents the development 400m, 800m, 1200m, 1600m and 2000m walk isochrones, (ie reflecting 5, 10, 15, 20 and 25-minute walk journeys), and taking account of the pedestrian infrastructure.

5.1.8.2 The walk isochrones presented in Figures 5.1 and 5.2 are created using Basemap TRACC software, a digital mapping and transport data program. The TRACC software enables installation of maps to create a road network. Amendments have been made to the road network to allow for the inclusion of public rights of way and pedestrian access points.

5.1.8.3 The TRACC software adopts the Department for Transport speeds and hence, a walk speed of 4.8km/h is automatically assumed across the road network. However, it is possible to alter the walk speed on all roads to reflect for example, changes in gradient or no accessibility by footway. The walk isochrones presented in Figures 5.1 (Northern Site) and 5.2 (Southern Site) and take into account the lack of footway on certain roads and the walk speed on these routes has been adjusted to 0km/h.

5.1.8.4 Indicated on Figures 5.1 and 5.2 are examples of local facilities near to the Site. This illustrates that there are a number of amenities within 1200m of the Site, including:

- Travel: Bus stops;
- Education: nursery/pre-school;
- Shopping: ATM, convenience store;
- Leisure: Public open space, playground.

5.1.8.5 There are additional amenities within a 1600m walk of the Site, including Edisford Primary School and leisure facilities on Edisford Road. The vast majority of town centre amenities are located between within, or just beyond 2000m of the Site.

5.1.9 Phase 2 Appeal Decision

5.1.9.1 As stated, paragraph 4.4.1 of MfS identifies that there is no upper limit concerning walking distances. The Phase 2 Appeal decision acknowledged that Henthorn Road is adequately accessible by means of walking. The Appeal Decision states that:

"…a degree of realism needs to be applied to the distances in the guidance and the locational circumstance of the appeal site. It is clear that there are a range of facilities within an easy walk of the site. Although the town centre is 2,000m away, the routes to it are relatively direct on good footway infrastructure. The walk from the appeal site to the town centre, which I undertook at the site visit, was neither unduly lengthy nor strenuous. I consider that some residents are likely to walk into the town centre as a matter of choice."

5.1.9.2 Furthermore, the Phase 2 appeal decision noted that the topography near to the town centre would not deter people from walking; already consented developments nearby would largely use the same walking routes. The Inspector concluded that:

"Although Henthorn Road is relatively straight and level, I recognise that local topography on the close approach to the town centre has, in parts, moderate gradients. However, this is common to residents wherever they live in Clitheroe and is no more or less a deterrent to walking for residents of the appeal site than is typical for existing residents.

Furthermore, there is little material difference in the walking distances to the town centre and those nearer facilities for the prospective residents of the appeal site and those of the Blakewater Road development to the north west, that was granted on appeal, and the Storey Homes development currently under construction to the south east. The residents of these developments would predominantly use the same routes to facilities and the town centre as those walking from the appeal site."

5.1.9.3 It is relevant to compare the walk distances for residents of the permitted Phase 1 and 2 residential schemes with the walk distances of future residents of the Phase 3 scheme. As all of the amenities lie to the north of the sites and all residents will generally walk through the junction of Blakewater Road/Henthorn Road, this is used as the common measuring point.

5.1.9.4 The walks distances from the centre of the sites to the junction of Blakewater Road/Henthorn Road are:

SCHEME	**WALK DISTANCE (m)**
Phase 1 (Taylor Wimpey)	300
Phase 2 (Miller Homes)	250
Phase 3 (Northern Site)	375
Phase 3 (Southern Site)	330.

The Phase 3 Southern Site comprises 80 dwellings and represents just under 70% of the total Phase 3 scheme. Therefore, the majority of Phase 3 residents (ie about 70%) will need to walk only an extra 30m when compared to residents of the permitted Phase 1 scheme. Based on typical walk speeds, an additional 30m walk distance would take just over 20 seconds to complete. Therefore, it is reasonable to conclude that the walk distances of Phase 3 residents are substantially similar to those of the residents of the permitted Phase 1 scheme.

5.1.9.5 It is demonstrated that residents of the Phase 3 development are able to access local facilities and the town centre on foot.

5.1.10 Public Rights of Way

5.1.10.1 **Figure 5.3** presents the existing Public Rights of Way (PROW) near to the Site. Footpath 3-1 FP17 is aligned around the western and southern perimeter of the Site. This provides a walking connection between Edisford Road and Henthorn Road.

5.1.10.2 The proposed Gladman Phase 3 residential scheme is located south of a residential site completed by Story Homes. It is understood that Story Homes paid a contribution towards surfacing Footpath 3-1 FP17. Improvement to FP17 includes:

- £55,000 contribution towards highway improvement of FP17 between Henthorn Road and Edisford Road for bicycle use;
- £8,000 contribution to introduce a footpath link from the Story Homes development to FP17 near the railway line;
- £50,000 contribution for surface improvement/ dressing of FP17 from Henthorn Road to Primrose Road.

For prospective residents, particularly those at the southern extent of the proposed development, the improvements outlined for FP17 will provide a surfaced and shorter route into the town centre.

5.1.11 Proposed Pedestrian Improvements

5.1.11.1 The proposed pedestrian infrastructure improvements are:

Northern Site

- Provide footway on the north side of Henthorn Road between the permitted Phase 2 access and the proposed Phase 3 footway/cycleway connection. New footway to be generally 2.0m wide although there is a slight reduction to 1.8m (minimum) over a 35m section where land availability is restricted;

- Pedestrian and cycle access also through permitted Phase 2 development;

- Provide 3.75m wide footway/cycleway connection with Henthorn Road, can function as an emergency access if required.

Southern Site

- Provide 2.0m wide footway on both sides of new Southern Site access road;

- Provide 2.0m wide footway on south side of Henthorn Road to connect with proposed Northern Site footway/cycleway and link to permitted Phase 2 footpath.

5.1.12 Walk Routes to Schools

5.1.12.1 The National Travel Survey (NTS) sets out that 51% of children aged 5-10 years walk to school. For journeys of under 1 mile (1.6km) 80% of children (5-10 years) walk to school.

5.1.12.2 The nearest primary school to the Site is Edisford Primary School on Edisford Road. There is a pedestrian entrance to the school at Siddows Avenue/Hargreaves Court. The walk distance between the centre of the Site and this entrance is just over 1.2km, which is well below the distance quoted in NTS. Consequently, there is a reasonable expectation that most children at the application Site, and based at Edisford Primary School, will walk to school.

5.1.12.3 The most likely route for residents to walk to/from Edisford Primary School is:

Henthorn Road (S) – Henthorn Road (N) – Siddows Avenue.

5.1.12.4 The completed Phase 2 development has delivered new pedestrian infrastructure along the northwest side of Henthorn Road (S). The new footway is to be 2.0m wide and includes street lighting. Henthorn Road (S) is subject to a 20mph speed limit, which is conducive to an environment for walking.

5.1.12.5 Henthorn Road (N) is an established residential road subject to a 20mph speed limit. The route is relatively level and offers sealed surface footways on both sides and benefits from street lighting. There are residential properties fronting Henthorn Road (N), which offer a degree of neighbourhood surveillance.

5.1.12.6 In support of the Phase 2 appeal, the appellant documented footway widths towards the town centre including along Henthorn Road. The Appeal decision concluded the existing footway infrastructure to be adequate. This stated:

"The appellant provided evidence of a variety of footway widths in the vicinity of the appeal site and leading to the town centre. The submitted evidence shows that existing footway widths are consistently between approximately 1.7m to 2.2m along the northern side of Henthorn Road leading up to the town centre and benefit from an acceptable surface and street lighting. These widths were not disputed by the Council. Although there may be localised street furniture and other minor impediments that may cause reductions in width,

overall I consider that the footway infrastructure in the vicinity of the site to be adequate for the range of users including those persons requiring the use of mobility equipment."

5.1.12.7 Siddows Avenue is also an established residential road, about 175m long and is subject to a 20mph speed limit. The route is relatively level, offers sealed surface footways on both sides of the road and benefits from street lighting. There are residential properties fronting Siddows Avenue which offer a degree of neighbourhood surveillance.

5.1.12.8 It is demonstrated that the walk route to the Edisford Primary School is acceptable. It is also reasonable to assume that most children based at the application Site and attending Edisford Primary School will complete their journey on foot.

5.1.13 LCC Consultation Response

5.1.13.1 The LCC 3 September 2021 consultation response (Appendix G) states:

"Further measures of mitigation are requested to enhance pedestrian routes to the local food shop and primary school to support/promote walking from the site to the local area. A scheme has been identified on Eddisford Road in the vicinity of the Spar Food Shop and the Primary School to provide a new zebra crossing.

We foresee that this scheme will support the walkability and sustainability of the site whilst enhancing highway safety for pedestrians on Edisford Road where the volume of traffic will increase as a result of the proposal."

5.1.13.2 The applicant confirms agreement to the provision of a new zebra crossing on Edisford Road in the vicinity of St Paul's Street.

5.2 Cycle

5.2.1 It is recognised that cycling also has potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport.

5.2.2 National Travel Survey (2024)

5.2.2.1 The NTS 2024 sets out that, on average, people:

(i) undertake 15 cycle trips per year,
(ii) cycle a total of 53 miles per year.

5.2.2.2 Based on the total cycle distance of 53 miles and 15 trips per year, this means that the average cycle trip is 3.5 miles, which is about 5.8km.

5.2.3 National Planning Policy Framework (NPPF) & The National Design Guide

5.2.3.1 NPPF defines sustainable transport modes as:

"Any efficient, safe and accessible means of transport with overall low impact on the environment, including walking and ***cycling****, ultra low and zero emission vehicles, car sharing and public transport."* (AHA emphasis).

5.2.4 The National Design Guide

5.2.4.1 The National Design Guide sets out in paragraph 82 that:

"Priority is given to pedestrian and ***cycle movements****, subject to location and the potential to create connections.* ***Prioritising*** *pedestrians and* ***cyclists*** *mean creating routes that are* ***safe, direct, convenient and accessible for people of all abilities****. These are designed as part of attractive spaces with good sightlines, and well chosen junctions and crossings, so that people want to use them. Public rights of way are protected, enhanced and well-linked into the wider network of pedestrian and* ***cycle routes****."* (AHA emphasis).

5.2.4.2 This expanded further in paragraph 83, which states:

"In well-designed places, people should not need to rely on the car for everyday journeys, including getting to workplaces, shops, schools and other facilities, open spaces or the natural environment. Safe and direct routes with visible destinations or clear signposting encourage ***people to*** *walk and* ***cycle****."! (AHA emphasis).*

5.2.5 CIHT Cycle Friendly Infrastructure

5.2.5.1 The CIHT guidance 'Cycle Friendly Infrastructure' (2004) states that:

"Most journeys are short. Three quarters of journeys by all modes are less than five miles (8km) and half under two miles (3.2km) (DOT 1993, table 2a). These are distances that can be cycled comfortably by a reasonably fit person."(para 2.3)

5.2.6 Cycle Isochrones and Local Amenities

5.2.6.1 The cycle isochrones presented in **Figure 5.4** were created using Basemap TRACC software. The TRACC software adopts a 16km/h cycle speed across the road network. The cycle isochrones presented in Figure 5.4 discounts footpaths which do not permit cyclists.

5.2.6.2 Figure 5.4 indicates the 2km and 5km cycle isochrones for the Site, reflecting typically 10-minute and 25-minute journeys. Review of Figure 5.4 highlights that most of Clitheroe is within a 2km cycle ride and all of Clitheroe is within a 5km cycle ride of the Site.

5.2.7 Cycle Routes to School

5.2.7.1 The nearest primary school is Edisford primary School. There is an entrance to the school at the northern end of Siddows Avenue. The most likely route for residents to cycle to/from Edisford Primary School is:

Henthorn Road (S) – Henthorn Road (N) – Siddows Avenue.

All of the route is along residential roads that are subject to a 20mph speed limit. The route is relatively level and benefits from street lighting. It is considered that development generated trips to/from school by cycle are feasible.

5.3 Summary

5.3.1 Transport sustainability is a principle underlying the proposed development. Encouraging walk and cycle journeys is recognised as important. The location of the Site provides a good context for journeys of residents to be undertaken on foot and by cycle. In the vicinity of the Site, the local highway network offers a good level of pedestrian infrastructure and roads subject to a 20mph speed limit.

5.3.2 The Phase 3 Site is located in close proximity to the Phase 2 residential scheme, which at appeal, was deemed to "…*constitute an accessible and sustainable form of development.*" Therefore, it is reasonable to conclude that the Phase 3 Site offers good opportunity for walking and cycling thereby offering the best chance of fostering a sustainable community. This is in accordance with the aims of local policies and national policy in NPPF.

5.3.3 To encourage walking trips, the applicant confirms agreement to the provision of a new zebra crossing on Edisford Road in the vicinity of St Paul's Street.

6 Public Transport

6.1 The proposed development affords opportunity for development generated public transport journeys to be made by bus and rail.

6.2 Bus

6.2.1 CIHT Buses in Urban Development

6.2.1.1 The CIHT document 'Buses in Urban Developments' (2018) sets out several reasons why bus services are important for urban areas, being:

- *"Bus use enables more people to be moved along a corridor of limited vehicle capacity;*
- *Buses enable people who either do not have a car or who do not wish to use one to travel farther than they can walk, with benefits to social equality;*
- *Bus services from peripheral developments can reduce car use from those developments and the resulting congestion on main radial roads;*
- *Bus users contribute substantially to retail activity in town centres;*
- *Towns and cities in which access to the centre is largely by bus can achieve a better city centre environment through more pedestrian space and better air quality;*
- *Buses contribute to active travel and healthier lifestyles because of walking (or cycling) to and from bus stops."*

6.2.2 Existing Bus Stops & Routes

6.2.2.1 There is a frequent bus service operating near to the Site. Service No C2 calls within 450m of the proposed development and functions as a town circular service via Low Moor. The bus service operates on a 30-minute frequency, Monday to Saturday daytime.

6.2.2.2 There is a school bus service (No 686) which calls at bus stops on Garnett Road, which is about 850m from the Site. This service offers trips to/from Bowland County High School on schooldays only.

6.2.2.3 There are also school bus services which call at stops Edisford Road. Service Nos 510 and 645 offer trips to/from Clitheroe Royal Grammar School, Bowland County High School and Ribblesdale High School.

6.2.2.4 Figures 5.1 and 5.2 identifies the locations of existing bus stops in the vicinity of the Site. There is 1no bus stop located on Blakewater Road, opposite Lune Road, which is approximately 450m from the centre of the Site. This stop caters for journeys to Clitheroe (service No C2).

6.2.2.5 The bus stop on Garnett Road comprises flag and pole and timetable information. This stop caters for service No 2 and school bus service No 686.

6.2.3 Bus Services & Frequencies

6.2.3.1 **Table 6.1** summarises the scheduled bus services operating near to the Site and the frequency of service.

6.2.3.2 The existing bus services summarised in Table 6.1 offer travel to Clitheroe Rail Station and town centre, as well as other areas within Clitheroe.

6.2.3.3 The first and last buses to/from Clitheroe are:

SERVICE	TO CLITHEROE		FROM CLITHEROE	
	FIRST	LAST	FIRST	LAST
C2	0712	1827	0700	1815

6.2.3.4 The No C2 service coincides with typical workplace start and finish times. This has been endorsed by the inspector at the Phase 2 appeal, who concluded that:

"…the No 2 service does operate during typical workplace start and finish times and offers some genuine opportunity for the use of public transport to be made to access employment."

This means that residents of the Site have genuine opportunity to complete commuting journeys to/from Clitheroe by bus.

6.2.3.5 Typical bus journey times are:

SERVICE	DESTINATION	JOURNEY TIMES (mins)
2	Low Moor	6
	Clitheroe (Interchange- Near Rail Station)	12

6.2.4 Phase 1 & 2 Financial Contributions

6.2.4.1 The No C2 service currently benefits from a financial contribution secured from the Phase 2 residential scheme. Financial assistance will extend to 2026.

6.2.4.2 The Phase 2 Appeal decision acknowledged the opportunity to travel by public transport:

"In the response to the consultation on the planning application, the highway authority identified that accessibility to public transport for the proposed development is good".

As the Phase 3 scheme is substantially similar to the permitted Phase 2 scheme in terms of bus accessibility, it is concluded that the proposed development is accessible by bus.

6.2.5 Lancashire County Council Consultation Response 11 March 2020

6.2.5.1 The LCC consultation response (refer Appendix D) seeks a financial contribution of £291,000 from the Phase 3 scheme to assist the No C2 bus service for a period of 5 years. To calculate the level of contribution, LCC take the Phase 2 contribution of £200,000 and then apply an uplift factor based on the Phase 2 and Phase 3 scheme sizes (ie 160/110=1.45).

6.2.5.2 The applicant is agreeable to offering financial assistance for the future operation of the No C2 service and would welcome discussions with LCC to determine an appropriate level of contribution given that the current proposal is for 115 dwellings.

6.3 Rail

6.3.1 Rail Station

6.3.1.1 The nearest rail station is at Clitheroe and is just over a 2km walk from the proposed development. Journeys to the rail station can also be made by cycle and bus. There are 5no cycle lockers available at the station as well as multiple cycle stands located adjacent to the station. Furthermore, the Phase 2 development made a £10,000 contribution towards additional cycle storage facilities within Clitheroe Town Centre.

6.3.1.2 Bus service No C2 that calls circa 450m from the Site, is routed near to Clitheroe Rail Station and the journey is about 12 minutes.

6.3.2 Rail Services

6.3.2.1 There is an hourly train service from Clitheroe to destinations including Blackburn, Bolton and Manchester. The journey times for services calling at Clitheroe Rail Station to a range of destinations are as follows;

DESTINATION	JOURNEY TIMES (mins)
Blackburn	28
Bolton	58
Salford Crescent	71
Manchester Victoria	79.

6.3.2.2 The above affords opportunity for residents of the Site to make journeys to work by bus and rail to destinations such as Blackburn and Bolton.

6.4 Summary

6.4.1 It was concluded at Appeal that the adjacent Phase 2 scheme is:

"…*located on an accessible site and that prospective residents would have the opportunity to undertake walk, cycle and public transport trips.*"

6.4.2 It is demonstrated that the Phase 3 scheme is substantially similar to the Phase 2 scheme in terms of public transport accessibility. Therefore, it is reasonable to conclude that the Phase 3 scheme has good public transport accessibility, with journeys to/from the Site by bus to a range of locations. There is also genuine opportunity for Phase 3 residents to complete journeys by rail. This is in accordance with the aims and objectives of current national and local policies.

7 Travel Plan

7.1 The TP for the proposed development is prepared in accordance with best practice and experience, and the 2014 PPG. The outcomes approach is adopted for the development TP.

7.2 The key objectives of the TP are to:

- Contribute to traffic reduction and other sustainable transport objectives set out in national, regional and local policies,
- Improve accessibility of the Site by sustainable modes of transport and address traffic and parking issues,
- Widen choice of travel mode for all those travelling to/from the Site.

7.3 Specific outcomes sought from the TP are to:

- Achieve the minimum number of additional single occupancy car traffic movements to/from the development,
- Address the access needs of site users, by supporting walking, cycling and public transport,
- Reduce the need for travel to/from the Site.

7.4 The TP explicitly considers accessibility by the sustainable travel modes and the proposed measures to encourage their use. These are summarised below:

- Walk & Cycle: Improved pedestrian infrastructure,
- Public Transport: Improved links to existing infrastructure,
- Electric vehicles: Provision of a 32Amp single phase electrical supply to allow for the future inclusion of an individual electric car charging point for each property,
- Car Share: To be promoted by the TPC,
- Work at home: Provision of infrastructure for high speed broadband service to be delivered to the new houses,
- Behavioural strategies: To be promoted by the TPC.

7.5 The TP target is set as: **maximum peak hour 2-way vehicle trip rate of 0.673 vehicles/hour/dwelling**. The objective is for the TP target to be achieved within 5 years from first occupation.

7.6 The TP is to operate for a period of 5 years after first occupation of the development.

7.7 The developer will appoint a Travel Plan Coordinator (TPC), to introduce, manage, operate and monitor the TP. As part of the ongoing management of the TP, the TPC will maintain a

dialogue with the Council, and monitor emerging best practice information, to provide the most efficient platform for maximising the effectiveness of the TP.

7.8 The developer is required to finance the TP. A sufficient revenue budget will be identified to employ the TPC for a period of 5 years post-occupation of the first dwelling, on a sufficient basis to introduce and manage the TP initiatives, and thereafter as required to:

- Manage the initiatives,
- Finance the measures identified in this and subsequent TP Monitoring and Review reports and as agreed with the Council, and
- Enable the TPC postholder to carry out the duties identified above.

7.9 The TP Action Plan is set out in Chapter 10 of the TP. The TP Table 3 summarises identified measures that are proposed, and indicates the timing for the measures and funding information. This illustrates the holistic approach adopted for the TP, aimed at encouraging from the outset a positive sustainable transport awareness and culture for the development. The TP measures will be reviewed and amended as appropriate, in consultation with and requiring the agreement of the local authority, as part of the ongoing dynamic monitoring and review process for the TP.

8 Traffic Flows

8.1 Study Network

8.1.1 The TA study network of junctions comprises:

REF	JUNCTION	CONTROL
SJ1	Lancaster Drive/Edisford Road	Priority control
SJ2	Seedall Avenue/Edisford Road	Priority control
SJ3	Faraday Avenue/Edisford Road	Priority control
SJ4	Thorn Street/Bawdlands	Priority control
SJ5	Henthorn Road/Bawdlands	Priority control
SJ6	Henthorn Road/Eshton Terrace/Thorn Street	Priority control
SJ7	Station Road/Parson Lane	Mini-roundabout
SJ8	Lowergate/Moor Lane/Woone Lane	Mini-roundabout/ priority control
SJ9	Castle View/Parson Lane	Priority control
SJ10	Greenacre Street/Woone Lane/Eshton Terrace	Priority control
SJ11	Whalley Road/Greenacre Street	Priority control
SJ12	Primrose Road/A671 Whalley Road	Priority control.

8.2 Peak Periods

8.2.1 The times when the combination is greatest, of traffic generated by the proposed residential development and the existing highway network traffic, are the weekday AM & PM peak hours. The TA includes quantative analysis of the traffic impact of the proposed development for these periods.

8.3 Traffic Counts

8.3.1 AHA undertook traffic counts at TA study junctions SJ1-11on 5 November 2024. Queue surveys were undertaken at the same time. A survey at SJ12 was undertaken on 27 November 2024.

8.3.2 Analysis of the traffic count data identifies the peak hours for traffic flows at the study junctions as:

- AM: 0815-0915, and
- PM: 1645-1745.

Quantative analysis is undertaken for these peak hours.

8.3.3 **Figure B1, Appendix B**, presents the 2024 AM & PM peak hour traffic count flows at the study junctions. The flows are presented in **vehicles**.

8.4 Traffic Growth

8.4.1 Development Year of Opening and Future Year

8.4.1.1 For the purposes of quantative testing of the local highway network, it is assumed that the development will be fully constructed and operational by year **2031.** It is also LCC policy to request assessment for 5 years after development opening. In this specific case that is **2036**.

8.4.2 Growth Factors

8.4.2.1 The National Transport Model (NTM) TEMPRO is used as a basis for deriving local growth factors. The NTM growth factors adopted to estimate year 2031 and 2036 traffic flows, from the 2024 count data, are set out in **Technical File Note 1C, Appendix C**.

8.4.3 Factored Counts

8.4.3.1 **Figures B2 and B3, Appendix B** present the 2031 and 2036 AM & PM peak hour traffic flows at all of the study network junctions.

8.5 Committed Developments

8.5.1 Ther previous TA report (ref 1677/1/B) considered the following committed developments:

(i) 3/2014/0597: Land off Waddington Road (275 dwellings),
(ii) 3/2012/0942: Higher Standen Farm/Littlemoor Farm (1040 dwellings),
(iii) 3/2013/0035: Land off Henthorn Road (270 dwellings),
(iv) 3/2013/0711: Land off Henthorn Road (140 dwellings),
(v) 3/2015/0879: Land off Littlemoor Road (48 dwellings),
(vi) 3/2017/0433: Land off Henthorn Road (24 dwellings),
(vi) 3/2018/08688: Land off Henthorn Road (110 dwellings),
(vii) 3/2019/1104: Land at Hawthorne Place (58 dwellings).

8.5.2 Where appropriate, AHA has reviewed the TA/TS reports that accompanied the planning applications for the committed schemes.

8.5.3 Land off Waddington Road (ref 3/2014/0597)

8.5.3.1 The scheme has been fully completed by Barratt Homes and David Wilson Homes. Therefore, the traffic generated by this scheme has been recorded in the November 2024 traffic counts.

8.5.4 Higher Standen Farm/Littlemoor Farm (ref 3/2012/0942)

8.5.4.1 The scheme at Higher Standen Farm/Littlemoor Farm (ref 3/2012/0942) assumes that 60% of development generated traffic will travel to/from the A59 corridor. The TA assumes that 40% of development generated traffic will travel towards Clitheroe centre. However, the study network adopted in Higher Standen Farm/Littlemoor Farm TA does not overlap with the TA study network in this TA. Therefore, no further consideration is given in this TA to traffic generated by the Higher Standen Farm/Littlemoor Farm committed development.

8.5.5 Taylor Wimpey Homes, Henthorn Road (ref 3/2013/0035)

8.5.5.1 The scheme of 270 dwellings at land off Henthorn Road (ref 3/2013/0035) is fully complete and occupied. Therefore, the traffic generated by this scheme is included in the November 2024 traffic counts.

8.5.6 Story Homes, Henthorn Road (ref 3/2013/0711) 24 House Scheme (ref 3/2017/0433)

8.5.6.1 Both residential schemes at land off Henthorn Road (ref 3/2013/0711 & 3/2017/0433) are fully complete and occupied. Therefore, the traffic generated by these schemes is included in the November 2024 traffic counts.

8.5.7 Jones Homes, Littlemoor Road (3/2015/0879)

8.5.7.1 The scheme of 48 dwellings at land off Littlemoor Road (ref 3/2015/0879) is fully complete and occupied. Therefore, the traffic generated by this scheme is included in the November 2024 traffic counts.

8.5.8 Miller Homes, Henthorn Road (ref 3/2018/08688)

8.5.8.1 The scheme of 110 dwellings at land off Henthorn Road (ref 3/2018/08688) is fully complete and occupied. Therefore, the traffic generated by this scheme is included in the November 2024 traffic counts.

8.5.9 Persimmon Homes, Hawthorne Place (ref 3/2019/1104)

8.5.9.1 The scheme of 58 dwellings at land off Hawthorne Place (ref 3/2019/1104) appears to be about 60% complete and occupied at the time of the November 2024 traffic counts. However,

the study network adopted in Hawthorne Place TS does not overlap with the TA study network in this TA. Therefore, no further consideration is given in this TA to traffic generated by the Hawthorne Place committed development.

8.6 Distribution of Development Generated Traffic

8.6.1 It is necessary to estimate the % distribution of traffic generated by the proposed residential development at the Site so that this may be assigned across the TA study network.

8.6.2 First TA Report (ref 1677/1/A)

8.6.2.1 The proposed Gladman Phase 3 residential scheme is located south of a residential site completed by Story Homes. Given that both sites are located in the same area of Clitheroe and propose a similar level of residential development, the approach adopted in the first TA report was to use the % distribution adopted for TA prepared for the Story Homes development for the proposed GDL Phase 3 residential scheme. The distribution was agreed with LCC highways officers for the adjacent 3/2018/08688 permitted GDL Phase 2 scheme.

8.6.3 Lancashire County Council Consultation Response 4 June 2020

8.6.3.1 The LCC consultation response of 4 June 2020 (refer Appendix E) states:

"In my previous response I suggested that a number of drivers may be diverting away from the Henthorn Road / Thorn Street junction to avoid the congestion that is present and utilising side roads such as Garnett Road / Lancaster Drive, Seedall Avenue or Faraday Avenue. The applicant's response was to load 31% of the traffic generated by the development to the Garnett Road / Lancaster Drive route out on to Edisford Road. Unfortunately, no clear evidence has been presented that can be scrutinised whether or not this is representative of the levels of diverting traffic that may be using this route and the other two route options have not been considered, or the local consequences."

8.6.3.2 Following a meeting on Site with LCC officers on 26 August 2020, it was agreed that a traffic survey should be undertaken at the junction of Henthorn Road/Garnett Road/Mytton View. This would provide a useful indicator as to the split of traffic travelling to/from the new residential developments at the southern end of Henthorn Road. The results of the survey are presented on Figure TN3/1 in TN 3 (refer Appendix F).

8.6.3.3 The 2021 recorded splits between Garnett Road and Henthorn Road are:

(i)	From Henthorn Road (S)	To Garnett Road	To Henthorn Road (N)
	AM	22%	78%
	PM	24%	76%

(ii)	To Henthorn Road (S)	From Garnett Road	From Henthorn Road (N)
	AM	19%	81%
	PM	22%	78%.

