ATKINS

Member of the SNC-Lavalin Group

Transport Proof of Evidence Application 21/01028/OUTMAJ

HMP Garth and HMP Wymott, Moss Lane, Ulnes Walton, Leyland

Ministry of Justice

August 2023

Stephen Yeates BSc (Hons) MSc CMILT

Transport Proof of Evidence – Volume 1

TOWN AND COUNTRY PLANNING ACT 1990
APPEAL BY THE MINISTRY OF JUSTICE
PROOF OF EVIDENCE ON BEHALF OF THE MINISTRY OF JUSTICE

Contents

Tables

Figures

1. Introduction

1.1. The Witness

1.1.1. My name is Stephen Yeates BSc (Hons), MSc, CMILT. I am a Chartered Member of the Institute of Logistics and Transport. I hold an Honours Degree in Geography and a Masters Degree in Transport Policy and Business Management. I am a Technical Director with Atkins Limited and I have over 20 years' experience in the field of transport planning.

1.1.2. Atkins Limited is an international design, engineering and project management consultancy working in a wide range of sectors including infrastructure, transportation, nuclear and power, oil and gas, engineering, and design.

1.1.3. The Ministry of Justice (MoJ) and His Majesty's Prison and Probation Service (HMPPS) appointed consultants to prepare the documents required for the submission of a Hybrid Planning Application seeking outline planning permission for a new prison (referred to as Garth Wymott 2 (GW2)). Mace Group, (on behalf of the MoJ) appointed Atkins to produce a Transport Assessment (TA) (Core Document A35) and an Outline Travel Plan (OTP) (Core Document A36).

1.1.4. As Project Director at Atkins Limited, I was responsible for the submission of the transportation documents which supported the Hybrid Planning Application (Application Reference: 21/01028/OUTMAJ).

1.1.5. I have prepared my Proof of Evidence (PoE) for this appeal. I confirm that the opinions expressed are my true and professional opinions.

1.1.6. I appear at this Inquiry on behalf of the MoJ to give evidence on transport planning matters.

1.2. Background

1.2.1. This appeal concerns the decision by Chorley Council (CC) to refuse planning permission for a new prison (up to 74,531.71 sqm GEA) (Class C2A) within a secure perimeter fence following the demolition of existing buildings and structures and together with associated engineering works; a replacement boiler house (with all matters reserved except for access); and a replacement bowling green and club house (Class F2(c)) on land adjacent to HMP Garth and HMP Wymott, Leyland.

1.2.2. Following the appeal against the decision, a public inquiry was held in July 2022, and I appeared at that Inquiry providing transport planning evidence on behalf of the Appellant.

1.2.3. The Inspector's Report (IR) to the Secretary of State (SoS), dated 20 October 2022, recommended that the appeal be dismissed.

1.2.4. Following consideration of the IR, a 'minded to grant' decision was made by Lee Rowley MP, the Parliamentary Under Secretary of State for Local Government and Building Safety, on behalf of the SoS for the Department of Levelling-Up Housing and Communities. The decision was set out in a letter dated 19 January 2023 (Core Document L1).

1.2.5. At Paragraph 4 of the letter, the SoS decided to give the Appellant and other parties the opportunity to provide further evidence on highways issues.

1.2.6. The following table provides a summary of the additional highways evidence which has been submitted since the publication of the SoS letter.

Table 1-1 - Additional highways evidence submitted (since 19 January 2023)

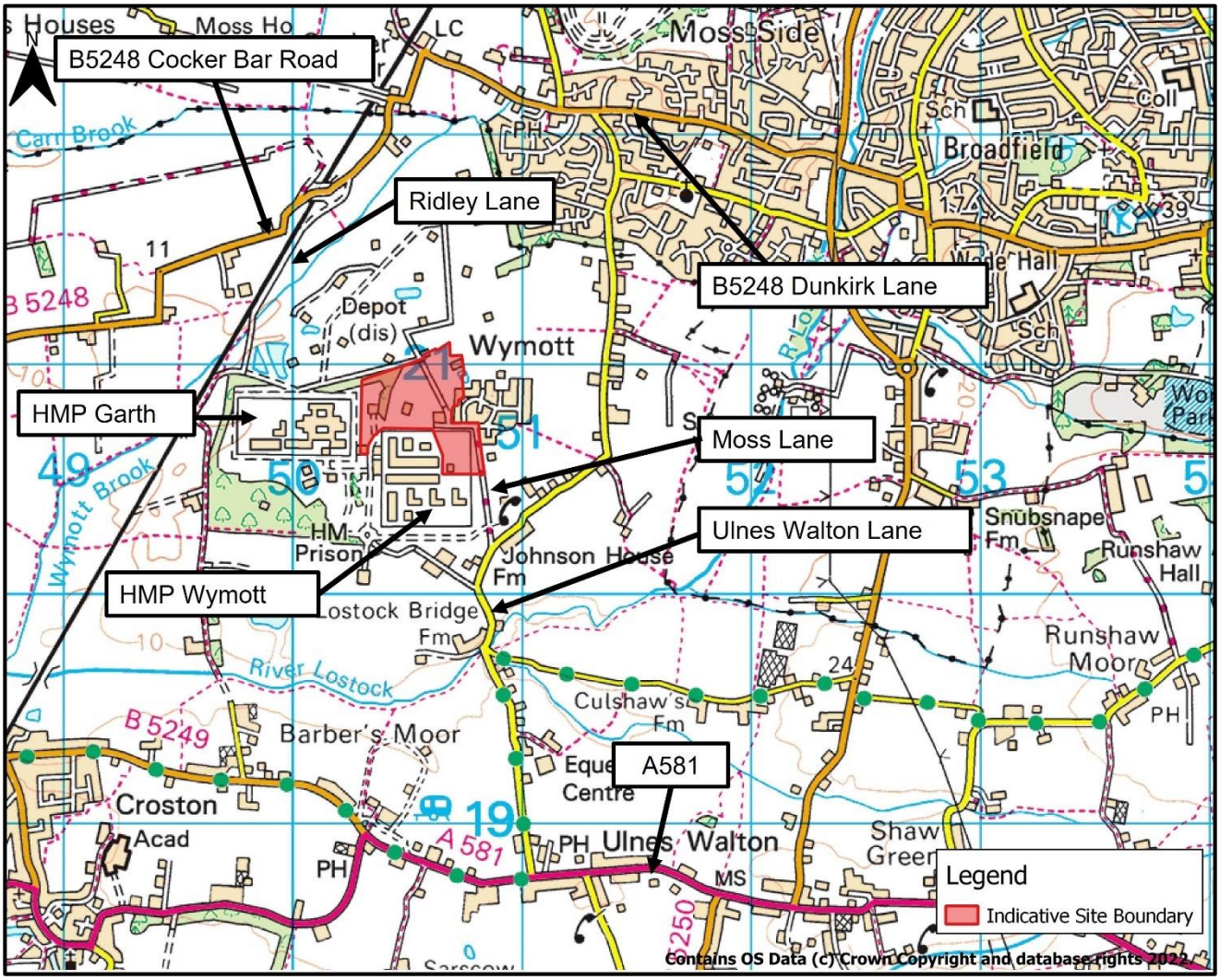
Document	Originator	On Behalf Of	Core Document Ref
Additional Highways Evidence, March 2023	Atkins	Ministry of Justice	M3
Additional Highways Evidence, March 2023 (Appendices)	Atkins	Ministry of Justice	M3a
Technical Note: Review of Atkins Additional Evidence on behalf of Chorley Council, March 2023	WSP	Chorley Council	N2
230302 R6 PoE Highway Safety (10)	Emma Curtis	Ulnes Walton Action Group (UWAG)	O2
Letter dated 17 March 2023 providing initial observations	Atkins	Ministry of Justice	M4

1.2.7. Following the submission of the additional highways evidence, it was confirmed by the Planning Casework Unit that the Inquiry would be reopened on 19 September 2023.

1.3. Site context

1.3.1. The development site is in a rural location in Lancashire to the southwest of the town of Leyland. GW2 is proposed to be located on land to the north of HMP Wymott. HMP Wymott is a Category C men's prison with a capacity of approximately 1,000 inmates. HMP Garth is located adjacent to HMP Wymott. HMP Garth is a Category B men's prison with a capacity of approximately 800 inmates. The site location is shown on Figure 1-1 (overleaf).

Figure 1-1 - Site location plan



1.3.2. HMP Garth and HMP Wymott are accessed via Moss Lane, a single carriageway road subject to a 30mph speed limit. Moss Lane also provides access to Wymott, a small residential area to the north of HMP Garth and HMP Wymott. It is proposed to access GW2 from Moss Lane.

1.3.3. Moss Lane is accessed from the south via Ulnes Walton Lane. The junction between Moss Lane and Ulnes Walton Lane is a priority-controlled T-junction, with vehicles on Moss Lane giving way to vehicles on Ulnes Walton lane.

1.3.4. Ulnes Walton Lane is a single carriageway road subject to a 40mph speed limit (within the vicinity of the junction with Moss Lane) which provides access between the B5248 Dunkirk Lane to the north and the A581 to the south. As Ulnes Walton Lane enters the urban area of Leyland (to the north) the speed limit is reduced to 30mph.

1.3.5. The B5248 Dunkirk Lane is a single carriageway road subject to a 30mph speed limit. It is the main route between Leyland to the east and Bretherton to the west.

1.3.6. The A581 is located 1.9km south of HMP Garth and HMP Wymott. The A581 is a single carriageway road which provides access to Croston and the A59 to the west, and the A49 near Chorley to the east. The A581 has lighting provision on both sides of the carriageway and a footway on the southern side of the carriageway between 'The Highfield' restaurant in the west and the A581/Leyland Lane junction in the east. The A581 is subject to a speed limit of 30mph (within the vicinity of Ulnes Walton) and is accessed from Ulnes Walton Lane via a priority-controlled junction.

1.4. Report structure

1.4.1. Volume 1 of my PoE uses the following structure:

a. Chapter 2 provides a summary of the additional highways evidence submitted to date;
b. Chapter 3 outlines the outstanding matters in issue;
c. Chapter 4 details the relevant policies and guidance;
d. Chapter 5 provides a summary of the updated transport data and information;
e. Chapter 6 addresses the feedback from the IR and SoS in relation to Moss Lane;
f. Chapter 7 addresses the feedback from the IR and SoS in relation to Ulnes Walton Lane;
g. Chapter 8 addresses the feedback from the IR and SoS in relation to the A581/Ulnes Walton Lane Junction;
h. Chapter 9 addresses the feedback from the IR and SoS in relation to the Construction Phase;
i. Chapter 10 provides evidence in relation to any other outstanding matters raised by CC and UWAG; and
j. Chapter 11 provides a summary and conclusion.

1.4.2. Volume 2 of my PoE includes the following appendices:

Appendix A – Policy, Standards and Guidance

A.1 Manual for Streets 2

A.2 Mini Roundabouts Good Practice Guidance

A.3 CD 116 Geometric Design of Roundabouts

A.4 GG 101 Introduction to the DMRB

A.5 Warwickshire County Council Departures from Standards

A.6 GG 119 Road Safety Audit

A.7 CD 123 Geometric Design of Priority Junctions

A.8 TRL Report – Traffic Calming in Villages on Major Roads

2. Assessment to date

2.1. Highways issues

2.1.1. Following a review of the Inspector's conclusions, Lee Rowley MP, the Parliamentary Under SoS for Local Government and Building Safety, invited the Appellant (and other parties) to provide further evidence on the following highways issues (Paragraph 4 in Core Document L1):

a. Ulnes Walton Lane Carriageway Markings and Traffic Calming

- Within the decision letter, the Inspector notes that the Appellant has made reference to reviewing/amending the existing carriageway markings at the Moss Lane/Ulnes Walton Lane junction, and additional measures are proposed. However, there are no drawings or agreements with Lancashire County Council (LCC) as the Local Highway Authority on specific details (IR 13.24 in Core Document L1).

b. Footway between Ulnes Walton Lane and Moss Lane

- Within the decision letter that the Secretary of State agrees with the Inspector, who concludes that without a new footway (between Ulnes Walton Lane and Moss Lane) people would continue to walk in the road or along the verge to access the northbound bus stop. According to the Inspector, this would result in an increased risk of vehicle of pedestrian conflict (IR 13.24 in Core Document L1).

c. Moss Lane Traffic Calming

- Within the decision letter, the Secretary of State agrees with the Inspector who notes that vehicles would still be tempted to speed along the southern section of Moss Lane despite the traffic calming measures proposed (IR 13.27 in Core Document L1).

d. A581/Ulnes Walton Lane Mitigation

- The Secretary of State agrees with the Inspector, that it has not been demonstrated that the proposed works would resolve capacity issues at the A581/Ulnes Walton Lane junction, or that the financial contribution would be sufficient (IR 13.29 in Core Document L1).

e. Construction Phase Impacts

- The Secretary of State agrees with the Inspector who states that the Appellant has not modelled or assessed the forecast construction traffic, neither have they demonstrated that the highway effects of the construction phase can be adequately mitigated (IR 13.33 in Core Document L1).

2.2. Additional highways evidence (provided by the Appellant)

2.2.1. The additional highways evidence submitted by the Appellant (see Table 1-1) provides a comprehensive response to the 'minded to grant' decision made by the SoS. In addition, the Appellant has continued to engage with LCC as the Local Highway Authority, and LCC has confirmed that they continue to have no objection to the proposed development following a review of the additional evidence prepared in response to the SoS.

3. Matters in issue

3.1. Scope of my proof

3.1.1. Following the submission of the additional highways evidence, it was confirmed that the Inquiry would be reopened on 19 September 2023.

3.1.2. Therefore, the Appellant has sought to agree a Statement of Common Ground (SoCG) to set out the matters agreed, and the matters in issue between the Appellant and the other interested parties.

3.1.3. A SoCG has been produced for matters between the Appellant and CC (Core Document P2). A separate SoCG has been produced for matters between the Appellant and UWAG as the areas of agreement differ (Core Document P1).

3.1.4. The matters in issue between the Appellant and CC are outlined below.

a. Ulnes Walton Lane Carriageway Markings and Traffic Calming
b. Moss Lane Traffic Calming
c. Footway between Ulnes Walton Lane and Moss Lane
d. A581/Ulnes Walton Lane Mitigation
e. Construction Phase Assessment

3.1.5. The matters in issue between the Appellant and UWAG are outlined below.

a. Traffic Surveys and Committed Development
b. Trip Generation
c. PIA Data
d. Impact on Vulnerable Road Users
e. Ulnes Walton Lane Carriageway Markings and Traffic Calming
f. Moss Lane Traffic Calming
g. Footway between Ulnes Walton Lane and Moss Lane
h. A581/Ulnes Walton Lane Mitigation
i. Construction Phase Assessment

3.1.6. The scope of my Proof is to provide further evidence to address the concerns raised by the Inspector and the SoS (see Chapters 6-9). In addition, I will provide further evidence in relation to each of the outstanding 'matters in issue' between the Appellant and the other parties as discussed during the case management conference. I will use this evidence to respond to the specific points raised by CC in the WSP Technical Note (Core Document N2) and UWAG in the Highway Safety PoE (Core Document O2).

4. Relevant policy and guidance

4.1. Introduction

4.1.1. The following chapter of this PoE outlines the policies and design guidance relevant to the Inquiry. Where a specific policy and guidance document has been referenced, I have provided a copy of the relevant extract in Appendix A (p.3) of this PoE.

4.2. Key policies

National Planning Policy Framework

4.2.1. The NPPF (Core Document H1) sets out the Government's planning policies for England and how these are expected to be applied. The purpose of the planning system is to contribute to the achievement of sustainable development in three mutually dependent dimensions: economic, social and environmental. It is recognised that transport policies have an important role to play in facilitating sustainable development.

4.2.2. The following parts of the NPPF are material to my evidence:

a. paragraph 110, a), b) c) and d);

b. paragraph 111; and

c. Annex 2: Glossary.

4.2.3. Paragraph 110 within the NPPF states:

> *"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*
>
> *a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
>
> *b) safe and suitable access to the site can be achieved for all users;*
>
> *c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; 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."*

4.2.4. Paragraph 111 within the NPPF states:

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

4.2.5. It should be noted that sustainable transport is a defined term within the NPPF (refer to Annex 2 within the NPPF 2021). The NPPF defines sustainable transport 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."*

Chorley Local Plan

4.2.6. The Chorley Local Plan 2012-2026 (Core Document I1) forms part of the statutory Development Plan for Chorley. The role of the Plan is:

a. To identify the scale of development in each settlement and allocate sites to meet the development needs of Chorley over a 15-year period in order to achieve the vision for growth as outlined in the Central Lancashire Core Strategy; and

b. To identify key local issues and provide a set of policies to manage change which will be used by decision makers to determine planning applications. These are known as Development Management (DM) Policies.

4.2.7. The following parts of the Chorley Local Plan are material to my evidence:

a. Policy ST1: New development and highway and traffic management schemes will not be permitted unless they include appropriate facilities for pedestrians, cycle parking facilities, and/or cycle routes.

b. Paragraph 4.8: Chorley Council has identified a number of local bus schemes for consideration, which would be prioritised and then implemented using a phased approach including improvements to the bus service to Garth and Wymott Prison, Ulnes Walton.

c. Policy BNE1: The residual cumulative highways impact of the development is not severe, and it would not prejudice highway safety, pedestrian safety, the free flow of traffic, and would not reduce the number of on-site parking spaces to below the standards stated in Site Allocations Policy – Parking Standards.

