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

Client: Barratt Homes and Bloor Homes North West

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

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



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1 Summary

Experience

- 1.1 My name is Paul Corbett. I am a chartered Civil Engineer and have 30 years experience in highways and transport matters associated with planning and development. I have extensive experience in the assessment of residential development and have advised many house builders and land owners in this context. I am familiar with the site and its surroundings.

Background

- 1.2 My company CBO Transport Ltd [CBO] has been working on the appeal site since 2015. The outline planning application for up to 600 homes which this appeal is to determine, was submitted in 2019 under planning application Reference P/2019/0005. All matters other than the primary means of access to the north of the site are reserved.
- 1.3 The appeal site is bounded by the A534 Holt Road to the north, Bryn Esty Road to the south, residential development to the west and open land to the east.
- 1.4 The proposed access to the site would be taken from the southside of the A534 Holt Road / A5156 roundabout as is shown in drawing CBO-0322-017 which is included in **Appendix A** of my main evidence.
- 1.5 The site is a proposed allocation in the deposit version of Wrexham County Borough Council's (WCBC) Local Development Plan (LDP) which runs to 2028. It forms the northern part of Key Strategic Site 2 (KSS2) which is allocated for 1,680 homes, with 1,580 expected to be delivered in the plan period. The KSS2 allocation extends south and west of Bryn Estyn Road and has a further highway frontage with Cefn Road.
- 1.6 The KSS2 LDP policy requires there to be connectivity between the northern and southern parts of the KSS2 site and to identify highway improvements to address capacity constraints at the Greyhound roundabout. To address these two policy requirements a link road is to be provided between the A5156 / A534 Holt Road roundabout and Cefn Road, through the site - "the KSS2 link road". The northern section of the KSS2 link road would also provide the main access to the KSS2 north and therefore appeal site.
- 1.7 There is an indicative alignment of the KSS2 link road shown on the Illustrative Concept Layout submitted with the planning application but this is 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 but this is not a matter which requires consideration through the appeal application as site layout is a reserved matter. For a site of this scale there is flexibility in the final layout and a suitable site layout can be provided with a range of KSS2 link road alignments.
- 1.8 The LDP also proposes to allocate a large area of land to the north of the Industrial Estate for further employment based development, known as Key Strategic Site 3 (KSS3).

Transport Planning Policy Framework and Site Accessibility

- 1.9 As a proposed allocation in the LDP and given highways and transport were not reasons for refusal, residential development on this site, brought forward in the manner proposed, is clearly consistent with policy.
- 1.10 Transport planning policy has a very strong focus on following an accessibility lead approach. This is developed through national policies and continues in the key policies of the LDP and Wrexham's Sustainable Urban Mobility Plan.
- 1.11 The site can be accessed on foot from three locations; the existing footways on Holt Road which run around the south side of the A5156 / A534 Holt Road roundabout; the existing footways on Thornhurst Drive which is a residential road that abuts the western boundary of the site and from Bryn Estyn Road.
- 1.12 Bryn Estyn Road and the footway which runs around the southern side of the A534 / A5156 roundabout, extending west along the Holt Road corridor are both signed cycle routes.
- 1.13 To the west these cycle routes converge at the Greyhound Roundabout and a signed route continues along Holt Road to the town centre. To the east the signed cycle route on Bryn Estyn Road continues to the industrial estate.

- 1.14 The site is accessible on foot to local schools and shops. The closest primary school to the site is the Borrass Park Community school on Borrass Park Road which is about a 1.1 km walk from the site. The closest secondary schools are Rhosnesni High School (1.2km walk from the site) and Ysgol Morgan Llwyd (1.2km walk from the site). These schools are well within the 2km walk distance for education journeys.
- 1.15 The allocation of KSS2 requires the provision of a primary school on site which would supplement the existing primary school provision.
- 1.16 Cycling has the potential to substitute for short car trips, particularly those under five kilometres. This puts the whole of Wrexham town centre, including the university and hospital within cycling distance of the site. It also puts the whole of the industrial estate within cycling distance of the site.
- 1.17 The site is in an accessible location for trips made on foot and by bike. The town centre and industrial estate are the two biggest attractors of trips in the Borough and the site is linked to both by cycle routes. There is also a frequent bus service which connects with the town centre.
- 1.18 My analysis of accessibility demonstrates the suitability of the appeal site for residential development and confirms that the location is consistent with the transport planning policy framework.
- 1.19 Future residents would have a realistic choice to use modes other than the private car for many journeys. This would be reinforced through a comprehensive Travel Plan for the site which would be secured through a planning condition.
- 1.20 Much of the detail of how the site will be laid out to encourage sustainable trips will be the subject of reserved matters applications. However, the access details to the A5156/ A534 Holt Road include off carriageway cycle facilities which it is envisaged will continue along the length the KSS2 link road. The access road is also to a standard that can accommodate bus services.

