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1 INTRODUCTION

1.1 THaT Consultancy has been appointed by Keep Chiswell Green to review the highway and transport aspects of two outline planning applications for development on land at Chiswell Green Lane to the west of the built-up area of Chiswell Green.

1.2 The two planning applications are:

- Land to the south of Chiswell Green Lane, St Albans (LPA ref: 5/2022/0927)

Outline planning application (all matters reserved except access) for the construction of up to 391 dwellings, a primary school and associated infrastructure.

- St Stephens Green Farm, Chiswell Green Lane, St Albans
(LPA ref: 5/2021/3194)

Outline planning application (all matters reserved except access) for up to 330 discounted affordable homes

1.3 For the purposes of determining these planning applications St Albans City and District Council is the local planning authority (LPA) and Hertfordshire County Council is the local highway authority (LHA). National Highways is the highway authority for the Strategic Road Network (SRN).

1.4 Our review has been undertaken on the basis of the information available in respect of each planning application on the LPA's planning portal as of early October 2022. We have inspected the highway and transport network in the vicinity of the two sites.

1.5 This Transport Note should be read in conjunction with the Planning Statements prepared by Keep Chiswell Green and Jed Griffiths MA DipTP FRTPI.

2 THE HIGHWAY & TRANSPORT FEATURES OF THE TWO PLANNING APPLICATIONS

Preamble

- 2.1 The highway and transport features of the two planning applications have evolved following their submission to the LPA. The changes were made primarily in response to feedback from the LHA. In this section of the report we summarise the main highway and transport aspects of each application as we understand them to be at the beginning of October 2022.

St Stephens Green Farm (“the Polo Field”)

Location

- 2.2 The site is located to the north of Chiswell Green Lane in open countryside to the west of the built-up area of Chiswell Green.

Proposed development

- 2.3 It is proposed to construct “up to 330 discounted affordable homes for key workers”.

Proposed access arrangements

- 2.4 Access to the site is proposed by way of a simple priority junction onto Chiswell Green Lane. The proposed new access is located on the derestricted section of Chiswell Green Lane to the west of the built-up section of Chiswell Green Lane which is subject to a 30 mph speed limit. It is proposed to extend the existing 30 mph speed limit westwards to encompass the proposed new access.
- 2.5 A separate emergency access is proposed from The Croft. This can be used by pedestrians and cyclists.

Off-site highway works

- 2.6 It is proposed to provide a 3.0 m wide shared pedestrian/cycle way from the site access running along the northern side of Chiswell Green Lane up to the double mini roundabout junction with Watford Road.
- 2.7 The carriageway width of Chiswell Green Lane will be reduced to 5.5 m. A carriageway narrowing to 3.5 m will be created immediately to the east of the proposed site access. This will enforce one way working with priority given to westbound traffic.

- 2.8 A raised junction table will be provided at the Chiswell Green Lane/Stanley Avenue simple priority junction to give priority for pedestrians and cyclists over motorists and to discourage “rat running” via Stanley Avenue in order to avoid the double mini roundabout.
- 2.9 Facilities for pedestrians and cyclists at the double mini roundabout and along Watford Road in the vicinity of the junction will be improved.
- 2.10 The creation of the 3 m wide shared pedestrian/cycleway whilst maintaining a carriageway wide enough to enable two vehicles to pass requires using the full width of the adopted highway. At present informal car parking takes place on the south side of Chiswell Green Lane in front of the properties on the north side of Chiswell Green Lane at the westernmost extent of the existing built-up area.
- 2.11 This parking area would be lost if the applicants highway proposals were to be built. The applicant now proposes to provide 10 car parking spaces for local residents in the proposed memorial area car park. This proposed car park is located within the application site.

Other mitigation measures

- 2.12 The applicant will:
- make a financial contribution of approximately £195,000 per year for 5 years to improve bus route 321.
 - provide the first occupiers of each property with an E-bike.
 - provide the first occupiers with a free monthly bus pass
- 2.13 A residential travel plan will be implemented.

Informative

- 2.14 It should be noted that there does not appear to be any requirement by either the LHA or the LPA for this development to fund, or contribute towards, the funding of the LHA’s “Chiswell Green corridor active travel improvements”. Funding of this work is however a requirement of the CALA application.