8.6.3.4 The recorded distribution at the Henthorn Road/Garnett Road/Mytton View junction is shown on Figure TN3/9 in TN 3 (refer Appendix F). The split at SJ1 and SJ6 is also estimated in the same way using the recorded split of turning movements. The % distribution at SJ1 and SJ6 is also shown on Figure TN3/9 in TN 3 (refer Appendix F).

8.6.3.5 The LCC consultation response of 3 September 2021 (refer Appendix G) states:

"We have reviewed your latest submission (Technical Note 3 dated 24/06/2021) which has dealt with the matters including the trip rates, distribution and committed development which we raised originally."

This confirms agreement to the revised distribution in TN3 (Appendix F).

8.6.3.6 **Figure B4, Appendix B** presents the **revised % distribution** of Gladman Phase 3 residential development generated traffic.

8.7 Generated Traffic

8.7.1 The proposed development comprises up to 115 dwellings.

8.7.2 First TA Report (ref 1677/1/A)

8.7.2.1 It is usual practice to undertake an interrogation of the TRICS database to identify suitable trip generation rates to adopt for estimating the AM and PM peak hour traffic generated by the proposed residential development. However, the approach adopted in the first AHA TA report was to use the trip rates adopted in the TA for the Story Homes development, which is located near to the proposed development.

8.7.2.2 The trip rates in the first AHA TA report (1677/1/A) are:

PEAK	**ARR**	**DEP**	**2-WAY**
AM	0.140	0.445	0.585
PM	0.437	0.226	0.663.

The trip rates set out above were **agreed** with LCC highways officers for the Story Homes and Gladman Phase 2 residential schemes.

8.7.2.3 Based on these the Story Homes trip rates, the resultant trip generations for the proposed 115 dwellings scheme are:

PEAK	ARR	DEP	2-WAY
AM	16	51	67
PM	50	26	76.

8.7.3 Lancashire County Council Consultation Response 11 March 2020

8.7.3.1 LCC undertook a count of the Taylor Wimpey scheme (Gladman Phase 1) in January 2020. Based on this, LCC calculated the following recorded trip rates:

PEAK	ARR	DEP	2-WAY
AM	0.159	0.577	0.737
PM	0.522	0.248	0.770.

8.7.4 AHA ATC Count: Blakewater Road

8.7.4.1 The LCC count was undertaken in January 2020, which pre-dates the Covid pandemic. There has been a change to the way people work since the pandemic. Therefore, AHA commissioned an ATC survey of the GDL Phase 1 development. This involved the installation of pneumatic tubes on Blakewater Road immediately to the west of Henthorn Road. Based on this, AHA calculate the following recorded trip rates:

PEAK	ARR	DEP	2-WAY
AM	0.185	0.563	0.748
PM	0.444	0.274	0.719.

8.7.4.2 The rates derived from the latest AHA survey are a little higher in the AM peak hour compared to those derived from the LCC January 2020 survey. In contrast, the latest PM peak hour rates are a little lower. It I concluded that the residential trip rates derived from the **2024 AHA survey** are the most appropriate to estimate the traffic generated by the proposed Phase 3 development.

8.7.4.3 Based on the AHA recorded trip rates, the resultant trip generations for the proposed 115 dwellings scheme are:

PEAK	ARR	DEP	2-WAY
AM	21	65	86
PM	51	32	83.

8.7.4.4 **Figure B5, Appendix B** presents the total traffic generated by the proposed Phase 3 development in the AM and PM peak hours at the study junctions, based on the % distribution on Figure B4, Appendix B and the AHA 2024 recorded residential trip rates.

8.8 With Proposed Development

8.8.1 The estimated 2031 and 2036 AM and PM peak hour With Development traffic flows at the TA study junctions are presented on **Figures B6 and B7, Appendix B**.

8.9 Traffic Impact

8.9.1 AHA usually adopts a materiality test to determine the requirement for detailed junction modelling. The test adopted is that junction modelling is undertaken if the proposed development is predicted to generate an increase in traffic at a study junction of **30** vehicles or more.

8.9.2 The traffic impact of the proposed development at the TA study network of junctions in the AM and PM peak hours is summarised below:

STUDY JUNCTION	**AM**	**PM**
SJ1	+19	+19
SJ2	+13	+12
SJ3	+13	+12
SJ4	+13	+11
SJ5	+29	**+31**
SJ6	**+69**	**+64**
SJ7	+29	**+32**
SJ8	**+42**	+28
SJ9	+29	**+31**
SJ10	**+51**	**+46**
SJ11	**+38**	**+36**
SJ12	**+36**	+29.

8.9.3 Review of the above summary shows that the proposed development is estimated to have a traffic impact in excess of 30 vehicles at TA study junctions **SJ5-SJ12**.

8.9.4 Consequently, junction modelling of TA study junctions SJ5-SJ12 is undertaken and the results are presented and discussed in Chapter 9.

9 Operational Performance of the Highway Network

9.1 The computer program PICADY (within JUNCTIONS 10) is used to model the performance of a priority (give-way) control junction. PICADY predicts the ratio of flow to capacity (RFC) and associated queue for the minor (give-way) entry to the junction and for the major road. PICADY is used to model the operational performance of:

REF	JUNCTION	CONTROL
SJ5	Henthorn Road/Bawdlands	Priority control
SJ6	Henthorn Road/Eshton Terrace/Thorn Street	Priority control
SJ9	Castle View/Parson Lane	Priority control
SJ10	Greenacre Street/Woone Lane/Eshton Terrace	Priority control
SJ11	Whalley Road/Greenacre Street	Priority control
SJ12	Primrose Road/A671 Whalley Road	Priority control.

9.2 The computer program ARCADY (within Junctions 10) is used to model the performance of a roundabout control junction. ARCADY predicts the ratio of flow to capacity (RFC) and associated queue for each approach to the junction. ARCADY is used to model the operational performance of:

REF	JUNCTION	CONTROL
SJ7	Station Road/Parson Lane	Mini-roundabout.
SJ8	Lowergate/Moor Lane/Woone Lane	Mini-roundabout/ priority control.

9.3 Queue Surveys and Model Validation

9.3.1 Queue Survey

9.3.1.1 Queues were recorded on all external approach arms at the study junctions. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.3.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). This provides a useful indicator of the current performance level and also assists with PICADY and ARCADY calibration.

9.3.2 Model Calibration

9.3.2.1 The process of model calibration involves:

(i) Construct PICADY/ARCADY model (within JUNCTIONS 10) for the junction;
(ii) Use 2024 recorded traffic count data;
(iii) Compare model output queues to recorded queues;
(iv) If necessary, make small adjustments to model geometry to provide 'best match' between model and recorded queues.

9.4 SJ5: Henthorn Road/Bawdlands

9.4.1 Queue Survey Results

9.4.1.1 Queues were recorded on the approaches to SJ5. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.4.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). The survey also recorded the maximum queue during the 5-minute interval.

9.4.1.3 A review of the survey data shows that the SJ5 is presently operating with negligible queuing traffic. This indicates that SJ5 is operating in a satisfactory manner.

9.4.2 Model Validation

9.4.2.1 A PICADY model is constructed for the 2024 AM & PM peak hour Count situation. The results are presented in **Table 9.1**. A review of Table 9.1 shows that the PICADY model queues provide a close match to the recorded queues. It is concluded that the PICADY model is suitable to test the traffic impact of the proposed development in years 2031 and 2036.

9.4.3 2031 and 2036 Assessment Years

9.4.3.1 **Table 9.2** presents the results of the PICADY modelling for SJ5 for years 2031and 2036.

9.4.3.2 Review of Table 9.2 shows that the existing SJ5 priority-controlled junction is predicted to operate with a high degree of spare capacity and with negligible queues/delays in the 2031 AM & PM peak hour Base situations. Table 9.2 shows that the addition of traffic generated by

the proposed development does not materially alter the performance of the junction in year 2031.

9.4.3.3 Similarly, the PICADY modelling confirms that the existing SJ5 priority-controlled junction is predicted to operate with a high degree of spare capacity and with negligible/small queues/delays in the 2036 AM & PM peak hour Base situations. Table 9.2 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2036.

9.4.3.4 It is concluded that the traffic impact of the proposed development at SJ5 in assessment years 2031 and 2036 is acceptable.

9.5 SJ6: Henthorn Road/Eshton Terrace/Thorn Street

9.5.1 Queue Survey

9.5.1.1 Queues were recorded on the approaches to SJ6. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.5.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). The survey also recorded the maximum queue during the 5-minute interval.

9.5.1.3 A review of the survey data shows that the SJ6 is presently operating with small queues. This indicates that SJ6 is operating in a satisfactory manner.

9.5.2 Model Calibration: 2024 Count

9.5.2.1 SJ6 was the subject of extensive discussion at the Phase 2 public inquiry. The PICADY analysis results presented in the TA report (ref 1616/2/B) were derived from a model that used the ONE HOUR traffic flow entry function. This form of entry synthesises a peak flow profile within the peak hour. The ONE HOUR function is useful when large numbers of junctions, and scenarios, need to be tested. However, given the discussion about SJ6 at the Phase 2 Appeal, AHA has revisited the PICADY model for SJ6 and undertaken revised modelling using the DIRECT form of traffic flow entry. This uses recorded flow patterns in 15-minute time intervals and is considered to be a more accurate (albeit more time-consuming) method of modelling the junction.

9.5.2.2 A model was constructed for the 2024 AM & PM peak hour Count situation and using the DIRECT form of flow entry. Initial PICADY results produced model output queues that were

higher than the recorded queues for the Thorn Street (E) approach. Consequently, AHA made small changes to the Thorn Street (E) geometry to generate model results that better matched recorded queues. The results of this exercise are presented in **Table 9.3**. A review of Table 9.3 shows that PICADY model of SJ6 correlates reasonably well with the recorded queues. It is concluded that the PICADY model is suitable to test the traffic impact of the Proposed Development in years 2031 and 2036.

9.5.3 2031 and 2036 Assessment Years

9.5.3.1 **Table 9.4** presents the results of the PICADY modelling for SJ6 for years 2031 and 2036.

9.5.3.2 A review of Table 9.4 shows that SJ6 is predicted to operate in an acceptable manner and with small queues and delays in the 2031 and 2036 AM peak hour Base situations. The PICADY modelling demonstrates that the addition of traffic generated by the proposed Phase 3 scheme generally does not materially alter the performance of the junction. The model shows the addition of traffic generated by the proposed Phase 3 scheme leads to some worsening of the performance of Henthorn Road (S) in the AM peak hour. However, the level of performance predicted by PICADY for Henthorn Road (S) in the 2036 AM peak hour With Development situation (ie worst case scenario) could not reasonably be described as severe, which is the test set out in NPPF.

9.5.3.3 In the PM peak hour, the PICADY modelling shows that the junction generally operates in an acceptable manner in the 2031 and 2036 Base situations. However, the model indicates that the Thorn Street (E) approach to the junction is starting to experience a slight deterioration in performance by 2031 and there is a further worsening of performance by year 2036. As would be expected, the PICADY model shows further deterioration of the performance of Thorn Street (E) if the proposed Phase 3 development proceeds. However, the level of performance predicted by PICADY for Thorn Street (E) in the 2036 PM peak hour With Development situation (ie worst case scenario) could not reasonably be described as severe, which is the test set out in NPPF.

9.5.4 LCC Consultation Response

9.5.4.1 The operation of SJ6 is considered in the LCC consultation response of 4 June 2020 (Appendix E), which states:

"There is growing concern that the Thorn Street / Henthorn Road junction is becoming increasingly congested with time as the residential developments along Henthorn Road become increasingly occupied. The operation of the junction is further complicated by the

combination of the periodic operation of the level crossing on Thorn Street and the parking that occurs on Henthorn Road outside the terraced properties (numbered 15 -31) both of which contribute to the delays at this junction. Although the revised TA makes reference to the delays accompanying the operations of the level crossing in terms of frequency, duration and queue lengths there is no acknowledgement or attempt to mitigate the effects of the parking outside the terraced properties. In considering the Phase 2 planning application in 2018 it was recognised from local observations that there was a degree of cooperation between drivers with a system of unofficial "give and take" operating on Henthorn Road. However there will be a level at which this system is likely to breakdown as drivers become increasingly frustrated with delays. The consequence of this will be increased queue lengths possibly impacting on adjacent junctions and the level crossing."

9.5.5 Improvement Scheme

9.5.5.1 Notwithstanding the results of the PICADY analysis, the limitations of the PICADY model and the potential for users to select alternative routes, SJ6 may still experience stress in the coming years. Consequently, the applicant has investigated the potential to carry out modest improvements at SJ6 commensurate with the level of development impact.

9.5.5.2 There is a practical problem in delivering major change to SJ6 due to limited highway land being available and the proximity of third-party properties. The approach adopted is to identify a number of small-scale works that could collectively offer improvement to the functioning of the junction.

9.5.5.3 **Drg No 1677/12/A** shows an improvement scheme. The main features are:

(i) Undertake widening on the west side of Henthorn Road over a distance of about 25m. This would increase the clear carriageway width (ie excluding parked vehicles) to 5.5m. Although a modest increase, it would provide additional lateral clearance between north and southbound vehicles on Henthorn Road and help to promote free flow conditions.

(ii) Slightly realign the centreline marking on Henthorn Road to position a right turning vehicle (to Eshton Terrace) so as to make the northbound movement through the junction easier to negotiate,

(iii) Introduce 'Keep Clear' markings on the southbound side of Henthorn Road at Eshton Terrace. This helps to overcome a southbound vehicle on Henthorn Road blocking the Eshton Terrace exit, and

(iv) Introduce tactile paving at the existing dropped kerb crossing locations on Eshton Terrace and Thorn Street (W).

9.5.5.4 LCC confirm their agreement to the improvement scheme shown on Drg No 1677/12/A in their 3 September 2021 consultation response (Appendix G), which states:

"An improvement scheme at the junction of Henthorn Road and Thorn Street is proposed and detailed in the Ashley Helme Associates drawing 'Proposed Junction Improvement Study Junction 6 – 1677/12-Rev A dated 27.08.21. This scheme will provide improvements to support the operation of the junction for vehicle/cycle movements and enhancements for pedestrian movements."

9.6 SJ7: Station Road/Parsons Lane

9.6.1 Queue Survey Results

9.6.1.1 Queues were recorded on the approaches to SJ7. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.6.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). The survey also recorded the maximum queue during the 5-minute interval.

9.6.1.3 A review of the survey data shows that the SJ7 is presently operating with small queues. This indicates that SJ7 is operating in a satisfactory manner.

9.6.2 Model Validation

9.6.2.1 An ARCADY model is constructed for the 2024 AM & PM peak hour Count situation. The results are presented in **Table 9.5**. A review of Table 9.5 shows that the ARCADY model queues provide a reasonable match to the recorded queues. It is concluded that the ARCADY model is suitable to test the traffic impact of the proposed development in years 2031 and 2036.

9.6.3 2031 and 2036 Assessment Years

9.6.3.1 **Table 9.6** presents the results of the ARCADY modelling for SJ7 for years 2031 and 2036.

9.6.3.2 Review of Table 9.6 shows that the existing SJ7 mini-roundabout junction is predicted to operate with spare capacity and with small/modest queues/delays in the 2031 AM & PM peak

hour Base situations. Table 9.6 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2031.

9.6.3.3 Similarly, the ARCADY modelling confirms that the existing SJ7 mini-roundabout junction is predicted to operate with spare capacity and with small/modest queues/delays in the 2036 AM & PM peak hour Base situations. Table 9.6 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2036.

9.6.3.4 It is concluded that the traffic impact of the proposed development at SJ7 in assessment years 2031 and 2036 is acceptable.

9.7 SJ8: Moor Lane/Woone Lane

9.7.1 Queue Survey Results

9.7.1.1 Queues were recorded on the approaches to SJ8. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.7.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). The survey also recorded the maximum queue during the 5-minute interval.

9.7.1.3 A review of the survey data shows that the SJ8 is presently operating with negligible queuing traffic. This indicates that SJ8 is operating in a satisfactory manner.

9.7.2 Model Validation

9.7.2.1 An ARCADY model is constructed for the 2024 AM & PM peak hour Count situation. The results are presented in **Table 9.7**. A review of Table 9.7 shows that the ARCADY model queues provide a reasonable match to the recorded queues. It is concluded that the ARCADY model is suitable to test the traffic impact of the proposed development in years 2031 and 2036.

9.7.3 2031 and 2036 Assessment Years

9.7.3.1 **Table 9.8** presents the results of the ARCADY modelling for SJ8 for years 2031 and 2036.

9.7.3.2 Review of Table 9.8 shows that the existing SJ8 mini-roundabout junction is predicted to operate with spare capacity and with small/modest queues/delays in the 2031 AM & PM peak

hour Base situations. Table 9.8 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2031.

9.7.3.3 Similarly, the ARCADY modelling confirms that the existing SJ8 mini-roundabout junction is predicted to operate with spare capacity and with small/modest queues/delays in the 2036 AM & PM peak hour Base situations. Table 9.8 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2036.

9.7.3.4 It is concluded that the traffic impact of the proposed development at SJ8 in assessment years 2031 and 2036 is acceptable.

9.8 SJ9: Castle View/Parsons Lane

9.8.1 Queue Survey Results

9.8.1.1 Queues were recorded on the approaches to SJ9. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.8.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). The survey also recorded the maximum queue during the 5-minute interval.

9.8.1.3 A review of the survey data shows that the SJ9 is presently operating with negligible queuing traffic. This indicates that SJ9 is operating in a satisfactory manner.

9.8.2 Model Validation

9.8.2.1 A PICADY model is constructed for the 2024 AM & PM peak hour Count situation. The results are presented in **Table 9.9**. A review of Table 9.9 shows that the PICADY model queues provide a close match to the recorded queues. It is concluded that the PICADY model is suitable to test the traffic impact of the proposed development in years 2031 and 2036.

9.8.3 2031 and 2036 Assessment Years

9.8.3.1 **Table 9.10** presents the results of the PICADY modelling for SJ9 for years 2031 and 2036.

9.8.3.2 Review of Table 9.10 shows that the existing SJ9 priority-controlled junction is predicted to operate with a high degree of spare capacity and with small/modest queues/delays in the

2031 AM & PM peak hour Base situations. Table 9.18 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2031.

9.8.3.3 Similarly, the PICADY modelling confirms that the existing SJ9 priority-controlled junction is predicted to operate with a high degree of spare capacity and with small/modest queues/delays in the 2036 AM & PM peak hour Base situations. Table 9.10 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2036.

9.8.3.4 It is concluded that the traffic impact of the proposed development at SJ9 in assessment years 2031 and 2036 is acceptable.

9.9 SJ10: Greenacre Street/Woone Lane/Eshton Terrace

9.9.1 Queue Survey Results

9.9.1.1 Queues were recorded on the approaches to SJ10. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.9.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). The survey also recorded the maximum queue during the 5-minute interval.

9.9.1.3 A review of the survey data shows that the SJ10 is presently operating with negligible queuing traffic. This indicates that SJ10 is operating in a satisfactory manner.

9.9.2 Model Validation

9.9.2.1 A PICADY model is constructed for the 2024 AM & PM peak hour Count situation. The results are presented in **Table 9.11**. A review of Table 9.11 shows that the PICADY model queues provide a close match to the recorded queues. It is concluded that the PICADY model is suitable to test the traffic impact of the proposed development in years 2031 and 2036.

9.9.3 2031 and 2036 Assessment Years

9.9.3.1 **Table 9.12** presents the results of the PICADY modelling for SJ10 for years 2031 and 2036.

9.9.3.2 Review of Table 9.12 shows that the existing SJ10 priority-controlled junction is predicted to operate with a high degree of spare capacity and with negligible queues/delays in the 2031 and 2036 AM & PM peak hour Base situations.

9.9.3.3 Review of Table 9.12 shows that, in 2031 and 2036, the traffic impact of development generated traffic at SJ10 is almost imperceptible. Therefore, it is reasonable to conclude that the traffic impact of the proposed development at SJ10 in assessment years 2031 and 2036 is acceptable.

9.10 SJ11: Whalley Road/Greenacre Street

9.10.1 Queue Survey Results

9.10.1.1 Queues were recorded on the approaches to SJ11. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 5 November 2024).

9.10.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). The survey also recorded the maximum queue during the 5-minute interval.

9.10.1.3 A review of the survey data shows that the SJ11 is presently operating with negligible queuing traffic. This indicates that SJ11 is operating in a satisfactory manner.

9.10.2 Model Validation

9.10.2.1 A PICADY model is constructed for the 2024 AM & PM peak hour Count situation. The results are presented in **Table 9.13**. A review of Table 9.13 shows that the PICADY model queues provide a reasonable match to the recorded queues. It is concluded that the PICADY model is suitable to test the traffic impact of the proposed development in years 2031 and 2036.

9.10.3 2031 and 2036 Assessment Years

9.10.3.1 **Table 9.14** presents the results of the PICADY modelling for SJ11 for years 2031 and 2036.

9.10.3.2 Review of Table 9.14 shows that the existing SJ11 priority-controlled junction is predicted to operate with a high degree of spare capacity and with negligible queues/delays in the 2031 and 2036 AM & PM peak hour Base situations.

9.10.3.3 Review of Table 9.12 shows that, in 2031 and 2036, the traffic impact of development generated traffic at SJ11 is almost imperceptible. Therefore, it is reasonable to conclude that the traffic impact of the proposed development at SJ11 in assessment years 2031 and 2036 is acceptable.

9.11 SJ12: Primrose Road/A671 Whalley Road

9.11.1 Current Performance

9.11.1.1 The junction was observed during the AM and PM peak hours. Site observation confirms that the junction is currently operating with only small queues and delays.

9.11.2 2031 and 2036 Assessment Years

9.11.2.1 **Table 9.15** presents the results of the PICADY modelling for SJ12 for years 2031 and 2036.

9.11.2.2 Review of Table 9.15 shows that the existing SJ12 priority-controlled junction is predicted to generally operate with spare capacity and with small/modest queues/delays in the 2031 and 2036 AM & PM peak hour Base situations.

9.11.2.3 In the AM peak hour, the PICADY modelling indicates that the Primrose Road approach to the junction is starting to experience a slight deterioration in performance by year 2031. As would be expected, the PICADY model shows further deterioration of the performance of Primrose Road if the proposed Phase 3 development proceeds. However, the level of performance predicted by PICADY for Primrose Road in the 2036 AM peak hour With Development situation (ie worst case scenario) could not reasonably be described as severe, which is the test set out in NPPF.

9.11.2.4 It is concluded that the traffic impact of the Proposed Development at SJ12 in assessment years 2031 and 2036 is acceptable.

9.12 Eshton Terrace Level Crossing

9.12.1 There is an existing level crossing on Eshton Terrace to the north east of the Site.

9.12.2 AHA commissioned a survey at the level crossing on 5 November 2024 between periods 0730-0930 and 1600-1815. The surveys recorded the following:

- Times when the level crossing barriers were closed,

- Times when the level crossing barriers opened,
- Length of time they were closed, and
- Length of queues that formed when the barriers were closed.

9.12.3 The level crossing barriers were down on 3no occasions during the AM survey period, with 2no occurrences during the AM peak hour (0815-0915). The barriers were down for an average of 1 minute 23 seconds in the AM peak hour. The maximum recorded queue on the eastbound approach was 18 vehicles, which occurred at 08:21:26. The maximum recorded queue on the westbound approach was 11vehicles, which also occurred at 08:21:26.

9.12.4 The level crossing barriers were down on 2no occasions during the PM survey period, with no closures in the PM peak hour (1645-1745). However, on the day of the survey, train services between Blackburn and Clitheroe were disrupted due to a broken-down train. The first affected service was at 1625 with the disruption extending to 1800 hours. This covers the PM peak hour. Timetable information shows, that without disruption, a train arrives at Clitheroe station at 1701 hours and departs at 1720 hours. This would mean that there would normally be 2no carrier closures in the PM peak hour.

9.12.5 Based on the average length of closure at the level crossing barrier, the average number of additional vehicles generated by the proposed development arriving at the level crossing during each closure is estimated using the following formula:

(Number of peak hour development generated vehicles at the level crossing/number of seconds in an hour) x average duration of barrier closure for the AM peak hour.

For example:

Figure B5, Appendix B shows that there are 40 development generated eastbound departures at the level crossing in the AM peak hour.

(40/3600) x 105 = 1.2

Using the above formula, the estimated increased in the queue during the AM peak hour is:

	Eastbound (veh)	Westbound (veh)
AM	1.2	0.4

9.12.6 The PM peak hour survey of the barriers was affected by cancelled train services. However, in the PM peak hour, the development is estimated to add 19 vehicles to Eshton Terrace in the eastbound direction and 26 vehicles in the westbound direction. This is lower than the AM peak hour and, therefore, it is reasonable to conclude that additional queuing in the PM peak hour, resulting from the development, will also be lower.

9.12.7 It should be recognised that the additional queuing vehicles occur on only 2no occasions in the AM and PM peak hours. This demonstrates that the impact of the proposed development on the level crossing is **not material**.

9.13 Summary

9.13.1 Comprehensive junction analysis and modelling is undertaken for the years 2031 and 2036 for the AM & PM peak hour Base and With Development situations. It is concluded that the proposed residential development **does not** have a detrimental impact on the operational performance of the TA highway network.

10 Summary & Conclusions

10.1 Ashley Helme Associates Limited are appointed by Gladman Developments Ltd to prepare a Transport Assessment report to support the planning application for residential development on land off Henthorn Road, Clitheroe. The Site is presently agricultural/field land. The proposed development comprises two parcels of land, referred to the Northern Site and Southern Site, that can accommodate up to 115 dwellings. All matters are reserved, except access.

10.2 AHA Past Involvement

10.2.1 AHA prepared the TA report that accompanied the planning application for a residential scheme of 110 dwellings on a site to the north of the current application Site. This scheme (application ref 3/2018/08688) was promoted by GDL and was approved following an appeal. The approved scheme is referred to as Phase 2. The proposed GDL development is referred to as Phase 3.

10.2.2 GDL submitted a planning application (ref 19/0999/OUT) for Phase 3 in 2019. AHA prepared two TA reports for the Phase 3 application being:

(i) First: TA Report (ref 1677/1/A), October 2019, and
(ii) Second: TA Report (ref 1677/1/B), March 2020.

10.3 Lancashire County Council Consultation Responses

10.3.1 Lancashire County Council (LCC) are the highway authority for the roads in Clitheroe. LCC provided comments to the 2019 Phase 3 application in their consultation responses of:

(i) 11 March 2020,
(ii) 4 June 2020, and
(iii) 3 September 2021.

10.3.2 The final LCC consultation response (3 September 2021) confirmed acceptance to the 2019 Phase 3 application, as follows:

*"To conclude we would raise **no objection** to the proposal subject to the measures of mitigation detailed above and the following conditions."* (AHA emphasis)

10.4 Access Strategy

10.4.1 The principle of transport sustainability underlies the masterplan development. The location of the Site provides a good context for journeys to be undertaken on foot and by cycle, and the masterplan access strategy reflects this with the provision of good permeability and connectivity for pedestrians and cyclists.

10.4.2 The planning application seeks outline consent with all matters reserved, except access. The access strategy for the Site is:

Northern Site

- Vehicles: Accessed through Phase 2
- Cycles: Accessed through Phase 2 and Henthorn Road,
- Pedestrians: Accessed through Phase 2 and Henthorn Road,
- Emergency: Henthorn Road.

Southern Site

- Vehicles: Henthorn Road
- Cycles: Henthorn Road,
- Pedestrians: Henthorn Road.

10.4.3 The proposed Site access arrangements on Henthorn Road are shown on Drg No 1677/01/F and include:

Northern Site

- Northern Site to be accessed through the permitted Phase 2 development;
- Provide footway on the north side of Henthorn Road between the permitted Phase 2 access and the proposed Phase 3 footway/cycleway connection. New footway to be generally 2.0m wide although there is a slight reduction to 1.8m (minimum) over a 35m section where land availability is restricted;
- Pedestrian and cycle access also available through permitted Phase 2 development;
- Provide 3.75m wide footway/cycleway connection with Henthorn Road, can function as an emergency access if required.

Southern Site

- Form new access on Henthorn Road to serve the Southern Site;
- Southern Access junction to operate under priority (give-way) control;
- Widen Henthorn Road carriageway to 5.5m between the permitted Phase 2 access and the proposed Southern access;
- Provide 2.0m wide footway on both sides of new Southern Site access road;
- Provide 2.0m wide footway on south side of Henthorn Road to connect with proposed Northern Site footway/cycleway and link to permitted Phase 2 footpath;

- Provide 2.4m x 46m visibility splay to the left for vehicles emerging from Site,
- Provide 2.4m x 46m visibility splay to the right for vehicles emerging from Site.

10.4.4 The proposed Site access arrangements are shown on Drg No 1677/01/F. These are substantially similar to those previously agreed with LCC (Drg No 1677/01/A) for the 2019 Phase 3 application.

