

# Proposed Residential Development – Bricket Wood Sports And Country Club, Paintball Site & Bricket Lodge, Lye Lane, Bricket Wood, AL2 3TF

# **Technical Note**

Prepared on behalf of JK Rudkin Builders Limited

June 2023

## Introduction

## Scope of Report

This Technical Note (TN) has been prepared by Milestone Transport Planning (MTP) on behalf JK Rudkin Builders Limited ('the applicant') in support an "Outline application (access sought) - Demolition of existing buildings and construction of up to 115 dwellings and creation of new access" on land at the former Bricket Wood Sports & Country Club, Paintball Site & Bricket Lodge, Lye Lane, Bricket Wood AL2 3TF (the "Site") (LPA Ref. 5/2022/2443).

The above-mentioned planning application was validated by the Local Planning Authority, St Albans City & District Council (SADC), on 12<sup>th</sup> October 2022. The planning application was supported by a Transport Assessment (TA) and Travel Plan (TP) prepared by Paul Mews Associates.

Following submission of the planning application the local Highway Authority, Hertfordshire County Council (HCC), provided comments to the applicant and requested an revised TA be provided (dated January 2023). Within the submitted revised TA, prepared by Paul Mews Associates, a 2.0-metre wide footway was proposed on Lye Lane south of the Site towards Bricket Wood village centre.

HCC have since reviewed the revised TA and provided a formal consultation response on 6<sup>th</sup> April 2023. A copy of the consultation response is attached at Appendix 1. HCC recommended that permission be refused for the following reasons:

• "Given the site's proximity to major roads, as well as the current lack of safe, convenient pedestrian and cycle provision, there is a significant challenge to make this site sustainable. Until concerns about the feasibility of the Proposed footway to the South are fully addressed it would not be appropriate to recommend permission with a condition that may not be deliverable (and therefore may not be enforceable) and is critical to the sustainable access of this site. Specifically, the highlighted Ancient Woodland, Common Land, minimum carriageway width and suitable level of protection of cyclists' design constraints must be satisfactorily addressed, with the designer of the Proposed footway to the South clearly stating any necessary relaxations or departures from standards (please refer to Manual for Streets, Inclusive Mobility and LTN1/20 design standards).



• There remains a concern that with the introduction of the Proposed footway to the South on Lye Lane, large refuse and servicing vehicles would encroach across the centre of the carriageway. Further swept path analysis of the carriageway on Lye Lane is required to demonstrate compliance with standards (please refer to Manual for Streets design standards). Any necessary relaxations or departures from standards should be clearly stated by the designer."

Following the consultation response, MTP have revised the initial 2.0-metre wide footway proposals prepared by Paul Mews Associates in order to achieve an deliverable scheme.

As such, this TN has been prepared to address the comments received from HCC Highways within their consultation response and to confirm that there are no residual cumulative impacts in terms of highway safety, especially regarding the proposed access arrangements, and therefore the recommended objection should be removed.

The following section of the report highlights HCC's comments (in bold and italics) and responds to them appropriately.

# Accessibility - Cycle & Pedestrian

#### **Active Travel Audit**

Regarding the appropriate identification of 'active' travel arrangements to the Site, within the consultation response, HCC stated that:

"The necessary improvements would need to be identified as part of a walking and cycling audit of the routes between the site and key local destinations."

Following the consultation response, an Active Travel Audit (ATA) was conducted on 24<sup>th</sup> May 2023. The scope of the ATA included the following 7 key routes:

- Route 1 Lye Lane (N): Extending circa 650-metres north from the Site to the St Stephen 018 Footpath.
- Route 2 –
   Lye Lane (S): Extending circa 490-metres south from the Site to the give-way priority junction with West Riding. This route provides access to both the St Stephen 015 and 030 Footpaths, the Woodbury Field Playground, and green space to the east of Lye Lane.
- Route 3 West Riding extending south-west from Lye Lane for circa 685-metres to the
  mini-roundabout junction with Mount Pleasant lane. This route provides access to
  the Site's nearest bus stops (adjacent to Grassington Close) and local amenities at
  the junction with Oakwood Road.
- Route 4 Mount Pleasant Lane, extending south-west for circa 600-metres to the Mount Pleasant Lane Junior Mixed Infant School.
- Route 5 Oak Avenue / Black Boy Wood, providing access to St Stephen 011 Bridleway and local amenities located on the northern side of Black Boy Wood.
- Route 6 St Stephen 011 Bridleway, providing a route towards Bricket Wood rail station.
- Route 7 Station Road, providing access to Bricket Wood rail station.

The ATA has been prepared to review existing 'active' travel (walking and cycling) provision along the above routes and to identify, where appropriate, opportunities for improvement.



For context, and as detailed in Section 4 of the revised TA (Jan 2023), the emerging development proposals on the Site will generate approximately 117 non car based trips over a daily period including 16 and 15 in the AM and PM peak hourly periods respectively. As such, the increased demand on 'active' travel infrastructure in vicinity of the Site will be low.

Within the ATA, due regard is given to Department for Transport's Local Transport Note (LTN) 1/20 'Cycle Infrastructure Design' (2020).

A copy of the full ATA is included as Appendix 2 to the TN. The ATA assessed each of the key routes against the 'Cycling Level of Service Tool (CLoS)' within Appendix A of LTN 1/20. This is a simple scoring assessment based on attributes of the five design criteria detailed within LTN 1/20. The CLoS is then used to identify strengths and weaknesses of the existing 'active' travel provision, and therefore provide recommendations on what can be improved.

The ATA concluded that the majority of the key routes were direct, well lit, and well overlooked. Consequently, the routes are suitable for the majority of 'active' travel users.

However, as part of the ATA a key area for improvement was identified along Route 2. This improvement comprises the provision of a new footway connecting the Site to the existing footway provision on the M25 overbridge, as well as continuing south along Lye Lane to the give-way priority junction with West Riding.

The purpose of this TN is to demonstrate that the proposed footway can be delivered within the public highway along this route. It is suggested that the footway improvement is delivered under a S278 agreement as part of the development proposals.

Additional areas for improvement that were identified within the ATA study area included: -

- Provision of dropped kerbs / tactile paving (locations detailed in the ATA);
- Additional street lighting (locations detailed in the ATA);
- Increased surface / verge maintenance by the Highway Authority (locations detailed in the ATA);
- Provision of an on-carriageway cycle lane along sections of West Riding and Mount Pleasant Lane.
- Additional cycle signage towards the key local amenities / Bricket Wood rail station throughout the study area.
- Provision of Kassel kerbing and shelters on both sides of West Riding bus stops.

It is proposed that an appropriately scaled proportion of these additional improvements are included as part of the 'Second Stand (S106)' contributions detailed in the 'Mitigation measures' section of the consultation response.



## Proposed 'Active' Travel Access Arrangements

This section of the report aims to address HCC's comments regarding the proposed 'active' travel access arrangements. Within the consultation response, HCC stated that:

"The drawings provided to-date do not provide sufficient detail to enable an informed view to be taken. Given the fundamental importance of the footway it is requested that a feasibility study or similar be provided by the applicant that details how the footway will be delivered in engineering terms. This would need to include detailed drawings on a topographical base and would need to include details of engineering solutions to mitigate the impact in term of matters such as drainage and trees. It would also require details of any third-party land (i.e. land outside of the public highway) that may be required, an overlay of the HCC Land Boundary data supplied will be useful. Any details of agreements that have been put in-place to secure use of any required land will also be needed."

Drawing No. 23051 / 001, attached at Appendix 3, details the revised 2.0-metre wide footway proposals on a topographical base.

As per the previous proposals, the 2.0-metre wide footway on the southern side of the proposed Site access would continue south to connect with the existing pedestrian infrastructure on the M25 overbridge. This would be achieved through the resurfacing of the existing verge between the Site and the M25 overbridge, on the eastern side of Lye Lane.

Continuing south of the M25 overbridge, the available space between the edge of the carriageway and the Highway Boundary narrows to circa 1.0-metre. The revised TA prepared by Paul Mews Associates stated that "Prior to this point it is proposed that a crossing point with dropped kerbs with tactile paving would be provided so that pedestrians with buggies / wheelchairs who require a full 2.0m width can cross to a new section of 2.0m wide footway on the western side of Lye Lane. This would then cross back to the east side of Lye Lane at a point where highways land ownership allows a 2.0m wide footway to be provided"

As shown on Drawing No. 23051 / 001, in order to provide pedestrians with a direct route south along Lye Lane, it is proposed that Lye Lane carriageway will be realigned south-westward to provide a 5.5-metre wide carriageway, enabling the provision of a continuous 2.0-metre wide footway along the eastern side of Lye Lane. The realigned western kerb line will tie back into the existing carriageway adjacent to Woodview Lodge, whilst the eastern kerb line will tie back into the existing carriageway circa 40-metres further south.

An uncontrolled crossing, provided with dropped kerbs and tactile paving, is proposed adjacent to Woodview Lodge. This will provide an improved connection between the recreational path, to the east, and to Woodview Lodge / the St Stephen 015 Footpath, to the west. This was an area identified for improvement within the ATA.

The 2.0-metre wide footway on the eastern side of Lye Lane would then continue south to a point adjacent to the St Stephen 030 Footpath, at which point it would cross to the western side of Lye Lane and continue south to connect with the existing footway infrastructure on the northside of West Riding. The proposed crossing point would be provided with dropped kerbs and tactile paving, increasing pedestrian permeability between the St Stephen 015 and 030 Footpaths; an area identified for improvement within the ATA.

Drawing No. 23051 / 001, reveals that the 2.0-metre wide footway may require the selective removal of existing tree stumps. Of note, the footway has been designed so that no tree removal is proposed. Where the footway is in proximity to existing trees a no dig solution may be required during construction, this will be explored further during the Detailed Design stage.



Additionally, and as recommended within the consultation response, in order to further protect the existing tree roots along Lye Lane the footway could be "...made by laying a granular subbase and a graded aggregate wearing course. This would permit natural drainage and would blend in well with the rural nature of Lye (sic) Lane". This will also be explored further at the Detailed Design stage.

As detailed in Drawing No. 23051 / 001, sections of the existing ditches / gullies, that currently run adjacent to either side of the Lye Lane carriageway, will be backfilled with suitable material in order to enable the construction of the 2.0-metre wide footway. The suitable fill material will be topped with a minimum of 150mm topsoil and grass seed that will tie the proposed back edge of footway into the existing levels.