4.3. Design guidance hierarchy

4.3.1. Manual for Streets 2: Wider Application of the Principles (MfS2) forms a companion guide to Manual for Streets (MfS1). MfS2, which was published by the Chartered Institution of Highways & Transportation (September 2010), builds on the guidance contained in MfS1, exploring in greater detail how and where its key principles can be applied to busier streets and non-trunk roads, thus helping to fill the perceived gap in design guidance between MfS1 and the Design Manual for Roads and Bridges (DMRB). Crucially, MfS2 advises that:

> *"DMRB is the design standard for Trunk Roads and Motorways in England, Scotland, Wales and Northern Ireland. The strict application of DMRB to non-trunk routes is rarely appropriate for highway design in built up areas, regardless of traffic volume"*[1]

4.3.2. MfS2 further expands on this:

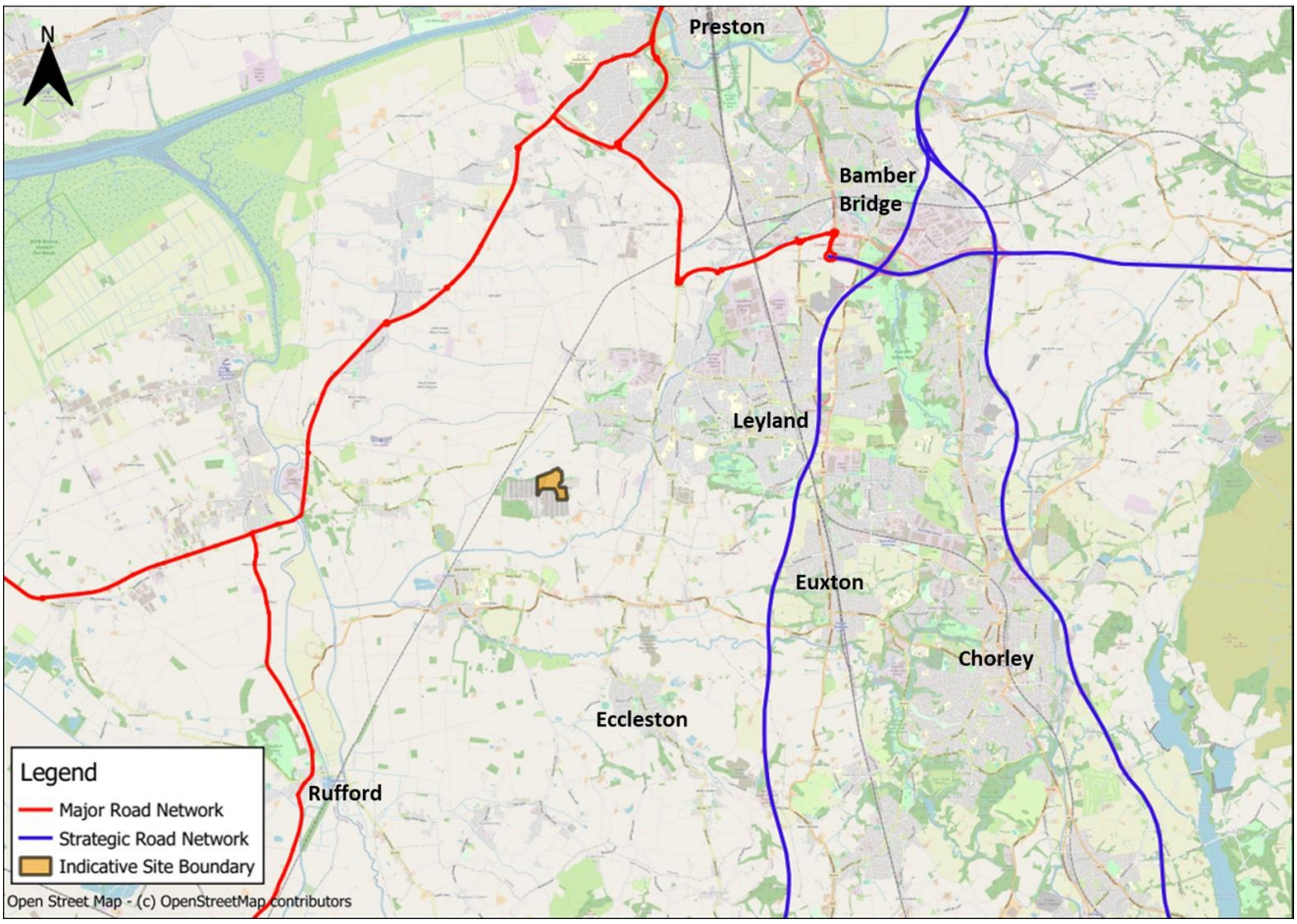
> *"… most MfS advice can be applied to a highway regardless of speed limit. It is therefore recommended that as a starting point for any scheme affecting non-trunk roads, designers should start with MfS.*
>
> *Where designers do refer to DMRB for detailed technical guidance on specific aspects, for example on strategic inter-urban non-trunk roads, it is recommended that they bear in mind the key principles of MfS and apply DMRB in a way that respects the local context. It is further recommended that DMRB is only used where the guidance contained in MfS is not sufficient or where particular evidence leads a designer to conclude that MfS is not applicable."*[2]

4.3.3. Figure 4-1 identifies which of the roads surrounding GW2 from part of the Strategic Road Network (SRN) and the Major Road Network (MRN). The MRN is defined as the country's busiest and most economically important local authority 'A' roads, sitting between the national SRN and the rest of the local road network[3]. It is important to note that roads which form part of the SRN are often referred to as trunk roads[4].

4.3.4. Moss Lane, Ulnes Walton Lane and the A581 do not form part of the SRN or MRN and are therefore not trunk roads, and instead form part of the Local Road Network. Following the guidance from the Chartered Institute of Highways and Transportation (CIHT) and the Department for Transport (DfT), MfS2 should be the starting point for any highway designs within the vicinity of the site.

[1] MfS2, Status and Application, (Appendix A.1, p.12)
[2] MfS2, Principles, Page 008 (Appendix A.1, p.16)
[3] https://maps.dft.gov.uk/major-road-network/index.html
[4] https://www.gov.uk/government/publications/guidance-on-road-classification-and-the-primary-route-network/guidance-on-road-classification-and-the-primary-route-network#chapter3

Figure 4-1 - Highway network within the vicinity of GW2



4.4. Mini roundabout design guidance

4.4.1. The preliminary highways design for the A581/Ulnes Walton Lane junction (see DWG: GARTH_ATK_HGN_A581_DR_D_0005_P3 in Core Document M3a and Appendix G (p.370) of this PoE) proposes to introduce a mini roundabout to mitigate the impact of the development proposals and support the wider corridor scheme along the A581 (see Paragraph 5.2.2 in Core Document M3). I have provided further commentary on the mini roundabout design guidance below.

4.4.2. As I have established in Section 4.3 of this PoE, the guidance in MfS2 should be the starting point for any designs on the immediate highway network surrounding GW2. MfS2 (Section 9.7, Appendix A.1, p.30) starts with the following paragraph:

> *"Mini roundabouts are essentially the application of a road marking (TSRGD diag 1003.4) which defines a give-way to the right rule, circulating the marked central island. Detailed guidance is given in TD 54/07 but (as with all sections of DMRB) this is written specifically for trunk roads and, where used in other situations, should not be applied uncritically."*[5]

[5] MfS2, Paragraph 9.7.1 (Appendix A.1, p.30)

4.4.3. In addition, MfS2 states that:

> *"Further detailed guidance on the design of mini roundabouts is given in the DfT and County Surveyors' Society (now ADEPT) publication 'Mini roundabouts good practice guidance."*[6]

4.4.4. Whilst MfS2 provides the starting point for design guidance, within section 9.7 it signposts the three key guidance documents listed below. However, MfS2 (9.7.1) reminds the reader that the DMRB guidance "*is written specifically for trunk roads and, where used in other situations, should not be applied uncritically".*

a. Mini roundabouts good practice guidance (Appendix A.2, p.45)
b. TD 54/07, which has since been replaced by CD 116, Geometric design of roundabouts (part of DMRB) (Appendix A.3, p.99)
c. The Traffic Signs Regulations and General Directions (TSRGD)

4.4.5. In addition, the Traffic Signs Manual, Chapter 5 offers advice to highway authorities on the use of traffic signs and road markings, and Section 6.3 includes mini roundabouts.

Mini roundabouts: good practice guidance

4.4.6. This document was produced to provide guidance on the **use** of mini roundabouts, and establishes best practice based on case studies. This document references the DMRB and TSRGD, as the locations for detailed design guidance, and re-emphasises that the detailed guidance on mini roundabouts is mandatory for trunk roads but advisory for applications on local roads, see below.

> *"Guidance on the design of roundabouts is provided in TD 16/93 [now CD116]. This is to be supplemented with a new TD providing detailed guidance on mini roundabouts [now CD116], which is mandatory for trunk roads but advisory for applications on local roads. The design guidance contained in the standard would be applicable to all roads but the guidance on siting and use may differ on local roads, which are different in character to trunk roads." (Paragraph 1.4, Appendix A.2, p.51)*

4.4.7. The guidance states that mini roundabouts were developed as a method to improve junction safety, particularly at locations with long straight sections of road, and locations with side road delay. They are also often employed as part of wider traffic calming schemes, and at locations with constrained highway space.[7]

CD 116, Geometric design of roundabouts

4.4.8. CD116 provides guidance on the geometric design of all roundabouts. Section 5 focuses on mini roundabouts (Appendix A.3, p.125). The document includes guidance on layout, overrun areas, road markings and visibility. The document should be read in conjunction with GG101 which provides an introduction and background on DMRB.

[6] MfS2, Paragraph 9.7.3 (Appendix A.1, p.30)
[7] Mini roundabouts: good Practice guidance, Page 5 (Appendix A.2, p.54)

4.4.9. It should be noted that since the publication of the WSP Technical Note (Core Document N2) was issued DMRB CD 116 (Version 2) has been withdrawn and updated with Version 2.1.0 in May 2023.

The Traffic Signs Regulations and General Directions (TSRGD) 2016

4.4.10. The TSRGD is a statutory instrument that sets out the design and conditions of use of official traffic signs that can be lawfully placed on or near roads in Great Britain. A full check of TSRGD compliance is typically applied during detailed design stages.

4.4.11. The Traffic Signs Manual, Chapter 5 then provides advice regarding the application of the different road markings and traffic signs.

4.5. Design Departures

4.5.1. In Section 8.7 of this PoE I make reference to the requirement for a design departure. Design departures are defined as a variation or waiving of a requirement in DMRB[8].

4.5.2. As set out in MfS2, the strict application of DMRB to non-trunk road routes is rarely appropriate. DMRB itself states (at Paragraph 2.1.1 in GG 101 (Appendix A.4, p.150)):

> *"…where the works are to be carried out on roads that are not part of the trunk road network and the use of the DMRB could result in significant over-specification, alternative documents such as the Manual for Streets or Designing Streets 2010] may be used with the approval of the Overseeing Organisation."*

4.5.3. Because of this, strictly speaking the standards in DMRB are not 'requirements' for non-trunk roads meaning that there is no mandatory need to vary or waive a DMRB standard to adopt a design that differs from DMRB. Furthermore, MfS2 does not include any reference to a departure process. My opinion is that this is because MfS2 is promoting a less prescriptive, or more flexible, design approach. Notwithstanding this, for convenience the terminology and process relating to 'design departures' is referenced here. The part of DMRB relating to the departure process is at Section 2 of GG 101 (Appendix A.4, p150).

4.5.4. In considering the role of design departures, the Warwickshire Design Guide (Annex 2.3, Appendix A.5, p.154) provides a good explanation, (whilst accepting that it relates to a different Local Highway Authority to that which GW2 is located in). It states that design departures:

> *"…are often necessary to deliver lean designs that lead to potential cost savings or other forms of "added value", or to resolve issues where there are physical constraints such as available highway land. Departures from standard can enable designs to fit the overarching project objectives, and to take advantage of new innovative techniques.[9]"*

[8] GG 101 Introduction to the Design Manual for Roads and Bridges, Page 7 (Appendix A.4, p.147)
[9] Annex 2.3 (Appendix A.5., p.154)

4.5.5. Once planning permission is granted, the detailed design for highway mitigation works (Section 278) can commence. LCC have confirmed that the Section 278 application would include:

a. Full construction details, including layout and levels.

b. A copy of the planning permission decision notice.

c. Copy of the planning application's approved site location plan with the red line boundary.

4.5.6. I have appended an email from LCC which provides further detail on the information required and the formal process for starting a Section 278 application (see Appendix B, p.221).

4.5.7. At the detailed design stage, the designer of a scheme will engage LCC, as highway authority, to identify what design information is required for a particular scheme. I would anticipate that the design for this scheme would include a report or technical note outlining which design guidance has been considered, and the areas where the design departs from guidance noting as set out above that DMRB does not strictly apply to these types of roads. Importantly, that report would include the evidence that the departures from guidance were identified at the planning stage, reviewed by the Local Highway Authority and that LCC continued to have no objection to the planning application.

Local evidence on design departures

4.5.8. To provide some local context on design departures, I have identified 10 mini roundabouts across Lancashire with the following key features:

a. Is a mini roundabout

b. Has private accesses located off the circulatory carriageway

4.5.9. As part of the research the following data was gathered:

a. Traffic flow data in the form of automatic traffic counts (ATCs), including volume and speed data. These were located 70m back from the existing give way lines on each approach arm, at each of the junctions identified.

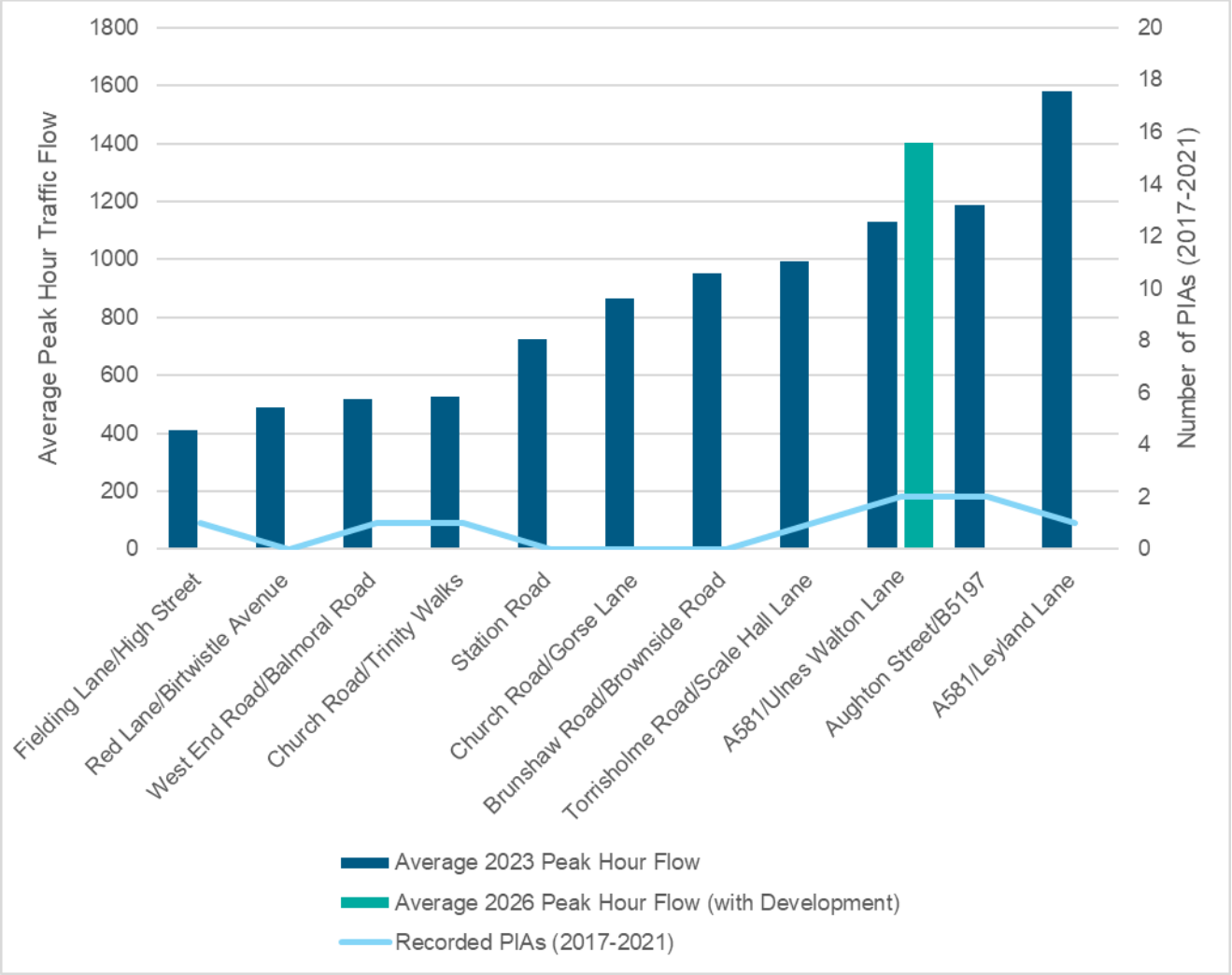
b. Personal Injury Accident data (for the most recent five-year period available).

c. OS Mapping.

4.5.10. I have used the information to calculate the peak hour flows and the 85th percentile speeds to determine the visibility requirements on each approach arm in line with Paragraph 5.20 in CD 116 (Geometric design of roundabouts). I have then compared this to the achievable visibility on each approach arm based on the existing highway layout. The full details are provided in Appendix C (p.224) of this PoE.

4.5.11. Figure 4-2 presents a comparison of the average peak hour traffic flow at each junction and the observed number of PIAs (2017-2021).

Figure 4-2 – Comparison of average peak hour flow and number of PIAs (2017-2021)



4.5.12. Each of the mini roundabouts identified has substandard visibility on at least one of the approach arms. However, the PIA analysis undertaken indicates that none of the junctions have existing highway safety issues as none of the junctions experienced more than 2 PIAs within the latest 5-year analysis period available (2017-2021). All of the PIAs recorded were classified as 'slight' with the exception of the A581/Ulnes Walton Lane junction which has one 'serious' PIA.

4.5.13. This evidence demonstrates that the existing mini roundabouts on the surrounding highway network have a low level of recorded personal injury accidents. To provide some context, the fourth most dangerous accident hotspot in Lancashire experienced five accidents in one year[10]. The evidence also demonstrates that there is not a direct correlation between a design departure and a poor highway safety record.

[10] https://www.lancs.live/news/lancashire-news/blackburns-most-dangerous-junction-most-17777391

Appeal history regarding departures

4.5.14. I draw the Inspector's attention to Appeal APP/P1805/W/20/3245111, specifically Paragraph 30 in the Appeal Decision (included as Appendix D.1, p.255) which considers a proposed roundabout junction. The proposed roundabout junction would not conform to modern design standards, but the Inspector concluded that most of the changes would not worsen highway safety or hinder traffic movements. It is acknowledged that the departure referenced in this case does not relate to visibility, but it does demonstrate that a shortfall against design guidance does not necessarily trigger an unacceptable safety impact.

4.5.15. I also draw the Inspector's attention to Appeal APP/X2410/A/12/2173673 (Appendix D.2, p.280) which considers the impact of a proposed development on a junction where the visibility did not conform to design standard guidance.

4.5.16. The Inspector made the following conclusions (IR237):

> *"This perceived deficiency must, in my view, be considered in the light of a number of factors, including the, albeit cautious, conclusion in MfS2 that there is no invariable relationship between visibility and collision risk. A second contextual factor is the reality that numerous junctions in urban areas are below current standards but are not normally reconfigured unless there is evidence of safety problems arising on a regular basis as a consequence. Otherwise, they are left alone to carry volumes of traffic far in excess of those that originally typified the streets, on the basis that drivers exercise the necessary degree of caution as circumstances demand. The proposition was advanced that, if absolute standards were to be routinely applied to junctions in the network at a distance from individual application sites, this would unnecessarily inhibit the development of urban areas […].*

4.5.17. The Inspector goes on to conclude that (IR250):

> *"For all the above reasons, while I understand the perception of the Council and the Parish Council that the imperfection of the Grove Lane junction with regard to its geometry and visibility to the left would be a cause for concern albeit not one ultimately shared by the highway authority, if the proposed development were to go ahead, I consider that the balance of evidence points conclusively to the judgement that highway safety would not be materially compromised by it. I therefore accord only limited weight to that perception and accordingly, I am unable to conclude that the effect of the proposed development would have an unacceptable impact in those terms".*

4.5.18. The SoS agreed with the Inspector, stating that:

> *"The Secretary of State notes that the Highway Authority has not objected to the appeal proposals but that the junction of Grove Lane with Sileby Road/South Street does not provide the visibility to the left that, ideally, it should. Having carefully considered the evidence summarised by the Inspector at IR235-243, the Secretary of State agrees with him that it is appropriate to consider the matter of the safety of the Grove Lane junction in the round. He therefore agrees with the Inspector that, despite its perceived deficiency in respect of visibility to*

the left, the junction operates safely and should not trigger prevention of the proposed scheme unless the impact of the proposed development on its continued safe operation would be demonstrably severe in the sense intended by paragraph 32 of the Framework."