Highway consultees

- 2.15 National Highways submitted two holding consultation responses requiring the applicant to undertake an assessment of the impact of the proposed development on the strategic road network (SRN) i.e M25 Junction 21A and the Park Street Roundabout.
- 2.16 Shortly thereafter National Highways “were provided information for another neighbouring application which presented the existing queueing and general traffic conditions on the M25”. National Highways also contacted the LHA which is responsible for 4 of the 5 arms at the Park Street roundabout.
- 2.17 As a result of these discussions National Highways issued a “no objection” consultation response.
- 2.18 The LHA issued 2 formal consultation responses and a “highways note” relating to both the St Stephens Green farm application and the Cala application.
- 2.19 The LHA initially recommended that planning permission be refused because the application did not comply with the LHA’s policies relating to sustainable development. Following the submission by the applicant of a Transport Assessment Addendum which provided additional information, and supporting measures, to address the LHA’s initial concerns the LHA withdrew its previous recommendation for refusal. The LHA noted that the applicant’s “supporting infrastructure and financial contributions” would need to be covered in detail in a s106 agreement and said that if the LPA were minded to grant permission then the LHA would provide a series of planning conditions.

Land to the south of Chiswell Green Lane (“the CALA application”)

Location

- 2.20 The site is located to the south of Chiswell Green Lane in open countryside to the west of the built-up area of Chiswell Green.

Proposed development

- 2.21 It is proposed to provide up to 391 dwellings and a new Primary School with a capacity for 420 pupils.

- 2.22 The site is to be developed as two separate parcels of land with no internal vehicular access between the two parcels. The northern parcel will provide for 215 dwellings and the primary school site. The southern site will provide for the remaining 176 dwellings.

Proposed access arrangements

- 2.23 It is proposed to provide two simple priority accesses along the site frontage to Chiswell Green Lane. The westernmost access will serve the school and the eastern access the residential development of 215 dwellings on the northern parcel of land. 10 recessed car parking bays will be provided on the south side of Chiswell Green Lane between the two proposed new accesses in order to replace the existing car parking area that will be lost.
- 2.24 Vehicular access to the southern parcel of land will be by way of a new simple priority junction on the northern arm of Forge End which is a residential cul-de-sac at present. Two other separate pedestrian/cycle accesses will be provided. One will be on the southern arm of Forge End and the other on Long Fallow to the south

Off-site highway works

- 2.25 We understand that following submission of the planning application the LHA entered into discussions with the applicant which led to the submission of a Transport Assessment Addendum and a commitment by the applicant to undertake the same off-site highway works to Chiswell Green Lane as proposed as part of the Polo Field application (see above) i.e. the provision of a 3 m wide shared pedestrian/cycle route along the northern side of Chiswell Green Lane and pedestrian/cycle improvement works at, and in the vicinity of, the double mini roundabout on Watford Road.
- 2.26 The applicant has also agreed to implement the LHA's cycle improvement proposals along Watford Road to the south of Chiswell Green Lane (i.e. Package 35-Chiswell Green Corridor Active Travel Improvements). We understand that the developer is seeking to deliver these works via S278 works.
- 2.27 The overarching aim of Package 35 is to improve connectivity between Chiswell Green, Park Street and St Albans and reduce through traffic on the Watford Road corridor.

- 2.28 The precise contribution to be made by CALA's application will depend upon whether or not the St Stephens Green farm application (see above) is approved because that applicant also proposes to undertake the works to Chiswell Green Lane and make a financial contribution towards the cost of improving the frequency of bus services on Watford Road.

Other mitigation measures

- 2.29 The applicant will make a financial contribution of approximately £175,000 per year for 5 years to improve existing bus routes operating on Watford Road.
- 2.30 A residential travel plan will be implemented.
- 2.31 A School travel plan will also be implemented.

Highway consultees

- 2.32 National Highways submitted two holding consultation responses requiring the applicant to undertake an assessment of the impact of the proposed development on the strategic road network (SRN).
- 2.33 In a report entitled "Response to National Highways" dated 10 August 2022 the applicant provided the detailed information required by National Highways. In September 2022 National Highways issued a "no objection" consultation response.
- 2.34 The LHA has issued a "no objection subject to conditions and S106 agreement" type consultation response. The S106 will encompass the residential school travel plans, funding for bus route 321 and providing bus pass provision for new residents. The conditions cover the matters outlined above.

3 TRANSPORT POLICY AND GUIDANCE

Preamble

- 3.1 In this section of the Transport Note we summarise the main statements of local and national transport policy and guidance most pertinent to our review of the two planning applications.