As the fill material is proposed to be permeable, any trees within the proposed verge will likely be retained. Drawing No. 23051 / 002, attached at Appendix 4, provides example cross sections of the proposed footway which will be explored further at the Detailed Design stage.

Drainage will be achieved through a combination of drainage kerbs and natural drainage of the footways proposed surfacing. It is proposed that the drainage kerbs will drain into the existing drainage system. If the proposed drainage kerbs are not deemed suitable, for maintenance purposes, then a traditional gully discharging to a filter drain solution in place of the existing ditch can be explored at the Detailed Design stage.

Drawing No. 23051 / 001 also reveals that PV cell powered lighting units will be positioned every circa 30-metres along the proposed footway. The exact specification of the lighting units will be determined at the Detailed Design stage but it is intended that the Highway Authority will adopt the proposed lighting units.

Finally, the Drawing No. 23051 / 001 reveals that the 2.0-metre wide footway, associated uncontrolled crossings, proposed Lye Lane carriageway realignment / widening, and proposed passing bay can all be fully accommodated within land under control of the applicant or the Highway Authority.

Of note, south of the M25 overbridge, Lye Lane is designated as Common Land. As such, should outline planning permission be achieved, a Grampian Condition would be required to ensure that no development can proceed until a subsequent consent is granted. The Grampian Condition would require explicit consent from the Planning Inspectorate on behalf of the Secretary of State for Environment, Food and Rural Affairs.

"Further consideration of the needs of cyclists is also necessary, the applicant should demonstrate consideration of LTN1/20 standards in this regard."

As part of the revised TA prepared by Paul Mews Associates, ATC data was collected for Lye Lane. The average total weekday two-way flow on Lye Lane was recorded at 1,145 vehicles per day.

In line with Table 4.1 of LTN 1/20, the 30-mph posted speed limit, and the low two-way vehicular flows along Lye Lane, the existing mixed traffic provision is suitable for some cyclists but may exclude potential users.

Although additional cycle infrastructure would be preferable, there is insufficient width to provide any additional cycle infrastructure, as well as the proposed 2.0-metre wide footway, due to the numerous constraints along this section of Lye Lane.

Nonetheless, the route is recognised by SADC's Cycling Map, as "routes suggested by local cyclists along usually quieter roads".



# Accessibility - Public Transport

This section of the report aims to address HCC's comments regarding the public transport accessibility. Within the consultation response, HCC stated that:

"...We request Kassel kerbing and shelters on both sides of West Riding, to enhance the bus stop amenities and pursue the opportunity to make bus services as attractive as possible."

As stated within the ATA, it is proposed that these improvements are included as part of the 'Second Stand (S106)' contributions.

# Refuse and Service Delivery

This section of the report aims to address HCC's comments regarding the refuse and service Delivery arrangements. Within the consultation response, HCC stated that:

"There remains a concern that Lye Lane with the introduction of the Proposed footway to the South off-site highway works, large refuse and servicing vehicles would encroach across the centre of the carriageway. When confronted by a vehicle coming the opposite direction it is likely they would also choose to encroach onto the kerbed footway, which would generate a safety concern for any vulnerable users, pedestrians and cyclists."

Drawing No.'s 23051 / TK01 & TK02, attached at Appendix 5, reveal that a large refuse vehicle (commonly used by HCC) and a private car can simultaneously access / egress the Site in a safe and convenient manner.

Continuing south from the Site, across the M25 overbridge, and through the proposed Lye Lane realignment, the carriageway is provided with sufficient width for the simultaneously access / egress of a large refuse vehicle and private car.

Adjacent to Woodview Lodge, where the realigned Lye Lane begins to tie back into the existing carriageway, Lye Lane narrows to circa 4.5-metres. Due to the large size of the HCC refuse vehicle, this section of Lye Lane is only wide enough to accommodate the refuse vehicle. As such, the private car is required to wait until the refuse vehicle passes by.

Of note, the straight alignment of this section of Lye Lane affords any vehicles an achievable forward visibility of circa 160-metres. This enables any oncoming vehicles to spot one another early and move to a suitable passing place. Assuming a vehicle speed of 30-mph, it would take circa 12 seconds for a refuse vehicle to travel the narrow section of Lye Lane and pass by the oncoming private car.

Continuing south towards West Riding, Lye Lane bends south-westward, the proposals include a slight widening of the carriageway (on the eastern kerb line) to enable the simultaneously access / egress of a large refuse vehicle and private car.

Approximately 75-metres north-east of the give-way priority junction with West Riding a 2.0 x 12.0-metre passing bay is provided on the south-eastern side of Lye Lane. This enables sufficient room for a refuse vehicle to pass any oncoming vehicles.



The 75-metre section between the proposed passing bay and the give-way priority junction with West Riding is only wide enough to accommodate the refuse vehicle but is provided with sufficient forward visibility for any oncoming vehicles to move to a suitable passing place. Due to the constraints outlined within this TN there is limited opportunity to widen the carriageway within this section.

At the give-way priority junction with West Riding, the development proposals involve the widening of Lye Lane's north-western kerb radii, to 8.0-metres, improving refuse vehicle access and minimising any centreline crossing.

Overall, the development proposals provide an improvement for refuse vehicle access over the existing scenario

Given refuse collection only occurs once per week and the low frequency of the vehicular trips along Lye Lane, there would be minimal chance of conflict. On the unlikely event a refuse vehicle meets an oncoming vehicle, the development proposals provide sufficient space / opportunity for the refuse vehicle to pass the oncoming vehicle in a safe and convenient manner.

"In addition to refuse vehicles, other larger vehicles such as Supermarket delivery or long wheel base panel vans (i.e. Amazon, DPD) undertaking deliveries for various companies on a more frequent basis than refuse vehicles could also impact upon the required junction and carriageway geometries to accommodate such vehicles."

Drawing No.'s 23051 / TK03 & TK04, attached at Appendix 6, demonstrate that a 7.5t box van (i.e. a large delivery vehicle) and a private car can simultaneously access / egress the Site, via Lye Lane, in a safe and convenient manner.

In light of the above, it is concluded that the development proposals are acceptable from a delivery / servicing perspective.

# Revised Stage 1 Road Safety Audit

As part of the submitted revised TA, prepared by Paul Mews Associates, a Stage 1 Road Safety Audit (RSA) and subsequent Designer's Response were also prepared and submitted.

Within the consultation response, HCC stated that "The S1RSA and S1RSA Response is generally accepted by HCC, notwithstanding the potential issues in terms of the deliverability of the proposed new footway on Lye Lane".

This TN has demonstrated that the revised 2.0-metre wide footway proposals are deliverable along Lye Lane. Following submission of this TN to HCC, a revised Stage 1 RSA will be instructed and circulated to HCC, along with a revised Designer's Response, as soon as possible.

# Summary & Conclusions

This TN has been prepared by MTP on behalf JK Rudkin Builders Limited ('the applicant') in support an "Outline application (access sought) - Demolition of existing buildings and construction of up to 115 dwellings and creation of new access" on land at the former Bricket Wood Sports & Country Club, Paintball Site & Bricket Lodge, Lye Lane, Bricket Wood AL2 3TF (the "Site") (LPA Ref. 5/2022/2443).



This TN has addressed comments received from HCC within their formal consultation response on 6<sup>th</sup> April 2023. In the context of the guidelines within para. 111 of the NPPF, it is considered that there are no residual cumulative impacts in terms of highway safety or the operational capacity of the surrounding road network and therefore the objection should be removed.

Appendix 1



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SG13 8DE

# Response to Planning application from Hertfordshire County Council (T and CP GDP Order 2015)

#### **Director of Planning**

St Albans City & District Council St Peters Street St Albans Hertfordshire AL1 3JE District ref: 5/2022/2443 HCC ref: SA/14229/2022 HCC received: 2 March 2023 Area manager: Rosemary Chatindo

Case officer: Chris Carr

#### Location

Bricket Wood Sports And Country Club, Paintball Site & Bricket Lodge, Lye Lane, Bricket Wood AL2 3TF

#### **Application type**

Outline

#### **Proposal**

ADDITIONAL INFORMATION

Outline application (access sought) - Demolition of existing buildings and construction of up to 115 dwellings and creation of new access

#### Recommendation

Notice is given under article 22 of the Town and Country Planning (Development Management Procedure) (England) Order 2015 that Hertfordshire County Council as Highway Authority recommends that permission be refused for the following reasons:

Hertfordshire County Council (HCC), as a highway authority, has reviewed the application submission and wishes to refuse permission for the proposed development until the following matters are resolved:

- Given the site's proximity to major roads, as well as the current lack of safe, convenient pedestrian and cycle provision, there is a significant challenge to make this site sustainable. Until concerns about the feasibility of the Proposed footway to the South are fully addressed it would not be appropriate to recommend permission with a condition that may not be deliverable (and therefore may not be enforceable) and is critical to the sustainable access of this site. Specifically, the highlighted Ancient Woodland, Common Land, minimum carriageway width and suitable level of protection of cyclists' design constraints must be satisfactorily addressed, with the designer of the Proposed footway to the South clearly stating any necessary relaxations or departures from standards (please refer to Manual for Streets, Inclusive Mobility and LTN1/20 design standards).

- There remains a concern that with the introduction of the Proposed footway to the South on Lye Lane, large refuse and servicing vehicles would encroach across the centre of the carriageway. Further swept path analysis of the carriageway on Lye Lane is required to demonstrate compliance with standards (please refer to Manual for Streets design standards). Any necessary relaxations or departures from standards should be clearly stated by the designer.

In summary, the site is in an area with currently modest levels of public transport accessibility. Further evidence of engagement with local bus operators to explore and pursue any opportunities to promote walking, cycling and public transport use is needed.

#### **Description of Proposal**

Planning application for the demolition of existing buildings and construction of up to 115 dwellings and creation of new access.

HCC Pre-application consultation is presented at Appendix I of the TA (January 2023 Update).

#### Site Description

The site location and context are shown in Appendix A of the TA (January 2023 Update).

The site is located approximately 4.5km south of St Albans, 4.5km east of Abbots Langley and 7km north of Watford. The site is bounded to the west by Lye Lane and to the south by the M25. The site is within the settlement of How Wood.

Lye Lane in Bricket Wood is within the St Stephen ward/electoral division, which is in the constituency of St Albans. The site can be accessed from Lye Lane which leads from the A405 North Orbital. The site can also be accessed from the south from the West Riding / Oak Avenue junction with Lye Lane.

The nearest train station to the site is Bricket Wood Station which is 1km south of the site. How Wood railway station is also a short distance away from the site around 1km to the north of the site.

