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Project: Proposed Residential Development
Land South of Holt Road, Wrexham

Client: Barratt Homes and Bloor Homes North West

Document: **UPDATE to** Highways and Transport Evidence of
Mr Paul Corbett MEng, CEng, MICE, MIHT

Appeal Ref: APP/H6955/A/20/3263516

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1 Introduction

Background

- 1.1 My company CBO Transport Ltd [CBO] has been commissioned by Barratt Homes and Bloor Homes to provide transport and highways advice for a proposed residential development of up to 600 dwellings at Land to the South of Holt Road, the appeal site. CBO has been working on the site since 2015.
- 1.2 On behalf of Barratt Homes and Bloor Homes, CBO produced the transport and highway information for the appeal planning application and I subsequently produced a Proof of Evidence covering these matters for the inquiry. My Proof (CD14.2) was dated 30th November 2021 with document reference CBO-0322-050. I also produced a Summary Proof of Evidence (CD14.2.1) of the same date with document reference CBO-0322-051.
- 1.3 As it is now two and half years since I prepared my evidence I have been asked to prepare an update to it which presents current baseline information and to identify whether any changes to the baseline would affect the conclusions I reached.
- 1.4 This update to my Evidence needs to be read alongside my original document. For ease of reference and where appropriate, I have used the same section headings and noted if nothing has materially changed since my main Evidence was prepared.

Planning Application Timeline and Agreed Position

- 1.5 In the Introduction to my main Evidence I set the planning application timetable (paragraphs 1.15 to 1.27). In this section I noted that subject to 3 points of mitigation Wrexham County Borough Council (WCBC) officers did not recommend highways to be a reason refusal and while members refused the application, highways was not a reason for refusal. The 3 points of mitigation were:-
 - Provision of widening on the westbound approach to the A535 / A5156 roundabout as shown on the proposed site access drawing CBO-0322-017 as included in **Appendix A** to my main Evidence.
 - Provision of the northern section of the KSS2 Link Road to the southern (Bryn Estyn Road) boundary of the site before occupation of the 250th dwelling.
 - Contribution to the cost of completing the KSS2 Link Road to the northern boundary of the southern part of KSS2.
- 1.6 There is nothing to add to the planning application timeline as the appeal has been in abeyance since my main Evidence was prepared. My clients remain committed to the provision of these 3 points of mitigation and the fact highways is not a reason for refusal remains an agreed issue with WCBC.

Basis and Structure of Update to Evidence

- 1.7 As above I have structured this update to my evidence in the same way as my main Evidence for ease of cross reference. On this basis following this Introduction I will set out in Section 2 an update of the transport planning policy of most relevance to the proposed development.
- 1.8 In sections 3 and 4 I will consider whether there have been any changes to the baseline position including accessibility by walking, cycling and public transport and highway matters.
- 1.9 Section 5 and 6 I will provide an update on the development and whether changes should be considered to the levels of traffic which would be generated by the appeal development and the likely distribution pattern.
- 1.10 Section 7 considers the modelling undertaken that underpins the Local Development Plan (LDP) and whether it can still be considered a valid tool while section 8 summarises the agreed position on highway mitigation for the appeal development.
- 1.11 Updates to my Conclusions and Recommendations are set out in Section 9.

- 1.12 The evidence that I have prepared and provide for this Appeal in this update to my Proof of Evidence is true and has been prepared and given in accordance with the guidance of the professional institution of which I am a member. I can also confirm that the opinions given are my true professional opinions.

2 Policy Background

Overview

- 2.1 In this section provide a brief update of relevant transport policy.
- 2.2 The most significant change is that the WCBC Local Development Plan (LDP) has now been adopted so the development of the site is now an adopted policy.

Future Wales (CD2.5)

- 2.3 There has been no change to Future Wales since my main evidence was prepared.

Planning Policy Wales (CD19.1)

- 2.4 Planning Policy Wales (PPW) was updated to Edition 12 in February 2024 so there is now a new version to consider.
- 2.5 In my main evidence I noted that Transport Planning in Wales has a very strong focus on following an accessibility lead approach and that this is developed from the national policies set out in PPW. At that time it was Edition 11 that was current but Version 12 continues to promote a strong focus on the accessibility lead approach.
- 2.6 Transport policies are still included in Section 4 entitled "Active and Social Places". Paragraph 4.1.1 introduces the transport section and reads:

The planning system should enable people to access jobs and services through shorter, more efficient and sustainable journeys, by walking, cycling and public transport. By influencing the location, scale, density, mix of uses and design of new development, the planning system can improve choice in transport and secure accessibility in a way which supports sustainable development, increases physical activity, improves health and helps to tackle the causes of climate change and airborne pollution by:

