



LAND SOUTH OF CHISWELL GREEN LANE,
CHISWELL GREEN, ST ALBANS

PROOF OF EVIDENCE – TRANSPORT CD3.23A

Anthony Jones BSc MCIHT

SECTION 78 APPEAL REFERENCE: APP/B1930/W/22/3313110
PLANNING APPLICATION REFERENCE: 5/2022/0927

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1.0 Qualifications and Experience

- 1.1. My name is Anthony Jones, and I am a Technical Director at Glanville Consultants. I hold a Bachelor of Science Degree with Honours in Environmental Assessment in the Construction Industry. I am a Member of the Chartered Institute of Highways and Transportation (CIHT) and Transport Planning Society (TPS).
- 1.2. I have been actively involved in providing highways and transportation planning advice relating to the development process since 2002. I have advised a wide range of clients operating in residential, retail, education, leisure and office sectors. My experience ranges from initial feasibility studies to expert witness duties on projects located throughout the UK and have included proposals for development in Hertfordshire and elsewhere in the southeast of England.
- 1.3. My Evidence for this Inquiry has been prepared and is given in accordance with the guidance of my professional institutions and I confirm that the opinions expressed are my true and professional opinions.
- 1.4. Glanville is fully familiar with the appeal sites and surrounding area, having first been instructed to work on this site in December 2015 to promote the Land to the South of Chiswell Green Lane within the emerging St Albans Local Plan. Following the appellants decision to proceed with a planning application in 2021, Glanville subsequently provided both transport and drainage services in support of the planning application.

2.0 Scope of Evidence

- 2.1. My Evidence is given on behalf of the appellants in respect of the appeal lodged under Section 78 of the Town and County Planning Act 1990 against the St Albans City and District Council's (the Council) refusal of outline planning application reference 5/2022/0927.
- 2.2. The reasons for refusal and a summary of the Council's Statement of Case is set out in detail in Mr Kenworthy's evidence on planning matters. There are no transport related policies referred to in the reasons for refusal. The highway authority at Hertfordshire County Council has no highway objection to the scheme and considered all the issues relating to accessibility, traffic impact and highway safety in its consultation responses (see paragraph 6.11.4 of **CD3.4**).
- 2.3. Sustainability is a holistic term. The National Planning Policy Framework (NPPF) sets out the three dimensions as economic, social and environmental. These are dealt with in Mr Kenworthy's evidence. My Evidence addresses the sustainability of the appeal scheme in transport terms with reference to Section 9 of NPPF (**CD 7.1**) and local transport related policies and confirms that its sustainability is appropriate in the context of the likely travel demand and its geographical context.
- 2.4. My evidence is provided to summarise the highway and transportation matters associated with the outline planning application and to seek to address the issues raised by the Keep Chiswell Green Statement of Case received on 09 March 2023 further to the Planning Inspectorate granting Keep Chiswell Green Rule 6 status on 21 February 2023.

Co-Joining

- 2.5. As set out in detail in Mr Kenworthy's evidence, PINS asked if the Appellants would agree to have their appeal considered by the same Inspector and at the same public inquiry hearing with another appeal application (reference APP/B1930/W/22/3312277) by Headlands Way Limited in relation to the Council's refusal of outline planning permissions on Land North of Chiswell Green Land, Chiswell Green, St Albans, AL2 3AJ ("the Polo School site").
- 2.6. The reasons for refusal are similar to the Appellants' reasons for refusal, however this is in the context that Officer's recommendation was to refuse planning permission. Similar to the appeal scheme, there are no transport related policies referred to in the reasons for refusal for the Polo School Site and the highway authority has no highway objection to the scheme.
- 2.7. My evidence only relates to appeal reference APP/B1930/W/22/3313110.

Third Party Objections

- 2.8. Keep Chiswell Green (KCG) had Rule 6 status granted by the PINS on 22 February 2023. I consider that the key transport issues identified in its Statement of Case and supported appendices are whether:

- i. the Transport Assessment and supporting transport documents that accompanied the outline planning application were prepared in accordance with industry best practice and credible?
 - ii. The proposed access strategy, routes to the site and the agreed off-site active travel and highway improvements safe, appropriate and, where relevant, deliverable?
 - iii. The site is, or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes and seek to the lower the propensity for single occupancy car travel?
 - iv. Is there a need to consider additional highway capacity improvements alongside, or in place of the agreed active travel and highway improvements, to mitigate the individual impact of the appeal scheme should the appeal be granted consent?
 - v. The individual of the appeal scheme and the cumulative impact with the Polo School scheme on the operation of local highway network, and in particular the impact at the Watford Road mini-double roundabout, severe?
 - vi. The Appeal scheme will impact on the operation, on-street parking and safety of Long Fallow and Forge End including their junctions with Watford Road?
 - vii. The Appeal scheme can provide appropriate parking arrangements for existing residents that park on-street on Chiswell Green Lane.
- 2.9. Other third-party transportation related objections can be summarised broadly as relating to accessibility, trip impact and highway safety.

Case Management Conference

- 2.10. The Case Management Conference for the co-joint appeals was held virtually on Friday 10 March 2023. It was agreed that Highways and Transportation is an issue to both appeals and would be addressed through evidence in chief and cross-examination.
- 2.11. The Inspector also requested that topic specific Statement of Common Ground are agreed between the Council. In the case of Highways and Transport issues, a Statement of Common Ground is in the process of being agreed with the highway authority.

Planning History and Negotiations with the Highway Authority

Hertfordshire County Council

- 2.12. Glanville was appointed by the site's appellants in December 2015 to provide highway support for the promotion of the appeal scheme within the draft 2018 St Albans Local Plan. A significant amount of highway work and liaison with the Highway Authority was undertaken during this process leading to the site's identification as a broad location allocation in the 2018 Publication Draft Local Plan for a minimum of 365 dwellings.

- 2.13. Following the withdrawal of the 2018 Publication Draft Local Plan at the Local Plan Examination in 2020, the appellants decided to progress a planning application. As part of the scoping work, Glanville attended a meeting with Hertfordshire County Council (HCC), the highway authority, prior to submission of the planning application (see **Appendix AHJ/1**) to discuss the Transport Scoping Note. A Transport Assessment (**CD 2.9**), a Residential and School Travel Plan (**CDs 2.10 and 2.11**) were subsequently prepared for the development of up to 391 dwellings and for a new school in accordance with an agreed scope, and these documents were submitted with the planning application.
- 2.14. Following the submission of the planning application, HCC Highways provided their highway related comments on the application (see **Appendix AHJ/2**). A meeting was subsequently held on the 7 July 2022 (see **Appendix AHJ/3**), and this led to the preparation of a Transport Assessment Addendum (**CD2.35a**) dated 30 March 2022. The Transport Assessment Addendum confirmed the following:
- The northern site access was updated to enable both developments to come forward if required and the 3m footway / cycleway on Chiswell Green Lane (**CD 2.35b**) was included within the proposals.
 - The HCC cycle proposals along Watford Road (**CD2.35c**) were provided and it is proposed that these are either provided via S278 agreement or via a S106 contribution.
 - Confirmation was provided that the increased bus frequency would be funded for 5 years, as requested by HCC, instead of diverting the bus into the site (**Appendix AHJ/4**).
- 2.15. The Highway Authority provided their final comments on the application, and these were dated 22 September 2022. This confirmed that they had no objection to the application subject to the provision of suitable conditions and S106 obligations. A copy of this response has been provided within **Appendix AHJ/5**.
- 2.16. In this respect, I consider that the consultation response considered all issues relating to accessibility, traffic impact and highway safety, subject the provision of an agreed mitigation package as set out in detail at **Chapter 4**.

National Highways

- 2.17. A holding objection was received from National Highways in relation to the outline planning application for the appeal scheme on the 14 July 2022. A copy is included within **Appendix AHJ/6**. It requested that further information assessing the impact of the appeal at the following A405 junctions:
- The Park Street Roundabout (A414/A405/ Watling Street junction)
 - The A405 / Tippendell Lane junction
 - The A405 / Watford Road junction; and
 - The M25 Junction 21A.
- 2.18. Glanville undertook the assessment requested by National Highways, incorporating the Committed development for the Radlett Rail Freight Terminal and the Noke Hotel, and a Technical Note response was produced and submitted on 10 August 2022 (**See Appendix AHJ/7**). This Technical Note confirmed the following:

- The Park Street Roundabout would exceed capacity in the 2027 and 2038 'without development' scenario. When the development traffic is added, the increases in queue and delay would be small and could not be considered as severe. However, the Rail Freight Terminal is proposing to part signalise the roundabout and it considers that the impact would not be severe following the implementation of the proposed mitigation.
 - The A405 / Tippendell Lane junction would operate within capacity in both the 'with' and without development scenario.
 - The Noke Hotel roundabout would exceed capacity in the 2027 and 2038 'without development' scenario but the mitigation proposed as part of the new hotel, the impact would not be severe.
 - The increase in flows on the M25 Junction 21a approaches, excluding the A405 southbound approach, would be minimal and would not be severe. On the A405 southbound, there would be an increase of 60 vehicles i.e. one vehicle per minute, but these are spread over a two-lane approach with a third lane flare and therefore it was considered that there would be no material impact on this junction.
- 2.19. A subsequent meeting was held with National Highways on 16 September 2022 where they requested confirmation that the queues on the M25 Junction 21a slip roads would not extend back onto the main M25 carriageway as a result of the proposed development. They also requested confirmation as to when the Park Street Roundabout improvements for the Radlett Rail Freight Terminal were going to be implemented to ensure that interim mitigation was not required. HCC Highways were able to confirm that the improvements at the Park Street Roundabout are due to commence in early 2024 and therefore will be completed before the proposed development is likely to be fully occupied (**see Appendix AHJ/8**).
- 2.20. In response to the M25 junction 21a query, a site visit was undertaken on 22 September 2022 which proved that the queueing did not extend back far enough to result in the additional trips affecting the main line flow. It did identify queueing on the A405 approach to the junction but that this queue was a rolling queue which moved relatively quickly and did not block the A405 / Watford Road roundabout (**see Appendix AHJ/9**). Following the provision of this data, National Highways removed their objection to the development and a copy has been provided within **Appendix AHJ/10**.
- Keep Chiswell Green*
- 2.21. Keep Chiswell Green, a local resident's group, issued two reports objecting to the outline planning application. These reports were dated June 2022 (**CD 6.3**) and October 2022 (**CD 6.13**) and have been re-submitted as part of their Statement of Case. Consequently, these reports have been considered in detail within this Proof of Evidence.
- 2.22. Following receipt of KCG report dated October 2022, St Albans City and District Council (SACDC) specifically asked the highways authority about its approach to mitigating the impact of the appeal scheme at the Watford Road double mini-roundabouts. The highway authority responded via email on the 07 November 2022 that it was content with the approach taken and with the sustainable transport package included within the Transport Assessment Addendum (see **Appendix AHJ/11**). We understand that it continues to support this position in this respect with regards to the Public Inquiry.

- 2.23. St Albans District Council took the planning application to committee on 28 November 2022. The committee report advised that there were no highway objections subject to the provision of a mitigation package including a footway / cycleway on Chiswell Green Lane, a Tiger crossing at the Watford Road/Chiswell Green Lane/Tippendell Lane double mini-roundabout, pedestrian / cycle improvements along Watford Road, bus funding and the implementation of a Residential and School Travel Plan, as set out in **paragraphs 4.35 to 4.37** of my evidence. The committee resolved to refuse the planning application for two reasons. None of these were highway related.

Statement of Common Ground on Transportation Issues (SCGT)

- 2.24. I am in the process of preparing a Statement of Common Ground on transportation issues (SCGT) with the highway authority, which I consider will be comprehensive. It confirms that there are no issues of dispute with the local highway authority and sets out what was agreed prior to and during the planning application. It forms a major part of the Appellant's case at this Inquiry and I shall refer to it throughout my Evidence.
- 2.25. The SCGT will confirm that the views of the Rule 6 party as set out in its Statement of Case are not supported by the highway authority.
- 2.26. Given these facts, it is my view that there are no highways or transportation related concerns relating to the application scheme.

Scope of Evidence

- 2.27. Part A of my Evidence summarises the application scheme. It examines the likely operational characteristics of the scheme and demonstrates that a choice of travel options will be available. It then confirms that the scheme complies with relevant parts of national, local and neighbourhood plan policies relating to transportation.
- 2.28. Part B of my Evidence addresses the matters related to transportation that have been raised by the Rule 6 Party and the other third party objections. Part C contains a summary of my Evidence and my conclusions.
- 2.29. My Evidence should be read in conjunction with Mr Kenworthy's Evidence on planning matters and Mr Hunters Evidence on Education matters

Part A

3.0 Appeal Site

Locational Characteristics

- 3.1 I consider that Chiswell Green is a good place for residential development in transport terms. The area benefits from being in close proximity to two major train lines into London and within a short cycling journey of four railway stations (1.6 kilometres (km) to 7.3km), whilst the conurbations of St Albans and Watford are easily accessible by bus. Chiswell Green has a well-connected network of footways and a range of Public Rights of Way surrounding the village. It also has good access to the M11 motorway and the A1.

Facilities within Chiswell Green & the Neighbouring Area

- 3.2 **Figure AHJ/1** illustrates the local facilities and amenities in Chiswell Green, **Figure AHJ/2** shows the local leisure facilities and amenities. These include:
- i. bus stops on Watford Road and Tippendell Lane within 700 and 720 metres walking distance of the centroid of the appeal scheme respectively.
 - ii. Greenwood Park and Greenwood Park Lawn Tennis Club both a 1.4km walking distance east of the centroid of the development.
 - iii. Various shops and the Three Hammers Public House within the centre of Chiswell Green and a 630m walking distance of the centroid of the development.
 - iv. Killigrew Primary School, a 1.5km walking distance from the centroid of the site.
- 3.3 Chiswell Green contains local employment opportunities and community facilities. Local businesses include Burston Garden Centre and the Noke Hotel. These are located within a 1.3km and 910 metres walking distance of the centroid of the appeal scheme respectively.
- 3.4 Other local businesses include:
- i. The Royal Entomological Society (which remains their head office following the closure of the adjacent Butterfly World)
 - ii. Burston Garden Centre
 - iii. Chiswell Green Cars
 - iv. Chiswell Fireplaces
 - v. The Walk in Closet Clothes Shop
 - vi. Starbucks

Nearby Facilities in Neighbouring Parishes at How Wood, Park Street and Bricket Wood

- 3.5 **Figure AHJ/3** illustrates the broad location of amenities and facilities in the adjoining Ward of How Wood, and St Albans Parish Council. These include for retail units in the centre of How Wood, Park Street Village Hall, Midway surgery and are all located within 1.5 kilometres (km) of the appeal scheme.
- 3.6 The adjoining Wards of Bricket Wood, Park Street and St Albans Parish Council also contain local employment opportunities and community facilities. Local businesses include Abbey View Retail/Business Centre in St Albans (a 3.6km cycle ride), Curo Business Park in Frogmore (a 3.7km cycle ride), Ventura Business Park in Colney Street (a 5.2km cycle ride) and the Building Research (BRE) in Bricket Wood (a 3.3km cycle ride).

3.7 Greenwood Park Community Centre is located approximately a 1.2km walk from the centroid of the development via Chiswell Green Lane or 1.3km via Forge End and Carisbrooke Road. It provides a home to various community and sports clubs, including Chiswell Green Third Age Trust U3A, Grow Chiswell Green, and Green Park Lawn Tennis Club. The area within the site's vicinity also provides a good range of religious groups, with Park Street Baptist Church, located 1.5km from the site, and Westminster Lodge Leisure Centre located 2.6km north of the site. Details can be found within **Appendix AHJ/12**.