Lye Lane is a narrow lane, North of the site Lye Lane narrows to 4.2m, there are no centre line markings present along the entire length of Lye Lane. The carriageway is subject to a 30mph speed limit, although the repeater signs and markings are sub-standard. Lye Lane south of the site does not feature footways. To the north of the site, again, there are no footways until Lye Lane reaches the A405 North Orbital Road.

Currently there are no safe and suitable pedestrian accesses to the site, which has 30 existing dwellings. No footways or street lighting are located on Lye Lane and connections to local amenities and public transport facilities is inadequate. Lye Lane is currently unlit, with no highway street light assets present. Lye Lane is part of the gritting network, and the gullies/drainage are subject to an 18 monthly cleaning programme, maintainable at public expense. Large potholes and flooding caused by blocked gullies are regularly reported along Lye Lane. The highway authority classifies Lye Lane as a P1/M1 (e.g. Rural Lane) and an L2 Local Access. The nearest public right of way (PROW) footpath is PROW 060, which the 2015 statement states "commences at junction with Lye Lane at Black Green thence NE to rejoin Lye Lane opposite Blackwood Green".

There is an existing permission for a hotel with 150 bedrooms, conference, and function centre, associated car parking, realignment of A405 roundabout and retention of bungalow (5/2018/2666) at the northern end of Lye Lane on the A405 North Orbital Road. There are also two single dwelling permissions (5/2019/3030 and 5/2020/1615) in the vicinity of the site with access via Lye Lane.

M25 Junction 21a in the immediate vicinity of the site is a recorded congestion hotspot, this is part of the strategic road network. There is designated Ancient Woodland and Wildlife Sites in Blackgreen Wood to the South of the site, along the Eastern side of Lye Lane. The site is designated Green Belt.

Part of Lye Lane to the South of the Site is designated Common Land (Bricket Wood Common, Smug Oak Common & Black Green).

#### **Analysis**

The following documentation has been submitted in support of this application:

- Proposed site plan Revision C
- Design and access statement
- Planning statement
- Highway boundary plan for Lye Lane
- Proposed new footway to South
- Specification for proposed footway base
- Transport Assessment (TA) updated January 2023

#### History

The applicant has undertaken pre-application consultation with HCC, including review of pre-application documents for schemes comprising 113 and 109 residential units respectively. This included a pre-application meeting on 30 March 2022, these discussions were then referred to as appropriate in HCC's subsequent response of 4 April 2022. The 4 April response commented on the following documents:

- Paul Mews Associates, January 2022, Bricket Lodge, Sport and Country Club and Paintball Site, Lye Lane, Bricket Wood, Feasibility Assessment ("the Feasibility Assessment");
- A set of sketch plans from Tom Gristwood Architects, dated 8 February 2022 and titled "Bricket Lodge Developed Sketch Proposals" ("the Sketch Proposal").

The 4 April response included recommended matters for consideration as part of any Transport Assessment (TA) and Travel Plan (TP). Following this initial pre-application correspondence, HCC reviewed at pre-application stage a draft TA and TP provided by the applicant as follows:

- Paul Mew Associates, July 2022, Proposed Residential Development at Former Bricket Wood Sport and Country Club / Paintball Site, Lye Lane, Bricket Wood, Transport Assessment ("the TA");
- Paul Mew Associates, July 2022, Proposed Residential Development at Former Bricket Wood Sport and Country Club / Paintball Site, Lye Lane, Bricket Wood, Travel Plan ("the TP").

Comments on "the TA" and "the TP" were provided to the applicant by HCC on 2 August 2022. The 2 August comments provided by HCC reiterated that, given the site's proximity to major roads, as well as the current lack of safe, convenient pedestrian and cycle provision, there is a significant challenge to make this site sustainable.

Improvements to pedestrian connectivity between the site and local amenities and public transport links, such as Bricket Wood rail station, were highlighted by HCC as being of particular importance. It was noted by HCC in the response dated 2 August that the proposed new footpath presented by the applicant (enclosed within Appendix G of the draft TA and in Appendix E of the TP) running along Lye Lane to link the site to West Riding would be required as a minimum.

It was also highlighted by HCC however that the implementation of this footway may be a significant engineering challenge given for example the presence of ditches and established trees on Lye Lane where the footway is proposed. This may affect its feasibility and in-practice deliverability and may require third-party land (outside of the public highway) in order to adequately mitigate these issues. The following transport related documents were originally submitted with application 5/2022/2443:

- Paul Mew Associates, July 2022, Proposed Residential Development at Former Bricket Wood Sport and Country Club / Paintball Site, Lye Lane, Bricket Wood, Transport Assessment ("the TA").
- Paul Mew Associates, July 2022, Proposed Residential Development at Former Bricket Wood Sport and Country Club / Paintball Site, Lye Lane, Bricket Wood, Travel Plan ("the TP").
- Paul Mew Associates, 26 August 2022, P2584 Bricket Wood Development, Response to HCC comments of 2nd August 2022.
- Allen Transport Consultancy Ltd, September 2022, Lye Lane, Bricket Wood, Hertfordshire, Proposed S278 Highway Works, Stage 1 Road Safety Audit ("S1RSA") -Appended to the S1RSA Response.
- Paul Mew Associates, September 2022, Lye Lane, Bricket Wood, Stage 1 RSA Response ("the S1RSA Response").
- Paul Mew Associates, 29 September 2022, P258: Land North of Bricket Wood, Herts, Proposed Site Access Junction Layout Drawing.
- Paul Mew Associates, 29 September 2022, P258: Land North of Bricket Wood, Herts, Proposed New Footway to South (4 Parts).
- Paul Mew Associates, 29 June 2022, P258: Land North of Bricket Wood, Herts, Refuse Vehicle Swept Path Analysis.

An updated TA was requested by HCC to be provided for review. A Transport Assessment (TA) – updated January 2023 has now been submitted, this document has been reviewed by HCC further below.

#### **Planning Policy**

The applicant has provided evidence that the National Planning Policy Framework (NPPF – July 2021), St Albans City and District Local Plan (1994) - being replaced by a new Local Plan (2020-2038), HCCs Local Transport Plan 4 (2018), St Albans City and District Revised Parking Policies and Standards (2002); and HCC's Roads in Hertfordshire: Highway Design Guide (3rd Edition) has been reviewed. Due to the nature of the application, this is considered acceptable. For future reference, the applicant should also provide evidence of consideration of the following policy documentation:

- National Planning Practice Guidance (2014);
- Town and County Planning General Permitted Development (2015); and
- St Stephen Parish Neighbourhood Plan (2022).

St Stephen Parish Neighbourhood Plan (made July 2022) includes the objective to improve transport and movement, through further development of public transport provision and other non-car travel modes, whilst ensuring a safe environment for pedestrians, cyclists, and horse-riders as well as motorists.

The site is not allocated for residential development in the current St Albans Local Plan. Between 25 January and 8 March 2021, St Albans City & District Council held a 'call for sites'. It is understood that this site has been submitted as part of this process. Over 200 sites have been submitted as part of this process. The Council are currently reviewing these sites (as well as hundreds of others) as part of its Housing and Employment Land Availability Assessment. A wide range of other technical work

is currently underway including: a comprehensive investigation of Urban Capacity; a new Green Belt Review; Sustainability Appraisal and Strategic Environmental Assessment; and an Infrastructure Delivery Plan.

### **Trip Generation & Distribution**

Trip generation forecasts have been prepared for the existing and proposed uses by means of the TRICS database. The proposed development will provide up to 115 mixed (private and affordable) dwellings.

Table 8 of the updated TA (January 2023) presents the proposed total person, car based and rail trip generation. This revised assessment is accepted.

As set out previously it is requested that full turning flow diagrams / matrices (including the observed 2022 year and the future assessment year of 2035 with and without development) are provided so that the junction modelling inputs can be checked. Information of this type was included at Appendix J of the previous TA but this information appears to have now been superseded and is not included in the updated TA (January 2023).

#### Impact on the Highway - Junction Assessment

Peak hours for assessment have been determined by means of automatic traffic count surveys undertaken on Park Street Lane between 25/04/22 and 01/05/22. The results of the ATC surveys are shown in Appendix F of the TA (January 2023 Update) and demonstrate that the AM peak hour is 08:00 to 09:00 while the PM peak hour is 15:00 to 16:00. Full ATC survey data is shown in Appendix F of the TA (January 2023 Update).

The proposed 'worst case' development (115 dwellings) has been shown to generate 101 vehicle trips in the AM peak hour and 96 vehicle trips in the PM peak hour.

Junction capacity assessments have been carried out to determine the impact of the development on the junctions of:

- A405/Lve Lane.
- Lye Lane/Oak Avenue/West Riding Junction and
- Lye Lane/Park Street Lane

Baseline manual classified turning count surveys were undertaken at these junctions on 26/04/22. Full details of the 'baseline' manual classified turning count surveys are shown in Appendix J in the updated TA (January 2023).

To assess whether this was a 'typical' weekday, the ATC data collected for Lye Lane, as set out in Appendix F of the TA (January 2023 Update), has been examined. The average total weekday two-way flow on Lye Lane was 1145 vehicles per day. The 'median' total weekday two-way flow on Lye Lane was 1148 vehicles per day. Total weekday two-way flows on Lye Lane on the day of the manual classified turning count surveys was 1158 vehicles per day. As such it is concluded that the manual classified turning count survey data is typical.

The 'baseline' manual classified turning counts were then 'growthed' to the future year of 2035 (10 years after the assumed opening year of 2025) to reflect background traffic growth. Full details of the 'future year' turning movements (OD tables) are shown in Appendix J of the TA (January 2023 Update).

Separate growth rates have been derived for AM and Interpeak periods to correspond with peak hours identified. In addition to TEMPRO growth data for the future year of 2035, fuel / income

adjustment factors for the future year of 2035 have also been applied based on TAG Unit M4 and the TAG Data Book (May 2022 v1.18) Table M4 2.1. Resulting growth rates for the future year of 2035 are presented at page 23 of the TA (January 2023 Update). These TEMPRO Growth Factors, TAG Income & Fuel Cost Factors and Total Growth Factors calculations have been independently replicated and are considered valid.

Due to the central reserve on the A405 North Orbital Road, the only site traffic related movements are the left turn from the A405 into Lye Lane, and the left turn movement out of Lye Lane on to the A405. It is noted that only a small proportion of site flows have been assigned to Lye Lane north of the site.