10.5 Walk and Cycle

10.5.1 The location of the Site provides a good context for journeys of residents to be undertaken on foot and by cycle. The proposed residential development is to provide access on Henthorn Road. The applicant propose pedestrian infrastructure improvements as follows:

Northern Site

- Provide footway on the north side of Henthorn Road between the permitted Phase 2 access and the proposed Phase 3 footway/cycleway connection. New footway to be generally 2.0m wide although there is a slight reduction to 1.8m (minimum) over a 35m section where land availability is restricted;
- Pedestrian and cycle access also through permitted Phase 2 development;
- Provide 3.75m wide footway/cycleway connection with Henthorn Road, can function as an emergency access if required.

Southern Site

- Provide 2.0m wide footway on both sides of new Southern Site access road;
- Provide 2.0m wide footway on south side of Henthorn Road to connect with proposed Northern Site footway/cycleway and link to permitted Phase 2 footpath.

10.5.2 Henthorn Road is subject to a 20mph speed limit. It is considered that Henthorn Road is a suitable route for cycling.

10.5.3 The applicant confirms agreement to the provision of a new zebra crossing on Edisford Road in the vicinity of St Paul's Street.

10.5.4 The location of the Site, characteristics of Henthorn Road and nearby local amenities, offer an excellent opportunity for fostering a sustainable community. This is in accordance with the aims of local policies and national policy in NPPF.

10.6 Public Transport

10.6.1 Encouraging public transport journeys is an important component of the development access strategy. There are existing bus services operating in the vicinity of the Site that offer a good

level of frequency and a range of destinations. Service No C2 calls within 450m of the proposed development and functions as a town circular service via Low Moor. The bus service operates to a 30-minute frequency, Monday to Saturday daytime.

10.6.2 For the previous planning application (ref 19/0999/OUT) LCC sought a financial contribution of £291,000 from the Phase 3 scheme to assist the No C2 bus service for a period of 5 years. The applicant is agreeable to supporting the future operation of the No C2 service and would welcome discussions with LCC to determine a suitable level of financial contribution given that the current development proposal is for 115 dwellings.

10.6.3 There is a school bus service (No 686) which calls just over 800m of the Site at bus stops on Garnett Road. This service offers trips to/from Bowland County High School on schooldays only. There are also school bus services which call at stops on Edisford Road. Service Nos 510 and 645 offer trips to/from Clitheroe Royal Grammar School, Bowland County High School and Ribblesdale High School.

10.6.4 The nearest rail station is at Clitheroe and is just over a 2km walk from the proposed development. Journeys to the rail station can also be made by cycle and bus. There are 5no cycle lockers available at the station. Bus service No 2, that calls at stops circa 450m from the Site, is routed near to Clitheroe Rail Station and the journey is about 12 minutes. There is an hourly train service from Clitheroe to destinations including Blackburn, Bolton and Manchester.

10.7 Traffic Impact

10.7.1 A TA study network of junctions is identified and comprises:

REF	JUNCTION	CONTROL
SJ1	Lancaster Drive/Edisford Road	Priority control
SJ2	Seedall Avenue/Edisford Road	Priority control
SJ3	Faraday Avenue/Edisford Road	Priority control
SJ4	Thorn Street/Bawdlands	Priority control
SJ5	Henthorn Road/Bawdlands	Priority control
SJ6	Henthorn Road/Eshton Terrace/Thorn Street	Priority control
SJ7	Station Road/Parson Lane	Mini-roundabout
SJ8	Lowergate/Moor Lane/Woone Lane	Mini-roundabout/priority control
SJ9	Castle View/Parson Lane	Priority control
SJ10	Greenacre Street/Woone Lane/Eshton Terrace	Priority control
SJ11	Whalley Road/Greenacre Street	Priority control
SJ12	Primrose Road/A671 Whalley Road	Priority control.

The TA study network of junctions is **agreed** with LCC highways officers.

10.7.2 Estimates of traffic generated by the proposed development are based on recorded residential trip rates. This approach was accepted by LCC for the 2019 Phase 3 application.

10.7.3 Comprehensive junction analysis and modelling is undertaken for year 2031 and 2036 AM & PM peak hour Base and With Development situations. It is concluded that the proposed residential development **does not** have a detrimental impact on the operational performance of the TA highway network.

10.7.4 An improvement scheme is proposed at the junction of Henthorn Road/Thorn Street (SJ6). The works are shown on Drg No 1677/12/A and include:

(i) Undertake widening on the west side of Henthorn Road over a distance of about 25m. This would increase the clear carriageway width (ie excluding parked vehicles) to 5.5m. Although a modest increase, it would provide additional lateral clearance between north and southbound vehicles on Henthorn Road and help to promote free flow conditions.

(ii) Slightly realign the centreline marking on Henthorn Road to position a right turning vehicle (to Eshton Terrace) so as to make the northbound movement through the junction easier to negotiate,

(iii) Introduce 'Keep Clear' markings on the southbound side of Henthorn Road at Eshton Terrace. This helps to overcome a southbound vehicle on Henthorn Road blocking the Eshton Terrace exit, and

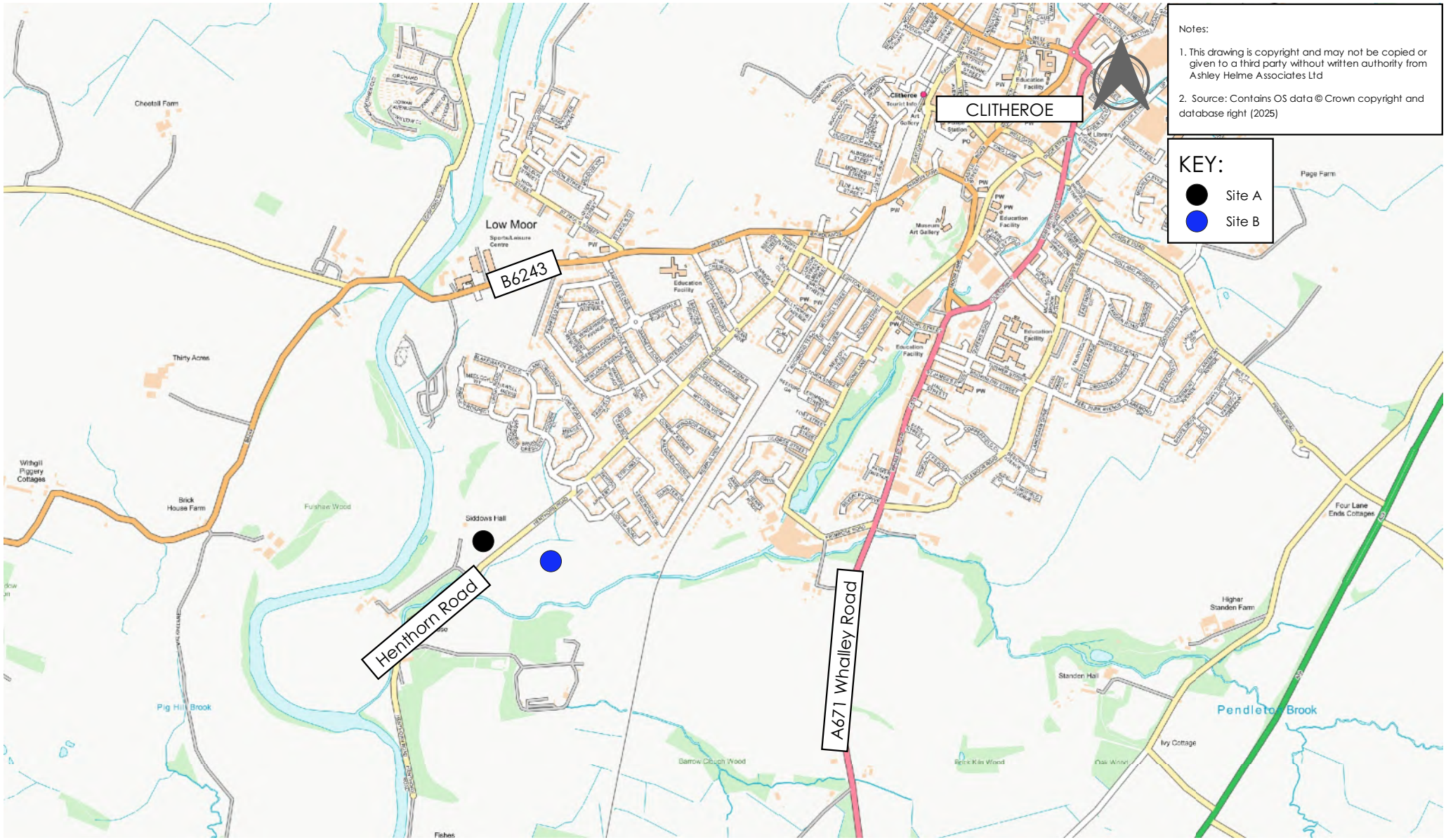
(iv) Introduce tactile paving at the existing dropped kerb crossing locations on Eshton Terrace and Thorn Street (W).

10.7.5 LCC confirmed their agreement to the improvement scheme shown on Drg No 1677/12/A in their 3 September 2021 consultation response.

10.8 Summary

10.8.1 It is concluded that the proposed development is in accordance with national and local transport policies, and that there are **no** transport/highways reasons for refusal of planning permission.

Figures



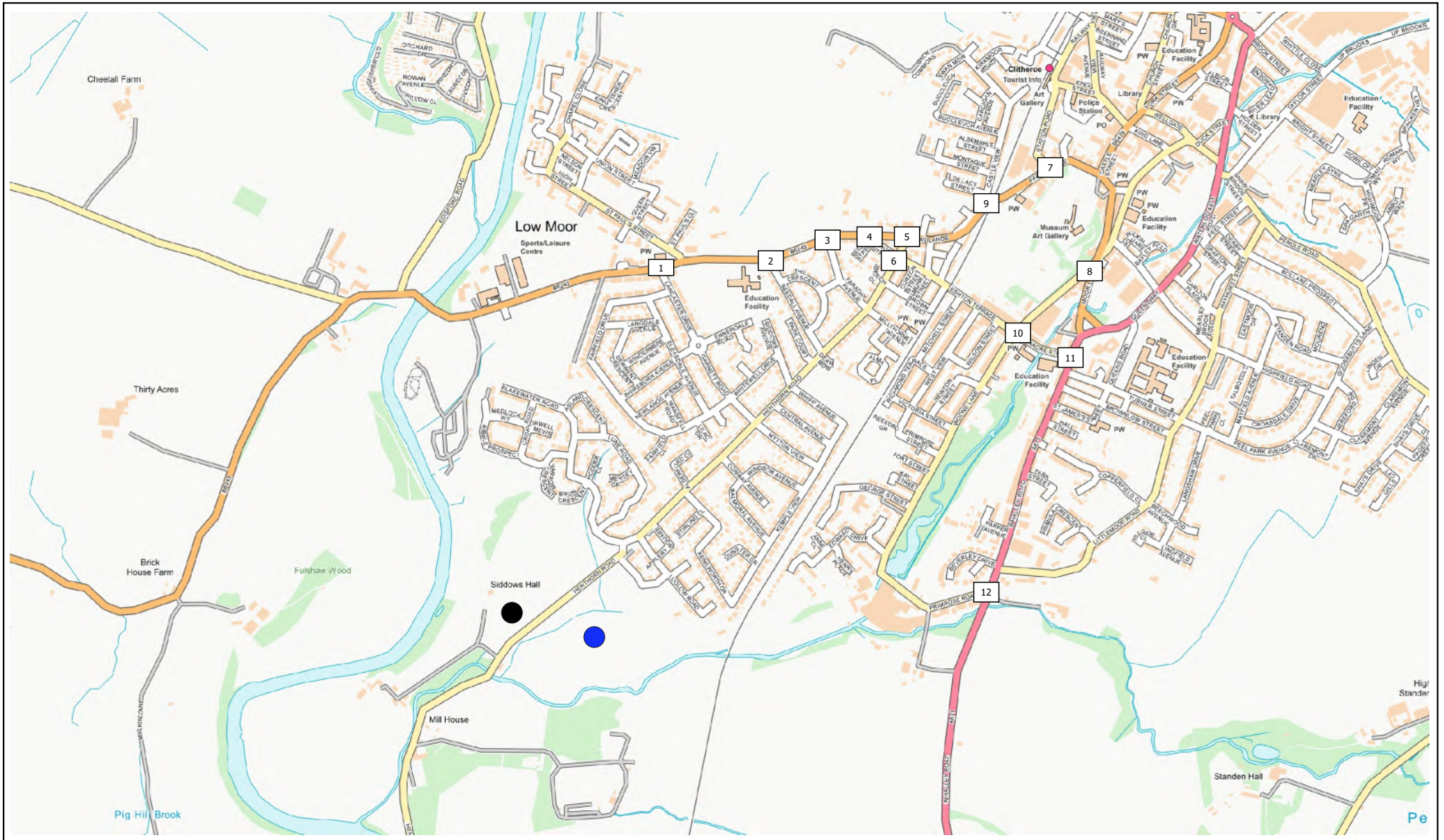
Notes:

1. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd

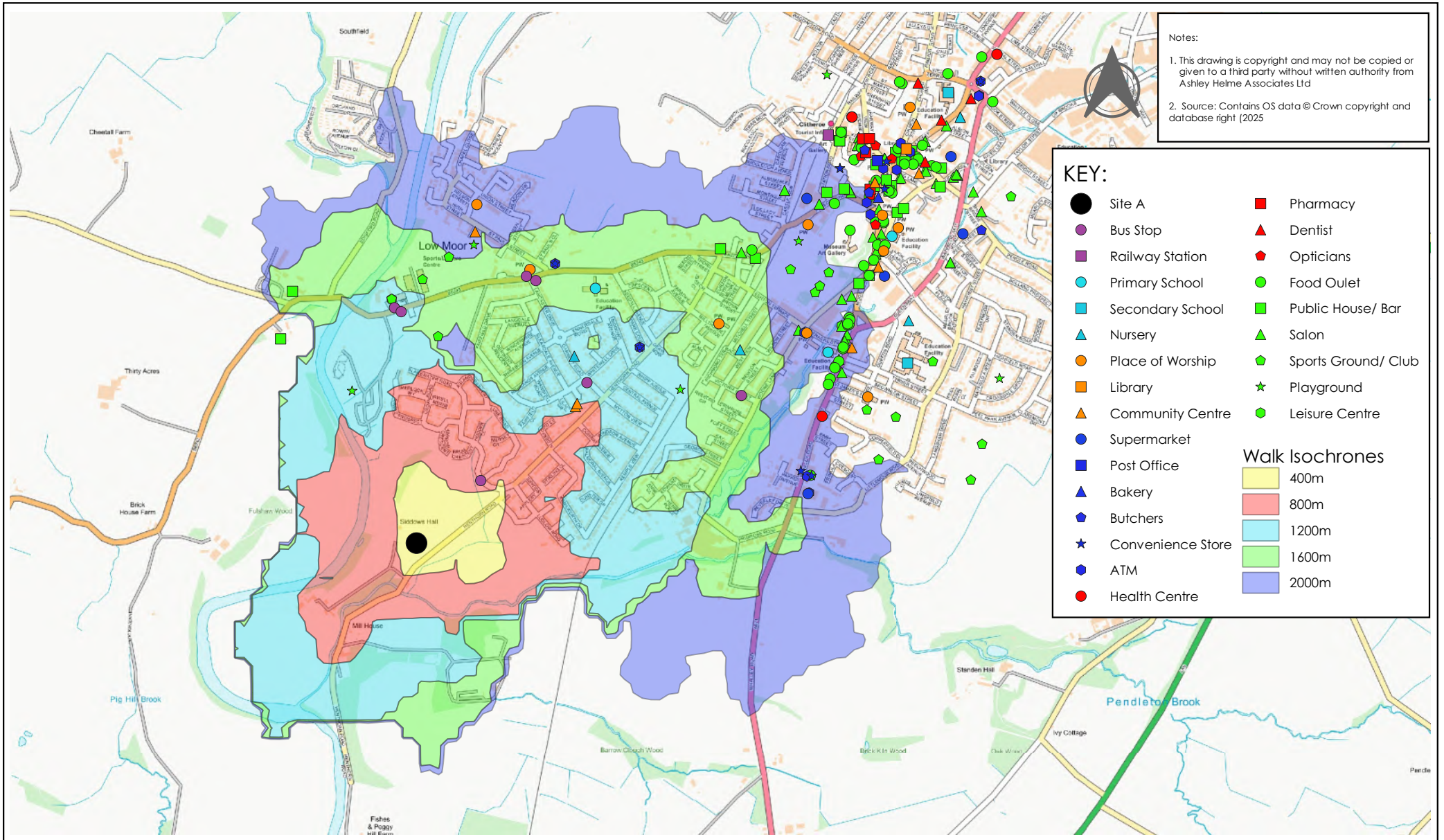
2. Source: Contains OS data © Crown copyright and database right (2025)

Project: HENTHORN ROAD, CLITHEROE	Title: LOCATION PLAN	FIGURE 1.1	
Client: GLADMAN DEVELOPMENTS		Date: DEC 2025	Scale: NTS

ASHLEY HELME ASSOCIATES

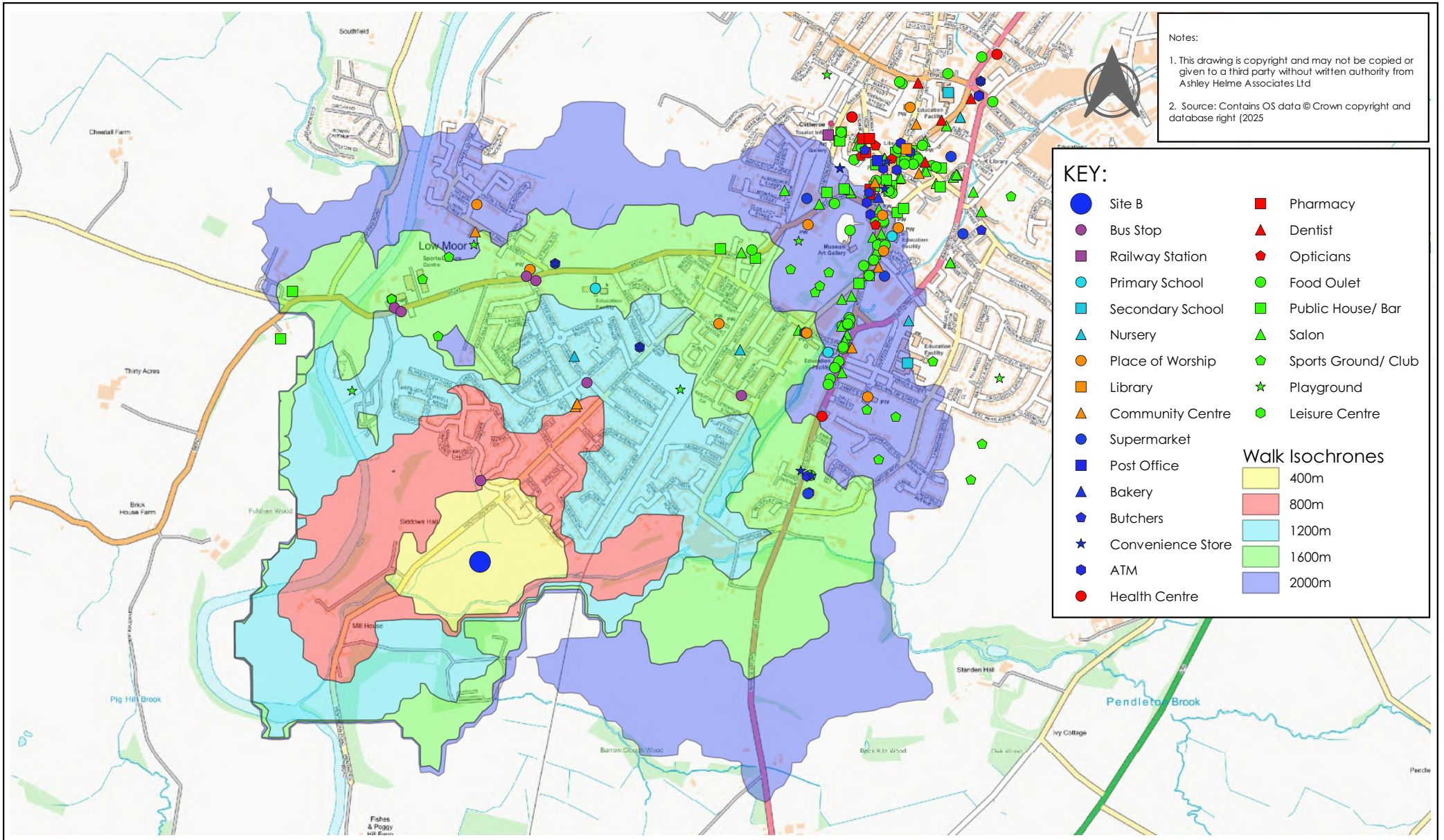


Project: HENTHORN ROAD, CLITHEROE	Title: STUDY JUNCTIONS	FIGURE 3.1	ASHLEY HELME ASSOCIATES
Client: GLADMAN DEVELOPMENTS		Date: DEC 2025 / Scale: NTS	



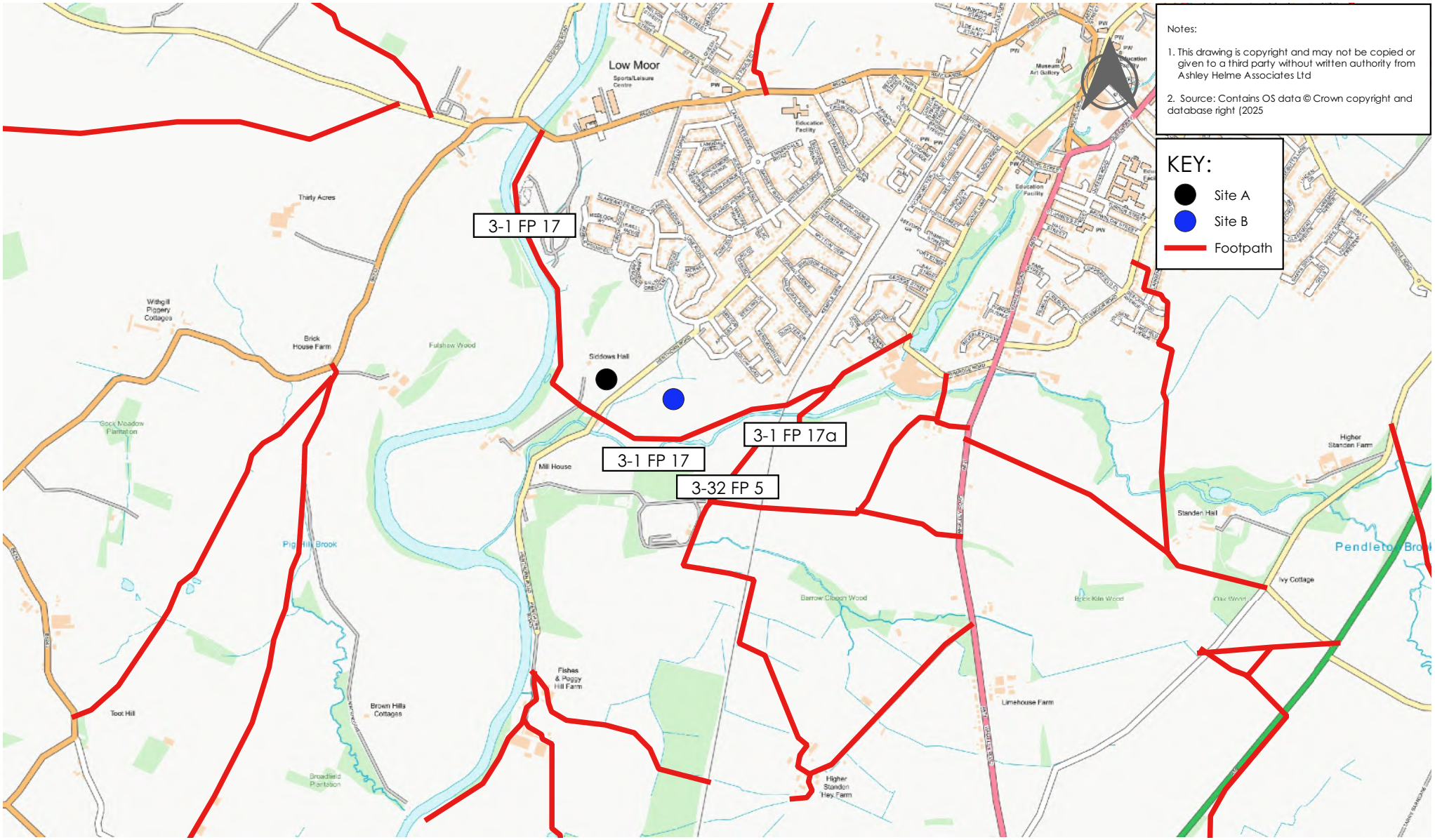
Project: HENTHORN ROAD, CLITHEROE	Title: WALK ISOCHRONES AND AMENITIES	FIGURE 5.1	
Client: GLADMAN DEVELOPMENTS		Date: DEC 2025	Scale: NTS

ASHLEY HELME ASSOCIATES

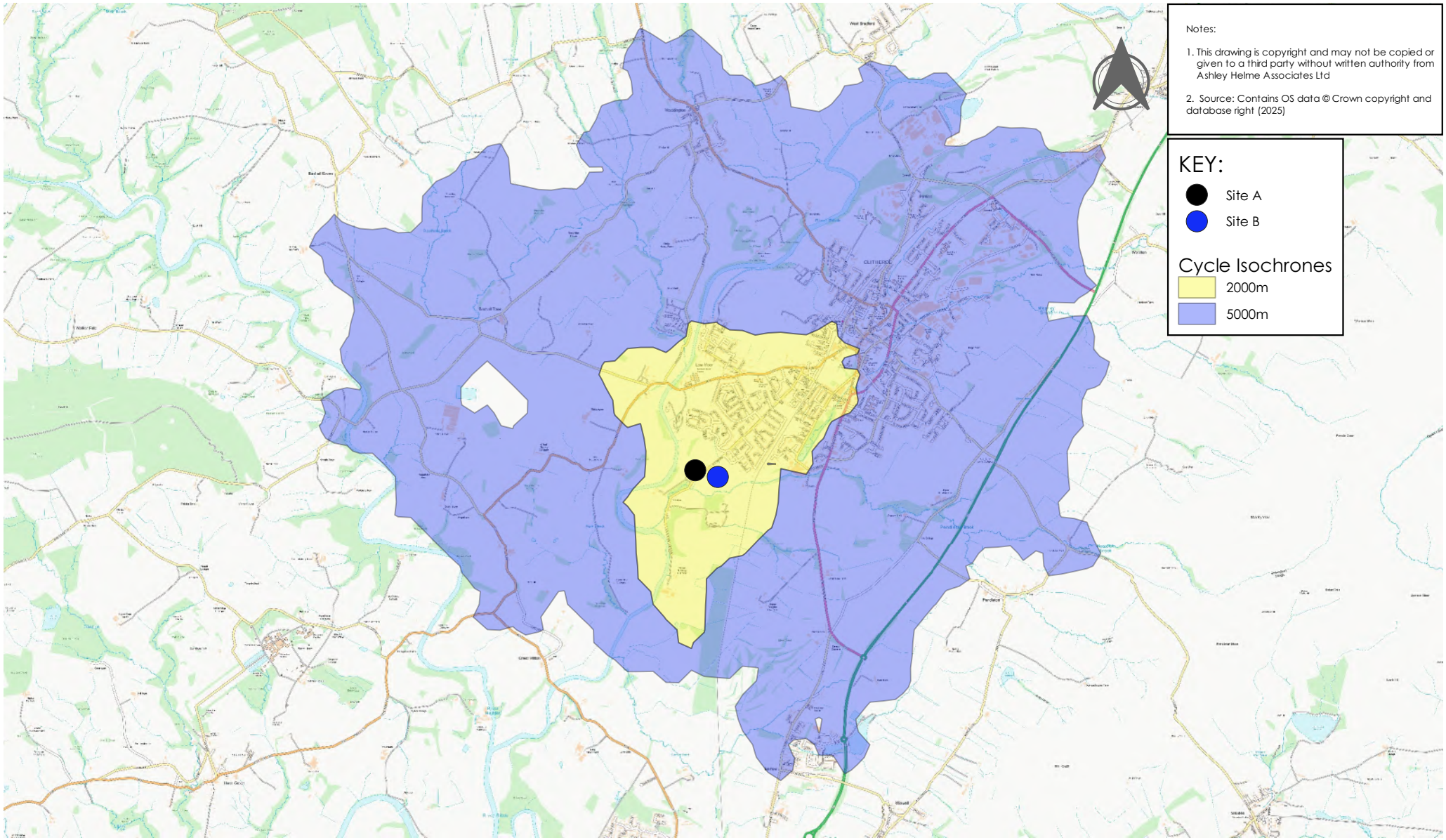


Project: HENTHORN ROAD, CLITHEROE	Title: WALK ISOCHRONES AND AMENITIES	FIGURE 5.2	
Client: GLADMAN DEVELOPMENTS		Date: DEC 2025	Scale: NTS

ASHLEY HELME ASSOCIATES



Project: HENTHORN ROAD, CLITHEROE	Title: PUBLIC RIGHTS OF WAY (PROW)	FIGURE 5.3	ASHLEY HELME ASSOCIATES
Client: GLADMAN DEVELOPMENTS		Date: DEC 2025	Scale: NTS



Project: HENTHORN ROAD, CLITHEROE	Title: CYCLE ISOCHRONES	FIGURE 5.4	
Client: GLADMAN DEVELOPMENTS		Date: DEC 2025	Scale: NTS

ASHLEY HELME ASSOCIATES

Tables

BUS NUMBER	ROUTE	FREQUENCY			OPERATOR
		MONDAY-SATURDAY		SUN	
		DAY	EVE		
Service calling within 800m of Site (a 10-minute walk)					
C2	Clitheroe Town Circular via Low Moor	30 mins	-	-	VB
Service calling within 800m of Site (a 15-minute walk)					
686	Clitheroe – Bowland County High School	2 trips[1]	-	-	HC
Service calling within 800m of Site (a 20-minute walk)					
510	Dunsop Bridge – Clitheroe Royal Grammar School – Bowland County High School	2 trips[1]	-	-	PSN
645	Chipping - Ribblesdale High School	2 trips[1]	-	-	BGT
C4	Clitheroe – Peel Park Circular	60 mins	-	-	PB

Notes:
1. 1 trip to school in AM and 1 return trip in PM, schooldays and is for school children only.
2. 1 trip to school in AM and 1 return trip in PM, schooldays and is for school children only. An additional service runs on Wednesdays and Fridays in direction to Chipping.
3. There are several school bus services operating within walking distance of the Site.

