

CD6.12

APPEAL REF: APP/B1930/W/22/3313110

Land South of Chiswell Green Lane, Chiswell Green, St Albans

(LPA ref: 5/2022/0927)

APPEAL REF: APP/B1930/W/22/3312277

Land North of Chiswell Green Lane, Chiswell Green, St Albans

(LPA ref: 5/2021/3194)

Proof of Evidence

of

David Walpole BSc(Hons) CivEng MCIHT

on behalf of

Keep Chiswell Green

March 2023

(Ver 1.1)

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1 QUALIFICATIONS AND EXPERIENCE

- 1.1 My name is David Walpole, and I am a partner at THaT Consultancy.
- 1.2 I have a Bachelor of Science degree with Honours in Civil Engineering from the University of Nottingham. I am a Member of the Chartered Institution of Highways and Transportation (CIHT).
- 1.3 I have been actively involved in providing transport and highway advice relating to the development planning process since the mid-1980s. I have advised a wide variety of clients in both the public and private sectors
- 1.4 My evidence for these Appeals has been prepared and is given in accordance with the guidance of my professional body and I confirm that the opinions expressed are my true and professional opinions.
- 1.5 I am familiar with the appeal proposals having first been instructed by Keep Chiswell Green (KCG) in October 2022 to review what are now the appeal applications.

2 SCOPE OF MY EVIDENCE

2.1 My evidence focuses on the transport and highway aspects of the appeal proposals.

2.2 I address the fundamental transport requirements of the Framework (CD 7.1), including:

- Do the appeal sites represent sustainable locations in transport terms and provide a genuine choice of transport modes? (Framework, para 105)
- Will the appeal proposals have an unacceptable impact on highway safety? (Framework, para 111)
- Will the residual cumulative impacts on the road network be severe? (Framework, para 111)

2.3 At the application stage both appellants submitted detailed transport assessments in support of their individual development schemes. As far as I am aware no attempt was, or has, been made to evaluate the cumulative transport and highway impacts should both schemes be granted permission.

2.4 Both appellants have offered sustainable transport measures (i.e. improved walking/cycling infrastructure and bus subsidies) to mitigate the significant transport and highway impacts of the proposed developments. Despite both appellants predicting serious capacity and queueing problems at the double mini roundabout in Chiswell Green neither appellant has proposed any form of off-site highway capacity improvements.

2.5 I will therefore consider whether or not the proposed mitigation measures will:

- create developments where sustainable modes of travel are the first choice for journeys; and
- effectively mitigate the significant capacity and congestion impacts that the developments are forecast to have on the transport network.

3 TRANSPORT POLICY AND GUIDANCE

Preamble

3.1 The main statements of national and local transport policy and guidance that I consider most pertinent to determining the two appeals are summarised below.

National Planning Policy Framework (July 2021) (CD 7.1)

3.2 Paragraph 105:

- actively manage patterns of growth to support sustainable development
- focus significant development at locations which are or can be made sustainable
- offer a genuine choice of transport modes

3.3 Paragraph 110:

- appropriate opportunities to promote sustainable transport modes have been taken up
- safe and suitable access to the site can be achieved for all users
- the proposed development reflects current national guidance, including the National Design Guide and the National Model Design Code
- 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

3.4 Paragraph 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.”

National Design Guide (CD 7.11)

3.5 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;”

3.6 A “walkable” development is defined in the National Design Guide as being:

“Local facilities are within walking distance, generally considered to be no more than a 10 minute walk (800 m radius).”

Cycling and Walking

3.7 The Government’s Policy Paper “Gear change: a bold vision for cycling and walking” (July 2020) (CD 7.13) sets out the government’s long-term vision to increase active travel. In this document the government states:

“We will ensure that all new housing and business developments are built around making sustainable travel, including cycling and walking, the first choice for journeys.”

3.8 In March 2023 the government published an updated Policy Paper “The Second Cycling and Walking Investment Strategy”.

3.9 This Policy Paper reiterated the Government’s target that:

“50% of all journeys in towns and cities should be walked or cycled by 2030”

Carbon Net Zero

3.10 The Government Policy Paper “Net Zero Strategy: Build Back Greener” (October 2021) (CD 7.12) sets out the government’s policies and proposals for decarbonising all sectors of the UK economy to meet the government’s target of achieving net zero by 2050.