Public Transport

Rail Service Provision

- 3.8 The appeal scheme is well placed to maximise the opportunity for future residents to travel by train with two railway routes located within close proximity of the site. These railway lines are the Abbey Line and Thameslink service. A further line is accessible from Watford Junction to the south of the appeal site. These are described further below:
- 3.9 The St Albans Abbey line is accessible from the nearest railway station to the site, namely How Wood station. This is located approximately 2.8km cycling journey east of the site. This branch line connects St Albans Abbey railway station in the north with Watford Junction station to the south. Watford Junction station provides further connections to London Euston and Milton Keynes.
- 3.10 The Thameslink rail line is accessible from St Albans City station, which is located approximately a 5km cycling journey north of the site. The station provides frequent train services towards St Pancras and London Bridge and Brighton further to the south. To the north it serves Luton and Bedford.
- 3.11 There are also four railway stations within a short walk, cycle ride or bus journey. These are as follows in order of distance from the centre of the site with the closest first:
- How Wood railway station
 - Park Street railway station
 - St Albans City railway station
 - Watford Junction
- 3.12 There are a further three stations between How Wood and Watford Junction stations which are closer than Watford Junction, namely Bricket Wood, Garston and North Watford), but these are located on the Abbey Line and I consider that residents would use How Wood and Park Street to access these services. Similarly, the St Albans Abbey station is located 2.6km from the site but it is the terminus for the Abbey Line service and so residents would use the closer stations to access it.
- 3.13 The National Travel Survey (NTS) statistics for 2021 contained within **Appendix AHJ/13** indicates that average journey times for travel by train in 2021 was 78 minutes.
- 3.14 I consider that How Wood Station provides a facility for residents at the application scheme to make realistic commuting, shopping and leisure trips to other settlements including St Albans, Garston and Watford. The average journey times to these locations is up to 5 minutes for St Albans Abbey station, up to 6 minutes for Garston and up to 12 minutes for Watford Junction.

- 3.15 I also consider that Park Street Station provides a facility for residents at the application scheme to make realistic commuting, shopping and leisure trips to other settlements including St Albans, Garston and Watford. The average journey times to these locations is up to 3 minutes for St Albans Abbey station, up to 9 minutes for Garston and up to 14 minutes for Watford Junction.
- 3.16 I consider that St Albans City Station provides a facility for residents at the application scheme to make realistic commuting, shopping and leisure trips to other settlements including and Bedford. The average journey times to these locations is up to 25 minutes for London St Pancras and up to 40 minutes for Bedford.
- 3.17 I also consider that Watford Junction Station provides a facility for residents at the application scheme to make realistic commuting, shopping and leisure trips to other settlements including London, Hemel Hempstead, Milton Keynes and Northampton. The average journey times to these locations is up to 23 minutes for London Euston, up to 12 minutes for Hemel Hempstead, 28 minutes for Milton Keynes and up to 60 minutes for Northampton.
- 3.18 The Residential Travel Plan includes measures for providing information to residents on train services including destinations, timetables and ways to access the stations by sustainable travel modes.

Bus Service Provision

- 3.19 Chiswell Green is served by a number of commercial bus services, including routes 321, 361 and 724. The routes are shown on **Figure AHJ/4** and the timetables are set out in **Appendix AHJ/14**.
- 3.20 The nearest operational bus stops on Watford Road are located within 700 metres walking distance of the centroid of the site using the footway / footpath improvements proposed as part of the application scheme and via existing walking routes in Chiswell Green. This equates to a circa eight minute walk based on an average walking speed of 80 metres per minute. The highway authority did not consider that these distances were adverse to promoting public transport use after they had confirmed that they did not wish to see the bus 321 diverted into the site. This is set out in its final consultation response to the outline planning application as included at **Appendix AHJ/4**.
- 3.21 I conclude that the existing bus stops on Watford Road are served by regular bus services seven days a week with an average frequency of up to 15 minutes during the working week and up to 15 minutes on Saturdays, and up to 30 minutes on Sundays. These frequencies would be increased as part of the agreed mitigation package as advised in **paragraphs 4.35 to 4.37**.
- 3.22 I consider that the services provide good public transport connections with the surrounding area including St Albans and Watford, as well as providing connections with the national rail services operated from St Albans City and Watford Junction railway stations.
- 3.23 The average bus journey time to St Albans City Centre is 20-25 minutes using the 321, 361 and 724 bus services. The average journey time to Watford town centre is 47 minutes using the 321 bus service and 30 minutes using the 724 bus services.

- 3.24 The National Travel Survey (NTS) statistics for 2021 contained at **Appendix AHJ/13** indicates that average journey times for travel by bus (also allowing for waiting time) outside London in 2021 was 39 minutes. Taking into account these statistics, I consider that St Albans, Watford, How Wood, Bricket Wood and Park Street are all located within a reasonable travel distance from the site in terms of average bus travel times, also allowing for an eight minute walk to / from the appeal scheme. A copy of the local bus timetables have been provided within **Appendix AHJ/14**.
- 3.25 Three different community transport schemes serve Chiswell Green. The detailed are included at **Appendix AHJ/15** and summarised below:
- i) St Albans City and District Council provides a Taxi Voucher Scheme – St Albans provide vouchers to the value of £60.00 (12 x £5 vouchers), per calendar year. In order to qualify for this scheme, residents must have a permanent disability/or be older than 75 years, without access to a private car. Vouchers are accepted by the majority of Taxi operators operating in St Albans.
 - ii) Hertfordshire - Dial-a-Ride - This is an affordable door to door travel service for people over 75 and anyone with a permanent disability. It costs £2.10 for the first mile, 50p for every mile after. It operates during the weekdays between 9:00am and 4:30pm, and can be used to get to places like local shops, clubs, hospitals, GP surgeries and visit friends and family.
 - iii) Community Transport Hertfordshire – is a platform where all contact information is collated regarding community transport. At the moment, there are two groups operating in Chiswell Green:
 - a. St Albans Good Neighbour Scheme, which is a voluntary service for the elderly, unwell, lonely, disabled or those facing a crisis and do not have any family or a neighbour who can assist.
 - b. Communities 1st – this group provides affordable door-to-door transport for people with mobility issues. It costs £0.60/mile for some local fixed rate journeys. However longer journeys can be accommodated for additional fee per mileage.
- 3.26 The nearest secondary school is the Marlborough Science Academy located in St Albans. It can be accessed via bus service numbers 321 or 724.
- 3.27 There are also a number of additional secondary schools and colleges located in St Albans and Watford that can be accessed via the public buses that stop at the existing bus stops on Watford Road. Whilst the buses are not free, students between the ages of 11 and 25 can purchase an HCC SaverCard for £20 per year which provides them with half price bus tickets. Further details can be found within **Appendix AHJ/16**.
- 3.28 I conclude that there is a comprehensive suite of public transport options including mainline rail and commercial public transport services available for future residents of the application site within reasonable walking and cycling distance of the site. The public transport options will also be enhanced as part of the agreed mitigation package. In my view, these provide a real choice to future residents of the application scheme to use public transport to travel to education, employment, shops and services in nearby settlements and further afield as a genuine alternative to journeys by car.

Walking and Cycling

- 3.29 The Department for Transport 'Local Cycling and Walking Infrastructure Plans' (2017) guidance states at paragraph 3.4 that "Cycling has the potential to replace trips made by other modes, typically up to 10km, although some people will cycle greater distances. For walking, the distances travelled are generally shorter, up to 2km." Planning for Walking (PFW) states that "across Britain about 80 per cent of journeys shorter than 1 mile are made wholly on foot... for journeys that are 1 to 2 miles long, 26 per cent are made on foot (NTS 2012)."
- 3.30 Paragraph 4.4.1 of Manual for Streets advises that walking offers the greatest potential to replace car trips, particularly those under two kilometres. The relevant extract is included at **Appendix AHJ/17**. A figure showing the 2km walking journey to local amenities and the existing and proposed crossing locations are shown within **Figure AHJ/5**.
- 3.31 The appeal site is well served by existing pedestrian infrastructure. There are footways on both sides of Chiswell Green Lane, providing access to the shops and the public house within the centre of Chiswell Green. These footways are between 1.6m and 2m wide and connect to the existing zebra crossing at the Watford Road double mini roundabout. pedestrian access will be achievable from both site access junctions to Chiswell Green Lane. Figure 6.8 within Manual for Streets confirms that a 1.6m footway is able to accommodate two pedestrians side by side pushing a pushchair. It is therefore considered that the existing footway widths remain acceptable. The relevant extract is included at **Appendix AHJ/18**.
- 3.32 To the west of the site, there are no footways on Chiswell Green Lane, however, there are no amenities to the west, only leisure walking routes.
- 3.33 The comprehensive package of Chiswell Green Corridor Active Travel improvements agreed to be provided by appellant should it be granted planning consent includes for the provision pedestrian access onto Forge End via a 2m footway at the main vehicular access (**CD1.18**) and a 3.5m wide footway cycleway at the southern end of the cul-de-sac (**CD1.19**). The location of these in context to the rest of the sustainable mitigation is shown on **Figure AHJ/6**.
- 3.34 Along the southern boundary of the site, Forge End has 1.6m wide footways on both sides of the road but this reduces down to one, on the northern side, on the approach to the junction with Watford Road for an approximate length of 72 metres. There are existing pedestrian crossing facilities in place on the Forge End arm at its priority junction with Watford Road in the form of dropped kerbs.
- 3.35 Long Fallow has 1.8mm wide footways on both sides of the road, separated from the carriageway by a 1.3m grass verge. The development proposals include providing a 4.1m wide footway / cycleway at the northern end of Long Fallow which will also form an emergency access to the site (**CD 1.19**).
- 3.36 Watford Road has footways provided on both sides of the road. These are between 1.5m and 1.7m wide and separated from the carriageway by a grass verge. There is an existing Pelican crossing immediately south of the junction with Hammers Gate. In addition to this crossing it is proposed to provide a Tiger crossing at the Watford Road / Forge End junction which provides access to the local residential roads which all have footway on both sides of the road.

- 3.37 To the east of the site, Tippendell Lane has a 1.6m wide footway on both sides of the road, whilst there is a Toucan crossing adjacent to Greenwood Park serving National Cycle Route 6. At the Tippendell Lane junction with the A405, there is an overbridge with ramps suitable for cyclists and people with mobility impairments. This bridge also forms part of National Cycle Route 6. To the east of the A405, Tippendell Lane reduces down to a single 2m wide footway on its southern side, whilst residential side roads branch off providing links to the centre of How Wood and How Wood railway station. There is uninterrupted pedestrian access to How Wood and Park Street railway stations either via the local roads or via National Cycle Route 6.
- 3.38 A network of Public Rights of Way (PRoWs) are located to the north of Chiswell Green Lane providing access to Ragged Hall Lane and the southern suburbs of St Albans. Similarly, there are footpaths to the west of the development providing access to the wider countryside and pedestrian connections to Bedmond. A copy of the local Public Rights of Way have been provided within **Appendix AHJ/19**.
- 3.39 Chiswell Green Lane is relatively flat and straight and is suitable for cycling. To the west of the site Chiswell Green Lane becomes narrow and windy with poor forward visibility, but this reduces vehicle speeds and makes drivers more cautious, however there are no amenities in this direction and so would typically be used for leisure purposes. A figure showing both a 5km and 10km cycling journey to local amenities is shown within **Figure AHJ/7**.
- 3.40 National Cycle Route 6 (NCR6) is located around 630m east of the site and can be accessed via Tippendell Lane or Farringford Close. It is a mix of off and on-road routes with the latter typically being formed of lightly trafficked residential roads. It crosses the A405 via a footbridge with cycle ramps at the A405 / Tippendell Lane junction. NCR6 provides signed cycle connections between the appeal site and St Albans to the north and Watford to the south. The proposed Chiswell Green Corridor Active Travel improvements will provide a Tiger crossing at the Watford Road / Forge End junction to provide a connection to NCR 6 via Farringford Close and Carisbrooke, therefore providing a route avoiding Watford Road and Tippendell Lane.
- 3.41 As outlined within paragraph 3.37, there is a bridge over the A405 at its junction with Tippendell Lane. This bridge forms part of NCR6 and has ramps suitable for cycle access. After the bridge, cyclists can either cycle via Tippendell Lane to How Wood Station or continue to use NCR6.
- 3.42 Within St Albans, NCR 6 provides connections to the wider St Albans cycle network either via a mixture of on and off-road routes and continues through St Albans City Centre towards Harpenden. At the eastern end of Griffiths Way in St Albans, NCR6 also connects with National Cycle Route 61 (NCR 61) which provides an off-road route between St Albans, via St Albans City Station to Hatfield in the east. A copy of the St Albans cycle map has been provided within **Appendix AHJ/20** to show these wider connections.
- 3.43 I understand that both the proposed school to be provided within the northern part of the appeal scheme and the existing Killigrew Primary School will have / has Travel Plans that seek to promote safe walking and cycling practices.

- 3.44 The local highway safety records for the most recent five-year study period confirm that there is no material highway pattern or problem on walking and cycling routes within the vicinity of the appeal scheme.
- 3.45 In my view, the existing walking and cycling routes work well and existing residents are familiar with the layout arrangements. HCC reviewed the supporting transport documents that accompanied the planning application in detail, which in turn, have been evolved building on the significant transport work carried out as part of the previous local plan work. Other than the agreed package of improvements, HCC didn't consider the need for additional improvements over and above what has been agreed as part of the planning application including on Forge End and Long Fallow. In my view, I would have expected HCC to request additional improvements across the wider area over and above what has been agreed to be provided if they considered them to be necessary from a highway safety perspective.
- 3.46 The proposed mitigation will provide significant improvements to the existing walking and cycling network in order to encourage a modal shift away from private car use (see **Figure AHJ/6**). The proposals include:
- i. A 3m wide footway / cycleway on Chiswell Green Lane between the western site access and Watford Road;
 - ii. The upgrade of the existing Zebra crossing at the Watford Road double mini-roundabout to a Tiger crossing to provide a cycle crossing in addition to a pedestrian crossing;
 - iii. An off-road footway / cycleway along Watford Road between Chiswell Green Lane and the A405 / Watford Road roundabout which will form part of SACDC's corridor improvements between St Albans and Watford. This will include dropped kerb and tactile paving provision at the junctions along Watford Road.
 - iv. The provision of a second Tiger crossing at the Forge End / Watford Road junction to provide another cycle route to NCR6 via Farringford Close and Carisbrook Road.
- 3.47 The Chiswell Green Lane footway / cycleway will be located on the northern side of the road to connect with the proposed Tiger crossing on Watford Road. It has been designed in accordance with LTN1/20, the national cycle design guidelines. It is predicted that following the implementation of the Travel Plans, there would be around 40 cycle trips during the peak hours based on a 5% cycle mode share for both the residential development and the school. Table 6-3 of LTN 1/20 (**see Appendix AHJ/21**) identifies that a 3m wide footway / cycleway can accommodate 300 cyclists per hour and therefore it would be of sufficient width to accommodate the predicted number of cyclists.

Conclusion on Pedestrian and Cycle Provision

- 3.48 I conclude that the existing roads and footways are appropriate for walking and cycling trips associated with the application scheme. The comprehensive sustainable package to improve these routes is provided in accordance with the highway authority's strategy to improve the walking and pedestrian routes on Watford Road and reduce through traffic on the Watford Road corridor as part of the Chiswell Green Corridor Active Travel Improvements.

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- 3.49 I conclude that both the existing and proposed walking and cycling improvements will provide opportunities for both future and existing residents to all facilities within Chiswell Green and the neighbouring Parishes that are located within reasonable walking and / or cycling distance of the appeal scheme.

Overall Conclusions on Accessibility

- 3.50 I conclude that the application site is accessible located and provides the opportunity for both future and existing residents to travel to amenities and facilities required on a daily basis by sustainable transport modes other than single occupancy car travel.
- 3.51 Firstly, this is because Chiswell Green and the neighbouring Parishes are served by a good mix of services, facilities and amenities, including for both frequent bus services and How Wood, Park Street, St Albans City and Watford Junction railway stations. Secondly, this is because the available public transport facilities offers both existing and future residents with a real choice to use these services to travel to education, employment, shops and services in other nearby settlements including How Wood, Park Street, St Albans and Watford as a genuine alternative to journey by car. Thirdly, because there is a good range of amenities and facilities required by residents on a daily and weekly basis located within Chiswell Green and the neighbouring Parishes that are reasonable walking and / or cycling distance of the site. Fourthly, it is because the package of measures set out in **Chapter 4** will further enhance the accessibility the site and encourage sustainable travel.