PICADY assessments for the Lye Lane / A405 North Orbital Road junction, the Lye Lane / West Riding / Oak Avenue junction, the Lye Lane / Park Street junction and the New Site Access / Lye Lane junction for the future year with development flows is presented in the TA (January 2023 Update). These junction assessments have been independently checked and verified. The assessments show that in both the AM and PM peak hours, there would be low Ratios of Flow to Capacity (RFC's) and minimal queuing on all junction arms. The Level of Service during both peak periods would be acceptable in highway capacity terms.

#### **Highway Safety**

A S1RSA and subsequent S1RSA Response have been submitted with the application. The S1RSA raises the following issues:

- Potential restricted visibility for motorists seeking to emerge from the development site access.
- Inadequate swept path requirements of larger vehicles negotiating the proposed development site access.
- Lack of dropped kerb provision across site access junction and within proposed development site.
- Potential restricted inter-visibility for pedestrians transitioning from the footway to the north of the site and the carriageway.
- Potential restricted inter-visibility at the proposed crossing facilities on the proposed new footway south of the site.
- Potential swept path requirements of vehicles accessing and egressing the existing access junction and vehicular crossovers on Lye Lane with proposed new footway in-place.
- Narrowed section of proposed footway (on the eastern side of Lye Lane).
- Location of existing ditches in proximity to the proposed new footways on Lye Lane.

The S1RSA Response accepts the issues raised in the S1RSA and amended drawings are included as part of the S1RSA Response, and separately as part of the application submission, to reflect the S1RSA findings.

The S1RSA and S1RSA Response is generally accepted by HCC, notwithstanding the potential issues in terms of the deliverability of the proposed new footway on Lye Lane.

It is also noted that the updated 'Proposed Site Access Junction Layout' Drawing (29 September 2022) includes a dropped kerb and tactile paving at the proposed short section of footway north of the site access (S1RSA 'Location F'). The tactile paving would need to be omitted (given that there is no footway on the western side of Lye Lane).

Furthermore, it is noted that some of the additional dropped kerbs and tactile paving that are now shown on the 'Proposed Uncontrolled Pedestrian Points with Dropped Kerbs' Drawing (29 September 2022) which is included at Appendix B of the S1RSA Response are not to standard.

Appendix C of the updated TA (January 2023) presents updated map extracts showing road traffic accidents by severity for the 5-year period 2017 to 2021 in the area around the development site which resulted in all casualty types. This includes the following locations as requested by HCC:

The area of Bricket Wood surrounded by the following roads, and including these roads themselves:

- West Riding;
- Oak Avenue;
- Park Street Lane west of Station Road (also referred to as Lye Lane east);
- Station Road;
- Mount Pleasant Lane.
- Lye Lane up to and including the junction with A405 North Orbital Road.

#### Refuse and Service Delivery

Appendix H of the updated TA (January 2023) presents swept path analysis of a refuse vehicle within the site, demonstrating these can access and egress the site in forward gear.

There remains a concern that Lye Lane with the introduction of the Proposed footway to the South off-site highway works, large refuse and servicing vehicles would encroach across the centre of the carriageway. When confronted by a vehicle coming the opposite direction it is likely they would also choose to encroach onto the kerbed footway, which would generate a safety concern for any vulnerable users, pedestrians and cyclists.

In addition to refuse vehicles, other larger vehicles such as Supermarket delivery or long wheel base panel vans (i.e. Amazon, DPD) undertaking deliveries for various companies on a more frequent basis than refuse vehicles could also impact upon the required junction and carriageway geometries to accommodate such vehicles.

Further swept path analysis of the carriageway on Lye Lane is required to demonstrate compliance with standards. Any necessary departures from standards should be clearly stated by the designer.

#### **Highway Layout - Access**

In summary, the proposed development is:

- Stopping up an existing vehicular access on Lye Lane and providing a new site access junction on Lye Lane, which is to be located north of the existing vehicular access for the paintball centre. The new site vehicle access will take the form of a priority junction;
- Providing new footways on Lye Lane, between the development site access junction and the junction of West Riding to the south of the proposed development site. The footways include a number of uncontrolled pedestrian crossing facilities, which incorporate dropped kerbs and tactile paving.

A sightline assessment was carried out for the proposed site access based on 85th percentile speed data collected as part of a 5-day weekday automatic traffic count survey carried out on Lye Lane adjacent to the location of the previously and current proposed site access. The 85th percentile speed assessment was based on the interpeak period of 10:00 to 15:00 on dry weekdays in April 2022 with speeds corrected for wet weather conditions. Full results of the automatic traffic count survey are presented in Appendix F of the updated TA (January 2023). The surveys revealed that the

85th percentile southbound speed was 29.2mph and the 85th percentile northbound speed was 28.4mph. In line with Manual for Streets these equate to sightline requirements of 43m. Appendix E of the updated TA (January 2023) demonstrates that these sightlines can be achieved from the proposed site access.

#### Cycling & Pedestrian access

The latest Highways Response to Jan comments states:

"Our report showed that a 2m footpath can be formed within highway land boundary. We showed the OS mapping land boundary that we have found to be reasonably accurate in past experiences and this accords with the highway boundary as supplied by HCC attached.

Trees and bushes have grown up within the highway land such that it is difficult to see the land boundary on site. Some pruning and selective felling of trees may be needed within highway land to accommodate a new footpath. We are not convinced that a fully metalled surface would be practicable with the proximity of tree roots. The provision of a footpath could be made by laying a granular subbase and a graded aggregate wearing course. This would permit natural drainage and would blend in well with the rural nature of Lyle (sic) Lane. Kerbing could be provided, and lighting could be provided using PV cell power units.

The aim of the footpath assessment at this stage is to demonstrate that it is feasible within the land available without encroaching into third party land ownership.

It is not considered necessary to provide detailed engineering drawings at this pre-planning stage which at any rate could be made a condition of planning consent."

In line with HCC's previous responses, a footway from the site to the existing footway provision at West Riding is an essential part of the non-car transport provision that is required to make the development acceptable, though it is only a part of the required improvements.

For example, the route has very little passive surveillance and no lighting (it is not clear the proposed PV cell power units are intended for adoption?), including existing parts of the pedestrian route between the southern end of the path and Bricket Wood station. The necessary improvements would need to be identified as part of a walking and cycling audit of the routes between the site and key local destinations. The exact scope of the audit would need to be agreed with HCC, along with the subsequent upgrades required, which would need to be delivered by the applicant through a S278 agreement.

Alternative non-car travel options would also be needed for those people uncomfortable with using the route due to security concerns and it is suggested that these measures would need to be incorporated and agreed with HCC as part of a robust Full Travel Plan.

As previously advised, implementation of the footway may be an engineering challenge due to the presence of ditches, gullies and trees (including designated Ancient Woodland and Common Land) located along Lye Lane where the footway is proposed. This may affect its feasibility and deliverability and there is concern that reducing the scale and / or form of the footway in order to overcome these engineering challenges and constraints would reduce the effectiveness of the footway and would not then meet the necessary requirements for assisting in providing safe and convenient travel to and from the site for all users, at all times of day and year and in all conditions. Further consideration of the needs of cyclists is also necessary, the applicant should demonstrate consideration of LTN1/20 standards in this regard.

Given the fundamental importance of the footway in assisting in meeting the required sustainability credentials of the site, additional information is required in respect to the design of this footway,

including matters such as drainage (noting the proposed SUDS specification supplied) and associated impacts on trees (including Ancient Woodland designated areas) and how these matters would be resolved. Details of proposed lighting provision are also required, including clarification of whether the proposed PV cell power units are intended for adoption.

In any design solution presented, the new footway needs to be continuous (occasional crossing points permitted), 2 metres minimum width (although a 3 metres width shared use path might also be considered), fully metalled (noting the applicant's comments), fully lit (see above) and fully kerbed between the site access and West Riding.

At the current time, the deliverability of this footway is still not known. The proposed condition, included within the Highways Response to Jan comments document, is therefore not enforceable and is not compliant with the 6 tests in NPPF for suitable planning conditions. The drawings provided to-date do not provide sufficient detail to enable an informed view to be taken. Given the fundamental importance of the footway it is requested that a feasibility study or similar be provided by the applicant that details how the footway will be delivered in engineering terms. This would need to include detailed drawings on a topographical base and would need to include details of engineering solutions to mitigate the impact in term of matters such as drainage and trees. It would also require details of any third-party land (i.e. land outside of the public highway) that may be required, an overlay of the HCC Land Boundary data supplied will be useful. Any details of agreements that have been put in-place to secure use of any required land will also be needed.

#### **Swept Path Assessment**

Further swept path analysis of the carriageway on Lye Lane is required to demonstrate compliance with standards. Any necessary departures from standards should be clearly stated and explained by the designer.

#### Car Parking

The calculation of parking provision for residential developments is set out in St Alban's City District Council's Local Plan Review. Policies 39 and 40 state the parking requirements at residential developments and were retained in the July 2020 Local Plan Review. A total of 253 car parking spaces are proposed within the curtilage of the development for the proposed 109 dwelling scheme.

The Highway Authority recommend that the level of on-site car parking is limited to a maximum of one space per 1 or 2 bed dwellings and two spaces for 3+ bedrooms. This is to encourage active travel / public transport trips.

Hertfordshire County Council declared a climate emergency in 2019 and the HCC Local Transport Plan Policy 5 requires all new developments to provide EV infrastructure. The DfT's Decarbonising Transport (2021) states that in 2030 the sale of new petrol and diesel cars will cease. The NPPF paragraph 112 (e) also requires sites to enable charging. A condition will be required to provide electric vehicle charging points for each residential dwelling.

A condition will be required to provide electric vehicle charging points for each residential dwelling.

#### Cycle Parking

Cycle parking standards are set out in St Alban's District Council's Local Plan Review. Policy 39 Part viii states that "bicycle and motorcycle parking provision may be required for in large developments".

The Highway Authority request cycle parking is provided at a level of one long-term cycle parking space per bedroom. It should be noted that the St Alban's standards are now only considered guidance.

It is proposed that the development will provide adequate and safe cycle storage within the boundary of each dwelling.

A condition will be required to provide cycle parking at a level of one long-term cycle parking space per bedroom within the boundary of each dwelling.

#### **Accessibility - Public Transport**

With regards to Highways Improvements in Association with Development, Policy 35 of the current Local Plan sets out that:'In order to mitigate the highways effects of development proposals the District Council, in conjunction with the County Council where appropriate, will seek highways improvements and / or improvements to the public transport system from developers whose proposals would otherwise result in detrimental highway conditions.'