3.11 In paragraph 48 of Chapter 3 the government states:

“48 We will embed transport decarbonisation principles in spatial planning and across transport policy making.”

3.12 In paragraph 31 of Chapter 4 the government explains that *“National planning policies already recognise the importance of sustainable development and make clear that reducing carbon emissions should be considered in planning decision-making”*. It goes on to explain that *“we will make sure that the reformed planning system supports our efforts to combat climate change and help bring greenhouse gas emissions to net zero by 2050.”*

3.13 In July 2021 the Government published its *“Transport Decarbonisation Plan”*, which sets out the commitments and actions needed to decarbonise the entire UK transport system. One of the six strategic priorities of the plan is developing solutions that consider the needs of different locations, highlighting the importance of tackling emissions at a local level to ensure that every place in the UK has its own net zero transport network by 2050.

3.14 In 2019 Hertfordshire County Council and St Albans City & District Council both declared a Climate Emergency. St Albans City & District Council aims to decarbonise the District by 2030 i.e. 20 years before the national target. The County Council’s target is for Hertfordshire to be a net zero County by 2050.

Hertfordshire’s Local Transport Plan 2018 – 2031 (LTP4) (CD 8.23)

3.15 Hertfordshire County Council is the local highway authority (LHA). 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”*

3.16 This policy has been used by both applicants to justify promoting pedestrian, cycle and bus improvements whilst also failing to address the significant traffic impacts that their analysis shows the proposed developments will cause.

3.17 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.”

3.18 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.”

St Albans District local plan review 1994 – Saved Policies (July 2020) (CD 8.1)

Policy 34: Highways Considerations in Development Control

- road safety
- 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

- 3.19 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

- 3.20 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 ACCESSIBILITY

Preamble

- 4.1 In my opinion establishing whether or not the appeal sites represent sustainable locations in transport terms is a fundamental consideration when determining these appeals.
- 4.2 If sustainable travel (i.e. walking, cycling and public transport) is not the first choice for journeys by new residents then the appeal proposals will inevitably be car-based dormitory communities on the edge of the existing built-up area of St Albans irrespective of any sustainable transport initiatives funded by the developments.
- 4.3 If the Government's sustainable development policies are to be successful then new development, and particularly new residential development, should be located so that it has easy access by sustainable modes of travel to a wide range of facilities and services including most if not all of the following:
- childcare/nurseries
 - primary schools
 - secondary schools
 - further education colleges
 - GPs
 - hospitals
 - food store/convenience store
 - town centres
 - employment centres (small, medium & large)

Local Facilities and Services

4.4 There is a limited range of services in Chiswell Green village itself, including:

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

4.5 Local residents must therefore travel further afield to access other facilities and services.

Walking

4.6 The facilities/services in the centre of the village as listed above are generally available within the 10 minute walk (800 m radius) threshold for a “walkable” neighbourhood as defined in the National Design Guide.

4.7 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.

Comment

4.8 I note that instead of using the most recent maximum figure of 800 m set out in the National Design Guide (CD 7.11) both applicants have used a figure of 2 km (a 25 minute walk) when establishing what facilities and services are within walking distance of their site.

4.9 I consider this approach unrealistic given the guidance set out in the National Design Guide (CD 7.11) and 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 etc in close proximity to each other.

4.10 It is clear therefore that the range of services and facilities that can be accessed on foot from each of the appeal sites is very limited. Residents would not be able to meet their essential daily needs within a walkable distance from their home.

Access by bus

- 4.11 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".
- 4.12 The nearest bus stops to the northern site are "approximately 650 and 700 m" from a point measured midway along the site frontage to Chiswell Green Lane (CD 4.26, TA para 3.26). The actual distance that residents will have to walk to a bus stop from the northern site will of course be very much longer because these figures do not allow for the distance that residents will have to walk through the site in order to join Chiswell Green Lane. This could easily add an additional 250 m onto the walking distance. Meaning that residents would have to walk 900-950 m to the closest bus stops. This being over twice the maximum walking distance set out in the LHA's design guide. The LHA's maximum figure of 400 m equates to a 5 minute walk. Residents of the proposed northern site would have a 11-12 minute walk to the closest bus stops.
- 4.13 The closest bus stops to the southern site (as given in paragraph 4.20 of the southern TA, CD 2.9) 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
- 4.14 I note that these distances have not been measured from the centre of each site. Taking the measurement from the centre of each site adds a further 150 – 200 m to each of these figures.