4.0 Appeal Scheme

Appeal Scheme

- 4.1 The proposed site is located to the south of Chiswell Green Lane and within the local authority area of St Albans City & District Council (SACDC). Highway Authority for the area is Hertfordshire County Council (HCC).
- 4.2 The appeal site is located to the southwest of the centre of Chiswell Green and is bordered to the west by the former Butterfly World attraction. Around 3.2km to the northeast of Chiswell Green is the cathedral city of St Albans, whilst 7.3km to the south is Watford.
- 4.3 A detailed description of the appeal proposals is set out Section 3 of the appellants Statement of Case. In summary, the development to the south of Chiswell Green Lane is proposed to provide up to 391 dwellings with a mix of affordable (40%) and private dwellings (60%). An area of land in the north western corner of the development is being allocated for the potential future provision of a new Primary School for up to 2FE (420 pupils), with early years provision, and/or a Special Educational Needs & Disabilities (SEND) school.
- 4.4 I consider that the provision of a 2FE Primary School will provide a real benefit in transport terms. This is because it will provide the genuine opportunities for future residents associated with the appeal scheme; as well as for existing residents that reside in close proximity to the northern and eastern site boundaries (and future residents should the Inspector be minded to also granted the Polo School scheme); opportunities to walk and cycle to the school. Existing and future residents will be able to use the existing pedestrian and cycle networks on Forge End and Long Fellows, the proposed internal pedestrian and cycle ways / paths within the appeal scheme and the proposed pedestrian and cycle improvements on Watford Road and Chiswell Green Lane. The provision of a 2FE primary school facility will also provide the opportunity to minimise the distances travelled on the local network to existing primary school provision including the nearest primary school at Killigrew Primary and Nursery School.
- 4.5 In the event that the school becomes a SEND school, the pupils would be coming from a wider catchment area likely to travel to the school via a fleet of minibuses provided by the local education authority, taxi or be dropped off by parents. It is considered that the likely travel demand for a SEND school would be less than that associated with a 2FE primary school.

Internal Layout

- 4.6 The appeal scheme is proposed to be split into two separate parcels with no vehicular link being provided between the two but there will be a network of pedestrian and cycle links providing permeability through the site and improving active travel connections between Chiswell Green Lane and Forge End and Long Follow.
- 4.7 The Transport Assessment identified that up to 215 dwellings (55%) and the 2FE Primary / SEND school are proposed to be provided in the northern part of the site.

- 4.8 Similarly, The Transport Assessment (**CD 2.9**) identified that the southern part of the site is proposed to be developed for up to 176 dwellings (45%).
- 4.9 The detailed internal layout will be secured through a reserved matters application, and I consider that the numbers of car and cycling spaces and the details of the design and management of the proposed parking for the proposed school can be confirmed at that stage. The internal layout will be designed in accordance with the principles of the Department for Transport (DfT) document Manual for Streets, and in accordance with the County Council's Highway Design Guide 'Roads in Hertfordshire'.

Proposed Access Strategy for All Modes of Transport and Off-site Active Travel Improvements

- 4.10 Two new priority tee junctions at Chiswell Green Lane will facilitate access to the northern part of the site for pedestrians, cyclists and vehicles (**CD 1.22**). There is existing verge parking on the southern side of Chiswell Green Lane and I understand that residents use this area for parking. The junction proposals incorporate 10 formalised parking spaces to incorporate this parking. This parking is also shown within **CD 1.22**.
- 4.11 A proposed new priority T-junction at Forge End, positioned between an existing gap between two dwellings, will facilitate access to the southern parcel of the site for vehicles, pedestrians and cyclists. Further access for pedestrians and cyclists will also be provided at both Forge End and Long Fallow.
- 4.12 The pedestrian and cycle access at Long Fallow will also facilitate a second point of access to the southern part of the site for the emergency blue services. To prevent this access point being used by vehicles other than the emergency blue light services, access will be controlled by lockable / droppable bollards (**CD 1.19**).
- 4.13 As part of the agreed mitigation package with Hertfordshire County Council, the appeal scheme also includes for the provision of a three metre wide shared footway / cycleway on the northern side of Chiswell Green Lane from the proposed westernmost site access up to the Watford Road double mini-roundabout. This will be delivered by the appellant via a S278 agreement alongside the provision of a Tiger uncontrolled pedestrian and cycle crossing on Watford Road at the section located between the two mini-roundabouts with Chiswell Green Lane and Tippendell Lane. If both schemes being considered as part of the co-joint public inquiry are given consent, then the costs of this route could be shared.
- 4.14 The scheme also includes the provision of an improved off-road pedestrian and cycle link along Watford Road from its junction with the Northern Orbital Road to the south of the appeal scheme up to and including the Watford Road double mini-roundabout. This forms part of the draft St Albans Local Cycling and Walking Improvement Plan's corridor improvements between St Albans and Watford. Paragraph 1.3.3 and 1.3.4 of Appendix A of the consultation draft of the LCWIP identifies that this route has been identified as a key cycling connection (see **Appendix AHJ/22**). The mechanism for delivery is currently anticipated to be via a S278 agreement. These improvements include a second Tiger crossing in the vicinity of the Watford Road / Forge End junction. **Figure AHJ/6** illustrates the proposed Chiswell Green Corridor Active Travel Improvements agreed to be provided on Chiswell Green Lane or Watford Road (see also **CD 2.35b** and **CD 2.35c**).

- 4.15 From the meeting held with HCC on the 07 July 2022 (see **Appendix AHJ/3**), it is understood that these improvements form part of a corridor improvement scheme that HCC are planning but need assistance to fund the full works. This corridor will provide improved cycle facilities between St Albans and Watford, with these proposals forming only part of the wider scheme. To the north of Chiswell Green Lane, the St Stephens Green Farm development will provide improved connections to St Albans, whilst additional developments will improve the route to the south of Watford Road to provide an interconnected scheme. It is understood that if any development does not receive consent then HCC will fund their section of the improvements themselves.
- 4.16 As set out in detail in **paragraphs 4.35 to 4.37** below, the appellant has agreed to provide a total S106 contribution of £2,668,966.00. This is based on £6,826 per dwelling as set out within Appendix 1 of HCC's Developer Contribution guidance document (**see Appendix AHJ/23**). It is understood that the costs of the off-site sustainable improvements advised in **paragraphs 4.35 to 4.37** can be deducted from the total S106 costs).
- 4.17 The proposed pedestrian and cycle improvements at Chiswell Green Lane, Forge End and Long Fallow and vehicular access junctions at Chiswell Green Lane and Forge End can be delivered within land within the applicant's control and the adopted highway extents.
- 4.18 The proposed pedestrian and cycle improvements at Chiswell Green Lane, Forge End and Long Fallow and vehicular access junctions at Chiswell Green Lane and Forge End are appropriate in terms of highway safety, capacity and operation accounting for both the individual and cumulative impacts of the appeal scheme and the Polo School scheme. This is the agreed position with the highway authority at Hertfordshire County Council.
- 4.19 There are no existing public footpaths within the appeal scheme. Whilst there will be no vehicular links between the two parcels, there will be a comprehensive network of pedestrian and cycle links within the green core of the site. These will improve permeability and significantly improve pedestrian and cycle connections between Forge End and Long Fallow for the local community. The extent of adoption will be confirmed during a future Reserved Matters application but if the footpaths and cycleways within the development are not adopted, then they will be privately maintained with rights of way maintained for both residents within the site and for residents external to the site.

Traffic Impact

- 4.20 The individual and cumulative vehicular trip generation of the northern and southern sites as derived in the Transport Assessment (**CD 2.9**) that supported the outline planning application are set out below.
- 4.21 It is forecast that the northern site, that is proposed to provide 215 dwellings (55%) and the 2FE Primary / SEND school, could generate 310 two-way vehicle trips in the AM peak period and 101 two-way vehicle trips in the PM peak period.

- 4.22 For a development of this size, a percentage of the pupils attending the proposed Primary School would live within the development. Paragraph 5.20 of the HCC Education Statement of Case (**CD 5.23**) identifies that 166 pupils out of a potential capacity of 420 pupils, could live within the appeal scheme and therefore would be more likely to walk, cycle or scoot to the school rather than travel by car. Using the same ratio (0.425 pupils per dwelling), 140 pupils could live within the St Stephens Green Farm development. The assessment carried out in the Transport Assessment (**CD 2.9**) that accompanied the outline planning application did not account for any internalisation of trips associated with the proposed 2FE school. This approach was agreed with the highway authority at HCC and is considered to be robust.
- 4.23 As outlined within paragraph 4.22, a SEND school will likely have a smaller pupil capacity than a typical primary school, whilst pupils would typically travel from a wider area by a fleet of minibuses and parent's cars. It is therefore considered that the impact assessment carried out within the Transport Assessment (**CD 2.9**) accounting for a 2FE primary school are robust and do not need to be revisited to account for a SEND school.
- 4.24 It is forecast that the southern site could generate 85 two-way vehicle trips in the AM peak period and 69 two-way vehicle trips in the PM peak period.
- 4.25 Cumulatively, both the northern and southern site could generate 395 two-way vehicle trips in the AM peak period and 170 two-way vehicle trips in the PM peak period. The cumulative development would lead to a maximum of 6.5 two-way additional vehicles per minute at the busiest times. As advised above, this is considered to be a robust forecast as it does not account for any potential reduction in trips associated with the provision of a 2FE primary school or the modal shift to more sustainable modes of travel that could occur with the provision of the comprehensive sustainable transport package agreed to be provided by the appellant and the implementation and monitoring of the agreed residential and school travel plans by Hertfordshire County Council.
- 4.26 The number of delivery and service vehicles on any given day requiring to access the sites on any given day will be low in real terms and I do not consider that these will have a material impact on the operation or safety of the local highway network. Many service vehicles visiting the northern and southern sites will already be serving the existing dwellings located to the north, east and south of the appeal scheme.
- 4.27 The trip rates and distribution have been agreed with the highway authority (see **Appendix AHJ/24**) and it is agreed that the individual or cumulative impacts (accounting for committed / allocated developments as per guidance set out in the National Planning Policy Guidance (NPPG)) is unlikely to be severe, subject to the provision of the agreed mitigation package.

Forecast Pedestrian and Cycle Generation

- 4.28 The individual and cumulative pedestrian trip generation of the northern and southern sites are set out below.
- 4.29 It is forecast that the northern site will generate 32 two-way pedestrian trips in the AM peak hour and 11 two-way pedestrian trips in the PM peak hour. Whilst it will also generate 6 two-way cycle trips in the AM peak hour and 2 two-way cycle trips in the PM peak hour.

- 4.30 It is forecast that the southern site will generate 9 two-way pedestrian trips in the AM peak hour and 9 two-way pedestrian trips in the PM peak hour. Whilst it is also forecast to generate 2 two-way cycle trips in the AM peak hour and 2 two-way cycle trips in the PM peak hour.
- 4.31 Cumulatively, both the northern and southern site will generate circa 61 two-way pedestrian trips and 12 two-way cycle trips in the AM and PM peak periods respectively before the Travel Plan is implemented.

Travel Plan Targets

- 4.32 A Residential (**CD 2.10**) and School Travel Plan (**CD 2.11**) were provided as part of the applications. The objectives of these reports are to encourage a modal shift away from private cars to sustainable travel. They therefore included initial targets based on 2011 Census 'Journey to Work' information but these would be amended following an initial baseline survey after the developments upon occupation of a certain number of dwellings. The Residential Travel Plan shows a 10% reduction in car driver mode share as a result of the active travel improvements not accounting for residents who may choose to work from home, the bus funding, the provision of bus vouchers and the tendency to now work from home. These targets would result in a modal shift of 39 private car trips in the morning peak hour and 17 private car trips in evening peak hour using other more sustainable modes of transport.
- 4.33 In order to achieve this, the residential travel plan seeks to achieve an increase in 16 resident walking, 21 cycling, 21 using public transport in the morning peak hours, It also seek to achieve an increase in ten residents walking, ten residents cycling, and ten residents using public transport. This includes for targeting parents and school children trips who reside outside the appeal scheme. Noting the agreed sustainable package to mitigate the impact of the scheme building on the existing good opportunities for residents to walk, cycle and / or use the nearby public transport opportunities, I consider that the forecast targets for increase the modal share of walking, cycling and public transport trips are realistic and achievable.
- 4.34 The Travel Plans are also dynamic documents and so additional measures and initiatives can be incorporated over the Travel Plan's life to further encourage walking and cycling over car use. As outlined within **paragraphs 4.35 to 4.37** below, financial contributions will be provided as part of the S106 for HCC to undertake monitoring of the Travel Plans. The Travel Plan also including monitoring measures and opportunities to review the modal share targets if they are found to be failing.

Mitigation Package

- 4.35 The appeal scheme proposes to provide a S106 sustainable transport contribution of up to £2,668,966.00 based on £6,826 per dwelling as set out within Appendix 1 of HCC's Developer Contribution guidance document (**Appendix AHJ/23**). The draft S106 agreement identifies that this contribution will go towards the following:
- i. £6,000 for monitoring of the Residential Travel Plan
 - ii. £7,500 for monitoring of the School Travel Plan
 - iii. £175k per year of bus funding for a five-year period; and
 - iv. the provision of bus vouchers to residents (£210 per dwelling).

- 4.36 It is understood that the costs of the off-site sustainable transport improvements will also be deductible from the sustainable transport S106 contribution, and these will include the following (see **Figure AHJ/6**):
1. The provision of a 3m footway / cycleway on Chiswell Green Lane which has been designed in accordance with LTN1/20 (**Appendix AHJ/21**).
 2. The provision of a Tiger crossing, which is a zebra crossing with an adjacent cycle facility, at the double mini-roundabout junction which will provide pedestrian and cycle access to the eastern side of Watford Road and improving connectivity to National Cycle Route 6.
 3. The provision of pedestrian / cycle accesses onto Forge End and Long Fallow to provide access to the southern end of Watford Road, and when combined with the routes through the site, improve connections between Watford Road and Chiswell Green Lane and the adjacent Public Rights of Way.
 4. The provision of a new Tiger crossing across Watford Road at its junction with Forge End to provide a new cycle link to the National Cycle Route 6 via Farringford Close and Carisbrook Road.
 5. The implementation of HCC's cycle improvements along Watford Road between Chiswell Green Lane and the A405 North Orbital Road. The proposals are just part of HCC's proposed improvements. When combined with the St Stephen's Green Farm proposals and proposals to the south of the M25, there will be a continuous improved pedestrian / cycle route along the Watford Road corridor between St Albans and Watford.
- 4.37 The off-site active travel improvements were confirmed as acceptable by the Highway Authority (see paragraph 8.13.26 of the Committee Report – **CD 3.4**) to mitigate the forecast impact of the appeal scheme and that there was no need to consider capacity improvements at the Watford Road double mini-roundabout junction in accordance with the LTP4 (**CD 8.23**).
- 4.38 I consider that the mitigation package will further enhance the accessibility of the application site and encourage future residents to use sustainable modes of travel.
- 4.39 In my view, the agreed mitigation package will also benefit existing residents on Chiswell Green Lane, Forge End, Long Fallow and the residential areas access of both Chiswell Green Lane and Watford Road.
- 4.40 I consider that the agreed transport mitigation package is comprehensive and commensurate with the scale of the appeal scheme.