- *Bringing services to people to reduce the need to travel. This is not about preventing travel altogether, it is about planning ahead for better physical and digital connectivity to support access to more local services, and more home and remote working. If more people can walk and cycle for everyday trips, we will reduce our dependency on cars.*
 - *Allowing people and goods to move easily from door-to-door by accessible, sustainable and efficient transport. To achieve this, we will need to invest in reliable, efficient and affordable transport services that people want to use, can use and do use. We also need the transport infrastructure to support those services. We will make sure our transport infrastructure is safe, accessible, well-maintained and future-proofed, to adapt to climate change.*
 - *Where we need new transport infrastructure, we will use the sustainable transport hierarchy to give priority to meeting the demand for travel by walking, cycling and public transport ahead of private motor vehicles.*
 - *Encouraging people to make the change to more sustainable transport. If we are going to meet our climate change targets, we also need people to travel differently. Which means making it easier to do the right thing. We will do this by making low-carbon sustainable transport more attractive and more affordable, and by adopting innovations.*
- 2.7 The introduction to this paragraph in PPW reads the same in Edition 12 as it did in Edition 11. The bullet points have been rewritten but their thrust remains the same with the focus on accessible locations and sustainable transport modes.
- 2.8 In the subsection of Planning Policy Wales entitled Sustainable Transport, paragraphs 4.1.9 and 4.1.10 (which were paragraphs 4.1.8 and 4.1.9 in Edition 11) state:

The Welsh Government is committed to reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Delivering this objective will make an important

contribution to decarbonisation, improving air quality, increasing physical activity, improving the health of the nation and realising the goals of the Well-being of Future Generations Act.

The planning system has a key role to play in reducing the need to travel and supporting sustainable transport, by facilitating developments which:

- are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car;*
- are designed in a way which integrates them with existing land uses and neighbourhoods; and*
- make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.*

Technical Advice Note 18 (CD2.12)

- 2.9 The strategic themes of PPW follow into detailed national advice provided Technical Advice Note 18 (TAN18).
- 2.10 There has been no change to TAN 18 since I prepared my main evidence.

Sustainable Urban Mobility Plan (CD4.11)

- 2.11 Locally the policies have been followed through to WCBC's Sustainable Urban Mobility Plan (SUMP).
- 2.12 There has been no change to WCBC's SUMP since I prepared my main evidence.

Adopted LDP Policy (CD18.1)

- 2.13 The policies in the adopted LDP continue this theme of the accessibility lead approach and there has been no change in this regard from the deposit draft. The four strategic objectives of the Plan which are relevant to the development of KSS2 in this context are:-
- Strategic Objective 4: Promote active travel and use of public transport by locating new development in the most accessible and sustainable locations; and seek to alleviate known highway infrastructure capacity constraints on the road network within the County Borough.*
 - Strategic Objective 6: Promote and encourage a healthy, active and safe lifestyle.*
 - Strategic Objective 8: Ensure all development is supported by the necessary provision of, or improvements to infrastructure, services and facilities in an effective and timely manner to make development sustainable and minimise its effect upon existing communities.*
 - Strategic Objective 10: Maximise our resistance to, and prepare for the consequences of climate change by reducing carbon emissions and the demand for energy, promoting the use of renewable resources, avoiding developing in areas of known flood risk and using a green infrastructure based approach to the planning and design of new development.*
- 2.14 SO4,6 and 8 remain unchanged from the deposit draft with the essence of SO10, particularly as it relates to transport and movement and the objective of reducing carbon emissions is the same.

Conclusion

- 2.15 While there have been some minor changes in the policy framework since my main Evidence was prepared, they do not materially affect the basis against which the appeal application should be considered.
- 2.16 The fact the site is now an allocation in the adopted LDP strengthens even further that the development of the site for residential development is consistent with the transport planning policy framework.

3 Accessibility by Walking, Cycling and Public Transport

Context

- 3.1 In this section of my update to my Evidence I will consider any changes that have occurred in the accessibility of the site by the sustainable modes.
- 3.2 Three Figures from my main proof are relevant in this regard and all are still current to the existing position other than Wrexham is now a city so reference to the town centre should now read city centre.
- 3.3 In summary **Figure 1.2** shows the location of the site in the context of Wrexham and the industrial estate; **Figure 1.3** shows the local context including designated cycle routes and bus stops while **Figure 3.1** shows the location of local facilities such as schools and shops and also shows the local bus route.

Access and Accessibility for Pedestrians and Cyclists

- 3.4 There has been no material change to the provision for pedestrians and cyclists in the local area since the application was submitted. The details in paragraphs 3.4 to 3.11 of my main Evidence therefore remain current.
- 3.5 Similarly, there has been no material change to the local facilities that are within walking and cycling distance of the site so the information in paragraphs 3.12 to 3.27 also remains current.

Accessibility by Public Transport

Bus

- 3.6 The principal service in the local area remains bus 35 with the closest bus stops to the site situated on St Mellion Crescent. The service is still operated by Arriva and runs on the same circular route between the city centre and residential areas to the east of Wrexham as it did when I prepared my main evidence. The route of the bus is shown in **Figure 3.1** my main Evidence and this remains the same.
- 3.7 Bus 35 continues to run a daytime service from 08:00 to 18:00 Monday to Saturday on a 30 minute frequency. The travel time to and from the town centre is still less than 15 minutes.
- 3.8 There is now however a Sunday service as well running hourly between 10:00 and 18:00.
- 3.9 As noted in my main Evidence there would be the opportunity for the bus operator to divert this service through the site which would enhance the bus accessibility of the eastern part of the site particularly. The diversion would be particularly effective with access to Thornhurst Drive as this would allow the service to loop through the site via the main access to the A534 roundabout. There is no change in this regard.
- 3.10 The other bus serving the A534 Holt Road corridor continues to be service 5 running between Wrexham and Chester. There have been some minor changes to timetabling since my main Evidence was produced but these do not materially change the details of the service set out in paragraphs 3.32 and 3.33 of my proof.
- 3.11 There continue to be a number of other services in east Wrexham which provide access to the Industrial Estate. As noted in my main Evidence the provision of the KSS2 Link Road provides the opportunity to divert existing or provide new services through the site. There is no change in this regard.