Comment

- 4.15 It is clear therefore that neither appeal site has satisfactory access to the local bus routes which run along Watford Road.
- 4.16 The southern site 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.
- 4.17 I note that in the 2011 Census only 2% of Chiswell Green residents travelled to work by bus. This suggests that travel by bus is an unattractive option for existing local residents.

- 4.18 Travel by bus is likely to be an even less attractive option for residents of the appeal proposals given that both appeal sites are located outside the existing urban area and with walking distances to bus stops that exceed the LHA's maximum figure.

Informative

- 4.19 The travel to work data from the 2021 Census was affected by the pandemic and almost 50% of residents in Chiswell Green worked from home. The proportion of residents travelling to work by bus in the 2021 Census was even lower than in the 2011 Census.

Cycling

- 4.20 Both appellants have assumed a maximum distance of 5 km for cyclists. This is a standard figure, and I take no issue with it.
- 4.21 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 etc are within the 5 km cycle catchment area many of the routes are hilly and difficult. I understand that some of the routes that appear suitable on a map are unpopular by reason of anti-social behaviour.
- 4.22 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 2011 a total of 14 Chiswell Green residents travelled to work by cycle representing just 1% of residents.
- 4.23 The number of Chiswell Green residents travelling to work by cycle in the 2021 Census was only 11, representing just 0.7% of residents.

Comment

- 4.24 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 Chiswell Green Lane and on Watford Road to the south of the double mini roundabout. There is already a cycle lane on Watford Road to the north of the double mini roundabout.

5 THE APPELLANTS' TRIP FORECASTS AND TRAVEL PLAN MODAL SPLIT TARGETS

The Northern Site

- 5.1 The appellants undertook a multimodal trip generation assessment which is set out in Section 6 of their Transport Assessment (CD 4.6).
- 5.2 The weekday (7 AM-7 PM) trip generation is forecast to be 2584 person trips.
- 5.3 The weekday AM and PM trip forecasts as derived from Table 6.4 of the appellants TA as set out in Table 5.1 below:

Mode	AM peak hour		PM peak hour	
	Number	%	Number	%
Car	223	75%	182	74%
Car passenger	11	3%	10	4%
Public transport	38	13%	31	13%
Walk	14	5%	12	5%
Cycle	3	1%	2	1%
Other	9	3%	8	3%
Total	298	100%	245	100%

Table 5.1 Northern Site

Number of Trips, by Mode, Weekday Peak Hours

- 5.4 This analysis shows that almost 80% of journeys to/from the appeal site will be undertaken by car.
- 5.5 Only 6% will be walked or cycled.
- 5.6 Of the 13% of trips forecast to be undertaken by public transport some will be undertaken by bus and others by train. It is quite possible that those travelling by train will drive, or be given a lift to, the railway station.
- 5.7 The appellant's travel plan targets are presented in Table 7.2 of their Residential Travel Plan (CD 4.30/4.31).
- 5.8 The targets for Year 5 involve increasing the number of pedestrian and cycle trips by 2% and increasing the number of public transport trips by 4%. With a consequent reduction in the number of car trips.

Comment

- 5.9 It is clear that the appeal proposals will create a car dependent development where the opportunity to take advantage of sustainable modes of travel is very limited.

The Southern Site

5.10 The appellants did not include a multimodal trip assessment in their Transport Assessment (CD 2.9), instead they only presented detailed information on forecast vehicle trips.

5.11 In paragraph 6.9 of their “Framework Residential Travel Plan” (CD 2.10) the appellants explained that:

“Comprehensive data that shows baseline travel patterns for the development as a whole is difficult to establish since this Travel Plan has been prepared prior to the site’s occupation. The initial Targets for Years 1, 3 and 5 for the residents are therefore based on the journey to work modal splits identified within the 2011 Census for the local area.”

5.12 The provisional travel plan targets for the end of Year 5, as presented in Table 3 of the travel plan, are:

- single occupancy vehicle travel should account for 50% of journeys to/from the site; and
- sustainable transport modes should account for 50% of journeys to/from the site.

5.13 At paragraph 6.18 of the travel plan the appellants go on to say that these provisional targets *“will be reviewed and amended where necessary in consultation with HCC and SACDC, following the collation of the results of the initial Travel Survey for the residential development.”*

5.14 In Section 10 of their main TA (CD 2.9) the appellants undertake a “sensitivity test” to see how the junctions in the study area would operate if the travel plan targets were achieved. At paragraph 10.8 they explain that the travel plan modal splits would lead to a 21% reduction in private car use.