5.0 Individual Impact of Appeal Scheme on Operation of Local Highway Network

- 5.1 It is my view that national and local transport policy is, wherever possible, to seek alternative solutions to building new roads / improving capacity at existing junction. I therefore consider that transport mitigation plan or package of measures should focus on maximising sustainable accessibility to the development considering measures such as: improvements to development site layout to facilitate walking and cycling as well as accessibility to the local public transport infrastructure; improvements to walking and cycling provisions in the vicinity of the development site; and improvements to the local public transport network. This is consistent with the approach agreed with the highway authority for the appeal scheme.
- 5.2 As set out in **Appendix AHJ/24**, the methodology of the Transport Assessment (**CD 2.9**) that accompanied the planning application including trip generation, distribution, accounting for committed / allocated was scoped out and agreed with the highway authority at Hertfordshire County Council.
- 5.3 In accordance with guidance set out in the National Planning Policy Guidance, it was agreed with the highway authority that it was not necessary to account for the Polo Scheme as part of the junction modelling assessment work included within the Transport Assessment that accompanied the outline planning. This is because it is not an allocated or committed development. The relevant extract from the NPPG is included at **Appendix AHJ/25**.
- 5.4 The Transport Assessment and the modelling results for the Watford Road double mini-roundabout are included within Table 20 of **Core Document 2.9**. The highway authority at HCC acknowledges that the Transport Assessment showed that there would be a reduction in the operational performance of the B4630 Watford Road / Tippingdell Lane / Chiswell Green Lane double mini-roundabout under future year (2027) weekday AM and PM peak hour periods.
- 5.5 Based on its local knowledge of the operation of the local highway network including the Watford Road double mini-roundabout, the highway authority does not consider that impact of the appeal scheme on highway capacity is sufficiently material that could not be mitigated by way of a sustainable transport package in accordance with its wider aspirations to improve connectivity between Chiswell Green, Part Street and St Albans and reduce through traffic on the Watford Road corridor as part of the Chiswell Green Corridor Active Travel Improvements as identified in the South Central Hertfordshire Growth and Transport Plan document.
- 5.6 The highway authority, when considering the impact of the appeal scheme at the Watford Road double mini-roundabout was very clear in its consultation response and liaison with Glanville and later emails to the local planning authority further to receipt of objection reports submitted by Keep Chiswell Green that it did not consider that it needed to be mitigated by means of creating additional highway capacity. The relevant correspondence is included at **Appendix AHJ/11**.

- 5.7 HCC considers that the substantial investment in off-site active travel mode infrastructure associated with the delivery of development on the Appeal Site is fully in alignment with the objectives embodied within LTP 4 Policy 1 (**CD 8.23**) and the NPPF (**CD 7.1**) and delivers a more balanced travel demand for future households and visitors. This is because it does not consider that highway capacity improvements by way of mitigating the impact of development schemes are a long term solution to reduce reliance on private car travel, support growth in sustainable transport and the objectives embodied within their own LTP 4 Policy 1 or the National Planning Policy Framework (NPPF).
- 5.8 I agree with the highway authority's approach to seek alternative solutions to building new roads / improving capacity at existing junction notably in this instance because the individual impact of the appeal scheme is not considered to be material in respect.

6.0 Cumulative Impact of Appeal Scheme and Polo School Scheme on Operation of Local Highway Network

- 6.1 Paragraph 8 of the Inspector's summary provided of the CMC held on the 10 March confirms that Highways and Transport would be a main issue to be addressed at the Public Inquiry. Paragraph 10 of the Inspector's summary states that all matters raised by interested parties would need to be addressed, although acknowledged the weight to be given to these issues depended on the evidence as it emerges during the Inquiry.
- 6.2 It is considered that the scope of the transport work and documentation prepared in support of the outline planning application was carried out in accordance with industry best practices and is considered to address the issues raised by third parties concerning trip impact, accessibility and highway safety. It is also considered that the TA considered the cumulative impact of the appeal scheme and other allocated / permitted development as per the advice in NPPG.
- 6.3 This is subject to the provision / implementation of the agreed mitigation package as set out in detail in **Chapter 4**.
- 6.4 Notwithstanding, it is noted that third parties do not consider that the cumulative impact on the local highway network of both this appeal scheme and the Polo School scheme have been considered in particular at the Watford Road double mini roundabout.
- 6.5 The purpose of this **Chapter** is to provide an assessment of the cumulative impact of both this appeal and the Polo School scheme at the Watford Road double mini-roundabout.
- 6.6 As set out in **paragraph 4.22**, it is considered that the agreed methodology used to consider the impact of the individual impact of the appeal schemes was robust. This is because it:
- (i) Assumed that all of the school pupils would live external to the development as no internalisation of the school trips was considered. In reality, a number of school pupils will live in both of the appeal sites and who would be unlikely to drive to and from the school.
 - (ii) The trip generation for the main assessment did not reflect the Travel plan measures or the success of the active travel mitigation to generate a mode shift away from the private car.
 - (iii) The trip generation did not reflect the increased bus patronage resulting from the proposed bus funding, bus travel vouchers and Hertfordshire County Council's ambitions for a 10-minute 'turn up and go' service on Watford Road.
- 6.7 It is therefore my view that providing a cumulative of both schemes using the previously agreed methodology would significantly overestimate the cumulative impact on the operation of the local highway network and would not be sufficiently accurate to allow the Inspector to understand the impact of both schemes in real terms.

6.8 To provide the most focussed cumulative impact of both the appeal and the Polo School scheme, we consider that it would be prudent to revise the trip rates, trip distribution etc as follows.

- i) Account for the internalisation of the school trips to provide a more realistic assessment of the school impact. This would include identifying how many pupils would potentially live within the appeal sites, identify their potential mode of travel and if they are new trips, to assign them to the highway network. It is acknowledged that the size and type of the school is still under consideration but as the original application was based on a 2FE Primary School. As set out in **Chapter 4**, the trip attraction associated with a SEND School is likely to be less by comparison. The cumulative assessment accounting for both appeal schemes has therefore been carried out assuming the provision of a 2FE primary school.
- ii) The trip rates have been reviewed to reflect sites without a Travel Plan based on the latest survey information to provide an appropriate base for the implementation of the Travel Plan reductions.
- iii) Apply the Residential Travel Plan targets for modal shift agreed with Hertfordshire County Council for both of the appeal sites. As set out in **paragraph 4.32 to 34** above, I consider that the proposed targets are realistic and achievable.

6.9 The issues raised by KCG in its SoC are dealt with in detail in part B of my evidence. However, comments have been provided with respect to the reliability of the use of Junctions 9 / ARCADY as set out in paragraph 4.10 of a Report dated October 22 prepared by THaT Consultancy (**CD 6.13**) as part of the updated junction modelling exercise. The comments advised that the ARCADY modelling identified four warnings about the results and that the modelling should be treated with caution. The warnings identified the following:

- a) that there are un-balanced flows at the double mini-roundabouts.
- b) That the distance between the roundabouts is small and the results should therefore be treated with caution as the mini-roundabouts will be modelled as separate junctions but the real behaviour may be of more complex systems with interactions that cannot be modelled.

6.10 The first warning is because the main traffic flow is a lot heavier on Watford Road than on Chiswell Green Lane and Tippendell Lane, which reduces the gaps for drivers to turn out onto the main road. We have consulted the Transport Research Laboratory (TRL), the software writers, to investigate this warning further and their response has been provided within **Appendix AHJ/26**. They have confirmed that the presence of unbalanced flows is liable to underestimate the capacity of the junction, as these junctions typically operate in a similar manner to a priority T-junction.

6.11 TRL has stated that ARCADY would overestimate the queueing and delay (see **Appendix AHJ/26**) and that the queues and delay would not be as long as shown within the results. Therefore, professional judgement should be applied when interpreting the results, which has been the approach adopted by Glanville and the highway authority to date.

- 6.12 TRL also responded to the second warning advising that the mini-roundabouts would act as two separate roundabouts (see **Appendix AHJ/26**). Whilst the junctions would operate separately, I consider that it was prudent to model them as a linked junction in order to assess the impact of any queueing on the internal link.
- 6.13 In my view, there will also be limitations to such assessments and forecasts using the available software. These assessments are tools to allow users and key decision makers to exercise professional judgment when interpreting the results with consideration to experience and local knowledge. I therefore conclude that methodology used to model the double mini-roundabout junction in the TA and within this proof of evidence is appropriate and agreed to be appropriate by the highway authority at HCC. I disagree with points raised by KCG with respect to the reliability of the assessments used.

Revised Methodology

- 6.14 As I outlined within **paragraph 4.22**, the Transport Assessment was based on a robust methodology. The changes made to the methodology are outlined below.

School Internalisation

- 6.15 I understand that paragraph 5.20 Of the HCC Education Statement of Case (**CD 5.23**) identifies that, whilst the final form of the school is not known, the development to the south of Chiswell Green Lane could result in 39.5% of a 2FE school capacity of 420 pupils living within the development. This equates to 166 pupils or 0.425 pupils per dwelling. When this ratio is also applied to the 330 dwellings at the St Stephens Green farm development, a total of 306 pupils could live within the developments if the Primary School is provided. Therefore only 114 pupils would come from the surrounding area. The revised trip generation therefore assumes the following:
- i. The northern parcel of the southern development provides 55% of the dwellings and therefore 91 pupils. These pupils would likely either walk or cycle to the school. If they are driven, the trip would not impact the double mini roundabout, whilst if the parent drives to work immediately afterwards, this would have been counted within the residential trip generation.
 - ii. The southern parcel would provide the remaining 75 pupils of the 166 identified above. It is considered some of these would walk or cycle, whilst some would be driven by their parents on their way to work. The School Travel Plan target of 50% car driver mode share has been applied to get 37 pupils being driven to the school. It is considered that some of these will be linked trips i.e.. parents dropping off their children on the way to work and therefore included within the residential trip generation. There are 44 school trips heading to / from the school along Watford Road to the south of Chiswell Green Lane, these will be split between the dwellings to the east and west of Watford Road , therefore assuming a 50% split (22 pupils) and taking into account some children may live in Forge End and Long Fallow, it is considered that 19, or 50%, of the southern parcel school related trips would be new trips. The parents would therefore drive to the school via Chiswell Green Lane and then return back to Watford Road via the same route.

- iii. For the St Stephens Green Farm development, it is considered that the 140 pupils would either walk or cycle to school or be driven. If they are driving, then it is considered these would either be linked trips or new trips. If the former then they will be contained within the residential trip generation. If they are new trips, then they would not impact the double mini-roundabout in any event.

Travel Plan and Active Travel Improvements

- 6.16 The trip generation has been revised to more a more appropriate base trip generation prior to applying the travel plan targets. Therefore, new trip rates have been extracted from the TRICS database using the most up to date surveys and just for sites without Travel Plans. As most residential development now come with Travel Plans, to provide a suitable number of surveys, sites were selected from all of England, excluding Greater London and were selected for Edge of town locations and, due to the site's proximity to the centre of Chiswell Green, for neighbourhood centres.
- 6.17 The TRICS outputs have been provided within **Appendix AHJ/27**, whilst the trip generation be found within the traffic flow diagrams within **Appendix AHJ/28**.
- 6.18 The Residential Travel Plan (**CD 2.10**) has a target reduction in private car use of 16%, of which 6% is due to an increase from working at home, however, the long-term impact of the latter is still being assessed. The Stephen's Green Farm Travel Plan had a modal shift target of 10% but discounted the potential increase in home working. Consequently, to provide a robust assessment, the revised trip rates have been reduced by 10% (see **Appendix AHJ/28**) to account for the modal shift targets, although we consider that there is the potential for the trips to reduce further as the desire for home working increases.

Committed Development

- 6.19 As part of the assessment, the impact of the committed development on the double mini-roundabout has been reviewed. The Burston Nursery flows have been assessed and when applied to Watford Road are so low (1 vehicle in the peak hour), it is considered that this would not have a material impact on the operation of the double mini-roundabouts (see **Appendix AHJ/28**). Similarly, the Rail Freight terminal and the new hotel at the A405 / Watford Road were assessed as part of the work undertaken for National Highways and the former would not impact Watford Road, whilst the new hotel trips would be negligible and again would not have a material impact on the operation of the mini-roundabouts.

Cumulative Assessment Results

Watford Road Double Mini-Roundabout

- 6.20 The ARCADY outputs have been provided within **Appendix AHJ/29** and show the following:
- 6.21 In the AM peak hour, Chiswell Green Lane would experience an increase in RFC of 0.69, an increase in queue of 15 vehicles and an increase in delay of 127.77 seconds compared to the 2027 without development scenario.

- 6.22 In the AM peak hour, Tippendell Lane would experience an increase in RFC of 0.17, an increase in queue of 16 vehicles and an increase in delay of 140.25 seconds compared to the 2027 without development scenario.
- 6.23 In the PM peak hour, Tippendell Lane would experience an increase in RFC of 0.33, an increase in queue of 47 vehicles, although the queue length of 330 metres does not extend back to and block the A405/ Tippendell Lane roundabout. The results forecast that there would be increase in delay of 601.91 seconds associated with the forecast cumulative impact of the appeal schemes compared to the 2027 without development scenario.
- 6.24 Based on the above I consider that the cumulative traffic impact of the appeal schemes at the Watford Road double mini-roundabout s material. I have therefore identified a feasible mitigation scheme that could be implemented if both schemes received planning consent. This involves the signalisation of the double mini-roundabout and a plan showing a potential arrangement is shown within **Figure AHJ/8**. The junction has been designed in accordance with CD123 of the Design Manual for Roads and Bridges and can delivered within the existing adopted highway extents.
- 6.25 A copy of the LinSig junction modelling (see **Appendix AHJ/30**) has also been provided which shows that a proposed signalised would mitigate the impact of the cumulative impact of both appeal schemes.
- 6.26 The above results are based on the premise that the controlled pedestrian crossing on Watford Road and the separate approach for the parade of shops located to the south of Tippendell Road are called every cycle, which is considered to be robust. In reality, I consider it unlikely that, with the anticipated demand, the pedestrian crossing would be called every cycle during the morning and evening peak hours. Similarly, the 2021 surveys contained within Appendix 14 of the St Stephen's Green Farm Transport Assessment identifies that there are 16 vehicles departing the shop car park during the AM peak hour and 12 vehicles in the PM peak hour. This equates to one departing vehicle every 2 to 3 cycles based on the assumed signal cycle time of 90 seconds.
- 6.27 Depending on whether the pedestrian crossing and the shop egress signals stages are called, I consider that the signal timings can be considered in more detail as part of the detail design of the scheme in liaison with HCC's Traffic Signal team, who will be able to further refine the signal timings. However, this is anticipated to provide additional capacity for the operation of the proposed signalised junction and as the modelling results for the controlled pedestrian crossing and the access to the parade of shops are considered to be robust.
- 6.28 There is also the potential to implement MOVA (Microprocessor Optimised Vehicle Actuation), which is a system which automatically adjusts the signal timings based on real time information. This typically improves the operation of the signalised junctions and, according to TRL, can reduce delay by up to 15%. This will therefore assist to provide more green time to both Chiswell Green Lane and Tippendell Lane as the real time queueing and delay data dictate.

6.29 In summary, results of the cumulative impact shows that it would lead to significant increases in queues and delays mainly at the Watford Road double mini-roundabout junction on the Chiswell Green Lane arm in the morning peak hour and Tippendell Lane in the evening peak. It is therefore proposed to signalise the Watford Road double mini-roundabout via a scheme designed in accordance with CD123 of the Design Manual for Roads and Bridges. The junction modelling outputs forecast the signalised junction will operate similarly to the double mini-roundabout junction for a 2027 design year without development. The junction is also deliverable within the adopted highway extents and would not require the provision of any third party land.

Cumulative Impact on Wider Local and Strategic Road Network

6.30 The cumulative assessment has been widened to assess the cumulative impact at the following adjacent junctions:

- Watford Road / Forge End (the next junction to the south);
- The A405 North Orbital Road / Tippendell Lane roundabout;
- The A405 North Orbital Road / Watford Road
- The M25 Junction 21a

6.31 The updated assessments are summarised below:

Watford Road / Forge End

6.32 To assess the cumulative at the Forge End junction, the PICADY model created for the Transport Assessment (**CD 2.9**) was updated to include reflect the cumulative flows outlined within paragraph 56.15. The results of this assessment have been provided within **Appendix AHJ/31** and shows that there would be a negligible increase in queue or delay when compared to the results accepted by the National Highways for the individual impacts of the appeal scheme.

6.33 It is therefore concluded that the cumulative impact of both appeals schemes would not be material and does not affect the agreed position with National Highways as part of the work carried out to support the outline planning application.

A405 North Orbital Road / Tippendell Lane

6.34 This junction was assessed as part of the consultation with National Highways during the planning application which showed that the roundabout was operating within capacity. The ARCADY model includes for traffic flows associated with the Rail Freight Terminal and the new hotel at the A405 / Watford Road roundabout as committed development. It has been updated to incorporate the Burston Nursery committed development.