Rail

- 3.12 There has been no material change to the information on rail provision set out in my main Evidence in paragraphs 3.35 to 3.38.

Overview

- 3.13 I concluded in the main Evidence that the accessibility of the appeal site was suitable for residential development and that the location is consistent with the transport planning policy framework.
- 3.14 As I set out above there has been an improvement in this regard with the introduction of a Sunday bus service.

4 Existing Highway Network

Site Context

- 4.1 In this section of my update to my Evidence I will consider any changes that have occurred in the local highway network in the vicinity of the appeal site.
- 4.2 Again, **Figures 1.2** and **1.3** of my main Evidence are relevant to this section and these continue to reflect the existing situation.
- 4.3 There have been no changes to the appeal site boundary or the existing use for agriculture since I prepared my main evidence. There has been no change to the extent of the adopted highway in the immediate vicinity of the appeal site so the map in **Appendix B** of my main evidence are still current.

The Local Highway Network

- 4.4 There have been no physical changes to the local highway network since I prepared my main evidence. The description provided in paragraphs 4.5 to 4.20 of my main evidence remains current.
- 4.5 In September 2023 the Welsh Government introduced a reduction in the default urban speed limit from 30mph to 20mph. This has resulted in the speed limit on all roads in the vicinity of the site which had a 30mph speed limit when I prepared my main evidence reducing to 20mph. This includes the A534 Holt Road to the west of the site and Cefn Road.

Peak Hour Traffic Flows

- 4.6 In my main evidence I presented traffic flows from surveys undertaken in 2017 and 2018 (Figures 4.1 and 4.2 of that Report). These flows were from the same data sets that were used for the VISSIM modelling that underpins the LDP evidence base.
- 4.7 At the time the main evidence was prepared traffic flows were being impacted by Covid 19, so it was not possible to undertake further traffic surveys, to check that the 2017 / 18 flows were still valid.
- 4.8 Now however the short term impacts of Covid have passed and so I instructed new traffic counts to be undertaken for the following junctions in the study area:-
 - The Greyhound Roundabout (A534 Holt Road / Cefn Road junction)
 - The A534 / A5156 Roundabout (where the site access will be taken from)
 - The A534 / Industrial Estate Roundabout
 - The A5156 / Borrass Park Road Junction
- 4.9 The surveys were undertaken in October 2023 by which time the 20mph speed limit had been introduced and signed.
- 4.10 **Figure 4.1A** of this report (I have added the A to avoid confusion with Figure 4.1 of my main evidence) shows the traffic flows by turning movement for 2017 / 18 and the 2023 surveys for the morning peak hour (08:00 to 09:00). The 2023 flows are in bold red text on the Figure. For each of the four junctions a total flow is also presented. Whether the original surveys were from 2017 or 2018 is referenced in the Total Flow tables.
- 4.11 In most cases the 2023 flows are lower by turning movement than the 2017/18 flows and in all cases the total flows are lower in 2023. The reduction in traffic flow is most significant at the Greyhound and Industrial Estate Roundabouts where there were about 200 fewer vehicles passing through the junctions in 2023.
- 4.12 At the A534 / A5156 roundabout in 2018 the local access between the A5156 and A534 east approaches only served the golf club but it now also serves a Euro Garages roadside services, so is now busier.
- 4.13 Notwithstanding this in the morning peak hour the total flow at this junction in 2023 was still less than it was in 2018 even with Euro Garages open.
- 4.14 In my main evidence I noted from the 2017 / 18 surveys how significant the Industrial Estate was in influencing traffic flow patterns on the road network. The 2023 surveys show the same thing.

- 4.15 **Figure 4.2A** shows the same information for the evening peak hour (16:30 to 17:30). Again, most flows are lower in 2023 and the total flows at the Greyhound, Industrial Estate and Borrass Park roundabouts are lower.
- 4.16 At the A534 / A5156 roundabout the flows from Euro Garages mean the total 2023 flows are slightly higher than the 2018 flows but only 65 vehicles or 2% higher.
- 4.17 The flow on the A534 westbound approach - which is the arm of the junction where the mitigation scheme is being proposed to address queuing in the evening peak hour - was lower in 2023. Here the 2018 flow was 1,865 vehicles and the 2023 flow was 1,771.