Key:
VB Vision Bus
HC Hodsons Coaches
PSN P&S Nelson
BGT Brteherton Gold Line Tours
PB Preston Bus Ltd

Source:
www.lancashire.gov.uk

Table 6.1 Bus Services & Frequencies

MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
	OBSERVED	MODELLED	OBSERVED	MODELLED
Henthorn Road	0.6	0.5	0.2	0.3
Bawdlands	0.0	0.5	0.0	0.5

Notes:
1. AHA queue survey 05.11.24,
2. Average spot queue observed over peak hour period,
3. Refer Figure B1, Appendix B for 2024 traffic count flows.

Table 9.1 PICADY VALIDATION SJ5 Henthorn Road/ Bawdlands

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
Henthorn Road left	0.01	0.0	6.05	0.01	0.0	6.21
Henthorn Road right	0.32	0.5	14.27	0.22	0.3	13.15
Bawdlands	0.25	0.5	6.06	0.23	0.5	6.92
2031 Base, Existing Junction Geometry						
Henthorn Road left	0.01	0.0	6.26	0.01	0.0	6.39
Henthorn Road right	0.36	0.5	15.54	0.24	0.3	14.17
Bawdlands	0.27	0.6	6.18	0.26	0.5	7.11
2031 With Development, Existing Junction Geometry						
Henthorn Road left	0.01	0.0	6.45	0.01	0.0	6.49
Henthorn Road right	0.39	0.6	16.60	0.26	0.4	14.71
Bawdlands	0.28	0.6	6.16	0.27	0.6	7.16
2036 Base, Existing Junction Geometry						
Henthorn Road left	0.01	0.0	6.43	0.01	0.0	6.54
Henthorn Road right	0.38	0.6	16.56	0.26	0.4	14.93
Bawdlands	0.29	0.7	6.28	0.28	0.6	7.25
2036 With Development, Existing Junction Geometry						
Henthorn Road left	0.01	0.0	6.56	0.01	0.0	6.65
Henthorn Road right	0.41	0.7	17.38	0.28	0.4	15.54
Bawdlands	0.29	0.7	6.21	0.28	0.6	7.30

Notes:
1. Refer Drg No 1677/06 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.2 PICADY RESULTS SJ5 Henthorn Road/ Bawdlands

MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
	OBSERVED	MODELLED	OBSERVED	MODELLED
Thorn Street (W)	0.1	0.2	0.1	0.2
Henthorn Road (S)	0.3	1.5	0.2	0.4
Thorn Street (E)	0.6	0.7	1.7	1.9
Henthorn Road (N)	0.0	0.0	0.2	0.0

Notes:
1. AHA queue survey 05.11.24,
2. Average spot queue observed over peak hour period,
3. Refer Figure B1, Appendix B for 2024 traffic count flows.

Table 9.3 PICADY VALIDATION SJ6 Henthorn Road/Thorn Street

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
Thorn Street (W)	0.14	0.2	11.19	0.19	0.2	10.24
Henthorn Road (S)	0.61	1.5	16.37	0.28	0.4	9.18
Thorn Street (E)	0.42	0.7	11.25	0.67	1.9	17.74
Henthorn Road (N)	0.01	0.0	6.08	0.01	0.0	5.30
2031 Base, Existing Junction Geometry						
Thorn Street (W)	0.16	0.2	11.75	0.20	0.3	10.67
Henthorn Road (S)	0.67	1.9	18.85	0.30	0.4	9.57
Thorn Street (E)	0.47	0.9	12.25	0.73	2.5	21.25
Henthorn Road (N)	0.01	0.0	6.10	0.01	0.0	5.26
2031 With Development, Existing Junction Geometry						
Thorn Street (W)	0.17	0.2	12.86	0.21	0.3	10.96
Henthorn Road (S)	0.80	3.5	29.94	0.34	0.5	10.25
Thorn Street (E)	0.52	1.1	13.90	0.78	3.2	25.65
Henthorn Road (N)	0.01	0.0	6.29	0.01	0.0	5.26
2036 Base, Existing Junction Geometry						
Thorn Street (W)	0.17	0.2	12.11	0.22	0.3	10.97
Henthorn Road (S)	0.70	2.2	20.84	0.31	0.5	9.85
Thorn Street (E)	0.49	1.0	12.91	0.76	2.9	24.39
Henthorn Road (N)	0.01	0.0	6.10	0.01	0.0	5.24
2036 With Development, Existing Junction Geometry						
Thorn Street (W)	0.17	0.2	12.86	0.22	0.3	11.26
Henthorn Road (S)	0.80	3.5	29.76	0.36	0.5	10.54
Thorn Street (E)	0.52	1.1	13.92	0.82	3.9	30.11
Henthorn Road (N)	0.01	0.0	6.29	0.01	0.0	5.23

Notes:
1. Refer Drg No 1677/06 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.4 PICADY RESULTS SJ6 Henthorn Road/Thorn Street

MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
	OBSERVED	MODELLED	OBSERVED	MODELLED
B6243 Parsons Lane (E)	0.0	0.4	0.3	0.5
B6243 Parsons Lane (W)	0.7	1.7	0.0	0.7
Station Road	0.0	0.5	0.0	1.2

Notes:
1. AHA queue survey 05.11.24,
2. Average spot queue observed over peak hour period,
3. Refer Figure B1, Appendix B for 2024 traffic count flows.

Table 9.5 ARCADY VALIDATION SJ7 Station Road/Parsons Lane

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
B6243 Parsons Lane (E)	0.27	0.4	5.68	0.34	0.5	7.07
B6243 Parsons Lane (W)	0.63	1.7	11.66	0.41	0.7	7.19
Station Road	0.34	0.5	6.28	0.54	1.2	8.70
2031 Base, Existing Junction Geometry						
B6243 Parsons Lane (E)	0.29	0.4	5.99	0.37	0.6	7.74
B6243 Parsons Lane (W)	0.68	2.1	13.60	0.44	0.8	7.66
Station Road	0.37	0.6	6.55	0.58	1.4	9.56
2031 With Development, Existing Junction Geometry						
B6243 Parsons Lane (E)	0.30	0.4	6.05	0.39	0.6	8.05
B6243 Parsons Lane (W)	0.71	2.4	14.89	0.46	0.8	7.84
Station Road	0.38	0.6	6.63	0.60	1.5	10.00
2036 Base, Existing Junction Geometry						
B6243 Parsons Lane (E)	0.31	0.4	6.20	0.40	0.7	8.24
B6243 Parsons Lane (W)	0.71	2.4	15.21	0.46	0.9	7.99
Station Road	0.39	0.6	6.72	0.61	1.5	10.18
2036 With Development, Existing Junction Geometry						
B6243 Parsons Lane (E)	0.31	0.5	6.26	0.41	0.7	8.57
B6243 Parsons Lane (W)	0.74	2.8	16.82	0.48	0.9	8.19
Station Road	0.39	0.6	6.81	0.63	1.6	10.68

Notes:
1. Refer Drg No 1677/07 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.6 ARCADY RESULTS SJ7 Station Road/Parsons Lane

MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
	OBSERVED	MODELLED	OBSERVED	MODELLED
Moor Lane (S)	0.0	0.5	0.1	0.5
Woone Lane	1.4	1.3	0.3	0.8
Moor Lane (N)	0.1	0.3	0.0	0.4

Notes:
1. AHA queue survey 05.11.24,
2. Average spot queue observed over peak hour period,
3. Refer Figure B1, Appendix B for 2024 traffic count flows.

Table 9.7 ARCADY VALIDATION SJ8 Moor Lane/Woone Lane

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
Moor Lane (S)	0.34	0.5	5.63	0.33	0.5	5.35
Woone Lane	0.57	1.3	8.70	0.43	0.8	6.51
Moor Lane (N)	0.24	0.3	6.91	0.29	0.4	6.74
2031 Base, Existing Junction Geometry						
Moor Lane (S)	0.37	0.6	5.86	0.36	0.5	5.56
Woone Lane	0.62	1.6	10.17	0.47	0.9	7.16
Moor Lane (N)	0.27	0.4	7.38	0.32	0.5	7.18
2031 With Development, Existing Junction Geometry						
Moor Lane (S)	0.37	0.6	5.86	0.36	0.5	5.56
Woone Lane	0.67	2.0	11.45	0.49	1.0	7.45
Moor Lane (N)	0.29	0.4	7.75	0.34	0.5	7.48
2036 Base, Existing Junction Geometry						
Moor Lane (S)	0.39	0.6	6.04	0.37	0.6	5.71
Woone Lane	0.66	1.9	11.40	0.50	1.0	7.65
Moor Lane (N)	0.29	0.4	7.70	0.34	0.5	7.51
2036 With Development, Existing Junction Geometry						
Moor Lane (S)	0.39	0.6	6.03	0.37	0.6	5.71
Woone Lane	0.70	2.3	13.03	0.52	1.1	7.96
Moor Lane (N)	0.31	0.4	8.12	0.36	0.6	7.83

Notes:
1. Refer Drg No 1677/08 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.8 ARCADY RESULTS SJ8 Moor Lane/Woone Lane

MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
	OBSERVED	MODELLED	OBSERVED	MODELLED
Castle View	0.3	0.2	0.3	0.2
Parsons Lane	0.5	0.3	0.9	0.6

Notes:
1. AHA queue survey 05.11.24,
2. Average spot queue observed over peak hour period,
3. Refer Figure B1, Appendix B for 2024 traffic count flows.

Table 9.9 PICADY VALIDATION SJ9 Castle View/Parsons Lane

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
Castle View	0.15	0.2	9.54	0.18	0.2	11.03
Parsons Lane	0.12	0.3	5.43	0.22	0.6	4.93
2031 Base, Existing Junction Geometry						
Castle View	0.17	0.2	10.07	0.21	0.3	11.74
Parsons Lane	0.13	0.3	5.41	0.25	0.7	4.97
2031 With Development, Existing Junction Geometry						
Castle View	0.17	0.2	10.28	0.21	0.3	11.98
Parsons Lane	0.13	0.3	5.41	0.26	0.7	4.94
2036 Base, Existing Junction Geometry						
Castle View	0.18	0.2	10.41	0.22	0.3	12.26
Parsons Lane	0.14	0.3	5.40	0.27	0.8	5.00
2036 With Development, Existing Junction Geometry						
Castle View	0.18	0.2	10.63	0.22	0.3	12.51
Parsons Lane	0.14	0.3	5.40	0.28	0.8	4.98

Notes:
1. Refer Drg No 1677/09 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.10 PICADY RESULTS SJ9 Castle View/Parsons Lane

MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
	OBSERVED	MODELLED	OBSERVED	MODELLED
Eshton Terrace	0.0	0.2	0.2	0.3
Woone Lane (S)	0.3	0.2	0.3	0.1
Greenacre Street	0.0	0.2	0.2	0.2

Notes:
1. AHA queue survey 05.11.24,
2. Average spot queue observed over peak hour period,
3. Refer Figure B1, Appendix B for 2024 traffic count flows.

Table 9.11 PICADY VALIDATION SJ10 Woone Lane/Eshton Terrace/Greenacre Street

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
Woone Lane (N)	0.00	0.0	0.00	0.00	0.0	0.00
Eshton Terrace	0.11	0.2	4.98	0.14	0.3	5.65
Woone Lane (S)	0.15	0.2	10.46	0.11	0.1	9.62
Greenacre Street	0.09	0.2	5.58	0.10	0.2	4.73
2031 Base, Existing Junction Geometry						
Woone Lane (N)	0.00	0.0	0.00	0.00	0.0	0.00
Eshton Terrace	0.13	0.3	5.09	0.16	0.4	5.70
Woone Lane (S)	0.16	0.2	11.00	0.12	0.1	10.10
Greenacre Street	0.10	0.2	5.71	0.11	0.3	4.75
2031 With Development, Existing Junction Geometry						
Woone Lane (N)	0.00	0.0	0.00	0.00	0.0	0.00
Eshton Terrace	0.15	0.4	5.01	0.16	0.4	5.67
Woone Lane (S)	0.17	0.2	11.26	0.12	0.1	10.35
Greenacre Street	0.11	0.2	5.73	0.12	0.3	4.69
2036 Base, Existing Junction Geometry						
Woone Lane (N)	0.00	0.0	0.00	0.00	0.0	0.00
Eshton Terrace	0.14	0.4	5.07	0.17	0.4	5.71
Woone Lane (S)	0.18	0.2	11.39	0.13	0.1	10.47
Greenacre Street	0.11	0.2	5.69	0.12	0.3	4.72
2036 With Development, Existing Junction Geometry						
Woone Lane (N)	0.00	0.0	0.00	0.00	0.0	0.00
Eshton Terrace	0.16	0.4	4.99	0.17	0.4	5.70
Woone Lane (S)	0.18	0.2	11.71	0.13	0.2	10.74
Greenacre Street	0.11	0.3	5.71	0.13	0.3	4.66

Notes:
1. Refer Drg No 1677/10 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.12 PICADY RESULTS SJ10 Woone Lane/Eshton Terrace/Greenacre Street

MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
	OBSERVED	MODELLED	OBSERVED	MODELLED
Greenacre Street	0.0	0.0	0.0	0.0
Whalley Road (N)	0.3	0.9	0.2	2.3
Whalley Road (S)	0.0	0.6	0.0	0.6

Notes:
1. AHA queue survey 05.11.24,
2. Average spot queue observed over peak hour period,
3. Refer Figure B1, Appendix B for 2024 traffic count flows.

Table 9.13 PICADY VALIDATION SJ11 Whalley Road/Greenacre Street

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
Greenacre Street	0.00	0.0	0.00	0.00	0.0	0.00
Whalley Road (N)	0.37	0.9	8.49	0.57	2.3	10.36
Whalley Road (S)	0.36	0.6	2.95	0.39	0.6	2.95
2031 Base, Existing Junction Geometry						
Greenacre Street	0.00	0.0	0.00	0.00	0.0	0.00
Whalley Road (N)	0.41	1.1	8.70	0.63	3.3	11.42
Whalley Road (S)	0.38	0.7	3.07	0.42	0.7	3.11
2031 With Development, Existing Junction Geometry						
Greenacre Street	0.00	0.0	0.00	0.00	0.0	0.00
Whalley Road (N)	0.42	1.2	8.68	0.66	3.9	12.23
Whalley Road (S)	0.39	0.7	3.10	0.42	0.7	3.15
2036 Base, Existing Junction Geometry						
Greenacre Street	0.00	0.0	0.00	0.00	0.0	0.00
Whalley Road (N)	0.43	1.2	8.84	0.67	4.1	12.46
Whalley Road (S)	0.41	0.7	3.17	0.44	0.8	3.21
2036 With Development, Existing Junction Geometry						
Greenacre Street	0.00	0.0	0.00	0.00	0.0	0.00
Whalley Road (N)	0.45	1.4	8.83	0.70	5.0	13.59
Whalley Road (S)	0.41	0.7	3.19	0.44	0.8	3.25

Notes:
1. Refer Drg No 1677/11 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.14 PICADY RESULTS SJ11 Whalley Road/Greenacre Street

MOVEMENT	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (veh)	DELAY (secs/veh)	RFC	QUEUE (veh)	DELAY (secs/veh)
2024 Count, Existing Junction Geometry						
Access Road	0.03	0.0	11.76	0.03	0.0	10.50
A671 Whalley Road (N)	0.21	0.7	5.03	0.19	0.6	5.64
Primrose Road	0.68	1.9	37.15	0.52	1.1	25.36
A671 Whalley Road (S)	0.01	0.0	3.91	0.00	0.0	3.34
2031 Base, Existing Junction Geometry						
Access Road	0.03	0.0	12.73	0.01	0.0	12.77
A671 Whalley Road (N)	0.25	0.8	5.07	0.23	0.8	5.61
Primrose Road	0.79	3.1	56.37	0.52	1.0	27.07
A671 Whalley Road (S)	0.01	0.0	3.80	0.00	0.0	3.29
2031 With Development, Existing Junction Geometry						
Access Road	0.03	0.0	12.74	0.01	0.0	13.03
A671 Whalley Road (N)	0.25	0.9	5.01	0.24	0.8	5.59
Primrose Road	0.60	1.4	33.79	0.54	1.1	28.80
A671 Whalley Road (S)	0.01	0.0	3.81	0.01	0.0	3.27
2036 Base, Existing Junction Geometry						
Access Road	0.03	0.0	13.46	0.01	0.0	13.47
A671 Whalley Road (N)	0.27	1.0	5.13	0.26	0.9	5.65
Primrose Road	0.87	4.5	79.91	0.56	1.2	31.40
A671 Whalley Road (S)	0.01	0.0	3.74	0.01	0.0	3.22
2036 With Development, Existing Junction Geometry						
Access Road	0.03	0.0	14.01	0.02	0.0	13.47
A671 Whalley Road (N)	0.28	1.0	5.08	0.26	0.9	5.63
Primrose Road	0.91	5.7	97.81	0,59	1.4	34.11
A671 Whalley Road (S)	0.01	0.0	3.74	0.01	0.0	3.20

Notes:
1. Refer Drg No 1677/12 for existing junction geometry,
2. Refer Figure B2 for 2031 Base traffic flows,
3. Refer Figure B3 for 2036 Base traffic flows,
4. Refer Figure B6 for 2031 With Development traffic flows,
5. Refer Figure B7 for 2036 With Development traffic flows.

Table 9.15 PICADY RESULTS SJ12 Primrose Road/Whalley Road

Drawings

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan and topographical survey

0m 5m 10m 15m 20m 30m 40m 50m

N

INGLETON CRESCENT

Balancing Pond

ESS

56.1m

Ppg Sta

Track

2m wide access path with 1m hedge removal on either side

PROPOSED PHASE 3 NORTHERN ACCESS

3.75m wide footway/cycleway.
Can be used as emergency access for Phase 3 North Site and Phase 2.
Controlled by knock-down bollards.

PROPOSED PHASE 3 SOUTHERN ACCESS

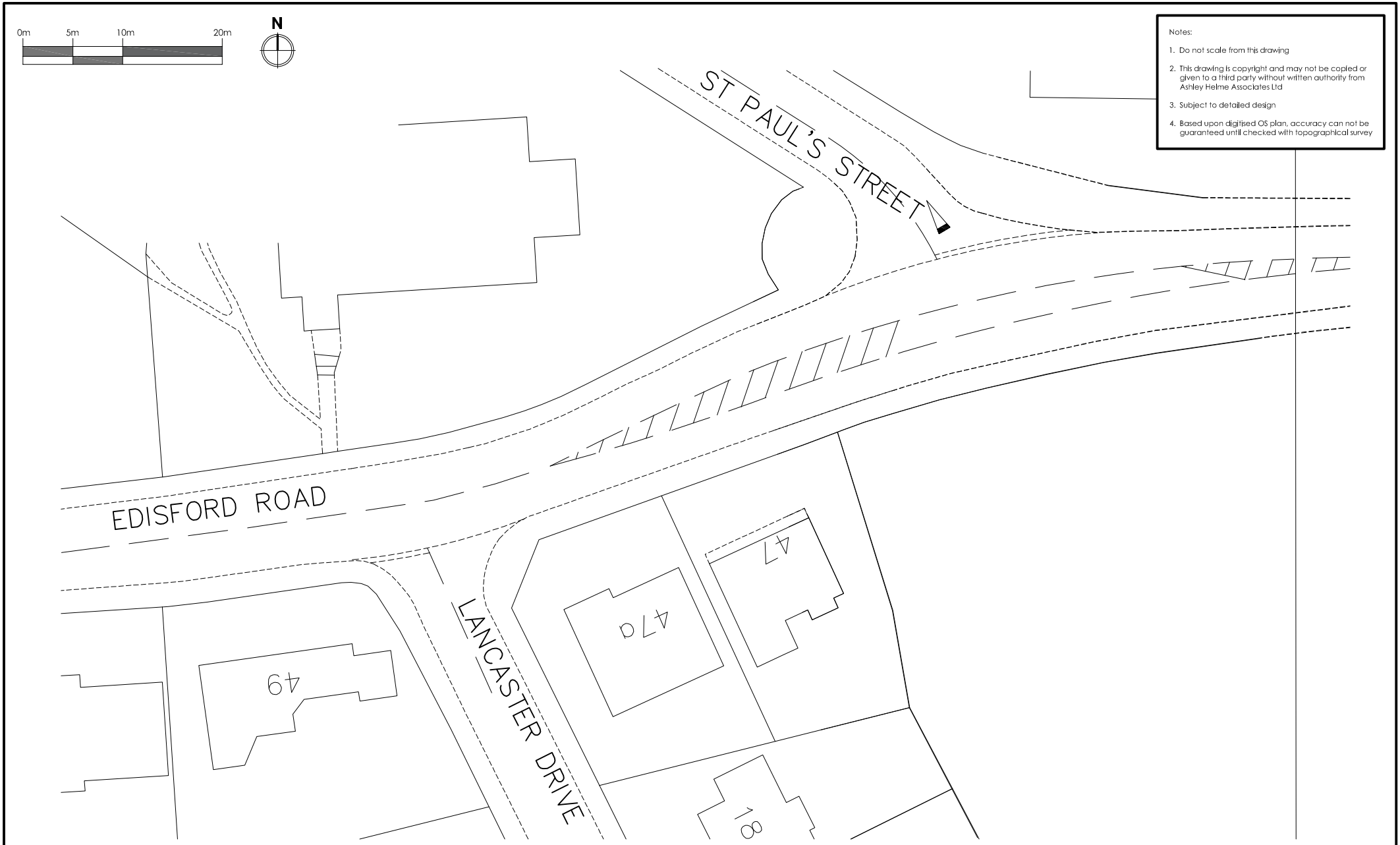
Widen Henthorn Road carriageway to 5.5m.
Extent of widening approximately 150m

Key:

- 2.4m x 46m visibility splay
- Proposed kerbline
- Proposed road markings
- Existing road markings
- Tactile paving

Project: HENTHORN ROAD, CLITHEROE	Title: PROPOSED ACCESS ARRANGEMENTS	Drg No: 1677/01	Rev: F
Client: GLADMAN DEVELOPMENTS		Date: NOVEMBER 2025	Scale: 1:500@A2

ASHLEY HELME ASSOCIATES
Telephone 0161 972 0552
Email aha@ashleyhelme.co.uk
Website www.ashleyhelme.co.uk
Address 76 Washway Road, Sale, Manchester, M33 7RE



Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

Project: HENTHORN ROAD, CLITHEROE	Title: EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 1	Drawing No: 1677/02	Rev:
Client: GLADMAN DEVELOPMENTS		Date: JUNE 2019	Scale: 1:500@A4

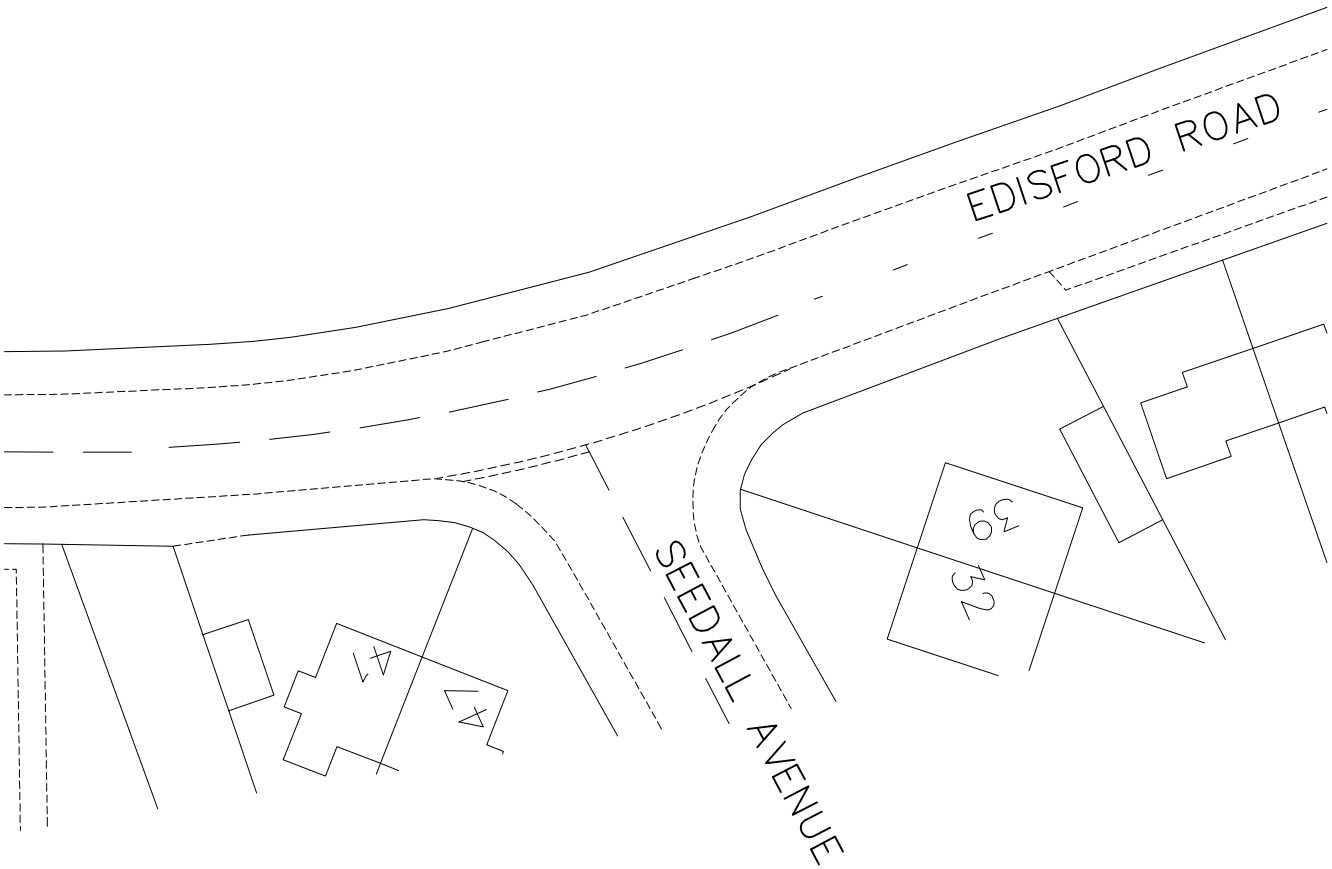
ASHLEY HELME ASSOCIATES

0m 5m 10m 20m

N

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey



Project	Client	Drawing No	Rev
HENTHORN ROAD, CLITHEROE	GLADMAN DEVELOPMENTS	1677/03	
Title		Date	Scale
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 2		JUNE 2019	1:500@A4

ASHLEY HELME ASSOCIATES

0m 5m 10m 20m

N

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

Project	Client	Drawing No	Rev
HENTHORN ROAD, CLITHEROE	GLADMAN DEVELOPMENTS	1677/04	
Title		Date	Scale
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 3		JUNE 2019	1:500@A4

