Our Ref: 078643-CUR-XX-XX-T-TP-00008-P02

17 December 2025

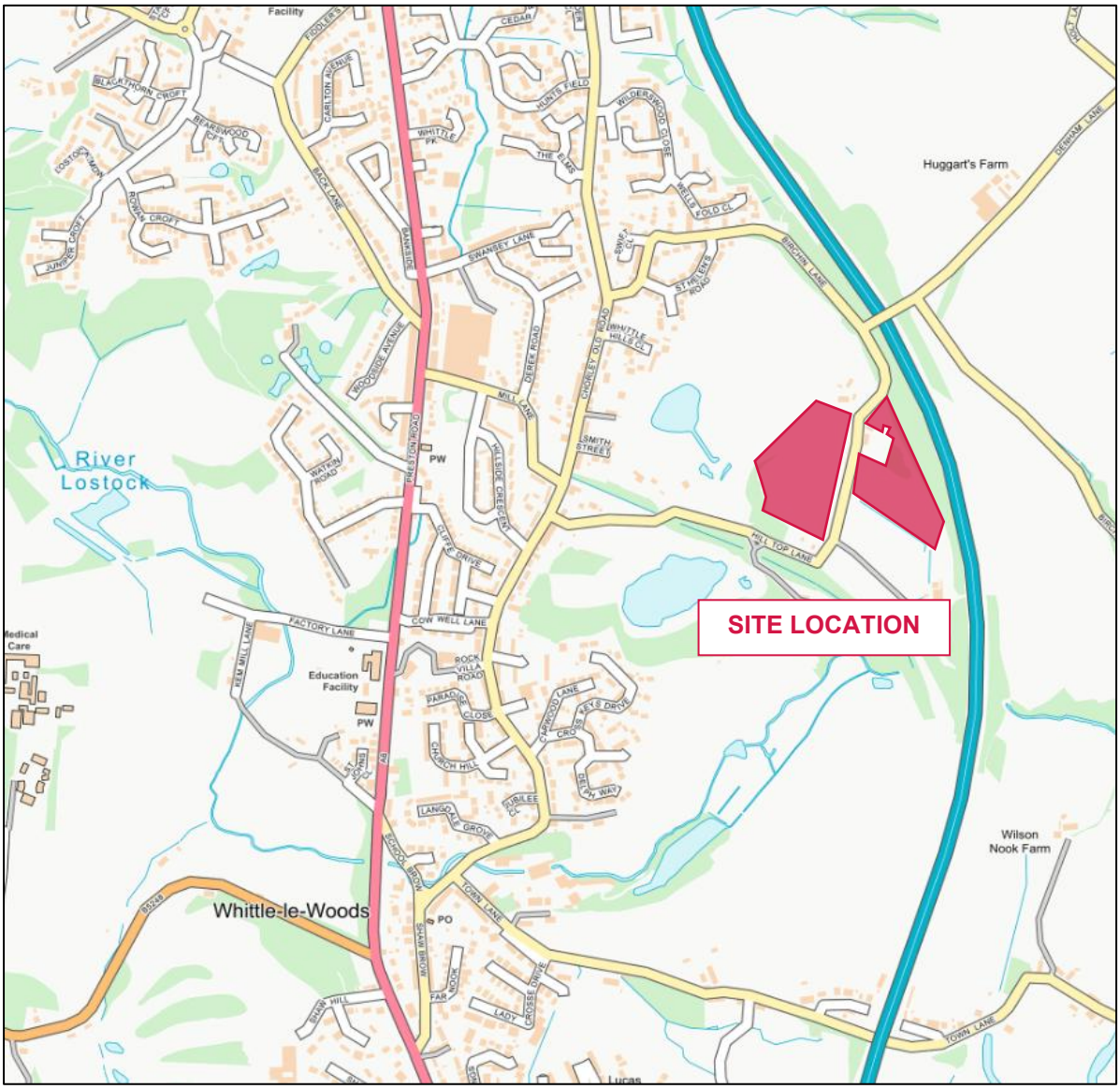
HILL TOP FARM, WHITTLE-LE-WOODS - HS2.37 (23/00727/OUT)
SUMMARY OF CURRENT HIGHWAYS POSITION

Background

Curtins have been appointed by Northern Trust Land Limited who submitted an Outline Planning Application (23/00727/OUT) in 2023 for up to 75 dwellings on Hill Top Lane, Whittle-le-Woods, Chorley.

The Hill Top Lane site is currently draft allocated under policy HS2.37 in the Central Lancashire Local Plan 2023-2041.

An indicative site location plan is shown below for ease of reference:



The planning application was supported by a Transport Assessment and Framework Travel Plan, prepared by Curtins.

National Highways Consultee Response

Following submission of the planning application in August 2023, National Highways issued a consultation response dated 28th September 2023 requesting further information before formulating a final view. A copy of the consultee response is included as **Appendix A**.

The key points highlighted by National Highways included the following;

- Clarification of the Local Plan status of the site;
- Traffic impact of the development on the Strategic Road Network; and
- Clarification of transport mode usage.

Curtins produced a Technical Note dated 3rd November 2023 in response to National Highways comments. A copy of the Technical Note is included as **Appendix B**.

The Technical Note confirmed that Chorley Council were supporting development on Safeguarded Land, provided the development is otherwise sustainable and conflicts with the Plan are outweighed by the shortfall in housing delivery. It was concluded that the site should be considered as allocated land.

The traffic impact of the proposed development on the Strategic Road Network, namely Junction 8 of the M61, was demonstrated to be negligible and would not have a material impact.

The transport mode share targets were clarified and demonstrated to be supported by the objectives contained within the submitted Framework Travel Plan.

Following submission of the Technical Note, National Highways submitted a further consultee response dated 30th April 2024 (**Appendix C**) confirming the following;

"In response to our comments on the transport assessment, Curtins have provided a technical note reference 078643-CUR-XX-XX-T-TP-00003-P01 dated 3rd November 2023.

Having considered the technical note, National Highways' opinion is that, in isolation, the proposed development would not be likely to generate a severe impact or material reduction in safety upon the SRN. However, we remain concerned over the cumulative impact of that piecemeal development such as this now coming forward outside of the Local Plan process."

Lancashire County Council Highways Consultee Response

Following submission of the planning application in August 2023, Lancashire County Council (LCC) Highways issued a consultation response dated 3rd November 2023. A copy of the consultee response is included as **Appendix D**.

The Local Highway Authority identified concerns with highway safety and sustainability.

It was noted that Hill Top Lane within the vicinity of the site does not provide any pedestrian footways and on this basis, there is no safe pedestrian or cycle access form the development site to the wider highway network.

In addition, it was noted that the junction of Birchin Lane and Chorley Old Road currently provides limited pedestrian facilities.

It was LCC Highways opinion that there is limited scope for widening of the pedestrian footway without reducing the carriageway to a single lane width and removing the availability of on street parking.

LCC Highways continued to address sustainability and concluded that Hill Top Lane would be an unattractive route due to gradient, lack of street lighting and absence of footways.

In addition, whilst more useable, the lack of pedestrian footways on Hill Top Lane and the existing parking and footways of Birchin Lane makes this route unattractive and thus fails to promote sustainability.

Curtins produced a Post Submission Response dated 23rd September 2024 in response to LCC Highways comments. A copy of the Technical Note is included as **Appendix E**.

The response confirms that a meeting was held on site with LCC Highways Officers in December 2023.

It was agreed during this meeting that a scheme to enhance pedestrian facilities at the Chorley Old Road/Birchin Lane junction was acceptable in principle, subject to a Stage 1 Road Safety Audit (RSA).

Following the positive meeting, the Stage 1 RSA for the proposed junction improvement was submitted to Chorley Council as the Planning Authority in May 2024. No insurmountable issues were raised in the RSA that could not be addressed as part of a traditional Section 278 works package.

On 21st June 2024 a second consultation response was received from LCC Highways. This was very brief and simply stated that the RSA did not resolve the comments raised in the previous response.

LCC subsequently confirmed that the RSA only addressed part of the previous consultation response, and they would require details on the full pedestrian connection between the site and Chorley Old Road.

Curtins, prepared a scheme which provides a pedestrian connection between the site and the existing footway on Birchin Lane. This is achieved by narrowing the existing carriageway to 5.5m and utilising the highway verge to provide a continuous 2m wide footway.

Following further investigation, it was established that the verge and adjacent land is available to deliver the proposed footway scheme.

Curtins continued to engage with LCC Highways following submission of the Post Submission Response and agreed that the individual site access junctions into the development sites could be realigned to discourage vehicles from travelling southbound (clockwise) along Hill Top Lane. In addition, Curtins sought to address any residual highway concerns in a second Post Submission Response dated 22nd August 2025 (**Appendix F**).

This response focussed on the existing and future arrangement along Birchin Lane between Chorley Old Road and St Helens Road.

A scheme has been developed by Curtins that seeks to rebalance the pedestrian/vehicle infrastructure along Birchin Lane. The fundamental principal of the proposed scheme is the introduction of a giveaway arrangement on Birchin Lane that formalises the current arrangement and

ensures existing/future users are aware of the constraints that restrict vehicle movements to one way only and react accordingly. This scheme is considered an improvement on the existing situation and offers safety and operational benefits to existing and future users.

In order to provide a robust evidence base and provide comfort to LCC that the risk of any conflicts will be minimal, Curtins commissioned a microsimulation model of the area to create a visual assessment of the highway scheme.

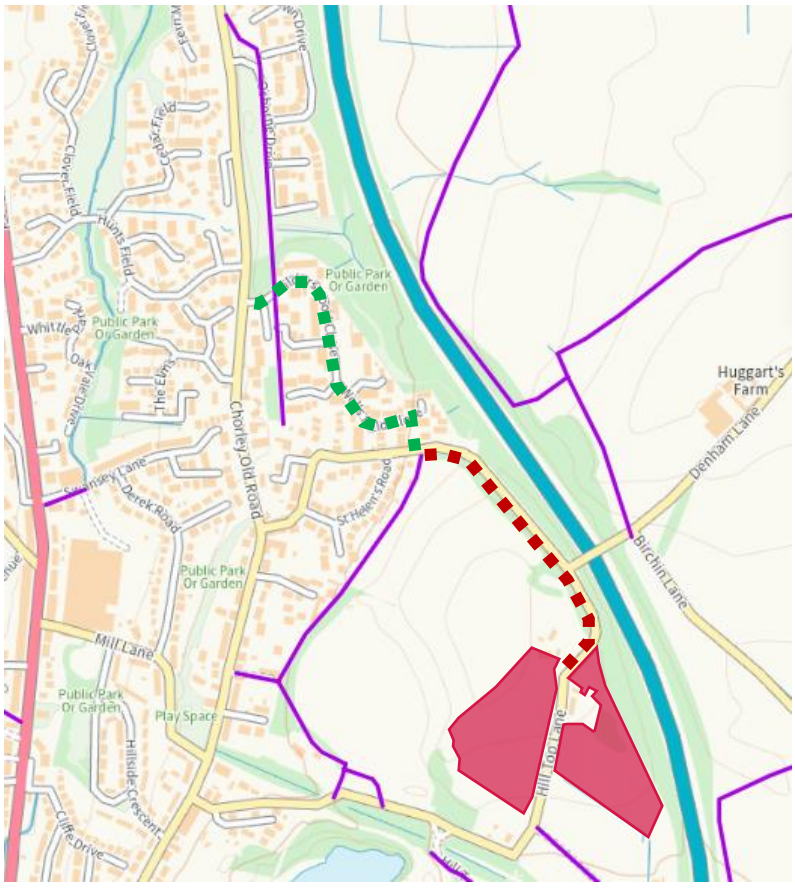
The further assessments confirmed that interaction between pedestrians and vehicles in the future would be minimal

It was ultimately concluded that the proposed highway scheme for Birchin Lane will not contribute to an existing highway safety issue and the increase in vehicle and pedestrian movements from the proposed residential development at Hill Top Farm can be safely accommodated.

Conclusions

Curtins has actively engaged with National Highways and agreed that the development of 75 dwellings on HS2.37 would not have a material impact on the operation of the Strategic Road Network.

Curtins has submitted additional information to Highway Officers at Lancashire County Council which demonstrates that sustainable connections between the site and the existing infrastructure on Birchin Lane can be delivered which would support active travel.



The Figure above confirms the extent of the proposed footway to be delivered on Hill Top Lane (dashed red) as well as the network of existing Public Rights of Way (PRoW) in the immediate vicinity of the site (purple) and alternative walking routes to reach Chorley Old Road (dashed green).

The proposed pedestrian infrastructure would connect the site to the wider area and the numerous alternative routes available to link to the surrounding highway network.

It is therefore considered that the current application will actively support sustainable travel in the future and deliver enhancements that will benefit existing and future residents in the surrounding area.

In addition to the above, Curtins has developed a scheme of enhancements at Birchin Lane and the junction with Chorley Old Road, which is supported by a Stage 1 Road Safety Audit, which will address the existing local constraints and deliver a more formal arrangement and improve safety and vehicle movement.

Curtins continue to engage with LCC Highway Officers to agree the final highway solution, however, the information which has been submitted to date confirms that a suitable highway solution can be delivered that will promote sustainable access in the future and accommodate the future traffic demand generated by 75 dwellings.

It is therefore Curtin professional opinion that the allocation would be developable in the context of highway safety and accessibility matters in terms of the definition set out in the NPPF.

[redacted] [redacted]

Curtins

Appendix A – National Highways Consultee Response – 28th September 2023

Curtins Consulting Ltd registered in England No. 2054159
Registered office: 51-55 Tithebarn Street, Liverpool, L2 2SB
Branch registered in Ireland No. 908625

National Highways Planning Response (NHPR 22-12)
Formal Recommendation to an Application for Planning Permission

From: Amy Williams - Regional Director
Operations Directorate
North West Region
National Highways
[redacted]

To: Chorley Council FAO: Daniel Power
[redacted]

CC: [redacted]

Council's Reference: 23/00727/OUT

Location: Land south of Rostock Dairy Garstang Road Barton PR3 5AA Hill Top Farm South Hill Top Lane Whittle-Le-Woods Chorley PR6 7QS.

Proposal: Outline planning application for around 75 dwellings with all matters reserved apart from access.

National Highways Ref: NH/23/02717

Referring to the consultation on a planning application dated 14th September 2023 referenced above, in the vicinity of the M61 motorway that forms part of the Strategic Road Network, notice is hereby given that National Highways' formal recommendation is that we:

~~a) offer no objection (see reasons at Annex A);~~

b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – National Highways recommended Planning Conditions & reasons);

~~c) recommend that planning permission not be granted for a specified period (see reasons at Annex A);~~

~~d) recommend that the application be refused (see reasons at Annex A)~~

Highways Act 1980 Section 175B ~~is~~/is not relevant to this application.[1]

[1] Where relevant, further information will be provided within Annex A.

This represents National Highways' formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should the Local Planning Authority not propose to determine the application in accordance with this recommendation they are required to consult the Secretary of State for Transport, as set out in the Town and Country Planning (Development Affecting Trunk Roads) Direction 2018, via transportplanning@dft.gov.uk and may not determine the application until the consultation process is complete.

The Local Planning Authority must also copy any consultation under the 2018 Direction to PlanningNW@nationalhighways.co.uk.

Signature: [redacted]	**Date:** 28th September 2023
Name: Warren Hilton **National Highways** [redacted]	**Position:** Assistant Spatial Planner

Annex A National Highways' assessment of the proposed development

National Highways has been appointed by the Secretary of State for Transport as a strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

National Highways comments on proposals

The application site is situated on land above a cutting alongside the northbound M61 created when the motorway was constructed. The site itself has a 15 metre level difference within it and so significant earthworks will be needed. The site also falls in the direction of the motorway boundary, and so surface water drainage will also be relevant.

Traffic Impacts and Transport Assessment (TA)

Firstly, the Local Plan status of the site needs to be clarified in relation the scope of the TA. The site's status is currently one of 'safeguarded land' within the current Chorley Local Plan and so may not be anticipated to come forward during the Plan period.

This is relevant to the requirements of the DfT Policy Circular 01/2022 paragraph 49 of the Circular, Footnote 21 that stipulates that assessment of unallocated sites should be based upon inclusion of committed development growth, but all Local Plan sites expected to come forward within the next three years.

As presented, the TA is also non-compliant with the requirements of paragraph 48 of Circular 01/2022, which requires that transport assessments should establish a transport vision of what the development is seeking to achieve in terms of transport mode usage and then test a set of scenarios to determine the optimum design and transport infrastructure to realise that vision. This also has relevant here given that the application refers to surrounding land being developed by other developers, and so this in in fact part of a much larger emerging housing location. Therefore, it is important that these approaches to minimising private vehicle usage and the need to travel are included and done in a coordinated way.

Geotechnical & Drainage

The development has the potential to disturb the motorway cutting earthworks adjacent to it, and so it is important that there is evidence and understanding now to support why this would not happen.

There have been a number of studies carried out for the site; the latest being the Wardell Armstrong Ground Investigation Report dated November 2022. However, whilst the report covers the development area with no consideration of its impact on the M61. Given the substantial fall in the ground level from the development site towards the motorway and the regrading needed to create a level site for development. No details of the earthworks/regrading and its potential impact on the M61 cutting slope have been provided. National Highways therefore requests this information now, as well as a slope stability analysis to include the M61 cutting slope. This evidence must accord with the principles set out within

Design Manual for Roads and Bridges standard CD622 and is also a requirement of Circular 01/2022 paragraph 54.

National Highways also has a filter drain at the top of the cutting slope, so further information is needed as to how this will be protected. We are those unsure of its precise location (whether inside or just outside of the motorway fence) and so this could be disturbed by the development and access road. We therefore request confirmation as to the position of the filter drain on site.

The site drains to the southeast to surface water currently runs towards the motorway. Our assumption therefore is that by levelling the site the strategy is to tend to keep surface water within their development site. However, the accompanying drainage report mentions that there could be problems with ground water as a result of the significant earthworks needed to address the site level difference. Whilst it is said that they are monitoring water levels to assess the risk, it is likely that additional drainage will be needed to pick up groundwater if this becomes a problem.

The presence of a proposed surface water attenuation pond in the south-east corner of the site next to the motorway might also present a risk to the motorway cutting slope. We therefore seek confirmation as to whether the development will have any exceedance measures in place or potentially telematics to warn if the pump fails or becomes blocked so that an intervention could be undertaken before levels overtop. If the intention is to discharge surface water to the ditch / watercourse at the southern end of the site and this land is outside the applicant's ownership, it would be up to the Local Lead Flood Authority to ensure that the adjacent landowner maintains that ditch – we therefore seek both clarification and confirmation as to how this would be managed.

National Highways conclusion and formal recommendation

Further information is needed to enable National Highways to form a final view on this planning application. Consequently, our formal recommendation to Chorley Council is that this application is not determined until at least 1st December 2023. This is to enable time for the additional work needed to be produced and reviewed. Should we able to provide a final view on the application before this date, the hold may be lifted earlier.

National Highways
28th September 2023

Standing advice to the local planning authority

The Climate Change Committee's 2022 Report to Parliament notes that for the UK to achieve net zero carbon status by 2050, action is needed to support a modal shift away from car travel. The NPPF supports this position, with paragraphs 73 and 105 prescribing that significant development should offer a genuine choice of transport modes, while paragraphs 104 and 110 advise that appropriate opportunities to promote walking, cycling and public transport should be taken up.

Moreover, the build clever and build efficiently criteria as set out in clause 6.1.4 of PAS2080 promote the use of low carbon materials and products, innovative design solutions and construction methods to minimise resource consumption.

These considerations should be weighed alongside any relevant Local Plan policies to ensure that planning decisions are in line with the necessary transition to net zero carbon.

Curtins

Appendix B – Curtins Technical Note – 3rd November 2023

[redacted] [redacted]

Curtins

Our Ref: 078643-CUR-XX-XX-T-TP-00003-P01

03 November 2023

Warren Hilton
Assistant Spatial Planner – Operations North West
[redacted]

Via Email Only

Re: 23/00727/OUT – Land off Hill Top Lane, Whittle-le-Woods, Chorley

Dear Warren,

This Technical Note has been prepared in relation to Highways comments from National Highways in relation to the above application.

The Technical Note sets out each comment received in italics, and Curtins' response below.