Highway Conditions

- 4.18 The description of highway conditions in paragraphs 4.28 to 4.34 of my main evidence remain representative of current conditions.
- 4.19 Holt Road is not an unduly congested corridor although the Greyhound Roundabout is recognised locally as a congested junction. My observations supported by queue surveys have always been that periods of queuing are relatively short. The lower traffic flows in 2023 mean that traffic is queuing less than it did.
- 4.20 Although traffic flows are now lower the modern dual carriageway road network which serves the industrial estate, made up of the A5156, A534 (east) and the industrial estate access road continues to be heavily trafficked in the peak direction. At the roundabouts there are relatively low levels of opposing traffic and consequently approach speeds are high and the capacity of the approaches are maximised.
- 4.21 In the morning peak hour there continues to be no notable traffic queuing on the A5156/A534/Industrial Estate route into the industrial estate but the high flow of traffic turning right at the industrial estate roundabout (into the industrial estate) does still cause some delay to traffic on the A534 Wrexham Road.
- 4.22 In the evening peak there continue to be surges of traffic leaving the industrial estate associated with different work finish times the most pronounced being just after 17:00. This can lead to slow moving queuing on the industrial estate access road and the A534 (east) approach to the A5156 roundabout.
- 4.23 As I noted in my main evidence it is practically impossible to provide highway capacity to accommodate the surges of commuter traffic flow which occur at large employment sites when trip generation is concentrated into short periods of time. The access to the industrial estate is typical in this context and although the estate has a new modern high capacity highway network serving it, there are times when the demand from commuter traffic means some of the roundabout approaches are operating close to their design capacity.
- 4.24 This should not be interpreted as an indication that the network as a whole is operating at capacity or is not fit for purpose. During the majority of the day and in the non-peak direction in the peaks, when the roads will be accommodating goods and business traffic and other more strategic movements, the network has significant levels of spare capacity and provides the industrial estate with an excellent connection to the strategic road network and Wrexham.
- 4.25 As I noted in my main evidence the location of the appeal site adjacent to this modern highway capacity road network is a significant asset.

Personal Injury Accident Record

- 4.26 In my main evidence I presented personal injury accidents (PIA) in the study area based on information on the on the Crashmap website for the five year period 2016 to 2020. There is now data on Crashmap for 2021 and 2022 so Table 4.1 now shows the number of PIAs for this 5 year period as well. The 2016 to 2020 information is shown in brackets in the Table.

Table 4.1: Personal Injury Accidents

Location	All Casualties	Pedestrian Casualties	Cycle Casualties
Tesco Roundabout	2 (2)	0 (0)	1 (1)
A534 Tesco to Greyhound	10 (13)	4 (6)	3 (3)
Greyhound Roundabout	0 (2)	0 (0)	0 (2)
A534 Greyhound to A5156	3 (2)	1 (0)	1 (1)
A534/A5156 Roundabout	4 (0)	0 (0)	0 (0)
A534, A5156 to Industrial Estate	1 (2)	0 (1)	1 (1)
Industrial Estate Roundabout	2 (5)	0 (0)	0 (0)
A5156, A534 to Borrass Park Road	1 (1)	1 (1)	0 (0)
Borrass Park Roundabout	4 (3)	0 (0)	2 (2)

- 4.27 The data shows that there has not been a material change in highway safety since I prepared my main evidence so my summary in paragraphs 4.36 to 4.38 remains representative and there is not a particular issue with highway safety in the local area.

Overview of Highway Network

- 4.28 The summary of the highway baseline position presented in this section of my main evidence remain representative.
- 4.29 The A5156 and A534 (west) continues to provide a modern high capacity road network and the fact that there is the opportunity to provide a direct connection to this network at the A5156 / A534 roundabout is a notable benefit of the appeal site.
- 4.30 The A534 Holt Road corridor is a typical urban road corridor with some peak period queueing at the Greyhound Roundabout associated with commuting and education trips although this is now less than it was. The now adopted LDP policy allocating the site for residential development requires consideration of the impact of development traffic on this corridor, particularly the Greyhound Roundabout.

5 Development Proposals

Development Content and Phasing

- 5.1 The development content set out in my main evidence has not changed with a development of up to 600 dwellings. Development will now start later and it is anticipated that first occupation will be in 2026 with a six year build out.

Access Details

- 5.2 The details set out in this section of my main evidence have not changed. The Illustrative Concept Layout included in **Appendix C** of my main evidence has not changed.
- 5.3 As set out in the introduction the access scheme from the A5156 / A534 Holt Road roundabout has not changed from the arrangement shown in drawing CBO-0322-017 which is include in **Appendix A** of my main evidence. It shows the location that that the access would connect to the roundabout and the alignment of the first section of the access road.
- 5.4 As well as providing access to the site this section of road would provide the northern part of the KSS2 link road. The carriageway and footway widths for the KSS2 link road have not changed from those shown on the plan. It is still envisaged that the road would have a 30mph speed limit with frontage access to provide an urban feel to the road although these details are reserved matters.
- 5.5 As I outlined in the introduction, the developers are committed to providing the link road to the Bryn Estyn Road boundary and to providing a contribution to the cost of the link road connection to the KSS2 south northern boundary.