4.5.19. This decision is of course based on a different factual situation. However, it demonstrates that as a matter of principle, the inability of a junction to conform with visibility standards does not automatically trigger an unacceptable safety impact. Each case must be considered on its merits and with the benefit of professional judgement.

4.6. Road Safety Audits (RSAs)

4.6.1. In Section 8.7 of this PoE I make reference to the RSAs provided in Core Document M3a. The following paragraphs provide a summary of their role and application.

4.6.2. The DMRB guidance for RSAs is contained in GG 119 - Road safety audit (see Appendix A.6, p.165).

4.6.3. The objective of an RSA is to identify aspects of engineering interventions that could give rise to road safety problems and to suggest modifications that could improve road safety. It is important to note that road safety audit is not intended to be a technical check of compliance with design requirements.

4.6.4. The RSA team is independent of the designers, and will make recommendations to the Overseeing Organisation, and these should be proportionate and viable suggestions for improvement to eliminate or mitigate an identified road safety audit problem.

4.6.5. There are four stages of an RSA:

a. Stage 1: Preliminary Design
b. Stage 2: Detailed Design
c. Stage 3: Construction Phase
d. Stage 4: Post Opening

4.6.6. The RSAs referenced within this PoE and provided in Core Document M3a are at Stage 1.

4.6.7. GG119 states that once the RSA has taken place a Response Report (or Designers Response) will be prepared where the design organisation shall, for each RSA problem and recommendation, complete one of the following:

a. Accept the RSA problem and recommendation made by the RSA team;
b. Accept the RSA problem raised, but suggest an alternative solution, giving appropriate reasoning; or
c. Disagree with the RSA problem and recommendation raised, giving appropriate reasoning for rejecting both.

4.6.8. In this regard, the DMRB guidance specifies that it is acceptable for the design organisation to reject the RSA findings, but the Overseeing Organisation (LCC as the Highway Authority) will need to agree with the reasoning. The Response Report will include feedback from the Overseeing Organisation. The RSA team does not get involved in the preparation of the Response Report and will not accept/reject any design changes which may / may not result from the recommendations made.

4.6.9. I have provided a Response Report to each of the RSAs undertaken in relation to the A581/Ulnes Walton Lane junction in Appendix E (p.41) and Appendix F (p.56) of Core Document M3a. The RSAs have been issued to LCC as the Highway Authority, for their review. This review did not change their position of 'no objection' to the hybrid planning application.

5. Updated transport data and information

5.1. Introduction

5.1.1. The following chapter provides a summary of the updated transport data and information which has been collected (by the Appellant) to support the reopened Inquiry.

5.2. A581/Ulnes Walton Lane speed survey

5.2.1. In February 2023, I commissioned Automatic Traffic Counts (ATC) at the A581/Ulnes Walton Lane junction to capture vehicle flows and speeds 70m back from the proposed give way lines on each approach arm. A summary of the 85th percentile speeds recorded by the ATC is provided in Table 5-1.

Table 5-1 – Speed survey results (A581/ Ulnes Walton Lane)

Approach Arm	A581 (East)	Ulnes Walton Lane	A581 (West)
85TH Percentile Speed (7 Day Average)	33.3 mph	26.3 mph	33.4 mph

5.2.2. The ATC also recorded total vehicle flows at the A581/Ulnes Walton Lane junction. Figure 5-1 presents a comparison between the 2021 AM Peak traffic flows used in the TA (factored for COVID-19) and the 2023 AM Peak observed traffic flows. Figure 5-2 presents a comparison between the 2021 PM Peak traffic flows used in the TA (factored for COVID-19) and the 2023 PM Peak observed traffic flows.

5.2.3. The analysis demonstrates that the traffic flows used to inform the assessment within the TA are higher than the observed 2023 flows.

Figure 5-1 - A581/Ulnes Walton Lane junction (total traffic) AM Peak (07:00-08:00)

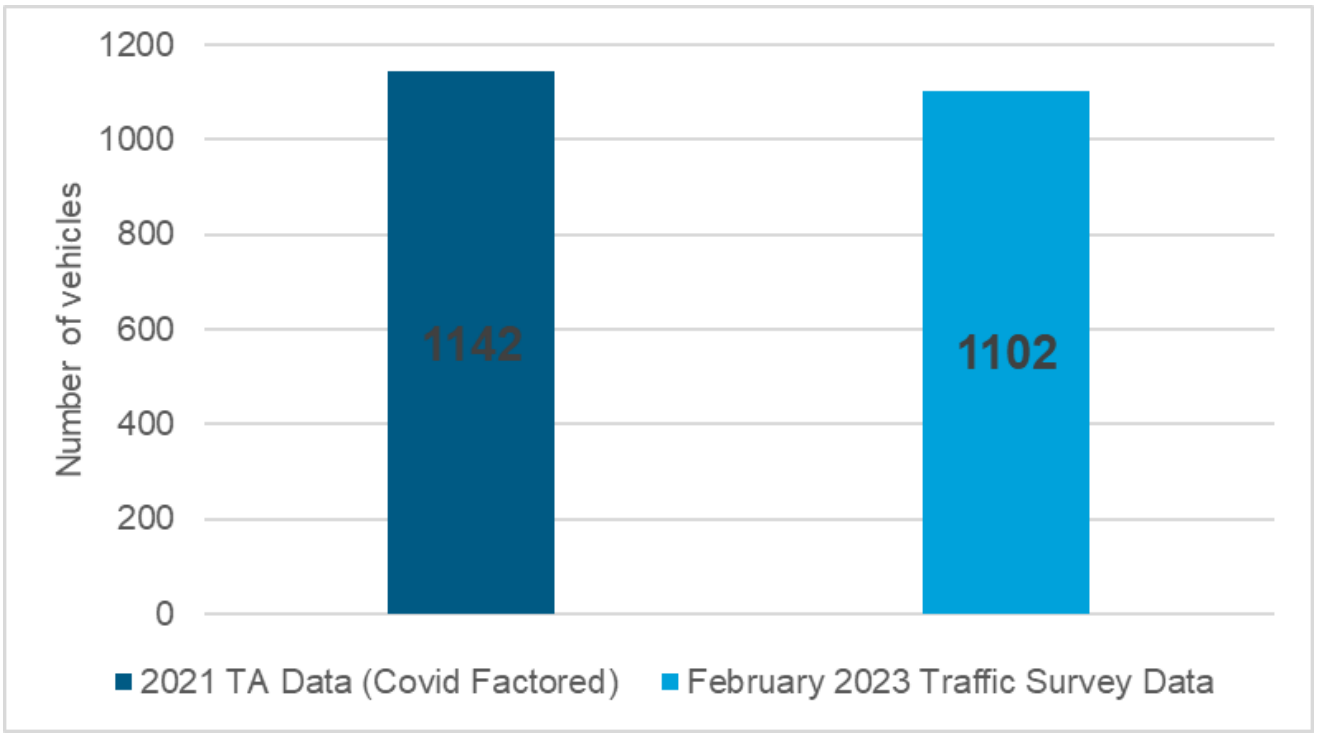
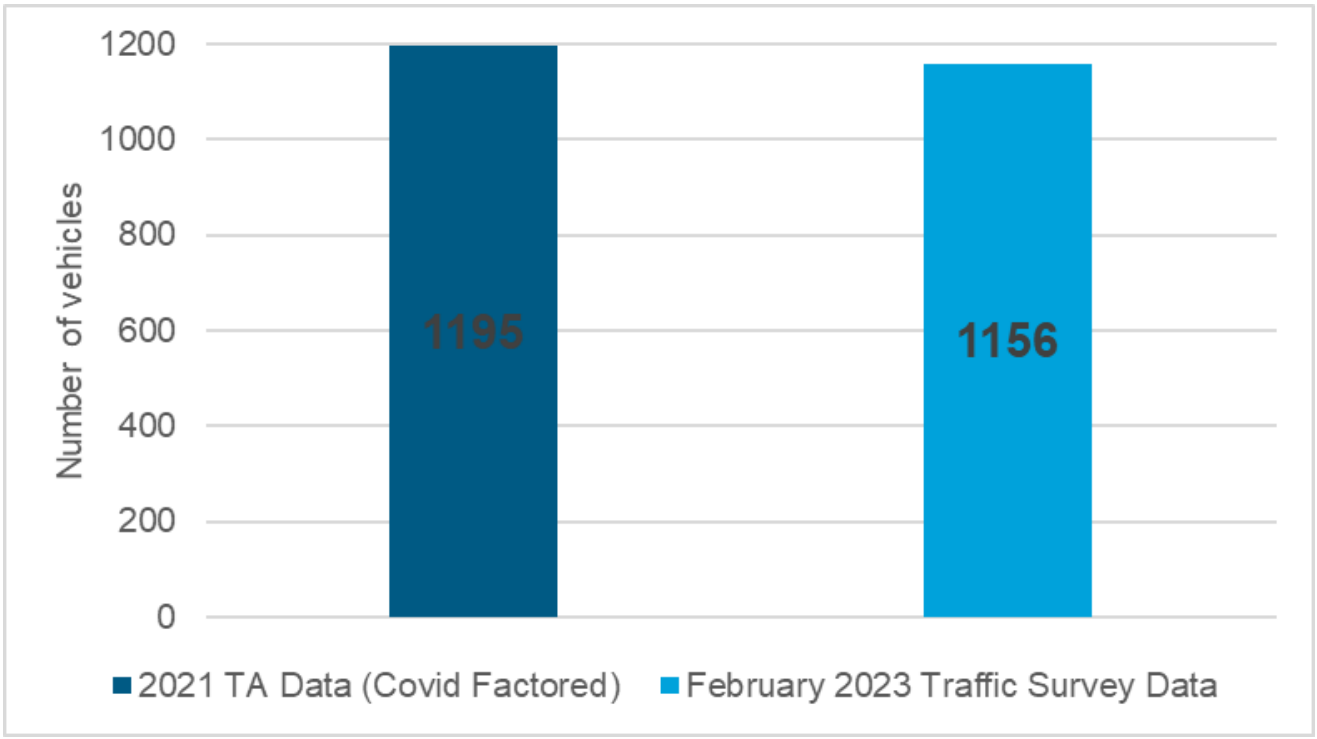


Figure 5-2 - A581/Ulnes Walton Lane junction (total traffic) PM Peak (17:00-18:00)



5.2.4. The 85th percentile speeds have been used to inform the evidence contained within Section 8.8 of this PoE. The traffic flows at the A581/Ulnes Walton Lane junction have been used to inform the evidence contained within Section 10.2 of this PoE.

5.3. Traffic flow forecasts

5.3.1. The TA (Core Document A35) assessed the off-site impact of GW2 using the following traffic scenarios:

a. 2021 Baseline:

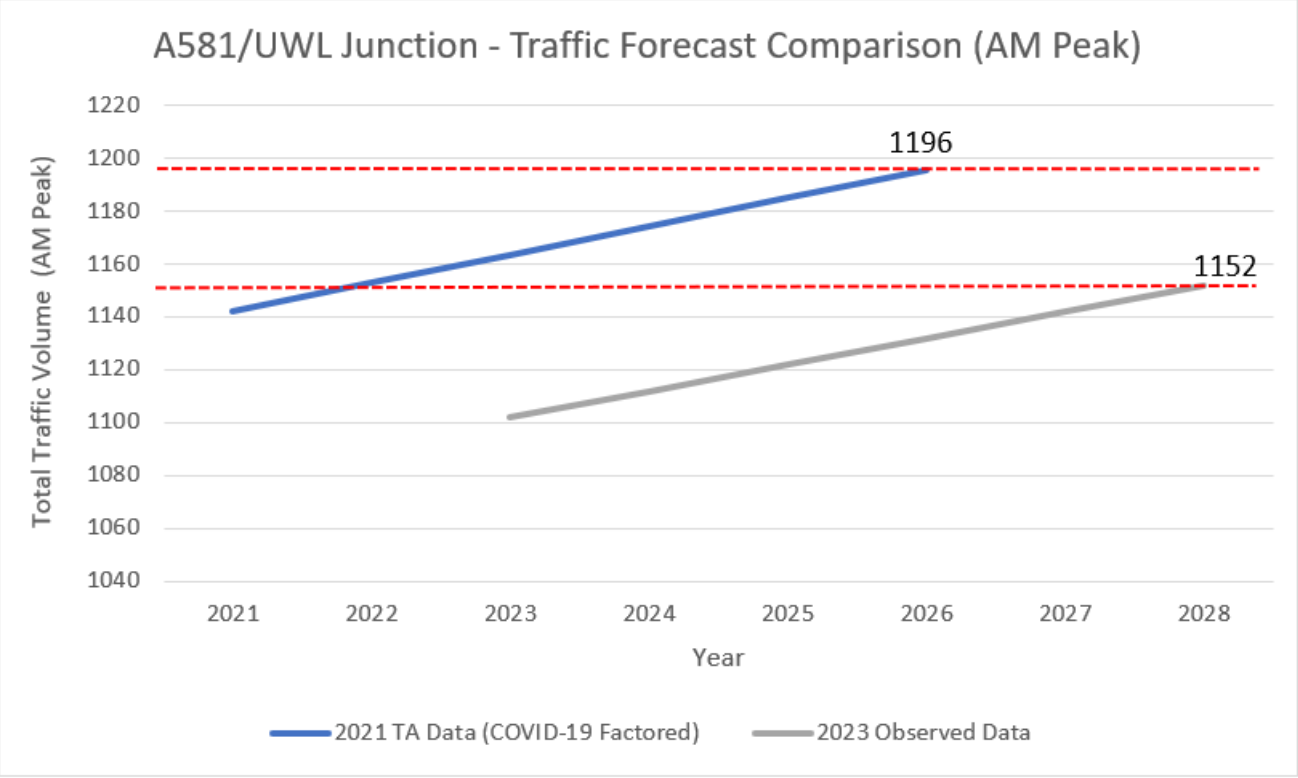
b. 2025 Opening Year without Development:

c. 2025 Opening Year with Development:

d. 2026 with Development:

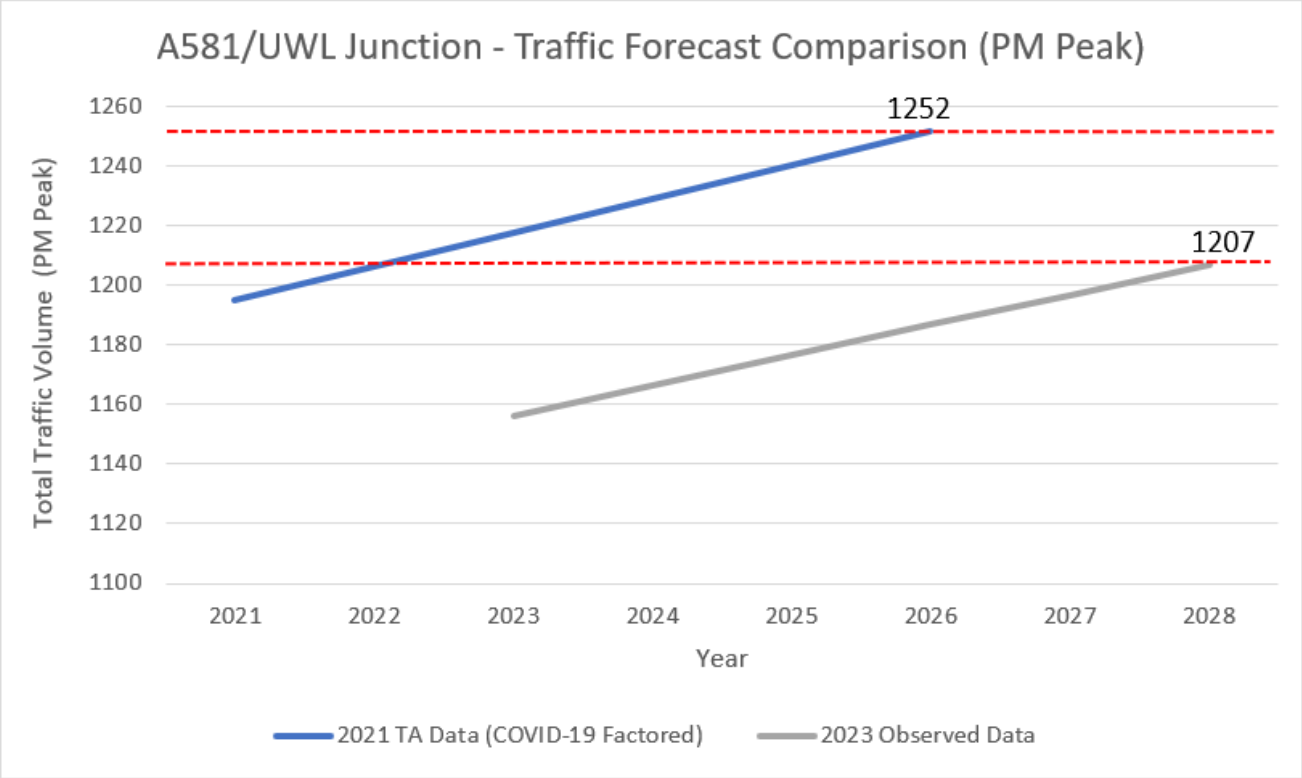
5.3.2. The TA (Core Document A35) was issued in August 2021. As per Section 1.2 in this PoE, a public inquiry was held in July 2022 following the appeal against the decision. The appeal has delayed the forecast opening of GW2. Therefore, to validate the analysis within the TA, I have factored the 2023 observed peak hour traffic flows at the A581/Ulnes Walton Lane junction (see Section 5.2) to a 2028 future assessment year using traffic growth factors from TEMPro v7.2[11] in line with the TA (see Figure 5-3 and Figure 5-4).

Figure 5-3 – A581/Ulnes Walton Lane traffic forecast comparison (AM Peak)



[11] Please note that TEMPro v8.0 was released in 2022. However, the local adjustment figures contained within TEMPro v8.0 have not yet been released so it is not possible to calculate traffic growth factors.