LOCAL PLAN STATUS OF THE SITE

The Local Plan status of the site needs to be clarified in relation the scope of the TA. The site's status is currently one of 'safeguarded land' within the current Chorley Local Plan and so may not be anticipated to come forward during the Plan period.

The site's status is confirmed as 'safeguarded land' under Policy BNE3, titled 'Areas of Land Safeguarded for Future Development Needs', of the Chorley Local Plan 2012-2026 Site Allocations and Development Management Policies Development Plan Document (LP). The site forms part of the area identified as BNE3.10, also known as 'West of M61, Whittle-le-Woods'.

However, Chorley Council as the Local Planning Authority (LPA) do not have a five year supply of housing land (a position tested by the Planning Inspectorate through recent appeals). As such, some policies within the adopted Plan are out-of-date and the 'tilted balance' and presumption in favour of sustainable development within the National Planning Policy Framework (NPPF) is engaged. The Planning Inspectorate's position as outlined within the respective appeal decisions is reproduced as follows:

- APP/D2320/W/22/3313413 – Land east of Charter Lane, Charnock Richard (76 affordable homes)
  - Paragraph 77: *"The delivery of housing is an undisputable benefit of the development in a Borough where the Council cannot currently demonstrate a 5-year supply. Enshrined in the Framework is the Government's objective to significantly boost the supply of housing and as such, I give this significant weight."*

- APP/D2320/W/22/3312908 – Land at Blackburn Road, Wheelton, Chorley (40 affordable homes)
  - Paragraph 17: *"In the above context, the evidence before me has drawn my attention to recent appeal decisions in Chorley, including those where planning permission previously has been granted for up to 123 dwellings at Land adjacent to Blainscough Hall, Blainscough Lane, Coppull, for up to 80 dwellings at Land to the East of Tincklers Lane, Eccleston, for up*

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to 34 dwellings at Land south of Parr Lane, Eccleston and for up to 25 dwellings at Land off Carrington Road, Adlington. Following those appeal decisions including the developments subject of Inquiries at Blainscough Lane, Coppull and Tincklers Lane, Eccleston, it is not a matter of dispute between the main parties that Policy 4 of the Central Lancashire Core Strategy (CS) is since its adoption including a different method for calculating local housing need. I have no reason to take a different view. Furthermore, even if I were to accept the stated Council position of a 3.3 year deliverable supply of housing based on a local housing need calculation of 569 dwellings per annum (following the standard method set out in paragraph 74 of the Framework and Planning Practice Guidance) rather than the deliverable supply of between 2.4 and 2.56 years identified by previous Inspectors, the shortfall in supply remains significant and clearly below five years. It follows that as I have found Policy 4 of the CS to be out of date and that the Council cannot demonstrate a five-year supply of deliverable housing sites that the 'tilted balance' in the Framework is to be applied which I necessarily return to later in my decision. more than five years old and is out of date due to changes to national policy."

On a local level, the following excerpt is also taken from the Council's Officer Report in respect of residential application 22/01142/OUTMAJ (Land South East of 33 Town Lane, Whittle-le-Woods, comprising up to 250 no. dwellings):

"Members will be aware of the current shortfall in housing delivery in the Borough and that this has resulted in the most important policies for the determination of this application being out-of-date, which triggers the engagement of the tilted balance of paragraph 11d of the [National Planning Policy] Framework.

Whilst the conflicts with policies BNE10 (tree loss) and BNE3 (safeguarded land) of the Chorley Local Plan 2012-2026 [sic], it is considered that these issues would not significantly and demonstrably outweigh the benefits of the proposal in delivering much needed housing in the borough. The proposal is therefore recommended for approval."

As a result of the above, Chorley Council are at this point in time supporting development on Safeguarded Land, provided the development is otherwise sustainable and conflicts with the Plan are outweighed by the shortfall in housing delivery.

It is also worth noting that, whilst not adopted, a new Local Plan (known as the Central Lancashire Local Plan) for the three Authorities of Chorley, Preston and South Ribble is being prepared to cover the period to 2038. Within the Preferred Options Consultation document, under 'Chorley Site Profiles', the site is identified under Site Profile 40 (allocation reference: CH/HS1.51) as being selected as a preferred option for proposed housing allocation.

On this basis, it can be concluded that the site should be considered as allocated land.

IMPACT OF DEVELOPMENT ON THE STRATEGIC ROAD NETWORK (SRN)

This is relevant to the requirements of the DfT Policy Circular 01/2022 paragraph 49 of the Circular, Footnote 21 that stipulates that assessment of unallocated sites should be based upon inclusion of committed development growth, but all Local Plan sites expected to come forward within the next three years.

Whilst Curtins acknowledges the DFT Circular, building on the above evidence from recent appeal decisions, Chorley Council's position on developments recommended for approval, and the emerging

Central Lancashire Local Plan, we do not believe its application is necessary in this instance considering that the site should be viewed as allocated land.

Further to the above, we are of the firm view that the proposed development is modest in scale and would not have a severe impact on the SRN. Based on the trip generation agreed with Lancashire County Council (LCC) Highways using LCC trip rates (which are more robust than average trip rates) the 75 dwellings would only generate 44 and 50 two-way trips in the AM and PM peak respectively, shown in **Table 1** below:

Time Period	Average Trip Rates – C3 (per dwelling)			Average Trip Generation – C3 (75 dwellings)		
	Arrive	Depart	Total	Arrive	Depart	Total
AM (08:00 – 09:00)	0.140	0.455	0.595	11	34	44
PM (17:00 – 18:00)	0.437	0.226	0.663	33	17	50

Table Error! No text of specified style in document.1 –Trip Rates and Trip Generation (75 dwellings)

Subsequently, using trip distribution based on journey to work data from the 2011 Census, it was observed that 25% of trips to and from the site would be directed from the A6 Preston Road to the south of the site, at the junction where the A6 Preston Road meets Shaw Brow. This equates to c. 11 and 12 two-way trips in the AM and PM peaks respectively.

It is noted that since the Transport Assessment (TA) was submitted, initial data from the 2021 Census has been published at the time of writing, although the Journey to Work breakdown is contained within a Topic Summary (TS061 – Method used to travel to work) rather than detailed origin – destination data (WU03EW – Location of usual residence and place of work by method of travel to work (MSOA level), which has been used in the 2011 Census).

As such, data from the 2021 Census has not been included as it is only a high-level overview without the option to filter by location of usual residence, as it has not been confirmed whether the geography filter relates to the place of residence or if it is the place of work. Census Day also took place on March 2021 when there was rapid change due to the COVID-19 pandemic response, as such the data that has been gathered may not be entirely representative of the existing situation at the site at the time of writing.

Data from the 2011 Census remains the most up-to-date information.

The A6 / Shaw Brow junction is still circa 1.25 miles from the Strategic Road Network (SRN) (M61 Junction 8), and these trips travelling to and from the south are likely to be split between Chorley and the M61. The actual number of trips reaching Junction 8 is predicted to be less than 10 two-way trips in both of the peak periods identified.

If a costly and time intensive modelling exercise was undertaken, the results would clearly show no material impact on any of the modelling metrics as a result of less than 10 additional trips during the AM and PM peak hours. This level of traffic is considered negligible in the context of the thousands of trips through Junction 8 in the peak periods.

Finally, it is understood that major improvements are already planned at Junction 8 as a result of the Botany Bay development. These works are currently being designed by LCC/National Highways and are therefore at a reasonably advanced stage.

TRANSPORT MODE USAGE

As presented, the TA is also non-compliant with the requirements of paragraph 48 of Circular 01/2022, which requires that transport assessments should establish a transport vision of what the development is seeking to achieve in terms of transport mode usage and then test a set of scenarios to determine the optimum design and transport infrastructure to realise that vision. This also has relevant here given that the application refers to surrounding land being developed by other developers, and so this in in fact part of a much larger emerging housing location. Therefore, it is important that these approaches to minimising private vehicle usage and the need to travel are included and done in a coordinated way.

The Transport Assessment (TA) already provides details regarding the anticipated trip generation and mode of travel. This is based on journey to work data and mode split data from the 2011 Census for the surrounding area as reproduced in **Table 2** below, and is considered an appropriate baseline position.

Mode of Travel to Work	Chorley 003	Chorley 004	Total	Average Percentage
Work mainly at or from home	0	0	0	0%
Underground, metro, light rail or tram	5	2	7	0%
Train	59	84	143	2%
Bus, minibus, or coach	93	94	187	3%
Taxi	3	7	10	0%
Motorcycle, scooter or moped	41	17	58	1%
Driving a car or van	3,050	2,856	5,906	83%
Passenger in a car or van	210	170	380	5%
Bicycle	71	41	112	2%
On foot	166	122	288	4%
Other method of travel to work	9	3	12	0%
Total	**3,707**	**3,396**	**7,103**	**100%**

Table 2 – 2011 Census Method of Travel to Work

The proposals seek to offer betterment on this position and the submitted Framework Travel Plan sets out a vision to reduce single occupancy car trips from 83% to 78%.

This will be achieved by encouraging sustainable modes of travel and minimising the need to travel via an extensive package of measures. Full details of the measures are set out in the Framework Travel Plan, however in summary they include:

- Appointment of a Travel Plan Coordinator (TPC);
- Welcome Packs to be supplied to all residents at the development, comprising links to LCC's Active Travel website, details of journey planning websites and tools, maps showing local walking / cycling routes and places of interest, information on local cycle shops, and details of the dedicated TPC;

- Providing adequate lighting, landscaping and shelter to create a safe and pleasant pedestrian environment within the site;
- Provision of signage to cycle routes in the vicinity of the site (i.e. to the link to National Cycle Network (NCN) Route 55 or to the Leeds and Liverpool Canal towpath); and
- Promoting car sharing informally and via online car share databases.

The appointment of a TPC represents the commitment to implementing the above measures, alongside sufficient follow-up actions such as surveying residents annually to establish the effectiveness of the Travel Plan measures, and recording the progression of the Travel Plan in a monitoring report for circulation to Highways Officers at LCC over a period of five years.

We trust the above information is sufficient to address National Highways' comments.

Yours sincerely,

[redacted]

Alex Vogt
Board Director
For and on behalf of
Curtins Consulting Ltd

Curtins

Appendix C – National Highways Consultee Response – 30th April 2024

National Highways Planning Response (NHPR 22-12)
Formal Recommendation to an Application for Planning Permission

From: Amy Williams - Regional Director
Operations Directorate
North West Region
National Highways
[redacted]

To: Chorley Council FAO: Daniel Power
[redacted]

CC: [redacted]

Council's Reference: 23/00727/OUT

Location: Hill Top Farm South Hill Top Lane Whittle-Le-Woods Chorley PR6 7QS

Proposal: Outline planning application for around 75 dwellings with all matters reserved apart from access.

National Highways Ref: NH/23/02717

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~~a) offer no objection (see reasons at Annex A);~~

b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – National Highways recommended Planning Conditions & reasons);

~~c) recommend that planning permission not be granted for a specified period (see reasons at Annex A);~~

~~d) recommend that the application be refused (see reasons at Annex A)~~

Highways Act 1980 Section 175B ~~is~~/is not relevant to this application.[1]

This represents National Highways' formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

[1] Where relevant, further information will be provided within Annex A.

Should the Local Planning Authority not propose to determine the application in accordance with this recommendation they are required to consult the Secretary of State for Transport, as set out in the Town and Country Planning (Development Affecting Trunk Roads) Direction 2018, via transportplanning@dft.gov.uk and may not determine the application until the consultation process is complete.

The Local Planning Authority must also copy any consultation under the 2018 Direction to [redacted]

Signature: [redacted]	**Date:** 30th April 2024
Name: Warren Hilton	**Position:** Assistant Spatial Planner
National Highways	
9th Floor, Piccadilly Gate, Store Street, Manchester M1 2WD	

Annex A National Highways' assessment of the proposed development

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Firstly, the Local Plan status of the site needs to be clarified in relation the scope of the TA. The site's status is currently one of 'safeguarded land' within the current Chorley Local Plan and so may not be anticipated to come forward during the Plan period.

This is relevant to the requirements of the DfT Policy Circular 01/2022 paragraph 49 of the Circular, Footnote 21 that stipulates that assessment of unallocated sites should be based upon inclusion of committed development growth, but all Local Plan sites expected to come forward within the next three years.

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Geotechnical & Drainage

The development has the potential to disturb the motorway cutting earthworks adjacent to it, and so it is important that there is evidence and understanding now to support why this would not happen.

There have been a number of studies carried out for the site; the latest being the Wardell Armstrong Ground Investigation Report dated November 2022. However, the report covers the development area with no consideration of its impact on the M61. Given the substantial fall in the ground level from the development site towards the motorway and the regrading needed to create a level site for development. No details of the earthworks/regrading and its potential impact on the M61 cutting slope have been provided. National Highways therefore requests this information now, as well as a slope stability analysis to include the M61 cutting slope. This evidence must accord with the principles set out within Design Manual for Roads

and Bridges standard CD622 and is also a requirement of Circular 01/2022 paragraph 54.

National Highways also has a filter drain at the top of the cutting slope, so further information is needed as to how this will be protected. We are those unsure of its precise location (whether inside or just outside of the motorway fence) and so this could be disturbed by the development and access road. We therefore request confirmation as to the position of the filter drain on site.

The site drains to the southeast to surface water currently runs towards the motorway. Our assumption therefore is that by levelling the site the strategy is to tend to keep surface water within their development site. However, the accompanying drainage report mentions that there could be problems with ground water as a result of the significant earthworks needed to address the site level difference. Whilst it is said that they are monitoring water levels to assess the risk, it is likely that additional drainage will be needed to pick up groundwater if this becomes a problem.

The presence of a proposed surface water attenuation pond in the south-east corner of the site next to the motorway might also present a risk to the motorway cutting slope. We therefore seek confirmation as to whether the development will have any exceedance measures in place or potentially telematics to warn if the pump fails or becomes blocked so that an intervention could be undertaken before levels overtop. If the intention is to discharge surface water to the ditch / watercourse at the southern end of the site and this land is outside the applicant's ownership, it would be up to the Local Lead Flood Authority to ensure that the adjacent landowner maintains that ditch – we therefore seek both clarification and confirmation as to how this would be managed.

National Highways comments – November 2023

Traffic Impacts

In response to our comments on the transport assessment, Curtins have provided a technical note reference 078643-CUR-XX-XX-T-TP-00003-P01 dated 3rd November 2023.

Having considered the technical note, National Highways' opinion is that, in isolation, the proposed development would not be likely to generate a severe impact or material reduction in safety upon the SRN. However, we remain concerned over the cumulative impact of that piecemeal development such as this now coming forward outside of the Local Plan process.

Geotechnical and Drainage

National Highways notes the recent addition of a Ground Investigation report by Northern Trust, but in no way does this report either add any further information than that offered initially within the application; nor does it actually contain any information to address the matter of demonstrating that the stability of the motorway cutting slope will not be disturbed as a result of the development. The report acknowledges the potential however and the need for a slope stability assessment to be produced and agreed with us, and the details of this will be influenced by the extent of the site regrading that is not known at this time (paragraphs 6.6.7 and 6.6.8).

The only alternative approach would be for this detail to be agreed as part of the planning condition. However, the applicant would be carrying a significant risk there in that the

development may not proceed at all / may have to be reduced in order to attempt to discharge the condition. All parties should be aware that National Highways will be vigorous in ensuring that the requirements of DMRB standard CD622 are applied in the preparation of any supporting information pending any agreement of the proposals from this perspective.

In terms of drainage however, we do require more detail at this stage. Whilst we do not expect the applicant to commit to providing a detailed design at this stage, we do expect them to be able to commit to confirming the location of the filter drain, evidence what consideration has been given to exceedance measures and a review of the groundwater situation ahead of the design, so continue to require this information at this stage.

National Highways comments – April 2024
In response to our comments on geotechnical matters and the stability of the motorway cutting slope, we are in receipt of a slope stability assessment carried out on behalf of the applicant by WardellArmstrong (WA) dated April 2024.

We have considered this report. Paragraph 6.1.4 states that "The findings of this report are based a number of assumptions, and it is therefore not intended to be used as detailed stability risk assessment, but rather a preliminary risk assessment for the development".

Paragraph 6.15 then goes on to say that "We recommend that prior to detailed design, additional targeted ground investigation is undertaken to facilitate the completion of a detailed slope stability assessment".

On the basis of these two statements and the report we are content to accept at this stage that the development should not lead to any undue impact upon the stability of the motorway cutting slope. However, and as acknowledged by WA, this matter will need to be investigated further. In the interests of not delaying this application further, this is not a matter that will need to be dealt with via a planning condition; any outcomes impacting on the development being entirely at the applicant's risk.

This philosophy also applies to the points above raised in relation to drainage – given that we have not received the required information and assurances from the applicant, these maters will not need to be resolved via planning condition with any outcome being at the applicant's risk.

National Highways conclusion and formal recommendation
National Highways' formal recommendation to Chorley Council is that the following conditions be applied at any grant of planning approval:

1. No development shall commence until:

   (a) a plan showing the alignment and elevational treatment of a close-boarded fence of not less than two metres in height to be erected along the eastern boundary of the development site (or at least one metre from any part of the existing Motorway fence where the boundary lies within one metre of this) including details of its future management and maintenance in perpetuity, has been submitted to and agreed in

writing by the Local Planning Authority (in consultation with the Highway Authority for the M61 motorway and

(b) the fence approved by part (a) of this condition has been erected in accordance with the agreed details.

Thereafter, the fence shall remain in situ and only be repaired or replaced in accordance with the requirements of this condition.

Reason: For reasons of safety, liability and maintenance in accordance with paragraph 57 DfT Circular 01/2022.

2. Prior to the commencement of development, full details of new drainage and its location shall be submitted to and approved in writing the Local Planning Authority (in consultation with the Highway Authority for the M61 motorway. The development shall thereafter be undertaken in strict accordance with the approved details prior to the first occupation of the development hereby permitted and retained in accordance with the agreed specification. No surface water shall be permitted to run off from the development hereby permitted on to the Strategic Road Network or into any drainage system connected to the Strategic Road Network. No drainage connections from any part of development hereby permitted may be made to any Strategic Road Network drainage systems.

   Reason: In the interest of the safe and efficient operation of the Strategic Road Network, and to protect the integrity of the Trunk Road drainage asset in accordance with DfT Circular 01/2022.

3. Prior to the commencement of any excavation works and landscaping works, geotechnical submissions shall be submitted to and agreed in writing by the Local Planning Authority (in consultation with the Highway Authority for the M61 motorway.

   Reason: To mitigate any adverse impact from the development on the M61 motorway in accordance with DfT Circular 01/2022.

National Highways
30th April 2024

Standing advice to the local planning authority

The Climate Change Committee's 2022 Report to Parliament notes that for the UK to achieve net zero carbon status by 2050, action is needed to support a modal shift away from car travel. The NPPF supports this position, with paragraphs 74 and 109 prescribing that significant development should offer a genuine choice of transport modes, while paragraphs 108 and 114 advise that appropriate opportunities to promote walking, cycling and public transport should be taken up.

Moreover, the build clever and build efficiently criteria as set out in clause 6.1.4 of PAS2080 promote the use of low carbon materials and products, innovative design solutions and construction methods to minimise resource consumption.

These considerations should be weighed alongside any relevant Local Plan policies to ensure that planning decisions are in line with the necessary transition to net zero carbon.

Curtins

Appendix D – Lancashire County Council Consultee Response – 3rd November 2023

Lancashire County Council

Chorley Council,
Civic offices
Union Street,
Chorley
PR7 1AL

Phone: 0300 123 6780
Email: [redacted]
Your ref: 23/00727/OUT
Our ref: D9.23.00727.OUT
Date: 3rd November 2023

For the attention of Daniel Power.

Proposal:	Outline planning application for around 75 dwellings with all matters reserved apart from access.
Location:	Hill Top Farm South Hill Top Lane Whittle-Le-Woods Chorley PR6 7QS

With regard to your letter dated the 14th September 2023.

The site was visited on the 4th October 2023 between 1:30pm & 4:00pm, 10th October 2023 between 4:30pm & 5:30pm and 2nd November 2023 between 8:00 am & 8:30am.

I refer to the above planning application and would like to thank you for the opportunity to provide comments. Lancashire County Council (LCC) as the Local Highway Authority (LHA) is responsible for providing and maintain a safe and reliable highway network. With this in mind, the present and proposed highway systems have been considered and areas of concern that potentially could cause problems for the public, cyclists, public transport, motorists, and other vehicles in and around the area have been identified.