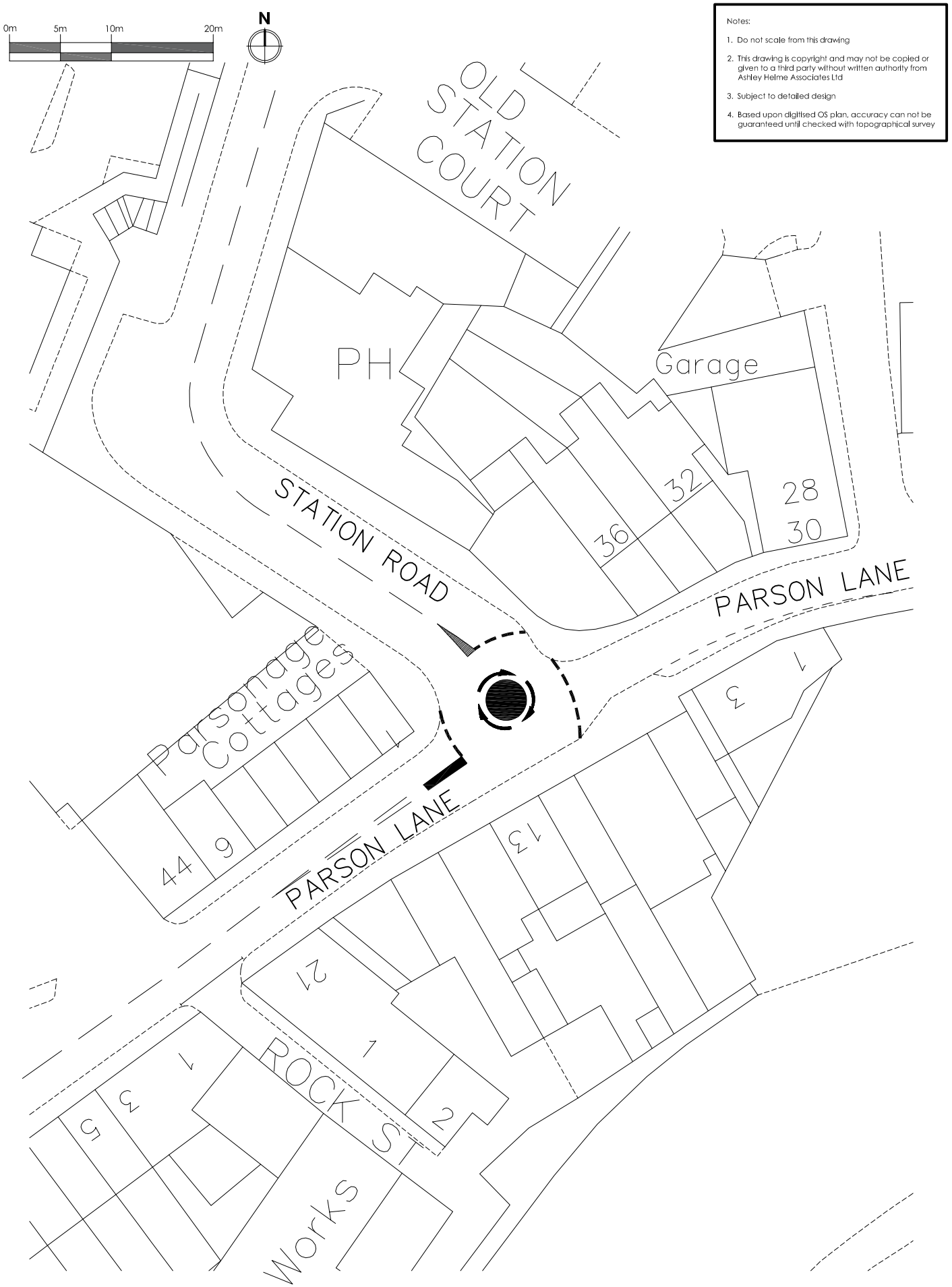
ASHLEY HELME ASSOCIATES

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

Project: HENTHORN ROAD, CLITHEROE	Title: EXISTING JUNCTIONS ARRANGEMENTS: STUDY JUNCTIONS 4, 5 & 6	Drawing No: 1677/05	Rev:
Client: GLADMAN DEVELOPMENTS		Date: JUNE 2019	Scale: 1:500@A3

ASHLEY HELME ASSOCIATES
Telephone 0161 972 0552
Email aha@ashleyhelme.co.uk
Website www.ashleyhelme.co.uk
Address 76 Washway Road, Sale, Manchester, M33 7RE

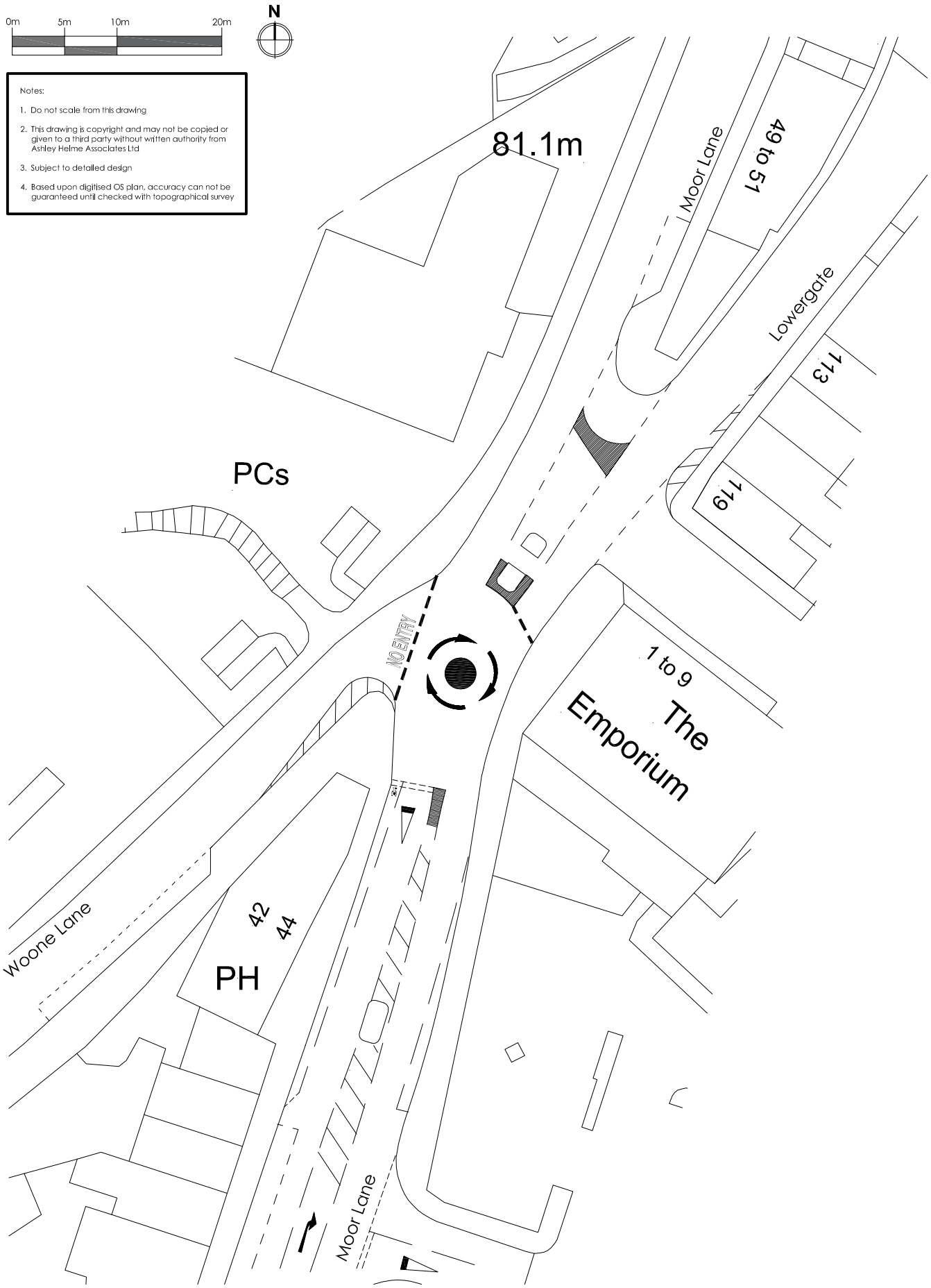


Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

Project: HENTHORN ROAD, CLITHEROE	Client: GLADMAN DEVELOPMENTS	Drawing No: 1677/06	Rev:
Title: EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 7		Date: JUNE 2019	Scale: 1:500@A4

ASHLEY HELME ASSOCIATES



Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

Project	Client	Drawing No	Rev
HENTHORN ROAD, CLITHEROE	GLADMAN DEVELOPMENTS	1677/07	
Title		Date	Scale
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 8		JUNE 2019	1:500@A4

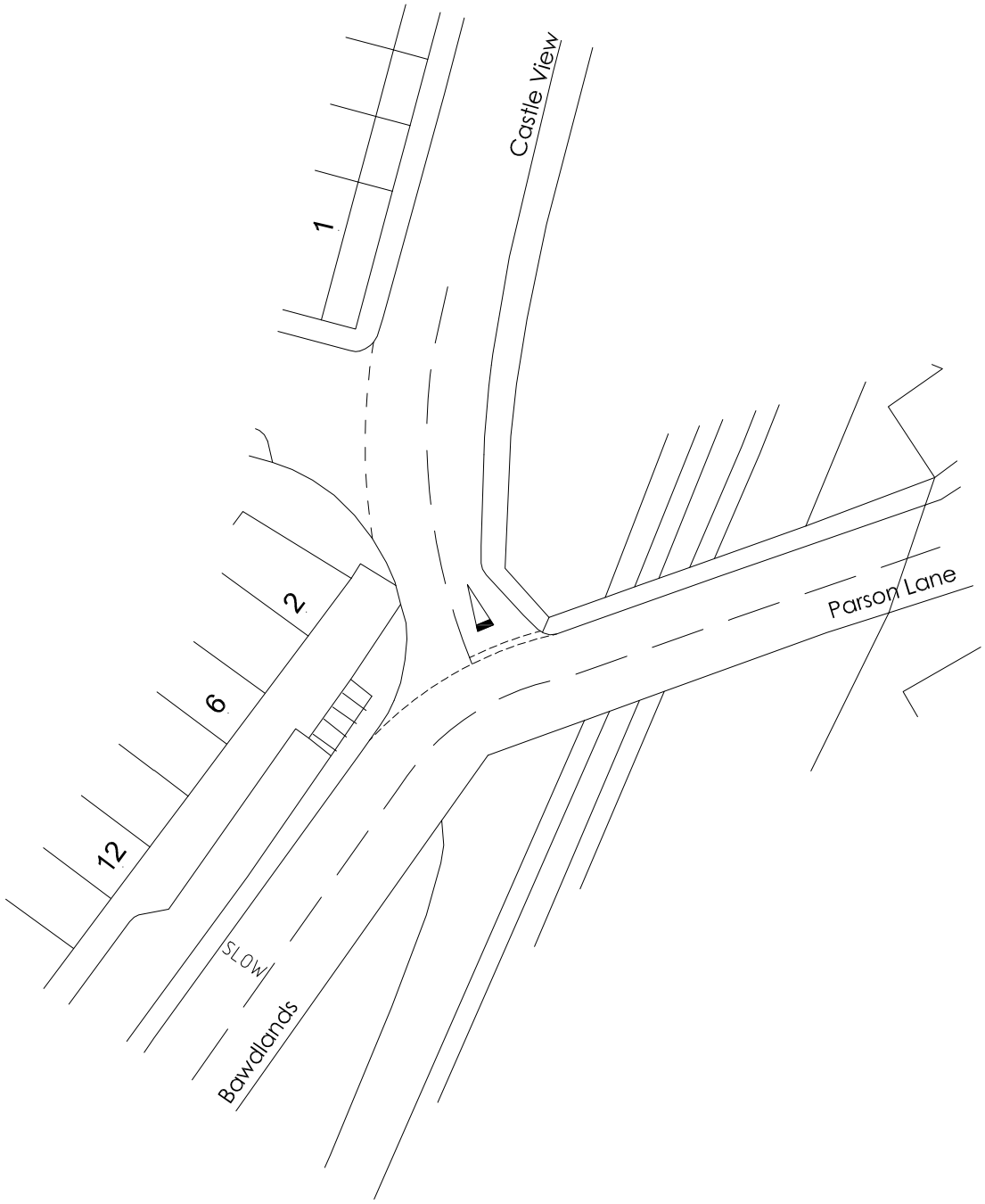
ASHLEY HELME ASSOCIATES

0m 5m 10m 20m

N

Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

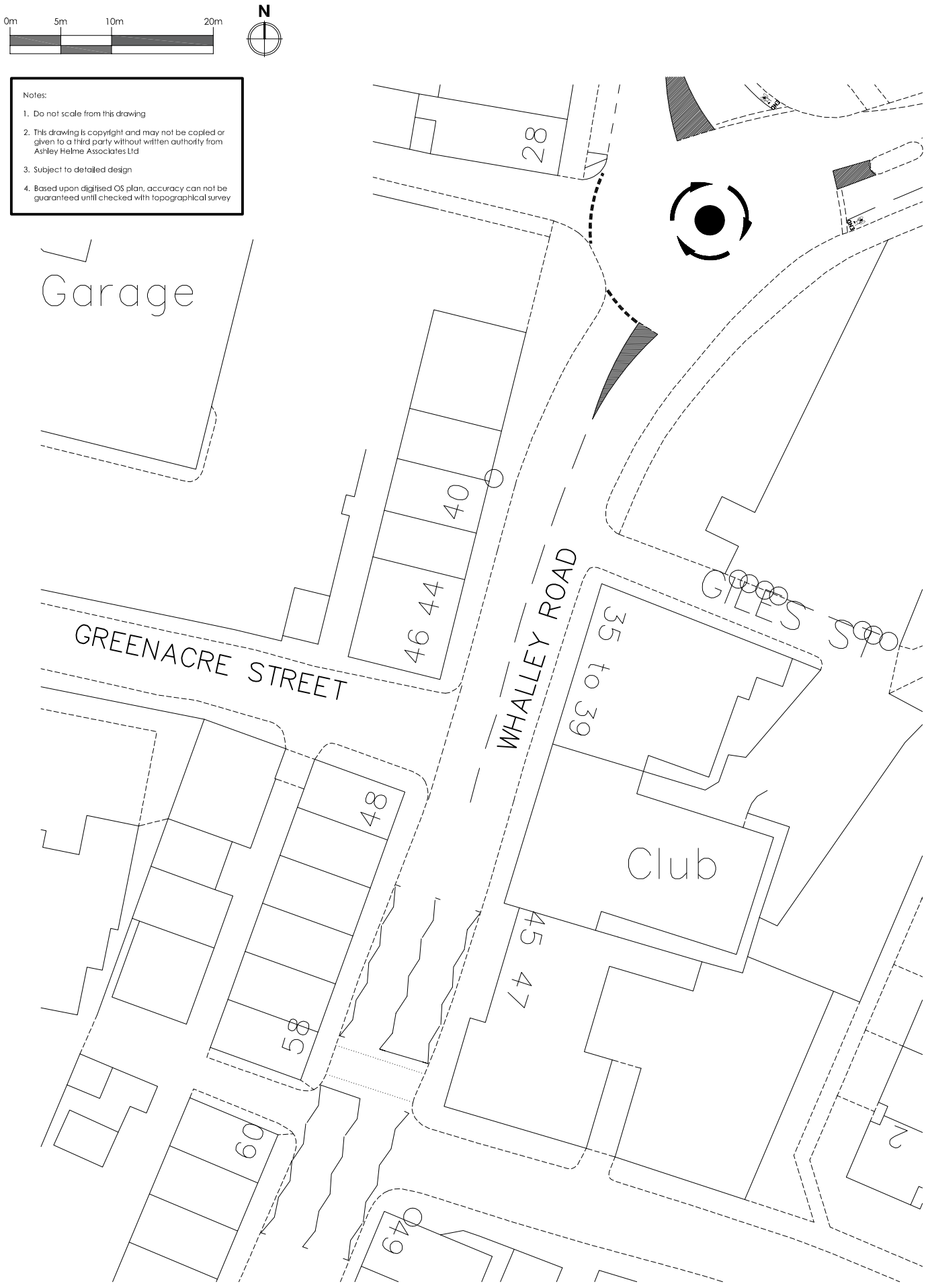


Project	Client	Drawing No	Rev
HENTHORN ROAD, CLITHEROE	GLADMAN DEVELOPMENTS	1677/08	
Title: EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 9		Date: JUNE 2019	Scale: 1:500@A4

ASHLEY HELME ASSOCIATES

Project: HENTHORN ROAD, CLITHEROE	Client: GLADMAN DEVELOPMENTS	Drawing No: 1677/09	Rev:
Title: EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 10		Date: JUNE 2019	Scale: 1:500@A4

ASHLEY HELME ASSOCIATES



Project	Client	Drawing No	Rev
HENTHORN ROAD, CLITHEROE	GLADMAN DEVELOPMENTS	1677/10	
Title		Date	Scale
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 11		JUNE 2019	1:500@A4

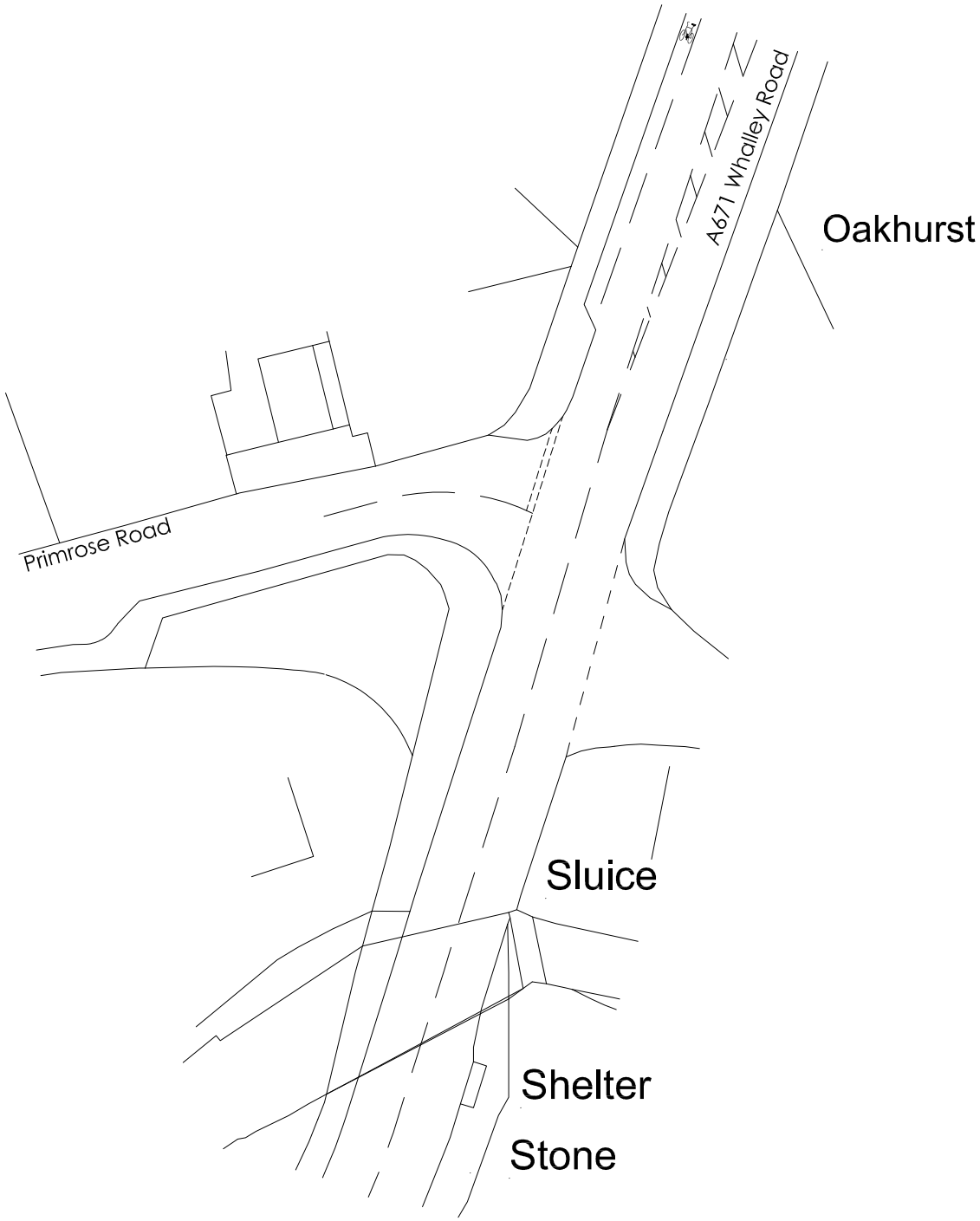
ASHLEY HELME ASSOCIATES

0m 5m 10m 20m

N

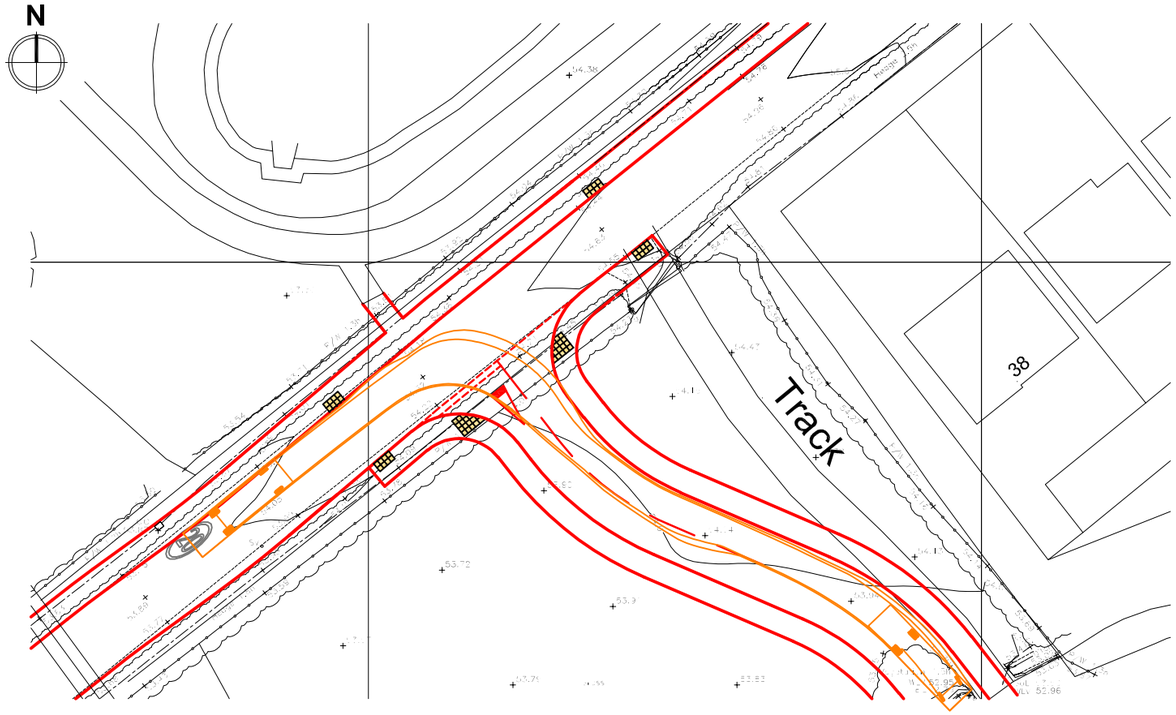
Notes:

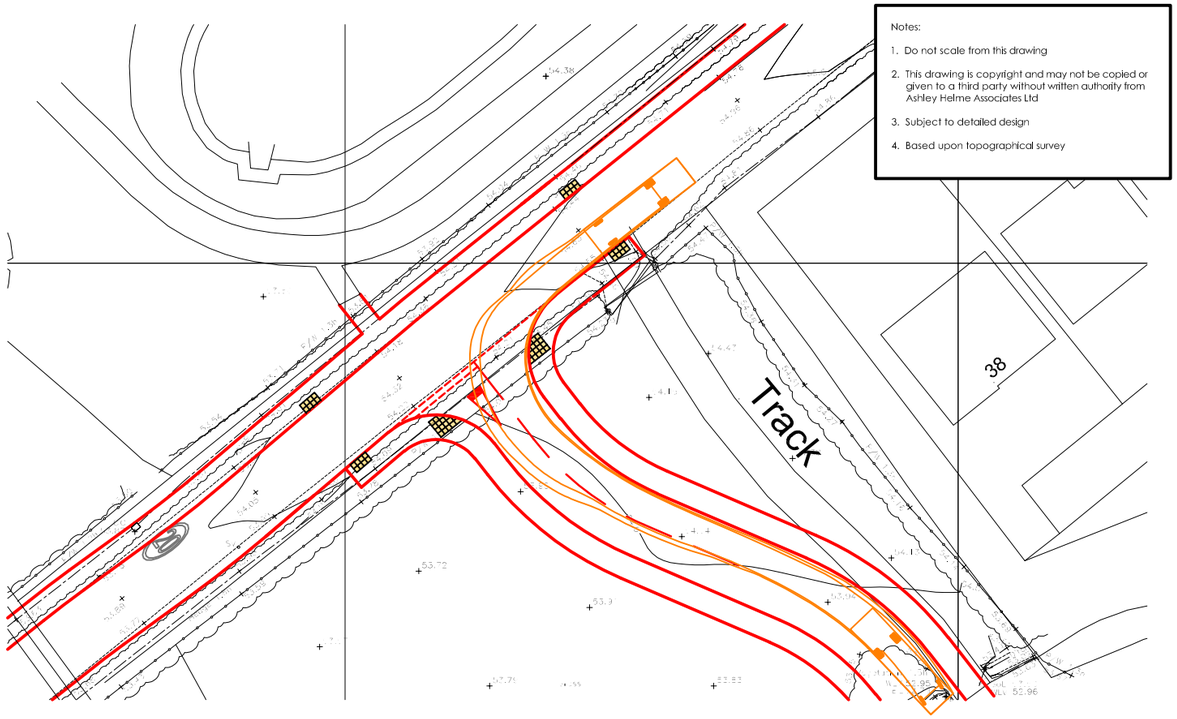
1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon digitised OS plan, accuracy can not be guaranteed until checked with topographical survey

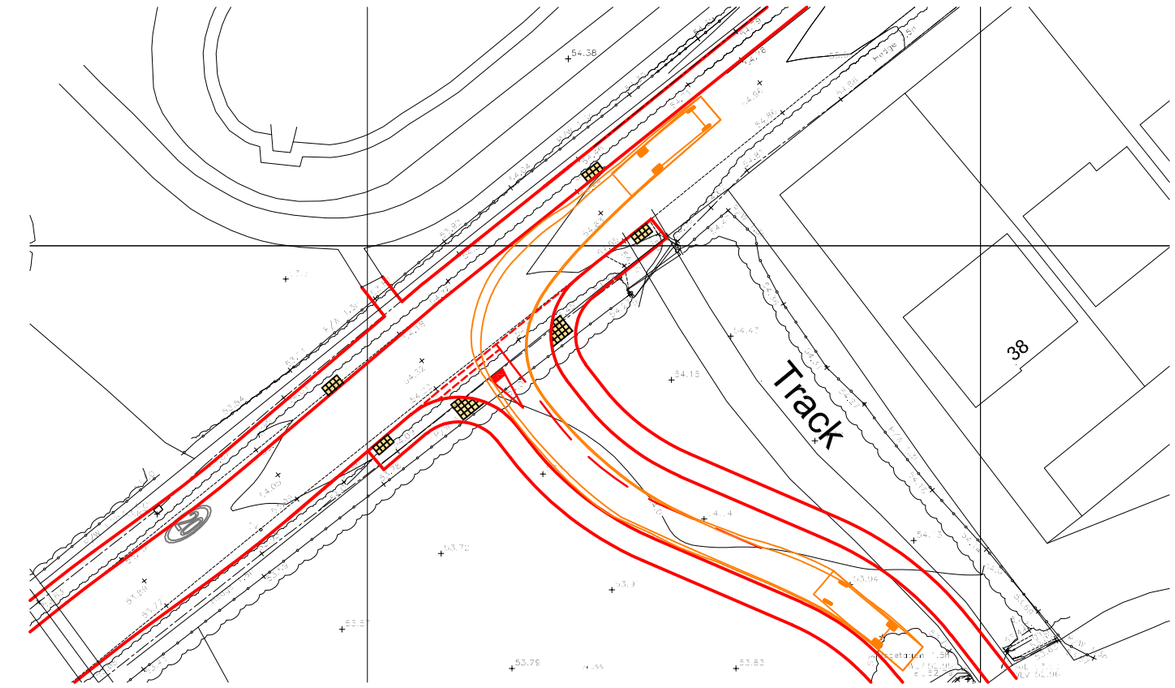


Project	Client	Drawing No	Rev
HENTHORN ROAD, CLITHEROE	GLADMAN DEVELOPMENTS	1677/11	
Title		Date	Scale
EXISTING JUNCTION ARRANGEMENTS: STUDY JUNCTION 12		JUNE 2019	1:500@A4