The National Planning Policy Framework (July 2021) (NPPF)

- 3.2 Chapter 9 of the NPPF is entitled “Promoting sustainable development”.

- 3.3 Paragraph 104 states:

“Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.”*

- 3.4 Paragraph 105 goes on to explain what the planning system should do to achieve these objectives. It states:

“The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport

solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.” [Our emphasis]

3.5 Paragraphs 110 – 113 explain how development proposals should be considered in order to achieve sustainable development. Paragraphs 110 – 112 state:

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

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

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

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

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

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

112. Within this context, applications for development should:

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

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

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

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

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

National Design Guide

3.6 The National Design Guide forms part of the government’s collection of planning practice guidance. Paragraph 130 of the NPPF states that permission should be refused for development of poor design. The National Design Guide explains how we recognise well-designed places by outlining and illustrating the Government’s priorities in the form of 10 characteristics.

3.7 Paragraph 63 explains that:

“Well-designed places have:

- compact forms of development that are walkable, contributing positively to well-being and place making;
- accessible local public transport, services and facilities, to ensure sustainable development;
- recognisable streets and other spaces with the edges defined by buildings, making it easy for anyone to find their way around, and promoting safety and accessibility; and
- memorable features or groupings of buildings, spaces, uses of activities that create a sense of place, promoting inclusion and cohesion.”

Hertfordshire's Local Transport Plan 2018 – 2031

3.8 Policy 1 of LTP 4 sets out the LHA's "transport user hierarchy". This policy states:

Policy 1: Transport User Hierarchy

To support the creation of built environments that encourage greater and safer use of sustainable transport modes, the county council will in the design of any scheme and development of any transport strategy consider in the following order:

- *Opportunities to reduce travel demand and the need to travel*
- *Vulnerable road user needs (such as pedestrians and cyclists)*
- *Passenger transport user needs*
- *Powered two wheeler (mopeds and motorbikes) user needs*
- *Other motor vehicle user needs"*

3.9 This policy has been used by the applicants to justify promoting pedestrian, cycle and bus improvements and to effectively ignore the significant traffic impacts that the proposed developments will cause.

3.10 When we read the explanatory text that accompanies this Policy we see that the objective is to promote sustainable transport modes, but it goes on to explain that:

"The needs of the motor vehicle are not ignored, but the policy ensures they do not take precedence over considerations higher up the hierarchy."

3.11 The introduction to LTP 4 sets the context by stating:

"Whilst highways intervention will still be required, a blended strategic approach combining improvements in walking, cycling, passenger transport and highways provision is seen as optimum, accompanied by efforts to achieve travel behaviour change."

3.12 Policy 5 Development Management states:

Policy 5: Development Management

"The county council will to work with development promoters and the district and borough councils to:

- a) Ensure the location and design of proposals reflect the LTP Transport User Hierarchy and encourage movement by sustainable transport modes and reduced travel demand.*
- b) Ensure access arrangements are safe, suitable for all people, built to an adequate standard and adhere to the county council's Highway Design Standards.*
- c) Consider the adoption of access roads and internal road layouts where they comply with the appropriate adoption requirements and will offer demonstrable utility to the wider public. Where internal roads are not adopted the county council will expect suitable private management arrangements to be in place.*
- d) Secure developer mitigation measures to limit the impacts of development on the transport network, and resist development where the residual cumulative impact of development is considered to be severe.*
- e) Require a travel plan for developments according to the requirements of 'Hertfordshire's Travel Plan Guidance'.*
- f) Only consider new accesses onto primary and main distributor roads where special circumstances can be demonstrated in favour of the proposals.*
- g) Resist development that would either severely affect the rural or residential character of a road or other right of way, or which would severely affect safety on rural roads, local roads and rights of way especially for vulnerable road users. This should include other routes which are important for sustainable transport or leisure.*
- h) Ensure that any new parking provision in new developments provides facilities for electric charging of vehicles, as well as shared mobility solutions such as car clubs and thought should be made for autonomous vehicles in the future."*

St Albans District local plan review 1994 – Saved Policies (July 2020)

Policy 34: Highways Considerations in Development Control

3.13 Development likely to generate a significant amount of traffic, which involves the creation or improvement of an access onto the public highway, will not normally be permitted unless acceptable in terms of the following highway considerations:

- road safety – visibility, turning radii, provision for pedestrians and cyclists, disabled and other disadvantaged

- environmental impact of traffic, especially in residential areas
- road capacity, including present and predicted future year assessments
- road hierarchy
- car parking provision
- St Albans city centre restraint
- local rural roads – risk of accidents, width/alignment, adverse impact on local environment

Policy 35: Highway Improvements in Association with Development

- 3.14 In order to mitigate the highway effects of development proposals the District Council, in conjunction with the County Council where appropriate, will seek highway improvements or contributions to highway improvements and/or improvements to the public transport system from developers whose proposals would otherwise result in detrimental highway conditions.