Figure 5-4 - A581/Ulnes Walton Lane traffic forecast comparison (PM Peak)



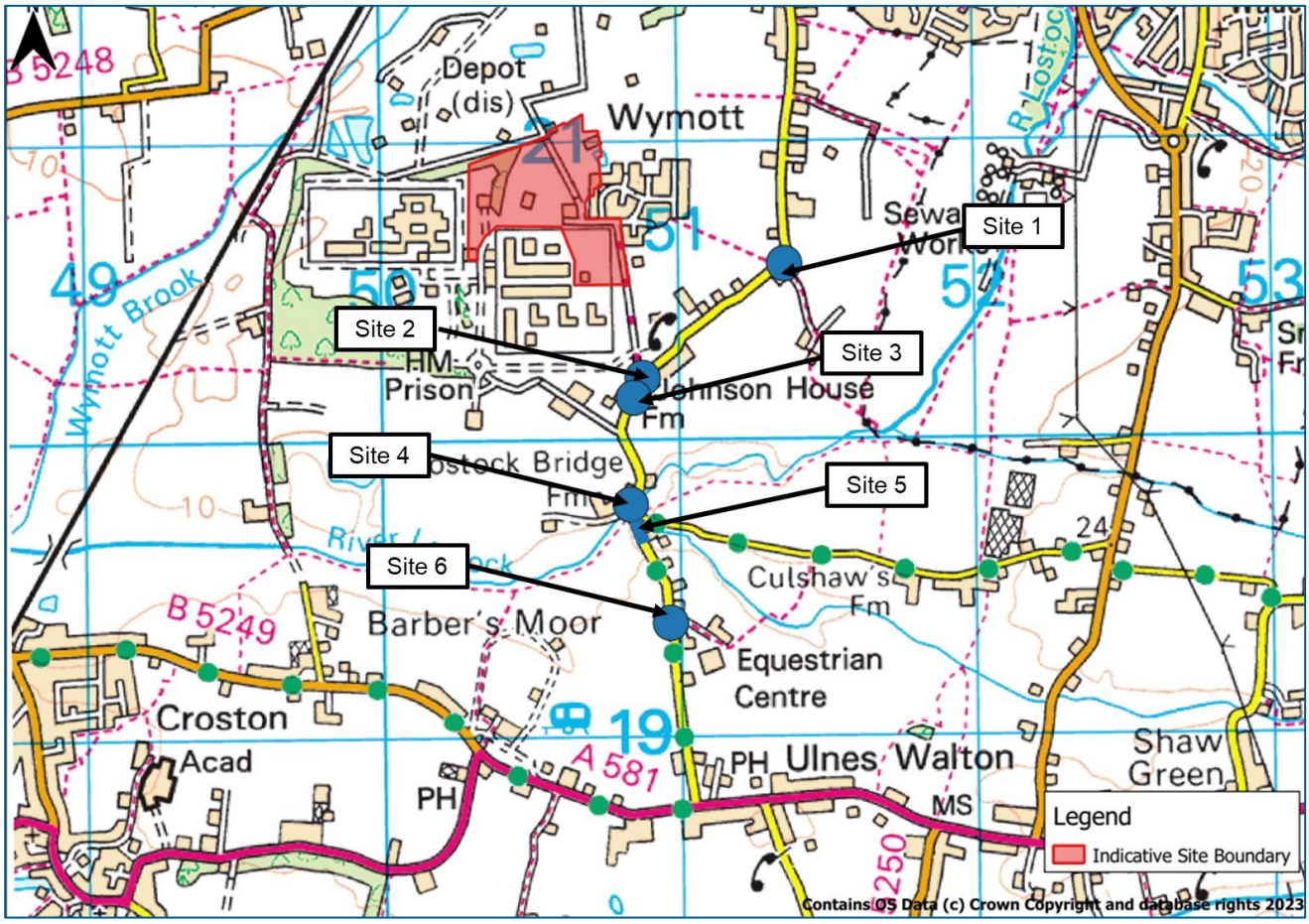
5.3.3. The analysis demonstrates that the forecast 2028 peak hour flows are lower than the 2026 peak hour flows used in the TA. This demonstrates that the analysis contained within the TA is robust, and the results of the standalone junction capacity assessment contained in the TA remain valid.

5.3.4. The traffic forecast analysis has been used to inform the evidence contained within Section 10.1.5 of this PoE.

5.4. Ulnes Walton Lane NMU survey

5.4.1. In June 2023, I commissioned several Non-Motorised User (NMU) surveys to specifically record pedestrian, cyclist, and equestrian movements along Ulnes Walton Lane (see Figure 5-5). The surveys also recorded NMU movements at the existing PRoW and the Moss Lane/Ulnes Walton Lane junction. The surveys were recorded over a 12-hour period on Thursday 8th June and Saturday 10th June 2023. As per the NDC Survey Report (Appendix F, p.365), the weather was fine on both days.

Figure 5-5 - NMU survey site location plan



5.4.2. A summary of the results is provided in Appendix E (p.355) of this PoE. The results show the number of pedestrian, cyclist, and equestrian movements recorded at each location.

5.4.3. A copy of the Survey Report issued by Nationwide Data Collection (NDC) is provided in Appendix F (p.364) of this PoE. In the site notes, NDC confirm that no pedestrians were observed using the post box throughout the survey periods at Site 2 (Moss Lane/Ulnes Walton Lane junction).

5.4.4. Table 5-2 provides a summary of the NMU movements recorded per day at each location.

Table 5-2 – Number of NMUs recorded per day

Survey Site	Survey Date	Pedestrians	Cyclists	Equestrians
Site 1	Thursday 08/06/23	8	120	0
	Saturday 10/06/23	2	179	0
Site 2	Thursday 08/06/23	11	140	1
	Saturday 10/06/23	23	192	6
Site 3	Thursday 08/06/23	2	129	0
	Saturday 10/06/23	11	185	0
Site 4	Thursday 08/06/23	1	134	0
	Saturday 10/06/23	12	170	0
Site 5	Thursday 08/06/23	2	137	0
	Saturday 10/06/23	15	186	0
Site 6	Thursday 08/06/23	4	138	0
	Saturday 10/06/23	13	185	0

5.4.5. The NMU surveys have been used to inform the evidence contained within Section 7.2 and Section 10.5 of this PoE.

5.5. HMP Oakwood ancillary trips

5.5.1. The MoJ confirmed pre-application that HGVs associated with the operation of GW2 would occur throughout the day, but outside of the peak hours. It was assumed that they would account for approximately 5% of the total daily vehicle trips. This was taken into account in the environmental assessment submitted as part of the hybrid planning application, however it was not considered within the TA (Core Document A35) because the assessment only considered the impact during the peak hours.

5.5.2. The MoJ has since provided the results of a transport survey undertaken in 2023 at HMP Oakwood, a Category C Prison located in Staffordshire which opened in 2012. HMP Oakwood has an operational capacity of 2,134 inmates as of July 2023 (GW2 is proposed to have a capacity of up to 1,715 inmates). The 2023 transport survey quantified the number of ancillary trips per day to HMP Oakwood including ‘Secure Prisoner Transport’ and ‘Deliveries’.

5.5.3. The survey confirmed that 14 ‘Secure Prisoner Transport’ trips were recorded per day (28 two-way) and 11 ‘Deliveries’ were recorded per day (22 two-way). The MoJ has confirmed that ‘Secure Prisoner Transport’ trips can include ‘Prisoner to Court Trips’, ‘Inter Prison Transfer Trips’ and ‘Prisoner to Hospital Trips’. All of which can occur throughout the day. The MoJ has also confirmed that ‘Deliveries’ occur outside of the peak hours.

5.5.4. Table 5-3 compares the number of ancillary trips assumed in the environmental assessment for GW2 to the number of observed ancillary trips for HMP Oakwood. The analysis confirms that the environmental assessment for GW2 is overly robust because the number of ancillary trips assumed is higher than those observed at HMP Oakwood despite the proposed capacity of GW2 being less than HMP Oakwood (based on the number of inmates).

Table 5-3 – Comparison of ancillary trips

GW2 Trip Generation (Daily Two-Way)	5% of GW2 Trip Generation (Rounded)	HMP Oakwood Observed Ancillary Trips (Daily Two-Way)	Difference
1,332	67	50	+17

5.5.5. The HMP Oakwood data has been used to inform the evidence contained within Section 10.2 of this PoE.

6. Moss Lane Traffic Calming

6.1. Introduction

6.1.1. The Inspector (IR 13.27) concluded that:

> *"The proposed traffic calming measures would involve 'slow' road markings and a narrowing of the carriageway in two locations, either side of the proposed new access towards the northern end of the road. It would assist with traffic speeds on the approach to the junction, although given the length of Moss Lane, it remains likely that vehicles would still be tempted to speed further south".*

6.1.2. In Core Document M3a, the Appellant has provided a preliminary highways design outlining an enhanced traffic calming scheme along the entire length of Moss Lane (see DWG: GARTH_ATK_HGN_MOSS_DR_D_0002_P3).

6.1.3. The enhanced traffic calming scheme proposed by the Appellant proposes to introduce:

a. 'Dragons Teeth' markings to indicate vehicles are entering a traffic calmed area;

b. A raised table at the existing access to HMP Garth and HMP Wymott; and

c. Traffic calming features with hatching to narrow carriageway (four in total).

6.1.4. The previous scheme at the previous Inquiry included additional road markings to encourage lower vehicle speeds. In response to the Inspector's feedback the scheme has been amended to include vertical traffic calming measures (a raised table) amongst other measures. Advice from the DfT[12] indicates that raised junctions are amongst the most effective measures at reducing vehicle speeds and reducing accidents.

6.1.5. Acknowledging that the scheme introduces vertical traffic calming, the Appellant sought advice from Hydrock who produced an Acoustic Statement (In Appendix H, p.87, of Core Document M3a) confirming that the implementation of the enhanced traffic calming scheme along Moss Lane would not change the conclusions of the Noise and Vibration Impact Assessment submitted as part of the Hybrid Planning Application.

6.1.6. In Core Document M3a, the Appellant provided copies of two Stage 1 road safety audits which examined the proposed highway works. The document also includes Response Reports, and confirmation that LCC as the Overseeing Organisation were satisfied with the proposals.

6.1.7. It has been agreed with LCC that the above highways works would be delivered via a Section 278 (s278) Agreement with LCC. Therefore, the additional highways measures proposed would be subject to detailed design and the associated Road Safety Audits (RSA) required at each appropriate stage of the design.

[12] Table 1-1, Local Transport Note 01/07, Traffic Calming

6.2. Concerns raised by CC

6.2.1. In Paragraph 4.1.12 of the WSP Technical Note (Core Document N2), CC conclude that the enhanced traffic calming scheme along the entire length of Moss Lane has not "*changed much from the initial proposal put before the Inquiry, it still does not address the safety concerns of the Inspector and it still does not fully mitigate the impact of the proposals at this location".*

6.2.2. I do not agree with this conclusion. The Inspectors concerns were in relation to the southern section of Moss Lane and therefore the enhanced traffic calming scheme proposes to introduce vertical traffic calming measures (in the form of a raised table) to the south of Moss Lane in addition to 'Dragons Teeth' and additional hatching to narrow the carriageway. In my expert opinion, these measures would mitigate the impact of the development proposals along Moss Lane and would specifically reduce speeds along the southern section.

6.2.3. I also believe that the conclusions from the previous Appeal, referenced earlier in my Proof (Paragraph 4.5.15), are relevant. The conclusions stated that numerous parts of our highway network are below modern standards but are typically left alone unless there is evidence of a road safety issue.

6.3. Concerns raised by UWAG

6.3.1. In Paragraph 23 of the Rule 6 PoE (Core Document O2), UWAG states:

> *"Moss Lane currently experiences speeding issues which will only be exacerbated if the development proceeds".*

6.3.2. For the reasons outlined in Paragraph 6.2.2 of this PoE, I do not agree with this conclusion.

7. Moss Lane/ Ulnes Walton Lane

7.1. Introduction

7.1.1. This Chapter of my Proof addresses feedback on:

a. Ulnes Walton Lane Carriageway Markings and Traffic Calming; and

b. Footway between Ulnes Walton Lane and Moss Lane

7.2. Ulnes Walton Lane Carriageway Markings and Traffic Calming

7.2.1. The Inspector (IR 13.24) concluded that:

> *"The appellant's proposed traffic calming measures for either side of the junction would involve a replacement chevron sign and new coloured surface treatment at the bend to the north, and reference to reviewing and amending existing road markings at the junction. Additional measures, including further south on Ulnes Walton Lane, are said by the appellant to be similar to those found elsewhere on the lane, but there are no drawings or agreements with the LHA on specific details".*

Background

7.2.2. LCC, as the Local Highway Authority, were consulted on the Transport Assessment (TA) (Core Document A35) and Outline Travel Plan (OTP) (Core Document A36) in advance of the Hybrid Planning Application submission to agree the scope of the assessment. Atkins continued to engage with LCC throughout the Determination Period. These discussions were used to agree the planning obligations and the associated delivery mechanism.

7.2.3. The design of a comprehensive traffic calming scheme was shown on Drawing DWG: GARTH_ATK_HGN_ULNES_DR_D_001 P1 (included in the Technical Addendum (Core Document A37), and for ease in Volume 2 of this Proof, Appendix G, p.367).

7.2.4. That drawing included a call-out which stated that "*Existing road markings at junction to be reviewed and amended where necessary. This includes the potential introduction of traffic calming features on the approach to the junction subject to agreement with the Highway Authority*."

7.2.5. This was formally captured in LCC's highway response to the application which recommended that "[the applicant] p*rovide traffic calming measures similar to [those on GARTH ULNES-ATK-HGN-DR-D-001 REV. P1] on the 130m section of Ulnes Walton Lane on its approach to Moss Lane from south as agreed and confirmed in an email of 3 December 2021 and indicated on the scheme plan."*

7.2.6. In Core Document M3a, the Appellant has provided a preliminary highways design for the Moss Lane/Ulnes Walton Lane junction (see DWG: GARTH_ATK_HGN_MOSS_DR_D_0003) (for ease of refence this drawing is also included in Appendix G, p.368, of this Proof) which outlined the specific measures proposed by the Appellant (at this location) including:

a. New chevron warning signs on yellow backing boards;

b. Additional 40mph repeater signs along Ulnes Walton Lane;

c. New high friction surfacing through the junction;

d. New advanced warning signage on yellow backing boards; and

e. A new 2m wide footway along Ulnes Walton Lane (from the existing northbound bus stop on Ulnes Walton Lane to the existing access junction for HMP Garth and HMP Wymott on Moss Lane).

7.2.7. I consider that this scheme complies with the request from LCC, and in turn addresses the Inspector's request as:

a. The measures shown in the drawing are consistent with Drawing GARTH ULNES-ATK-HGN-DR-D-001 REV. P1; and

b. They cover a distance of circa 115m to south.

7.2.8. The TA (Core Document A35) included junction capacity assessments of the existing junction layout (at the Moss Lane/Ulnes Walton Lane junction), and I can confirm that the proposed highway works do not change to findings regarding future performance.

7.2.9. In Core Document M3a, the Appellant provided copies of two Stage 1 road safety audits which examined the proposed highway works. The document also includes Response Reports, and confirmation that LCC as the Overseeing Organisation were satisfied with the proposals.

7.2.10. It has been agreed with LCC that the above highways works would be delivered via a Section 278 (s278) Agreement with LCC. Therefore, the additional highways measures proposed would be subject to detailed design and the associated Road Safety Audits (RSA) required at each appropriate stage of the design.

Concerns raised by CC

7.2.11. In Paragraph 2.1.5 of the WSP Technical Note (Core Document N2), CC state that there has been "no attempt to improve forward visibility for drivers turning right into Moss Lane to access the appeal site, which will remain impaired".

7.2.12. Section 3.6 within the TA for GW2 provides a review of historic PIA data from the DfT (Core Document A35). The PIA data covers a five-year analysis period (2016-2020) and includes the Moss Lane/Ulnes Walton Lane junction. I updated the PIA analysis within my original PoE (refer to Table 5-2 and Figure 5-1 in Core Document E4). The updated analysis confirmed that there has been zero recorded PIAs at the Ulnes Walton Lane/Moss Lane junction during the five-year analysis period. Therefore, I do not consider there to be an existing highway safety issue at the Moss Lane/Ulnes Walton Lane junction, especially in relation to the existing forward visibility.

7.2.13. In addition, as per IR13.21, the Inspector has confirmed that the evidence indicates that the proposals would not exacerbate any safety issues insofar as PIAs are concerned.

7.3. Footway between Ulnes Walton Lane and Moss Lane

7.3.1. The Inspector (IR 13.24) concluded that:

> *"The appellant does not propose to provide footways linking the northbound bus stop to the footway on Moss Lane, meaning that people would continue to walk in the road or on the verge to access bus services. Thus, there would be an increased risk of vehicle and pedestrian conflicts at the junction that would not be adequately mitigated".*

7.3.2. In addition to the proposed traffic calming measures outlined in Section 7.2, DWG: GARTH_ATK_HGN_MOSS_DR_D_0003 also details a new 2m wide footway along Ulnes Walton Lane (from the existing northbound bus stop on Ulnes Walton Lane to the existing access junction for HMP Garth and HMP Wymott on Moss Lane).

7.3.3. It is also proposed to provide tactile paving and a step free crossing point to allow pedestrians to cross Moss Lane and access the existing footway on the western side of the carriageway (see DWG: GARTH_ATK_HGN_MOSS_DR_D_0002_P3 in Appendix G, p.369). The new footway is proposed to be delivered within the existing highway boundary. The design of the tactile paving accords with Guidance on the Use of Tactile Paving Surfaces (DfT, 2021) included in Core Document M3a.

7.3.4. This proposal provides a benefit to pedestrians in the area and reduces the risk of vehicle and pedestrian conflicts.

7.3.5. It has been agreed with LCC that the above highways works would be delivered via a s278 Agreement with LCC. Therefore, the additional highways measures proposed would be subject to detailed design and the associated RSAs required at each appropriate stage of the design.

Concerns raised by CC

7.3.6. In Paragraph 2.1.7 of the WSP Technical Note (Core Document N2), CC state that the "scheme put forward by the Appellant does not consider the conditions along Ulnes Walton Lane, nor the increased exposure of existing and future users to increased traffic as a result of the proposals". In paragraph 2.1.8, CC state that there are "numerous hazards along this section of Ulnes Walton Lane, with vulnerable road users travelling in the road on the Lancashire Highway; or needing to cross to access the equestrian centres, PRoW routes, and local services including the post box to the north-west of the Moss Lane junction and the bus stop to the south of the junction".

7.3.7. As per Section 5.4 in this PoE, I commissioned several Non-Motorised User (NMU) surveys in June 2023 to specifically record pedestrian, cyclist, and equestrian movements along Ulnes Walton Lane (see Figure 5-3).

7.3.8. In response to the specific concerns regarding the post box located to the northwest of the Moss Lane/Ulnes Walton Lane junction, I refer to the Survey Report issued by NDC in Appendix F (p.364)

of this PoE. In the site notes, NDC confirm that no pedestrians were observed using the post box throughout the survey periods. In addition, as per Section 2.5 in my Transport Rebuttal (Core Document E12) there is an existing post box located within Wymott Village (on Willow Road) which is more convenient for residents and Royal Mail has identified it as a 'Priority' post box.

7.3.9. Regarding the exposure of existing users to increased traffic, Table 7-1 outlines the number of pedestrian movements recorded at the Moss Lane/Ulnes Walton Junction and compares it to the trip generation for GW2 during the AM and PM development peak periods. The trip generation for GW2 has been extracted from Table 5-4 in Core Document A35.

Table 7-1 – Moss Lane/Ulnes Walton Lane trip generation and pedestrian movements

	AM Peak (07:00 to 08:00)	PM Peak (17:00 to 18:00)
GW2 Trip Generation (Vehicles)	223	253
Observed Pedestrian Movements (8th and 10th June 2023)	0	0

7.3.10. Table 7-1 demonstrates that zero pedestrian movements were recorded during the development peak hours for GW2 on Thursday 8th June and Saturday 10th June 2023.

7.3.11. Further analysis of the data shows that there were only 11 and 23 daily pedestrian movements, on Thursday 8th June and Saturday 10th June 2023 respectively. These movements generally dispersed throughout the day between the two development peak hours for GW2.

7.4. Concerns raised by UWAG

7.4.1. The Inspector (IR 13.25) concluded that it is unlikely that the proposals would materially worsen the risk to NMUs because:

> *"Such users are typically restricted to certain time of the day and week and generally dispersed… therefore it is unlikely that the proposal would materially worsen the risks to these users".*

7.4.2. However, there remains disagreement between UWAG and the Appellant on whether the proposed development will have an unacceptable adverse highway safety impact on vulnerable highway users.