6.35 The junction modelling outputs included at **Appendix AHJ/31** show that there would be no perceptual reduction in the operation of the junction or increases in queues or delay on all the arms assessed.

6.36 It is therefore concluded that the cumulative impact of both appeals schemes would not be material and does not affect the agreed position with National Highways as part of the work carried out to support the outline planning application.

A405 North Orbital Road / Watford Road

- 6.37 As with the previous junction, National Highways agreed that there was no material impact at this roundabout as a result of the development to the south of Chiswell Green Lane. The junction model for this roundabout also included the mitigation for the committed new hotel and the rail freight terminal and has been updated to include the Burston Nursery flows.
- 6.38 The junction modelling outputs included at **Appendix AHJ/31** show that there would be no perceptual reduction in the operation of the junction or increases in queues or delay on all the arms assessed.
- 6.39 It is therefore concluded that the cumulative impact of both appeals schemes would not be material and does not affect the agreed position with National Highways as part of the work carried out to support the outline planning application.

M25 Junction 21A

- 6.40 To assess the cumulative impact of both appeal schemes at the M25 Junction 21a, the same approach was used that was undertaken as part of the planning application consultation with National Highways. A copy of this response can be found within **Appendix AHJ/9**.
- 6.41 The assessment involved peak hour site visit to assess the operation of the M25 Junction 21a slip roads and how much spare queueing space was available to accommodate the additional traffic flows. A copy of the findings of this site visit has been provided within **Appendix AHJ/9**.
- 6.42 The cumulative development of both appeal schemes would result in 32 inbound trips and 99 outbound trips during the AM peak hour which equates to a 2.3% increase in two-way vehicle trips on the junction. This reflects around 0.5 inbound and just under 2 outbound vehicles per minute and represents an increase of 0.1 and 1 inbound and outbound vehicle per minute from the traffic impact previously agreed with National Highways.
- 6.43 In the PM Peak hour, there would be 78 inbound and 41 outbound vehicles which reflects an increase of 1.7% in two-way vehicle trips. This increase results in 1.3 inbound vehicles per minute and 1.5 outbound vehicles per minute which is an increase of 0.5 and 1 vehicle per minute when compared to the individual impact of the appeal scheme and the agreed position with NH.
- 6.44 The increase in vehicles is therefore not considered to have a material impact on the operation of the M25 Junction 21A and does not affect the agreed position with National Highways as part of the work carried out to support the outline planning application.

Summary

- 6.45 This chapter sets out the cumulative assessment undertaken to assess both of the appeal sites. It incorporates a more realistic methodology taking into account the model shift anticipated towards more sustainable transport modes and reduction in single occupancy car travel with the implementation of the Travel Plan targets, the agreed sustainable mitigation package and the internalisation of some of the school trips.
- 6.46 The cumulative assessment shows that a feasible mitigation scheme by way of a staggered signalised junction is required to mitigate the cumulative impact of both appeal schemes. This is anticipated to operate similarly to the levels of queues and delay forecast for a 2027 design year without development. At this stage, it is considered that the proposed staggered signalised junction could be delivered by way of an appropriately worded planning condition included within the S106 agreement should the Inspector be minded to grant consent for one or the other individual appeals schemes or to allow both.
- 6.47 The cumulative impact assessment also shows that there is no material impact to the adjacent junctions or Strategic Highway Network as set out in detail above.

Part B

7.0 Issues Arising

- 7.1 Paragraph 2.8 of my Evidence identified that the key transport issues raised by the Rule 6 Party in the statement of case are whether:
- i. *the Transport Assessment and supporting transport documents that accompanied the outline planning application were prepared in accordance with industry best practice and credible?*
 - ii. *The proposed access strategy, routes to the site and the agreed off-site active travel and highway improvements safe, appropriate and, where relevant, deliverable?*
 - iii. *the site is, or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes and seek to the lower the propensity for single occupancy car travel?*
 - iv. *Is there a need to consider additional highway capacity improvements alongside, or in place of the agreed active travel and highway improvements, to mitigate the individual impact of the appeal scheme should the appeal be granted consent?*
 - v. *The individual of the appeal scheme and the cumulative impact with the Polo School scheme on the operation of local highway network, and in particular the impact at the Watford Road mini-double roundabout, severe?*
 - vi. *The Appeal scheme will impact on the operation, on-street parking and safety of Long Fallow and Forge End including their junctions with Watford Road?*
 - vii. *Appeal scheme can provide appropriate parking arrangements for existing residents that park on-street on Chiswell Green Lane.*
- 7.2 Other third party transportation related objections can be summarised broadly as relating to the accessibility, trip and highway safety.
- 7.3 I will now address each of these in turn.

i. the Transport Assessment and supporting transport documents that accompanied the outline planning application were prepared in accordance with industry best practice and credible?

7.4 **Paragraph 4.27** confirms that the supporting transport documents was carried out in accordance with an agreed scope with the highway authority at Hertfordshire County Council. This transport work built on and evolved the already significant transport work prepared and agreed with the local highway authority at HCC as part of the earlier Local Plan work. This resulted in a positive recommendation being provide by the highway authority that advised that it was content to accept the reduction in capacity of the operation of the Watford Road double mini-roundabout junction subject to the provision of an agreed mitigation package to encourage sustainable transport modes as genuine alternatives to single occupancy car travel. The highway authority further supported this view when asked by the local planning authority about the appropriateness of the approach further to the objection report submitted by KCP in October 2022. As advised in **paragraph 2.22**, HCC confirmed that its position and recommendations for the scheme from a highways and transport perspective remained unchanged,

7.5 During the outline planning application, Glanville also liaised extensively to assess and agree the impact of the appeal scheme on the operation of the Strategic Road with National Highways. In accordance with the company's licence issued by the Secretary of State, NH is the highway authority, traffic authority and street authority for the strategic road network (SRN) in England. It is a condition of its licence that the company must comply with or have due regard to relevant government policy. As advised in **paragraph 2.17**, NH did provide several holding directions to the scheme. However, it is my understanding that the holding directions did not require Glanville to reconsiders its methodology used to forecast trip rates, trip distribution and junction modelling. These holding directions were provided as NH required the appellant to provide further information and details to understand the impact of the appeal scheme at four junctions on the SRN. Further to the provision of this additional information by Glanville, this resulted in the removal of its holding direction on 30 September 2022.

7.6 It is my view that the fact that two key highways and transport stakeholders in the form of NH and HCC reviewed the transport work that supported the outline planning application and did not raise any concerns with respect to its proposed methodology should be afforded considerable weight.

7.7 I therefore concluded that Transport Assessment and supporting transport documents that accompanied the outline planning application were prepared in accordance with industry best practice and are credible.

ii. The proposed access strategy, routes to the site and the agreed off-site active travel and highway improvements safe, appropriate and, where relevant, deliverable?

7.8 The proposed access routes and access junctions are discussed within **Chapter 3** of my evidence. It is proposed to provide vehicular access via Chiswell Green Lane and via Forge End. There will be further pedestrian / cycle access points on Forge End and Long Fallow.

7.9 These accesses have been designed in accordance with nation design guidance including Manual for Streets, the Design manual for Roads and Bridges and LTN 1/20.

- 7.10 The sustainable transport measures listed within paragraphs **4.35 to 4.37** have been designed in accordance with LTN1/20 (**Appendix AHJ/21**) and therefore comply with the current national design guidelines. As outlined within **paragraph 3.47**, Table 6-3 of LTN1/20 identifies that a 3m wide footway / cycleway can accommodate up to 300 cyclists per hour. As the development's proposed cycle trips will be between 40-50, I consider that the proposals provide sufficient capacity to accommodate the predicted cycle usage.
- 7.11 The proposed Chiswell Green Corridor Active Travel Improvements are contained within the adopted highway and therefore are deliverable.
- 7.12 The highway authority has reviewed both the access junction design, the access routes and the sustainable transport mitigation measures and have raised no concerns about the design of the safety of the proposals. This was confirmed within paragraph 6.11.4 of **CD 3.4**.
- 7.13 I conclude that the proposed access strategy, routes to the site and the agreed off-site active travel and highway improvements are safe, appropriate and deliverable.

iii. the site is, or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes and seek to the lower the propensity for single occupancy car travel?

- 7.14 I consider that Chiswell Green and the neighbouring Parishes are served by a good mix of services, facilities and amenities, including for both frequent bus services and How Wood, Park Street, St Albans City and Watford Junction railway stations. Secondly, this is because the available public transport facilities offers both existing and future residents with a real choice to use these services to travel to education, employment, shops and services in other nearby settlements including How Wood, Park Street, St Albans and Watford as a genuine alternative to journey by car. Thirdly, because there is a good range of amenities and facilities required by residents on a daily and weekly basis located within Chiswell Green and the neighbouring Parishes that are reasonable walking and / or cycling distance of the site. Fourthly, it is because the package of measures set out in **Chapter 4** will further enhance the accessibility the site and encourage sustainable travel.
- 7.15 I consider that the application site is accessibly located and provided the opportunity for both future and existing residents to choose to travel by sustainable modes of transport as genuine alternatives to single occupancy car travel.

iv. Is there a need to consider additional highway capacity improvements alongside, or in place of the agreed active travel and highway improvements, to mitigate the individual impact of the appeal scheme should the appeal be granted consent?

- 7.16 As advised in **paragraph 5.1**, it is my view that national and local transport policy is, wherever possible, to seek alternative solutions to building new roads / improving capacity at existing junction. I therefore consider that transport mitigation plan or package of measures should focus on maximising sustainable accessibility to the development considering measures such as: improvements to development site layout to facilitate walking and cycling as well as accessibility to the local public transport infrastructure; improvements to walking and cycling provisions in the vicinity of the development site; and improvements to the local public transport network. This is consistent with the approach agreed with the highway authority for the appeal scheme.

- 7.17 The highway authority at HCC acknowledges that the Transport Assessment showed that there would be a reduction in the operational performance of the B4630 Watford Road / Tippendell Lane / Chiswell Green Lane double mini-roundabout under future year (2027) weekday AM and PM peak hour periods. However, based on its local knowledge of the operation of the local highway network and the robust assumptions adopted in the agreed methodology, the highway authority does not consider that the appeal scheme will have an unacceptable impact on highway safety or that the residual cumulative impacts would not be severe subject to the provision of the agreed mitigation package.
- 7.18 HCC considers that the substantial investment in off-site active travel mode infrastructure associated with the delivery of development on the Appeal Site is fully in alignment with the objectives embodied within LTP 4 Policy 1 (**AHJ/21**) and the NPPF (**CD 7.1**) and delivers a more balanced travel demand for future households and visitors. This is because it does not consider that highway capacity improvements by way of mitigating the impact of development schemes are a long term solution to reduce reliance on private car travel, support growth in sustainable transport and the objectives embodied within their own LTP 4 Policy 1 or the National Planning Policy Framework (NPPF).
- 7.19 I therefore conclude that it is the individual impact of the appeal scheme at the Watford Road double mini-roundabout junction does not justify the need for highway capacity improvements instead of or in addition to the agreed mitigation package. However, as set out in **Chapter 6**, we have considered a signalised junction scheme to mitigate the cumulative impact of both the appeal scheme and the Polo scheme.
- 7.20 Should the Inspector disagree with my and the highway authority's views concerning the individual impact of the scheme and the adequacy of the proposed mitigation agreed with the highway authority to address its impact on highway capacity, the proposed signalised junction scheme is a proposal that would address these concerns.

v. The individual of the appeal scheme and the cumulative impact with the Polo School scheme on the operation of local highway network, and in particular the impact at the Watford Road mini-double roundabout, severe?

- 7.21 **Chapter 6** includes for a cumulative assessment of both the appeal scheme and the Polo Scheme. The assessment in comparison to the robust approach agreed with the highway authority in the TA that supported the planning application incorporates a more realistic methodology taking into account the model shift anticipated towards more sustainable transport modes and reduction in single occupancy car travel with the implementation of the Travel Plan targets, the agreed sustainable mitigation package and the internalisation of some of the school trips.
- 7.22 Notwithstanding, the results of the cumulative impact shows that it would lead to significant increases in queues and delays mainly on the Chiswell Green Lane arm in the morning peak hour and Tippendell Lane in the evening peak. **Chapter 6** therefore includes for a proposal to signalise the Watford Road double mini-roundabout designed in accordance with CD123 of the Design Manual for Roads and Bridges. The junction modelling outputs forecast the signalised junction will operate similarly to the double mini-roundabout junction for a 2027 design year without development. The junction is also deliverable within the adopted highway extents and would not require the provision of any third party land.

- 7.23 **Chapter 6** confirms that the cumulative impact of the appeal scheme and the Polo School scheme would not be material at any of the other junctions assessed.
- 7.24 I therefore conclude that, subject to the proposed mitigation of the Watford Road double mini-roundabout, there would not be any material impact on the existing operation of both the local and strategic road networks associated with the cumulative impact of the appeal and Polo School schemes.

vi. The Appeal scheme will impact on the operation, on-street parking and safety of Long Fallow and Forge End including their junctions with Watford Road?

- 7.25 It is not proposed to provide a general vehicular access via Long Fallow, only an emergency access. **CD 1.19** shows that fire tenders are able to access the site without any problems. As fire tenders already require access to Long Fallow, it is considered that access for these vehicles is achievable. Vehicular access to the appeal scheme is not proposed via Long Fallow.
- 7.26 The Forge End access junction is shown within **CD 1.18**. The trip generation contained within the Transport Assessment indicates during the AM peak hour there will be 23 inbound vehicles and 61 outbound vehicles. This equates to 1 inbound vehicle every 2.5 minutes and 1 outbound vehicle every minute. During the PM peak hour, there are 47 inbound and 22 outbound vehicles. This equates to around 1 inbound vehicle every 1.5 minutes and 1 outbound vehicle every 2.5 minutes. The junction capacity assessment shows that this junction would operate within capacity with minimal queueing and delay.
- 7.27 A swept path assessment was submitted as part of the Transport Assessment (**CD 3.9**) which shows that a refuse vehicle is able to operationally access the site. It should also be noted that refuse vehicles already access Forge End to serve the existing dwellings and it is anticipated that the southern parcel will have the same collection day as Forge End and so access will be achievable when required. The latest five years of accident records indicates that there is no safety concern at the junction of Watford Road and Forge End.
- 7.28 The impact on Forge End was considered acceptable by the Highway Authority (see paragraph 6.11.4 of **CD 3.4**) and they raised no capacity or safety concerns with the development proposals.
- 7.29 I conclude that the appeal scheme will not have a material impact on the operation, on-street parking and safety of Long Fallow and Forge End including their junctions with Watford Road.

vii. Appeal scheme can provide appropriate parking arrangements for existing residents that park on-street on Chiswell Green Lane.

- 7.23 As outlined within paragraph 3.11 Of this Proof of Evidence, the proposed northern access junction incorporates ten formal parking spaces to provide parking for the existing residents who park on-street at the proposed site access. This parking can be seen within **CD 1.22**.