LCC embraces appropriate development within Lancashire in line with local and national policies / frameworks and that, which is emerging. This involves working closely with planning authorities, in this case officers of Chorley Council, developers and their representatives. This approach supports the delivery of high quality, sustainable development and an appropriate scale of development that can be accommodated both locally and strategically.

Summary

LCC Highways is of the opinion that as proposed, the outline planning application for around 75 dwellings with all matters reserved apart from access will have a detrimental impact on highway safety in the immediate vicinity of the site and should be refused on highway safety and sustainability issues as detailed within this report.

Introduction

The proposed development site is adjacent to Hill Top Lane with approximately half on a parcel of land east of Hill Top Lane and west of the M61 and the other half west of Hill Top Lane. Hill Top Lane is an unclassified road which is part of the adopted highway network and has a speed limit of 60mph (national speed limit). There are no pedestrian footways on Hill Top Lane within the vicinity of the proposed development. The

proposed development is situated at or close to the top of Hill Top Lane which is approximately 35 – 40 metres higher in elevation when compared to the elevation of Chorley Old Road.

Development Proposal

The proposed development is an outline planning application for up to 75 dwellings with only access applied for and all other matters reserved. Part of the internal layout has been considered by LCC Highways. This is because it is proposed to alter Hill Top Lane's alignment and as such is considered part of the access which is applied for.

The development proposes vehicular, pedestrian and cycle access via Hill Top Lane.

Highway Safety

The recorded collision history for the most recent five year periods on LCC's internal mapping system "Mapzone" and Crashmap were assessed on the 2nd November 2023. From this assessment no recorded collisions were found on Hill Top Lane. A single collision recorded as serious was found on Chorley Old Road approximately 70 metres south of the junction with Hill Top Lane.

As currently proposed within the red edge boundary, there is no safe pedestrian or cycle access from the development site to the wider highway network. Pedestrians would need to join the carriageway of Hill Top Lane which in LCC Highways is unacceptable due to the poor forward visibility of Hill Top Lane in parts. Travelling south along Hill Top Lane the carriageway is narrow and has no passing places, this does not change until reaching the entrance to the currently disused quarry. Travelling westwards along Hill Top Lane the carriageway is sufficiently wide enough to allow vehicles to safely pass each other. There is no footway on either side of this section of Hill Top Lane, a pedestrian footway is only present once Birchin Lane is reached.

Birchin Lane is a residential road with footways on both sides, from LCC Highways observations on all three of the site visits on street parking was present on Birchin Lane. At points, this on street parking resulted in cars straddling the footways as well as the carriageway thus reducing the effective width of the footways. The junction of Birchin Lane and Chorley Old Road has a substantially poor existing pedestrian footway. It is LCC Highways opinion that there is no scope for widening of the pedestrian footway without reducing the carriageway to a single lane width and removing the availability of on street parking. As this junction provides access to and from Birchin Lane a reduction to a single lane width is not acceptable in LCC Highways opinion.

Due to the matters raised above it is LCC Highways opinion that as proposed, the development does not propose a safe access for pedestrians or cyclists. Therefore, it is LCC Highways opinion that the application should be refused on highway safety grounds.

Sustainable Transport

As proposed it is LCC Highways opinion that the proposals do not sufficiently promote sustainable transport. It is an obligation on all developments as set out in the National

Planning Policy Framework (NPPF) 2021 to promote sustainable development of which promoting sustainable transport is a component.

Travelling to and from the development using Hilltop Lane to its junction with Chorley Old Road is a very unattractive route in LCC Highways opinion and would discourage users of the proposals from travelling in a sustainable manner. This is due to the gradient of Hill Top Lane in sections, its lack of street lighting, the absence of footways and the existing drainage of adjacent fields onto Hill Top Lane.

Travelling to and from the development site using Hill Top Lane, onto Birchin Lane and then Chorley Old Road, whilst more useable is still unattractive in LCC Highways opinion. The lack of pedestrian footways on Hill Top Lane and the existing parking and footways of Birchin Lane makes this route unattractive and thus fails to promote sustainability.

Conclusion

In conclusion it is LCC Highways opinion that as submitted the application does not promote a safe or sustainable access for pedestrians or cyclists for the reasons covered in this report. Therefore, unless the applicant is able to address the matters raised in this report the application should be refused on highway safety and sustainability grounds.

If you have any questions, please do not hesitate to contact me.

Yours sincerely

Callum Torrans
Highway Development Control

Curtins

Appendix E – Curtins Post Submission Response – 23rd September 2024

[redacted]

[redacted]com

Curtins

Our Ref: 078643/AV/180924

23 September 2024

Mr Callum Torrans

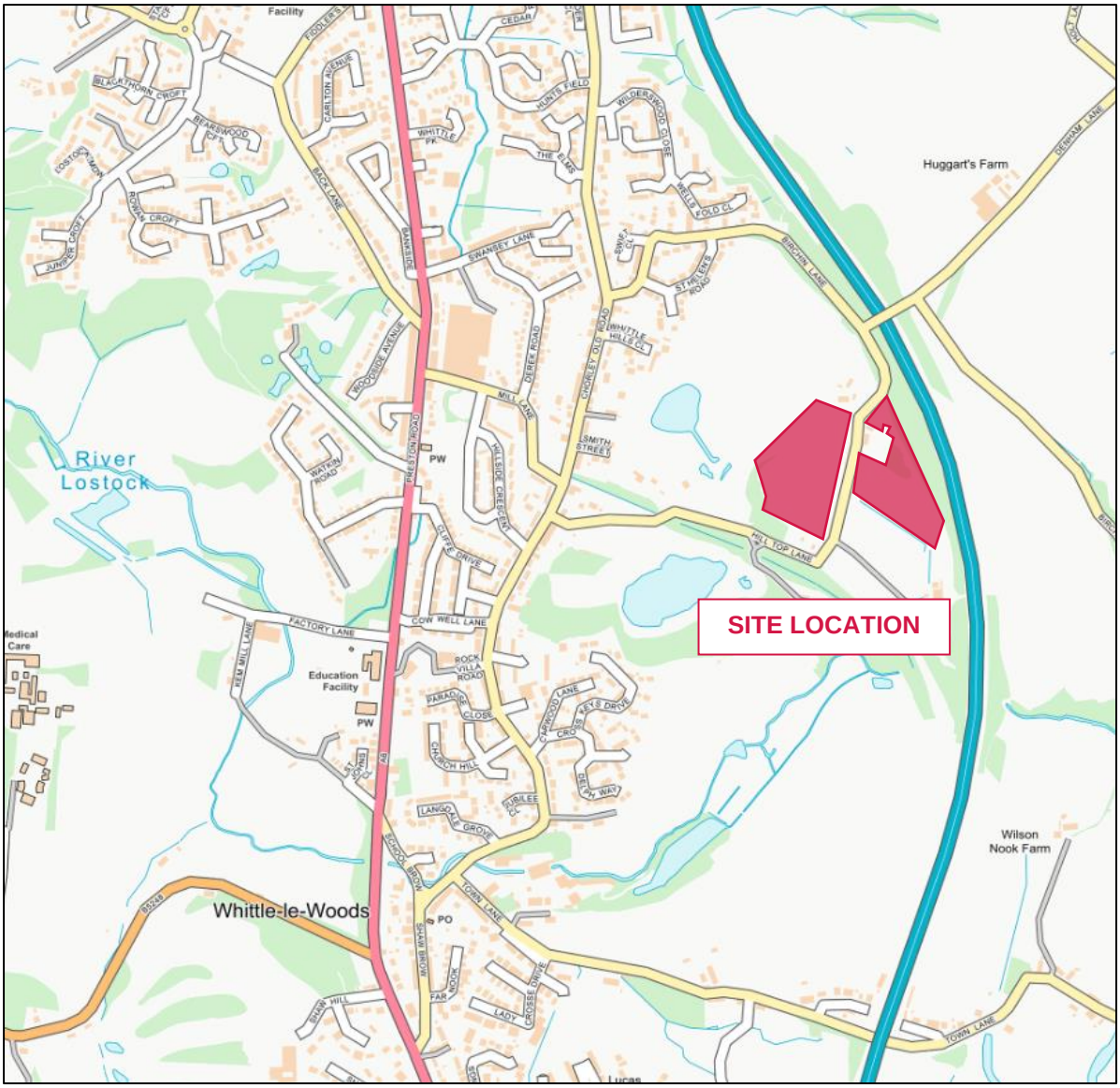
Via Email Only

Re: HILL TOP FARM SOUTH, WHITTLE-LE-WOODS (23/00727/OUT) - HIGHWAYS POST SUBMISSION RESPONSE

Dear Mr Torrans,

As you will be aware, Northern Trust submitted an Outline Planning Application (23/00727/OUT) in 2023 for circa 75 dwellings on Hill Top Lane, Whittle-le-Woods, Chorley.

An indicative site location plan is shown below for ease of reference:



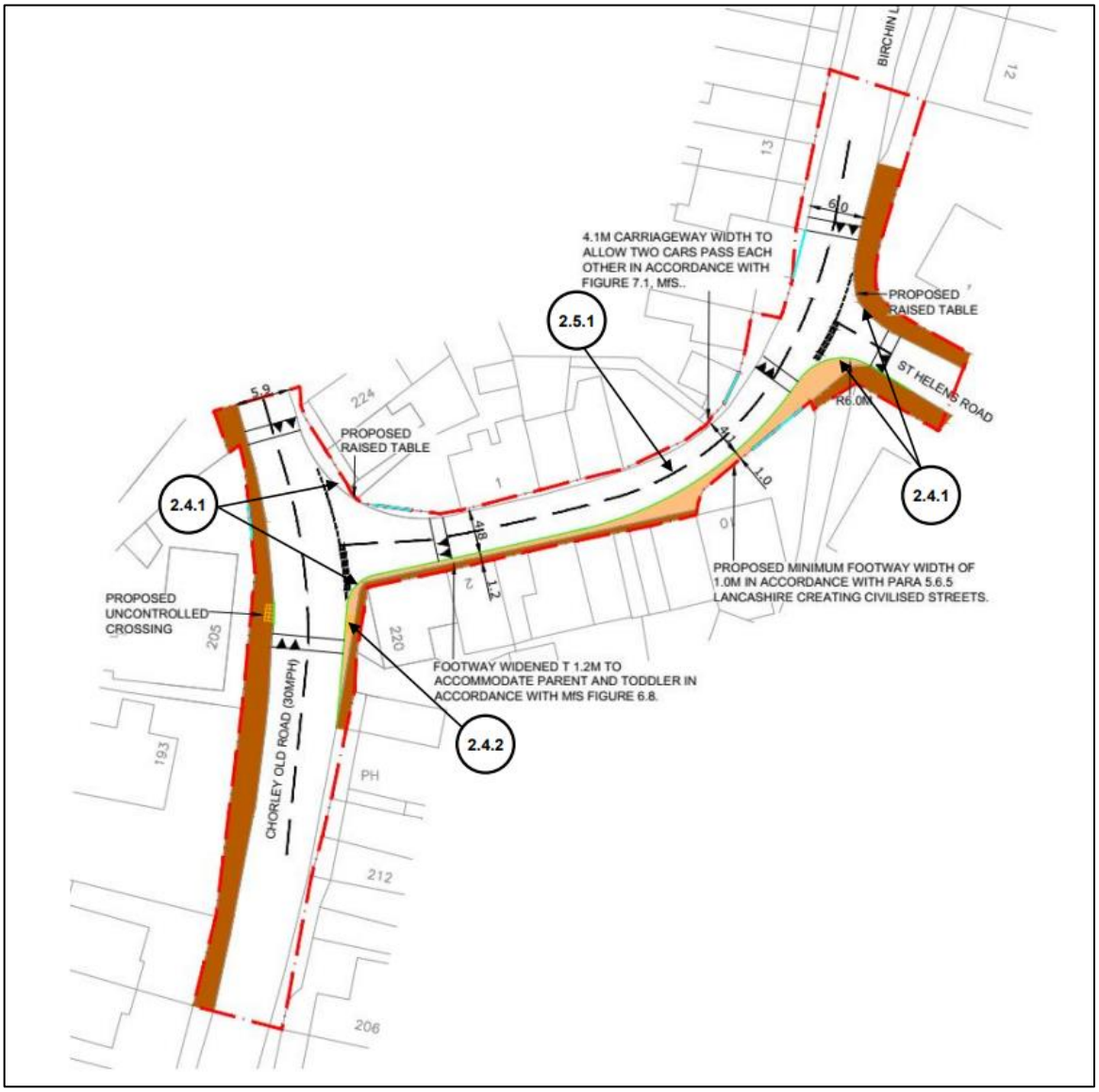
Since then, numerous discussions have taken place between Curtins and Lancashire County Council (LCC) Highways and a summary of this is provided below.

Background

LCC Highways provided an initial consultation response on the 3rd November 2023 and this stated that LCC Highways could not support the application at the current time due to highway safety and sustainability issues, predominantly focused on the lack of pedestrian connectivity between the site and Chorley Old Road.

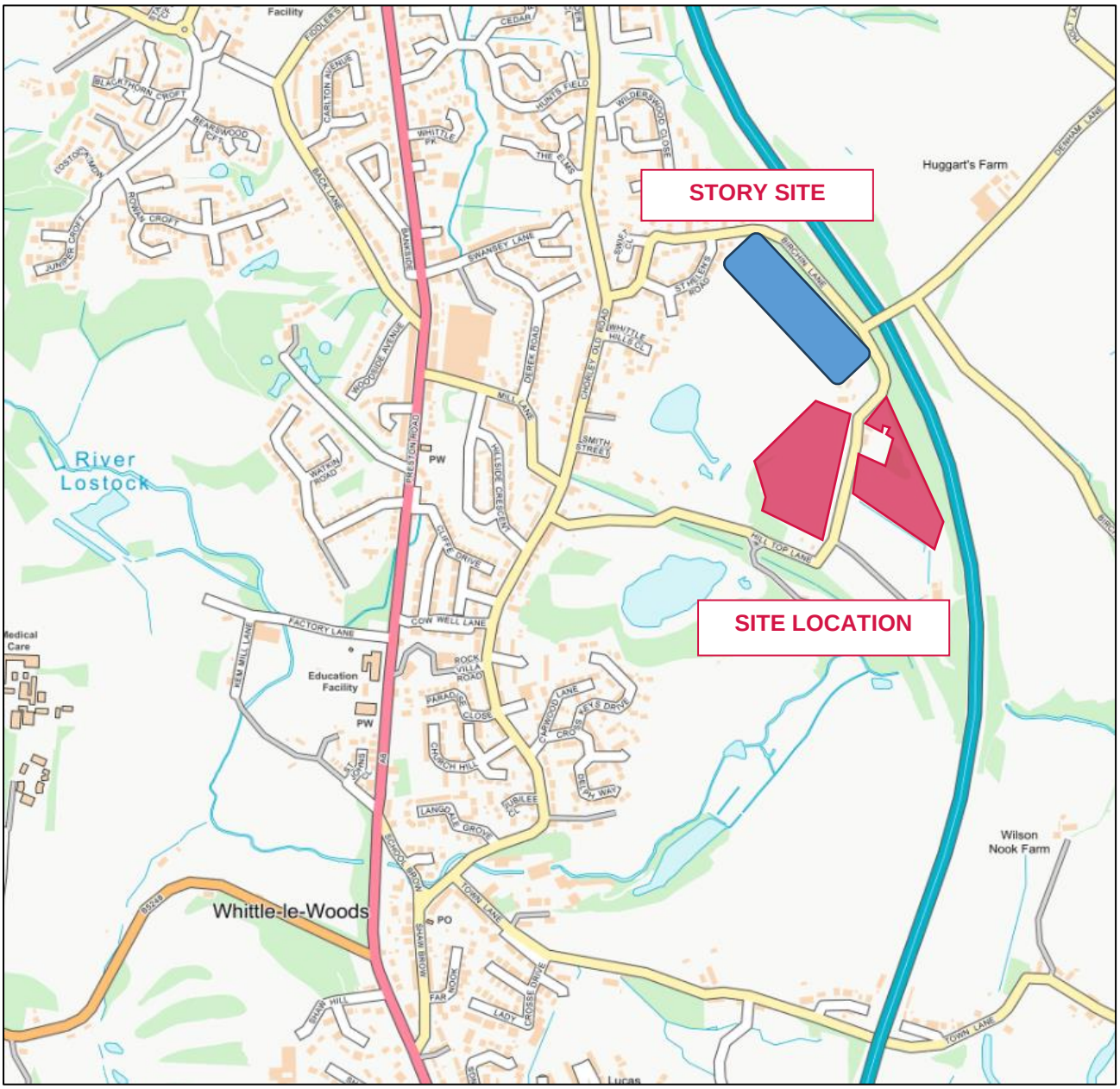
Following the response, Curtins arranged a meeting with Mr Glenn Robinson and Mr Callum Torrans to discuss solutions and this took place on the 6th December 2023.

During the meeting, discussions first focused on a potential junction improvement scheme for the Chorley Old Road/Birchin Lane junction that would deliver enhanced pedestrian footways at the junction itself. Mr Robinson agreed during the meeting that the improvement was acceptable in principle. For ease of reference an extract of the improvement is shown below:



Mr Robinson requested a Stage 1 Road Safety Audit of the junction improvements, and it was agreed that Curtins would commission this and prepare a Designers Response.

It is worth noting at this point, that in addition to the application site, there is another parcel of land on Hill Top Lane that is controlled by Story Homes. An indicative location plan is shown below for ease of reference:



The applicant and Story Homes have had a number of discussions regarding the sites coming forwards together and whilst a planning application for the Story Homes site has not been submitted it is understood that this is likely in a relatively short time period.

This is an important point with regard to pedestrian connectivity, and during the meeting on the 6th December, Curtins explained that a suitable pedestrian link between the application site and the existing footway on Birchin Lane could be provided via the site the Story Homes site. Mr Robinson

expressed a view that this would be acceptable in principle assuming that the two sites were delivered in conjunction.

Curtins asked Mr Robinson directly if LCC could support the application subject to the provision of the junction improvement and the pedestrian link through the Story site and Mr Robinson confirmed LCC could.

Following the positive meeting, the Stage 1 RSA for the proposed junction improvement was submitted to Chorley Council as the Planning Authority in May 2024.

On the 21st June 2024 a second consultation response was received from LCC Highways. This was very brief and simply stated that the RSA did not resolve the comments raised in the previous response.

On the 19th August 2024, Curtins had a telephone discussion with Mr Torrans at LCC where it was explained that the RSA had been submitted in response to the comments received from Mr Robinson at the meeting on the 6th December. LCC explained that the RSA only addressed part of the previous consultation response, and they would require details on the full pedestrian connection between the site and Chorley Old Road.

On the 12th September Curtins met with Mr Torrans and Mr Derbyshire of LCC Highways to discuss a potential scheme of improvements that would see a new pedestrian footway delivered on Birchin Lane to provide a continuous connection between the site and Chorley Old Road. The layout was positively received, subject to clarification on having the land available to deliver the improvements.

The remainder of this response sets out the current position.

Current Position – Chorley Old Road/Birchin Lane Junction Improvements

For clarity, the proposed layout, Stage 1 Road Safety Audit and the Designers Response are included as **Appendix A**.

You will note that no insurmountable issues were raised in the RSA that could not be addressed as part of a traditional Section 278 works package.

The applicant is prepared to accept a planning condition based on these junction improvements, that would secure a package of works to be developed and implemented in conjunction with LCC Highways.

Current Position – Birchin Lane Footway

To provide a continuous footway connection between the site and Birchin Lane, Curtins is of the view that there are two feasible options.

Option 1 involves the provision of a route through the Story Homes site, if the site comes forward in the near future. It is not possible to provide precise details of this route at this time, but if the Story site was to come forward this may be preferable to any alternatives.

Option 2 involves the provision of a new footway on Birchin Lane that does not require access through the Story Homes site.

The proposed layout is shown on **Drawing 78643-CUR-XX-00-D-TP-03001-P01_Footway** in **Appendix B** and you will note that this includes the provision of a 2m footway between the site and the existing footway on Birchin Lane. This is achieved by narrowing the existing carriageway to 5.5m (this could be increased to 6m) and utilising the highway verge.

The Highway Boundary as provided by LCC, is overlaid onto the proposed layout and this suggests that some of the land required to deliver the footway involves utilisation of the highway verge, and some of this does not appear to be adopted highway.