Policy 36 A: Location of New Development in Relation to Public Transport Network

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

4 COMMENTARY ON HIGHWAY AND TRANSPORT ISSUES

Post application submissions

- 4.1 Both planning applications were accompanied by detailed Transport Assessments and Travel Plans. Following submission of the respective planning applications and consequent further engagement with the LHA and National Highways both applicants submitted further information, including Transport Assessment Addenda, and made further commitments to enhance pedestrian and cycle facilities in the area.

Cumulative impact

- 4.2 The two planning applications have been prepared and their potential transport impacts are now being evaluated in complete isolation of one another. Whilst we can understand that neither site can be considered a committed development to be taken into consideration in the other assessment the fact that there are two major developments impacting on exactly the same local highway network and progressing through the planning system at the same time leads us to conclude that it would be prudent for the cumulative impact of both schemes to be considered. This work could be presented as a “sensitivity test” to inform the LPA and LHA and enable them to make an informed decision as to whether or not these applications are acceptable.
- 4.3 The argument for requiring a cumulative impact assessment is particularly strong in this case because the local highway network is operating at close to capacity now and will be over capacity by 2026 even without any additional development generated traffic. Once the traffic forecast to be generated by either of these two developments traffic is taken into account the highway network will be operating well over capacity and delays and queues will increase dramatically. The situation will be even worse if both developments were to be approved.
- 4.4 Our review of the two planning applications leads to conclude that each application is unacceptable on its own because of the serious impact it will have on the operation of the local highway network, and particularly the double mini roundabout on Watford Road.
- 4.5 The cumulative impact would of course be considered during the transport modelling undertaken when preparing the new Local Plan.

- 4.6 Recognising the potential difficulty of having two planning applications affecting the same section of the highway network the LHA has required a degree of cooperation between the two applicants. In particular we understand that an agreement has been reached whereby the proposed pedestrian/cycle infrastructure along Chiswell Green Lane and in the vicinity of the double roundabout will be common to both applications and will be delivered either jointly, or individually, depending upon whether one or both planning applications are approved.

Watford Road/Tippendell Road/Chiswell Green Lane double mini roundabout

- 4.7 Whilst the computer models of this double mini roundabout junction differ slightly they both reached the same fundamental conclusion. This being that the double mini roundabout junction between Watford Road/Tippendell Road/Chiswell Green Lane is operating at, or close to, capacity using 2016 observed flows and will be over capacity in 2026/7 without any additional development flows. Once development generated traffic is taken into account from either one, or both, of the proposed developments then the situation deteriorates quickly, and queues and delays increase dramatically.
- 4.8 The accurate modelling of double mini roundabouts is difficult. The Arcady models produced by both applicants contain numerous “data errors and warnings”.
- 4.9 We have reproduced below the “data errors and warnings” section of the output from the Arcady assessment presented in Appendix 13 of the TA submitted in support of the Polo Field application. This relates to the existing layout in the 2026 AM peak.

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	1 - Southern	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details. [Arms 1 and 3 have 91% of the total flow for the roundabout for one or more time segments]
Warning	Pedestrian Crossing	1 - Southern - 3 - Watford Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Linked Roundabout	1 - Southern - 3 - Watford Road	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	2 - Northern - 3 - Watford Road	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked roundabouts	2 - Northern	U-turns on linked arms may cause sporadic locking up of junctions and/or unreliable results.

- 4.10 The equivalent output from the TA submitted in support of the Cala development is reproduced below. This relates to the equivalent model, in this case existing layout 2027 in the AM peak without development.