7.4.3. As per Table 5-2 in this PoE, there was only 11 pedestrian movements recorded at the Moss Lane/Ulnes Walton Lane junction on Thursday 8th June, and only 23 pedestrian movements recorded on Saturday 10th June. Across both survey days there were zero pedestrian movements recorded at the Moss Lane/Ulnes Walton Lane junction during the AM (07:00-08:00) and PM (17:00-18:00) development peaks. This supports the Inspector's conclusions that such users are typically restricted to certain times of the day.

7.4.4. Therefore, in my expert opinion the development proposals would not materially worsen the risk to pedestrians because the number of pedestrian movements recorded is low and zero pedestrians

were recorded during the development peak hours when the majority of the additional trips generated by GW2 are on the network.

7.4.5. It is acknowledged that there will be additional traffic on the network outside of the development peak hours. However, the proposed footway between Moss Lane and Ulnes Walton Lane will reduce the risk of vehicle and pedestrian conflict caused by pedestrians walking on the verge to access the northbound bus stop as per the Inspectors conclusions (see IR13.24).

7.5. Summary

7.5.1. It is my professional opinion that the proposed highway work and new footway provide an overall betterment to the junction, reducing the risk between vehicles and pedestrians.

7.5.2. There is a very low level of pedestrian activity at this junction, however, the new footway will provide access to the existing northbound bus stop.

7.5.3. LCC are satisfied with the proposed measures, which would be subject to S278 and detailed design.

8. A581/ Ulnes Walton Lane

8.1. Introduction

8.1.1. The Inspector (IR 13.29) concluded that:

> *"There is no design for a mini roundabout at even an indicative level and no modelling of the effects it would have with the development in place or how it might affect the flow on other arms of the junction".*

8.1.2. A preliminary highways design for the A581/Ulnes Walton Lane junction (see DWG: GARTH_ATK_HGN_A581_DR_D_0005_P3 in Appendix G, p.370) has been produced (as presented in Core Document M3a).

8.1.3. The specific measures proposed include:

a. The provision of a raised table;

b. The provision of speed cushions along the A581;

c. Three new lighting columns on the Ulnes Walton Lane approach;

d. Relocated speed limit signs along Ulnes Walton Lane to extend the existing 30mph zone;

e. A reduced Inscribed Central Diameter (ICD); and

f. Dragons Teeth on all approach arms.

8.1.4. As per Section 4.4 of this PoE, mini roundabouts were developed as a method to improve junction safety, particularly at locations with long straight sections of road. The location of the proposed junction is within a 30mph zone and adheres to guidance regarding the use of this type of junction. Further, the measures proposed would contribute towards the objectives of the A581 Rufford to Euxton Safety Improvement scheme through the introduction of physical traffic calming measures along the A581.

8.2. Traffic flows

8.2.1. For ease of refence, Figure 8-1 provides a summary of the peak hour traffic flows at the A581/Ulnes Walton Lane junction for the '2025 Opening Year without Development' scenario. Figure 8-2 provides a summary of the peak hour traffic flows for the '2025 Opening Year with Development' scenario. The traffic flows have been extracted from Table 7-10 in the TA (Core Document A35). Please take into consideration the earlier evidence presented in Section 5.2 and Section 5.3 of this PoE which demonstrates that the traffic forecasting presented in the TA (Core Document A35) is robust.

Figure 8-1 - A581/Ulnes Walton Lane Traffic Flows (2025 without Development)

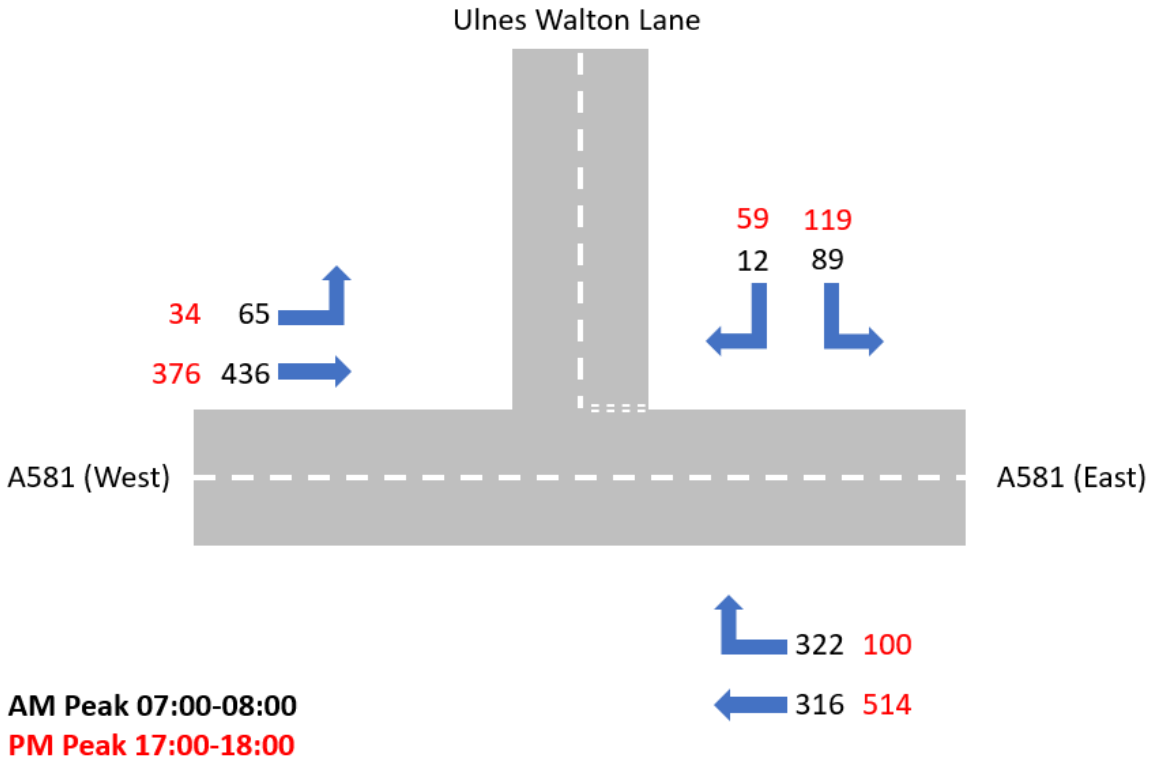
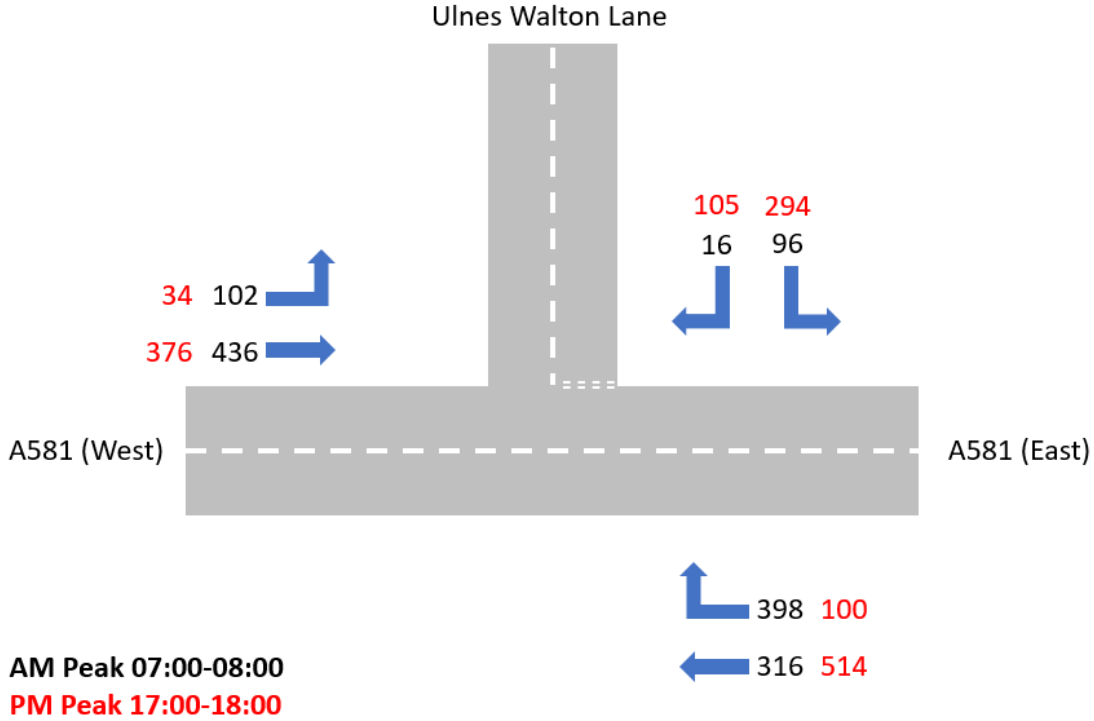


Figure 8-2 - A581/Ulnes Walton Lane Traffic Flows (2025 with Development)



8.3. Capacity assessment

8.3.1. Table 5-1 in Core Document M3a includes capacity assessments for the mini roundabout and demonstrates that the proposed mitigation scheme (with development traffic) would operate better than the existing junction layout (without development traffic). The standalone junction capacity assessment therefore demonstrates that the introduction of the proposed mitigation scheme at the A581/Ulnes Walton Lane junction would mitigate the impact of the development at this location to an acceptable degree, and in fact provide a betterment over the existing situation (in line with Paragraph 110(d) in the National Planning Policy Framework).

8.4. CD 116 (Paragraph 5.28)

8.4.1. In Paragraph 5.1.21 of the WSP Technical Note (Core Document N2), CC has indicated that Atkins has not adhered to Paragraph 5.27 in DMRB CD 116 (Geometric Design of Roundabouts) and presented Swept Path Analysis (SPA) which is unsafe (see DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2 in Appendix J, p.100, of Core Document M3a).

8.4.2. For information, since Core Document N2 was issued DMRB CD 116 (Version 2) has been withdrawn and updated with Version 2.1.0. Paragraph 5.27 has been superseded by Paragraph 5.28.

8.4.3. For ease of reference, Paragraph 5.28 in DMRB CD 116 (Version 2.1.0) is provided below:

> “Where the swept path of the largest vehicle anticipated to use the junction crosses the inscribed circle, the give way markings for the affected arms shall be moved back such that they are not crossed by the outside edge of the swept path”.

8.4.4. CC has failed to acknowledge the note under Paragraph 5.28 in DMRB CD 116 (Version 2.1.0) which states:

> “The largest vehicle anticipated circulating past the entry is used for swept path analysis”.

8.4.5. Please note, this note was present in Version 2 of DMRB CD 116.

8.4.6. This note indicates that it is the circulating movement which passes an entry arm prior to exiting the junction which is critical to ensure that the largest deign vehicle does not over-sail the give-way line and potentially interact with a vehicle waiting to enter the junction.

8.4.7. The SPA presented on DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2 (see Appendix J, p.100, in Core Document M3a) demonstrates that the two swept paths which pass an entry arm prior to exiting the junction can both be undertaken without over-sailing the adjacent give-way line (see points A and B on Figure 8-1 and Figure 8-2).

Figure 8-3 – Extract from DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2 (1)

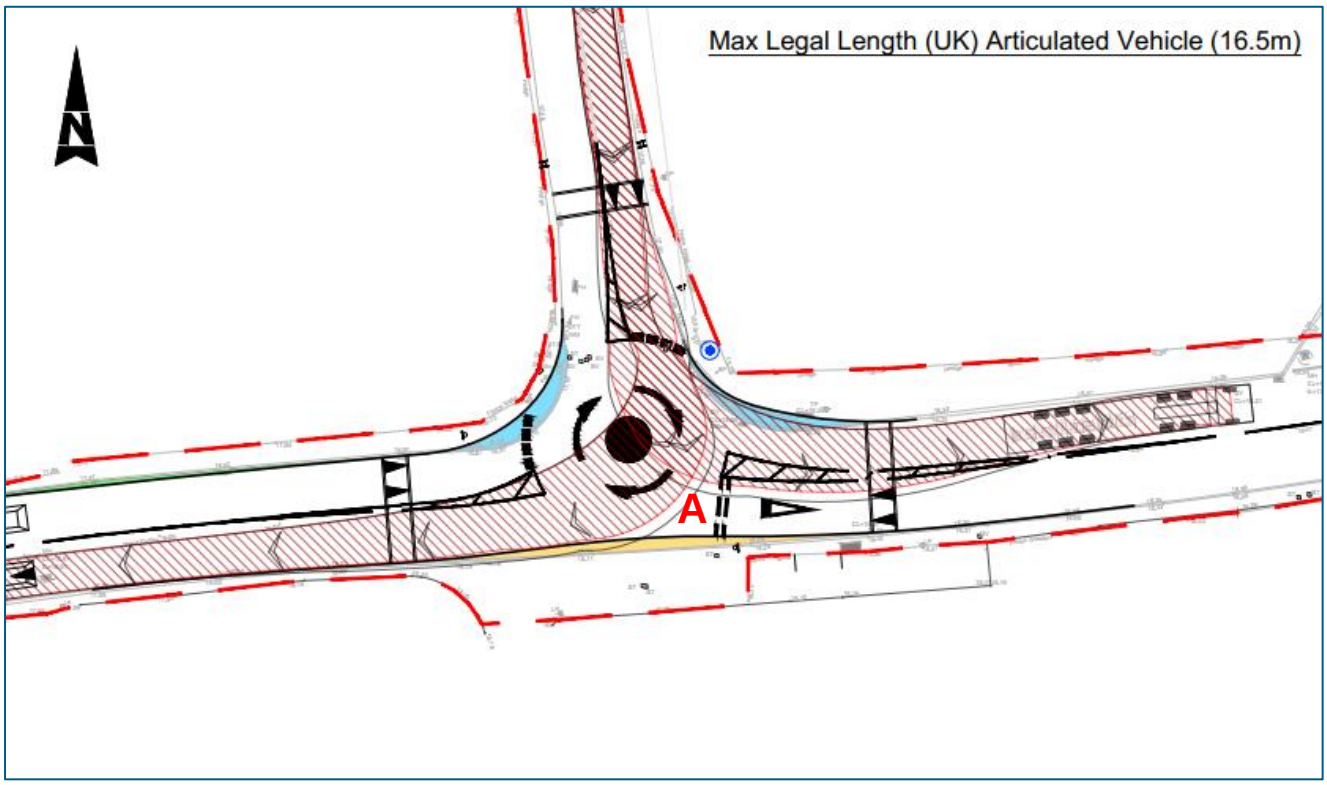
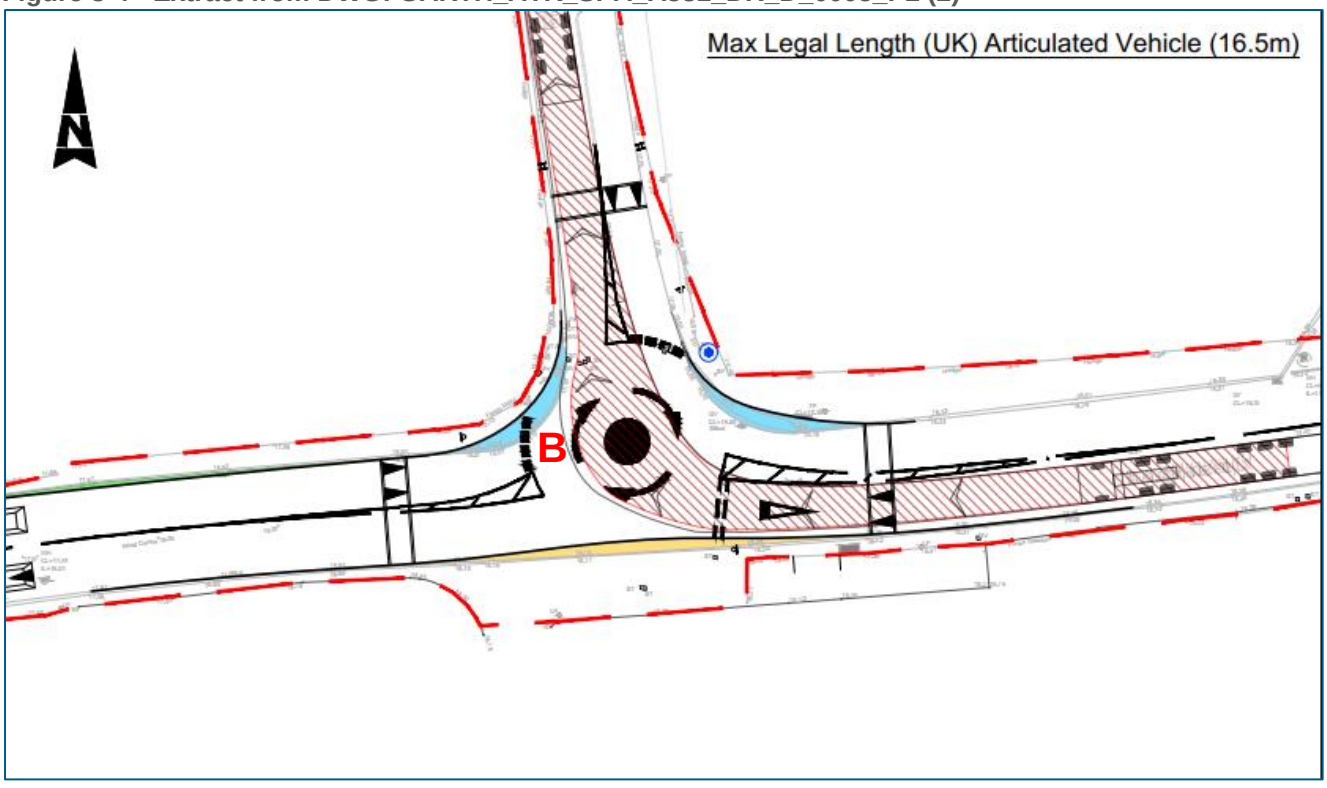


Figure 8-4 - Extract from DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2 (2)



8.4.8. If the design was not compliant with Paragraph 5.28 in DMRB CD 116 (Version 2.1.0) then the outside edge of the swept path would be touching the give-way markings next to point A and point B. However, there is sufficient space between the outside edge of the swept path and the give way markings at point A and point B.

8.4.9. Therefore, CC has incorrectly interpreted the guidance in Paragraph 5.28 and the preliminary highways design for the A581/Ulnes Walton Lane junction does adhere to DMRB CD 116 (Version 2.1.0).

8.5. Existing HGV manoeuvres

8.5.1. In Paragraph 5.1.21 of the WSP Technical Note (Core Document N2), CC has stated that large heavy goods vehicles currently make unsafe manoeuvres at the A581/Ulnes Walton Lane junction.

8.5.2. In Section 2.2.2.2 of the Designers Response to the Road Safety Audit (see Appendix E, p.41, in Core Document M3a), I have reviewed the SPA for the existing highway layout and compared it to the proposed highway layout (mini roundabout), and the SPA for other alternative forms of junction.

8.5.3. The SPA demonstrates that an Articulated Vehicle (16.5m) would currently overrun on to the opposite side of the carriageway when making the movement from Ulnes Walton Lane to the A581 (East). However, as per the updated PIA analysis provided within my original PoE (refer to Figure 5-1 in Core Document E4) there has only been two recorded PIAs at the A581/Ulnes Walton Lane junction during the five-year analysis period. This results in an average annual accident rate of 0.4 PIAs per annum.