Curtins disputes this as the verge is clearly maintained and has street furniture and signage. It is also very difficult to confirm precise boundaries when comparing PDF plans.

Notwithstanding, after a land registry search it is understood that the entire road and a significant area of highway verge and adjacent land may actually be National Highways land.

To ascertain the precise status of this land, Curtins liaised with National Highways and received the below response on the 4th September 2024.

- *This is land acquired by us as part of the construction of the M61 to realign Birchin Lane, which is a local road for which LCC is the highway authority. The original Orders for the M61 will have made this clear that the improved section of Birchin Lane (including its verges form part of the improved highway for which the local highway authority becomes responsible. This will include all of the land beyond the motorway fenced boundary in situations where the road is contiguous such as this.*

- *It is common for the Titles of such land were not transferred to the local highway authority, but they remain responsible for them by virtue of the original scheme Side Roads Order that transfers the section of highway to them (highway is not just the carriageway, but includes landscaped verges and footways).*

- *In these circumstances, such land may be altered by the local highway authority without consent of National Highways or the need to transfer Title but only where the alteration being proposed to the land is for a highway purpose and therefore the land remains part of the adopted highway (for example, road widening or the creation of a new side road access bell-mouth that has been approved).*

- *It is quite common for LCC to adopt this stance, but the reality is that they will have legal responsibility for the maintenance of this land as the highway verge by virtue of the original Side Roads Order and have done since the motorway was opened in 1969.*

On the above basis, the verge and adjacent land appears to be available for the proposed highway improvements shown on the drawing in **Appendix B**.

The applicant would therefore be willing to accept a planning condition that secures a pedestrian route between the site and Chorley Old Road by either delivering a route through the Story Homes site in due course, or a route via a package of works to deliver a footway adjacent to Birchin Lane.

Curtins are keen to resolve all highway matters as soon as possible and we trust this letter assists you in being able to offer your support for the planning application.

Appendix A – Stage 1 Road Safety Audit

CHORLEY OLD ROAD/BIRCHIN LANE, WHITTLE-LE-WOODS PROPOSED HIGHWAY IMPROVEMENT

STAGE 1 ROAD SAFETY AUDIT

610/2024/103/01 Rev 1

19 January 2024

six:TEN Highways & Traffic Ltd
[redacted]
[redacted].co.uk
www.610traffic.co.uk

Rev:	Issue Status:	Prepared by/Date:	Checked by/Date:	Approved by/Date:
0	DRAFT	Jon Preston 18 January 2024	Tristan Brooks 18 January 2024	
1	FINAL	Jon Preston 19 January 2024	Tristan Brooks 19 January 2024	Jon Preston 19 January 2024

Report Title:	Chorley Old Road/Birchin Lane, Whittle-le-Woods Proposed Highway Improvement Stage 1 Road Safety Audit
Date:	19 January 2024
Document Reference & Revision:	610/2024/103/01 Rev 1
Prepared by:	Six Ten Highways & Traffic Ltd
On behalf of:	Curtins

CONTENTS

APPENDICES

1.0 INTRODUCTION

1.1 This report results from a preliminary design Stage 1 Road Safety Audit (RSA) carried out on the proposed highway scheme at the Chorley Old Road/Birchin Lane, Whittle-le-Woods, at the request of Curtins, the designer of the scheme who provided the Audit Brief. The audit team has been approved by the Overseeing Organisation Lancashire County Council to carry out Road Safety Audits on their highway network.

1.2 The Road Safety Audit Team was as follows:

Jon Preston MCIHT MSoRSA
Audit Team Leader

Tristan Brooks* Bsc (Hons), MBA, CMILT, MCIHT, MSoRSA, HE RSA Cert of Comp
Audit Team Member

1.3 Audit Team members marked with an asterisk above hold a Highways England approved Certificate of Competency (CoC) in Road Safety Audit, in accordance with Article (1–3) of EC Directive 2008/96/EC.

1.4 The audit took place at the St Helens office of six:TEN Highways and Traffic between 18 December 2023 and 19 January 2024. The Road Safety Audit was undertaken in accordance with the Road Safety Audit information provided. The audit comprised an examination of the documents provided as detailed in Appendix One.

1.5 The Audit Team visited the site together during the afternoon of Monday 18 December 2023 between 12.30hrs and 13:00hrs. During the site visit the weather was raining and the carriageway surface was wet. Traffic movements in the vicinity of the proposed highway works were low with some pedestrian and no cyclist movements observed.

1.6 All roads in the vicinity of the proposed highway works are currently subject to a 20mph speed limit and are street lit.

1.7 The terms of reference of the audit are as described in GG 119 Rev.2. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria. This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits.

1.8 The proposed highway works works are associated with a residential development and in summary includes:

- Junction tables at the junctions of Chorley Old Road with Birchin Lane and Birchin Lane with St Helen's Road;
- Provision of an uncontrolled pedestrian crossing on Chorley Old Road to the south of Birchin Lane; and
- Widening of the existing footway on Birchin Lane.

1.9 The Audit Team have not been informed of any Departures from Standard for the proposed scheme, however, they have been advised that the proposed scheme has been prepared using land available within the adopted highway, with reference to Manual for Streets and Lancashire County Council's Creating Civilised Streets.

1.10 The audit team have not been made aware of any previous RSA's undertaken on the scheme.

1.11 Personal injury collision data has been obtained from the online Mario Maps database which shows there has been no personal injury collisions in the vicinity of the proposed highway works during the five-year period up to 6 December 2023.

1.12 The scheme has been examined and this report compiled only regarding the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other Standards or criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

1.13 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG 119 Rev 2, and in no way, imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

2.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

2.1 General

2.1.1 No road safety issues identified at this stage.

2.2 Local Alignment

2.2.1 No road safety issues identified at this stage.

2.3 Junctions

2.3.1 No road safety issues identified at this stage.

2.4 Walking, Cycling and Horse Riding

2.4.1 Location: St Helen's Road junction with Birchin Lane and Birchin Lane junction with Chorley Old Road

Problem

Summary: Lack of appropriate facilities for pedestrians increasing the risk of pedestrian trips/falls or pedestrian/vehicle collisions

The drawing does not show any appropriate crossing facilities for pedestrians wishing to cross St Helen's Road near the junction with Birchin Lane or Birchin Lane near the junction with Chorley Old Road, such as dropped kerbs and tactile paving. A lack of appropriate facilities for pedestrians may result in them having to negotiate a full height kerb, increasing the risk of trips/falls and creating manoeuvrability issues for those with pushchairs, wheelchairs and mobility scooters. Additionally, a lack of tactile paving may result in a lack of appropriate warning for visually impaired pedestrians of the side roads, and they may inadvertently enter the carriageway, which could increase the risk pedestrian/vehicular collisions.

Recommendation

It is recommended that uncontrolled pedestrian crossing facilities, such as dropped kerbs and tactile paving, should be provided on St Helen's Road near the junction with Birchin Lane and on Birchin Lane near the junction with Chorley Old Road.

2.4.2 Location: Proposed uncontrolled pedestrian/cyclist crossing on the eastern side of Chorley Old Road

Problem

Summary: Parked vehicles may obscure pedestrian and driver intervisibility increasing the risk of pedestrian/vehicular collisions

It was observed during the site visit that there is a risk that vehicles parked on the eastern side of Chorley Old Road may obscure the intervisibility between pedestrians wishing to cross Chorley Old Road from the east and drivers travelling northbound on Chorley Old Road. A reduction of pedestrian and driver intervisibility may increase the risk of pedestrian/vehicular collisions as crossing pedestrians may fail to sufficiently appreciate approaching traffic and vice versa.

Recommendation

It is recommended that the pedestrian and driver invisibility is investigated, and the design ensures sufficient pedestrian/driver intervisibility splays are provided at the proposed uncontrolled pedestrian crossing.

2.5 Traffic Signs, Carriageway Markings and Lighting

2.5.1 Location: Birchin Lane

Problem

Summary: Use of centre line road markings may increase the risk of vehicular collisions

The drawing provided for audit shows that centre line road markings will be provided where the carriageway is relatively narrow e.g. 4.1 metres in places The use of centreline markings on carriageway widths below 5.5 metres can give the impression to drivers that the carriageway is wide enough for opposing vehicles to pass (particularly large vehicles), when this may not be the case, potentially resulting in head on or side-swipe type collisions.

Recommendation

It is recommended that the proposed centreline road markings are omitted where the carriageway width is less than 5.5 metres, however, it is recommended that the centreline road marking remains on the immediate approach to the Chorley Old Road junction.

3.0 ROAD SAFETY AUDIT TEAM STATEMENT

We certify that the audit has been carried out in accordance with DMRB GG119 Rev 2.

AUDIT TEAM LEADER

Jon Preston MCIHT MSoRSA

Director Signed: [redacted]

six:TEN Highways & Traffic Ltd Date: 19 January 2024

AUDIT TEAM MEMBER

Tristan Brooks Bsc (Hons), MBA, CMILT, MCIHT, MSoRSA, HE RSA Cert of Comp

Traffic & Road Safety Engineer Signed: [redacted]

six:TEN Highways & Traffic Ltd Date: 19 January 2024

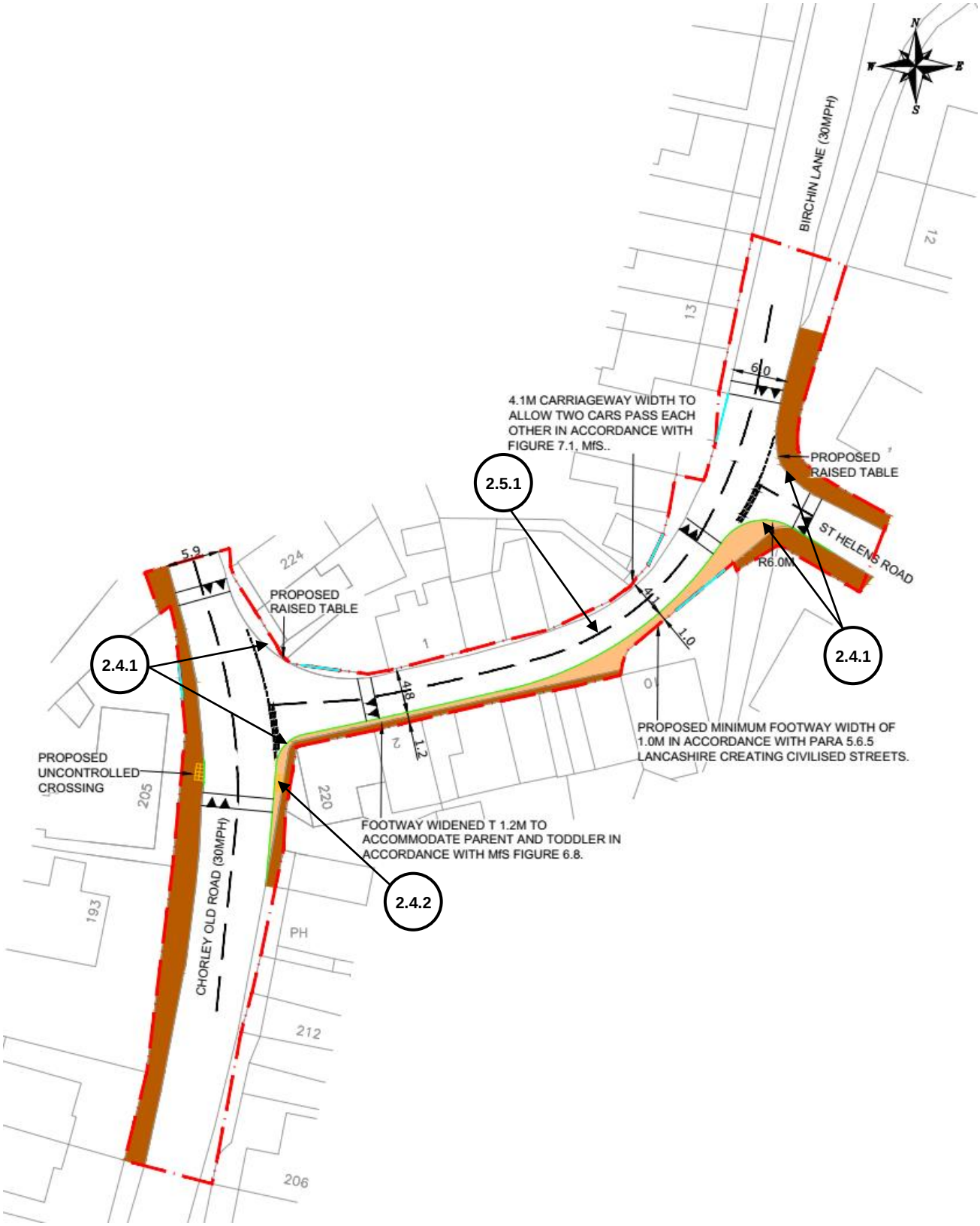
APPENDIX ONE

4.0 LIST OF DRAWINGS AND DOCUMENTS SUPPLIED BY THE DESIGN ORGANISATION

- 3092-F06 Highway Improvement Plan
- 78643-CUR-XX-XX-T-TP-00004-P01 RSA Brief
- 5 year (up to 6 December 2023) Personal Collision Data from Mario Maps

APPENDIX TWO

5.0 PROBLEM LOCATION PLAN



APPENDIX THREE

6.0 PHOTOGRAPHS

6.1 General View looking north of Chorley Old Road

6.2 General view looking east on Birchin Lane

Appendix B - Drawing 78643-CUR-XX-00-D-TP-03001-P01_Footway

EXISTING FOOTWAY

PROPOSED FOOTWAY TO TIE INTO EXISTING FOOTWAY PROVISION ALONG SOUTHERN SIDE ALONG BIRCHIN LANE

PROPOSED 2m FOOTWAY

5.5m MINIMUM CARRIAGEWAY WIDTH

PROPOSED 2m FOOTWAY

PROPOSED 2m FOOTWAY ALONG THE WESTERN SIDE OF HILL TOP LANE TO LINK WITH EXISTING FOOTWAY ALONG BIRCHIN LANE TO THE NORTH

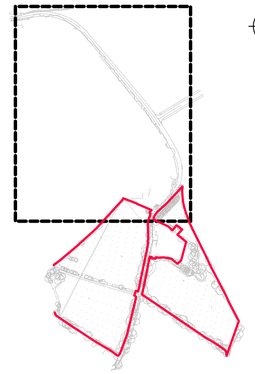
PROPOSED ROAD TO TIE INTO EXISTING HILL TOP LANE EASTERN SIDE

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.
5. THE CONTENT OF THIS DRAWING IS FOR INDICATIVE INFORMATION ONLY AND NOT SUITABLE FOR CONSTRUCTION PURPOSES

KEY:
- INDICATIVE RED LINE
- PROPOSED KERB LINE
- PROPOSED FOOTPATH
- PROPOSED ROAD MARKINGS
- PUBLIC HIGHWAY EXTENTS AS PER LCC RECORDS: 'Hill Top Lane digitised adoption plans'

GENERAL VIEW



Rev:	Description:	Date:	By:	Chkd:

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Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status:

PRELIMINARY

Project:

HILL TOP LANE - WHITTLE-LE-WOODS

Drg Title:

POTENTIAL FOOTWAY LINK
(OVER DIGITISED HIGHWAY BOUNDARY)

Size:	Date:	Drawn By:	Designed By:	Checked By:
A1	16/10/23	DD	DD	AV
Scale: 1:500				

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
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Appendix F – Curtins Post Submission Response No. 2 – 22nd August 2025

Our Ref: 078643-CUR-XX-XX-T-TP-00007-P01

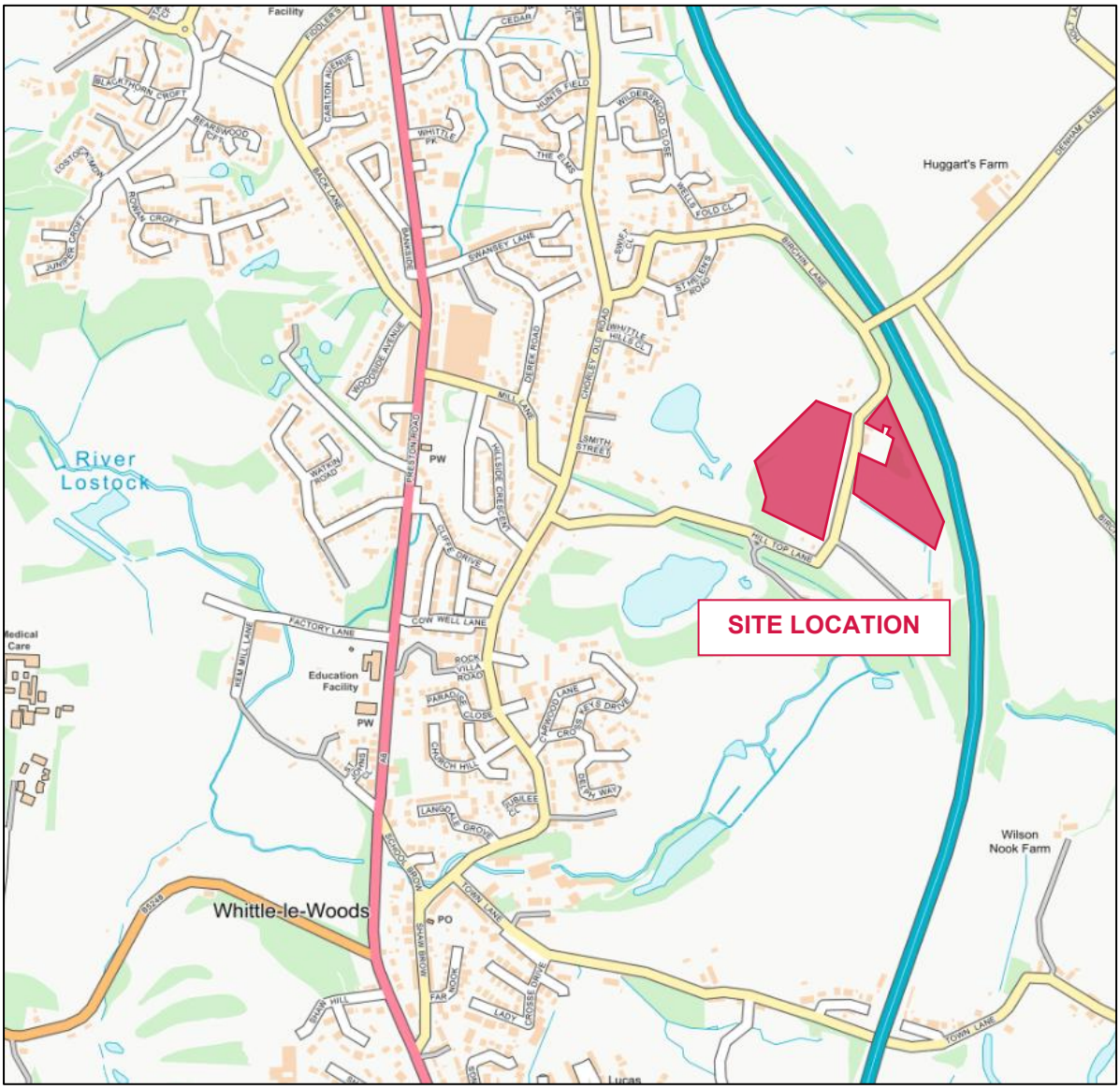
22 August 2025

HILL TOP FARM SOUTH, WHITTLE-LE-WOODS (23/00727/OUT) - HIGHWAYS POST SUBMISSION RESPONSE No. 2

Background

Curtins have been appointed by Northern Trust who originally submitted an Outline Planning Application (23/00727/OUT) in 2023 for circa 75 dwellings on Hill Top Lane, Whittle-le-Woods, Chorley.

An indicative site location plan is shown below for ease of reference:



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Registered office: 51-55 Tithebarn Street, Liverpool, L2 2SB
Branch registered in Ireland No. 908625

Curtins

Since the planning submission, numerous discussions have taken place between Curtins and Lancashire County Council (LCC) Highways.

The broad principals of development on the Hill Top Lane site have been agreed, however, there are residual highway concerns in respect of the existing and future arrangement along Birchin Lane between Chorley Old Road and St Helens Road.

It has long been established that Birchin Lane in its current capacity is not able to accommodate two large vehicles passing with vehicles having to navigate the bend in an informal give way arrangement.

Notwithstanding the above, the volume of large vehicles using Birchin Lane is nominal given the 7.5t weight restriction currently in place.