Part C

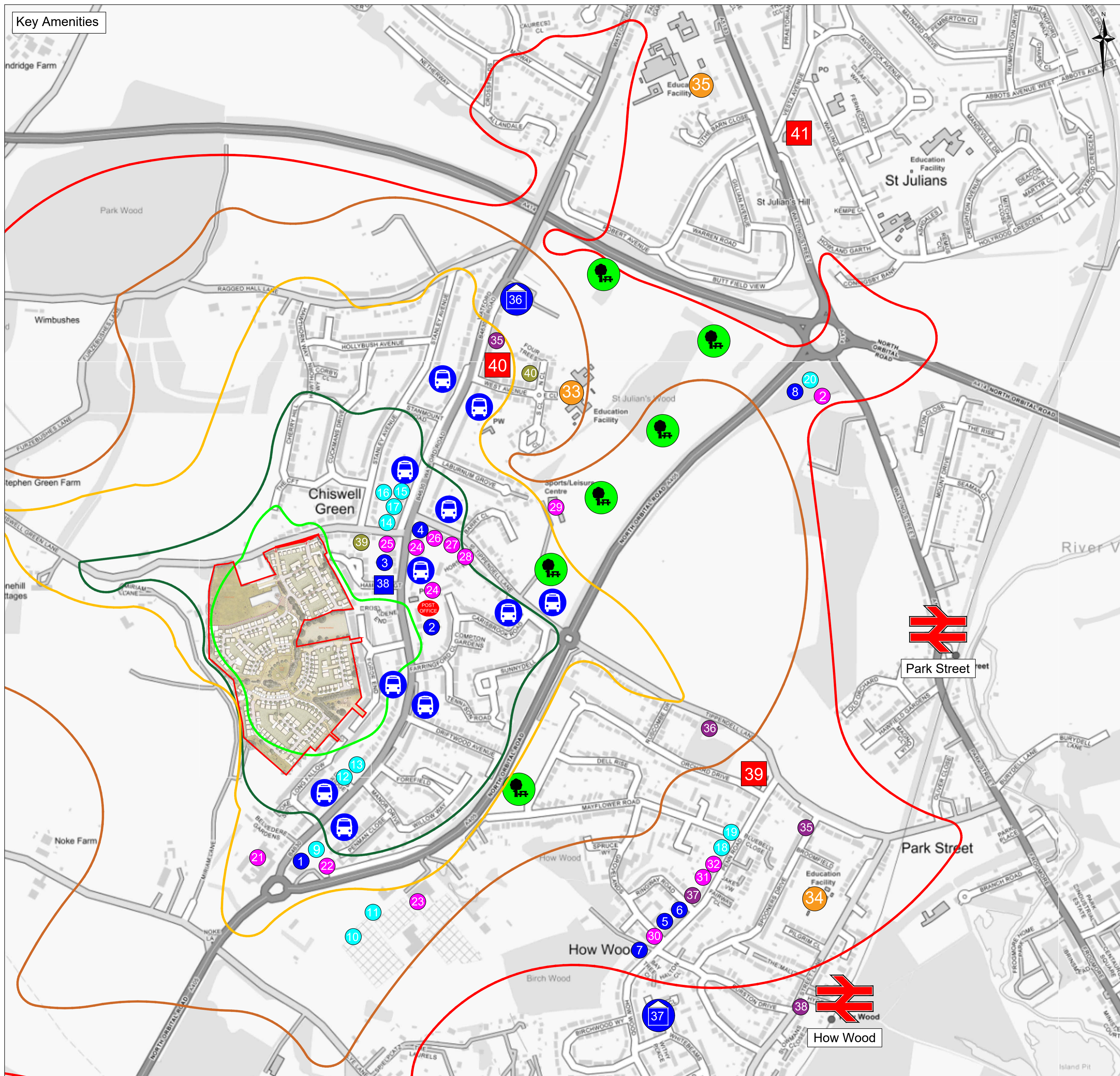
8.0 Summary and Conclusions

- 8.1 The appeal scheme is proposed to provide up to 391 dwellings with a mix of affordable (40%) and private dwellings (60%). An area of land in the north western corner of the development is being allocated for the potential future provision of a new Primary School for up to 2FE (420 pupils), with early years provision, and/or a Special Educational Needs & Disabilities (SEND) school.
- 8.2 There are no transport related policies referred to in the reasons for refusal for the appeal scheme. The highway authority at Hertfordshire County Council has no highway objection to the scheme and considered all the issues relating to accessibility, traffic impact and highway safety in its consultation responses and that a package of mitigation measures has been agreed.
- 8.3 Keep Chiswell Green (KCG) had Rule 6 status granted by the PINS on 22 February 2023. I consider that the key transport issues identified in its Statement of Case and supported appendices are whether:
- i. the Transport Assessment and supporting transport documents that accompanied the outline planning application were prepared in accordance with industry best practice and credible?
 - ii. The proposed access strategy, routes to the site and the agreed off-site active travel and highway improvements safe, appropriate and, where relevant, deliverable?
 - iii. the site is, or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes and seek to the lower the propensity for single occupancy car travel?
 - iv. Is there a need to consider additional highway capacity improvements alongside, or in place of the agreed active travel and highway improvements, to mitigate the individual impact of the appeal scheme should the appeal be granted consent?
 - v. The individual of the appeal scheme and the cumulative impact with the Polo School scheme on the operation of local highway network, and in particular the impact at the Watford Road mini-double roundabout, severe?
 - vi. The Appeal scheme will impact on the operation, on-street parking and safety of Long Fallow and Forge End including their junctions with Watford Road?
 - vii. The Appeal scheme can provide appropriate parking arrangements for existing residents that park on-street on Chiswell Green Lane.
- 8.4 I have assessed each of these issues in Chapter 7 of my Evidence.
- 8.5 The existing and proposed highway infrastructure is appropriate for walking and cycling trips and there are a range of facilities located within Chiswell Green and the neighbouring Parishes that are located within reasonable walking and cycling distance of the site.
- 8.6 There is a comprehensive suite of public transport options including mainline rail and commercial public transport services available for use by residents of the appeal scheme.

-
- 8.7 I conclude that Transport Assessment and supporting transport documents that accompanied the outline planning application were prepared in accordance with industry best practice and are credible.
- 8.8 I conclude that the proposed access strategy, routes to the site and the agreed off-site active travel and highway improvements are safe, appropriate and deliverable.
- 8.9 I conclude that the application site is accessibly located and provided the opportunity for both future and existing residents to choose to travel by sustainable modes of transport as genuine alternatives to single occupancy car travel.
- 8.10 I therefore conclude that it is the individual impact of the appeal scheme at the Watford Road double mini-roundabout junction does not justify the need for highway capacity improvements instead of or in addition to the agreed mitigation package. However, I have considered a signalised junction scheme to mitigate the cumulative impact of both the appeal scheme and the Polo scheme. Should the Inspector disagree with my and the highway authority's views concerning the individual impact of the scheme and the adequacy of the proposed mitigation agreed with the highway authority to address its impact on highway capacity, the proposed signalised junction scheme is a proposal that would address these concerns.
- 8.11 I conclude that, subject to the proposed mitigation of the Watford Road double mini-roundabout, there would not be any material impact on the existing operation of both the local and strategic road networks associated with the cumulative impact of the appeal and Polo School schemes.
- 8.12 I conclude that the appeal scheme will not have a material impact on the operation, on-street parking and safety of Long Fallow and Forge End including their junctions with Watford Road.
- 8.13 I finally conclude that there are no highway or transportation related reasons why the application scheme should not be allowed.

Figures

Key Amenities



Convenience Store:

- 1 Little Waitrose
- 2 Foodfare Convenience Store
- 3 Co-op Food
- 4 Chiswell Green Local Store
- 5 The Co-Operative Food
- 6 The Bok and Rose South African Shop
- 7 Moonlight
- 8 M&S Food

Retail:

- 9 Shell Gas Station
- 10 Burston Garden Centre
- 11 Hertfordshire Fisheries
- 12 Ride St Albans Bicycle Shop
- 13 JMB Motorspor
- 14 Hire One Hardware Store
- 15 Globe Pharmacy
- 16 Chiswell Fireplaces
- 17 KC Flooring Specialists
- 18 How Wood Pharmacy
- 19 Lily Alley Florist
- 20 BP Gas Station

Hospitality:

- 21 The Noke Restaraunt
- 22 Starbucks Coffee
- 23 Burston Restaurant
- 24 Gracey's Pizza
- 25 The Three Hammers Public House
- 26 Flamelight
- 27 The Rami Tandori
- 28 Simmons Bakers
- 29 Lazy Llama Cafe
- 30 The Village Spice
- 31 Sea World
- 32 Simmons Bakers

Education:

- 33 Killigrew Primary and Nursery School
- 34 How Wood Primary School and Nursery
- 35 The Marlborough Science Academy

GP:

- 36 Midway Surgery
- 37 Park Street Surgery

Dentist:

- 38 UK Dental Specialists

Religious Facilities:

- 39 Park Street Baptist Church
- 40 Green Wood United Reformed Church
- 41 St Bartholomew Church

Beauty:

- 35 Greenwood Natural Therapies
- 36 Indigo Beauty Room
- 37 The Sun Set
- 38 The Anti Ageing Clinic

Pet Store:

- 39 Walkalot
- 40 Your Pet Concierge

NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS, DOCUMENTS AND SPECIFICATIONS. ANY DISCREPANCIES BETWEEN INFORMATION SHOWN ON THIS AND ANY OTHER DRAWING SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
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- Key:**
- Site Boundary
 - Train Station
 - Bus Stop
 - Shop
 - Retail
 - Hospitality
 - Education
 - GP
 - Dentist
 - Churches
 - Beauty Salon
 - Pet Store
 - Park - Recreation
 - Post Office

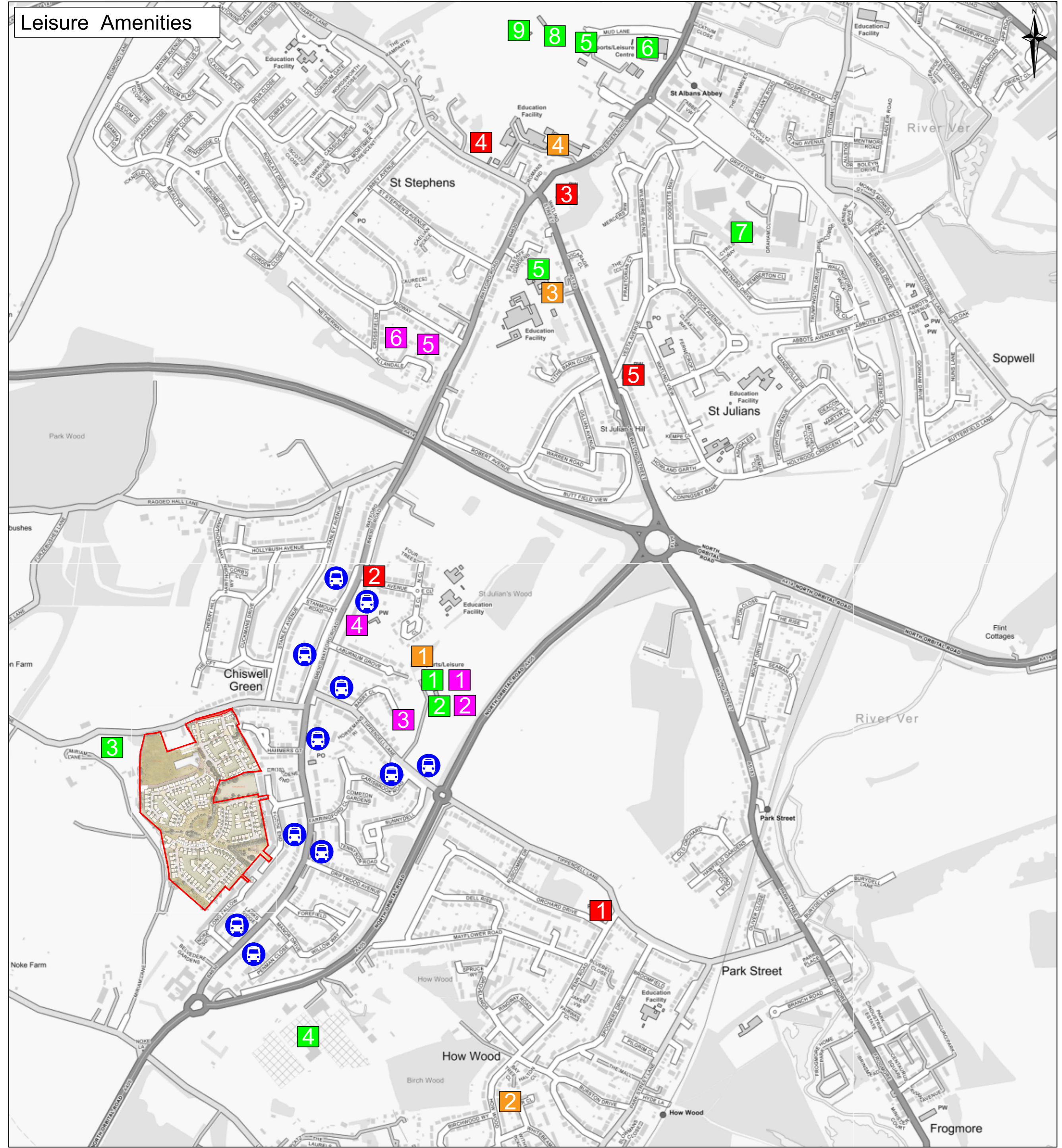
- Walking Distance:**
- 0-5min walk (0-400m)
 - 5-10min walk (400-800m)
 - 10-15min walk (800-1200m)
 - 15-20min walk (1200-1600m)
 - 20-25min walk (1600-2000m)

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Client: CALA HOMES (CHILTERN) & REDINGTON CAPITAL
 Project: LAND SOUTH OF CHISWELL GREEN LANE
 Title: LOCAL AMENITIES

Project Engineer: DK Scale: INTS
 Project Director: AHJ Date: MARCH 2023
 Status:

Leisure Amenities



Religious Facilities:

- 1. Park Street Baptist Church
- 2. Green Wood United Reformed Church
- 3. St. Stephen's Church
- 4. St Bartholomew Church
- 5. Brothers of the Sacred Heart

Sports Clubs and Facilities:

- 1. Greenwood Park Lawn Tennis Club
- 2. Spirit TKD (ITF Taekwon-Do):
- 3. Chiswell Green Livery Yard and Riding School
- 4. CrossFit Verulamium
- 5. St Albans & Potters Bar Karate (Tiska)
- 6. Harpenden Badminton Club
- 7. Everyone Active Gym and Spa Westminster Lodge
- 8. PureGym St Albans
- 7. St Albans Athletics Club
- 8. Athena Ladies Running Club

Local Groups and Communities:

- 1. Greenwood Park Community Centre
- 2. Chiswell Green Third Age Trust U3A
- 3. Grow Chiswell Green
- 4. Soroptimist St Albans and District
- 5. Verulam Explorer Scout Unit
- 6. 1st St Albans Scout Group

Classes and Extracurricular Activities:

- 1. Salsa Mish
- 2. Booster Cushion Theatre
- 3. VAKs | St Albans Tutors
- 4. Abbey Theatre

Key:

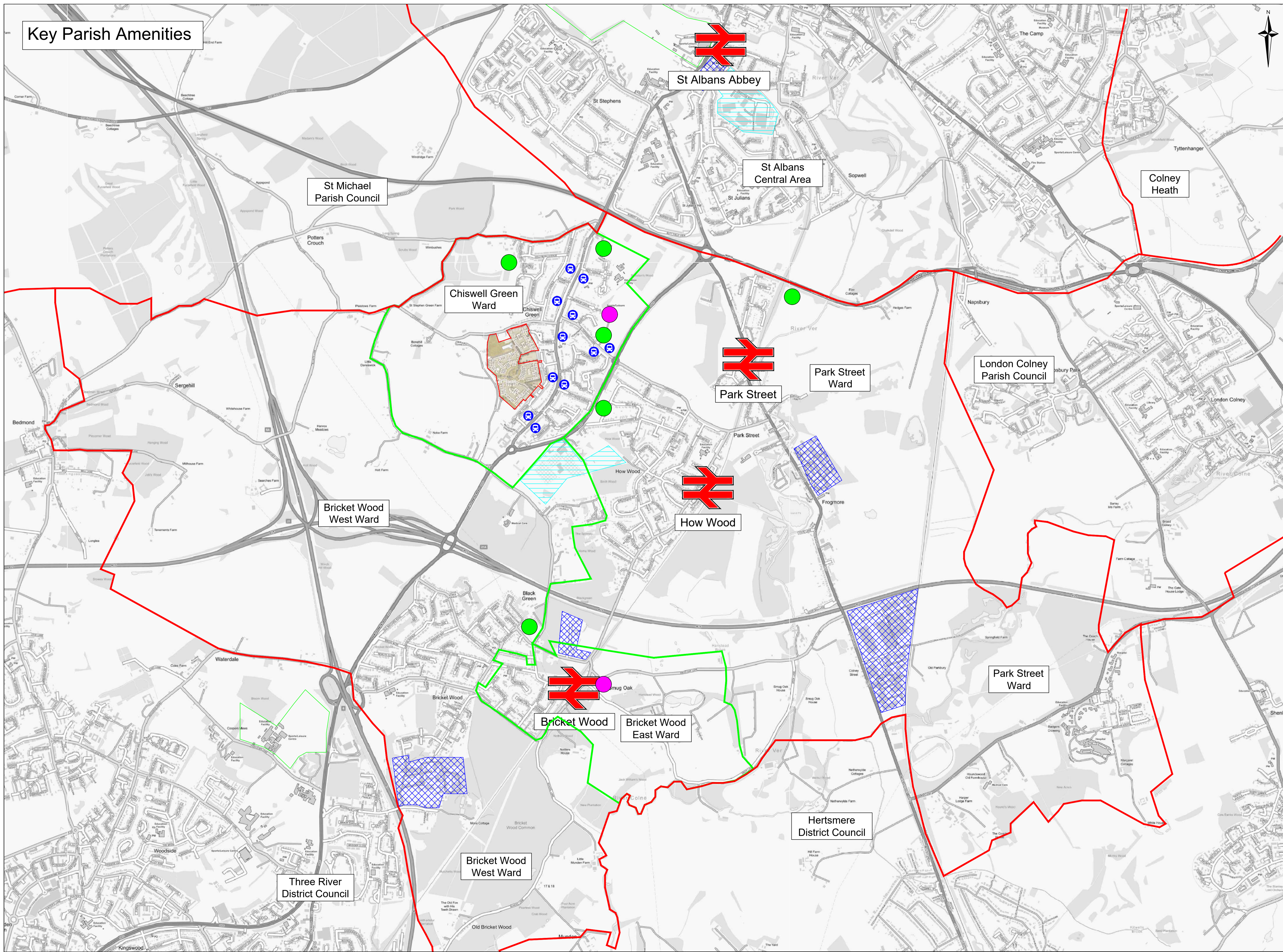
- Site Boundary
- Bus Stop
- Religious Facilities
- Sports Club and Facilities
- Local Groups and Communities
- Classes and Extracurricular Activities