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 3a - Southern Jct	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and B have 90% of the total flow for the roundabout for one or more time segments]
Warning	Mini-roundabout	Junction 3b - Northern Jct	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and B have 83% of the total flow for the roundabout for one or more time segments]
Warning	Linked Roundabout	Junction 3a - Southern Jct - Watford Road (North)	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 3b - Northern Jct - Watford Road (South)	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

- 4.11 The link road between the two roundabouts is only approximately 25 m long. This length of link road is approximately four queueing vehicles long. At present there is a zebra crossing on the link road. This already reduces the number of vehicles that can queue on the link road to 3. Usually there are 2 vehicles queueing on the north side of the crossing and 1 on the south side. Queueing vehicles frequently queue back over the roundabouts preventing other vehicles from entering the roundabouts. The proposal to provide a Tiger crossing (a zebra crossing with a parallel crossing for cyclists) on the link road will reduce the number of vehicles that could queue on the link road even further. Once the queues on the link road extend back into the upstream mini roundabout then that junction will be blocked. A gridlock situation will be created. Therefore whilst providing a Tiger crossing will help cyclists (which is a highway benefit) the cost of doing so will be to reduce the capacity of the roundabouts leading to increased queuing and congestion which is a serious highway disbenefit.
- 4.12 The Cala development proposals introduce an additional 343 vehicles into the Watford Road/Chiswell Green Lane mini roundabout in the AM peak hour. The Polo Field development would introduce another 217 vehicles into this junction. Using the observed turning count data collected on 9.9.21 and presented in Figure 1 of the Polo Field TA we see that the total number of vehicles passing through the southern mini-roundabout in the AM peak hour was 1377 vehicles. The CALA development would therefore result in traffic movements through the mini-roundabout increasing by 25%. The Polo Field development would result in a 16% increase. If both developments were to proceed then flows through this junction would increase by 41%. Of course, the combined traffic impact of both developments has not been considered by either applicant.

- 4.13 Given the problems with the junction modelling and a question mark as to whether it is appropriate to base such a critical assessment on observed traffic flows dating back to 2016 as CALA have done we do not think that the junction modelling submitted by either applicant can be relied upon to accurately forecast traffic conditions at the double mini roundabout.
- 4.14 All that we can say with confidence is that the double mini roundabout junction will be operating significantly over capacity with extensive queueing.
- 4.15 It is clear that improving the Watford Road/Tippendell Road/Chiswell Green Lane junction will be difficult. We note that the LHA has previously said that there is little or no scope to enhance the performance of the double mini roundabout junctions through increasing the entry width and effective flare length of several of the approach arms because of the constrained highway boundary. We cannot reconcile this statement with the drawings showing the extent of the highway boundary along this section of Watford Road which show the proposed improvements to pedestrian/cycle infrastructure around the double mini roundabout junction. The drawings submitted by both applicants clearly show that there is extensive highways land available around the roundabouts which could be used to provide junction improvements.
- 4.16 We are concerned that neither applicant nor the LHA has considered it necessary to investigate what improvements could be made at this junction. Instead the focus has been on the provision of improved pedestrian and cycle facilities on Watford Road and funding the increased frequency of buses along Watford Road. Whilst we can understand the need to provide improved facilities for pedestrians and cyclists in order to promote sustainable modes of travel, and the benefits of providing a more frequent bus service along Watford Road, the reality is that the car will remain the primary mode of travel for most people, most of the time in this area.
- 4.17 Local and national transport policies do not prohibit making junction improvements. As stated in the LTP 4 above a balance has to be struck. Whilst making junction improvements may no longer be the first option to consider it is still an important way of creating a safe, efficient, highway network that meets the needs of all users.

- 4.18 In our opinion, this is a case where junction improvements are necessary because the provision of improved pedestrian and cycle facilities at the junction and on Watford Road and funding additional bus services for 5 years, will not address the significant highway capacity issues at the Watford Road/Tippendell Road/Chiswell Green Lane junction. Indeed as the queues building up at this junction it is likely that not only the carriageway but also the pedestrian and cycle facilities, particularly the Tiger crossing, will become gridlocked as a result of queueing vehicles, and vehicles trying to divert around the junction via the service road.
- 4.19 The forecast operation of the double roundabout junction and the impact that the proposed development will have either individually or collectively is unacceptable. We therefore strongly advise that mitigation measures at this junction are considered in conjunction with both planning applications that these are based upon up-to-date traffic surveys.