Curtins have therefore explored potential options to enhance Birchin Lane within the constraints presented by existing properties and available width within the adopted highway. In order to inform this process, a topographical survey was commissioned to provide the exact dimensions and geometry of the existing highway.

A scheme has been developed by Curtins that seeks to rebalance the pedestrian/vehicle infrastructure in this location.

The emerging highway illustrated in Figure 1 proposes the following;

- Proposed 1.2m footway between the junction with St Helen's Road and the bend further south on Birchin Lane. Beyond the bend to the west, the footway narrows and ties into existing provision.
- The kerblines on the straight section of Birchin Lane remain unchanged allowing for a large refuse and a car to pass (identical to the current situation).
- Slight kerb realignment at the junction with Chorley Old Road, to offer an improved footway (minimum 1.2m width around the bend).
- A large refuse and a car can pass each other on the straight section of Birchin Lane (as per existing layout).
- A refuse travelling westbound would require greater carriageway space past the bend.

The fundamental principal of the proposed scheme is the introduction of a giveaway arrangement on Birchin Lane that formalises the current arrangement and ensures existing/future users are aware of the constraints and react accordingly.

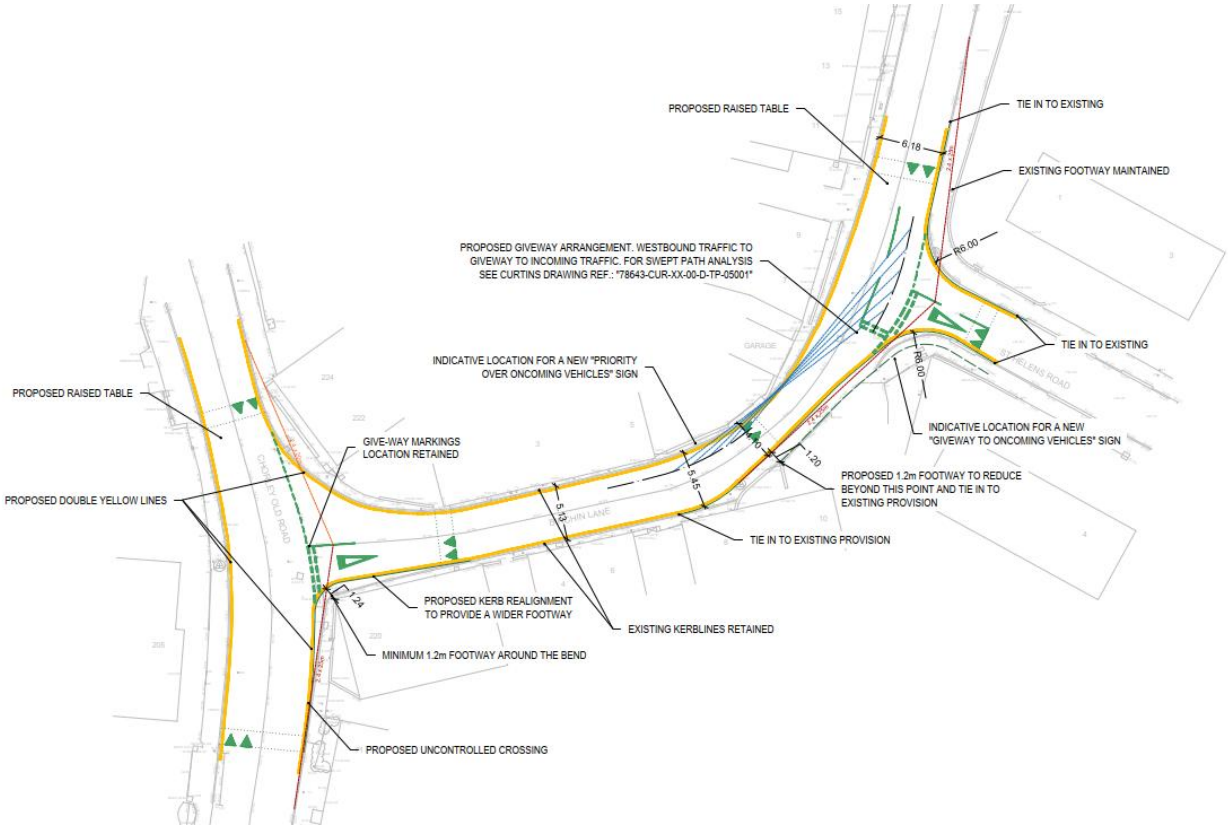

Figure 1: Birchin Lane/Chorley Old Road Highway Scheme

Supporting VISSIM Model

Curtins held a meeting on site with Highway Officers at LCC on 23rd June 2025, where the existing and proposed highway alignment was discussed as well as the interactions between vehicles and vulnerable users (pedestrian, wheelchair users and push chairs) along Birchin Lane.

Whilst it was agreed that there is no record of any highway safety issues on Birchin Lane in respect of vehicle and pedestrian conflicts, LCC maintain that there is a highway safety concern should the proposed residential scheme come forward.

In order to provide a robust evidence base and provide comfort to LCC that the risk of any conflicts will be minimal, Curtins commissioned a microsimulation model of the area to create a visual assessment of the highway scheme.

The full modelling report prepared by the Modelling Group is contained as Appendix A to this note. Further video outputs of the modelling scenarios have been issued to LCC for consideration.

In order to provide a robust assessment of the study area, a combination of PM peak hour traffic (the busiest network period) plus AM peak hour pedestrian demand (busiest period of pedestrian demand) has been modelled for three future year scenarios;

- Scenario 1 - 2028 Base plus Development plus pedestrian demand (300 dwellings)
- Scenario 2 - 2028 Base plus Development plus pedestrian demand (350 dwellings)
- Scenario 3 - 2028 Base plus Development plus pedestrian demand (450 dwellings)

[redacted]

The model has been validated using one month of TOMTOM journey time data. In order to achieve accurate eastbound validation, The Modelling Group introduced on-street parking on Birchin Lane to appropriately delay vehicle flow.

The modelling assessment identified no major operational issues in any of the three scenarios other than a slight increase in journey times westbound due to the newly introduced give-way line on Birchin Lane.

The Modelling Group has, however, recommended that a formal KEEP CLEAR is introduced at the Birchin Lane/St Helen's Road junction to prevent eastbound traffic from blocking the give-way section. This could be incorporated at detailed design stage.

Section 8 of the Modelling Group report contains an assessment of pedestrian movements within the network.

In conjunction with a review of the video outputs, there were two, four and 11 instances of pedestrian v pedestrian conflicts on Birchin Lane in scenarios 1, 2 and 3 respectively. This is not unexpected given the increase in pedestrian movements between scenarios.

It is evident from review of each video that whilst pedestrians may potentially cross paths, the conflict between pedestrians and vehicles in minimal. On the occasions where pedestrians are observed to walk within the Birchin Lane carriageway, there is typically no traffic or a single vehicle travelling in either direction. The slow vehicle speeds and available carriageway space ensure ample room for pedestrians and vehicles to pass safely.

In order to further enhance safety and control interactions between pedestrians and vehicles a reduction in speed limit on Birchin Lane could also be introduced.

Summary and Conclusions

Curtins have developed a highway scheme for Birchin Lane which responds to the existing constraints and formalises the current informal give-way arrangement that is currently required to navigate the route.

In order to provide LCC with comfort that future conflicts between pedestrians and vehicles can be suitably accommodated and managed, a microsimulation model has been developed.

The additional modelling provides a visual assessment of the future operation based on robust assumptions of vehicle and pedestrian movements.

The further assessments confirm that interaction between pedestrians and vehicles in the future would be minimal.

It is therefore concluded that the proposed highway scheme for Birchin Lane will not contribute to an existing highway safety issue and the increase in vehicle and pedestrian movements from the proposed residential development at Hill Top Farm can be safely accommodated.

[redacted] [redacted]

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Appendix A – Modelling Impact Assessment Report

Curtins Consulting Ltd registered in England No. 2054159
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Branch registered in Ireland No. 908625

MODELLING GROUP

Modelling Impact Assessment Report

MG0386 – Birchin Lane

Nicolas Contentin

25 July 2025

CURTINS LIMITED

DOCUMENT CONTROL ISSUE SHEET

Project & document details

Project name	Birchin Lane
Project number	MG0386
Document title	Modelling Impact Assessment Report
Document reference	\05_Technical\04_Reports & Notes\02_Future Year Testing

Document history

Issue	Status	Reason for issue	Issued to
A	DRAFT	Client approval	Frederick Frempong

Issue control

Issue	Date	Author	Contributors	Approved	Date
A	25/07/2025	Nicolas Contentin	Nicolas Contentin	Luke Best	24/07/2025

CONTENTS

APPENDICES

1 INTRODUCTION

1.1 Project Background

1.1.1 Modelling Group Ltd were commissioned by Curtins Limited to carry out a microsimulation model of the area highlighted in **Figure 1.1**. The aim has been to create a robust and reliable platform for assessment and mitigation of any impacts resultant of the proposed development in the years 2021 and 2028.

FIGURE 1.1: MODEL EXTENTS

1.1.2 The test scenario modelling has been developed within the agreed 2021 base year VISSIM model.

1.2 Report Purpose

1.2.1 This report summarises the calibration/validation of the model. It also summarises the full future year modelling process, including the methodology for testing and analysing the comparative performance of all analysed options, the improvements achieved as a result of any mitigation proposals, and the details of any remaining impacts resultant of the proposed development scheme.

1.3 Report Structure

1.3.1 This report is structured as follows:

- **Section 2: Model Development** – Including details of the model setup;
- **Section 3: Input Date Preparation** – Including details of the data captured for the validation;
- **Section 4: Model Calibration** – Including details of the calibration of the model;
- **Section 5: Model Validation** – Including details of the validation of the model;
- **Section 6: Modelling Methodology** – Including details of the development of the proposed model;
- **Section 7: Model Performance Analysis** – Including details on the queues and travel time;
- **Section 8: Pedestrian Assessment** – Including details on the pedestrian performance.

2 MODEL DEVELOPMENT

2.1 Model Specification

Summary

2.1.1 The VISSIM model has been developed using the specification detailed in.

Element	Detail
VISSIM Version	2024(SP11)
Modelled year	2021 and 2028
Model unit settings	Length: • Kilometres • Metres Speed: • Miles per hour (mph) Acceleration: Metres/second squared (m/s²)
Model motorised vehicle types used	• Lights (Cycles, Motorcycles, Cars, Ligh Goods Vehicles) • Heavies (OGV1, OGV2) • Buses (modelled as public transport routes)

TABLE 2.1: VISSIM MODEL SPECIFICATION SUMMARY

Data Sources – Open Data

2.1.2 The model was constructed using an OS base drawing and aerial photo of Birchin Lane.

2.1.3 A review of the speed limit was carried out and a 20mph speed limit is currently in place.

Model Periods

2.1.4 This study has required the modelling of morning and evening commuter peak periods. The details regarding exactly what needs modelling in order to fully study these periods has been derived from traffic data collected on Wednesday 6th of October 2021. Details regarding the periods modelled are shown in **Table 2.2**.

Time of Day	Peak Period
Morning Peak	0745-0845
Evening Peak	1630-1730

TABLE 2.2: MODELLED TIME PERIOD

2.1.5 Curtins Limited provided Modelling Group with flow diagrams for years 2021, 2023 and 2028.

2.1.6 The flow diagrams have been reviewed, and it was concluded that 322 vehicles travelled through the Chorley Old Road/ Birchin Lane junction during the PM peak compared to 276 vehicles during the AM peak.

2.1.7 These figured were extracted from the '2028 Base+Dev' scenarios. A screenshot of the '2028 Base+Dev PM' scenario is available in **Figure 2.1**.

2.1.8 Curtins Limited have also provided the pedestrian trip figures presented in **Table 2.3**.

Time	Scenario 1 – 300 Dwelling			Scenario 1 – 350 Dwelling			Scenario 1 – 450 Dwelling		
	Arrival	Dep.	Total	Arrival	Dep	Total	Arrival	Dep	Total
0700-0800	5	12	16	7	18	24	9	23	32
0800-0900	11	31	41	16	46	62	22	61	83
0900-1000	8	8	16	13	11	24	17	15	32
1600-1700	15	8	23	23	12	35	31	16	47
1700-1800	12	11	23	18	16	35	25	22	46
1800-1900	12	9	21	18	14	32	24	19	43

TABLE 2.3: PEDESTRIAN TRIP SUMMARY TABLE

2.1.9 It was agreed with Curtins Limited to model the PM peak 2028 traffic figures with the AM 0800-0900 pedestrian figures to model a worst-case situation. The combination of the two provide a robust assessment.

2.1.10 Consequently, the model has been validated against the PM peak 2021 only.

Traffic Assignment Methodology

2.1.11 The assignment has been setup using static Origin-Destination (O-D) routes.

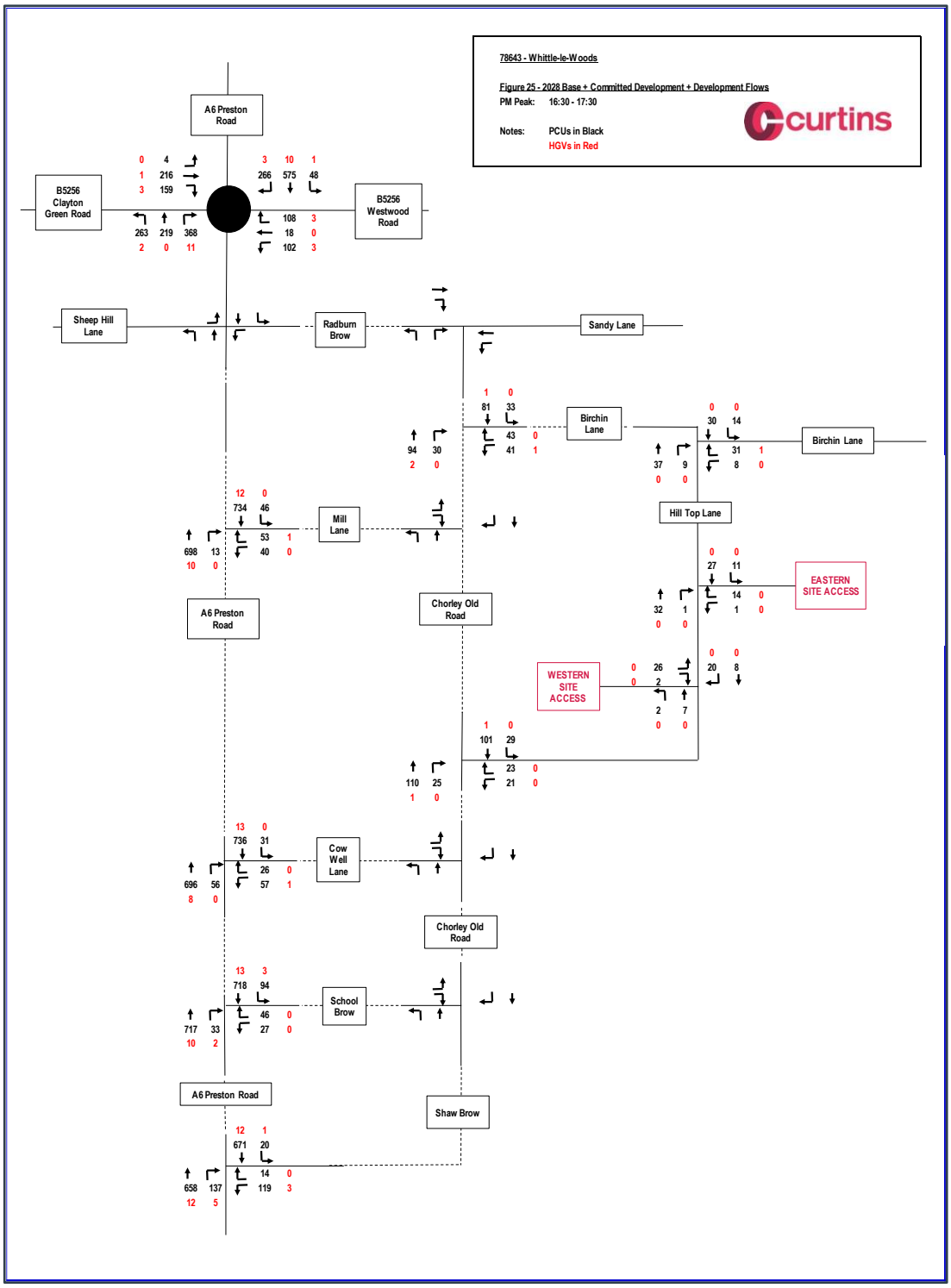


FIGURE 2.1: PM 2028 BASE+DEVELOPMENT FLOW DIAGRAM

3 INPUT DATE PREPARATION

3.1 Data Sources – Non- Surveyed

3.1.1 The following sections detail non-surveyed data sources used for modelled elements.

3.2 Speed Data

Desired Speed Distributions

3.2.1 The speed limit desired speed distributions within the model have been calculated from Department for Transport (DfT) statistics[1] or, where national data is not available for certain speed bands, based on TfL speed profiles.

Desired Speed Distributions – Turns

3.2.2 Within the network, various speed distributions have been created for vehicles negotiating turns of various radii within different speed limits. Whilst this is not a requirement of the DfT TAG Unit 3.1 Guidance, it is recommended in the TfL Modelling Guidelines.

3.2.3 To account for various speed limits, different vehicle types and to allow a set of distributions to apply to both urban and rural locations, a simplistic approach has been adopted to derive speed bands for high and low braking. This is shown in **Table 3.1**.