With regards to public transport provision, Policy 36A – Location of New Development in Relation to Public Transport Network, sets out that:

'The District Council will generally encourage the use of public transport. In considering the impact of new development, account will be taken of its proximity to the public transport network and whether facilities will be provided within the development to cater for the use of the network'.

An assessment of local public transport has been carried out and is reported in the updated TA (January 2023).

The NPPF (July 2021) sets out that opportunities to promote walking, cycling and public transport use are to be identified and pursued. Applications for development should:

- give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second so far as possible to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- create places that are safe, secure and attractive which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards.

Currently two bus routes serve Bricket Wood. The nearest bus stops are located approximately 0.4 miles to the south of the site on West Riding, at Grassington Close within the village of Bricket Wood.

How Wood rail station is located approximately 1km to the North and Bricket Wood rail station is located approximately 1km to the South. Rail services at these stations are towards St Albans Abbey or Watford Junction and typically operate at a frequency of 1 per hour in each direction. At Watford Junction, interchange is available to direct services to London Euston, southern, central and north-western England and Scotland as well as to London Overground services.

In summary, the site is in an area with currently modest levels of public transport accessibility. Further evidence of engagement with local bus operators to explore and pursue any opportunities to promote walking, cycling and public transport use is needed. We request Kassel kerbing and shelters on both sides of West Riding, to enhance the bus stop amenities and pursue the opportunity to make bus services as attractive as possible. The proposed development still risks being car dependant.

#### Travel Plan

A condition will be required to provide a robust Full Travel Plan.

#### Construction

A Construction Traffic Management Plan will be required to ensure construction vehicles will not have a detrimental impact on the vicinity of the site and a condition will be required to provide adequate parking for construction vehicles on-site to prevent on-street conflict and impacts to the highway safety on Lye Lane.

### Planning Obligations / Community Infrastructure Levy (CIL)

St Albans does not currently have a CIL. In the absence of CIL, sustainable transport contributions are sought. Hertfordshire County Council's 4th Local Transport Plan (LTP4) has developed strategies and plans for the county and the towns and areas within it which identifies the sustainable transport and accessibility measures for which contributions would be sought.

For new residential developments, a contribution of £6,826 per dwelling is required. Therefore, based on the proposed development of 109 dwellings the total developer contribution to active travel would be £744,034.

The cost of any necessary and relevant local off-site highways' works will be discounted from this total. For example, the cost of the proposed footway to the south and the requested bus stop improvements, plus any gaps identified in the required walking and cycling audit of the routes between the site and key local destinations, will be discounted from this total.

Transport Package SM20 within Hertfordshire County Council's South-West Hertfordshire Growth and Transport Plan that will be directly relevant to this location.

Transport Package SM20 is to provide an A405 Cycleway, to include provision of off-road cycleway broadly alongside the A405 running from Coningsby Bank (St Albans) and Bricket Wood (M1 J6) and connecting to existing route. Enhancing existing cycleway continuing to Garston (including the Leisurepark) and Leavesden (including the business park). This forms part of a broader strategy to make the A405 multi-modal at Bricket Wood.

#### Conclusion

Hertfordshire County Council (HCC) as highway authority has reviewed the application submission and wishes to restrict the grant of permission until the above matters are resolved

#### Signed

Chris Carr

6 April 2023

Appendix 2



# Proposed Residential Development – Former Bricket Wood Sport & Country Club / Paintball Site

# **Active Travel Audit**

Prepared on behalf of JK Rudkin Builders Limited

June 2023

#### Introduction

This Active Travel Audit (ATA) has been prepared by Milestone Transport Planning (MTP) on behalf JK Rudkin Builders Limited ('the applicant') in support an "Outline application (access sought) - Demolition of existing buildings and construction of up to 115 dwellings and creation of new access" on land at the former Bricket Wood Sports & Country Club, Paintball Site & Bricket Lodge, Lye Lane, Bricket Wood AL2 3TF (the "Site") (LPA Ref. 5/2022/2443).

The above-mentioned planning application was validated by the Local Planning Authority, St Albans City & District Council (SADC), on 12<sup>th</sup> October 2022. The planning application was supported by a Transport Assessment (TA) and Travel Plan (TP) prepared by Paul Mews Associates.

Following submission of the planning application the local Highway Authority, Hertfordshire County Council (HCC), provided comments to the applicant and requested an updated TA be provided (dated January 2023). Within the updated TA, a new 2.0-metre wide footway was proposed on Lye Lane south of the Site towards Bricket Wood village centre.

HCC have since reviewed the updated TA and provided a formal consultation response on 6<sup>th</sup> April 2023. A copy of the consultation response is attached at Appendix 1.

Within the consultation response HCC stated the following regarding 'active' travel access to the Site "The necessary improvements would need to be identified as part of a walking and cycling audit of the routes between the site and key local destinations". As such, this document has been prepared to review existing 'active' travel (walking and cycling) provision in the vicinity of the Site.

For context, and as detailed in Section 4 of the submitted revised TA (Jan 2023), the emerging development proposals on the Site will generate approximately 117 non car based trips over a daily period including 16 and 15 in the AM and PM peak hourly periods respectively. As such, the increased demand on 'active' travel infrastructure in vicinity of the Site will be low.

Within the ATA, due regard is given to Department for Transport's Local Transport Note (LTN) 1/20 'Cycle Infrastructure Design' (2020). Paragraph 4.5.4 of LTN 1/20 states "Cycling rarely happens in isolation, and it may be useful to consider adopting a whole street approach, such as TfL's Healthy Streets Check for Designers".



# Scope & Methodology

Figure 1 reveals that the study area for the ATA includes key desire lines for pedestrians and cyclists to / from Bricket Wood rail station, bus stops and local amenities located along West Riding, and Mount Pleasant Lane Junior Mixed Infant School.

Within the ATA study area the 7 key routes are:

- Route 1 Lye Lane (N): Extending circa 650-metres north from the Site to the St Stephen 018 Footpath.
- Route 2 Lye Lane (S): Extending circa 490-metres south from the Site to the give-way priority junction with West Riding. This route provides access to both the St Stephen 015 and 030 Footpaths, the Woodbury Field Playground, and green space to the east of Lye Lane.
- Route 3 West Riding extending south-west from Lye Lane for circa 685-metres to the
  mini-roundabout junction with Mount Pleasant lane. This route provides access to
  the Site's nearest bus stops (adjacent to Grassington Close) and local amenities at
  the junction with Oakwood Road.
- Route 4 Mount Pleasant Lane, extending south-west for circa 600-metres to the Mount Pleasant Lane Junior Mixed Infant School.
- Route 5 Oak Avenue / Black Boy Wood, providing access to St Stephen 011 Bridleway and local amenities located on the northern side of Black Boy Wood.
- Route 6 St Stephen 011 Bridleway, providing a route towards Bricket Wood rail station.
- Route 7 Station Road, providing access to Bricket Wood rail station.

Figure 1 ATA Study Area





The ATA methodology comprised a Site visit, undertaken on 24<sup>th</sup> May March 2023, during which a photographic survey of the above routes are benchmarked against the 'Cycling Level of Service Tool (CLoS)' within Appendix A of LTN 1/20.

# Safety Considerations

Section 3 of the submitted revised TA (Jan 2023), reviews highway safety within the vicinity of the Site through the analysis of road traffic accidents for the 5-year period (2017 to 2021).

Of note, only a couple of 'slight' incidents occurred within the ATA study area over the 5-year period. As such, there would appear to be no discernible patterns or specific clusters of incidents suggesting there are no distinctive issues attributable to defective road conditions, poor visibility or other physical characteristics associated with the existing road layout.

## **Active Travel Audit**

This section of the report assesses each key route against the CLoS tool. This is a simple scoring assessment based on attributes of the five design criteria detailed within LTN 1/20, these state that all routes for anticipated users should be:

- Coherent;
- Direct;
- Safe;
- Comfortable;
- Attractive.

The CloS is then used to identify strengths and weaknesses of the existing 'active' travel provision, and therefore provide recommendations on what can be improved.

The tool also includes some factors that are considered to be 'Critical Fails' – results that represent unsafe conditions for cycling which must be addressed (or an alternative route found).

## Route 1 – Lye Lane (N)

Although Route 1 currently has no 'active' travel infrastructure, the route is recognised by SADC's Cycling Map, as "routes suggested by local cyclists along usually quieter roads". A copy of SADC's Cycling Map is attached at Appendix 2 of this report. Additionally, at the route is provided with pedestrian / equestrian warning signage circa 70-metres from the give-way controlled priority junction with the A405 North Orbital Road.

Of note, the north-western terminus of Route 1 connects with the St Stephen 018 Footpath which links Lye Lane with the A405 North Orbital Road to the north, providing subsequent 'active' travel connections to the B4630 Watford Road and Chiswell Green.

Table 3, along with Figure 2, reveals a key improvement for Route 1 would be further road cleaning / maintenance of potholes by the Highway Authority. This would result in a higher quality surface for 'active' travel users.

Additional, consideration should be given to increased cycle signage, street lighting, and warning signs for motorists.



# Table 1 Route 1 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
Cohesion	Connections	0	No dedicated cycle infrastructure is present.	N/A
	Continuity / Wayfinding	0	Limited signage for cyclists, opportunities to get confused.	Improved provision of signage would be beneficial.
	Density of Network	0	No dedicated cycle infrastructure within the vicinity.	N/A
	Distance	2	Minimal route deviation.	N/A
	Time (Frequency of stops)	1	Minimal stops present.	N/A
Directness	Time (Delay at junctions)	1	Delays at junctions are the same for cyclists as motor vehicles.	N/A
	Time (Delay on links)	1	Cyclists would likely travel at the speed of the slowest vehicle (i.e. a cycle ahead).	Limited opportunity to improve this.
	Gradients	1	Slight downhill gradient northbound.	N/A
	Motor vehicle speed	1	85 <sup>th</sup> percentile speed circa 30-mph.	Narrow carriageway acts as a natural speed constraint.
Safety	Motor vehicle volume	1	Vehicle traffic over average weekday period observed was moderate.	N/A
	Risk of collision – segregation	0	Cyclists share carriageway.	Limited available width to improve this.
	Risk of collision – conflicting movements	1	Conflicting cycle / motor traffic are not separated.	Consider providing side entry treatment would be beneficial but limited available width to provide this.
	Complexity of design	2	No road markings but road layout is clear.	Consider provision of road marking. For example, speed limit roundels.
	Kerbside activity	1	Limited kerbside activity but no protection to 'active' travel users.	Consideration could be given to providing protected space for cyclists.
	Physical hazards	1	No guardrails or buildouts to prevent cyclists evading danger.	Limited opportunity to improve this.