Wider Site Access Framework

- 5.6 My commentary in my main evidence on the other elements of the Illustrative Concept Layout as they relate to access is still representative of the indicative proposals.
- 5.7 There is an indicative alignment of the KSS2 link road shown on the Illustrative Concept Layout but this is still not fixed as WCBC has not yet determined where the connection between KSS2 north and south should be located. There are a number of options for the connection still under consideration but this does not affect the planning application as site layout is a reserved matter. For a site of this scale there is considerable flexibility over the KSS2 link road alignment.
- 5.8 The Illustrative Concept Layout shows the potential to provide a secondary access through Thornhurst Drive but as I stressed in my main evidence planning permission is not being sought for this access in this outline application. The nature and form of any access to Thornhurst Drive is a reserved matter.
- 5.9 There would however be notable accessibility benefits of providing access for pedestrians, cyclists and potentially buses through Thornhurst Drive and the integration of new development with existing neighbourhoods continues to be supported in the latest version of PPW.
- 5.10 There remains no proposal to provide an access to Bryn Estyn Road and the commentary in my main evidence on the likely arrangement once the KSS2 link road has been provided is still the current thinking, although this is a reserved matter.

Pedestrian and Cycle Access

- 5.11 As shown on the Illustrative Concept Layout a network of pedestrian and cycle routes which provide internal connectivity and linkage to external networks would be provided. The provision of infrastructure to promote active travel is another policy requirement of the now adopted LDP policy.
- 5.12 As well as pedestrian and cycle access via the vehicular access points it is still the intention to provide pedestrian and cycle access to each end of Bryn Estyn Road and an access to the cycle route which runs along the southern side of the A534. This access links into a key north south cycle route through the site which it is still the intension to provide within a green corridor.

Overview

- 5.13 In section 3 of this update to my evidence I showed that the site remains in an accessible location which would provide future residents with a choice of transport modes for many journeys. The Draft Illustrative Concept Layout shows how the site would connect into these networks to help maximise the number of trips made by modes other than the private car. As noted in my main evidence this would be reinforced through a site wide Travel Plan which would be delivered through a planning condition.
- 5.14 As I noted in my main evidence the details of the site access for which full planning is being sought provide the first elements of the networks which will support sustainable travel by including off carriageway cycle facilities and a carriageway width suitable for bus use.

6 Traffic Generation, Assignment and Future Year Traffic Flows

Trip Rates and Trip Generation

- 6.1 The trip generation set out in my main evidence was based on the trip rates used for the LDP VISSIM modelling. These rates were derived from the TRICS database - which is the industry standard source of information on trip generation - in 2018 by ITP – the consultants initially undertaking the VISSIM modelling and were approved by Council officers in this context.
- 6.2 Trip rates derived from TRICS now (February 2024) would be lower than these rates which were derived in 2018 as there has been a reduction in peak hour trip generation associated with more people working from homes since Covid. This trip generation set out in Table 6.2 of my main evidence – and used in the LDP modelling - therefore remains appropriate and robust.

Trip Distribution and Assignment

- 6.3 The Trip distribution set out in my main evidence was based on the 2011 census journey to work (JTW) information using journeys to work made by car drivers at the middle super output areas level [MSOA] level.
- 6.4 While there is now information from the 2021 census, as this was affected by Covid it is not appropriate to use it for this purpose and so the 2011 information, summarised in Table 6.3 of my main evidence – and used in the LDP modelling - remains the most appropriate.
- 6.5 **Figures 6.1** and **6.2** of my main evidence which show development traffic flows on the local road network are therefore unchanged, although as I note in my main evidence, these will not be precisely replicated in LDP modelling as they do not take account of the implications of network conditions on vehicle assignment as the model will have done.

7 WCMC Local Plan Traffic Modelling and Mitigation Strategy

Overview

- 7.1 As I set out in my main evidence, WCBC commissioned detailed traffic modelling work to provide evidence for the LDP on the traffic impact and mitigation requirements for the two proposed strategic allocations on the east side of Wrexham, namely KSS2 and KSS3 – KSS3 being the large employment allocation at the industrial estate. This modelling work was part funded by the developers of KSS2 north (the appellants) and the then developers of KSS2 south.
- 7.2 I described the modelling process in some detail in my main evidence and there is no reason to repeat any of this. The key consideration now is whether anything has changed since the model was developed in 2018/19 which might mean the findings of the modelling are no longer representative.
- 7.3 In this section of the update I have deviated from the section headings used in my main evidence as they do not fit particularly well with the information I need to provide.