	Speed bands - mph		
	High braking – from	High braking – to	
Speed limit		Low braking – from	Low braking - to
20 mph	10	15	20
5 mph	11.67	8	2.67

TABLE 3.1: TURN SPEEDS – BRAKING BANDS FOR DIFFERENT SPEED LIMITS

[1] https://www.gov.uk/government/statistical-data-sets/vehicle-speed-compliance-statistics-data-tables-spe

4 MODEL CALIBRATION

4.1 Network Structure

4.1.1 The network has been developed using a series of links and connectors.

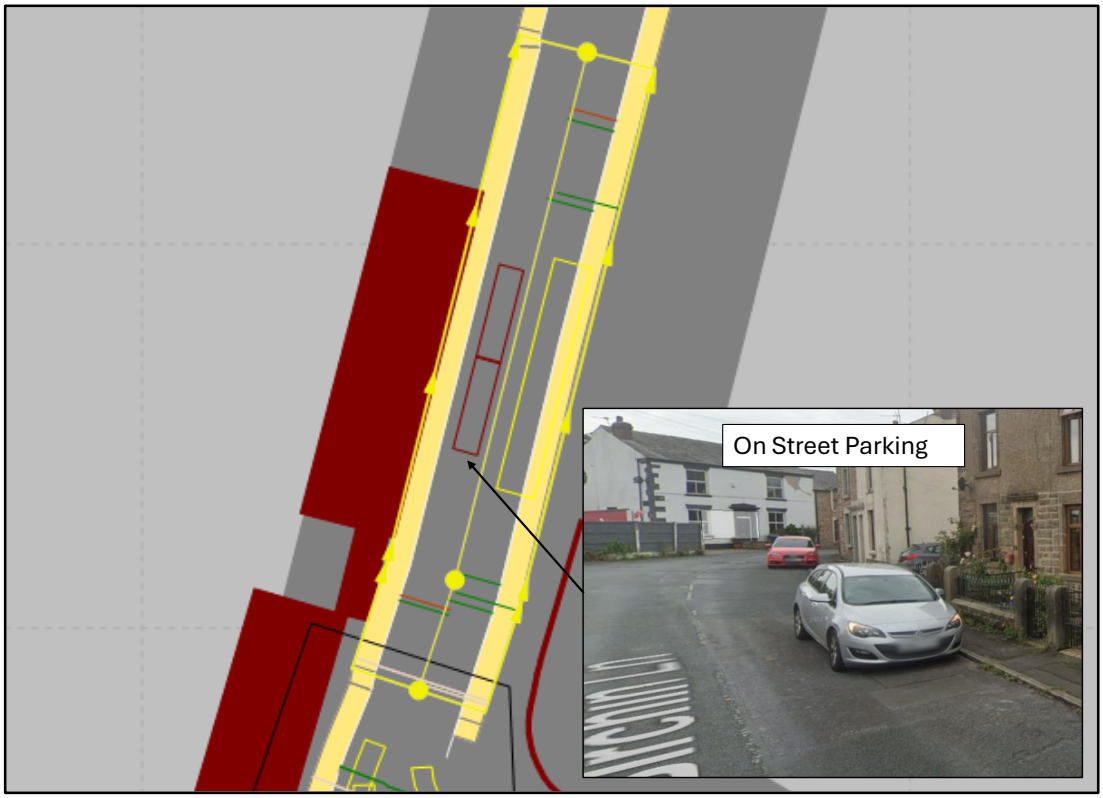


FIGURE 4.1: ON-STREET PARKING ON BIRCHIN LANE

4.1.2 On-Street Parking has been modelled on Birchin Lane as shown in **Figure 4.1**.

Assumption List

4.1.3 The following assumptions have been made:

- Pedestrians will walk on the footway on sections where pedestrian footways are provided – see **Figure 4.2**
- Pedestrians will walk on the carriageway on section where pedestrian footways are not provided – see **Figure 4.2**
- A total of 10 pedestrians will travel along Birchin Lane in the eastbound direction and westbound direction (20 pedestrian 2 ways in total)

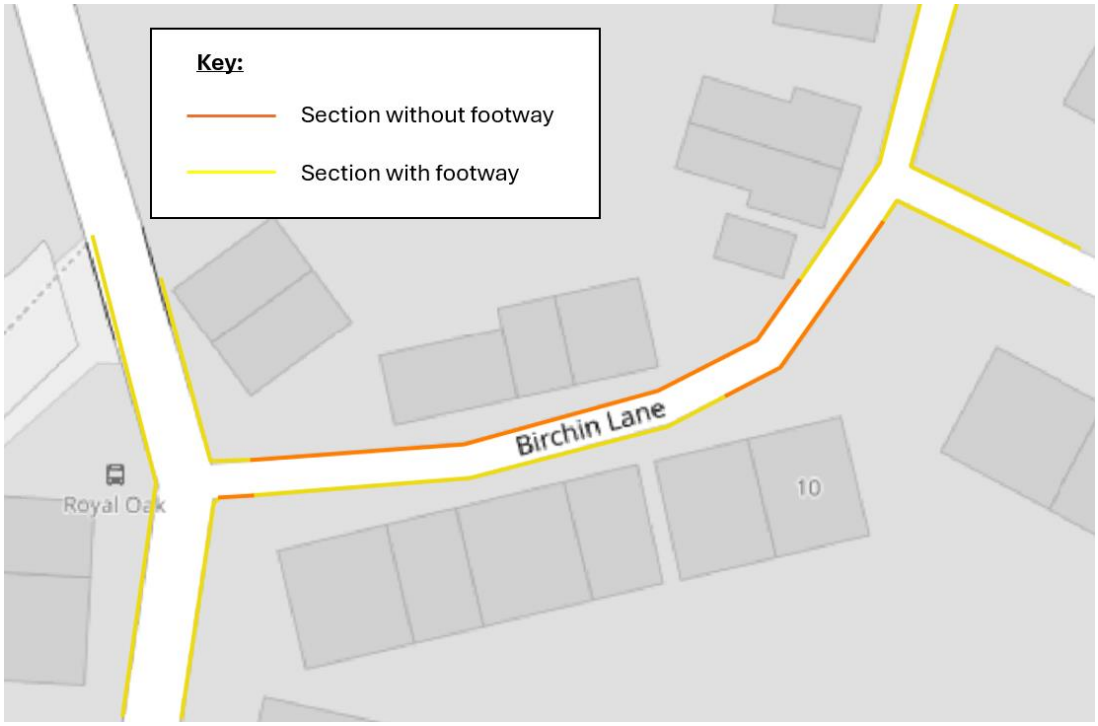


FIGURE 4.2: EXISTING FOOTWAY ARRANGEMENT

Reduce Speed Area

4.1.4 A 5 mph reduce speed area has been applied to traffic overtaking parked vehicles on Birchin Lane.

4.1.5 A reduce speed area of 5mph has been applied to the eastbound traffic and a 20mph reduce speed area has been applied to the westbound traffic along the bent located near Saint Helen's Road. The forward visibility in the westbound direction is greater than the eastbound direction. Various speeds were tested to improve the calibration of the journey time and the implementation of the on-street parking.

FIGURE 4.3: VISIBILITY OF THE BIRCHIN LANE BEND

Priority Control

4.1.6 The network features a number of priority-controlled junctions, and areas requiring bespoke conflict behaviour control through the use of priority rules. To model the appropriate give-way behaviour, priority rules have been used throughout. During the calibration process, individual priority rules have then been iteratively adjusted, as necessary, in order to realistically simulate actual network conditions.

4.1.7 Initially, separate gap times for Lights (4.0s) and Heavies (4.5s) were included at the priority-controlled junctions, with the focus on the side roads giving way to the main road.

4.1.8 Pedestrians were also included with gap time of 3.0s.

4.1.9 A 6s gap time has been applied to all vehicles overtaking parked vehicles on Birchin Lane.

4.2 Traffic Data

4.2.1 The modelled turning counts at each of the junctions have been compared against the observed data collected as shown in **Table 4.1**.

Mvt Nb	From	To	Survey	Modelled	Difference	GEH
1	Chorley Old Road (N)	Birchin Lane	22	22	0	**0**
2	Chorley Old Road (N)	Chorley Old Road (S)	63	65	2	**0.25**
3	Birchin Lane	Chorley Old Road (S)	17	25	8	**1.7**
4	Birchin Lane	Chorley Old Road (N)	30	29	-1	**0.1**
5	Chorley Old Road (S)	Chorley Old Road (N)	78	81	3	**0.3**
6	Chorley Old Road (S)	Birchin Lane	12	14	2	**0.5**
7	Birchin Lane (E)	Birchin Lane (W)	37	44	7	**1.0**
8	Birchin Lane (E)	Saint Helen's Road	0	0	0	**0.0**
9	Saint Helen's Road	Birchin Lane	0	0	0	**0.0**
10	Saint Helen's Road	Birchin Lane	10	10	0	**0.0**
11	Birchin Lane (W)	Saint Helen's Road	10	9	-1	**0.3**
12	Birchin Lane (W)	Birchin Lane (E)	24	34	10	**1.8**

TABLE 4.1: TURNING COUNT VALIDATION TABLE

4.2.2 The comparative analysis summary shows that the junction flow GEH value is within the 85% threshold for a GEH of 5 or below, in line with modelling guidelines.

4.3 Entry Flow

4.3.1 To ensure that the correct flows were entering the model, a comparison of the entry flows was required.

4.3.2 A four zones have been assessed:

- Zone 1 – Chorley Old Road (N)
- Zone 2 – Birchin Lane
- Zone 3 – Saint Helen's Road
- Zone 4- Chorley Old Road (S)

Zone	Survey	Modelled	Diff.	GEH
1	85	87	2	**0.2**
2	37	44	7	**1.0**
3	10	10	0	**0.0**
4	90	95	5	**0.5**

TABLE 4.2: ENTRY FLOW VALIDATION TABLE

4.3.3 The comparative analysis summary shows that all entry flows have a GEH value of below 3, in line with modelling guidelines.

4.4 Exit Flow

4.4.1 To ensure that the correct flows were entering the model, a comparison of the exit flows was required.

Zone	Survey	Modelled	Diff.	GEH
1	108	110	2	**0.1**
2	24	34	10	**1.8**
3	10	9	-1	**0.3**
4	80	90	10	**1.0**

TABLE 4.3: EXIT FLOW VALIDATION TABLE

4.4.2 The comparative analysis summary shows that all exit flow have a GEH value of below 3, in line with modelling guidelines.

5 MODEL VALIDATION

5.1 Journey Time

5.1.1 The modelled journey times have been compared against the collected real-world data, as compiled from the TomTom Move portal as shown in **Figure 5.1**.

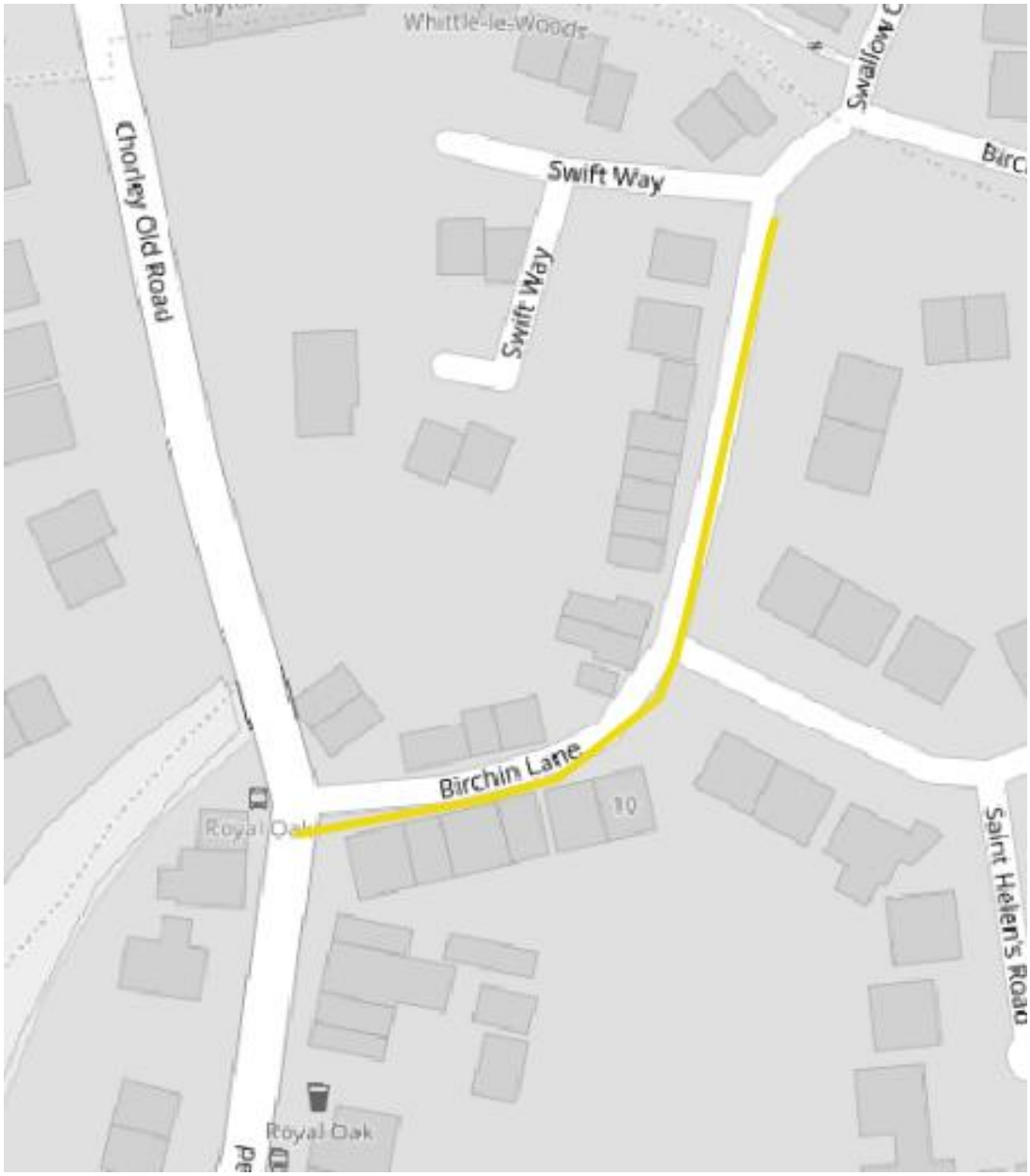


FIGURE 5.1: JOURNEY TIME VALIDATION ROUTE

5.1.2 Both the eastbound and westbound routes validate within the required 15% threshold as shown in **Table 5.1**.

Section	Observed	Modelled	Difference	% Diff.
EB Route	59.3s	50.2s	-9.1s	-15%
WB Route	39.8s	34.7s	-5.0s	-13%

TABLE 5.1: JOURNEY TIME VALIDATION TABLE

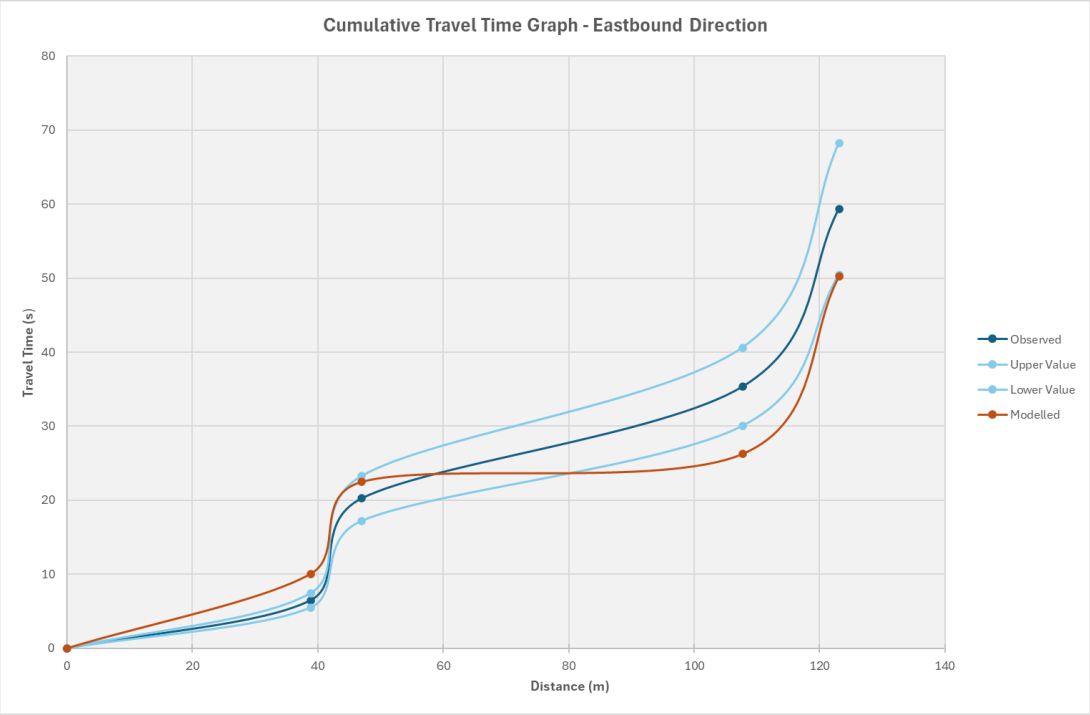


FIGURE 5.2: CUMULATIVE EASTBOUND JOURNEY TIME GRAPH

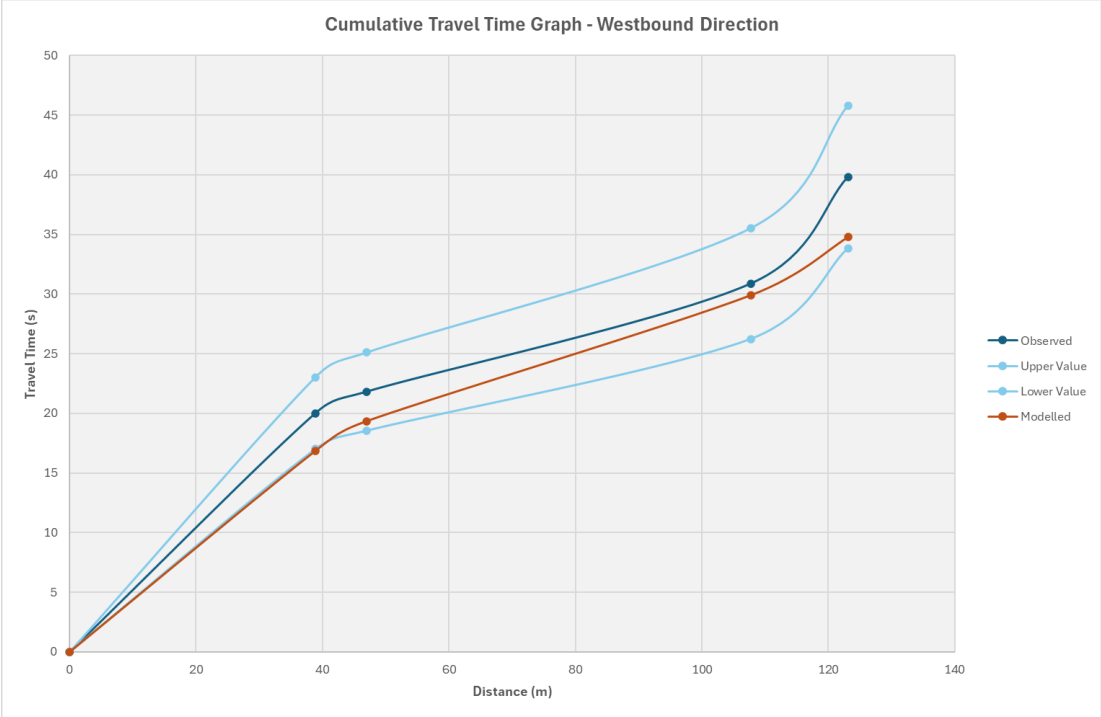


FIGURE 5.3: CUMULATIVE WESTBOUND JOURNEY TIME GRAPH

5.1.3 Both graphs show that the cumulative journey time follows the +/- 15% threshold and validates within the modelling guideline criteria.

5.2 Queue Length

5.2.1 Validating the model against queue length isn't required by traffic modelling guidelines but comparing it with observed data is good practice. It helps confirm accuracy and adds confidence in the model's performance.

Time	Observed	Modelled	Difference
16:30	0.0	6.2	6.2
16:35	5.8	0.0	-5.8
16:40	11.5	6.5	-5.1
16:45	0.0	6.5	6.5
16:50	11.5	6.5	-5.0
16:55	5.8	6.5	0.7
17:00	0.0	6.5	6.5
17:05	5.8	0.0	-5.8
17:10	5.8	6.2	0.4
17:15	0.0	6.6	6.6
17:20	5.8	6.8	1.0
17:25	5.8	6.2	0.5
Average	**+4.8m**	**+5.4m**	**+0.6m**

TABLE 5.2: MAXIMUM QUEUE LENGTH SUMMARY TABLE – BIRCHIN LANE

5.2.2 The average maximum queue length is within +0.6 metre from the observed value which is acceptable.

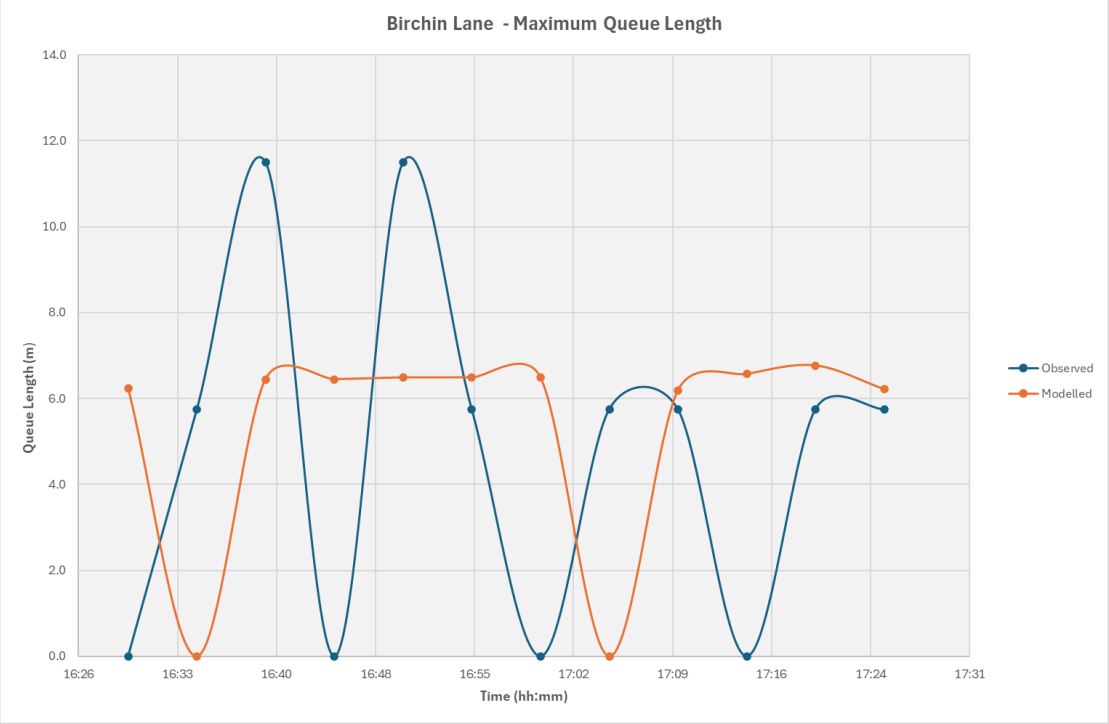


FIGURE 5.4: QUEUE LENGTH PROFILE GRAPH

5.3 Conclusion

5.3.1 The model has been calibrated against the turning counts and validated against the journey time. The overall validation meets current modelling guidelines.