# Table 1 Cont. Route 1 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
Comfort	Surface quality	0	Numerous potholes and damage present.	Road cleaning / further maintenance of potholes by Highway Authority would provide a higher quality surface for 'active' travel users.
	Effective width	1	Given the low volume of vehicles / speed, the mixed traffic provision is suitable but will exclude some potential users.	Limited available width to provide a dedicated cycle lane.
	Rest / Shelter	1	No dedicated resting spots but is unlikely required due to the short section of route.	N/A
	Wayfinding	1	No dedicated cycle signage along the route.	Cycle signage towards the rail station and key amenities would be beneficial. Additional cycle / pedestrian warning signs for motorists would be beneficial.
Attractiveness	Social safety – lighting	0	Majority of the route is unlit.	Highway Authority should consider additional street lighting.
	Social safety – isolation	0	Route is generally away from activity.	N/A
	Street clutter	1	As cyclists are in the carriageway there is no clutter to obstruct them.	N/A
	Cycle parking	0	No cycle parking provided but likely not required.	N/A
Audit Score Total (Max 46)		17 (37%)	-	-



Figure 2 Route 1 – Existing 'Active' Travel Network & Potential Improvements





Highway Authority to consider carriageway resurfacing and verge maintenance, along with additional street lighting and signage, to provide 'active' travel users with a safer environment.



As per Fig 1.1, consider carriageway resurfacing and verge maintenance, along with additional street lighting and signage, to provide 'active' travel users with a safer environment.





As per Fig 1.1, consider carriageway resurfacing and verge maintenance, along with additional street lighting and signage, to provide 'active' travel users with a safer environment.



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As per Fig 1.1, consider carriageway resurfacing and verge maintenance, along with additional street lighting and signage, to provide 'active' travel users with a safer environment.

# Route 2 – Lye Lane (S)

As per Route 1, Route 2 currently has no / very limited 'active' travel infrastructure but the route is still recognised by SADC's Cycling Map, as "routes suggested by local cyclists along usually quieter roads".

Of note, Route 2 provides connection to the St Stephen 015 and 030 Footpaths, which provide recreational routes for pedestrians.

Table 2, along with Figure 3, reveals a key improvement for Route 2 would be the provision of a new footway connecting the Site to the existing footway provision on the M25 overbridge, as well as continuing south along Lye Lane to the give-way priority junction with West Riding.



As previously mentioned, a new 2.0-metre wide footway was proposed as part of the revised submitted TA (Jan 2023) prepared by Paul Mews Associates. However, HCC raised concerns over the deliverability of this footway within their formal consultation response concerns were raised over the deliverability of the footway.

As such, MTP have since prepared a Technical Note (TN) and Drawing No. 21058 / 001, which reveals a revised 2.0-metre wide footway design can be delivered within the public highway. It is suggested that as part of the development proposals, this footway improvement is delivered under a S278 agreement.

Table 2 Route 2 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
Cohesion	Connections	0	No dedicated cycle infrastructure is present.	N/A
	Continuity / Wayfinding	0	Limited signage for cyclists, opportunities to get confused.	Improved provision of signage would be beneficial.
	Density of Network	0	No dedicated cycle infrastructure within the vicinity.	N/A
	Distance	2	Minimal route deviation.	N/A
	Time (Frequency of stops)	1	Minimal stops present.	N/A
Directness	Time (Delay at junctions)	1	Delays at junctions are the same for cyclists as motor vehicles.	N/A
Directives.	Time (Delay on links)	1	Cyclists would likely travel at the speed of the slowest vehicle (i.e. a cycle ahead).	Limited opportunity to improve this.
	Gradients	2	Consistent level gradient.	N/A
	Motor vehicle speed	1	85 <sup>th</sup> percentile speed circa 30-mph.	Narrow carriageway acts as a natural speed constraint.
	Motor vehicle volume	1	Vehicle traffic over average weekday period observed was moderate.	N/A
	Risk of collision – segregation	0	Cyclists share carriageway.	Limited available width to improve this.
Safety	Risk of collision – conflicting movements	1	Conflicting cycle / motor traffic are not separated.	Limited available width to improve this.
	Complexity of design	2	No road markings but road layout is clear.	Consider provision of road marking. For example, speed limit roundels.
	Kerbside activity	1	Limited kerbside activity but no protection to 'active' travel users.	Limited opportunity to improve this.



## Table 2 Cont. Route 2 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Physical hazards	1	No guardrails or buildouts to prevent cyclists evading danger.	Limited opportunity to improve this.
Comfort	Surface quality	2	Smooth high grip surfaces present.	N/A
	Effective width	1	In line with Figure 4.1 of LTN 1/20, mixed traffic is suitable.	Limited opportunity to improve this.
	Rest / Shelter	1	Some shelter provided by vegetation.	N/A
	Wayfinding	0	No dedicated cycle signage.	Cycle signage towards the rail station and key amenities would be beneficial. Additional cycle / pedestrian warning signs for motorists would be beneficial.
Attractiveness	Social safety – lighting	0	Majority of the route is unlit.	Highway Authority should consider additional street lighting.
	Social safety – isolation	0	Route is generally away from activity.	N/A
	Street clutter	1	As cyclists are in the carriageway there is no clutter to obstruct them.	N/A
	Cycle parking	0	No cycle parking provided but likely not required.	N/A
Audit Score Total (Max 46)		19 (41%)	-	-



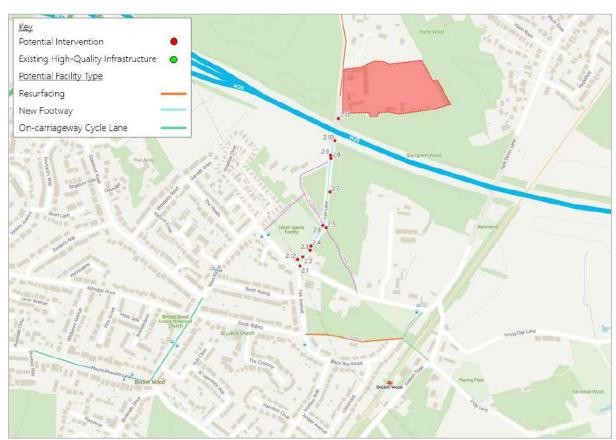


Figure 3 Route 2 – Existing 'Active' Travel Network & Potential Improvements







Consider provision of new footway and culvert for the existing drainage ditch. Additional consideration should be given to the provision of street lighting.





As per Fig 2.2 consider provision of new footway and culvert for the existing drainage ditch. Additional consideration should be given to the provision of street lighting.



Consider provision of new footway, dropped kerbs, and tactile paving. Additionally, consider a change of surfacing treatment for the transition between footway and St Stephens 015 PROW.



As per Fig 2.2 consider provision of new footway and culvert for the existing drainage ditch. Additional consideration should be given to the provision of street lighting.



As per Fig 2.2 consider provision of new footway and culvert for the existing drainage ditch. Additional consideration should be given to the provision of street lighting.



As per Fig 2.5, consider provision of new footway, dropped kerbs, and tactile paving. Additionally, consider a change of surfacing treatment for the transition between footway and St Stephens 015 PROW.



Consider provision of new footway and an improved interaction with the informal footpath.





Consider provision of new footway and an improved interaction with the informal footpath.



Consider continuation of the existing footway southbound on Lye Lane.



Consider continuation of the existing footway northbound on Lye Lane.



As per Fig 2.1, consider provision of new footway, dropped kerbs, and tactile paving.

## Route 3 – West Riding

Table 3 reveals that Route 3 is considered direct, well lit, and well overlooked. However, there is currently limited cycle infrastructure along the route.

Table 3, along with Figure 4, reveals Route 3 could be improved through a combination of increased provision of dropped kerbs / tactile paving and increased cycle signage.

Additional consideration should be given to the provision of an on-carriageway cycle lane, which would be suitable for the majority of users but not all due to the mixed traffic conditions.

Additional uncontrolled pedestrian crossings at the West Riding / Mount Pleasant Lane mini-roundabout junction and along West Riding in vicinity of the bus stops located at the southern frontage of Woodbury Field would be beneficial to pedestrians.

Finally, within HCC's consultation response it was requested that "...Kassel kerbing and shelters on both sides of West Riding, to enhance the bus stop amenities and pursue the opportunity to make bus services as attractive as possible." It is suggest that these improvements are included as part of the 'Second Stand (S106)' contributions.



# Table 3 Route 3 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
Cohesion	Connections	1	Cyclists can connect to some routes without dismounting.	Provision of dropped kerbs, tactile paving, and cycle slip lanes would improve connections.
	Continuity / Wayfinding	0	Lack of signage results in potential for cyclists to get confused.	Provision of signage to aid wayfinding.
	Density of Network	1	No dedicated cycle infrastructure within the vicinity.	N/A
	Distance	1	Route follows more or less as the crow flies.	N/A
	Time (Frequency of stops)	1	Stops are relatively infrequent.	N/A
Directness	Time (Delay at junctions)	1	Delay at junctions is the same for cyclists as motor vehicles.	Limited opportunity to improve this.
	Time (Delay on links)	1	Low traffic volumes enable cyclists to chose the appropriate speed and overtake if required.	N/A
	Gradients	2	Consistent level gradient.	N/A
Safety	Motor vehicle speed	1	85 <sup>th</sup> percentile speeds likely 30- mph.	N/A
	Motor vehicle volume	1	Route sees moderate vehicle traffic during the peak periods.	N/A
	Risk of collision – segregation	0	Cyclists share carriageway.	Consider provision of on- carriageway cycle lane which would be suitable for the majority of users but not all due to the mixed traffic conditions.
	Risk of collision – conflicting movements	1	Conflicting cycle / motor traffic are not separated.	Consider providing side entry treatment in line with LTN 1/20 guidance.
	Complexity of design	2	Clear, understandable, simple road markings and road layout.	N/A
	Kerbside activity	1	Minimal kerbside activity.	Limited opportunity to improve this.
	Physical hazards	1	Some hazards alongside path	Limited opportunity to improve this.
Comfort	Surface quality	2	Smooth high grip surfaces present.	N/A



# Table 3 Cont. Route 3 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Effective width	0	Likely speed / volume of motor vehicles in line with the mixed traffic.	N/A
	Rest / Shelter	2	Cycle parking and benches present.	N/A
	Wayfinding	0	No dedicated cycle signage.	Cycle signage towards key amenities would be beneficial.
	Social safety – lighting	2	Route is lit to highway standards throughout.	N/A
	Social safety – isolation	2	Route is overlooked throughout its length.	N/A
Attractiveness	Street clutter	1	As cyclists are in the carriageway there is no clutter to obstruct them.	N/A
	Cycle parking	2	Secure cycle parking provided, sufficient to meet demand.	N/A
Audit Score Total (Max 46)		26 (57%)	-	-



Figure 4 Route 3 – Existing 'Active' Travel Network & Potential Improvements





Consider provision of a new uncontrolled crossing comprising of dropped kerbs and tactile paving.