Comment

5.15 I do not consider the appellants’ travel plan commitments to be sufficiently robust to enable planning permission to be granted.

- 5.16 I am concerned that no attempt has been made to present multimodal trip rate forecasts, even though this information could have been provided in the same way as it was in respect of the northern site.
- 5.17 The provisional travel plan targets involve very much greater modal shift away from car use than those presented in respect of the northern site. Based on all the information currently available to me I consider it very unlikely that the appellants will be able to create a development in this location that achieves the travel plan targets.

6 THE APPELLANTS' FORECAST TRAFFIC IMPACTS AT THE DOUBLE MINI ROUNDABOUT

Preamble

6.1 Watford Road (B4630) is the busiest B Road in Hertfordshire and the 17th busiest road overall. In 2021 the annual average weekday flow (AAWD) on Watford Road was 18,667 vehicles. In 2019 pre-Covid the AAWD flow was 19,526 vehicles. (Source: Hertfordshire Traffic and Transport Data Report 2022, Hertfordshire County Council, January 2023, CD??).

6.2 The impact that the appeal proposals will have on Watford Road, and particularly the double mini roundabout junction at the centre of the village, is a particularly important consideration in the decision-making process because of the very high volume of traffic using Watford Road.

The Appellants' Junction Modelling

6.3 Both appellants undertook their own, independent, assessment of the likely impact of their proposed development on the operation of this double mini roundabout in the centre of Chiswell Green. The computer models of this double mini roundabout junction used different base traffic flows and somewhat different modelling assumptions. The modelling undertaken in respect of the southern site was based on traffic surveys undertaken in January 2016. The modelling work in respect of the northern site was based on traffic surveys undertaken in September 2021.

6.4 Both appellants 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 at present and will be over capacity in 2026/7 without any additional development flows. Once development generated traffic is taken into account from either one of the proposed developments then the situation deteriorates quickly, and queues and delays increase dramatically. If both appeal proposals were to be approved then the impact on this junction would be even more severe, albeit neither appellant quantified the magnitude of the combined impact.

6.5 Our clients' day-to-day experience is that there are already serious capacity and congestion problems at this junction at peak times. The computer modelling therefore confirms our clients' anecdotal evidence.

6.6 I have summarised below in Tables 6.1 and 6.2 each appellants' assessment of the future operation of this junction. This information is extracted from the relevant Transport Assessments.

		AM Peak Hour			PM Peak Hour		
	Arm	RFC	Queue (veh)	Delay(S)	RFC	Queue (veh)	Delay(S)
Southern Roundabout	Watford Road (S)	1.00	20.1	85.96	1.15	74.2	293.85
	Chiswell Green Lane	0.83	4.1	52.15	0.91	6.1	102.07
	Watford Road	0.57	1.3	7.37	0.61	1.5	7.75
Northern Roundabout	Watford Road (N)	1.00	19.3	94.72	1.06	36.4	148.7
	Tippendell Lane	1.15	40.2	274.71	1.27	62.6	529.43
	Watford Road	0.66	1.9	8.52	0.71	2.4	10.01

Table 6.1 2026 Base + Committed Development + Land North
(Source: TA Table 7.4, CD 4.26-28)

6.7 RFC means ratio of flow to capacity. A figure of 1.0 means that that arm of the junction is operating at capacity. When assessing junctions a figure of 0.85 is normally taken to be the maximum working capacity above which queues and delays will start to increase dramatically.

		AM Peak Hour			PM Peak Hour		
	Arm	RFC	Queue (veh)	Delay(S)	RFC	Queue (veh)	Delay(S)
Southern Roundabout	Watford Road (N)	0.82	4.2	15.75	0.67	1.9	9.11
	Watford Road (S)	0.88	6.1	27.48	0.91	8.0	33.53
	Chiswell Green Lane	0.76	2.8	34.66	0.43	0.7	15.21
Northern Roundabout	Watford Road (S)	0.63	1.7	6.47	0.55	1.2	4.89
	Watford Road (N)	1.00	16.2	55.61	1.00	20.0	77.03
	Tippendell Lane	1.07	16.9	115.85	1.09	20.7	285.66

Table 6.2 2027 Base + Land South
(Source: TA Table 20, CD 2.9)

6.8 I have reproduced below in Table 6.3 the results of junction modelling undertaken in respect of the southern site assuming that the applicants’ travel plan target of a 21% reduction in car travel is achieved. As I have explained previously I consider this target unrealistic.