5.3.2 This model serves as a robust tool for assessing the proposed scheme's impact on local traffic conditions.

6 MODELLING METHODOLOGY

6.1 Overview

6.1.1 Modelling Group has tested a proposed scheme developped by Curtins Limited. Further details are provided below.

6.2 Scenarios Tested

6.2.1 Modelled scenarios tested include:

- 2021 Existing Base PM – Existing layout and flow
- 2028 Reference Case PM – Existing layout and future traffic growth
- 2028 Proposed Scheme PM – including proposed pedestrian scheme and future traffic growth – 300 Dwelling – **Scenario 1**
- 2028 Proposed Scheme PM – including proposed pedestrian scheme and future traffic growth – 350 Dwelling - **Scenario 2**
- 2028 Proposed Scheme PM – including proposed pedestrian scheme and future traffic growth – 400 Dwelling - **Scenario 3**

6.3 Network Development

6.3.1 Several changes have been made to the network to reflect the proposed changes.

- Introduction of a raised table on Birchin Lane
- Introduction of a 1.2 metre pedestrian footway on Birchin Lane South as shown on **Figure 6.2**
- Reduction of the carriageway and the introduction of a give-way on the westbound movement
- It has been assumed that the second vehicle will leave a gap while queuing at the Birchin Lane give-way as shown in **Figure 6.1**. This 'informal' Keep Clear will allow for vehicles to turn right into Saint Helen's Road and avoid blocking the eastbound traffic.

6.3.2 A drawing of the proposal in available in **Appendix A**.

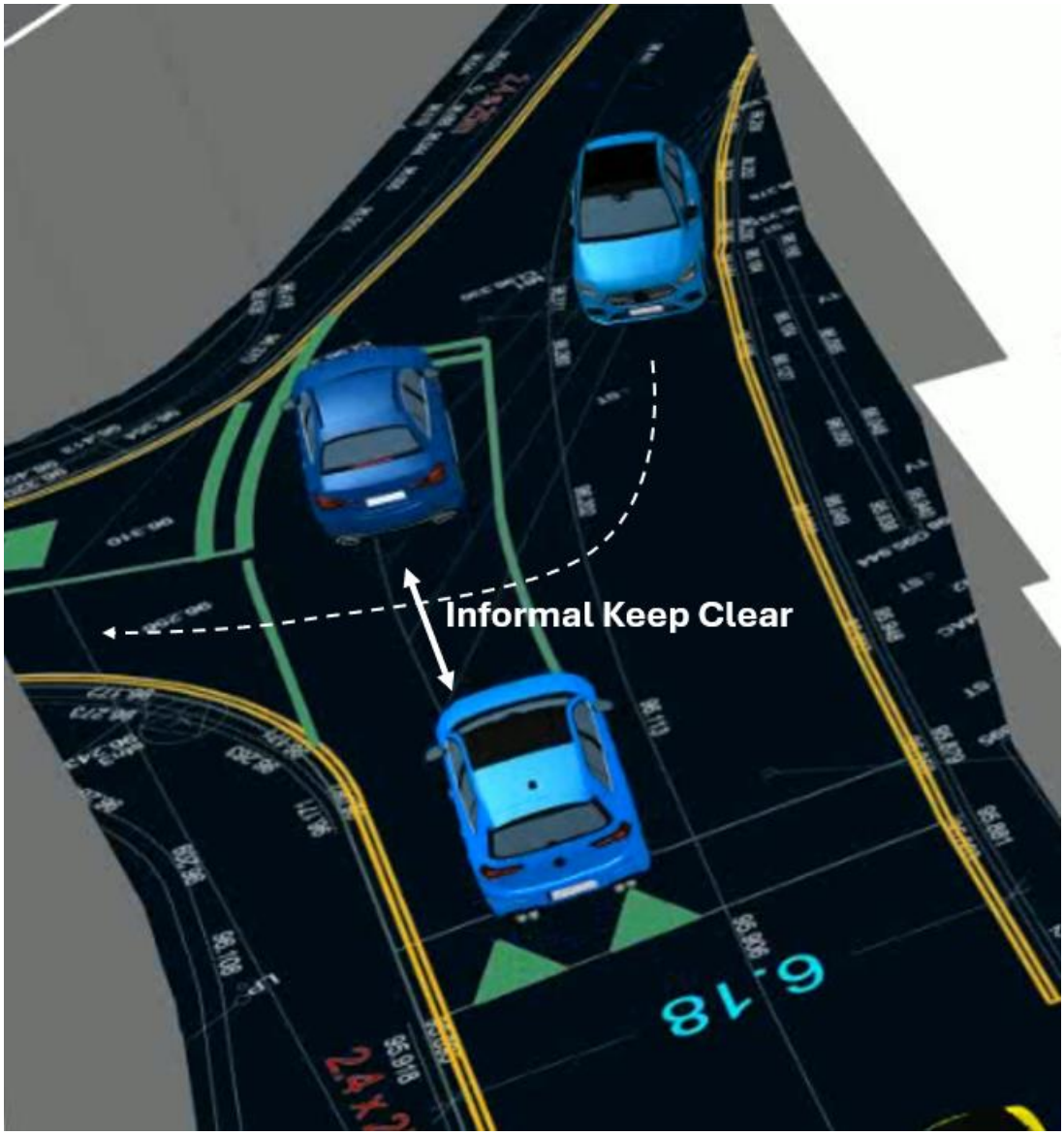


FIGURE 6.1: KEEP CLEAR ON BIRCHIN LANE

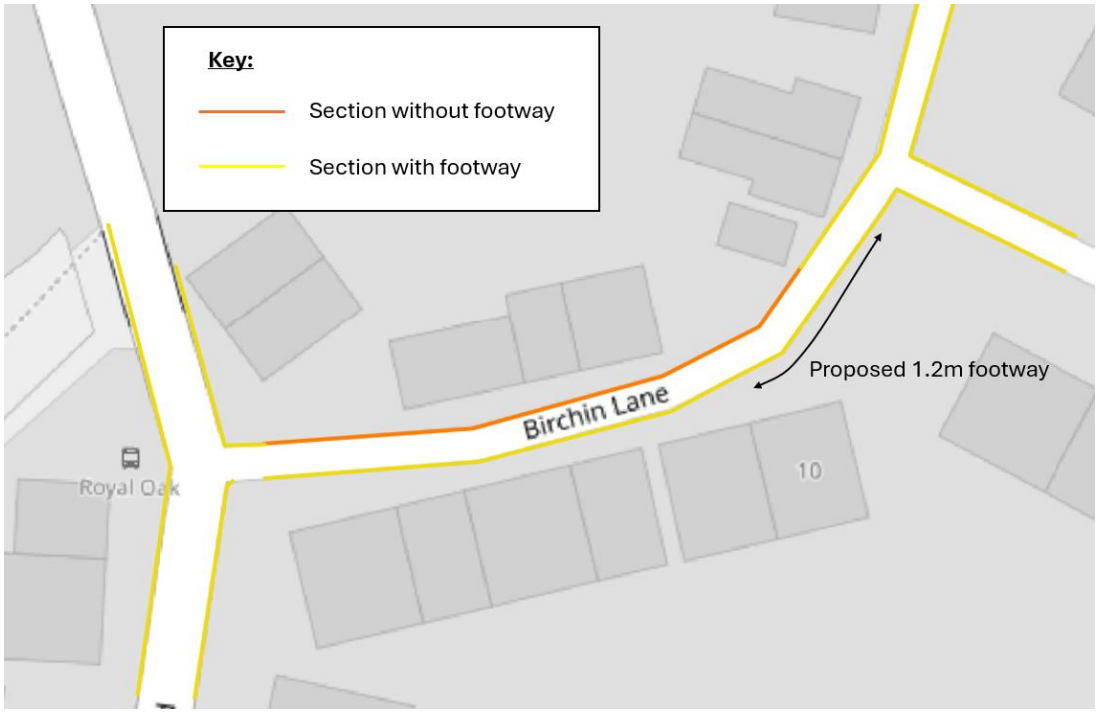


FIGURE 6.2: PROPOSED FOOTWAY ARRANGEMENT

6.4 List of Assumptions

6.4.1 It has been assumed that pedestrians using the northern footway will used the southern footway and cross the road at the informal crossing along Birchin Lane.

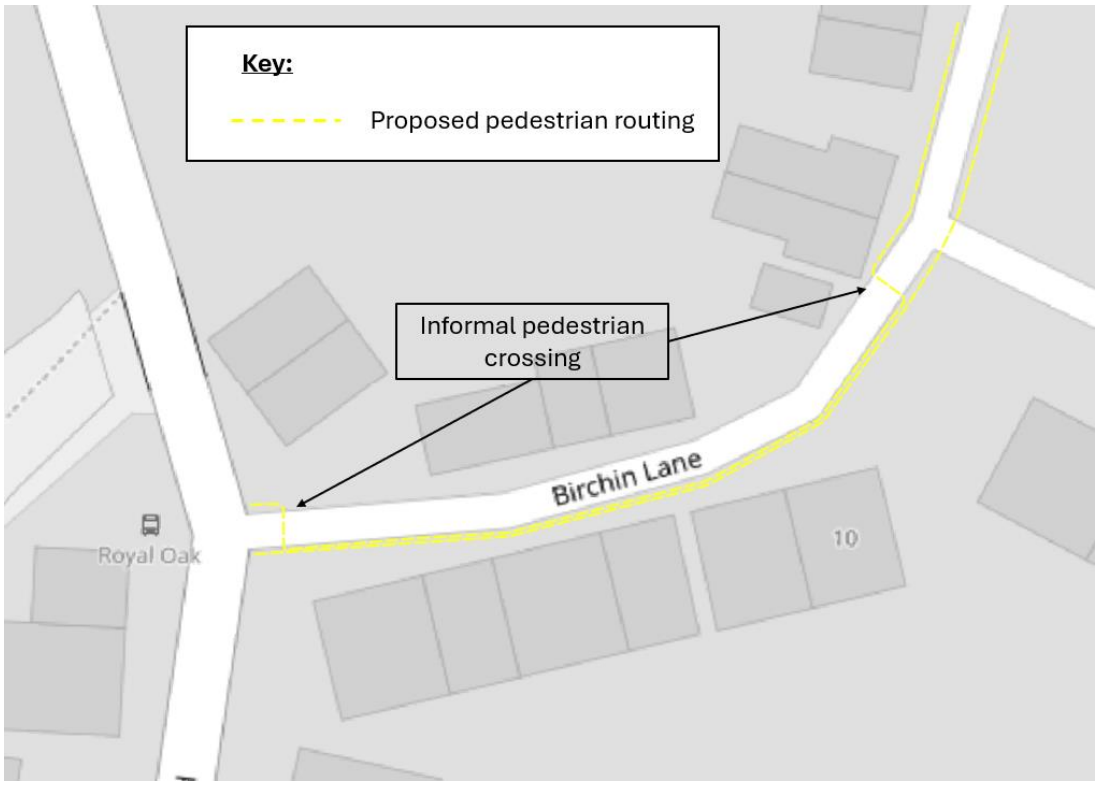


FIGURE 6.3: PROPOSED PEDESTRIAN ROUTING

7 MODEL PERFORMANCE ANALYSIS

7.1 Overview

7.1.1 The impact of the development on the local network in all future year scenario tests has been assessed using the following model outputs:

- Overall network performance statistics, including average per vehicle speed and delay, as well as network-wide average delay etc
- Key route performance statistics, including journey time, delay and speed comparisons.

7.1.2 Modelled scenarios are averaged over 20 seeds to reflect daily fluctuations in overall network operation.

7.2 Network Performance Statistics

7.2.1 This section summarises the network performance statistics. Network performance data is split into two main types – average per vehicle data, and total network statistics (taken over the peak hour).

7.2.2 Data is then further broken down as follows:

- Per Trip Average Per Vehicle Data:
  - Delay – defined as average time spent in a delay state (i.e. being held below desired speed due to network conditions)
  - Stops – defined as the average number of times each vehicle comes to a full stop
  - Speed – defined as the overall average speed per trip, in miles per hour
  - Stopped Delay – defined as the average amount of time spent in an unwanted, stopped state
- Total Network Data:
  - Travel Time – defined as the total cumulative travel time of all vehicles completing trips within the peak hour
  - Total Delay – defined as the total cumulative delay of all vehicles completing trips within the peak hour
  - Latent Delay – defined as the total amount of delay stored outside of the network (i.e. experienced by Latent Demand – see below, and therefore not counted in the Delay Time statistic defined above) at the end of the evaluation interval
  - Latent Demand – defined as the total number of vehicles (demand) stuck outside of the network at the end of the evaluation interval (generally due to queueing and delays).

7.2.3 **Table 7.1** show summary network performance data for the evening peak periods.

Metric	Vehicle Class	01-A - REF-PM-2028	01-A - DEV1-PM-2028	01-A - DEV2-PM-2028	01-A - DEV3-PM-2028
Average Delay (s)	All Vehicles	1.9	3.1	3.0	3.0
Average Delay (s)	Lights	2.0	3.4	3.5	3.6
Average Delay (s)	Heavies	2.0	3.5	3.5	3.6
Average Stops	All Vehicles	0.1	0.1	0.1	0.1
Average Stops	Lights	0.1	0.1	0.1	0.1
Average Stops	Heavies	0.1	0.1	0.1	0.1
Average Stops	All Vehicles	0.1	0.1	0.1	0.1
Average Stops	Lights	0.1	0.1	0.1	0.1
Average Stops	Heavies	0.1	0.1	0.1	0.1
Average Speed (mph)	All Vehicles	5.2	4.7	4.5	4.4
Average Speed (mph)	Lights	5.4	5.2	5.1	5.1
Average Speed (mph)	Heavies	5.4	5.1	5.1	5.1
Average Stop Delay (s)	All Vehicles	0.2	0.6	0.6	0.6
Average Stop Delay (s)	Lights	0.2	0.6	0.6	0.6
Average Stop Delay (s)	Heavies	0.2	0.6	0.6	0.6
Total Travel Time (s)	All Vehicles	15038.2	18548.8	21557.4	24246.7
Total Travel Time (s)	Lights	13271.9	14008.6	14022.4	14052.4
Total Travel Time (s)	Heavies	13231.6	13956.3	13969.9	13999.9
Total Delay (s)	All Vehicles	650.3	1122.0	1159.9	1202.7
Total Delay (s)	Lights	647.9	1100.2	1115.6	1144.7
Total Delay (s)	Heavies	645.2	1093.4	1108.6	1137.6
Total Latent Delay (s)	All Vehicles	23.5	29.1	32.5	34.3
Total Latent Demand (veh)	All Vehicles	0.0	0.0	0.0	0.0
Average Stops	All Vehicles	0.1	0.1	0.1	0.1
Average Stops	Lights	0.1	0.1	0.1	0.1

TABLE 7.1: AFTERNOON PEAK NETWORK PERFORMANCE STATISTICS

7.2.4 There is no latent demand for any scenario - it can be concluded that it will therefore not skew the model results presented in this report.

7.2.5 An increase in average delay of +2.5s per vehicle is observed with the proposed scenarios due to the introduction of the new give-way control on Birchin Lane.

7.3 Key Junction Performance Statistics

Summary of Junctions Analysed

7.3.1 In order to provide a detailed assessment of network operation, the following junctions have been analysed:

- Junction 1 – Chorley Old Road/Birchin Lane
- Junction 2 – Birchin Lane/Saint Helen's Road
- Junction 3 – New priority on Birchin Lane westbound

Junction 1 - Summary

7.3.2 A slight increase in mean-maximum queue length of less than 5m is observed on Birchin Lane for all three scenarios. All scenarios perform similarly across the peak period and the rise in pedestrian numbers will not impact the queue on Birchin Lane.

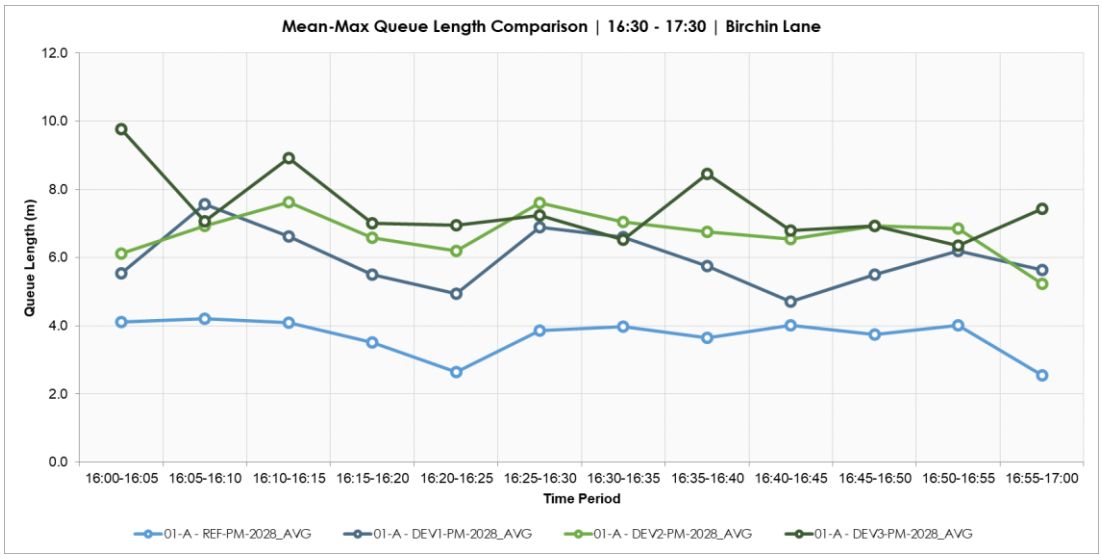


FIGURE 7.1: QUEUE GRAPH – BIRCHIN LANE

Junction 2 - Summary

7.3.3 A slight increase in Mean Maximum queue length of less than 2m is observed on Birchin Lane for all three scenarios. All scenarios perform similarly during the peak period.