ASHLEY HELME ASSOCIATES

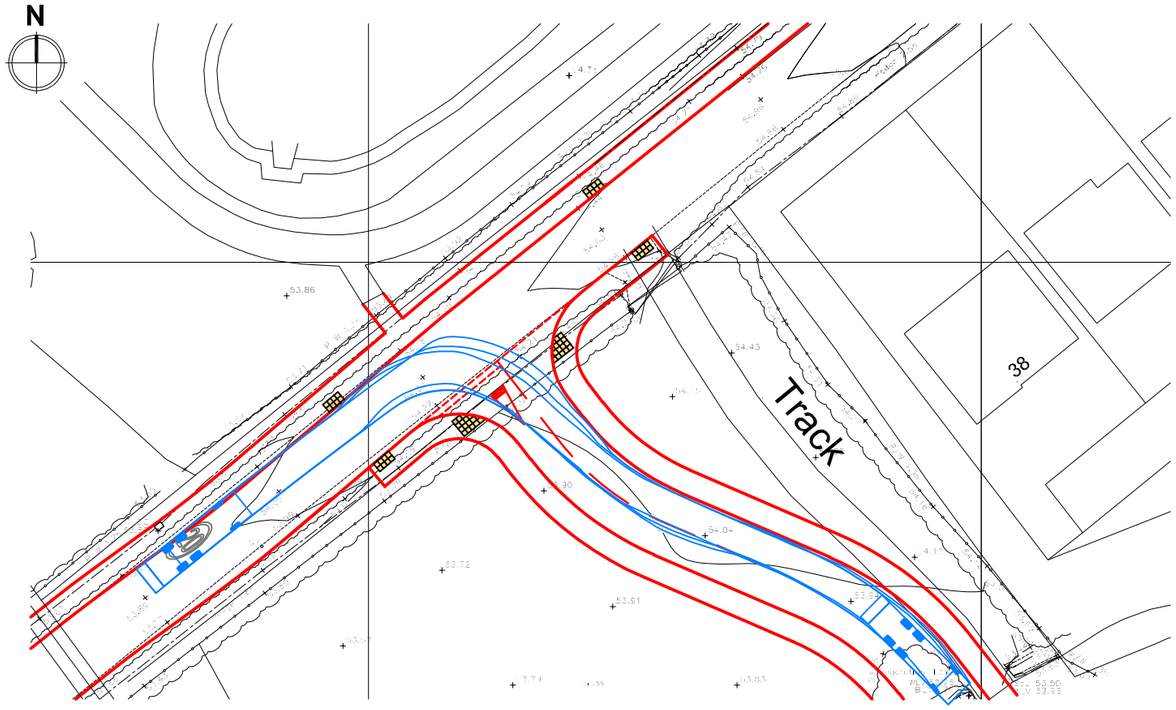


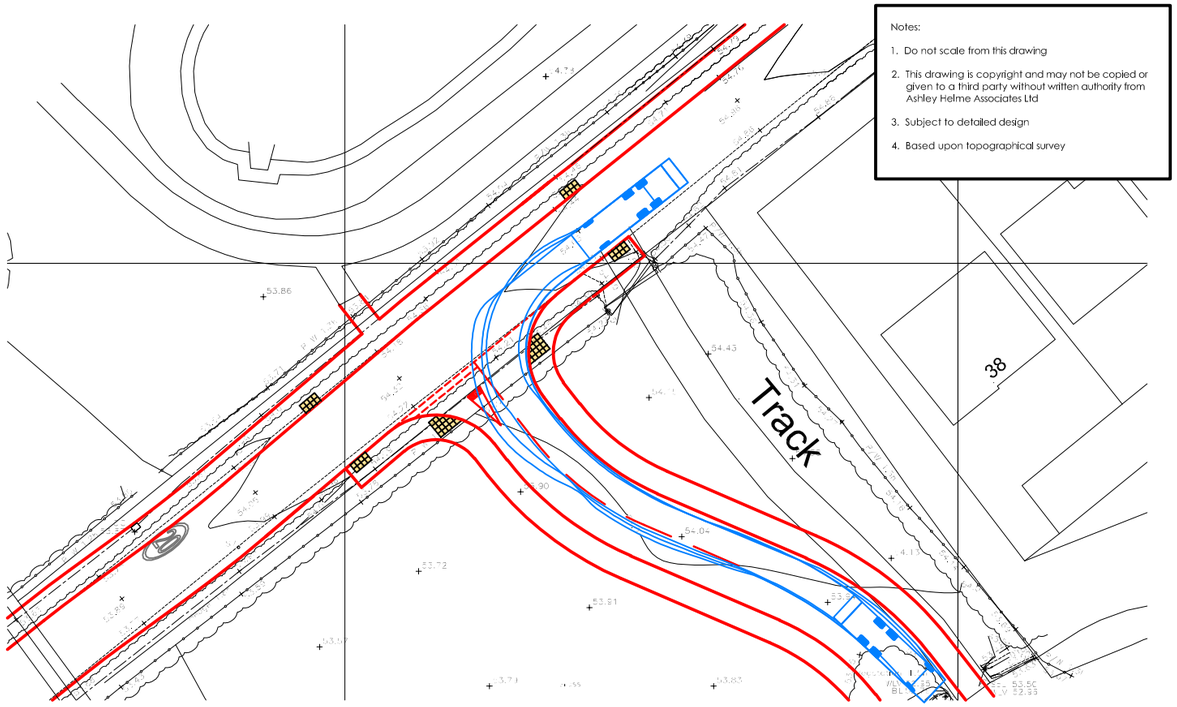




Project: HENTHORN ROAD, CLITHEROE	Title: SWEPT PATH ANALYSIS: PANTECHNICON	Drawing No: 1677/SP/01	Rev: A
Client: GLADMAN DEVELOPMENTS		Date: NOVEMBER 2024	Scale: 1:500@A3

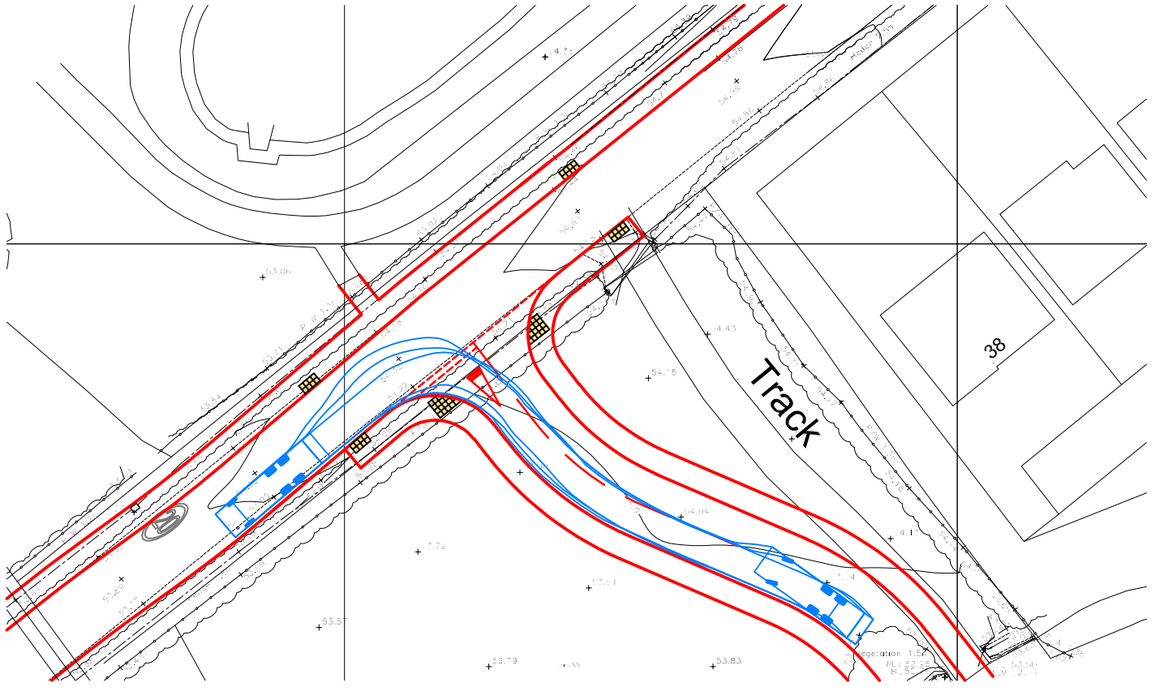
ASHLEY HELME ASSOCIATES
Telephone 0161 972 0552
Email aha@ashleyhelme.co.uk
Website www.ashleyhelme.co.uk
Address 76 Washway Road, Sale, Manchester, M33 7RE

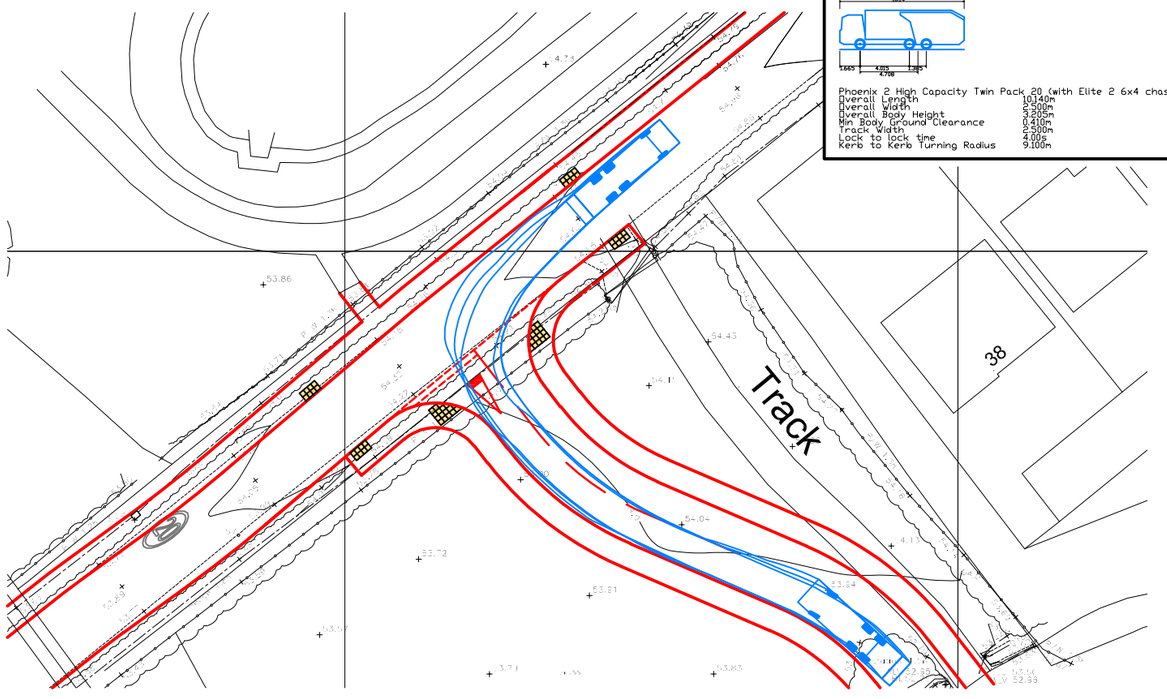


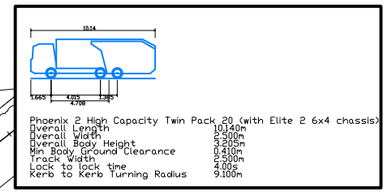


Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon topographical survey



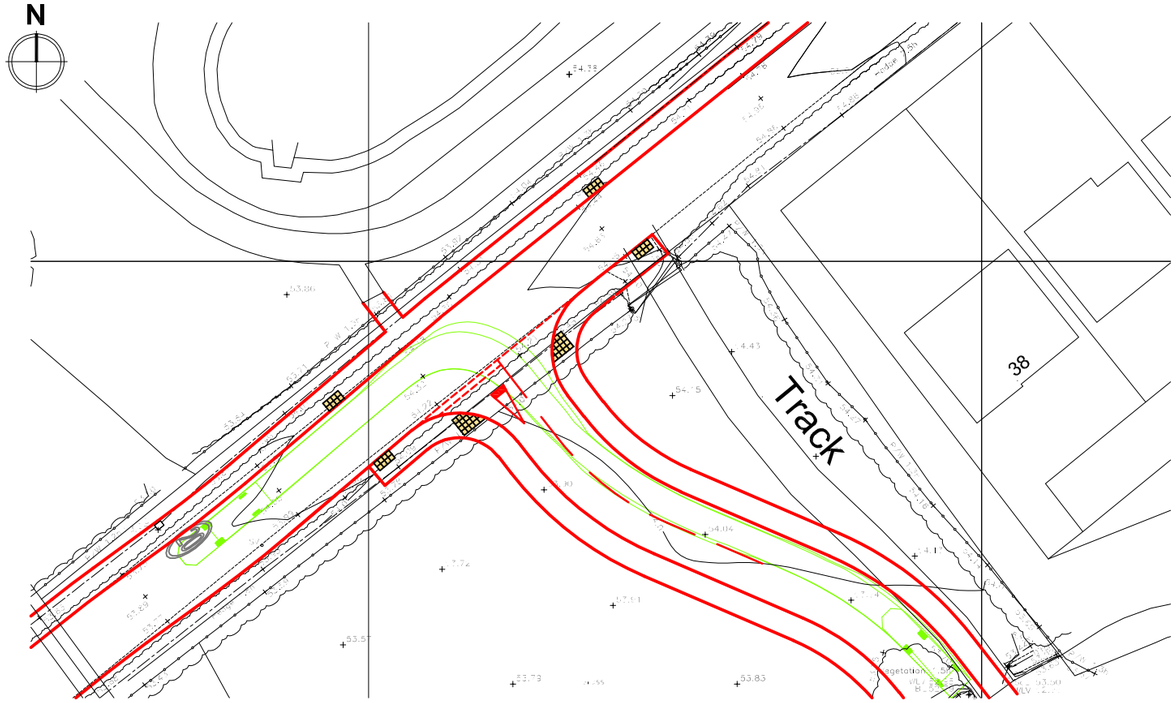




Project: HENTHORN ROAD, CLITHEROE	Title: SWEPT PATH ANALYSIS: REFUSE VEHICLE	Drawing No: 1677/SP/02	Rev: A
Client: GLADMAN DEVELOPMENTS		Date: NOVEMBER 2024	Scale: 1:500@A3

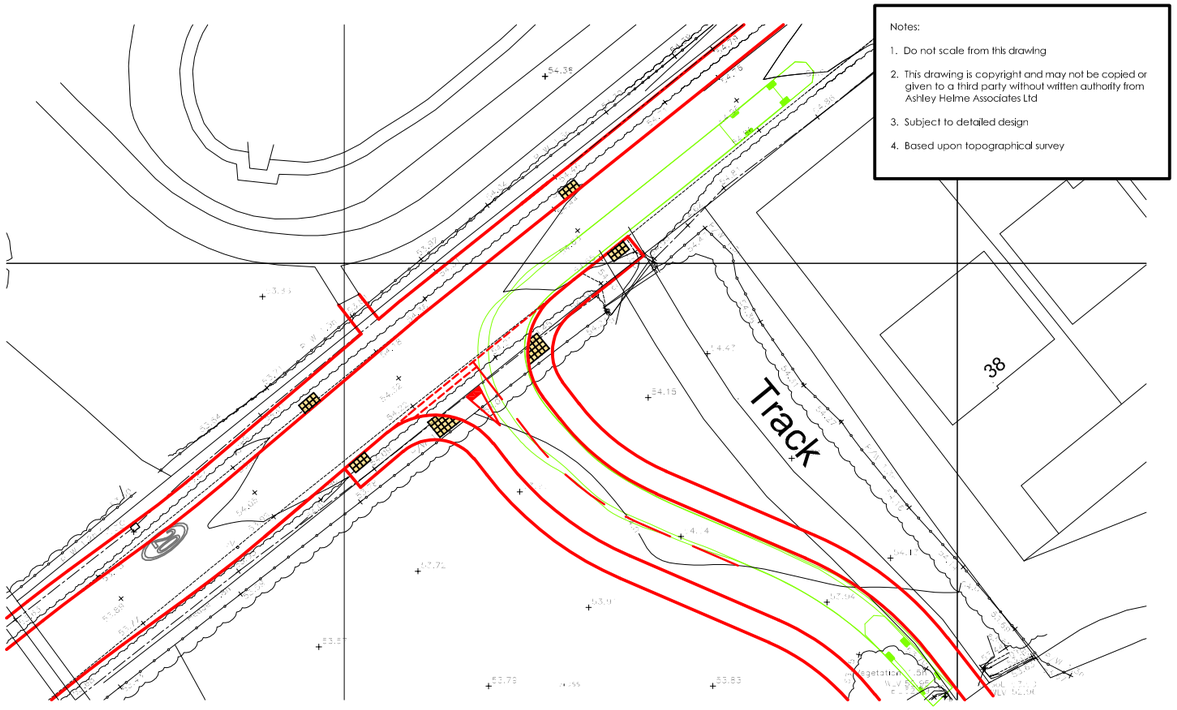
ASHLEY HELME ASSOCIATES

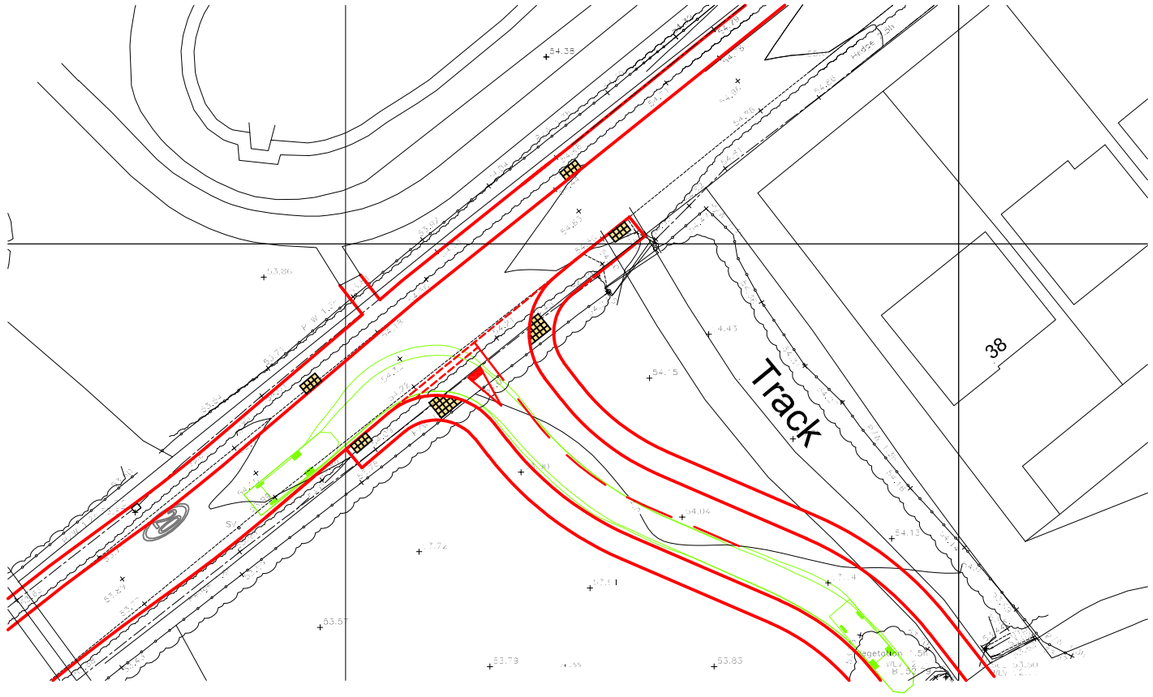
Telephone 0161 972 0552
Email aha@ashleyhelme.co.uk
Website www.ashleyhelme.co.uk
Address 76 Washway Road, Sale, Manchester, M33 7RE

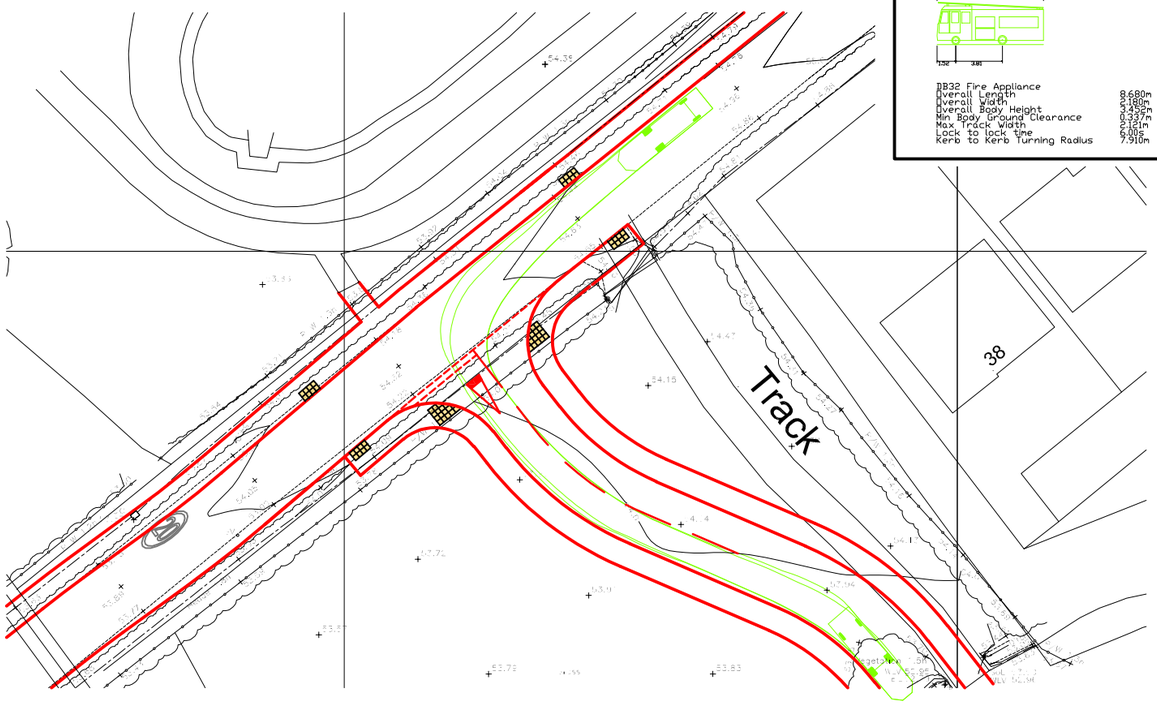


Notes:

1. Do not scale from this drawing
2. This drawing is copyright and may not be copied or given to a third party without written authority from Ashley Helme Associates Ltd
3. Subject to detailed design
4. Based upon topographical survey



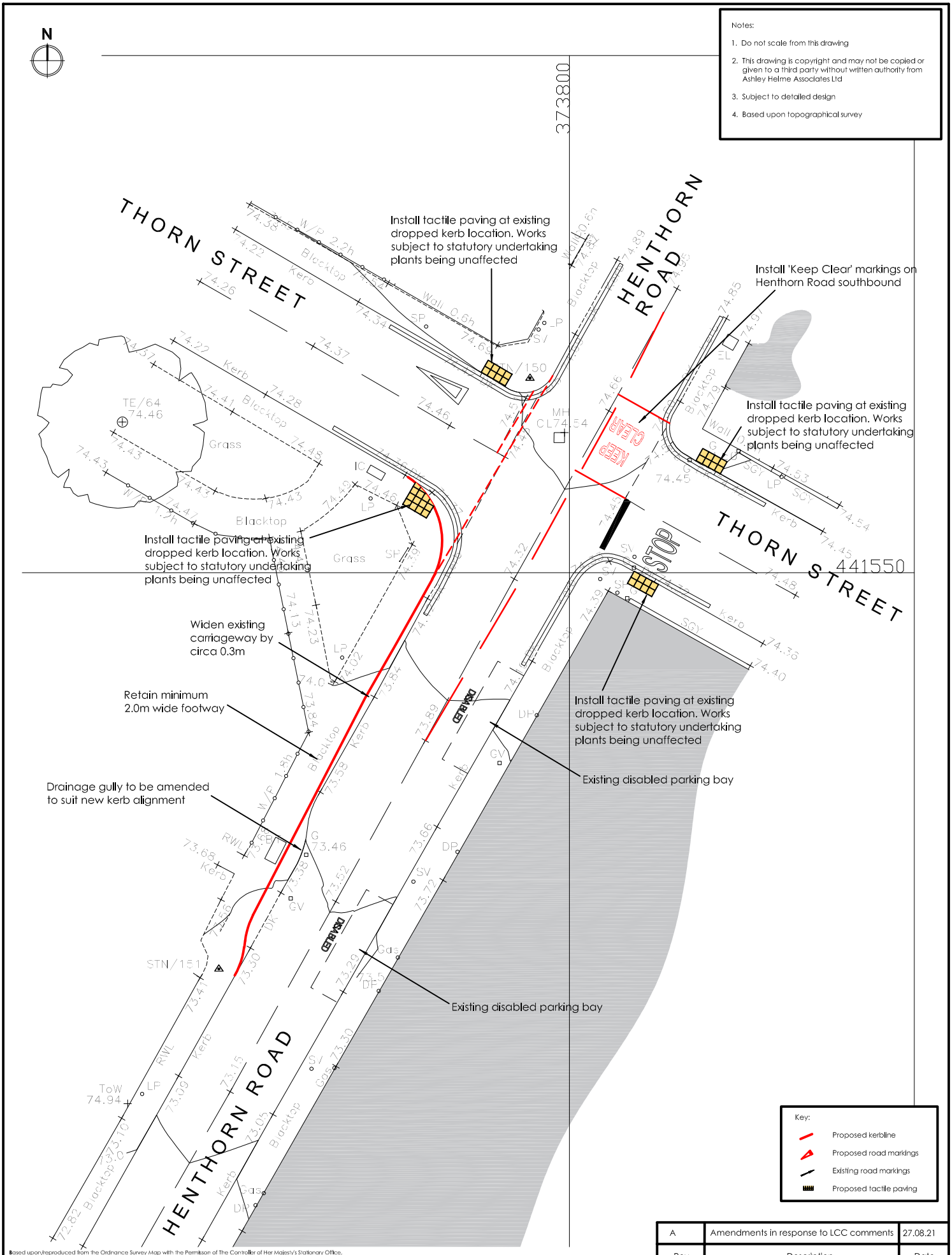




Project: HENTHORN ROAD, CLITHEROE	Title: SWEPT PATH ANALYSIS: FIRE APPLIANCE	Drawing No: 1677/SP/03	Rev: A
Client: GLADMAN DEVELOPMENTS		Date: NOVEMBER 2024	Scale: 1:500@A3

ASHLEY HELME ASSOCIATES

Telephone 0161 972 0552
Email aha@ashleyhelme.co.uk
Website www.ashleyhelme.co.uk
Address 76 Washway Road, Sale, Manchester, M33 7RE

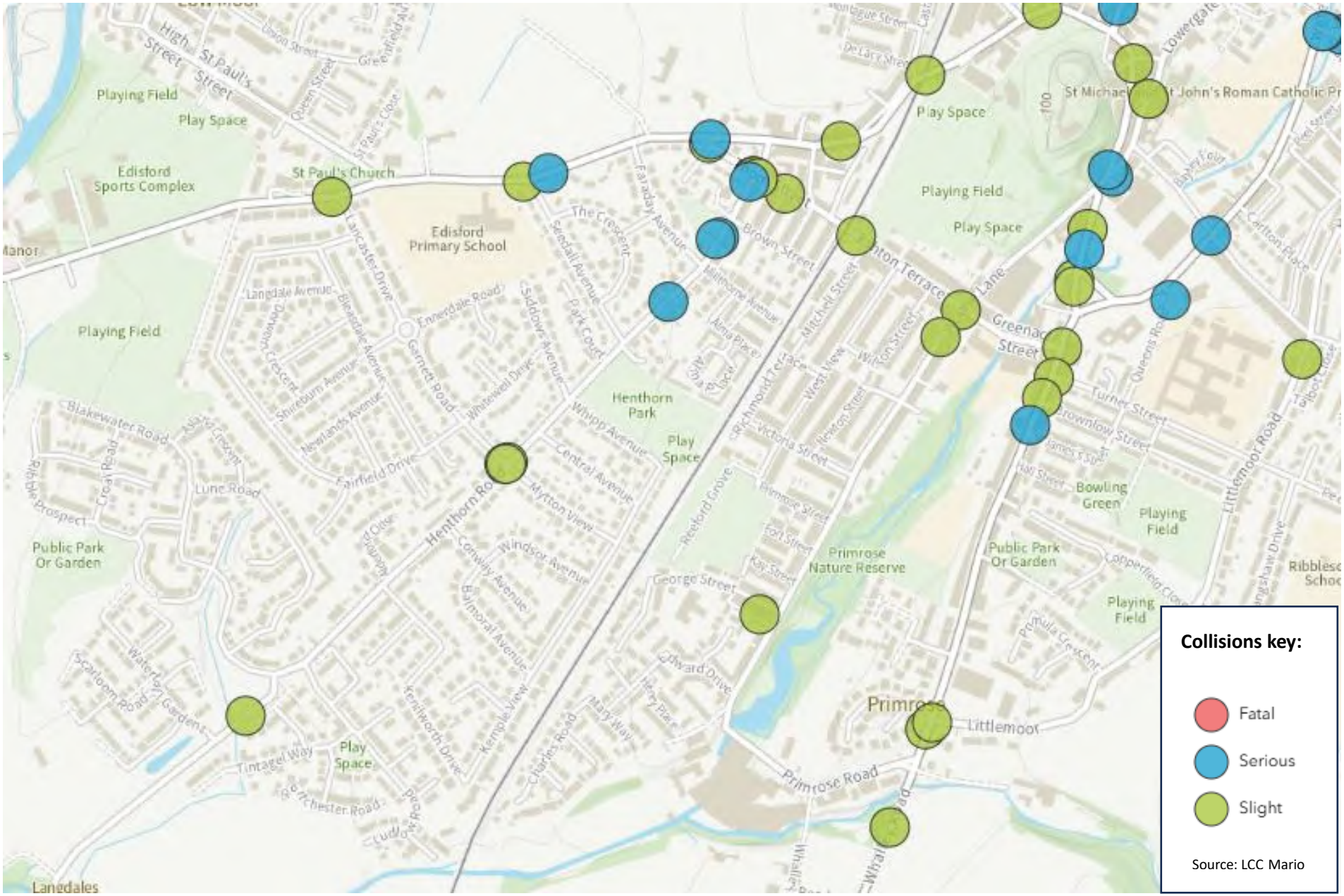


Rev	Description	Date
A	Amendments in response to LCC comments	27.08.21

Project: HENTHORN ROAD, CLITHEROE	Client: GLADMAN DEVELOPMENTS	Drawing No: 1677/12	
Title: PROPOSED JUNCTION IMPROVEMENT: STUDY JUNCTION 6	Date: AUGUST 2021	Scale: 1:200@A3	Rev: A