		AM Peak Hour			PM Peak Hour		
	Arm	RFC	Queue (veh)	Delay(S)	RFC	Queue (veh)	Delay(S)
Southern Roundabout	Watford Road (N)	0.82	4.1	15.32	0.66	1.9	8.98
	Watford Road (S)	0.86	5.4	24.42	0.90	7.1	30.39
	Chiswell Green Lane	0.71	2.2	29.10	0.41	0.7	14.61
Northern Roundabout	Watford Road (S)	0.62	1.6	6.32	0.54	1.2	4.85
	Watford Road (N)	0.99	15.6	53.68	0.99	18.6	72.75
	Tippendell Lane	1.06	16.2	110.03	1.07	18.0	252.19

Table 6.3 2027 Base + Land South (reduced vehicular trip rates)
(Source: TA Table 28, CD 2.9)

6.9 At paragraph 10.18 in their TA (CD 2.9) the southern applicant comments on this modelling output and notes that:

“The results shown in Table 28 indicate that the junction would still exceed capacity despite the provision of the sustainable transport improvements when compared to the results outlined within Table 20. However, the junction would operate better than if the improvements were not made.”

Comment

6.10 In my opinion the most striking finding is that the travel plan commitments in respect of the southern site, which assume an unrealistically large 21% shift away from car travel, make no significant difference to the operation of the double mini roundabout junction.

6.11 The forecast reduction in car use at the northern site as a result of their travel plan commitments is a reduction from 75% to 65% i.e. 10%. The effect of such a reduction on the operation of the double mini roundabout junction will be even less than that forecast by the southern site.

- 6.12 Given that neither appellant is proposing to make any changes to the junction that will increase capacity it is clear that operating conditions at the double mini roundabout junction will worsen significantly as a result of either of the proposed developments irrespective of any travel plan commitments.
- 6.13 The transport and highway mitigation measures proposed by both appellants centre on providing improved facilities for pedestrians and cyclists and providing additional funding for bus services for a period of 5 years.
- 6.14 Despite their best intentions it is clear that these sustainable transport mitigation measures will not mitigate the significant traffic impacts of either of the appeal proposals.

Highway safety concerns

- 6.15 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 queuing on the north side of the crossing and 1 on the south side. Queuing 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.
- 6.16 I have witnessed vehicles driving over the central islands at this junction as queues have extended back over the roundabouts. This is obviously an undesirable situation. It should also be borne in mind that driving over the central island of a mini roundabout is a road traffic offence unless the vehicle you are driving is physically incapable of negotiating the roundabout without driving over the central island.

- 6.17 The southern development proposals will introduce an additional 343 vehicles into the Watford Road/Chiswell Green Lane mini roundabout in the AM peak hour. The northern development will introduce a further 217 vehicles into this junction. Using the observed turning count data collected on 9.9.21 and presented in Figure 1 of the northern TA (CD 4.26) we see that the total number of vehicles passing through the southern mini-roundabout in the AM peak hour was 1377 vehicles. The southern development would therefore result in traffic movements through the mini-roundabout increasing by 25%. The northern 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.
- 6.18 All that we can say with confidence is that the double mini roundabout junction will be operating significantly over capacity with extensive queueing.
- 6.19 It is clear that improving the Watford Road/Tippendell Road/Chiswell Green Lane junction will be difficult. I 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. I 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.
- 6.20 I am 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 I 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.

- 6.21 Local and national transport policies do not prohibit making junction improvements. As stated in LTP4 above a balance has to be struck. Whilst making junction improvements should 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.
- 6.22 In my 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 build 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.
- 6.23 The forecast operation of the double roundabout junction and the impact that the proposed developments will have either individually or collectively is unacceptable. In my opinion the residual cumulative impacts of the development proposals on the road network would be severe and this is likely to lead to an unacceptable impact on highway safety.
- 6.24 At the planning application stage I advised that the transport impacts of what are now the appeal proposals should be addressed by a mitigation package that comprised sustainable transport initiatives supported by highway capacity improvements. This advice was ignored.