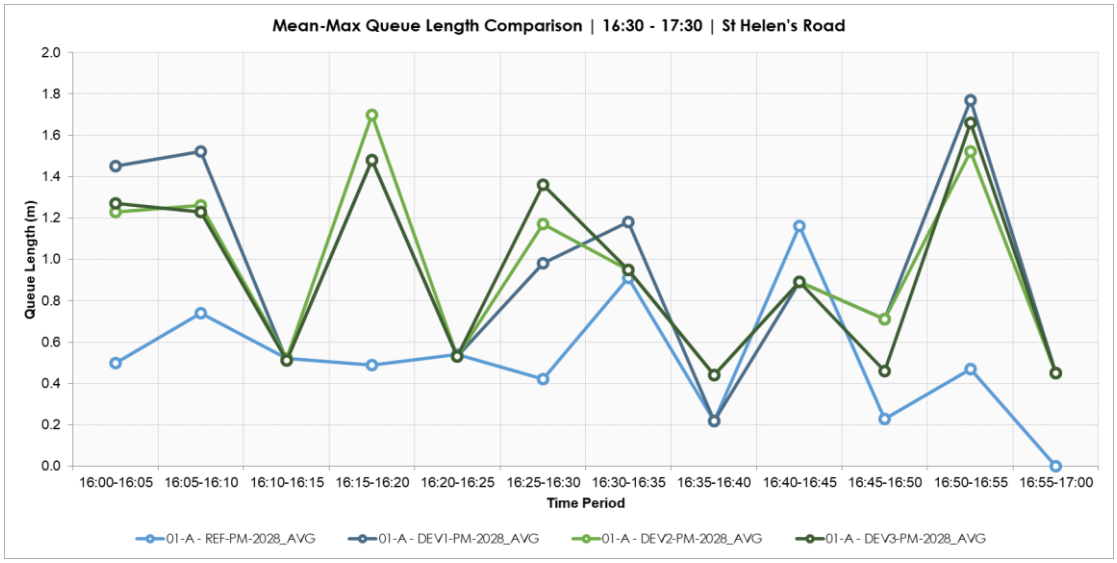


FIGURE 7.2: QUEUE GRAPH ST HELEN'S ROAD

Junction 3 - Summary

7.3.4 A maximum queue of 14m is anticipated at the new give-way control on Birchin Lane. It is recommended to implement a formal 'KEEP CLEAR' to allow vehicles to turn right into Saint Helen's Road as shown in **Figure 6.1.**

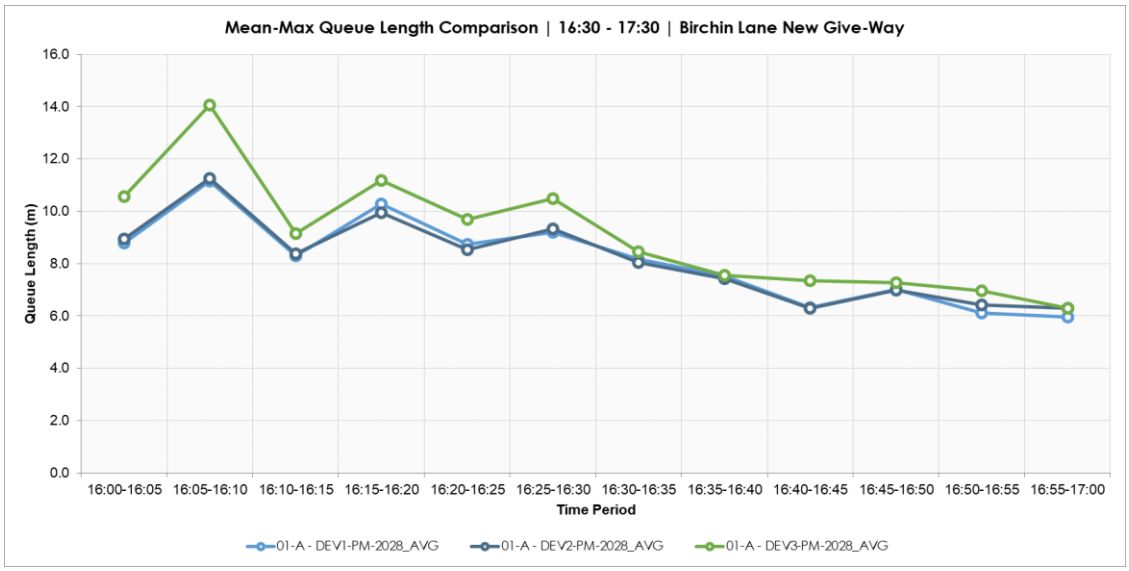


FIGURE 7.3: QUEUE GRAPH NEW GIVE-WAY ON BIRCHIN LANE

7.4 Key Route Performance Statistics

Summary of Routes Analysed

7.4.1 In order to provide a detailed assessment of network operation, the following routes have also been analysed –**Figure 7.4** shows these locations:

- Eastbound Route
- Westbound Route

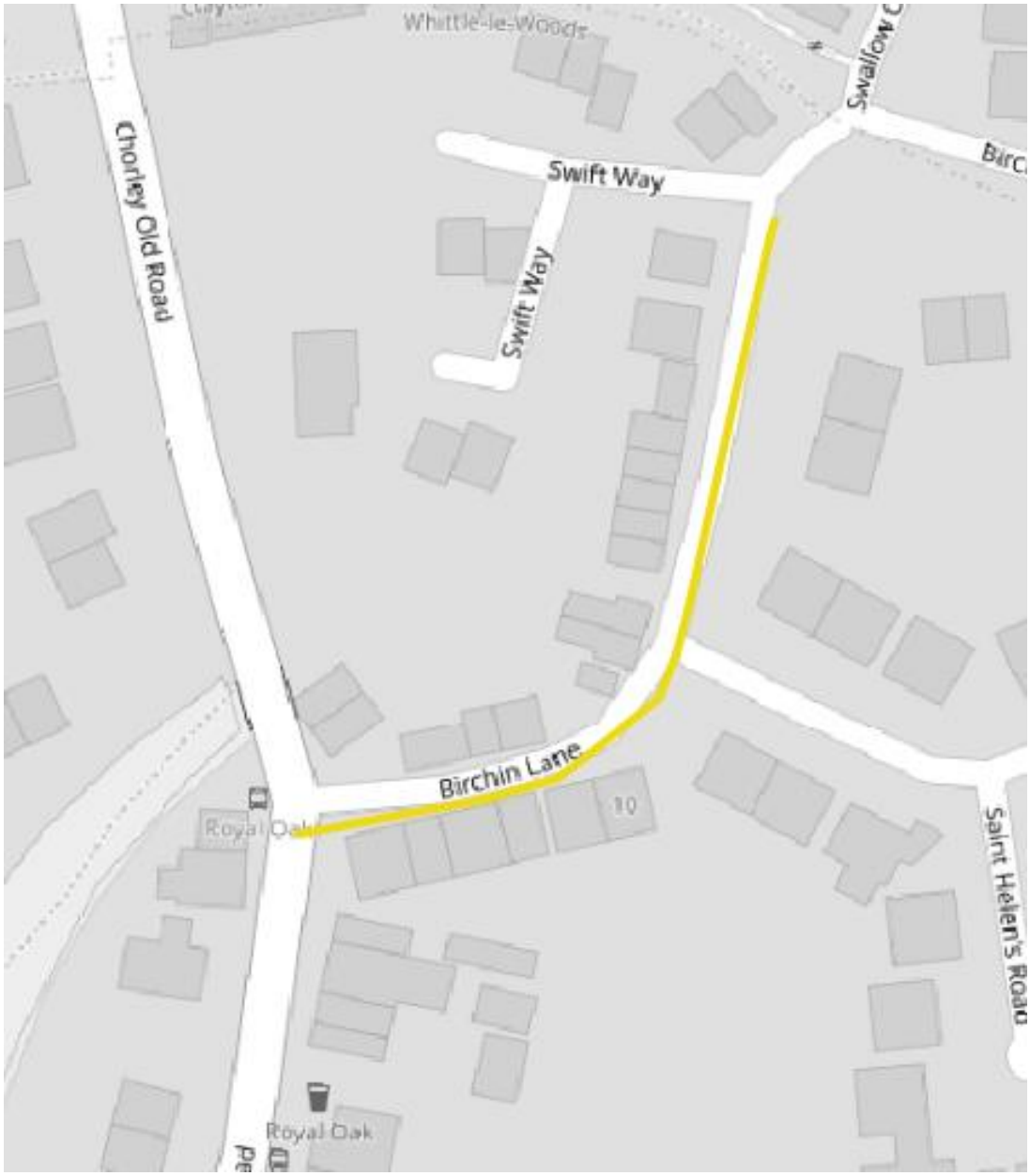


FIGURE 7.4: ANALYSED ROUTE LOCATIONS

Route 1 - Summary

7.4.2 Overall, the journey times for Option 1, 2 and 3 is approximately five seconds faster in the eastbound direction thanks to the implementation of the give-way control on Birchin Lane. The eastbound traffic has priority over the westbound vehicles.

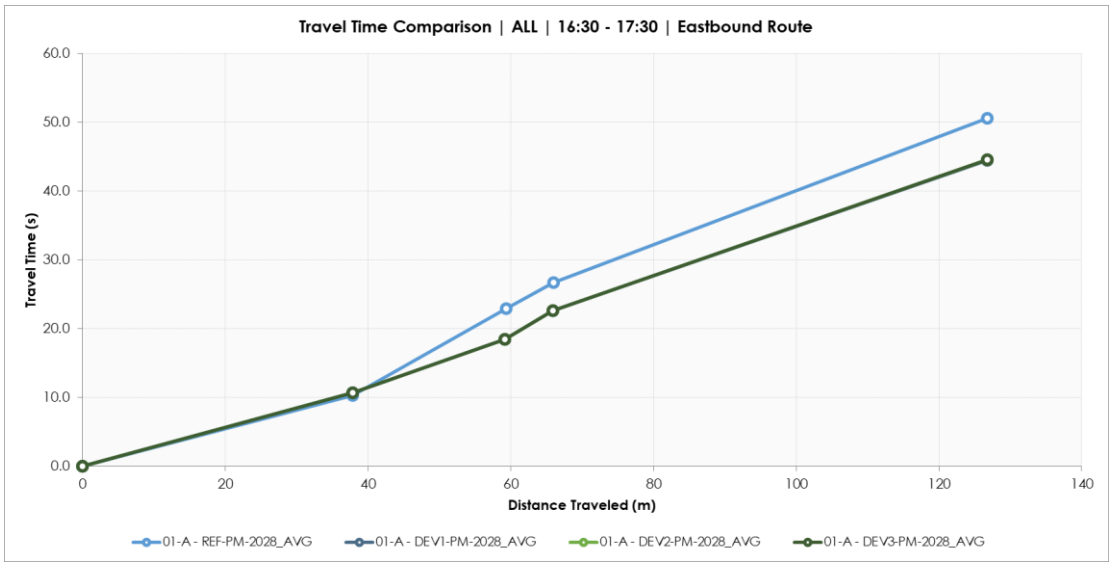


FIGURE 7.5: EASTBOUND ROUTE

Route 2 - Summary

7.4.3 The westbound travel time show that vehicles travelling in the westbound direction will be delayed by approximately five seconds compared to the eastbound direction because of the new priority rules on Birchin Lane.

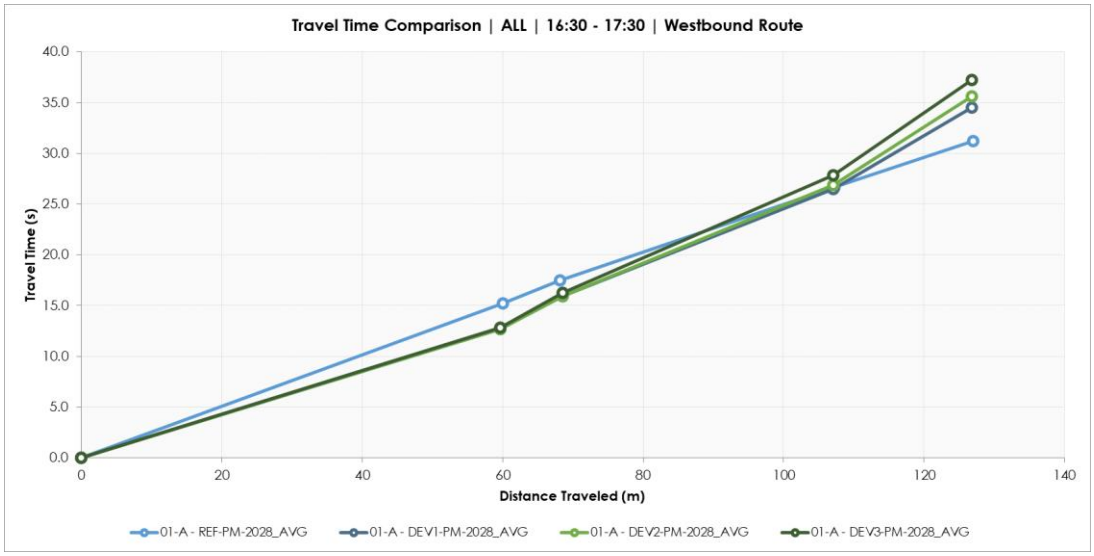


FIGURE 7.6: WESTBOUND ROUTE

8 PEDESTRIAN ASSESSMENT

8.1.1 A review of the model along the new section of footway presented in **Figure 8.1** has been carried out to understand when pedestrians travelling in the eastbound direction meet pedestrian travelling westbound.

8.1.2 We have observed two, four and eleven instances of cross path respectively with Scenario 1, 2 and 3 while watching the first seed run. These numbers may change depending on the seed number to it provide a robust estimate of the occurrence.

8.1.3 It has been assumed that pedestrian crossing path will stay on the 1.2 metre section of footway however there could be a risk that they step on the carriageway.

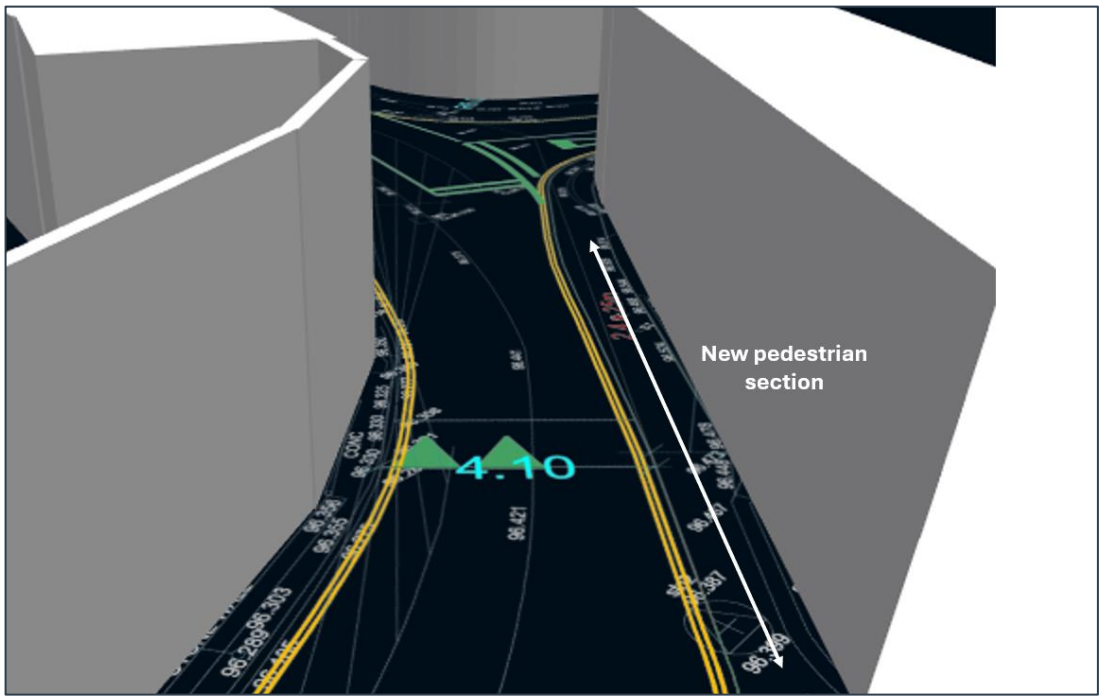


FIGURE 8.1: PROPOSED 1.2 METRE FOOTWAY SECTION

9 MODELLING SUMMARY & RECOMMENDATIONS

9.1 Summary of Model Performance Analysis

9.1.1 Modelling Group has been commissioned by Curtins Limited to carry out the modelling of Birchin Lane. The model has been validated to satisfactory level.

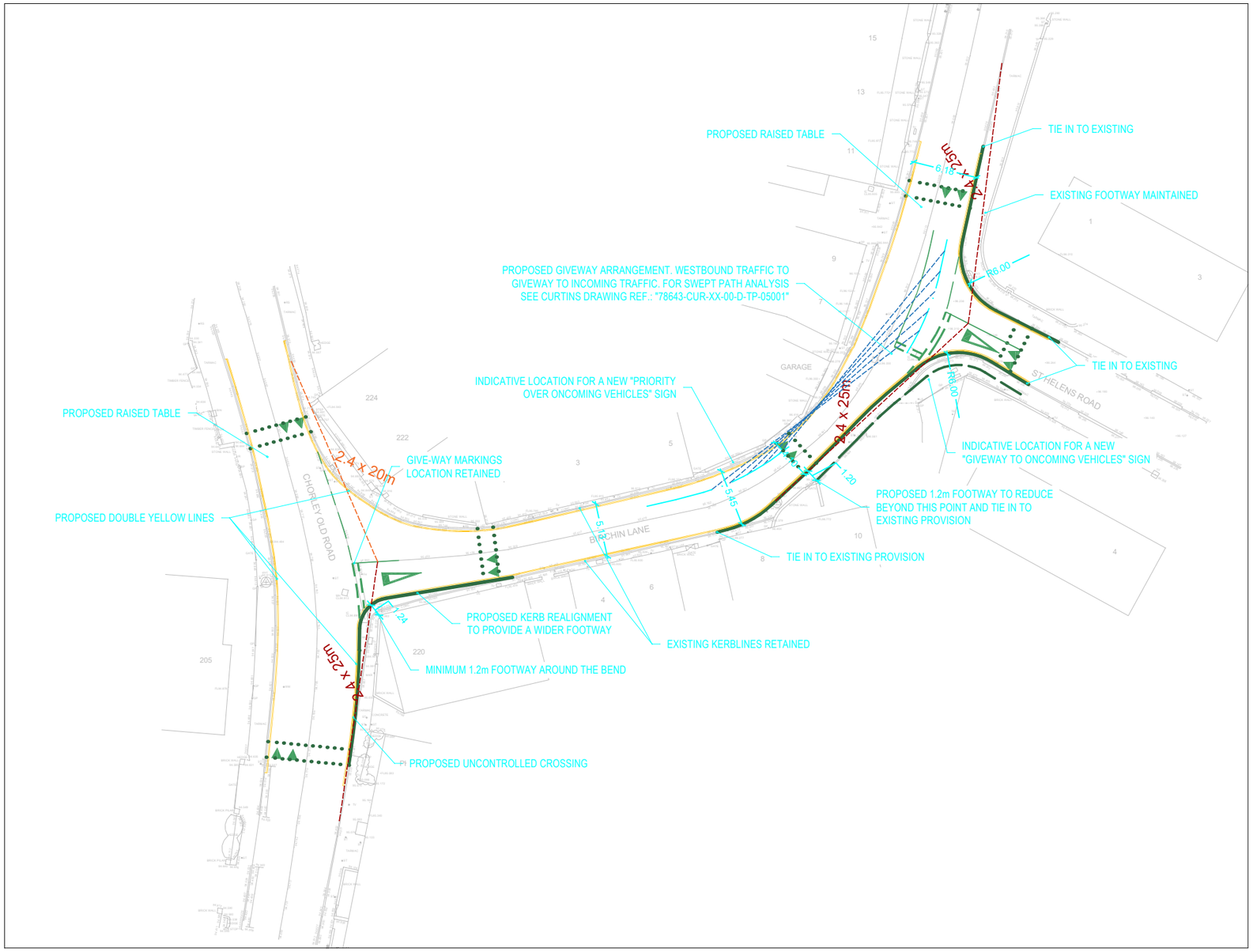
9.1.2 An assessment of Birchin Lane has been carried out using VISSIM.

9.1.3 Overall, the scheme will provide benefits to pedestrians with a new section of pedestrian footway.

9.1.4 The introduction of a new Give-Way line on Birchin Lane will marginally increase the travel time by less than 5 seconds overall.

9.1.5 It is proposed to introduce a KEEP CLEAR marking on Birchin Lane at the junction of Saint Helen's Road to help right turner to access Saint Helen's Road.

APPENDIX A:
PROPOSED DRAWING


PROPOSED RAISED TABLE
TIE IN TO EXISTING
2.4 x 25m
EXISTING FOOTWAY MAINTAINED
PROPOSED GIVEWAY ARRANGEMENT. WESTBOUND TRAFFIC TO GIVEWAY TO INCOMING TRAFFIC. FOR SWEPT PATH ANALYSIS SEE CURTINS DRAWING REF.: "78643-CUR-XX-00-D-TP-05001"
R6.00
TIE IN TO EXISTING
INDICATIVE LOCATION FOR A NEW "PRIORITY OVER ONCOMING VEHICLES" SIGN
2.4 x 25m
R8.00
ST HELENS ROAD
PROPOSED RAISED TABLE
2.4 x 20m
GIVE-WAY MARKINGS LOCATION RETAINED
INDICATIVE LOCATION FOR A NEW "GIVEWAY TO ONCOMING VEHICLES" SIGN
PROPOSED 1.2m FOOTWAY TO REDUCE BEYOND THIS POINT AND TIE IN TO EXISTING PROVISION
PROPOSED DOUBLE YELLOW LINES
CHORLEY OLD ROAD
BIRCHIN LANE
TIE IN TO EXISTING PROVISION
PROPOSED KERB REALIGNMENT TO PROVIDE A WIDER FOOTWAY
EXISTING KERBLINES RETAINED
MINIMUM 1.2m FOOTWAY AROUND THE BEND
2.4 x 25m
PROPOSED UNCONTROLLED CROSSING
GARAGE

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