Chiswell Green Lane

- 4.20 As explained above both applicants now propose to provide a 3.0 m wide shared pedestrian/cycle route along the northern side of Chiswell Green Lane between Watford Road and the proposed site access(es). As a result of this feature the carriageway width will be reduced to 5.5 m.
- 4.21 In the Cala proposals the existing on street car parking area at the western end of the current built-up area will be retained in approximately its current position albeit with a different design. We consider this arrangement acceptable.
- 4.22 The Polo Field proposal is to relocate the residents car parking into the Polo Field development and provide allocated car parking spaces in the Memorial car park. This arrangement will not be convenient, and we would expect it to be unattractive to residents given that most residents want to park where they can see their vehicle at all times.
- 4.23 The proposed access to the Polo Field site is located opposite the terrace of properties on the south side of Chiswell Green Lane and aligned perpendicular to Chiswell Green Road. The car parking area for these properties is located to the west of the dwellings. Residents must walk along Chiswell Green Lane for a distance of approximately 50m to use the car parking area because there is no direct access to the parking area from

the properties. There is no footway along this section of Chiswell Green Lane. Walking along a narrow, unlit, rural road is inherently dangerous and undesirable. If the Polo Field development were to proceed as currently proposed then residents will have to walk, in the carriageway, across the junction. Not only will the number of vehicles these residents encounter as they walk between their houses and cars increase dramatically as a result of the new housing development, but drivers will be turning into and out of the access and either slowing down on the approach to the proposed pinch point immediately to the east of the proposed access or accelerating away from it. The attention of drivers will be focused on the manoeuvres they are about to undertake and looking for other vehicles, they are unlikely to expect to encounter pedestrians walking in the carriageway.

- 4.24 We therefore strongly suggest that in conjunction with either of the proposed developments a footway be provided along the south side of Chiswell Green Lane between the cottages and their parking area. The drawings submitted with both applications show there to be scope to do this within the existing highway boundaries.
- 4.25 The peak hour traffic flow on Chiswell Green Lane between Watford Road and the proposed site access(es) is currently 268 vehicles per hour in the AM peak hour. This will increase by 300 vph as a result of the Cala development, and 217 as a result of the Polo Field application. If both developments were to be approved then the increase would be 517 vph i.e. nearly a threefold increase
- 4.26 These changes in flow are likely to change the character of Chiswell Green Lane from a “street” where the “place” function dominates to a “road” where the “movement” function dominates.
- 4.27 Historically a figure of 300 VPH was considered the threshold below which a road could be considered to have the environmental characteristics commensurate with a primarily residential area. Once flows exceeded 300 VPH this was no longer the case.
- 4.28 As a result of either, or both, applications the character of Chiswell Green Lane is likely to change as a result of the significant increases in traffic flow that will occur.
- 4.29 As part of the proposals for Chiswell Green Lane it is proposed to provide a raised junction table at the Chiswell Green Lane/Stanley Avenue junction. Milestone Transport Planning who formulated these proposals on behalf of the Polo Field developer has argued that the raised table will “discourage future households from

‘rat running’ via Stanley Avenue in attempting to gain access to the B4630 Watford Road through bypassing the double mini roundabout junctions.”

- 4.30 We disagree with this assertion and can see no reason why turning at a raised junction table will be significantly more inconvenient than driving straight on.
- 4.31 It is clear from our review of both applicants’ submissions that traffic queues at the double mini roundabout will worsen significantly if either, or both, developments are approved. We therefore think that the likelihood of ‘rat running’ via Stanley Avenue will increase significantly irrespective of any traffic calming/management measures.
- 4.32 The provision of a raised table in this location will have the effect of displacing the existing on street car parking which takes place on this section of highway. This will inevitably inconvenience legitimate highway users.

The proposed 3 m wide shared pedestrian/cycle way

- 4.33 Chiswell Green Lane will be the sole point of vehicular access to the Polo Field development and the northern part of the Cala development (i.e. the primary school and 215 dwellings). The proposed 3.0 m wide shared pedestrian and cycle way will be the main point of access to the sites for those travelling on foot or bike.
- 4.34 There is no equivalent provision for pedestrians, or cyclists on the south side of Chiswell Green Lane.
- 4.35 Table 6.3 of LTN 1/20 “Cycle Infrastructure Design” says that 3.0 m is the minimum recommended width for a shared use route.
- 4.36 Providing a shared pedestrian/cycle facility on just one side of the road is unlikely to encourage the uptake of walking and cycling in preference to the private car.
- 4.37 We note that the on-site pedestrian and cycle provision shown on the illustrated site layouts that accompany both planning applications are of a higher standard than is proposed along Chiswell Green Lane in the vicinity of the proposed site accesses.
- 4.38 The primary school with 420 pupils will generate high levels of pedestrian activity at the start and end of the school day. A single 3.0 m wide shared surface is a totally inadequate level of provision to provide a safe route for young children and parents/guardians, many with pushchairs and prams. Introducing cyclists in to this mix

as well will create a dangerous and inconvenient situation. We suspect that many parents/guardians will choose to travel to/from the school by car rather than walk.