Traffic diverting onto Watford Road from the A405

- 6.25 My clients have made me aware of two development schemes that affect traffic flows on the A405 North Orbital Road to the east of Chiswell Green. The first is the Radlett Strategic Rail Freight Interchange and the second is the introduction of traffic signals on the North Orbital Road at Burston Garden Centre.
- 6.26 National Highways required the southern site to consider the impact of the rail freight interchange on their assessment of the proposed residential development. As I understand it whilst the freight development would introduce an additional 200 vehicles per hour (or thereabouts) onto the A405 in the weekday peak hours it was

assumed that the traffic impact would be confined to the strategic road network and would not affect traffic flows on Watford Road.

- 6.27 It seems likely though that as a result of the significant increase in traffic flows on the A405 some traffic may choose to divert onto Watford Road and “rat run” through Chiswell Green.
- 6.28 In the same way the introduction of traffic signals on the A405 will introduce additional delays for drivers on the A405 which may result in drivers choosing to divert onto Watford Road.
- 6.29 Given that the double mini roundabout in the centre of Chiswell Green is already operating at or close to capacity any additional traffic diverting through the village in order to avoid problems on the A405 will exacerbate the current problems.

7 COMMENTARY ON OTHER HIGHWAY AND TRANSPORT ISSUES

Preamble

7.1 In my evidence I have so far established that:

- neither appeal site represents a sustainable location in transport terms;
- the double mini roundabout in the centre of the village is operating at or close to capacity now and will be over capacity in the design year of 2026 without any additional development flows being taken into account;
- each appeal site when considered on its own will create severe traffic impacts, particularly at the double mini roundabout in the village. The impacts should both developments be approved has not been quantified, but will clearly be even more severe than the individual impacts;
- the transport mitigation measures proposed by both appellants focus on sustainable transport initiatives and will not mitigate the serious traffic and highway impacts arising from the appeal proposals (a point explicitly acknowledged by the southern applicant); and
- Watford Road (B4630) is the busiest B Road in Hertfordshire and the 17th busiest road overall.

7.2 In this section of my evidence I address the remaining transport and highway issues associated with the two appeal proposals.

Cumulative impact

7.3 The two planning applications were prepared, and their potential transport impacts evaluated in complete isolation of one another. Whilst I 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 me to conclude that it would be prudent for the cumulative impact of both schemes to be considered.

7.4 I think this is particularly important now for the following reasons:

- the two schemes are to be determined by way of a conjoined public inquiry and the Inspector does not have the benefit of knowing what the combined traffic impact will be if planning permission was to be granted for both schemes
- the local highway network is operating at close to or slightly over 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 is taken into account the highway network will be operating well over capacity and delays and queues will increase dramatically. The situation will of course be even worse if both developments were to be approved.

7.5 My review of the two planning applications leads me 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.

7.6 The cumulative impact is something that would of course be considered during the transport modelling undertaken when preparing the new Local Plan.

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

Chiswell Green Lane

- 7.8 Both appellants 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.
- 7.9 In the southern 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. I consider this arrangement acceptable.
- 7.10 The northern site 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 I would expect it to be unattractive to residents given that most residents want to park where they can see their vehicle at all times.
- 7.11 The proposed access to the northern 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 northern development were to proceed as currently proposed then residents will have to walk, in the carriageway, across the access junction serving the northern site.
- 7.12 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 new site 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.
- 7.13 This will expose pedestrians to significant highway risk.

- 7.14 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 southern development, and 217 as a result of the northern development. If both developments were to be approved then the increase would be 517 vph i.e. nearly a threefold increase
- 7.15 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.
- 7.16 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.
- 7.17 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.
- 7.18 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. The developer of the northern site 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.”
- 7.19 I 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.
- 7.20 It is clear from my review of both applicants’ submissions that traffic queues at the double mini roundabout will worsen significantly if either, or both, developments are approved. I therefore think that the likelihood of ‘rat running’ via Stanley Avenue will increase significantly irrespective of any traffic calming/management measures.
- 7.21 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