Key Model Inputs

- 7.4 The development of the VISSIM model was a relatively complex process but in essence it was based on the road network and traffic flows as they were in 2017 and 2018.
- 7.5 I have already noted in Section 4 of this report that there have been no physical changes to the road network since I prepared my main evidence and in turn there had been no changes between then and when the model was developed in 2017/ 18. On this basis the physical road network the model is based on remains valid.
- 7.6 Similarly in Section 4 I presented peak hour traffic flows at key junctions from October 2023 and compared them with those from 2017 / 18 that were part of the data set used to develop the model from. These showed that current traffic flows were generally lower than the ones used to develop the model.
- 7.7 The only increases are associated with the Euro Garges site at the A5156 / A534 roundabout and these are very localised and have not resulted in any increases at adjacent junctions. Indeed, even with this site operational the total traffic flows at the roundabout in the morning peak are lower than they were in 2018 and while they are higher in the evening peak, they are only marginally higher.
- 7.8 On this basis there is no reason to suggest that traffic flows have changed sufficiently in the last 5 or 6 years to affect the validity of the modelling. In fact, the 2023 traffic flows suggest that the model has more traffic in it than it would if it had been developed today and can therefore be considered as robust.
- 7.9 In section 4 I also noted that the default urban speed limit in Wales has changed from 30mph to 20mph and that as a result the roads in the vicinity of the site which has a 30mph speed limit were now 20mph which included the A534 Holt Road west of the A5156 roundabout and Cefn Road. This has not affected the speed limits on the A5156 or the A534 east of the roundabout which remain at 70mph.
- 7.10 Journey times are used in the model development process so the change in the speed limit could affect the modelling albeit the roads most local to the site are not affected.
- 7.11 However, the speed limit effects link speeds and not total corridor travel time, which includes delays at junctions and crossings etc. Generally, in urban areas it is the delays that have the greatest impact on journey times, not link speeds and therefore the change in speed limit may not have a particularly significant impact on journey times. This is one of the points that is often made in considering the implications of introducing an area wide 20mph speed limit.

- 7.12 Tables 7.1 and 7.2 show the 2017 / 18 corridor travel times for the three urban corridors in the VISSIM model for the morning and evening peak hour used in the development of the model.

Table 7.1: Model Baseline Journey Times and Speeds Morning Peak Hour

		Distance (Miles)	Times (secs)	Mean Speed
Holt Road - Tesco R'bout to A5156 R'bout	Northeast Bound	1.5	236	23
	Southwest Bound	1.5	250	22
Cefn Road - Queensway to Borrass Road	Northbound	1.5	228	24
	South Bound	1.5	244	22
Borrass Park Road - Jeffrey's Rd to A5156	Northeast Bound	0.45	110	15
	Southwest Bound	0.45	104	16

Table 7.2: Model Baseline Journey Times and Speeds Evening Peak Hour

		Distance (Miles)	Times (secs)	Mean Speed
Holt Road - Tesco R'bout to A5156 R'bout	Northeast Bound	1.5	262	21
	Southwest Bound	1.5	272	20
Cefn Road - Queensway to Borrass Road	Northbound	1.5	229	24
	South Bound	1.5	261	21
Borrass Park Road - Jeffrey's Rd to A5156	Northeast Bound	0.45	121	13
	Southwest Bound	0.45	118	14

- 7.13 The final column of the Tables shows the mean speeds along the corridors were at or around 20mph anyway in 2017/18 so the introduction of the 20mph speed limit is unlikely to have a significant impact on corridor journey times.
- 7.14 Some early analysis has been undertaken of the effect of the introduction of the speed limit which indicates the median speed has dropped from 22.7mph to 19.8mph. This helps demonstrate the point that the speed limit change would not have a significant impact on journey times on the urban roads included in the model.
- 7.15 The other point to consider in this context is that the only route choice there is in the model is on urban roads which had 30mph speed limits previously and are now 20mph so relatively the journey times will not be significantly different.
- 7.16 On this basis, I would consider the current highway and traffic conditions are similar enough to those in 2017/18 to mean the model remains a valid tool for testing development impact.

Forecasting Parameters

- 7.17 Having established that the model remains a valid tool this section of my update to main evidence considers whether the parameters used to forecast future year traffic demands and necessary mitigation remain valid.
- 7.18 The key input parameters in this regard are trip generation and distribution from the developments being tested and any further future year traffic growth.
- 7.19 In Section 6 I showed that the trip generation for the proposed development was based on the figures used in the modelling and that if trip rates were derived now they would be lower than these. On this

basis for the proposed development the trip generation used in the model remains valid and I would consider it to be robust.