Wide carriageway, consider provision of an on-street cycle lane in line with LTN 1/20 guidance. Consider additional cycle signage towards key local amenities.





Consider provision of dropped kerbs and tactile paving.



As per Fig 3.3 consider provision of dropped kerbs and tactile paving.



As per Fig 3.3 consider provision of dropped kerbs and tactile paving.



As per Fig 3.3 consider provision of dropped kerbs and tactile paving.



As per Fig 3.3 consider provision of dropped kerbs and tactile paving.



Example of high quality 'active' travel infrastructure comprising of cycle parking and a resting spot, adjacent to local amenities.





As per Fig 3.3 consider provision of dropped kerbs and tactile paving.



As per Fig 3.3 consider provision of dropped kerbs and tactile paving.



As per Fig 3.2, consider provision of an on-street cycle lane in line with LTN 1/20 guidance. Consider additional cycle signage towards key local amenities.



As per Fig 3.3 consider provision of dropped kerbs and tactile paving.



As per Fig 3.1, consider provision of a new uncontrolled crossing comprising of dropped kerbs and tactile paving, providing a connection between the Woodbury Field Playground and the north-westbound bus stop on West Riding.



Consider surface maintenance at the Woodbury Field access.





Highway Authority to consider footway resurfacing and verge maintenance.

#### Route 4 – Mount Pleasant Lane

Table 4 reveals that Route 4 is considered direct, well lit, and well overlooked. However, there is currently limited cycle infrastructure along the route.

Table 4, along with Figure 5, reveals Route 4 could be improved through a combination of increased provision of dropped kerbs / tactile paving, increased cycle signage, and increased surface maintenance from the Highway Authority.

Additional consideration should be given to the provision of an on-carriageway cycle lane, which would be suitable for the majority of users but not all due to the mixed traffic conditions.

Table 4 Route 4 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Connections	1	Cyclists can connect to some routes without dismounting.	Provision of dropped kerbs, tactile paving, and cycle slip lanes would improve connections.
Cohesion	Continuity / Wayfinding	0	Lack of signage results in potential for cyclists to get confused.	Provision of signage to aid wayfinding.
	Density of Network	1	No dedicated cycle infrastructure within the vicinity.	N/A
	Distance	1	Route follows more or less as the crow flies.	N/A
Directness	Time (Frequency of stops)	1	Stops are relatively infrequent.	N/A
	Time (Delay at junctions)	1	Delay at junctions is the same for cyclists as motor vehicles.	Limited opportunity to improve this.



# Table 4 Cont. Route 4 CLoS

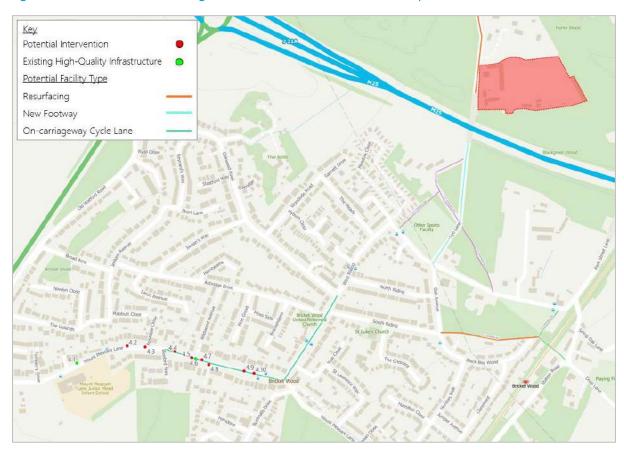
Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Time (Delay on links)	1	Low traffic volumes enable cyclists to chose the appropriate speed and overtake if required.	N/A
	Gradients	1	There are no sections of route with extended periods of steep gradients.	N/A
	Motor vehicle speed	1	85 <sup>th</sup> percentile speeds likely 30- mph.	N/A
	Motor vehicle volume	1	Route sees moderate vehicle traffic during the peak periods.	N/A
	Risk of collision – segregation	0	Cyclists share carriageway.	Consider provision of on- carriageway cycle lane which would be suitable for the majority of users but not all due to the mixed traffic conditions.
Safety	Risk of collision – conflicting movements	1	Conflicting cycle / motor traffic are not separated.	Consider providing side entry treatment in line with LTN 1/20 guidance.
	Complexity of design	2	Clear, understandable, simple road markings and road layout.	N/A
	Kerbside activity	1	Minimal kerbside activity.	Limited opportunity to improve this.
	Physical hazards	1	Some hazards alongside path	Limited opportunity to improve this.
	Surface quality	1	Smooth high grip surfaces present within the carriageway but some side roads have minor defects.	Road cleaning / further maintenance of potholes by Highway Authority would provide a higher quality surface for cyclists.
Comfort	Effective width	0	Likely speed / volume of motor vehicles in line with the mixed traffic.	N/A
	Rest / Shelter	1	Benches present along the route.	N/A
	Wayfinding	0	No dedicated cycle signage.	Cycle signage towards key amenities would be beneficial.
Attractiveness	Social safety – lighting	2	Route is lit to highway standards throughout.	N/A



Table 4 Cont. Route 4 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Social safety – isolation	2	Route is overlooked throughout its length.	N/A
	Street clutter	1	As cyclists are in the carriageway there is no clutter to obstruct them.	N/A
	Cycle parking	0	No cycle parking provided but likely not required.	N/A
Audit Score To	tal (Max 46)	16 (35%)	-	-

Figure 5 Route 4 – Existing 'Active' Travel Network & Potential Improvements







Example of high-quality zebra crossing with dropped kerbs, tactile paving, road markings, signage, and guard railing.



Consider provision of new uncontrolled crossing point with dropped kerbs, tactile paving, and refuge island.



Consider provision of dropped kerbs and tactile paving. Gravel from the private road within the highway boundary, consider increased surface maintenance.



Wide carriageway, consider provision of an on-street cycle lane in line with LTN 1/20 guidance.



As per Fig 4.3, consider provision of dropped kerbs and tactile paving. Gravel from the private road within the highway boundary, consider increased surface maintenance.

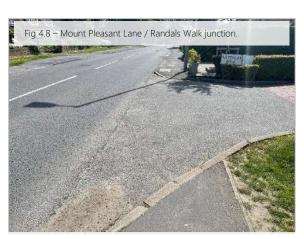


Example of high-quality 'active' travel infrastructure comprising a wide footway, grass verge, and a resting place.





As per Fig 4.4, consider provision of an on-street cycle lane in line with LTN 1/20 guidance.



Consider provision of dropped kerbs and tactile paving.



As per Fig 4.4, consider provision of an on-street cycle lane in line with LTN 1/20 guidance.



Consider an uncontrolled pedestrian crossing, comprising of dropped kerbs and tactile paving, in the vicinity of the existing bus stops.

# Route 5 – Oak Avenue / Black Boy Wood

Table 5 reveals that Route 5 is considered direct, well lit, and well overlooked. However, there is currently limited cycle infrastructure along the route.

Table 5, along with Figure 6, reveals Route 5 could be improved through increased cycle signage and the provision of tactile paving and dropped kerbs where it is lacking.

Table 5 Route 5 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Connections	1	Cyclists can connect to some routes without dismantling.	Limited opportunity to improve this.
Cohesion	Continuity / Wayfinding	0	Lack of signage results in potential for cyclists to get confused.	Provision of signage could be beneficial.



# Table 5 Cont. Route 5 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Density of Network	1	No dedicated cycle infrastructure within the vicinity.	Limited opportunity to improve this.
	Distance	1	Route generally follows as the crow flies.	N/A
	Time (Frequency of stops)	1	Stops are fairly infrequent along the route.	N/A
Directness	Time (Delay at junctions)	1	Delays are a similar time for motorists and cyclists / pedestrians.	Limited opportunity to improve this.
	Time (Delay on links)	1	Low traffic volumes enable cyclists to choose the appropriate speed and overtake if required.	N/A
	Gradients	2	Consistent level gradient.	N/A
	Motor vehicle speed	1	85 <sup>th</sup> percentile speeds likely below 30-mph.	N/A
	Motor vehicle volume	1	Route sees moderate vehicle traffic during the peak periods.	N/A
	Risk of collision – segregation	0	Cyclists share carriageway.	Limited available width to improve this.
Safety	Risk of collision – conflicting movements	1	Conflicting cycle / motor traffic are not separated.	Consider providing side entry treatment in line with LTN 1/20 guidance.
	Complexity of design	2	Clear, understandable, simple road markings and road layout.	N/A
	Kerbside activity	1	Minimal kerbside activity.	Limited opportunity to improve this.
	Physical hazards	1	No guardrails or buildouts to prevent cyclists evading danger.	Limited opportunity to improve this.
	Surface quality	2	Smooth high grip surfaces present.	N/A
Comfort	Effective width	0	Likely speed / volume of motor vehicles in line with the mixed traffic.	N/A
	Rest / Shelter	1	Some shelter provided by vegetation.	N/A



Table 5 Cont. Route 5 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Wayfinding	1	Little dedicated cycle signage.	Cycle signage towards key amenities, and Bricket Wood rail station, would be beneficial.
	Social safety – lighting	2	Route is lit to highway standards throughout.	N/A
	Social safety – isolation	2	Route is overlooked throughout its length.	N/A
Attractiveness	Street clutter	1	As cyclists are in the carriageway there is no clutter to obstruct them.	N/A
	Cycle parking	0	No cycle parking provided but likely not required.	N/A
Audit Score Tot	tal (Max 46)	25 (54%)	-	-

Figure 6 Route 5 – Existing 'Active' Travel Network & Potential Improvements







Consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile paving.



As per Fig 5.1, consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile



As per Fig 5.1, consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile paving.



As per Fig 5.1, consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile paving.



Consider provision of dropped kerbs and tactile paving. Additionally, Highway Authority should consider increased verge maintenance to increase achievable visibility.



As per Fig 5.5, consider provision of dropped kerbs and tactile paving.





As per Fig 5.1, consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile paving.



As per Fig 5.1, consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile paving.



As per Fig 5.1, consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile paving.