8.5.4. As per Paragraph 4.5.10 in this PoE, the fourth most dangerous accident hotspot in Lancashire experienced five accidents in one year. Therefore, I do not consider a junction which experiences 0.4 PIAs per annum to have an existing highway safety issue despite the potential overrun associated with an Articulated Vehicle (16.5m).

8.5.5. In addition, the SPA presented in Appendix E (p.55) of Core Document M3a demonstrates that the proposed highway layout provides a significant betterment compared to the existing highway layout in terms of vehicle overrun (see DWG: GARTH_ATK_HGN_A581_DR_D_0008-P1 in Appendix E, p.55, of Core Document M3a).

8.5.6. Furthermore, the COBALT assessment presented during the Inquiry (Core Document K13) demonstrated that the increase in traffic associated with GW2 would only generate an additional 0.5 PIAs per annum across the whole study area. This assessment did not take into consideration any of the off-site highway mitigation agreed with LCC. It only considered the increase in traffic based on the existing highway layout.

8.5.7. Therefore, in my professional opinion the preliminary highways design for the A581/Ulnes Walton Lane junction proposed by the Appellant (see DWG: GARTH_ATK_HGN_A581_DR_D_0005_P3) would mitigate the impact of the development at this location and provide a betterment compared to the existing highways layout.

8.6. Rigid vehicles

8.6.1. In Paragraph 5.1.26 of the WSP Technical Note (Core Document N2), CC has stated that some rigid vehicles of lesser length (including a Refuse Vehicle, Bus, and Horsebox) can have more intrusive turning circles than a 16.5m Articulated Vehicle. Therefore, in response I have undertaken further SPA for the proposed highway layout using a Refuse Vehicle, Bus, and Horsebox (see DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2_SPA2 in Appendix H, p.372, of this PoE). The SPA demonstrates that a refuse vehicle, bus, and horsebox have less intrusive turning circles than a 16.5m Articulated Vehicle contrary to the statement made by CC.

8.7. A581 HGV movements

8.7.1. In Paragraph 5.1.27 of the WSP Technical Note (Core Document N2), CC has stated that the SPA submitted by the Appellant fails to demonstrate that a HGV can negotiate the ahead movement from the A581 (East) to the A581 (West). In paragraph 5.1.28, CC further add that it would be a 'realistic assumption' that the SPA would overrun the footway to the south of the junction which would cause a safety issue for pedestrians on the footway.

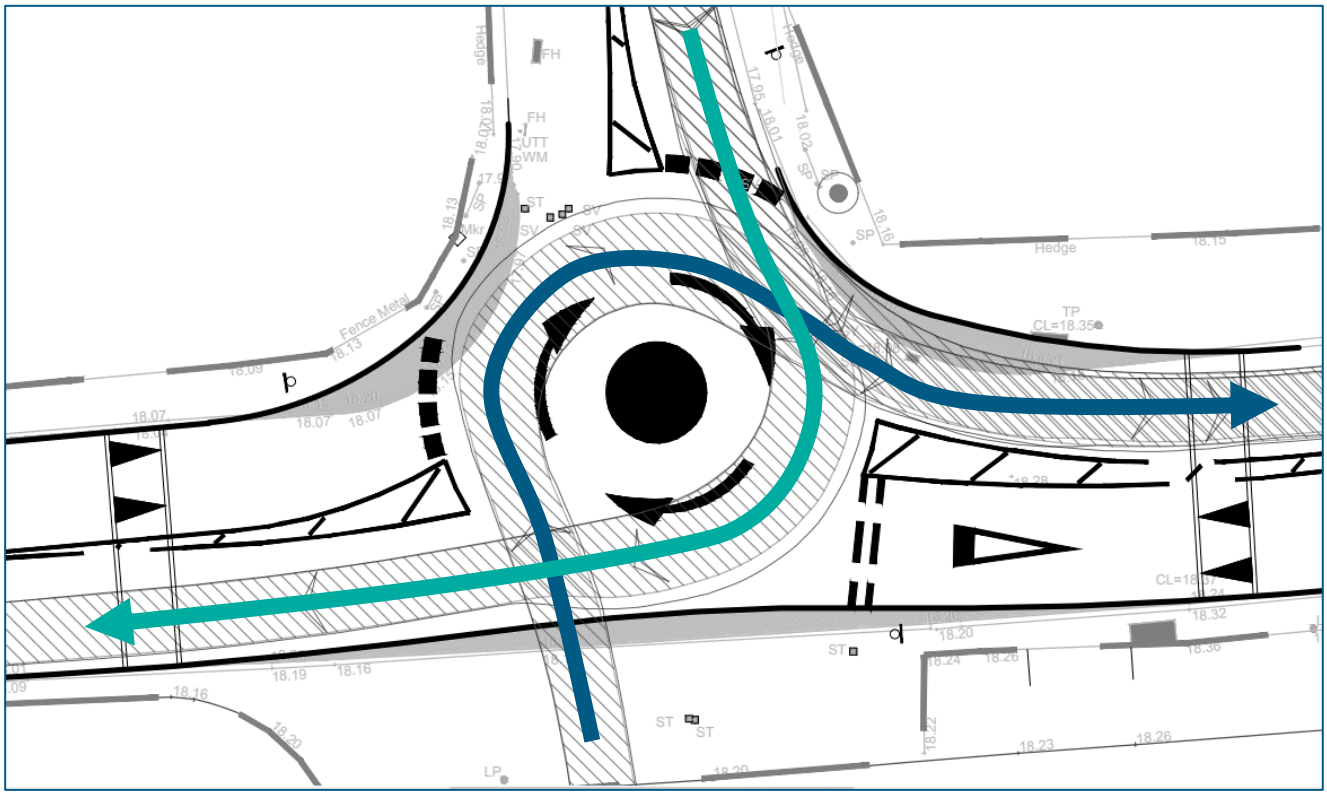
8.7.2. I have undertaken further SPA for the proposed highway layout which demonstrates that a Refuse Vehicle, Bus, and a 16.5m Articulated Vehicle can all safely make the ahead movement from the A581 (East) to the A581 (West) without overrunning the footway to the south (see DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2_SPA3 in Appendix I, p.374, of this PoE).

8.8. Large cars

8.8.1. In Paragraph 5.1.29 of the WSP Technical Note (Core Document N2), CC has requested that SPA for a large car is provided to demonstrate that vehicles can safely manoeuvre in and out of each private driveway to the south of the A581/Ulnes Walton Lane junction. CC has also suggested that the SPA provided by the Appellant shows a vehicle performing a U-turn (see DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2_SPA1 in Appendix J, p.100, of Core Document M3a).

8.8.2. I have undertaken further SPA for the proposed highway layout which demonstrates that a large car can safely manoeuvre in and out of the three private accesses to the south of the A581/Ulnes Walton Lane junction (see DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2_SPA4 in Appendix J, p.376, of this PoE). In addition, CC has incorrectly interpreted the previous SPA submitted by the Appellant which shows a large car turning right out of a private access to the south and crossing the SPA for a large car turning right out of Ulnes Walton Lane. It does not show a vehicle performing a U-turn (see Figure 8-5).

Figure 8-5 - Extract from DWG: GARTH_ATK_SPA_A581_DR_D_0005_P2_SPA1



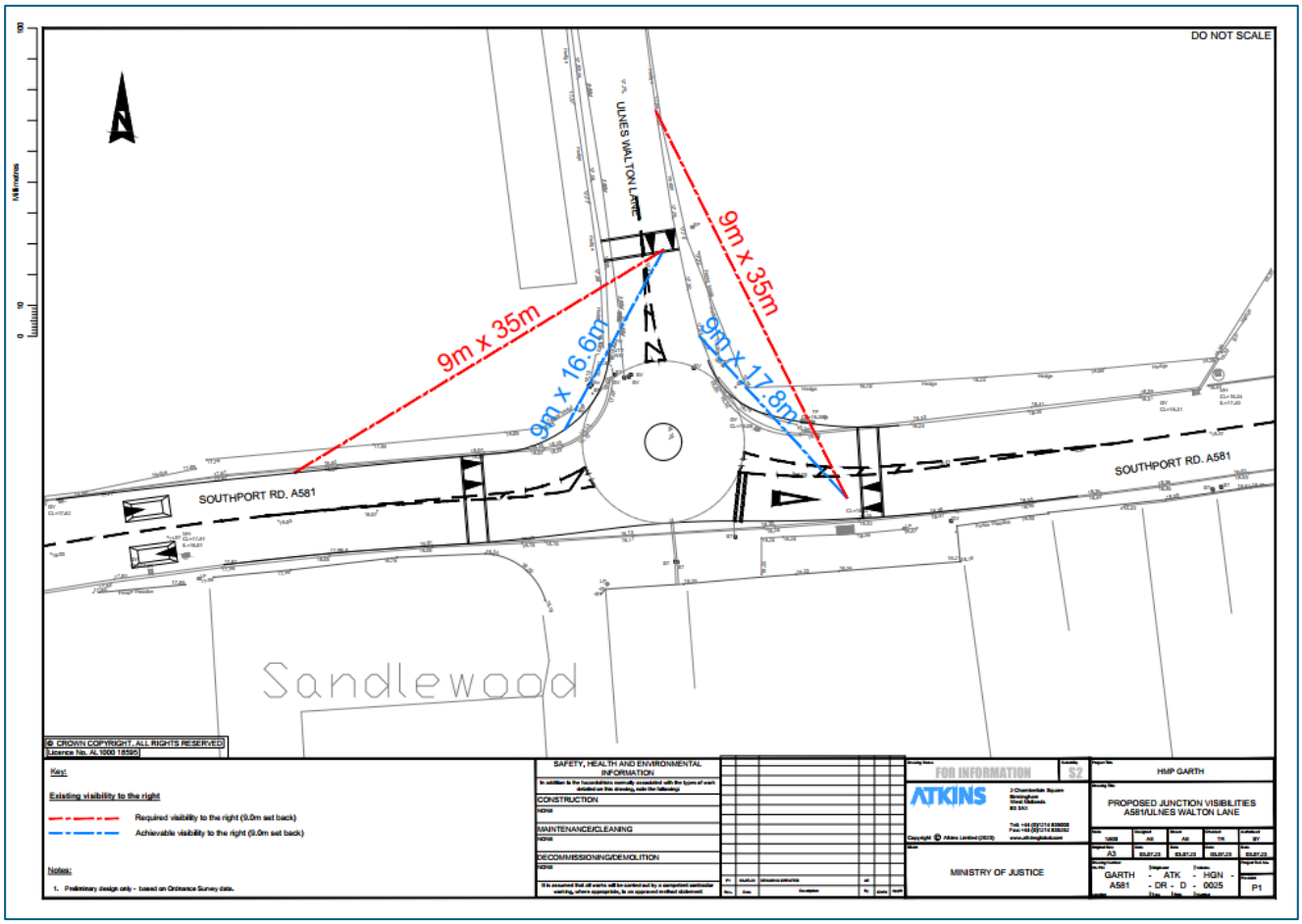
8.9. Departures

8.9.1. In Paragraph 5.1.34 of the WSP Technical Note (Core Document N2), CC has noted that the preliminary highways design for the A581/Ulnes Walton Lane junction would require a departure from standards as part of the proposed s278 Agreement. The departure would be in relation to Paragraph 5.20 in CD 116 (Geometric design of roundabouts) which states that a minimum visibility distance to the right shall be provided in accordance with Table 5.20 in CD 116. This was acknowledged in Section 5.6 of Core Document M3 (albeit it is important to note (as set out in Section 4.5) that strictly speaking CD 116 only applies to trunk roads).

8.9.2. As per Paragraph 4.5.4 in this PoE, departures are often necessary to resolve issues where there are physical constraints such as available highway land as is the case at the A581/Ulnes Walton Lane junction.

8.9.3. Figure 8-6 demonstrates the extent of the departure in relation to the preliminary highways design proposed at the A581/Ulnes Walton Lane junction. The achievable visibility to the right is 16.6m from the Ulnes Walton Lane arm and 17.8m from the A581 (east) arm. This information was provided previously in Table 5-3 of Core Document M3.

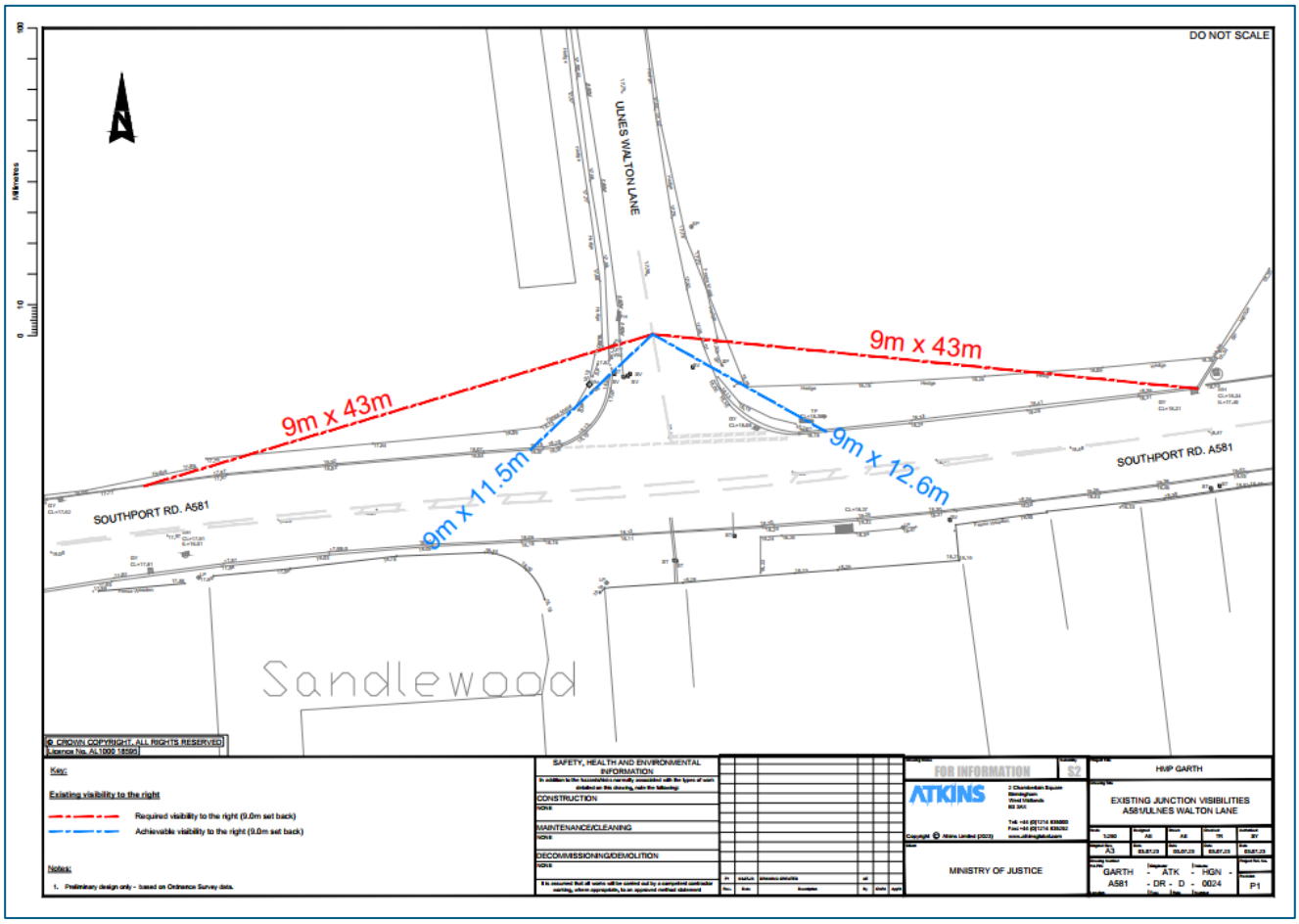
Figure 8-6 – A581/Ulnes Walton Lane preliminary highways design – visibility to the right



8.9.4. CC has stated that the "severity of such a breach of standards is not addressed".

8.9.5. For context, Figure 8-7 demonstrates the minor arm visibility for the existing junction layout at the A581/Ulnes Walton Lane. The existing visibility from the minor arm (Ulnes Walton Lane) is sub-standard and whilst it is not directly comparable to the visibility requirements for a mini roundabout, the preliminary highways design for the A581/Ulnes Walton Lane junction improves the visibility to the right from Ulnes Walton Lane from 11.5m to 16.6m, providing a betterment (see Figure 3.2a in CD 123 in Appendix A.7, p.207, of this PoE).

Figure 8-7 - A581/Ulnes Walton Lane existing junction layout – minor arm visibility



8.9.6. As stated in Paragraph 5.6.4 in Core Document M3, the Appellant has discussed the required departures and the findings of both RSA's with LCC. As per Section 4.6 in this PoE, the objective of an RSA is to identify aspects of engineering interventions that could give rise to road safety problems and to suggest modifications that could improve road safety. The RSA team is independent of the designers and will make recommendations to the Overseeing Organisation (LCC), and these should be proportionate and viable suggestions for improvement to eliminate or mitigate an identified road safety audit problem.

8.9.7. LCC has noted the contents of the two RSA's and the designer's response and have confirmed that the mini roundabout as presented is entirely within the adopted highway and could be delivered under a s278 agreement. As per Paragraph 4.5.3 within this PoE, a s278 agreement relates to the detailed design of the proposed highways works and can only commence once planning permission is granted and the Applicant has submitted the required information to the overseeing organisation (LCC).

8.9.8. It is important to note that LCC, as the Local Highway Authority have a statutory duty to reduce and prevent accidents on their network whilst promoting highway safety. In this instance, LCC has acknowledged the required departures and consider that the effects of the departures can be mitigated for the following reasons:

a. The Appellant is proposing to provide physical traffic calming, advanced warning signage and additional lighting columns. These measures would reduce vehicle speeds on the approach to the junction; and

b. The scheme provides additional highway capacity which reduces vehicle queues and driver delay. This reduces the risk of driver frustration which has associated safety benefits.

c. The proposed improvement provides a betterment of the existing situation.

8.9.9. In addition, as per Paragraph 10.4.2 in Manual for Streets 2 (MfS2) it is often assumed that a failure to provide visibility at priority junctions in accordance with the values recommended in DMRB (as appropriate) will result in an increased risk of injury collisions. However, research carried out by TMS Consultancy for MfS2 found no evidence of this (see extract from MfS2 in Appendix A.1, p.40, of this PoE).

8.9.10. The evidence within MfS2 also demonstrates that main road speed is influenced by road width and forward visibility. The ability of the driver to stop is likely to be affected by more than just what is happening in the side road and an understanding of the factors influencing main road speed is more important when assessing visibility requirements. This supports the decision to introduce the traffic calming features outlined in Paragraph 8.1.2.

8.9.11. As per the evidence provided in Section 4.5 in this PoE, I have demonstrated that there are several mini roundabouts within Lancashire with design departures specifically relating to visibility. The evidence presented also demonstrates that there is not a direct correlation between a design departure and a poor highway safety record which supports the evidence contained within MfS2.

8.10. Approach speeds

8.10.1. In Paragraph 5.1.36 of the WSP Technical Note (Core Document N2), CC has stated that there is no evidence to demonstrate the existing 85th percentile speeds on the approaches to the A581/Ulnes Walton Lane junction.