ASHLEY HELME ASSOCIATES
Telephone 0161 972 0552
Email aha@ashleyhelme.co.uk
Website www.ashleyhelme.co.uk
Address 76 Washway Road, Sale, Manchester, M33 7RE

A LCC MARIO Accident Plot (2020-2025)


Collisions key:
Fatal
Serious
Slight
Source: LCC Mario
Edisford Sports Complex
St Paul's Church
Edisford Primary School
Playing Field
Play Space
Henthorn Park
Primrose Nature Reserve
Bowling Green
Public Park Or Garden
Primrose Road
Littlemoor
Lanedales

B Traffic Flows

Notes:
1. Source: SJ1-12, AHA Traffic Count 05.11.24
2. Source: SJ12, AHA Traffic Count 27.11.24

N

Key
SJ1-12 AM 0815-0915
PM 1645-1745
veh

RAILWAY LINE

B6243 Edisford Road

SJ1 | SJ2 | SJ3 | SJ4 | SJ5 | SJ9 | SJ7

B6243 Bawdlands

B6243

Castle View

Station Road

Lancaster Drive

Seedall Avenue

Faraday Avenue

Thorn Street

Eshton Terrace

SJ6

Henthorn Road

SITE

Lowergate

SJ8

Woone Lane

Greenacre Street

SJ10

SJ11

B6478

SJ12

Primrose Road

A671 Whalley Road

RAILWAY LINE

FIGURE B1 **TRAFFIC COUNT: 2024**
AM & PM PEAK HOURS

ASHLEY HELME ASSOCIATES

Notes:

1. NTM factors applied to traffic count data in Figure B1, refer Technical Filenote 1C, Appendix C

N

NTM Growth Factors
2024-2031 1.077

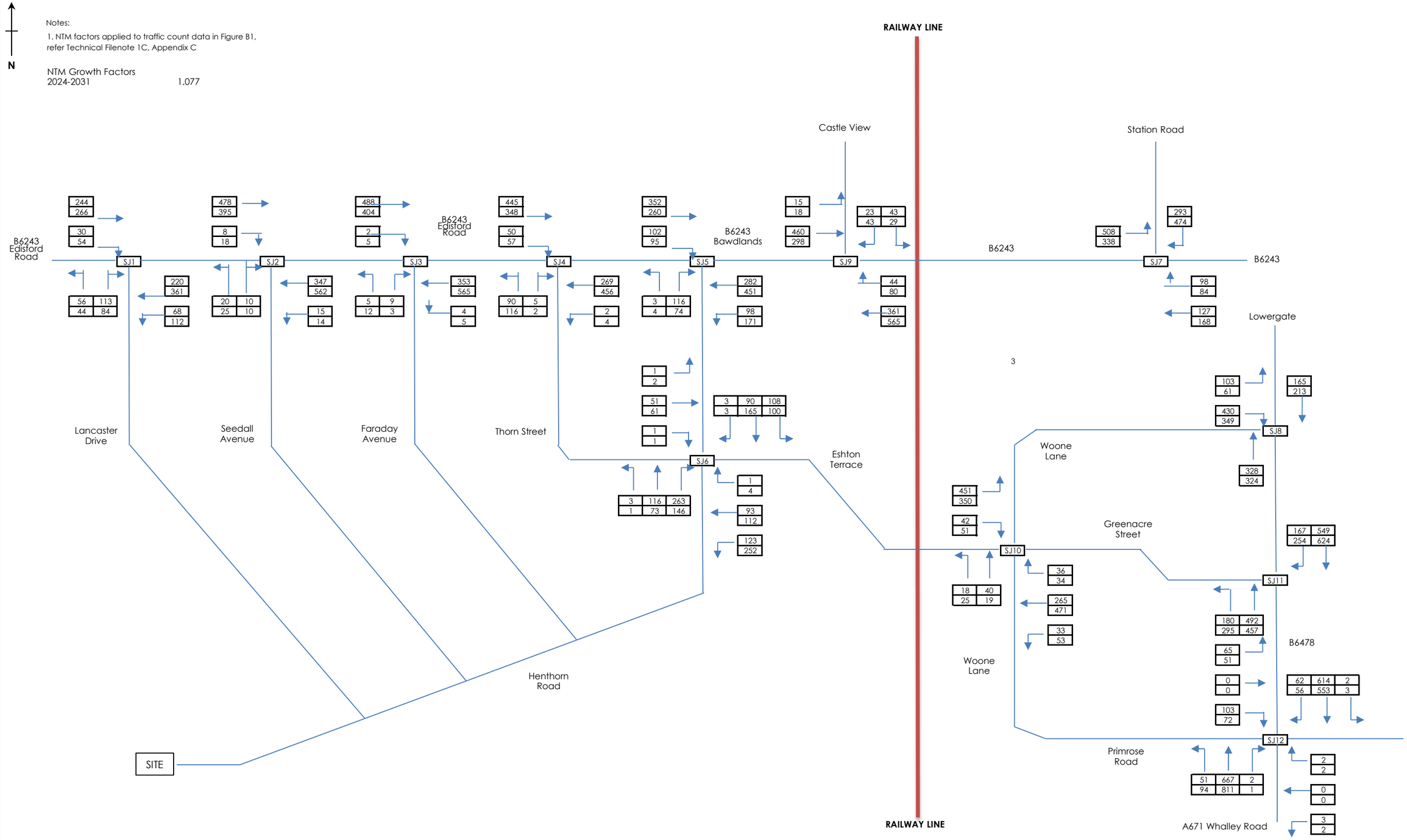


FIGURE B2 **YEAR OF OPENING: 2031**
AM & PM PEAK HOURS

ASHLEY HELME ASSOCIATES

Notes:

1. NTM factors applied to traffic count data in Figure B1, refer Technical Filenote 1C.

N

NTM Growth Factors
2024-2036 1.125

RAILWAY LINE

B6243 Edisford Road

B6243 Edisford Road

B6243 Bawdlands

Castle View

B6243

Station Road

B6243

Lancaster Drive

Seedall Avenue

Faraday Avenue

Thorn Street

Eshton Terrace

Lowergate

Woone Lane

Greenacre Street

B6478

Woone Lane

Primrose Road

A671 Whalley Road

Henthorn Road

SITE

RAILWAY LINE

FIGURE B3 **FUTURE YEAR: 2036**
AM & PM PEAK HOURS

ASHLEY HELME ASSOCIATES

Notes:

1. % distribution adopts the proportional split of development traffic at SJ1 and SJ6 to that previously agreed with LCC in AHA Technical Filenote 3. The distribution on the wider network previously used the Croft Transport Planning % distribution presented in Figures 17 & 18 of the TA dated October 2022 submitted with planning ref 3/2012/1092. This was agreed with LCC. The proportional splits of traffic in the Croft Transport Planning TA are adopted to distrbute the revised % distribution at SJ1 & SJ6 on the wider network.

N

Arrival

Departure

RAILWAY LINE

B6243 Edisford Road

B6243 Bawdlands

B6243

Castle View

Station Road

Lancaster Drive

Seedall Avenue

Faraday Avenue

Thorn Street

Eshton Terrace

Lowergate

Woone Lane

Greenacre Street

B6478

Primrose Road

A671 Whalley Road

Henthorn Road

SITE

SJ1 SJ2 SJ3 SJ4 SJ5 SJ6 SJ7 SJ8 SJ9 SJ10 SJ11 SJ12

FIGURE B4 **% DISTRIBUTION PROPOSED DEVELOPMENT**

ASHLEY HELME ASSOCIATES

	ARR	DEP	2WAY
AM	21	65	86
PM	51	32	83

Notes:
1. Assumes 115 dwellings

Arrival

Departure

N

RAILWAY LINE

B6243 Edisford Road

B6243 Bawdlands

B6243

Castle View

Station Road

Lancaster Drive

Seedall Avenue

Faraday Avenue

Thorn Street

Eshton Terrace

Lowergate

Woone Lane

Greenacre Street

B6478

Primrose Road

A671 Whalley Road

Henthorn Road

SITE

SJ1 SJ2 SJ3 SJ4 SJ5 SJ6 SJ7 SJ8 SJ9 SJ10 SJ11 SJ12

FIGURE B5 **GENERATED TRAFFIC PROPOSED DEVELOPMENT**

ASHLEY HELME ASSOCIATES

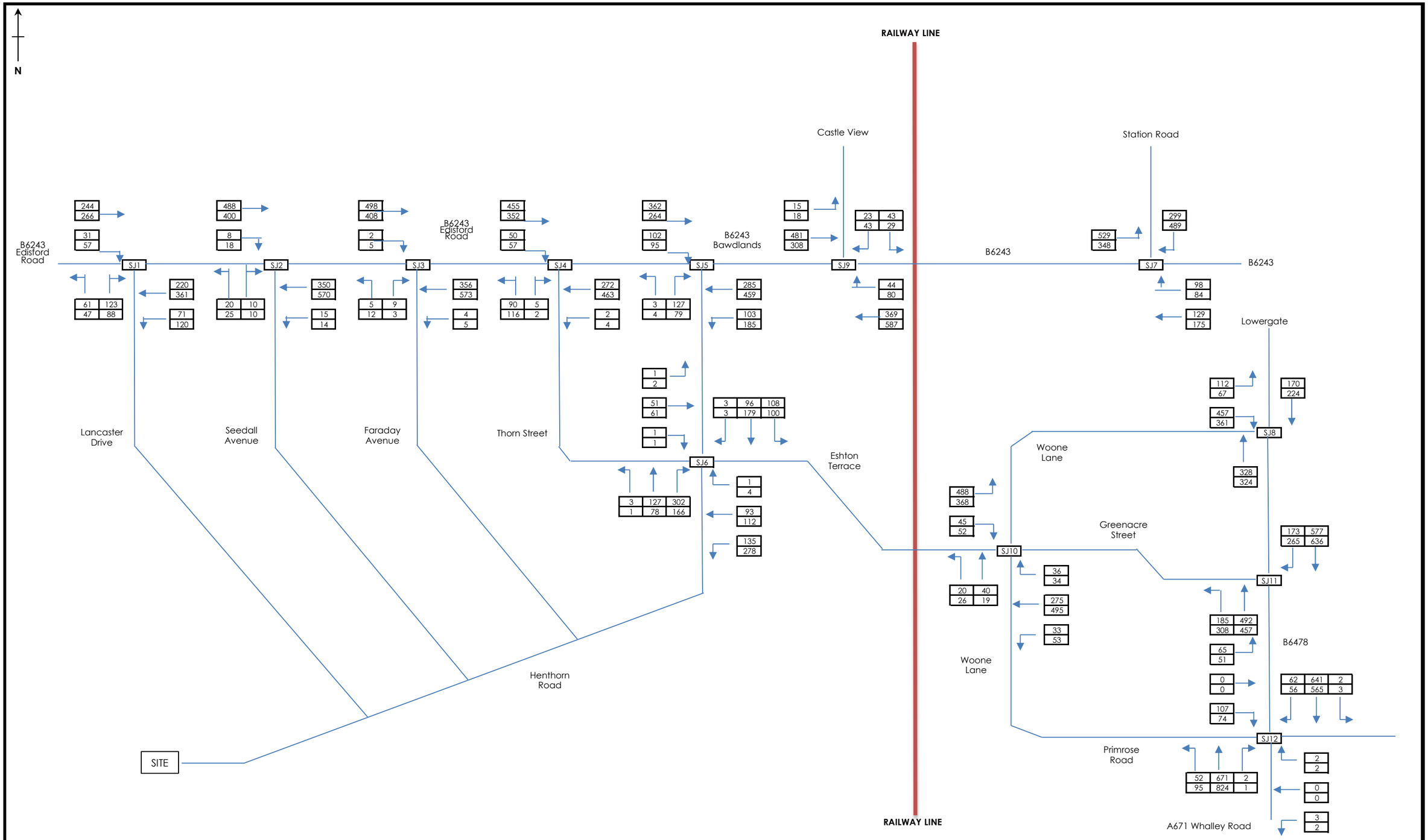


FIGURE B6 **WITH DEVELOPMENT: 2031**
AM & PM PEAK HOURS

ASHLEY HELME ASSOCIATES

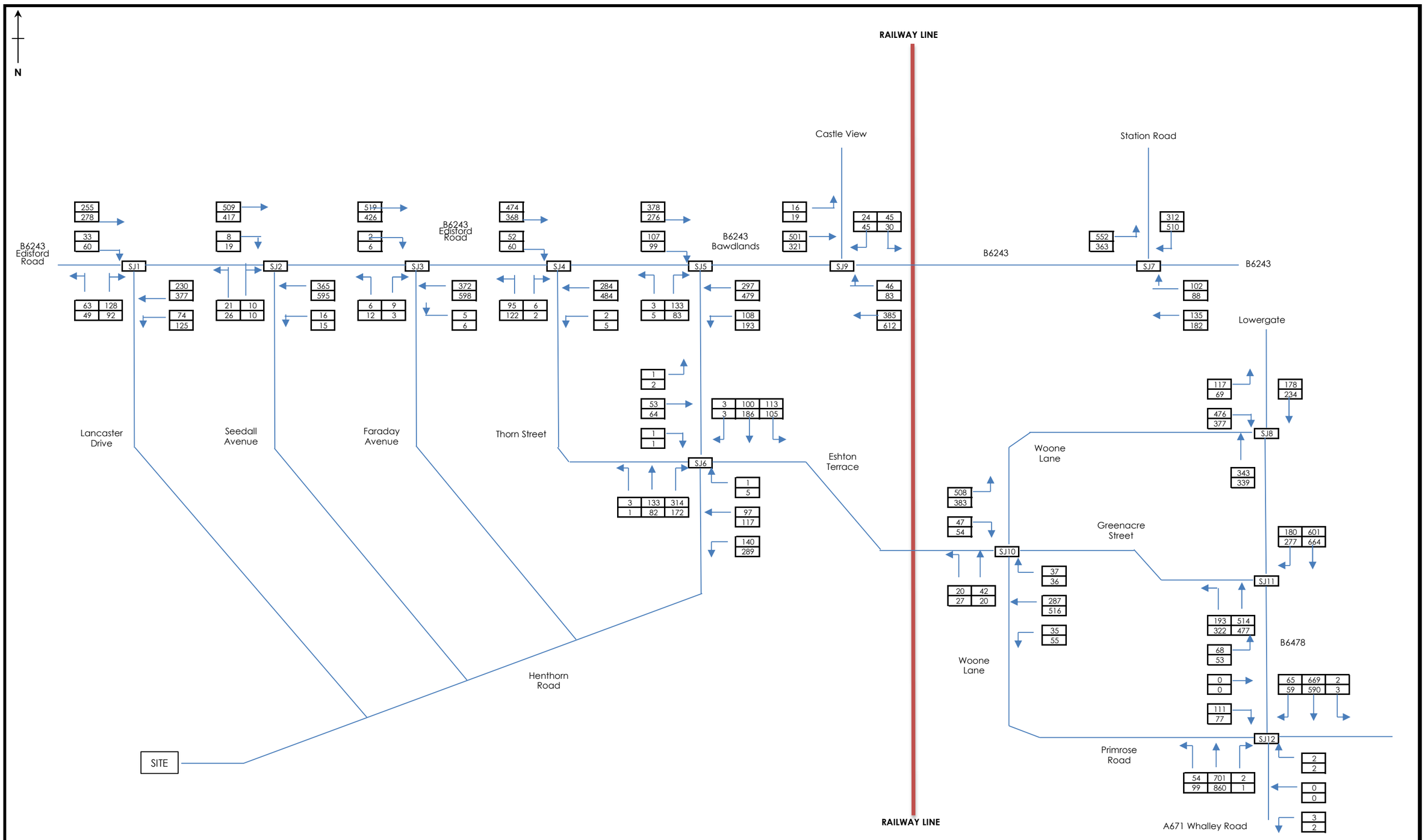


FIGURE B7 **WITH DEVELOPMENT: 2036**
AM & PM PEAK HOURS

ASHLEY HELME ASSOCIATES

C Technical Note 1C

TECHNICAL FILE NOTE 1C					
Project	Henthorn Road, Clitheroe			Project No	1677
Contact		Originator		Date	01.12.25

Traffic Growth: National Transport Model (NTM)

Methodology

Methodology for growthing background traffic from count year (2024) to Future Years (2031 & 2036) is to use the National Transport Model (NTM) methodology, using the following criteria:

- Ribble Valley 003 MSOA geographical area,
- All purpose car driver trips,
- Area type: All
- Road type: All

2024 to 2031 <Year of Opening>

AM peak period: 1.0772

PM peak period: 1.0768

Adopt average growth factor: 1.0770

2024 to 2036 <Future Year>

AM peak period: 1.1254

PM peak period: 1.1246

Adopt average growth factor: 1.1250

D LCC Consultation Response 11 March 2020

Lancashire County Council

Ribble Valley Borough Council
Development Control

Tel 0300 123 6780
Email developeras@lancashire.gov.uk

Your ref 3/2019/0999
Our ref
Date 11th March 2020

Dear Sir / Madam

Application no: 3/2019/0999
Address: Henthorn Road Clitheroe
Proposal: Outline Application for up to 160 Residential Units

Unfortunately the applicant did not seek pre application advice for this application although it is noted that the applicants transport consultant has the benefit of previous involvement in this area, nevertheless the opportunity to question, amend or clarify the previously agreed parameters such as trip generation and distribution has not been possible.

The following executive summary provides the current position based on the submitted documentation. I would welcome dialogue with the applicant's transport consultant to allow matters to be suitably concluded

Executive summary

There are concerns that the analysis as presented has utilised previously used parameters such as trip generation and distribution which may not be representative of the situation currently experienced along Henthorn Road in light of the intervening development that is either completed or extant. The opportunity to review these assumptions in light of the evidence offered by the adjacent housing estates provided by Taylor Wimpey and Story Homes has, based on my review, been missed and casting doubt on the validity and veracity of the evidence presented within the submitted transport assessment.

Without a thorough review (by AHA) and suitable evidence based update of the analysis and parameter adopted within the transport assessment the view is that the information presented does not provide a representative view of the prevailing

Phil Durnell
Director of Highways and Transport
Lancashire County Council
Cuerden Mill • Cuerden Way • Bamber Bridge • Preston • PR5 6BS

conditions at all the junctions under review nor a clear understanding of the operation of the impact of this and previous developments in an area that has seen a number of residential developments coming forward. As a consequence of the lack of evidence based information on the impact of the development on the local network , the Highway Authority are unable to support this application as presented at this time.

Notwithstanding the highway authorities current position on the application as presented we are willing to have dialogue with the developer and his transport consultant to secure an evidence based conclusion to this ~~proposal .~~proposal.

1.0 Site Location

The site is located on land adjacent to Henthorn Road to the south west of Clitheroe Town centre.

2.0 Development Description

The application is for outline planning permission with all matters reserved except for access for a residential development of up to 160 units and comprises of 2 phases with Phase 2 (as referred to in the submitted documents) sited to the north of Henthorn Road and comprising of 35 residential units and Phase 3 sited to the south of Henthorn Road and comprising 125 residential units.

Phase 1 of the sequence is represented by a previous application (app 2018/0688) for 110 residential units which was granted approval on appeal.

2.0 Access

Vehicular access to Phase 2 (to the north of Henthorn Road) will be gained via the adjacent Phase 1 development whilst access to Phase 3 (to the south) will be via a new access point. Vehicle speed surveys have been carried out and the phase 3 access will have visibility splays appropriate to the prevailing 85th%ile speeds on Henthorn Road which in this instance will be 2.4m x 42m to the left on exit and 46m to the right. I am therefore satisfied that the appropriate local access visibility requirements can be achieved.

In addition to the vehicular access points, the applicant also proposes a 3.75m wide pedestrian / cycle link on to Henthorn Road to the south westerly of the corner of the site with the option of this being available as a secondary emergency access route and a separate pedestrian access point further east along the site frontage. Although the internal layout of the development will be subject to reserved matters, it is noted that within the submitted documents (Dwg 1677/01) that it is intended that the latter pedestrian access will connect to an internal footway at the expense of providing a footway directly adjacent to Henthorn Road. This layout is not supported by the highway authority.

Other than facilities at the vehicular access there are no separate pedestrian or cycle facilities to Phase 3

3.0 Layout

With the exception of the proposed vehicular access points and the drawing referred to in para 2.0 above (Dwg 1677/01) there is no information provided in respect of the internal layout of the proposed development. It is

recommended that should planning permission be granted and the development subsequently proceeds to reserved matters stage, the applicant engages in pre application discussions in respect of the internal road layout, parking, electric charging points, etc. to ensure that the final layout is of a suitable standard to be put forward for adoption and future maintenance by the highway authority.

3.0 Sustainability.

The recent appeal decision for the adjacent Phase 1 element of the proposed development (app2018/0688) has provided some insight into the perceived accessibility of the site to the wider area in respect of sustainable modes of transport such as walking, cycling and public transport. In conclusion the planning inspector was satisfied the walking distances to the local convenience store, school and town centre were acceptable in the context of the site. Taking this into consideration the existing infrastructure has been deemed acceptable. It is however noted that the provision of the local bus service is the subject of a level of developer contribution to ensure that it remains commercially viable. The appeal site decision resulted in a developer contribution of £200,000 payable over 5 years at £40,000 per annum. Notwithstanding the wider highway issues and the county councils current position in respect of this application, if all matters could be and are subsequently resolved, taking this sum on a pro rata basis, a contribution of £291,000 would be sought to maintain and improve the existing bus service payable in instalments over a 5 year period commencing with the occupation of the 100th dwelling. I must note that this trigger point has not been discussed nor agreed with the applicant since the opportunity for the highway authority to discuss this and other matters at a pre-application stage was not available.

Public Rights of Way

Both phase 2 and 3 have a public right of way running through them, these will need to be taken into consideration when the internal layouts are being planned. Ideally there should be opportunities for the residents to access these routes from within the site. Contributions for potential upgrading to a shared pedestrian / cycle facility may be sought

4.0 Collision Data Review

The collision data submitted with the transport assessment has been reviewed, taking into account the updated data available since the report was produced and there are no indications that there has been a deterioration of the safety record for the various junctions, indeed there has been a slight reduction in the overall number of accidents as the 5 year period of review has rolled forward from April 2018 to December 2018.

5.0 Traffic Growth.

I have noted in the submitted TA (para8.5.2) that the applicant has discounted a 24 house development (17/0433) presenting an argument that the traffic generation is covered in the TEMPRO growth figures. Whilst this may not seem inappropriate there is always a level of uncertainty with regard to future traffic levels. Growth is based on a number of combined parameters projected forward. Its aim is to provide a best indication of future traffic levels for an area i.e. it is not specific to an individual road. The approach adopted in the submitted TA is not robust. Its reasonableness can only be considered when other influencing factors are considered. In the area where this development has an impact, the issues extend beyond that of simple traffic levels used in junction modelling.

6.0 Committed Development

The applicant has identified a number of committed developments in the area which have been constructed, partially constructed and have extant planning permission. Of these, the Taylor Wimpey development of 270 dwellings has been completed and the traffic generation would have been evident in the traffic counts undertaken in 2018. The Story Homes development of 140 dwellings was registered as 60% complete and occupied in the TA. In order to fully assess the impact of the remaining development on the road network revised traffic counts would have been expected as it is anticipated that in the intervening period the site would be substantially completed. This is currently an issue that would need to be addressed.

8.0 Traffic Generation

As noted above the Taylor Wimpey Development of 270 dwellings has now been completed and a comparison count has been undertaken to assess the veracity of the TRICS assumptions in terms of traffic generation from this site.
The peak hour surveys were undertaken on Wednesday 8th January during the am / pm peaks as defined in the TA for the application 3/2010/0719.
The results are presented below in comparison to the trip rates obtained from TRICS

Peak	TRICS rates			Observed Rates		
	Arr	Dep	2 way	Arr	Dep	2 way
Am	0.140	0.445	0.585	0.159	0.577	0.736
Pm	0.437	0.226	0.663	0.522	0.248	0.770

For a development of 270 dwellings these figures represent an increase in traffic flows from the predicted figure of 158 2 way trips in the am peak to an observed flow of 199 vehicles, similarly the pm peak flows rise from 179 to 208.

Whilst TRICS represents a way of predicting traffic flows associated with development it has its limitations and the surveys undertaken show that the TRICS rates previously

agreed have underestimated the traffic generation for this particular development. If this exercise was repeated for the 2018 application it would equate to an additional 17vehicles on the network over and above the level predicted by TRICS and similarly 12 vehicles in the pm peak. In percentage terms, the traffic generation from the 2010 application has underestimated the traffic impact by 26% in the am peak and 16% in the pm peak.

On the basis of these figures it is considered necessary to revisit the previously adopted trip rates which have historically been used since the 2010 application and substitute them for the trip rates observed from the Taylor Wimpey development. This would give a clearer indication of the traffic impact on the highway network. I would expect this approach to be adopted by the developer with a comparison with my data. Any variance would need to be agreed with me before being used in any modelling processes. Note all models will need to be validated having regard to influences both up and down stream.

7.0 Distribution.

The distribution of the development traffic on the network has been carried through from the initial 2010 application. It is not considered prudent, in light of the level of development that has already occurred in this area, to revisit the distribution of traffic on the network. In previous applications there has been a concern that the operation of the Henthorn Road / Thorn Street junction was becoming problematic with RFC values exceeding theoretical capacity. With this in mind, there may be an element of traffic diverting away from routes through this junction and favouring routes such as Garnett Rd/ Lancaster Drive, Seedall Avenue and Faraday Avenue. The submitted Transport Assessment only suggests Garnett Rd and Lancaster Drive as the alternative route to access Edisford Road. The use of these side roads should be evaluated perhaps looking at all opportunities for alternative route choices and what changes will be required to assist, promote or discourage their use

8.0 Highway Improvements

Further information has been requested to assess the impact of the development on the network. Until that information is fully reviewed it is not possible to determine what mitigation measures may be required.

In respect of the site access and works considered necessary for Henthorn Road the following works will be required.

- Localised widening of Henthorn Road to a minimum of 5.5m from Blakewater Road to the western boundary of the development frontage onto Henthorn Road.
- Provision of a 2m footway along the northern side of Henthorn Road for the full extent of the Phase 2 site frontage onto Henthorn Road. To its junction with Blakewater Road Provision of a 2m footway along the southern side of Henthorn Road from the proposed vehicular access to its junction with Blakewater Road

9.0 Planning Contributions

Notwithstanding the wider highway issues and the county councils current position in respect of this application, if all matters could be and are subsequently resolved, a contribution of £291,000 would be sought to maintain and improve the existing bus service payable in instalments over a 5 year period commencing with the occupation of the 100th dwelling. I must note that this trigger point has not been discussed nor agreed with the applicant since the opportunity for the highway authority to discuss this and other matters at a pre-application stage was not available.

For development of this scale Lancashire County Council (LCC) highways can provide a facility to the developer to enable the highway authority to provide a range of Travel Plan services as outlined below. An application of the scale proposed would incur a cost of £6,000. Please note: This is an LCC service offer to the developer and not a requirement. Appraise initial Travel Plan(s) submitted to the Planning Authority and provide constructive feedback. Oversee the progression from the Interim Travel Plan to the Full Travel Plan/s in line with agreed timescales. Monitor and support the development, implementation and review of the Full Travel Plan. This will include reviewing:

- o Annual surveys
- o Progression of initiatives / actions plan
- o Targets"

Conclusion

As highlighted previously it is unfortunate that the opportunity to have a pre-application discussion on this proposal was not pursued. This has resulted in the position that the highway authority could not support the application on the basis of the information provided within the submitted application documents. Nevertheless there is a willingness on the part of the highway authority to meet with the applicant and their traffic consultant for discussions.