- 7.20 Similarly in Section 6 I showed that the trip distribution of the proposed development traffic was based on the best available census data and therefore remains valid.
- 7.21 The other developments included in the modelling were KSS2 south and KSS3.
- 7.22 The trip generation and distribution used for KSS2 south was calculated on the same basis as KSS2 north and therefore this remains valid.
- 7.23 For KSS3 – the large employment allocation in the industrial estate – a planning application for the development of this site was submitted last year. The trip generation from the site included in the Transport Assessment submitted with that application is notably lower than that included in the modelling. While the Council has questioned a number of elements of the submitted TA, including the level of trip generation, this does demonstrate that the trip generation used in the LDP modelling for KSS3 is likely to be robust.
- 7.24 The trip distribution for KSS3 used in the modelling was based on the 2017 / 18 traffic patterns of industrial estate traffic. The 2023 surveys show these are relatively similar so the distribution used for KSS3 traffic remains valid.
- 7.25 Background traffic growth was also included in the modelling based on TEMPRO derived growth rates for 2018 to 2023 and 2018 to 2028 – 2023 was the interim assessment year, when it was assumed partial levels of development had been built and 2028 was the year the full development had been completed.
- 7.26 The 2023 surveys show that there has not been any growth in traffic since 2018. While the calculation of growth rates using TEMPRO is year specific, it is in reality only providing a very approximate estimation of potential growth and has consistently over estimated traffic growth even in the decade preceding Covid.
- 7.27 The fact that the model includes growth from 2018 to 2023 and 2018 to 2028 therefore provides a reasonable estimation of potential background traffic growth over a 5 and 10 year horizon from now, so 2029 and 2034.
- 7.28 Therefore, I would consider the growth assumptions used in the modelling remain valid. Apart from Euro Garages, the traffic from which is included in the 2023 traffic counts, I understand that only one development has been approved in the local area since the modelling was undertaken. This is a small residential site on Land North of Holt Road (application reference P/2018/0673) which was too small (up to 74 dwellings) to require any off site traffic analysis. I would consider that the traffic from this development can be assumed to have been taken account of by the background traffic growth included in the model.
- 7.29 On the basis of the above analysis, I would consider that the modelling undertaken for the LDP remains valid.
- 7.30 The “2023” modelling results which I describe in paragraphs 7.33 to 7.43 of my main evidence are representative of a future year when development on KSS2 and KSS3 is partially complete.
- 7.31 Similarly, the “2028” modelling results which I describe in paragraphs 7.44 to 7.50 of my main evidence are representative of a future year when development on KSS2 and KSS3 is fully complete.

8 Agreed Highway Mitigation

Overview

- 8.1 In Section 8 of my main Evidence I described how the results of the LDP modelling were used to identify the necessary mitigation for the appeal development.
- 8.2 In the previous section of this report I concluded that the LDP modelling and its results remain valid and therefore the information presented in Section 8 of my main evidence is also still valid.
- 8.3 There is no reason therefore to update the information presented in Section 8 of my main evidence.
- 8.4 In summary there is no change to the agreed highway mitigation required for the appeal development which is:-
- Access scheme and mitigation works shown in CBO drawing CBO-0322-017 and included in **Appendix A** of my main evidence.
 - Complete the KSS2 link road to the southern boundary of the appeal site before occupation of the 250th dwelling.
 - Provide a proportional contribution to the cost of the section of the KSS2 link road between the southern boundary of the appeal site and the northern boundary of the KSS2 south site.
- 8.5 In the appeal Statement of Common Ground (SOCG) (**CD16.1**) there are agreed planning conditions securing the delivery of the access and mitigation works shown in drawing CBO-0322-017.
- 8.6 In the draft Section 106 agreement there are obligations for the developer to complete the KSS2 link road to the southern boundary before occupation of the 250th dwelling and pay a proportional contribution to the cost of the section of the KSS2 link road between the southern boundary of the appeal site and the northern boundary of the KSS2 south site. The appellants commissioned a quantity surveyor to prepare a cost for this section of road which has been updated to reflect recent cost increase. This will provide the basis of an agreed contribution to include in the final Section 106 agreement.
- 8.7 With this planning condition and S106 obligations there is no change to my conclusion that planning permission for the appeal development should not be withheld on traffic grounds.

KSS2 South and KSS3

- 8.8 Since I prepared my main evidence there has been some progress on KSS2 South and KSS3. KSS2 south now has a pre application scheme out for consultation but at the time of writing no planning application has been submitted. The Transport Assessment submitted with the consultation concludes, based on current traffic data, that the LDP modelling continues to be fit for purpose. In other words their conclusions in this regard are the same as mine.
- 8.9 As noted previously a planning application for KSS3 has now been submitted.
- 8.10 The progress of these developments does not influence the mitigation agreed for KSS2. The LDP modelling considered all three (KSS2 north, KSS2 south and KSS3) and mitigation to accommodate all three was determined.
- 8.11 The agreed offsite mitigation shown on CBO-0322-017 (**Appendix A** to main evidence) shows widening of the A534 westbound approach to the A534 / A5156 roundabout, proportionate to the level of traffic generated by KSS2 north and which forms part of the wider LDP mitigation scheme at this junction.
- 8.12 The agreement to provide the KSS2 link road to the southern boundary of the site and contribute to the proportional cost of completing the link road to the northern boundary of the KSS2 south site means the road can be completed as and when required by the developers of KSS2 south.
- 8.13 The requirement for and timing of mitigation required for KSS2 south and KSS3 is a matter between WCBC and the respective developers. These do not influence the mitigation agreed for the appeal site.

9 Conclusions and Recommendations

Conclusions

- 9.1 In this update to my Proof of Evidence I have shown that in the two and half years since I prepared that evidence:-
- The transport planning policy position has not materially changed.
 - The site remains in an accessible location appropriate for residential development.
 - There have been no physical changes to the local road network or the position regarding highway safety.
 - A 20mph urban speed limit has been introduced but this does not affect the LDP modelling work.
 - Traffic flows are now generally lower than they were when the LDP modelling was prepared.
 - The forecasting parameters used in the LDP modelling remain appropriate.
 - The LDP model continues to be a valid tool and the modelling results can still be relied upon.
- 9.2 On this basis the agreed highway mitigation continues to be appropriate for the proposed appeal development.