- 7.22 Chiswell Green Lane will be the sole point of vehicular access to the northern development and the northern part of the Land to the south 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.
- 7.23 There is no equivalent provision for pedestrians, or cyclists on the south side of Chiswell Green Lane.
- 7.24 Table 6.3 of LTN 1/20 “Cycle Infrastructure Design” (CD 7.15) says that 3.0 m is the minimum recommended width for a shared use route.
- 7.25 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.
- 7.26 I 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.
- 7.27 I understand that the description of the southern development has been changed from “2FE primary” to “school” to give the education authority more flexibility with respect to the school site. This does not affect my assessment of the proposed site access arrangements and issues raised with respect to pedestrian and cycle safety and convenience. Whatever type and size of school is eventually provided on the site it is essential that it has safe and convenient access for all users including pedestrians and cyclists. For the purposes of determining the appeal it is appropriate to consider the “worst case” in transport terms which is likely to be a 2FE primary school as originally proposed.
- 7.28 A 2FE 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. I suspect that many parents/guardians will choose to travel to/from the school by car rather than walk.

- 7.29 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.
- 7.30 I 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

- 7.31 As part of the southern scheme access to the southern part of that site (176 dwellings) will be by way of a new simple priority junction on the northern arm of Forge End.
- 7.32 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.
- 7.33 The southern 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 southern development.
- 7.34 In order to improve safety at this junction, and to maintain a consistent standard of junctions along this stretch of highway, I consider that the applicant should provide a ghost island junction layout. The feasibility of this would have to be established in conjunction with the emerging proposals for a cycle route along Watford Road.

Watford Road Cycle Improvements

- 7.35 As part of the application for the southern site a series of 6 drawings were submitted with the TAA (CD 2.35a) "for information only". This series of drawings presents the County Council's emerging proposals to provide a scheme of pedestrian/cycle improvements for Watford Road between Chiswell Green Lane in the north and the A405/Noke Hotel roundabout to the south. As I understand it the applicants have committed to fund cycle improvements along this stretch of Watford Road up to a maximum cost of £2.6 million.

- 7.36 The County Council’s proposals have now been incorporated into the emerging “St Albans District Local Cycling and Walking Infrastructure Plan” (consultation draft) (January 2023) (CD 8.22). The public consultation on this emerging Plan closes on 20 March 2023.
- 7.37 The series of 6 drawings submitted by the applicant raise numerous areas of concern some of which are matters of detail and others of a more fundamental nature (e.g. the loss of car parking in front of the Post-Office leading to its potential closure). The proposals as shown in this series of 6 drawings show varying standards of provision for pedestrians and cyclists apparently dependent upon the extent of highway land. Along some sections it is proposed to provide a 3 m wide cycleway together with a separate 2 m wide footway. In other locations where there is less highways land available it is only proposed to provide a shared 3 m wide footway/cycleway. There is frontage development along both sides of Watford Road with numerous private drives and side roads. There are therefore numerous potential conflict points along the proposed cycle route. Pedestrians and cyclists will also come into conflict with one another at various points along the route as design standards change and will also be put at risk as they cross the numerous vehicle accesses and side road junctions.
- 7.38 Providing a cycle route along this section of Watford Road clearly raises serious highway safety issues irrespective of any sustainable travel benefits that would arise from improving conditions for cyclists.
- 7.39 My clients made a Freedom of Information (FOI) request of the County Council requesting copies of the Stage 1 & 2 Safety Audits undertaken in the preparation of the proposed scheme. The County Council’s response dated 6 March 2023 (CD 6.14) explains that:

“The scheme indicated in the request is still in the Project Validation stage, and so no Stage 1 and Stage 2 Safety Audits have yet been carried out or produced as we are still in the early/concept stages of the scheme. We therefore do not hold this information.

To advise and assist we are currently out to consultation on the St Albans Local Cycling and Walking Infrastructure Plan (LCWIP) until 20th March at 10am: St Albans Local Cycling and Walking Infrastructure Plan.

Further information about the concept-level proposals for this route are included in the LCWIP and can be reviewed and commented on as part of the consultation. Any proposals adopted in the LCWIP will be subject to further design and feasibility work, as well as further stakeholder engagement, before they can be implemented.”

- 7.40 It is clear therefore that the proposals to provide additional cycle facilities along Watford Road are at an early stage and there is no certainty that they will proceed, and if they do, then what form they might take.
- 7.41 As the FOI response set out above explains the proposals are only at the concept level and there are no detailed proposals in the public domain.
- 7.42 There is a great deal of local concern associated with the proposals.
- 7.43 There is therefore no certainty that a major part of the proposed mitigation measures associated with the southern site will be delivered.