# Route 6 – St Stephen 011 Bridleway

Table 6 reveals that Route 6 is considered direct and well segregated to motorised vehicles. However, Table 6, along with Figure 7, reveals Route 6 could be improved through increased cycle signage, lighting, and increased surface / verge maintenance by the Highway Authority.

Table 6 Route 6 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
Cohesion	Connections	1	Cyclists can connect to some routes without the need to dismount.	Limited opportunity to improve this.



# Table 6 Cont. Route 6 CLoS

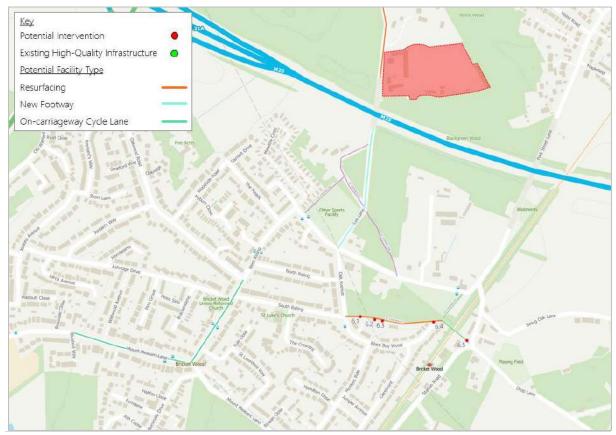
Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Continuity / Wayfinding	1	Route is made up of discrete sections, but cyclists can clearly understand how to navigate between them, including through junctions.	Increased cycle signage towards key amenities, and Bricket Wood rail station, would be beneficial.
	Density of Network	1	Route contributes to the wide cycle network density.	N/A
	Distance	2	Route follows as the crow flies.	N/A
	Time (Frequency of stops)	1	Stops are relatively infrequent.	N/A
Directness	Time (Delay at junctions)	1	Some delays at junctions.	Limited opportunity to improve this.
	Time (Delay on links)	1	Cyclists can usually pass slower traffic.	N/A
	Gradients	1	Slight uphill gradient over railway line.	N/A
	Motor vehicle speed	2	Route is segregated from motor vehicles.	N/A
	Motor vehicle volume	2	Route is segregated from motor vehicles.	N/A
	Risk of collision – segregation	2	Route is segregated from motor vehicles.	N/A
Safety	Risk of collision – conflicting movements	1	Side road junctions are infrequent.	N/A
	Complexity of design	2	Clear, understandable, simple layout.	N/A
	Kerbside activity	2	Route is segregated from kerbside activity.	N/A
	Physical hazards	2	Route is segregated from physical hazards.	N/A
	Surface quality	1	Minor defects in road surface.	Could be improved / cleaned.
Comfort	Effective width	1	Recommended widths are generally maintained throughout the route.	Increased surface / verge maintenance by the Highway Authority would ensure the recommended widths are maintained.



Table 6 Cont. Route 6 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Rest / Shelter	1	Some shelter provided by vegetation.	N/A
	Wayfinding	1	Gaps identified in route signing which could be improved.	Increased cycle signage towards key amenities, and Bricket Wood rail station, would be beneficial.
	Social safety – lighting	1	Short and infrequent lighting present.	Highway Authority should consider providing additional street lighting.
Attractiveness	Social safety – isolation	1	Sections of the route are not far from activity.	N/A
	Street clutter	1	Minimal street clutter.	N/A
	Cycle parking	0	No cycle parking provided but likely not required.	N/A
Audit Score To	Audit Score Total (Max 46)		-	-

Figure 7 Route 6 – Existing 'Active' Travel Network & Potential Improvements







Highway authority should consider increased verge maintenance, signage, and lighting.



Highway authority should consider increased verge / surface maintenance, signage, and lighting.



As per Fig 6.2, Highway authority should consider increased verge / surface maintenance, signage, and lighting.



Consider an improved transition between bridleway, footway, and carriageway in line with LTN 1/20. This should compromise dropped kerbs, corduroy and tactile paving, signage, and surface treatment.



As per Fig 6.1, Highway authority should consider increased verge maintenance, signage, and lighting.



### Route 7 – Station Road

Table 7 reveals that Route 7 is considered direct, well lit, and well overlooked. However, there is currently limited cycle infrastructure along the route.

Table 7, along with Figure 8, reveals Route 6 could be improved through increased cycle signage. It was also observed that the access to Bricket Wood rail station would benefit from the provision of tactile paving and dropped kerbs.

Table 7 Route 6 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Connections	1	Cyclists can connect to some routes without the need to dismount.	Limited opportunity to improve this.
Cohesion	Continuity / Wayfinding	1	Route is made up of discrete sections, but cyclists can clearly understand how to navigate between them, including through junctions.	Increased cycle signage towards key amenities, and Bricket Wood rail station, would be beneficial.
	Density of Network	1	Route contributes to the wide cycle network density.	N/A
	Distance	2	Route follows as the crow flies.	N/A
	Time (Frequency of stops)	1	Stops are relatively infrequent.	N/A
Directness	Time (Delay at junctions)	1	Some delays at junctions.	Limited opportunity to improve this.
	Time (Delay on links)	1	Low traffic volumes enable cyclists to choose the appropriate speed and overtake if required.	N/A
	Gradients	2	Consistent level gradient.	N/A
	Motor vehicle speed	1	85 <sup>th</sup> percentile speeds likely below 30-mph.	N/A
	Motor vehicle volume	1	Route sees moderate vehicle traffic during the peak periods.	N/A
Safety	Risk of collision – segregation	0	Cyclists share carriageway.	Limited available width to improve this.
	Risk of collision – conflicting movements	1	Conflicting cycle / motor traffic are not separated.	Consider providing side entry treatment in line with LTN 1/20 guidance.
	Complexity of design	2	Clear, understandable, simple road markings and road layout.	N/A



# Table 7 Cont. Route 6 CLoS

Key Requirement	Factor	Score (Max 2)	Observations	Areas for Improvement / Notes
	Kerbside activity	1	Minimal kerbside activity.	Limited opportunity to improve this.
	Physical hazards	1	No guardrails or buildouts to prevent cyclists evading danger.	Limited opportunity to improve this.
	Surface quality	2	Smooth high grip surfaces present.	N/A
	Effective width	0	Likely speed / volume of motor vehicles in line with the mixed traffic.	N/A
Comfort	Rest / Shelter	1	Some shelter provided by vegetation.	N/A
	Wayfinding	1	Gaps identified in route signing which could be improved.	Increased cycle signage towards key amenities, and Bricket Wood rail station, would be beneficial.
	Social safety – lighting	2	Route is lit to highway standards throughout.	N/A
Attractiveness	Social safety – isolation	2	Route is overlooked throughout its length.	N/A
	Street clutter	1	Minimal street clutter.	N/A
	Cycle parking	2	Cycle parking provided at Bricket Wood rail station.	N/A
Audit Score Tot	tal (Max 46)	28 (60%)	-	-



Figure 8 Route 7 – Existing 'Active' Travel Network & Potential Improvements





Consider provision of new uncontrolled pedestrian crossing comprising of dropped kerbs and tactile paving.



Consider provision of increased signage for St Stephen 011 bridleway.



# Audit Summary and Identified Improvements

This ATA has been prepared by MTP on behalf JK Rudkin Builders Limited ('the applicant') in support an "Outline application (access sought) - Demolition of existing buildings and construction of up to 115 dwellings and creation of new access" on land at the former Bricket Wood Sports & Country Club, Paintball Site & Bricket Lodge, Lye Lane, Bricket Wood AL2 3TF (the "Site") (LPA Ref. 5/2022/2443).

This document has reviewed the existing 'active' travel provision in the vicinity of the Site in line with the 'Cycling Level of Service Tool (CLoS)' within Appendix A of LTN 1/20.

As part of the ATA a key area for improvement was identified along Route 2. This improvement comprises the provision of a new footway connecting the Site to the existing footway provision on the M25 overbridge, as well as continuing south along Lye Lane to the give-way priority junction with West Riding.

MTP have prepared a Technical Note (TN) and Drawing No. 21058 / 001, which reveals a 2.0-metre wide footway design can be delivered within the public highway along this route. It is suggested that as part of the development proposals, this footway improvement is delivered under a S278 agreement.

Additional areas for improvement that have been identified included:

#### • Provision of dropped kerbs / tactile paving at the following locations:

- West Riding / Mount Pleasant Lane mini-roundabout junction;
- West Riding / St Lawrence Way give-way priority junction;
- West Riding / Ashridge Drive give-way priority junction;
- West Riding / South Riding give-way priority junction;
- West Riding / Oakwood Road give-way priority junction;
- West Riding / North Riding give-way priority junction;
- West Riding bus stops, adjacent to Woodbury Field Access;
- Mount Pleasant Lane / Rosedale Close give-way priority junction;
- Mount Pleasant Lane / Wildwood Avenue give-way priority junction;
- Mount Pleasant Lane / Randals Walk give-way priority junction;
- Oak Avenue / West Riding give-way priority junction;
- Oak Avenue / North Riding give-way priority junction;
- Oak Avenue / South Riding give-way priority junction;
- Oakwood Avenue / St Stephen 011 interaction;
- Black Boy Wood / Claremont give-way priority junction;
- Black Boy Wood / Hunters Ride give-way priority junction;
- Black Boy Wood / Russel Court give-way priority junction; and
- Access to the Bricket Wood rail station.

#### • Additional street lighting at the following locations:

- Throughout Route 1 (North Lye Lane); and
- St Stephen 011 Bridleway.
- Increased surface / verge maintenance by the Highway Authority at the following locations:
  - Throughout Route 1 (North Lye Lane);
  - Woodbury Field Access;
  - West Riding south-westbound towards Lye Lane;
  - Mount Pleasant Lane / Rosedale Close give-way priority junction;
  - Mount Pleasant Lane / Wildwood Avenue give-way priority junction;



- Oakwood Avenue / St Stephen 011 interaction; and
- St Stephen 011 Bridleway.
- Provision of an on-carriageway cycle lane along sections of West Riding and Mount Pleasant Lane.
- Additional cycle signage towards the key local amenities / Bricket Wood rail station throughout the study area.
- Provision of Kassel kerbing and shelters on both sides of West Riding bus stops.

Implementation of any of the above recommended improvements would aid in strengthening the existing 'active' travel provision in the vicinity of the Site and improve connectivity for cyclists / pedestrians.

It is proposed that an appropriately scaled proportion of these additional improvements are included as part of the 'Second Stand (S106)' contributions.