Recommendations

- 9.3 There is no change to the recommendation set out in my main evidence which is repeated below.
- 9.4 I would recommend that planning approval is not withheld on transport or highway grounds for the appeal development subject to the following :-
- Implementation of the access scheme at the A534 Holt Road / A5156 roundabout incorporating widening to the A534 westbound approach shown in drawing CBO-0322-017 (**Appendix A** of my main evidence).
 - Completion of the KSS2 link road to the southern boundary of the appeal site before occupation of the 250th dwelling.
 - Provision of a proportional contribution to the cost of the section of the KSS2 link road between the southern boundary of the appeal site and the northern boundary of the KSS2 south site.
- 9.5 The implementation of the access scheme would be controlled by planning condition and such is included in the conditions listed in the SOCG (**CD16.1**). The requirement to complete the KSS2 link road to the southern boundary and pay the contribution to the connection to KSS2 south are obligations in the draft S106 agreement which the appellants have prepared with WCBC.



Figures

Figure 4.1A Comparison of 2017/18 and 2023 Traffic Flows: Weekday **Morning** Peak

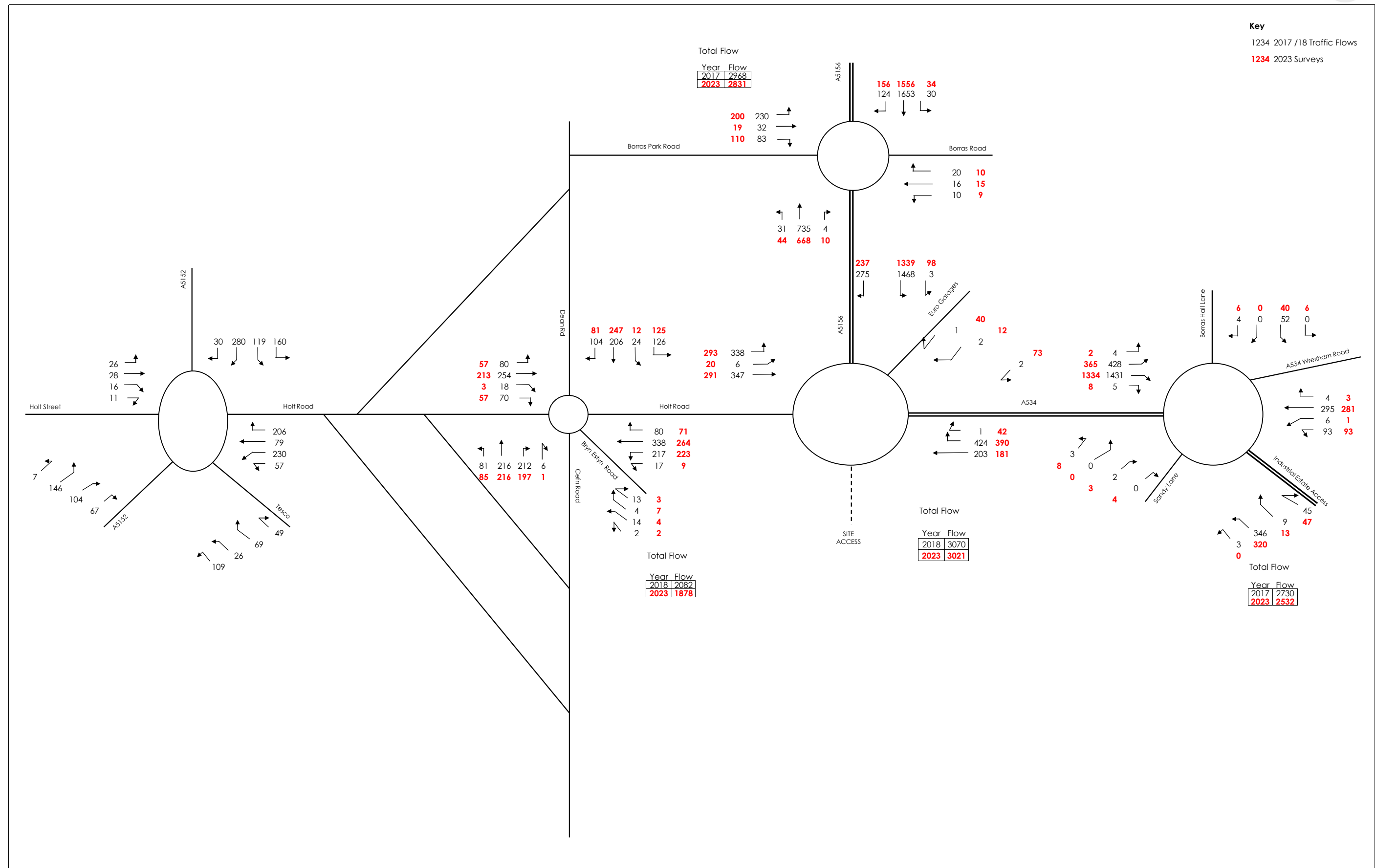


Figure 4.2B Comparison of 2017 / 18 and 2023 Traffic Flows: Weekday Evening Peak