NOTES

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Client:	CALA HOMES (CHILTERN) & REDINGTON CAPITAL		
Project:	LAND SOUTH OF CHISWELL GREEN LANE		
Title:	LEISURE AMENITIES		
Project Engineer:	DK	Scale:	NTS
Project Director:	AHJ	Date:	MARCH 2023
Status:			
Drawing No.	Fig AHJ_2	11	

Key Parish Amenities



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Key:

- Proposed Site Location
- Bus Stop
- Train Station
- Parish Boundary
- Ward Boundary
- Employment Area
- Retail Area
- Leisure Area
- Community Centre
- Children's Play Areas

Rev	Description	Date	CRD
<p>Glanville 3 Growlands Business Centre Boundary Way Hemel Hempstead Tel: (01442) 835999 Fax: (01442) 254894 postbox@glanvillegroup.com www.glanvillegroup.com</p>			
<p>Client: CALA HOMES (CHILTERN) & REDINGTON CAPITAL</p>			
<p>Project: LAND SOUTH OF CHISWELL GREEN LANE</p>			
<p>Title: PARISH AMENITIES</p>			
Project Engineer: DK		Scale: NTS	
Project Director: AHJ		Date: MARCH 2023	
Status:			
Drawing No. Fig_AHJ_3			Rev 11

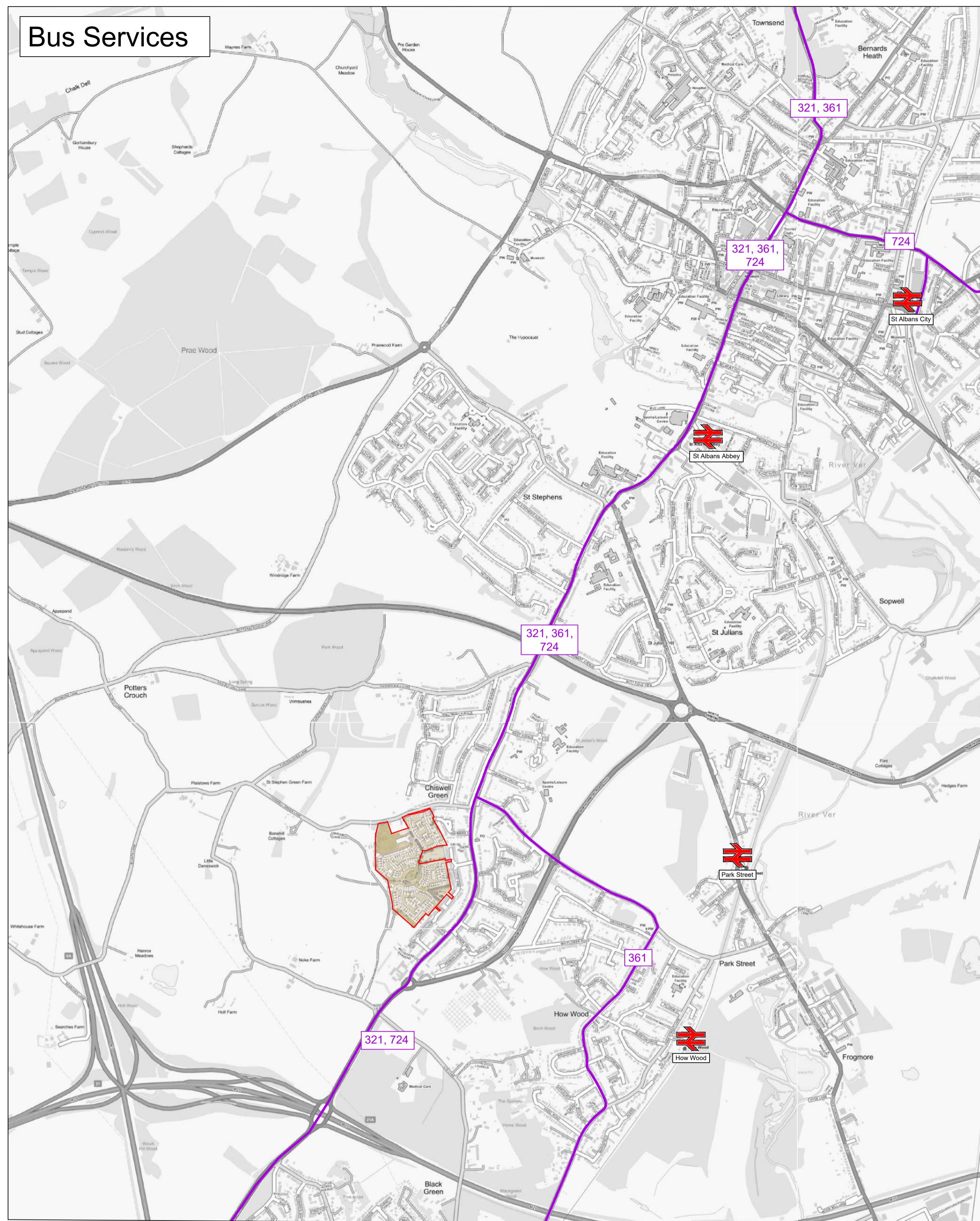
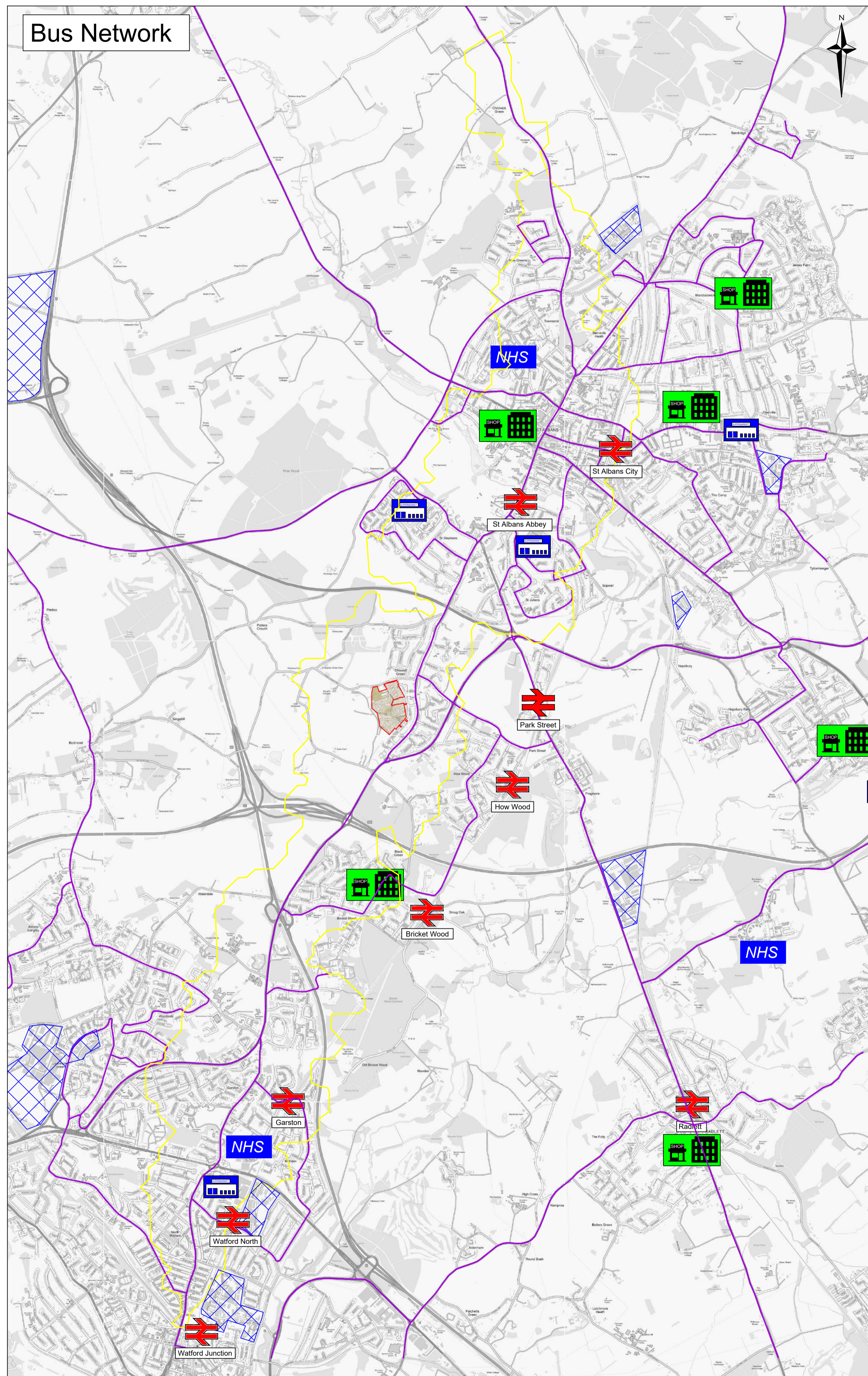


Table: Bus Services in Chiswell Green - BusStop (Three Hammers)

No. SERVICE	DESTINATION	FIRST/LAST SERVICE	FREQUENCY	
			AM PEAK	PM PEAK
321	Luton - St Albans - Watford - Rickmansworth	Luton/St Albans	05:58/23:25	3 Buses 3 Buses
		Watford/Rickmansworth	05:56/23:23	3 Buses 3 Buses
365	Garston - St Albans	St Albans	07:51/16:58	1 Bus 1 Bus
		Garston	08:51/17:32	1 Bus 1 Bus
724	* Harlow - St Albans - Watford - Heathrow Airport	Watford/Heathrow Airport	05:12/22:01**	1 Bus 1 Bus
		St Albans/Harlow	06:27/23:49***	1 Bus 1 Bus

* 724 Express Bus Service stops only on dedicated bus stops
 ** There are two night services departing at 02:38 and 04:43
 *** There are one night service departing at 01:49
 Average Bus Journey Time Isochrones (NTS 2021) takes into account the time allowed walking from the site to the bus stop and from last stop plus a 10min walk. The length of time between different bus services is limited to 10min.

Table: Average Bus Journey Time

DESTINATION	JOURNEY TIME (min)
How Wood Train Station	27
St Albans Train Station	29
Watford Junction Train Station	40
St Albans City Centre	20
Watford City Centre	43
St Albans Hospital	44
Watford General Hospital	59
Brick Knoll Business Park	48
Porters Wood Business Park	45
Hemel Hempstead Maylands	71
North Watford Business Park	34

- #### NOTES
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Key:

- Proposed Site Location
- Bus Routes
- Bus Stop
- Train Station
- Average Bus Journey Time Isochrone (39min)
- Employment Area
- Hospital
- Town Centre
- Supermarkets

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Client: CALA HOMES (CHILTERN) & REDINGTON CAPITAL

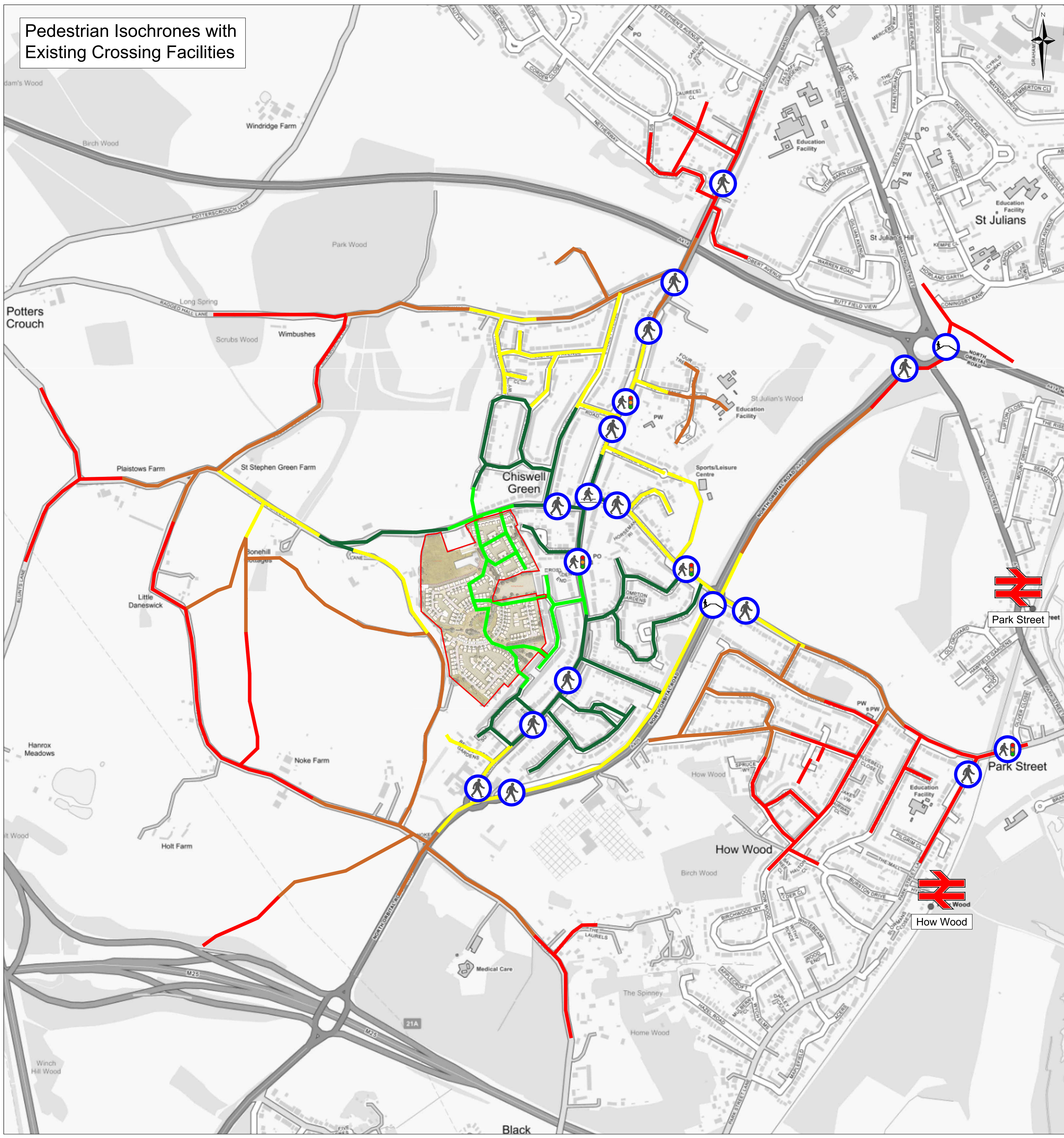
Project: LAND SOUTH OF CHISWELL GREEN LANE