- 4.39 It is also likely that many parents who may prefer to walk will have no choice other than to drive due to time constraints in having to get to other schools or employment.
- 4.40 We therefore do not consider that the provision of a single 3.0 m wide shared pedestrian/cycle route will be effective in achieving the modal shift away from the private car that the applicants seek.

Watford Road/Forge End Junction

- 4.41 As part of the Cala scheme access to the southern parcel of land (176 dwellings) will be by way of a new simple priority junction on the northern arm of Forge End.
- 4.42 Forge End meets Watford Road at a simple priority junction. Unlike most of the other junctions and important accesses along this section of Watford Road there is no ghost island right turn facility, nor any central hatching, to protect vehicles turning right into Forge End. A vehicle waiting to turn right into Forge End impedes the flow of southbound traffic on Watford Road. This increases the likelihood of rear end shunt type accidents occurring.
- 4.43 The Cala development will add an additional 84 turning movements into/out of Forge End in the weekday AM peak hour. Existing peak hour flows on Forge End are only 64 in the AM peak hour. The number of turning movements at the junction will therefore more than double as a result of the Cala development.
- 4.44 In order to improve safety at this junction, and to maintain a consistent standard of junctions along this stretch of highway, we consider that the applicant should provide a ghost island junction layout.
- 4.45 We are also concerned that the needs of cyclists wanting to cross Watford Road from Forge Lane (the main access to the southern CALA site), and the properties along the western side of Watford Road, to use the proposed new cycle lane on the east side of Watford Road have not been considered in detail. Is it, for example, expected that cyclists will have to travel south to cross Watford Road before going north, and vice-versa? If so then this will lead to cyclists crossing Watford Road in an ad hoc manner leading to highway safety problems.

4.46 We are also concerned that the needs of pedestrians, cyclists and drivers using Forge Lane itself have not been properly considered. There is no footway on the south side of Forge Lane between Watford Road and the internal fork. This requires pedestrians to cross at, or close to, the fork in the road. The internal fork is uncontrolled with restricted visibility and unclear priorities. We consider that the highway safety issues associated with the use of Forge Lane should be fully addressed to ensure the safety of all road users and particularly pedestrians and cyclists.

Local facilities and services

4.47 There is a limited range of services in the village, including:

- a Co-op convenience store
- pharmacy
- a public house
- bakery
- a post office

Walking

4.48 These facilities/services are generally available within the 10 minute walk (800 m radius) threshold for a “walkable” neighbourhood as defined in the National Design Guide.

4.49 Other facilities, such as education, GP, and a park are located more than an 800 m walk from each of the sites. Employment opportunities in the Chiswell Green area are very limited.

4.50 We note that instead of using the most recent figure of 800 m set out in the National Design Guide both applicants have used a figure of 2 km when establishing what facilities and services are within walking distance of their site.

4.51 We consider this approach unrealistic given the thrust of recent National planning policy to create sustainable communities where the overall need to travel is reduced

by locating housing, employment, education, retail facilities/services et cetera in close proximity to each other.

- 4.52 It is clear therefore that whilst both sites have access on foot to the range of services and facilities available in the village centre the range of services and facilities that can be accessed on foot is very limited.

Access by bus

- 4.53 The LHA's Highway Design Guide states that "... Bus stops should be located so that the maximum walking distance from any dwelling is 400 m".
- 4.54 The maximum walking distance to "less frequent" bus routes (such as the services on Watford Road) as set out in Table 4 of Buses in Urban Developments (CIHT, 2018) is 300 m.
- 4.55 The nearest bus stops to the Polo Field and are "approximately 650 and 700 m" (T A para 3.26) from a point measured midway along the site frontage to Chiswell Green Lane. We note that this is not measured from the middle of the site.
- 4.56 The closest bus stops to the Cala site (as given in paragraph 4.21 of the Cala TA) are:
420 m east of the northern site access
275 m south-east of the Forge End site access
300 m south of the Long Fallow footway/cycleway access
- 4.57 We note that these distances have not been measured from the centre of each site. Taking the measurement from the centre of the site adds a further 150 – 200 m to each of these figures.
- 4.58 It is clear therefore that neither the Polo Field site nor the Cala site has satisfactory access to the local bus routes which run along Watford Road.
- 4.59 Cala tried to overcome this constraint by suggesting that buses could route through their site by way of Chiswell Green Lane. This proposal was unacceptable to the LHA.
- 4.60 We note that in the last Census only 2% of Chiswell Green residents travelled to work by bus. This suggests that travel by bus is an unattractive option for local residents.