8.10.2. As per Table 5-1, the 85th percentile speeds along the A581 (on the approach to the A581/Ulnes Walton Lane junction) are approximately 33mph, and the 85th percentile speed along Ulnes Walton Lane (on the approach to the A581/Ulnes Walton Lane junction) is 26.3mph.

8.10.3. As per Paragraph 2.2.1.1. in Appendix F (p.61) of Core Document M3a, it is noted that LCC have installed average speed cameras along the A581 corridor as part of the wider A581 Rufford to Euxton Safety Improvement scheme. This will help regulate speeds on the A581 in the vicinity of the junction, notwithstanding the speed reduction measures proposed by the Appellant.

8.10.4. In addition, the Transport Research Laboratory (TRL) has produced a report on traffic calming in villages on major roads (TRL Report 385) which is included in Appendix A.8 (p.214) of this PoE. The report notes that within villages, physical traffic calming measures resulted in mean and 85th

percentile speed reductions of 7-12mph. Noting that the observed 85th percentile speeds along the A581 are between 33.3 and 33.4 mph, it is considered that the proposed traffic calming measures (and the average speed cameras) would reduce the 85th percentile speeds to 25mph or below which would reduce the visibility requirements at the A581/Ulnes Walton Lane junction to 25m instead of 35m (see Table 5.23 in CD 116 in Appendix A.3, p.136, of this PoE).

8.11. Concerns raised by UWAG

8.11.1. In Paragraph 13 of the Rule 6 PoE (Core Document O2), UWAG has provided video footage showing traffic queuing at the A581/Ulnes Walton Lane junction on Thursday 26 January 2023. UWAG has also concluded that "*residential properties and local businesses in the vicinity of this junction will be seriously impacted of the development proceeds*".

8.11.2. This supports the results of the Standalone Junction Capacity Assessment presented in Table 5-2 (Core Document M3) which demonstrate that the existing junction layout is forecast to operate over acceptable capacity thresholds in the '2025 Opening Year without Development' scenario.

8.11.3. However, as per Paragraph 5.5.6 (in Core Document M3), the additional Standalone Junction Capacity Assessment presented by the Appellant in Core Document M3 demonstrates that the proposed mitigation scheme (with development traffic) would operate better than the existing junction layout (without development traffic). Therefore, the introduction of the proposed mitigation scheme at the A581/Ulnes Walton Lane junction would mitigate the impact of the development at this location to an acceptable degree (in line with Paragraph 110(d) in the National Planning Policy Framework).

8.12. Summary

8.12.1. Moss Lane, Ulnes Walton Lane and the A581 form part of Local Road Network. Therefore, following guidance from the CIHT and DfT, MfS2 should be the starting point for any highway designs within the vicinity of the site (see Paragraph 4.3.4 in this PoE).

8.12.2. As per Paragraph 4.4.6 in this PoE, mini roundabouts were developed as a method to improve junction safety, particularly at locations with long straight sections of road, and locations with side road delay. They are also often employed as part of wider traffic calming schemes, and at locations with constrained highway space like the A581/Ulnes Walton Lane junction.

8.12.3. The proposed scheme provides a betterment over the existing situation, with improved visibility, new traffic calming measures, improved vehicle manoeuvrability and enhanced highway capacity.

8.12.4. If the roads concerned were trunk roads, the preliminary highways design for the A581/Ulnes Walton Lane junction would require a departure from guidance as part of the proposed s278 Agreement. However, as per Paragraph 4.5.2 in this PoE, departures are often necessary to resolve issues where there are physical constraints such as available highway land. This is evident from the 10 mini roundabouts identified within Lancashire which have substandard visibility on at least one of the

approach arms. I have also taken into consideration that the existing priority junction would not comply with modern design standards.

8.12.5. The evidence demonstrates that the existing mini roundabouts on the surrounding highway network have a low level of recorded accidents, which shows that there is not a direct correlation between a design departure and a poor highway safety record. This supports the evidence presented in MfS2. Further, one of the locations assessed is the adjacent junction on the A581 which is a comparable mini roundabout to that proposed.

8.12.6. As stated LCC, as the Local Highway Authority, have a statutory duty to reduce and prevent accidents on their network whilst promoting highway safety. In this instance, LCC has acknowledged the departures and consider that the effects of the departures can be mitigated.

8.12.7. Therefore, the Inspector and the SoS can be confident that the approach taken by the Appellant accords with the relevant policies, standards, guidance, recommendations, and good practice across the industry.

8.12.8. In my professional opinion, the increase in traffic associated with GW2 would not have a severe residual cumulative impact at the A581/Ulnes Walton Lane junction as a result of the off-site highway mitigation measures proposed, and I do not consider that the development proposals would have an adverse impact on highway safety, pedestrian safety, or the free flow of traffic in line with the NPPF (refer to Paragraph 4.2.2 (b)) and the Chorley Local Plan (refer to Paragraph 4.2.6 (c)).

9. Construction phase

9.1. Introduction

9.1.1. The Inspector (IR 13.33) concluded that:

> *"Construction traffic has not been modelled or assessed by the appellant, while the mitigation measures discussed above have been designed for operational traffic. All construction traffic would use Ulnes Walton Lane and Moss Lane. The appellant contends that in an average construction month the number of vehicles is predicted to be lower than the predicted operational traffic, at around 1,140 trips per day. However, this would still be a significant increase in traffic, including around 146 HGVs per day, using roads and junctions over a three-year period where there are safety and capacity concerns as outlined above."*

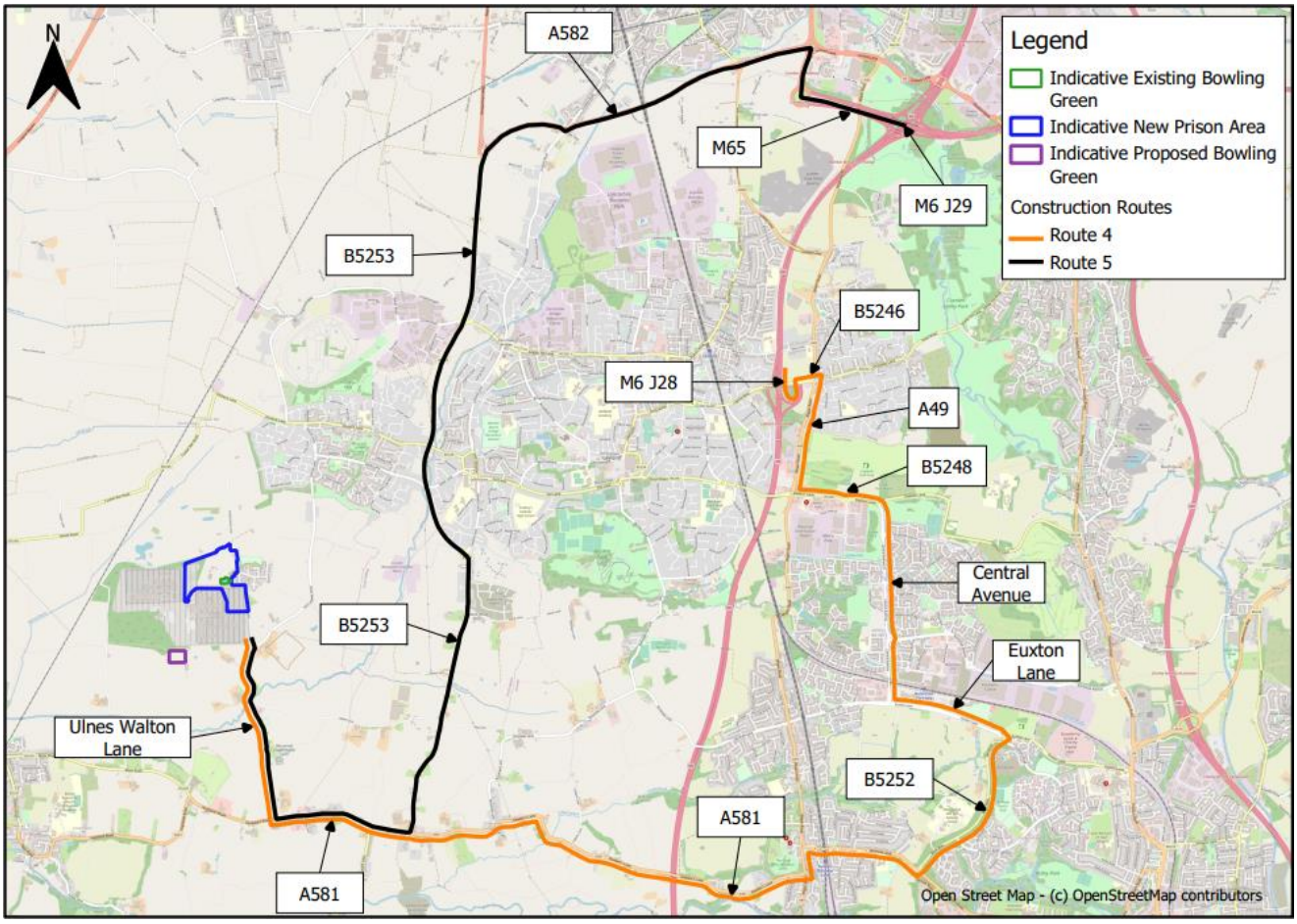
9.1.2. In Section 6 of Core Document M3a, the Appellant has provided additional highways evidence in relation to the construction phase impacts. The additional highways evidence includes a routing assessment, updated construction forecasts, standalone junction capacity modelling, and a summary of the measures contained within the Working Draft CTMP (Core Document K11).

9.2. Routing assessment

9.2.1. In Paragraph 34 of the Rule 6 PoE (Core Document O2), UWAG has raised concerns relating to construction traffic routing along Ulnes Walton Lane, stating that "*HGVs are around 2.55m wide, excluding wing mirrors. Ulnes Walton Lane (UWL) is, on average, 5.5 metres wide and UWL has 17 sharp bends and curves with a weight limit of 7.5 tonnes, except for access*".

9.2.2. The Contractor appointed for GW2, Laing O'Rourke, commissioned a logistics report (see Appendix N, p.143, in Core Document M3a). The logistics report provided a summary of the route survey(s) undertaken using a HGV and a 45ft Standard Flat Trailer (with Escort Vehicle). The route survey(s) confirmed that it is possible for a HGV to access the site without impacting or overrunning any existing kerb lines using Route 4 and Route 5 (see Figure 9-1).

Figure 9-1 – Proposed construction routes

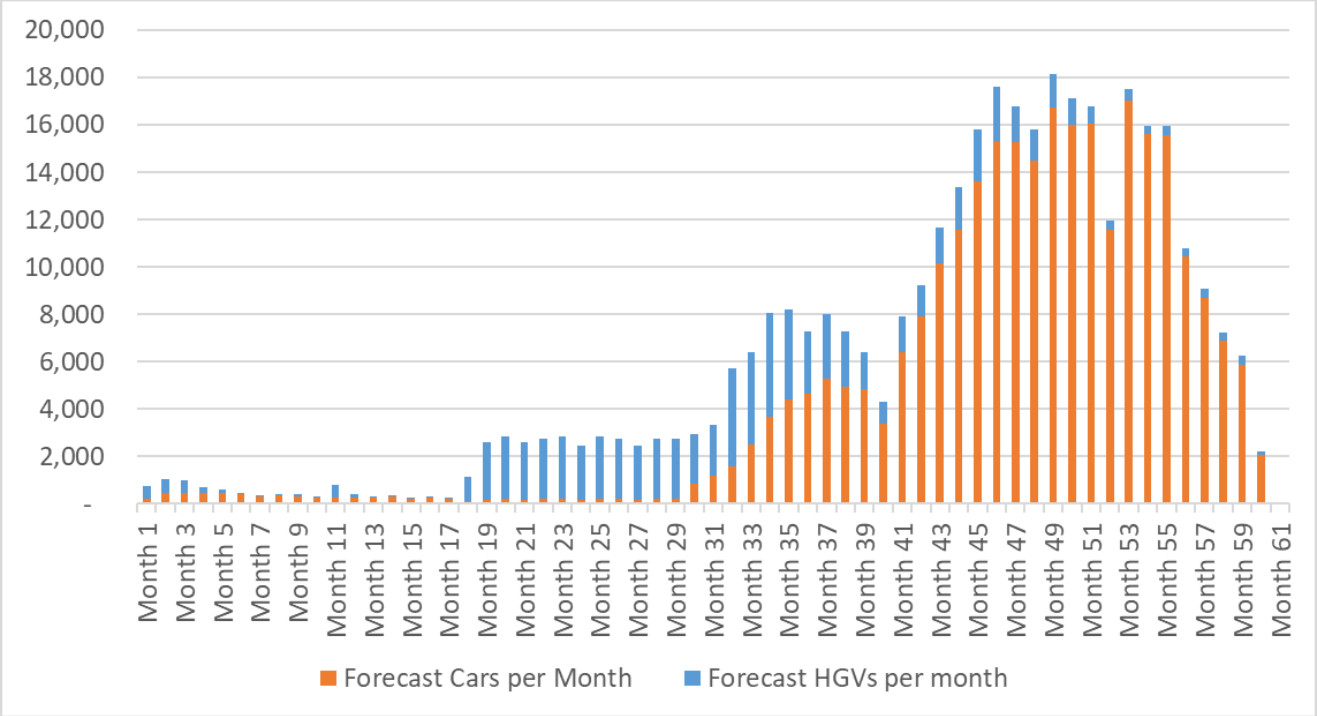


9.3. Updated construction forecasts

9.3.1. As part of the additional highways evidence, the Contractor has provided a summary of the forecast number of construction vehicles required during the construction phase of the project (see Figure 9-2). This includes HGVs (deliveries associated with the construction phase) and cars (construction personnel). These forecasts supersede the information contained within the Working Draft CTMP (Core Document K11). As per Section 5.3 of this PoE, it is acknowledged that the appeal has delayed the construction phase. Therefore, Figure 9-2 makes reference to months within the construction programme rather than specific dates as per the information contained within Core Document M3. Please note, this does not change the forecast number of construction vehicles required throughout the duration of the construction phase.

9.3.2. In Paragraph 28 of the Rule 6 PoE (Core Document O2), UWAG has made several observations in relation to the Construction Phase using the data provided in the Framework Construction Traffic Management Plan (Core Document K11). The Appellant has now provided updated construction forecasts. Therefore, the observations made by UWAG have been superseded.

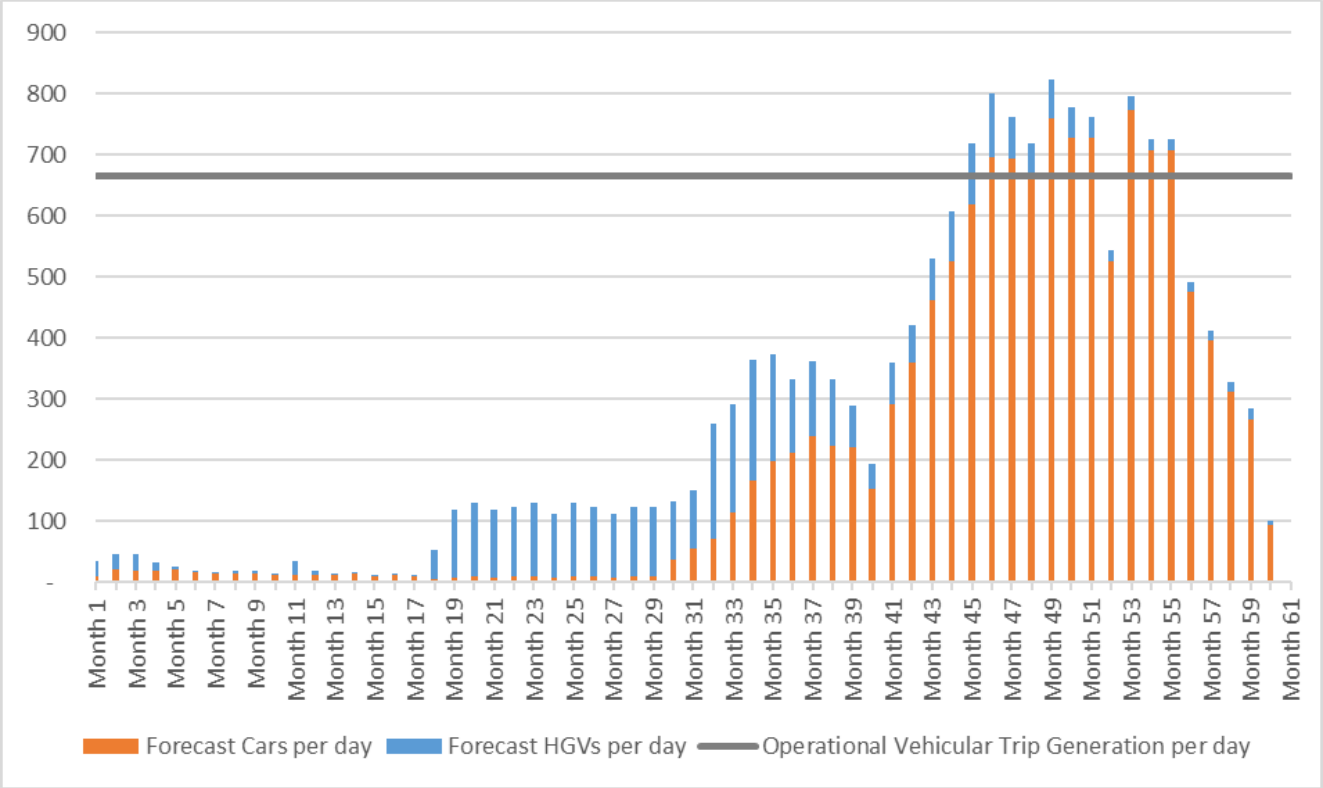
Figure 9-2 – Monthly forecast construction vehicles across construction programme



9.3.3. The revised construction forecasts presented in Figure 9-2 indicate that the number of HGVs required will peak in Month 34 at 4,376 HGVs per month. In contrast, the number of cars (staff/construction personnel) required will peak in Month 53 at 17,006 cars per month. The combined construction peak will occur in Month 49 with 18,132 total construction related vehicles per month.

9.3.4. Figure 9-3 presents the forecast number of construction vehicles required per day during the construction phase of the project. The forecast number of construction vehicles includes HGVs (deliveries associated with the construction phase) and cars (construction personnel). For comparison, the daily number of vehicles associated with the operational phase of the development (666 vehicles per day) has been included on the graph.

Figure 9-3 - Daily forecast construction vehicles across construction programme



9.3.5. Figure 9-3 demonstrates that the number of vehicles associated with the construction phase of the project will exceed the operational phase for a total 10 months during the construction programme. During the combined construction peak, the construction phase exceeds the operational phase by a total of 158 vehicles per day.

9.4. Standalone junction capacity modelling

9.4.1. As part of the additional highways evidence, the Appellant has used standalone junction capacity assessment software to model the combined construction peak (December 2027) at the following locations:

a. Moss Lane/Ulnes Walton Lane Junction;

b. School Lane/Dunkirk Lane Junction; and

c. A581/Ulnes Walton Lane Junction.

9.4.2. Traffic growth factors from TEMPro have been applied to the 2021 traffic flows contained within the TA (see Core Document A35) to establish a 2027 baseline (in line with the combined construction peak). The Appellant has assumed that all HGVs will arrive/depart the site via Ulnes Walton Lane (south) and the A581 (east) in line with the preferred construction access routes.