Yours faithfully

Dave Bloomer
Highways & Transport
Lancashire County Council

E LCC Consultation Response 4 June 2020

Lancashire County Council

Ribble Valley Borough Council
Development Control

Tel 0300 123 6780
Email developeras@lancashire.gov.uk

Your ref 3/2019/0999
Our ref
Date 4th June 2020

Dear Sir / Madam

Application no: 3/2019/0999
Address: Henthorn Road Clitheroe
Proposal: Outline Application for up to 160 Residential Units

This letter is in response to the revised Transport Assessment (TA) received in respect of the above application and in response to my previous letter dated 11th March 2020.

In my previous response I raised concerns that the terms of reference adopted for the initial TA related back to those previously agreed for an application received in 2010 when proposals for residential development along Henthorn Road first came forward. The traffic generation in particular has relied on trip rates derived from TRICS. I mentioned in my previous response that a survey of the Taylor Wimpey development of 270 units was undertaken with the results indicating that TRICS trip rate was underestimating the traffic generation from the existing development which would equate to similar scenario for the current, proposed development. I am pleased that the revised junction analyses have incorporated these revised trip rate figures but would have expected for these rates to have been verified by the applicant with them undertaking a further count.

The revised trip rates have been used to revisit the junction analyses previously undertaken. As mentioned previously the junctions included within the TA have been those that have been agreed historically, and in the absence of any

Phil Durnell
Director of Highways and Transport
Lancashire County Council
Cuerden Mill • Cuerden Way • Bamber Bridge • Preston • PR5 6BS

opportunity to undertake a pre-app discussion, the opportunity to review the junctions that should be included within the scope of the TA has been missed.

In my previous response I suggested that a number of drivers may be diverting away from the Henthorn Road / Thorn Street junction to avoid the congestion that is present and utilising side roads such as Garnett Road / Lancaster Drive, Seedall Avenue or Faraday Avenue. The applicant's response was to load 31% of the traffic generated by the development to the Garnett Road / Lancaster Drive route out on to Edisford Road. Unfortunately, no clear evidence has been presented that can be scrutinised whether or not this is representative of the levels of diverting traffic that may be using this route and the other two route options have not been considered, or the local consequences.

In order to qualify assumptions made etc it would be typical and reasonable that additional traffic counts at the Edisford Road and Henthorn Road junctions as well as having observations of network operation (local driver behaviour and all conflict etc i.e. a quantitative and qualitative approach) for these alternative routes to determine the current level of traffic using them that is generated from outside their immediate catchment area.

With the current travel restrictions and disruption to school and working practices this will not be achievable in the foreseeable future. The county Council is reviewing a number of sites across the county to assess when traffic figures have returned to normal levels at which point the survey results will be considered to be representative

In lieu of new data I could be satisfied with an alternative/robust approach be taken (as deemed appropriate by the highway authority), however this would require agreement between LCC and the applicants transport consultants and be suitable to stand up to external scrutiny.

There is growing concern that the Thorn Street / Henthorn Road junction is becoming increasingly congested with time as the residential developments along Henthorn Road become increasingly occupied. The operation of the junction is further complicated by the combination of the periodic operation of the level crossing on Thorn Street and the parking that occurs on Henthorn Road outside the terraced properties (numbered 15 -31) both of which contribute to the delays at this junction. Although the revised TA makes reference to the delays accompanying the operations of the level crossing in terms of frequency, duration and queue lengths there is no acknowledgement or attempt to mitigate the effects of the parking outside the terraced properties. In considering the Phase 2 planning application in 2018 it was recognised from local observations that there was a degree of cooperation between drivers with a system of unofficial "give and take" operating on Henthorn Road. However there will be a level at which this system is likely to breakdown as drivers become increasingly frustrated with delays. The consequence of this will be increased queue lengths possibly impacting on adjacent junctions and the level crossing.

Turning to other matters addressed in the revised TA

Public Transport

In my previous response I mentioned that a public transport contribution of £291K would be required to promote public transport and the local bus service.

This figure was calculated using the per dwelling contribution secured by the 2018 permission which secured a contribution of £200K over 5 years which would be used to secure the continuation of the subsidised bus service . However the annual contribution of £40K is below the full cost of the service provision which amounts to £70K per annum. The contribution requested from the current application would make up the £150K shortfall leaving the remainder to provide additional buses to supplement the current timetable and allow for their provision on Sundays and Bank Holidays.

Offsite Highway Works.

In my previous response a necessary requirement was the widening of Henthorn Road to 5.5m for the full length of the site frontage. The applicant does not support this ask and has indicated that it is unnecessary. However I am of the view from an operational perspective it would make sense to carry out this widening to the westerly emergency access point.

Public Rights of Way

In my previous response I alluded to the potential upgrading of the local public right of way (PROW) network and that a contribution may be sought. The applicant has highlighted that the Story Homes application has contributed £105K towards improvements to the PROW network. Discussions with the PROW section of the county council has revealed that the funding previously secured will not satisfy the funding requirements so, pro rata, a s106 contribution of £120K would be required.

I am happy to progress discussions with the applicant and his transport consultants to come to a conclusion that can satisfy scrutiny. However, as presented there are a number of matters still outstanding that require attention and I would not recommend that the proposal as submitted be considered with a positive recommendation until a conclusion is reached.

Yours faithfully

Dave Bloomer
Highways & Transport
Lancashire County Council

TECHNICAL NOTE 3					
Project	Land off Henthorn Road, Clitheroe			Project No	1677
Contact		Originator	SJH	Date	24/06/21

ASHLEY HELME ASSOCIATES

LAND OFF HENTHORN ROAD, CLITHEROE
APPLICATION REF 3/2019/0999

1.0 Introduction

1.1 Ashley Helme Associates Limited (AHA) are appointed by Gladman Developments Ltd (GDL) to provide highways/transportation advice with respect to the planning application for residential development on land off Henthorn Road, Clitheroe (henceforth referred to as the Site).

1.2 The Site comprises two parcels of land to the north and south of Henthorn Road. Both areas of Site are presently agricultural/field land. The proposed development comprises up to **160** dwellings, as follows:

(i) Northern Site: 35 dwellings,
(ii) Southern Site: 125 dwellings.

1.3 AHA prepared the TA report (ref 1616/2/B) that accompanied the planning application for a residential scheme of 110 dwellings on a site to the north of the current application Site. This scheme (application ref 3/2018/08688) was promoted by GDL and was approved following an appeal. The approved scheme is referred to as **Phase 2**. The proposed scheme is referred to as **Phase 3**.

1.4 AHA has prepared two Transport Assessment reports for the current Phase 3 application, being:

(i) First: TA Report (ref 1677/1/A), October 2019, and
(ii) Second: TA Report (ref 1677/1/B), March 2020.

1.5 The second TA report was prepared in response to comments from Lancashire County Council (LCC), who are the highway authority for all of the roads and junctions that form part of the TA study network. The second TA report was prepared to address issues raised by LCC, being:

(i) Proposed access arrangements,
(ii) Financial contribution towards the No2 bus service,
(iii) Traffic impact assessment using recorded residential trip rates, and
(iv) Distribution of generated traffic.

1.6 This Technical Note No 3 has been prepared specifically to consider the distribution of development generated traffic and its assignment to the local highway network. AHA and GDL met with LCC highways officers on 26 August 2020 on site to discuss distribution. It was suggested that it be would useful to understand the travel patterns of existing residents at the southern end of Henthorn Road, ie those near to the application Site. To this end, a survey of the Garnett Road/Henthorn Road junction would give a good indication of the split between residents using:

(i) Garnett Road/Lancaster Drive, and
(ii) Henthorn Road/Eshton Terrace.

2.0 Traffic Flows

2.1 Traffic Counts

2.1.1 AHA undertook manual classified turning counts at the junctions of:

(i) Henthorn Road/Garnett Road/Mytton View,
(ii) Lancaster Drive/Edisford Road (**SJ1** in the TA reports), and
(iii) Henthorn Road/Eshton Terrace/Thorn Street (**SJ6** in the TA reports).

The surveys were undertaken between 0730-0930 and 1615-1815 and queues were recorded in 5 minute intervals at the same time.

2.1.2 An analysis of the survey data confirms that the peak hours are:

(i) AM: 0815-0915, and
(ii) PM: 1615-1715.

The results of the traffic survey are summarised on Figure TN3/1. The flows are shown in vehicles.

2.2 Covid-19

2.2.1 Prior to the surveys being undertaken, AHA liaised with LCC highways officers to seek confirmation that it was acceptable to carry out the surveys. LCC responded (20 April 2021 email) to confirm that the surveys could go ahead. Notwithstanding this, it is accepted that the surveys took place during a time when some national restrictions were still in place and this could have an effect on the recorded flows. AHA has available traffic count data collected in June 2018 for SJ1 and SJ6. AHA has compared the total junction flows recorded in 2021 with the 2018 data. The flows are:

(i)	SJ1:	AM	2018 = 675 vehicles	2021= 632 vehicles
		PM	2018 = 889 vehicles	2021 = 709 vehicles,
(ii)	SJ6:	AM	2018 = 717 vehicles	2021 = 684 vehicles
		PM	2018 = 864 vehicles	2021 = 785 vehicles.

At SJ1, the 2021 AM flows are only 6% lower than those recorded in 2018. In the PM peak hour, the difference is 20%. At SJ6, the 2021 flows are broadly similar to the 2018 flows, being 5% lower in the AM peak hour and 9% lower in the PM peak hour.

2.2.2 The approach adopted in this Technical Note No 3 is to apply an uplift factor to the recorded 2021 flows so that the flows are scaled up to the same level as the 2018 counts. The uplift factors are:

(i)	SJ1:	AM	1.068
		PM	1.254
(ii)	SJ6:	AM	1.048
		PM	1.101.

The resultant 'adjusted' 2021 traffic flows at SJ1 and SJ6 are presented on Figure TN3/2.

2.3 Traffic Growth

2.3.1 The analysis years adopted in both TA reports are 2024 and 2029 and these are similarly adopted in this Technical Note No 3.

2.3.2 The National Transport Model (NTM) TEMPRO is used as a basis for deriving local growth factors. The NTM growth factors adopted to estimate year 2024 and 2029 traffic flows, from the 2021 'adjusted flow', are set out in Technical File Note 1/A.

2.3.3 Figures TN3/3 and TN3/4 present the 2024 and 2029 'Growthed' AM & PM peak hour traffic flows at SJ1 and SJ6.

2.4 Committed Developments

2.4.1 The AHA TA reports include traffic estimates for the following committed schemes:

(i)	3/2014/0597:	Land off Waddington Road (275 dwellings),
(iv)	3/2013/0711:	Land off Henthorn Road (140 dwellings),
(vi)	3/2017/0433:	Land off Henthorn Road (24 dwellings),
(vii)	3/2018/08688:	Land off Henthorn Road (110 dwellings).

2.4.2 The scheme at Waddington Road is not forecast to add any traffic to SJ1 and SJ6 and, therefore, is not considered further in this Technical Note No 3.

2.4.3 The scheme of 140 dwellings (3/2013/0711) by Story Homes is now fully sold. Traffic generated by this scheme will have been recorded in the 2021 traffic surveys. Therefore, this site is not considered further in this Technical Note No 3.

2.4.4 Traffic estimates for 3/2017/0433 and 3/2018/08688 are set out on Figures TN3/5 and TN3/6 respectively. The estimates are based on agreed trip rates with LCC and the pattern of movement recorded in the 2021 traffic counts (discussed below).

2.5 Base Traffic Flows

2.5.1 Figures TN3/7 and TN3/8 presents the year 2024 and 2029 Base flows at SJ1 and SJ6. These are derived by the combination of year 2024 and 2029 factored flows (Figures TN3/3 and TN3/4) and the traffic generated by the permitted developments (Figures TN3/5 and TN3/6).

2.6 Distribution and Assignment

2.6.1 The LCC consultation response (4 June 2020) states:

"In my previous response I suggested that a number of drivers may be diverting away from the Henthorn Road / Thorn Street junction to avoid the congestion that is present and utilising side roads such as Garnett Road / Lancaster Drive, Seedall Avenue or Faraday Avenue. The applicant's response was to load 31% of the traffic generated by the development to the Garnett Road / Lancaster Drive route out on to Edisford Road. Unfortunately, no clear evidence has been presented that can be scrutinised whether or not this is representative of the levels of diverting traffic that may be using this route and the other two route options have not been considered, or the local consequences."

2.6.2 Following a meeting on Site with LCC officers on 26 August 2020, it was agreed that a traffic survey should be undertaken at the junction of Henthorn Road/Garnett Road/Mytton View. This would provide a useful indicator as to the split of traffic travelling to/from the new residential developments at the southern end of Henthorn Road. The results of the survey are presented on Figure TN3/1.

2.6.3 The 2021 recorded splits between Garnett Road and Henthorn Road are:

(i) From Henthorn Road (S)		To Garnett Road	To Henthorn Road (N)
	AM	22%	78%
	PM	24%	76%

(ii) To Henthorn Road (S)		From Garnett Road	From Henthorn Road (N)
	AM	19%	81%
	PM	22%	78%.

2.6.4 The recorded distribution at the Henthorn Road/Garnett Road/Mytton View junction is shown on Figure TN3/9. The split at SJ1 and SJ6 is also estimated in the same way using the recorded split of turning movements. The % distribution at SJ1 and SJ6 is also shown on Figure TN3/9.

2.7 Trip Rates

2.7.1 LCC undertook a count of the Taylor Wimpey scheme (Gladman Phase 1) in January 2020. Based on this, LCC have calculated the following recorded trip rates:

PEAK	ARR	DEP	2-WAY
AM	0.159	0.577	0.737
PM	0.522	0.248	0.770.

These trip rates were adopted in the second AHA TA report (ref 1677/1/B).

2.7.2 Based on the LCC recorded trip rates, the resultant trip generations for the proposed 160 dwellings scheme are:

PEAK	ARR	DEP	2-WAY
AM	25	92	117
PM	83	40	123.

2.7.3 Figure TN3/10 presents the total traffic generated by the proposed development in the AM and PM peak hours at SJ1 and SJ6, based on the % distribution on Figure TN3/9 and the LCC recorded residential trip rates.

2.8 With Development

2.8.1 The estimated 2024 and 2029 AM and PM peak hour With Development traffic flows at SJ1 and SJ6 are presented on Figures TN3/11 and TN3/12.

3.0 Junction Modelling

3.1 Queue Surveys

3.1.1 Queues were recorded on all external approach arms at SJ1 and SJ6. Data was collected at the same time as the AM & PM peak period traffic count surveys (ie on 22 June 2021).

3.1.2 The survey recorded queues in 5-minute intervals. The survey recorded the queue on each arm at the 5-minute mark (eg at 0800, 0805, 0810, etc). This provides a useful indicator of the current performance level and also assists with PICADY calibration.

3.2 Model Calibration

3.2.1 The process of model calibration involves:

(i) Construct PICADY models (within JUNCTIONS 9) for SJ1 and SJ6;
(ii) Use 2021 recorded traffic count data;
(iii) Compare model output queues to recorded queues;
(iv) If necessary, make small adjustments to model geometry to provide 'best match' between model and recorded queues.

4.0 SJ1: Lancaster Drive/Edisford Road

4.1 Queue Survey and Model Validation

4.1.1 Review of the SJ1 queue survey data collected in 2021 shows that:

APPROACH	MEAN SPOT QUEUE (Vehs)	
	AM	PM
Lancaster Drive	0.8	0.2
Edisford Road	0.0	0.0

4.1.2 The queue survey confirms that small queues were recorded on the 5-minute interval marks. This means that any queues that form within the 5-minute interval period are clearing. The survey results provide clear evidence that SJ1 is presently operating in an **acceptable** manner.

4.1.3 A PICADY model has been constructed for the 2021 AM & PM peak hour Count situations. The results of this exercise are presented in Table TN3/1. A review of Table TN3/1 shows that PICADY model of SJ1 correlates well with the recorded queues. It is concluded that the PICADY model is suitable to test the traffic impact of the Proposed Development in years 2024 and 2029.

4.2 2024 and 2029

4.2.1 Table TN3/2 presents the results of the PICADY modelling for S1 for years 2024 and 2029.

4.2.2 Review of Table TN3/2 shows that the existing SJ1 priority-controlled junction is predicted to operate with a high degree of spare capacity and with negligible queues/delays in the 2024 AM & PM peak hour Base situations. Table TN3/2 shows that the addition of traffic generated by the proposed development has no perceptible effect on the performance of the junction in year 2024.

4.2.3 Similarly, the PICADY modelling confirms that the existing SJ1 priority-controlled junction is predicted to operate with a high degree of spare capacity and with negligible/small queues/delays in the 2029 AM & PM peak hour Base situations. Table TN3/2 shows that the addition of traffic generated by the proposed development does not materially alter the performance of the junction in year 2029.

4.2.4 It is concluded that the traffic impact of the Proposed Development at SJ1 in assessment years 2024 and 2029 is acceptable.

5.0 SJ6: Henthorn Road/Eshton Terrace/Thorn Street

5.1 2021 Queue Survey and Model Validation

5.1.1 Review of the SJ6 queue survey data collected in 2021 shows that the mean spot queue for all arms are:

APPROACH	MEAN SPOT QUEUE (Vehs)	
	AM	PM
Thorn Street (W)	0.0	0.2
Henthorn Road (S)	0.1	0.2
Thorn Street (E)	0.8	1.8
Henthorn Road (N)	0.0	0.0.

5.1.2 The queue survey confirms that small/negligible queues were recorded on the 5-minute interval marks. This means that any queues that form within the 5-minute interval period are clearing. The survey results provide clear evidence that SJ6 is presently operating in an **acceptable** manner.

5.1.3 A PICADY model has been constructed for the 2021AM & PM peak hour Count situations and using the DIRECT form of flow entry. The output queues from this model are presented in Table TN3/3. A

review of Table TN3/3 shows that queues forecast by the PICADY model of SJ6 correlate well with the recorded queues. It is concluded that the PICADY model is suitable to test the traffic impact of the Proposed Development in years 2024 and 2029.

5.2 2024 and 2029

5.2.1 The modelling results for years 2024 and 2029 are presented in Table TN3/4. A review of Table TN3/4 shows that SJ6 is predicted to operate in an acceptable manner and with small queues and delays in the 2024 and 2029 AM peak hour Base situations. The PICADY modelling demonstrates that the addition of traffic generated by the proposed Phase 3 scheme generally does not materially alter the performance of the junction. The model shows that Henthorn Road (S) is starting to experience slight deterioration by year 2024 and worsens further by year 2029. As would be expected, the addition of traffic generated by the proposed Phase 3 scheme leads further worsening of this arm in the AM peak hour. However, the level of performance predicted by PICADY for Henthorn Road (S) in the 2029 AM peak hour With Development situation (ie worst case scenario) could not reasonably be described as severe, which is the test set out in NPPF.

5.2.2 In the PM peak hour, the PICADY modelling shows that the junction generally operates in an acceptable manner in the 2024 and 2029 Base situations. However, the model indicates that the Thorn Street (E) approach to the junction is starting to experience a slight deterioration in performance by 2024 and there is a further worsening of performance by year 2029. As would be expected, the PICADY model shows further deterioration of the performance of Thorn Street (E) if the proposed Phase 3 development proceeds. The proposed Phase 3 development is predicted to increase the queue on Thorn Street (E) by 3.5 vehicles in 2024 and by 4.4 vehicles in year 2029. The corresponding increases in delay are 18.54 seconds (in 2024) and 21.67 seconds (in 2029). However, the level of performance predicted by PICADY for Thorn Street (E) in the 2029 PM peak hour With Development situation (ie worst case scenario) could not reasonably be described as severe, which is the test set out in NPPF.

5.3 Limitations of PICADY Model

5.3.1 The LCC Consultation Response (dated 5 October 2018) refers to the **'courteous nature'** of drivers using SJ6. It is common on highway networks for junctions to operate in a different manner to the format of the junction. The layout of SJ6 gives motorists on Henthorn Road priority over users on Thorn Street (E) and Thorn Street (W). However, site observation suggests that Henthorn Road drivers regularly slow/stop to allow vehicles on the Thorn Street (E &W) arms to complete turning movements. This is at odds with the format of the junction. This type of operation is similar to some new residential schemes which include crossroad junctions that have no markings and, therefore, no user has priority over another user. This fosters an environment where a resident is cooperative (or courteous) with other residents and this leads to slower through speeds and a safer operation.

5.3.2 The PICADY modelling software used to test the performance of SJ6 does not include a 'courteous nature' setting. The PICADY program assumes that vehicles follow the format of the junction, ie vehicles on the minor arm give-way to vehicles on the major arm. The modelling of SJ6 confirms that the junction will operate in an acceptable manner if the proposed Phase 3 development is implemented but it is important to recognise that the model may produce overly-pessimistic results as it cannot take into account the courteous nature of drivers using the junction.

5.4 Dynamic Reassignment

5.4.1 It is also important to recognise that some of the vehicles that pass through SJ6 could use alternative routes. For example, traffic travelling northbound on Henthorn Road to Edisford Road could use:

(i) Garnett Road/Lancaster Drive,
(ii) Seedall Avenue, or
(iii) Faraday Avenue.

The same is true for the contrary movement.

A review of Figure TN3/1 shows that 17% (AM) and 19% (PM) of the total junction traffic travels north and south through SJ6 and could use an alternative route. If it transpires that SJ6 gets increasingly stressed in future years then some traffic may divert to use alternative routes. This would help the performance of the junction.

5.5 Improvement Scheme

5.5.1 Notwithstanding the results of the PICADY analysis, the limitations of the PICADY model and the potential for users to select alternative routes SJ6 may still experience stress in the coming years. Consequently, the applicant has investigated the potential to carry out modest improvements at SJ6 commensurate with the level of development impact.

5.5.2 There is a practical problem in delivering major change to SJ6 due to limited highway land being available and the proximity of third-party properties. The approach adopted is to identify a number of small scale works that could collectively offer improvement to the functioning of the junction.

5.5.3 Drg No 1677/12 shows an improvement scheme. The main features are:

(i) Undertake widening on the west side of Henthorn Road over a distance of about 25m. This would increase the clear carriageway width (ie excluding parked vehicles) to 5.5m. Although a modest increase, it would provide additional lateral clearance between north and southbound vehicles on Henthorn Road and help to promote free flow conditions.

(ii) Slightly realign the centreline marking on Henthorn Road to position a right turning vehicle (to Eshton Terrace) so as to make the northbound movement through the junction easier to negotiate,

(iii) Introduce 'Keep Clear' markings on the southbound side of Henthorn Road at Eshton Terrace. This helps to overcome a southbound vehicle on Henthorn Road blocking the Eshton Terrace exit,

(iv) Reinstate the red surface dressing at the junction which has been worn away. This helps to reinforce the existing 20mph speed limit on Henthorn Road and is complementary to fostering a 'courteous nature' at the junction, and

(v) Introduce tactile paving at the existing dropped kerb crossing locations on Eshton Terrace and Thorn Street (W).

G LCC Consultation Response 3 September 2021

Lancashire County Council

Development Control
Ribble Valley Borough Council

Phone: 0300 123 6780
Email: highways@lancashire.gov.uk

Your ref: 19.0999.OUT
Our ref: D3.19.0999
Date: 3rd September 2021

App no: **19.0999.OUT**

Address: **Land off Henthorn Road Clitheroe**

Proposal: **Outline planning application for the erection of up to 160 dwellings with public open space, landscaping and sustainable drainage system (SuDS) and vehicular access point from Henthorn Road. All matters reserved except for means of access.**

We have reviewed your latest submission (Technical Note 3 dated 24/06/2021) which has dealt with the matters including the trip rates, distribution and committed development which we raised originally.

An improvement scheme at the junction of Henthorn Road and Thorn Street is proposed and detailed in the Ashley Helme Associates drawing 'Proposed Junction Improvement Study Junction 6 – 1677/12-Rev A dated 27.08.21. This scheme will provide improvements to support the operation of the junction for vehicle/cycle movements and enhancements for pedestrian movements.

Further measures of mitigation are requested to enhance pedestrian routes to the local food shop and primary school to support/promote walking from the site to the local area. A scheme has been identified on Eddisford Road in the vicinity of the Spar Food Shop and the Primary School to provide a new zebra crossing.

We foresee that this scheme will support the walkability and sustainability of the site whilst enhancing highway safety for pedestrians on Edisford Road where the volume of traffic will increase as a result of the proposal.

The Ashley Helme Associates drawing 'Proposed access arrangements' 1677/01 Rev A dated August 2019 is acceptable. The points where the internal footway and emergency/cycle route emerge onto Henthorn Road will need to have the required visibility splays. This can be dealt with by a condition which will cover all the new junctions on Henthorn Road.

We would seek to secure these off-site highway works to be delivered under S278 agreement with LCC whereby the design and build would be undertaken by a contractor appointed by the applicant/developer.

Phil Durnell
Director of Highways and Transport
Lancashire County Council · PO Box 100 · County Hall · Preston · PR1 0LD

As per our original comments, LCC provide Travel Support to developers and a contribution of £6,000 (cost based upon the number of dwellings) is requested. The support includes:-

- Appraise initial Travel Plan(s) submitted to the Planning Authority and provide constructive feedback.
- Work closely with the Developer's appointed Travel Plan Coordinator, the end use where appropriate, local community groups
- Oversee the progression from the Interim Travel Plan to the Full Travel Plan/s in line with agreed timescales.
- Monitor and support the development, implementation and review of the Full Travel Plan. This will Include reviewing:
    - Annual surveys
    - Progression of initiatives / actions plan
    - Targets
- Where appropriate suggest further cost effective meaningful intervention to maintain/satisfy travel plan targets using local knowledge

A bus service contribution of £291,000 payable in instalments of £58,200 over a 5 year period commencing with the occupation of the 100th dwelling is requested to support the running of the bus service 2 Clitheroe – Low Moor Circular which is subsidised by Lancashire County Council.

Conclusion

To conclude we would raise no objection to the proposal subject to the measures of mitigation detailed above and the following conditions.

1. No development shall take place, including any works of demolition, until a construction method statement has been submitted to and approved in writing by the Local Planning Authority. The approved statement shall be adhered to throughout the construction period. It shall provide for:

i) The parking of vehicles of site operatives and visitors
ii) The loading and unloading of plant and materials
iii) The storage of plant and materials used in constructing the development
iv) The erection and maintenance of security hoarding
v) Wheel washing facilities
vi) Measures to control the emission of dust and dirt during construction
vii) A scheme for recycling/disposing of waste resulting from demolition and construction works
viii) Details of working hours
ix) Routing of delivery vehicles to/from site

2. The Ashley Helme Travel Plan 1677/2/A dated October 2019 shall be implemented in accordance with the timetable contained within.
3. A scheme for the site access and off-site highway works shall be submitted to and approved by the Local Planning Authority. The works shall include the following and be implemented prior to the first occupation of any dwelling.
    a. New zebra crossing on Edisford Road in the vicinity of St.Paul's Street

b. Improvement scheme Henthorn Road/Thorn Street Ashley Helme Associates drawing 'Proposed Junction Improvement Study Junction 6 – 1677/12-Rev A dated 27.08.21

4. Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 1995 there shall not at any time in connection with the development hereby permitted be erected or planted or allowed to remain upon the land hereinafter defined any building, wall, fence, hedge, tree, shrub or other device over 1m above road level. The visibility splay to be the subject of this condition shall be that land in front of a line drawn from a point 2.4 m measured along the centre line of the proposed road from the continuation of the nearer edge of the carriageway of Henthorn Road to points measured 42m to the north east of the proposed access and 46m to the south west along the nearer edge of the carriageway of Henthorn Road, from the centre line of the access including the footway/cycleway accesses , in accordance with a scheme to be agreed by the Local Planning Authority in conjunction with the Highway Authority. Reason: To ensure adequate visibility at the street junction or site access.

5. Within 3 months of commencement details of the proposed arrangements for future management and maintenance of the estate road within the development shall be submitted to and approved by the local planning authority. The streets shall thereafter be maintained in accordance with the approved management and maintenance details until such time as an agreement has been entered into with the Highway Authority or a private management and maintenance company has been established.

6. Within 3 months of commencement full engineering, drainage, street lighting and constructional details to adoptable standards (LCC specification) of the internal estate roads have been submitted to and approved in writing by the Local Planning Authority. The development shall, thereafter, be constructed in accordance with the approved details, unless otherwise agreed in writing with the Local Planning Authority.

7. The internal estate roads shall be constructed in accordance with the approved engineering details and to at least base course level prior to first occupation of any dwelling, unless otherwise agreed in writing with the Local Planning Authority.

8. Prior to the occupation of each dwelling the driveways and parking areas shall be constructed in a bound porous material and made available for use and maintained for that purpose for as long as the development is occupied.

9. Prior to first occupation each dwelling shall have a secure cycle store for at a ratio of 1 cycle space per bedroom.

10. Prior to the first occupation each dwelling shall have an electric vehicle charging point. Charge points must have a minimum power rating output of 7kW, be fitted with a universal socket that can charge all types of electric vehicle currently.

Notes

The grant of planning permission will require the applicant to enter into a S278 Agreement, with the County Council as Highway Authority. The applicant should be advised to contact Lancashire County Council for further information by emailing the Highway Development Control Section at developeras@lancashire.gov.uk .

Kelly Holt
Highway Development Control Engineer
Highways and Transport
Lancashire County Council
www.lancashire.gov.uk