Cycling

- 4.61 Both applicants have assumed a maximum distance of 5 km for cyclists. This is a standard figure, and we take no issue with it.
- 4.62 However, the distance to be cycled is only one factor affecting how likely it is that someone will choose to cycle rather than using another mode of travel. A particular concern in the St Albans area is that it is hilly, and the roads are busy making them unattractive to cyclists. Therefore whilst St Albans town centre, How Wood, Bricket Wood et cetera are within the 5 km cycle catchment area many of the routes are hilly and difficult. We understand that some of the routes that appear suitable on a map are unpopular by reason of anti-social behaviour.
- 4.63 The unattractiveness of cycling for those living in Chiswell Green is clearly demonstrated by the travel to work Census 2011 data for the 2 LSOAs covering the built-up area of Chiswell Green. In each case only 1% of residents travelled to work by cycle.
- 4.64 It is clear therefore that cycling is unlikely to be a popular mode of travel for Chiswell Green residents even if cycle lanes are provided along Watford Road.

5 CONCLUSIONS AND RECOMMENDATION

5.1 We have reviewed the highways and transport aspects of the two planning applications against current policy, best practice standards and guidance. Our investigations lead us to conclude that:

- The local highway network, and particularly the double mini roundabout in the centre of the village, is operating at capacity at present. The additional traffic arising from either one, or both, of the proposed developments will lead to a significant worsening of the situation.
- Both applicants, and the LHA, have ignored the significant traffic impact and instead focussed on providing improved provision for pedestrians, cyclists and bus users in an attempt to mitigate the transport impacts of the proposed developments.
- We consider that a more balanced approach is needed that merges highway improvements (ie junction improvements) with increased provision to support sustainable modes of travel.
- We think it is unrealistic to expect sustainable transport initiatives on their own to satisfactorily overcome the major transport impacts arising from these developments in an area where the car is, and will remain, the primary mode of transport for most people, most of the time.
- We note that in the last census only 1% of residents travelled to work by cycle, only 5% used public transport and only 5% walked. Clearly sustainable modes of travel are not realistic options in this area.
- The two application sites which are located in the Green Belt beyond the boundary of the built-up area of Chiswell Green are unsustainable locations in transport terms
- The sites only have access on foot to a limited range of services and facilities. Again this is primarily because the two sites are located in open countryside beyond the urban area.

- The sites have relatively poor cycle access despite the proposed new cycle lanes to be provided along Watford Road.
- The sites have poor access to the bus network primarily because the distance residents will have to walk to their closest bus stop is excessive.
- These factors when taken together mean that there is unlikely to be a genuine choice of transport modes available to the new residents.
- If permitted then the developments would lead to the creation of car-based dormitory communities.
- The proposal to fund more frequent bus services along Watford Road for a period of 5 years is a highway benefit. Whether or not these services remain financially viable once the funding runs out is uncertain.
- The proposed developments (either individually or collectively) will exacerbate the already serious highway safety and capacity concerns on the local highway network and particularly at the Watford Road/Chiswell Green Lane/Tippendell Road double mini roundabout junction.
- The additional traffic arising from the proposed developments will change the function and character of Chiswell Green Lane from that of a “street” to a “road” with an emphasis on its traffic carrying capabilities rather than its place function.

5.2 The development proposals are therefore contrary to local and national policy that seeks to create safe, attractive sustainable communities where the overall need to travel is reduced and where residents have a genuine choice of transport modes.

5.3 The proposed development will provide highway benefits by way of the improvements to the pedestrian and cycle facilities in the village and by funding an increased bus frequency along Watford Road for 5 years.

5.4 However, the serious transport and highway issues must override any benefits arising from the provision of housing and the sustainable transport initiatives.

Recommendation

- 5.5 If the sites are to be brought forward for development then we suggest that this should be done through the Local Plan process. The transport modelling process and overall site assessment procedure will ensure that the highway and transport networks can easily and safely accommodate the proposed developments and that the transport and social infrastructure is in place to support the development.