9.4.3. Recognising that construction personnel are likely to arrive from various origins, the Appellant has distributed construction personnel (cars) on to the local highway network using the same trip distribution presented on Figure 5-1 within the TA (see Core Document A35).

9.4.4. The results from the standalone junction capacity modelling indicate that the School Lane/Dunkirk Lane junction and the Moss Lane/Ulnes Walton Lane junction are forecast to operate within acceptable thresholds of capacity in all of the assessment scenarios. Therefore, the Appellant has demonstrated that the construction traffic during the combined peak (December 2027) could be accommodated at these locations without the requirement for mitigation.

9.4.5. However, the results from the standalone junction capacity modelling indicate that the A581/Ulnes Walton Lane junction is forecast to operate over acceptable thresholds of capacity in the AM Peak (07:00-08:00) and the PM Peak (17:00-18:00) in the '2027 Baseline + Construction' scenario. Therefore, the traffic flows associated with the combined construction peak (December 2027) have been tested using the proposed highways layout at this location.

9.4.6. The proposed highways layout at the A581/Ulnes Walton Lane junction would ensure that the junction does not operate over capacity during the construction phase of the project, and that the local highway network could accommodate the additional construction traffic during the combined construction peak.

9.4.7. As per Section 5.3 of this PoE, it is acknowledged that the appeal has delayed the forecast opening of GW2 and therefore the combined construction peak could occur in 2028. However, the analysis contained in Figure 5-3 and Figure 5-4 has demonstrated that the forecast 2028 peak hour flows are lower than the 2026 peak hour flows used in the TA. Therefore, the 2028 peak hour flows will also be lower than the 2027 peak hour flows referenced in Paragraph 9.4.2 above. This means that the results of the standalone junction capacity assessment for the construction phase are robust.

9.5. Construction Traffic Management Plan

9.5.1. As part of the additional highways evidence, the Appellant has provided a summary of the measures contained within the Working Draft Construction Traffic Management Plan (CTMP - Core Document K11). The Appellant has acknowledged that the construction phase will generate additional traffic on the local highway network and therefore the measures contained within the Working Draft CTMP (Core Document K11) will ensure that the temporary residual impact is further mitigated.

9.6. Weight restrictions

9.6.1. In Paragraph 6.1.8 of the WSP Technical Note (Core Document N2), CC has stated in reference to the 7.5t weight restriction along Ulnes Walton Lane that "*it is likely that a construction vehicle has the potential to weigh greater than 7.5t especially with full loads*".

9.6.2. LCC has confirmed that the 7.5t weight restriction along Ulnes Walton Lane does not permit vehicles heavier than 7.5t to travel along Ulnes Walton Lane unless they are required to do so for access. Therefore, HGVs associated with the construction and operational phases of GW2 will be permitted to travel along Ulnes Walton Lane. Please note that the existing HMP Garth and HMP Wymott prisons are currently served daily by HGVs which are required to use Ulnes Walton Lane for access.

10. Other matters in issue

10.1. Traffic surveys and committed development

10.1.1. The Inspector (IR 13.18) concluded that:

> *"It is common ground between the appellant and the Council that the approach to the traffic surveys is appropriate and has been validated by the LHA. It provides a suitable baseline and the TA takes into account committed development".*

10.1.2. However, there remains disagreement between UWAG and the Appellant on whether the 2019 traffic surveys form a robust basis for the assessment of the proposals or if the committed development has been properly accounted for in the assessments (see Section 3.1 in Core Document P1).

10.1.3. As per Figure 5-1 and 5-2 within this PoE, I have undertaken a traffic flow comparison at the A581/Ulnes Walton junction to compare the 2021 baseline traffic flows used in the TA (see Section 7.2.6 in Core Document A35) to the observed February 2023 traffic flows (see Section 5.2 in this PoE).

10.1.4. The analysis demonstrates that the traffic flows used to inform the assessment within the TA (factored to account for the impact of COVID-19) are higher than the observed 2023 flows. Therefore, in my expert opinion I consider the 2019 traffic surveys (used to inform the assessment within the TA) to be overly robust because the volume of traffic on the network in 2023 is lower than the 2021 scenario assessed.

10.1.5. In addition, the analysis contained within Figure 5-3 and Figure 5-4 demonstrates that the forecast 2028 peak hour flows are lower than the 2026 peak hour flows used in the TA. This demonstrates that the analysis contained within the TA is robust, and the results of the standalone junction capacity assessment contained in the TA remain valid.

10.1.6. With regards to committed development, Section 7.2.2 in the TA (Core Document A35) confirms that traffic growth factors for Chorley Local Authority were extracted from TEMPro v7.2 to factor the 2021 Baseline to 2025 and 2026. The traffic growth factors extracted from TEMPro v7.2 include committed development and background traffic growth.

10.2. Trip generation

10.2.1. The Inspector (IR 13.18) concluded that:

> *"In the operational phase, there is no dispute that the prison would generate around 1,330 trips per day from staff and visitors. This excludes ancillary traffic, such as deliveries and contractors, which could take place at any time of the day albeit trip numbers are likely to be much lower than for staff and visitors".*

10.2.2. However, there remains disagreement between UWAG and the Appellant on whether ancillary traffic, such as deliveries and contractors has been properly accounted for in the assessments (see Section 3.2 in Core Document P1).

10.2.3. The MoJ confirmed pre-application that HGVs associated with the operation of GW2 would occur throughout the day, but outside of the peak hours. It was assumed that they would account for approximately 5% of the total daily vehicle trips. This was considered in the environmental assessment submitted as part of the hybrid planning application, however it was not considered within the TA (Core Document A35) because the assessment only considered the impact during the peak hours.

10.2.4. As per Section 5.5 of this PoE, the MoJ has provided the results of a transport survey undertaken in 2023 at HMP Oakwood, a Category C Prison located in Staffordshire which opened in 2012. The transport survey quantifies the number of ancillary trips per day including 'Secure Prisoner Transport' and 'Deliveries'.

10.2.5. The survey confirmed that 14 'Secure Prisoner Transport' trips were recorded per day and 11 'Deliveries' were recorded per day. The results of the survey demonstrate that the number of ancillary trips (Secure Prisoner Transport and Deliveries) are not material in volume. In addition, the MoJ has confirmed that 'Secure Prisoner Transport' trips can occur throughout the day and 'Deliveries' occur outside of peak hours. Therefore, the analysis contained within the TA (Core Document A35) is robust.

10.3. PIA data

10.3.1. The Inspector (IR 13.21) concluded that:

> *"Data provided by the appellant shows that the surrounding road network experienced around half of the expected numbers of personal injury accidents (PIA) for the periods 2014-2018 and 2016-2020 with no noticeable difference allowing for Covid suppressed traffic movements in 2020. The appellant forecasts that PIA would only increase by 0.5 per year with the proposal in place in 2025. Therefore, this indicates that the proposal would not exacerbate any safety issues insofar as PIA is concerned".*

10.3.2. However, in Paragraph 17 of the Rule 6 PoE (Core Document O2), UWAG has provided evidence of a collision that occurred on along Ulnes Walton Lane on Wednesday 29 June 2022. Specifically, the collision is said to have occurred on the bridge over the River Lostock. The photographic evidence provided by UWAG suggests that the collision involved two cars.

10.3.3. Section 3.6 within the TA for GW2 (Core Document A35) provides a review of historic PIA data from the DfT. The PIA data covers a five-year analysis period (2016-2020) and includes the bridge over the River Lostock. I updated the PIA analysis within my original PoE (refer to Table 5-2 and Figure 5-1 in Core Document E4). The updated analysis confirmed that there has been zero recorded PIAs at the bridge over the River Lostock during the five-year analysis period.

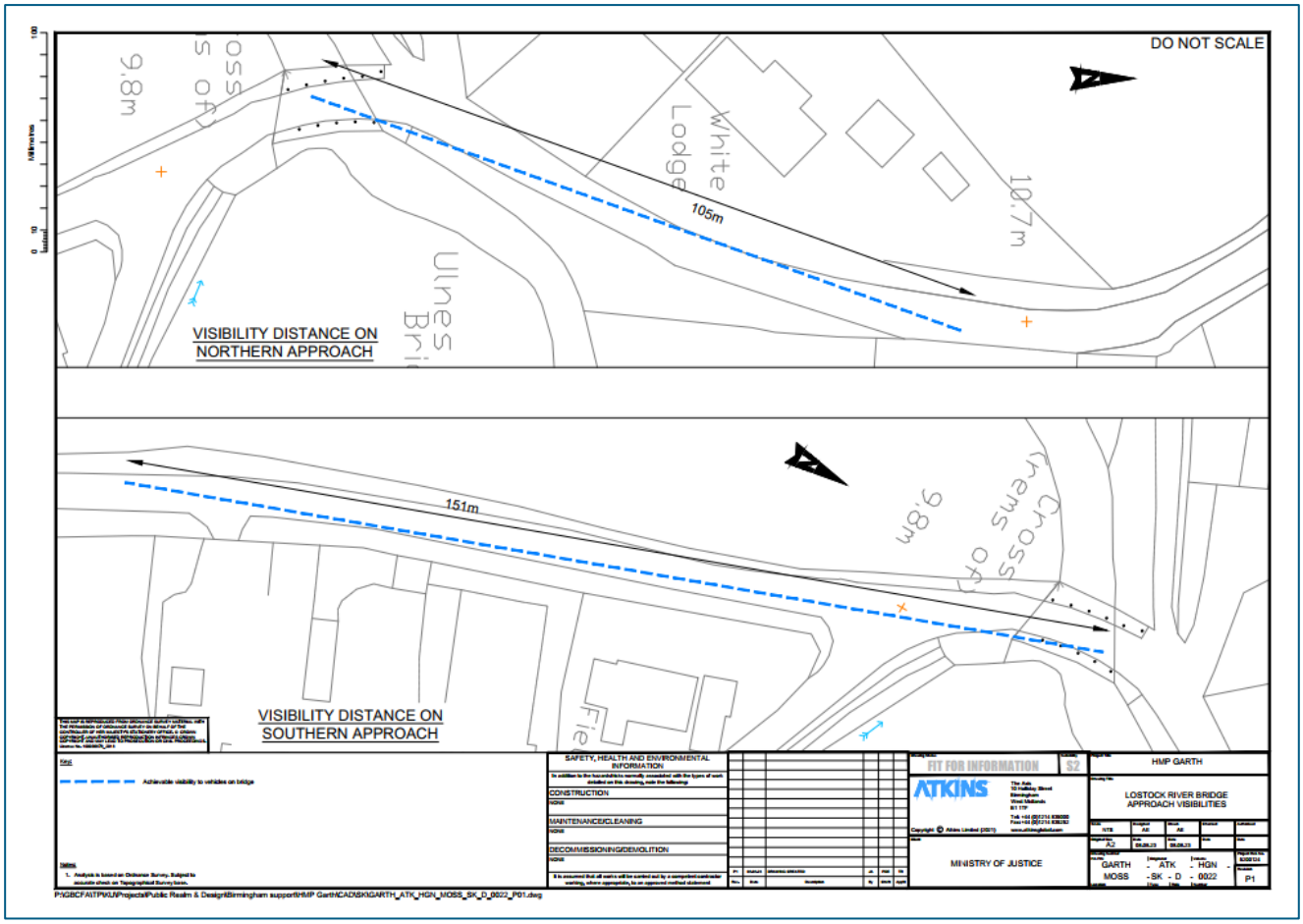
10.3.4. The DfT has not yet released PIA data for 2022 so it is not possible to verify the evidence provided by UWAG. In addition, without reviewing the causation factors it is not possible to determine if the existing highway layout is unsafe, or if the collision was a result of other external factors such as driver error, impairment or distraction, or loss of control. If I take into account the collision referenced by UWAG, then the average annual accident rate between 2016-2022 would be 0.14 PIAs per annum. Based on this value I do not believe that there is an existing highway safety issue at this location.

10.4. A581 (Bridge over River Lostock)

10.4.1. In addition to the point raised above in Paragraph 10.3.2, UWAG has suggested that the bridge over the River Lostock presents a safety issue because of the existing highway layout (see Paragraph 16 in Core Document O2).

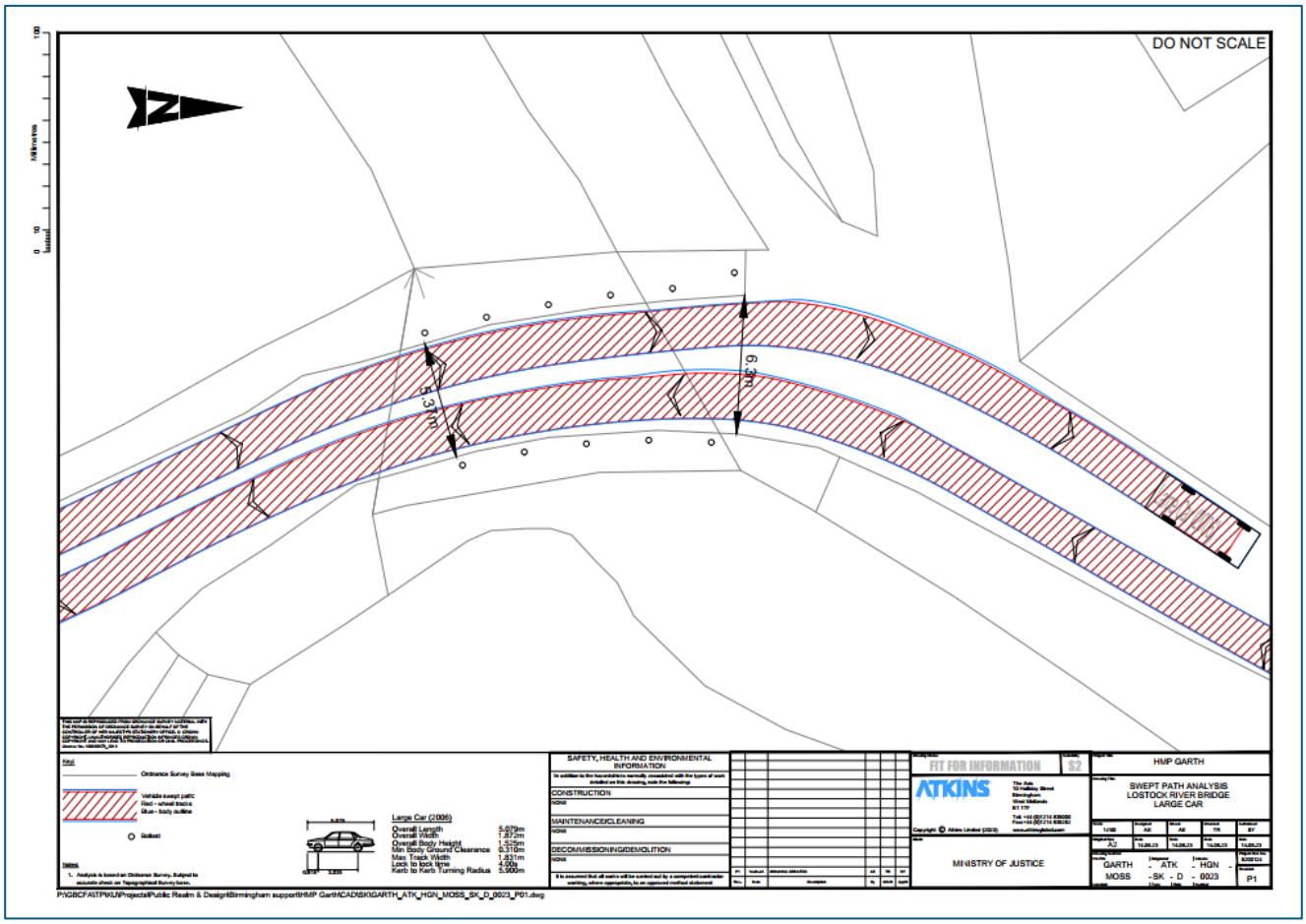
10.4.2. Further to the analysis contained within Paragraph 10.3.4, I have reviewed the existing forward visibility for vehicles approaching the bridge from the north and the south (see Figure 10-1). The analysis demonstrates that vehicles approaching from the north have a clear view of the bridge for 105m, and vehicles approaching from the south have a clear view of the bridge for 151m. These values are based on 2D plans and in reality a HGV would be able to see over the top of the existing bridge parapets due to the elevated driving position. This would further increase the forward visibility.

Figure 10-1 – Forward visibility on the approach to the River Lostock bridge



10.4.3. In addition, I have undertaken SPA to demonstrate that two large cars can safely pass over the River Lostock Bridge (see Figure 10-2).

Figure 10-2 - SPA showing two large cars passing over River Lostock Bridge



10.4.4. Therefore, in my expert opinion, I do not believe that the existing highway layout presents a safety issue because vehicles have sufficient carriageway space and forward visibility to see oncoming traffic, In addition, the PIA data demonstrates that there were zero recorded PIAs at the bridge over the River Lostock during the five-year analysis period (2016-2020).

11. Summary and conclusion

11.1. Summary of findings

11.1.1. This PoE has demonstrated:

a. That a range of policies and standards have been considered in preparing the proposed highway improvement schemes. This review sets out a clear approach to design on the local road network, with Manual for Streets used as a starting point.

b. I have provided evidence on numerous local mini roundabouts, which all include departures from guidance within their designs and continue to operate safely. This demonstrates that a failure to adhere to design guidance does not automatically equate to an unacceptable road safety impact. I have further provided examples of two previous Appeal decisions where Inspectors and the SoS have considered departures and visibility.

c. In preparing my PoE I have obtained updated traffic flow information, examining recent traffic growth NMU movements in the area.

d. The traffic calming scheme on Moss Lane has been updated to reflect the feedback from the Inspector and SoS. The revised scheme now introduces a raised table, which (based on DfT research) is amongst the most effective traffic calming schemes.

e. A revised highway scheme is also proposed along Ulnes Walton Lane, at the junction with Moss Lane. Whilst my updated NMU data shows very low levels of pedestrians in this area, a proposed footway has been introduced to provide a safe connection from Moss Lane to the northbound bus stop. Further traffic calming is included on Ulnes Walton Lane.

f. The design for a new mini roundabout has been provided for the A581/Ulnes Walton Lane junction. Mini roundabouts are widely regarded as being effective traffic calming schemes, improving road safety. The proposed scheme provides improved visibility and highway capacity when compared to the existing situation. The proposed design does have some visibility which depart from guidance. Having examined other nearby locations I have determined that the proposed design would be comparable to existing layouts. Considering the road safety benefits of the proposed scheme, and improved capacity, I do not believe that the proposed scheme would have an unacceptable impact on highway safety.

g. That the construction phase of the development can be safely accommodated on the local highway network with the introduction of the proposed mitigation scheme at the A581/Ulnes Walton Lane junction; and

h. That the Appellant has addressed the other matters in issue raised by CC and UWAG.

11.2. Conclusion

11.2.1. In my opinion, there is no evidence that GW2 would prejudice highway safety, pedestrian safety, or the free flow of traffic and therefore the proposals comply fully with Paragraph 110 in the NPPF, and BNE1 of the Chorley Local Plan 2012-2026. Furthermore, the development proposals would not have an adverse impact on highway safety, let alone an impact which could reasonably be described as “unacceptable” and therefore the proposals also comply fully with Paragraph 111 in the NPPF.

Stephen Yeates
Two Chamberlain Square
Paradise Circus
Birmingham
B3 3AX