8 ASSESSMENT AGAINST POLICY

National Planning Policy Framework (CD 7.1)

- 8.1 The appeal proposals conflict with Paragraph 105 in that the appeal sites are not sustainable locations and do not offer a genuine choice of transport modes.
- 8.2 The appeal proposals conflict with each part of Paragraph 110 for the following reasons:
- although both appellants have promoted sustainable transport options these measures are likely to be ineffective
 - the proposals do not provide safe access, particularly along Chiswell Green Lane (which will serve the school)
 - the proposals do not reflect the guidance in the National Design Guide particular with regard to creating walkable developments
 - the impacts of the proposed developments in terms of capacity, congestion and highway safety have not been mitigated as is explicitly acknowledged in the TA submitted in respect of the southern site
- 8.3 It is clear that both appeal proposals will have a severe impact on the road network and that the proposed mitigation measures will do nothing to address the highway safety, capacity and congestion impacts that the appeal proposals will create.

National Design Guide (CD 7.11)

- 8.4 Both appeal schemes conflict with the guidance set out in the National Design Guide primarily because they will not create walkable developments with easy access to public transport, services and facilities

Gear Change (CD 7.13)

- 8.5 Both appeal schemes conflict with the objectives of this Policy Paper because sustainable travel, including cycling and walking, will not be the first choice for journeys.

Carbon Net Zero (CD 7.12)

- 8.6 Both appeal schemes conflict with the objectives of this Policy Paper because the appeal proposals, if allowed, will create car dependent communities where travel by car is the only realistic option for most journeys. This conflicts with the government's objective of the UK achieving carbon net zero by 2050.
- 8.7 The appeal proposals therefore also conflict with the County Council and SACDC objectives of achieving carbon net zero by 2050 and 2030 respectively.

Local Transport Plan 4 (CD 8.23)

- 8.8 The appeal proposals conflict with Policy 1 and the wider objectives of LTP 4 by promoting sustainable travel initiatives whilst also ignoring the significant highway impacts that will arise as a result of the proposed developments. Neither scheme has followed the "blended strategic approach" set out in LTP 4 whereby highways interventions are combined with improvements in walking, cycling, and passenger transport.

Local plan review 1994 (CD 8.1)

- 8.9 Both schemes conflict with Policy 34 in that they will have:
- a detrimental impact on road safety
 - have an adverse environmental impact arising from additional traffic in a residential area
 - an adverse impact on road capacity including present and predicted future year assessments
- 8.10 Both schemes conflict with Policy 35 in that the proposed mitigation measures will not mitigate the serious impacts that the appeal proposals will have on the highway network.
- 8.11 Both appeals conflict with Policy 36A because neither scheme provides easy and convenient access to public transport.

Comment

- 8.12 Clearly both appeal proposals conflict with the raft of National and Local policies which seek to create sustainable developments.

9 CONCLUSIONS

9.1 I have reviewed the highways and transport aspects of the two appeal applications against current policy, best practice standards and guidance. My investigations lead me 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.
- I consider that a more balanced approach is needed that merges highway improvements (ie junction improvements) with increased provision to support sustainable modes of travel.
- I 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.
- I note that in the 2011 census only 14 (1%) people living in Chiswell Green travelled to work by cycle, only 2% travelled by bus and only 5% walked. In the 2021 census (which was affected by the pandemic) only 11 people (0.7%) cycled to work. 15 (0.9%) people travelled to work by bus and 4% of residents walked to work. Clearly sustainable modes of travel are not realistic options in this area.
- It is clear from all the information submitted with the two planning applications that both appeal sites represent 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, particularly given the low level of patronage demonstrated in the two most recent censuses.
- 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.
- The proposal to provide a 3 m wide shared pedestrian and cycleway along Chiswell Green Lane as the main access to the northern appeal site, and the northern part of the southern site (which includes the proposed school) is wholly inadequate. The situation created will be dangerous and inconvenient and will not be effective in achieving the shift away from private car usage that is being sought.

- 9.2 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.
- 9.3 The proposed developments will provide highway benefits by way of the improvements to the pedestrian and cycle facilities in the village (assuming that these can be delivered) and by funding an increased bus frequency along Watford Road for 5 years.
- 9.4 However, the serious transport and highway issues must override any benefits arising from the provision of housing and the sustainable transport initiatives.
- 9.5 This being the case both appeals should be dismissed on transport and highway grounds.