Title: BUS NETWORK

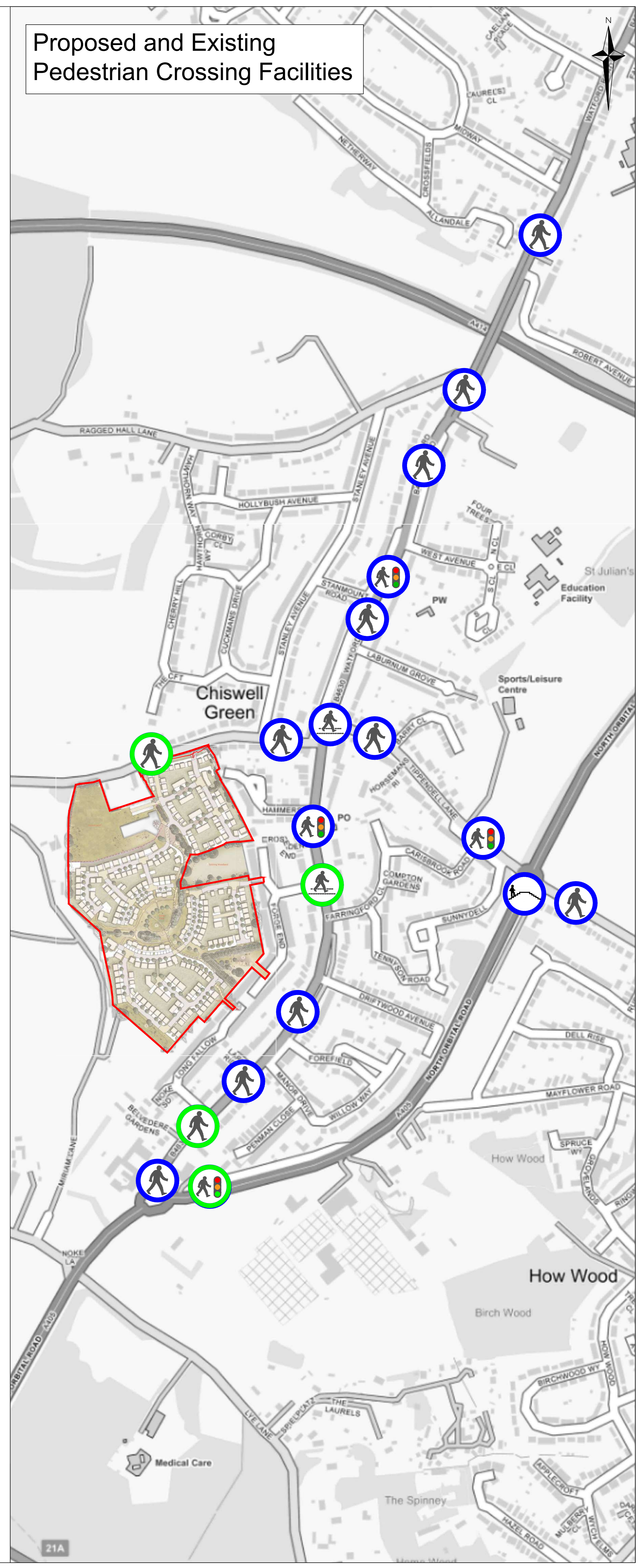
Project Engineer: DK Scale: NTS
 Project Director: AHJ Date: MARCH 2023
 Status:

Drawing No. Fig_AHJ_4 Rev 11

Pedestrian Isochrones with Existing Crossing Facilities



Proposed and Existing Pedestrian Crossing Facilities



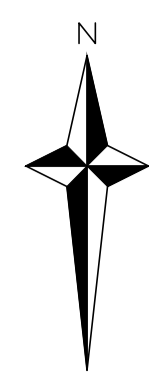
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- Key:**
- Proposed Site Location
 - Train Station
 - Signalised Pedestrian Crossing
 - Zebra Crossing
 - Uncontrolled Pedestrian Crossing
 - Pedestrian Overbridge / Subway
- Walking Distance:**
- 0-5min walk (0-400m)
 - 5-10min walk (400-800m)
 - 10-15min walk (800-1200m)
 - 15-20min walk (1200-1600m)
 - 20-25min walk (1600-2000m)
- Proposed Improvements:**
- Signalised Pedestrian Crossing
 - Zebra Crossing
 - Uncontrolled Pedestrian Crossing

11	FIRST ISSUE	20/03/2023	DNK
Rev.	Description	Date	Chkd
<p>Glanville 3 Grovelands Business Centre Boundary Way Hemel Hempstead Tel: (01442) 835959 Fax: (01442) 254894 post@glanvillegroup.com www.glanvillegroup.com</p>			
Client: CALA HOMES (CHILTERN) & REDINGTON CAPITAL			
Project: LAND SOUTH OF CHISWELL GREEN LANE			
Title: PEDESTRIAN ISOCHRONES			
Project Engineer: DK		Scale: NTS	
Project Director: AHJ		Date: MARCH 2023	
Status:			
Drawing No.	Fig AHJ_5	Rev 11	



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- KEY**
- OS BASE MAPPING
 - PROPOSED PEDESTRIAN / CYCLE IMPROVEMENTS
 - ADOPTED HIGHWAY

11	FIRST ISSUE	20/03/2023	DK
Rev	Description	Date	CHK

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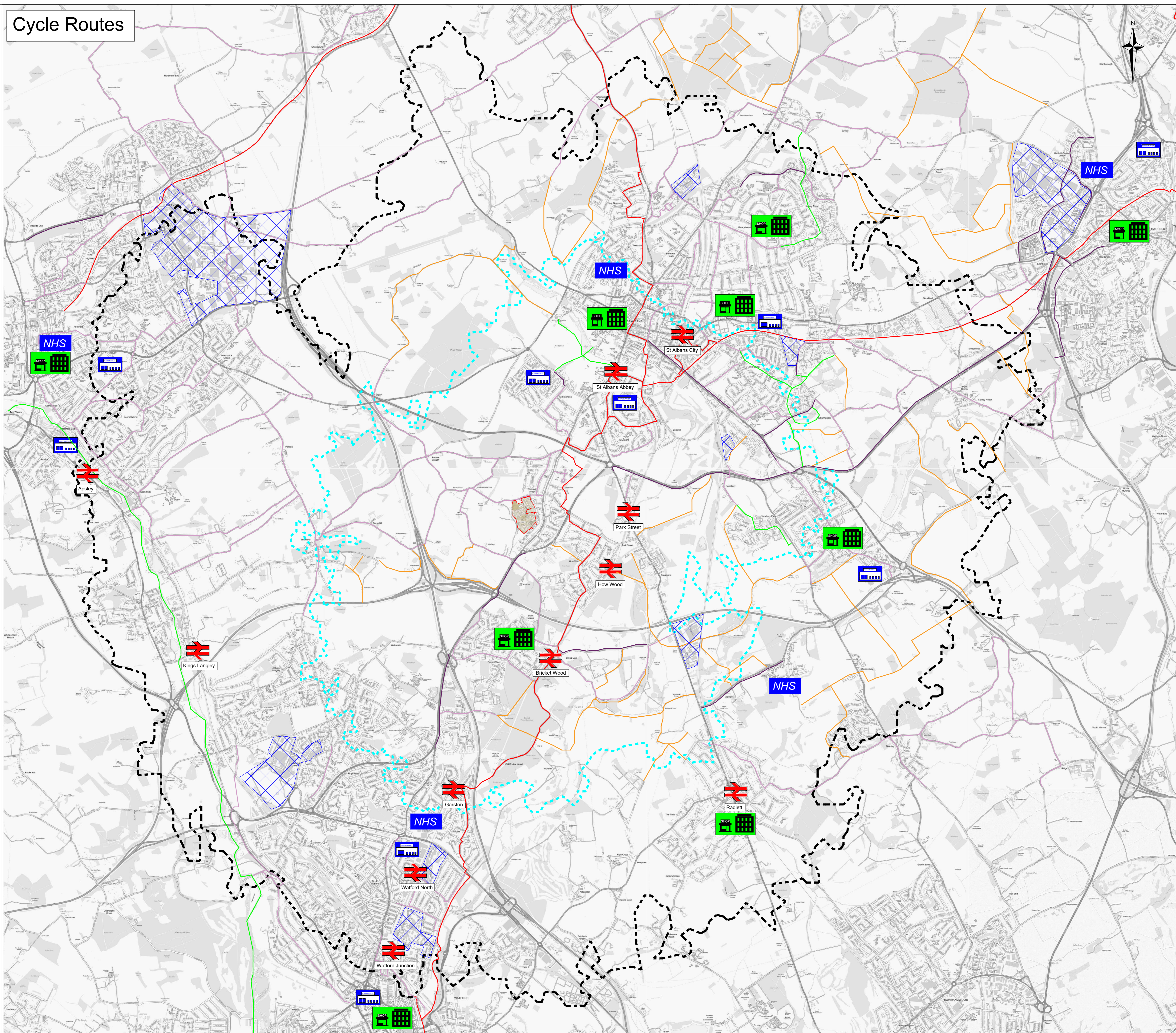
Client: CALA HOMES (CHILTERN) & REDINGTON CAPITAL

Project: LAND SOUTH OF CHISWELL GREEN LANE

Title: CHISWELL GREEN CORRIDOR ACTIVE TRAVEL IMPROVEMENTS

Project Engineer: DK Scale: 1:1000 @A0
 Project Director: JB Date: MARCH 2023
 Status: INFORMATION

Cycle Routes



- NOTES**
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- Key:**
- Proposed Site Location
 - Indicative Cycle Isochrone (5km/20min)
 - Indicative Cycle Isochrone (10km/40min)
 - Train Station
 - Employment Area
 - Hospital
 - Town Centre
 - Supermarkets
- Cycling routes:**
- National Cycle Routes
 - Shared with Pedestrians
 - Traffic Free Route
 - Bridleway/ Track / Other
 - Routes Suggested by Local Cyclists

Rev	Description	Date	Chkd

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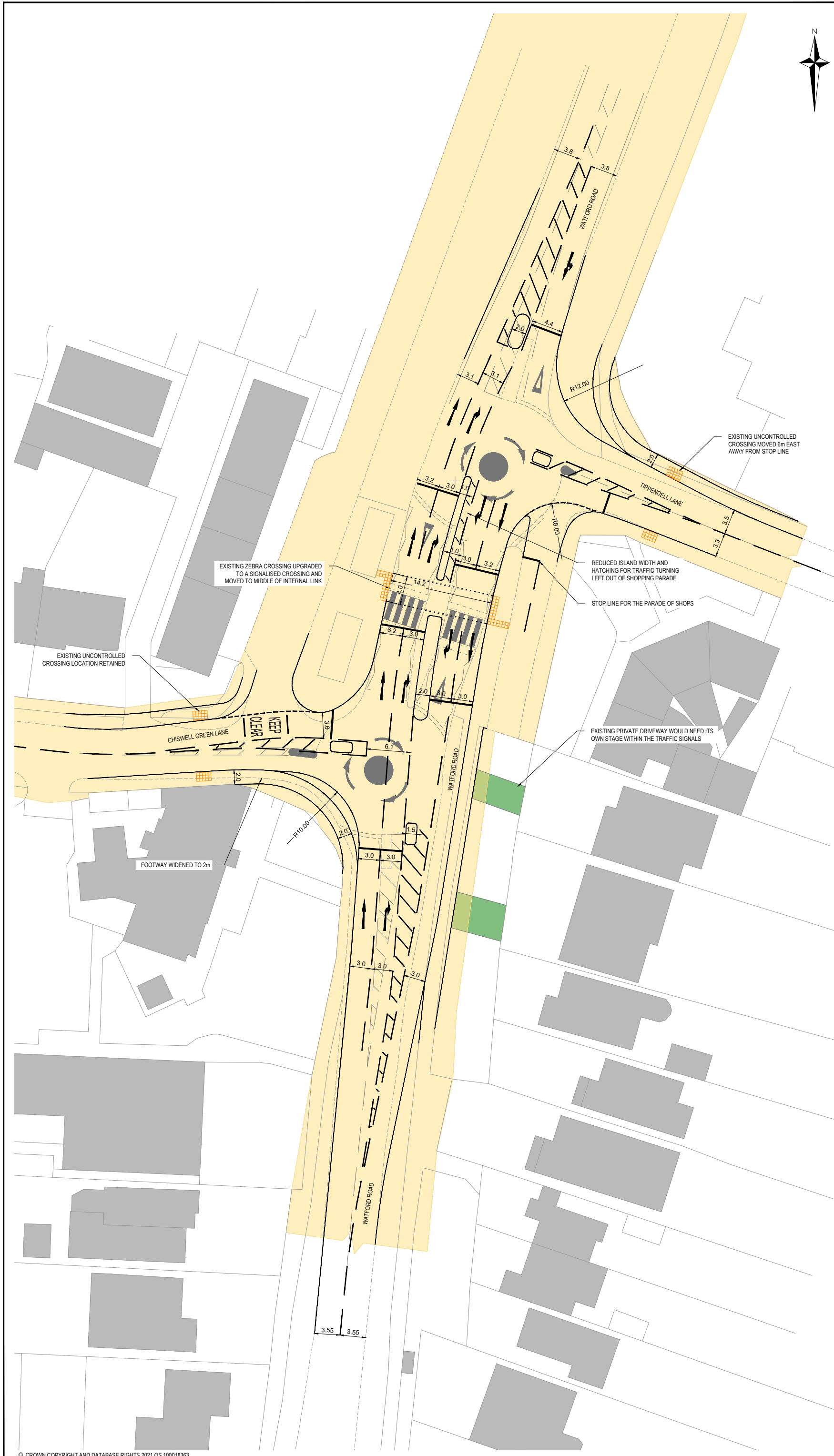
Client: CALA HOMES (CHILTERN) & REDINGTON CAPITAL

Project: LAND SOUTH OF CHISWELL GREEN LANE

Title: CYCLE ISOCHRONES

Project Engineer: DK Scale: NTS
 Project Director: AHJ Date: MARCH 2023
 Status:

Drawing No. Fig AHJ_7 Rev 11



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 - THE JUNCTION ARRANGEMENT IS BASED ON THE OS BASE MAPPING AND WILL NEED TO BE CHECKED AGAINST A TOPOGRAPHICAL SURVEY.
 - A SWEEP PATH ASSESSMENT WILL NEED TO BE UNDERTAKEN TO CONFIRM THE JUNCTION LAYOUT.

KEY

- OS BASE MAPPING
- ADOPTED HIGHWAY
- PROPOSED JUNCTION
- EXISTING PRIVATE DRIVEWAYS
- TACTILE PAVING

EXISTING ZEBRA CROSSING UPGRADED TO A SIGNALISED CROSSING AND MOVED TO MIDDLE OF INTERNAL LINK

EXISTING UNCONTROLLED CROSSING LOCATION RETAINED

FOOTWAY WIDENED TO 2m

REDUCED ISLAND WIDTH AND HATCHING FOR TRAFFIC TURNING LEFT OUT OF SHOPPING PARADE

STOP LINE FOR THE PARADE OF SHOPS

EXISTING PRIVATE DRIVEWAY WOULD NEED ITS OWN STAGE WITHIN THE TRAFFIC SIGNALS

EXISTING UNCONTROLLED CROSSING MOVED 6m EAST AWAY FROM STOP LINE

FOR INFORMATION ONLY

11	FIRST ISSUE	25/11/2021	DK	JB
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Client: CALA HOMES (CHILTERN) & REDLINGTON CAPITAL

Project: LAND WEST OF CHISWELL GREEN

Title: POTENTIAL WATFORD ROAD / CHISWELL GREEN LANE / TIPPEDELL LANE - SIGNALISED LAYOUT OPTION 1

Project Engineer: DK Scale: 1:500 @ A3
 Project Director: JB Date: NOVEMBER 2021
 Status: INFORMATION



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