Highway Network

- 1.21 The A534 Holt Road is the main radial route serving the eastern side of Wrexham. It links with the town centre road network at the Tesco's roundabout and then runs through the eastern residential areas of the town to its junction with the A5156. The road is urban in nature with frontage access, frequent junctions and a number of controlled pedestrian crossing points. The Greyhound Roundabout is located on this section of the road.
- 1.22 The junction of the A534 Holt Road and A5156 is a large roundabout. The A534 east of the roundabout is a derestricted dual carriageway road. About 1.3km to the east of the A5156 roundabout there is another large roundabout junction on the A534 from which the access road to the industrial estate is taken.
- 1.23 The A534 continues on the eastern side of the Industrial Estate roundabout where it is known as Wrexham Road. Wrexham Road is a rural single carriageway road.
- 1.24 The A5156 is a dual carriageway road built to a modern standard. It runs north from the A534 roundabout and connects with the A483 trunk road at Junction 6.
- 1.25 Traffic flows are dominated by commuter traffic generated by the industrial estate and as a consequence, the flows on the A5156 and A534 are extremely peaky.
- 1.26 In the context of typical urban peak period traffic conditions, Holt Road is not an unduly congested corridor. The Greyhound Roundabout is recognised locally as a congested junction, but my observations supported by queue surveys undertaken for the LDP modelling indicate that periods of queuing are relatively short.
- 1.27 The modern dual carriageway road network which serves the industrial estate, is heavily trafficked in the peak directions. 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.
- 1.28 In the morning peak hour traffic does not queue on the A5156/A534/Industrial Estate route into the industrial estate but the high flow of traffic turning right into the industrial estate causes some delay to traffic on the A534 Wrexham Road.

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- 1.29 In the evening peak there are 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 westbound approach to the A5156 roundabout.
 - 1.30 There is no particular issue with highway safety in the local area.
 - 1.31 The fact that there is the opportunity to provide a direct connection to the highway network at the A5156 / A534 roundabout is a notable benefit of the appeal site and means that the impact of site generated traffic on the urban roads to the west of the site is minimised. Generally, the traffic generated from the residential development will be travelling in the opposite direction to the industrial estate commuter traffic which again helps to minimise traffic impact.

WCBC Local Plan Traffic Modelling

- 1.32 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. All findings of the modelling were agreed between WCBC and the developers of KSS2 as reflected in the LDP Statement of Common Ground (**CD3.22**). This modelling has been used to assess the access requirements for the appeal development, its traffic impact and highway mitigation requirements.
- 1.33 The WCBC local plan modelling was undertaken using the VISSIM modelling package. VISSIM is a microsimulation model which is used to consider relatively small networks at a fine level of detail. The findings of VISSIM models are often used to derive mitigation requirements for large developments.
- 1.34 The modelling included two forecast years 2023 and 2028. The 2023 model included partial development on the two sites, while the 2028 model included full development.
- 1.35 The 2023 models identified the need for two highway improvement schemes to mitigate the impact of the partial development – part signalisation of the industrial estate roundabout and widening of the A534 westbound approach to the A534 Holt Road / A5156 roundabout from 2 lanes to 3, with corresponding widening of the circulatory carriageway.
- 1.36 The 2023 modelling demonstrated that the KSS2 link road was not required to accommodate the partial development on KSS2 and KSS3.
- 1.37 The 2028 models identified the need for further highway improvements at the A534 / A5156 roundabout in the form of widening of the A5156 southbound approach from 2 to 3 lane and signalisation of this and the A534 westbound approach.
- 1.38 The 2028 modelling demonstrated that the KSS2 link road was required to accommodate the full development on KSS2 and KSS3.

Agreed Highway Mitigation

- 1.39 These schemes deal with significant levels of traffic, only a relatively small proportion of which is associated with the appeal development. The level of traffic generated by KSS3 is critical to the timing of the improvements to A534 Holt Road / A5156 and Industrial Estate Roundabouts so if development on KSS3 does not come forward as quickly as anticipated then the need for the improvements, or the improvements at the scale identified in the modelling work would not be required.
- 1.40 During the determination of the appeal application, initial discussions over delivery of mitigation focused on the provision of a contribution by the KSS2 north (appeal site) developers to the funding of the junction improvements. Developers of KSS2 south and KSS3 would similarly be required to provide contributions when development on these sites came forward.
- 1.41 The problem with this approach is that if development on one or more of the sites is delayed there is a delay in delivering any form of mitigation.
- 1.42 Recognising this, it was agreed with WCBC that rather than paying a contribution to all the works, the KSS2 north developer should implement specific improvements at the A534 Holt Road / A5156 roundabout which were in line with the overall mitigation strategy.
- 1.43 On this basis the highway improvement scheme shown in CBO drawing CBO-0322-017 was prepared (**Appendix A** of my main evidence), the scheme that now forms the proposed access to the appeal

development. The scheme involves the widening of the A534 Holt Road westbound approach and the southern section of the circulatory carriageway as well as the provision of the site access itself.

- 1.44 This is the same scheme identified through the VISSIM modelling to address the impacts of development on the A534 Holt Road / A5156 roundabout at 2023, albeit the extent of widening on the A534 westbound approach has been reduced from 100m to about 50m. The lesser degree of widening reflects the fact that KSS2 north traffic represents a relatively small proportion of the total development traffic on the A534 westbound approach which necessitates the longer widening scheme.

Agreed Position on the KSS2 Link Road

- 1.45 The WCBC modelling clearly showed that with full development on the two strategic sites the KSS2 link road was required. It was also clear however through the 2023 models of partial development that notable levels of development could come forward without the road.
- 1.46 The modelling showed that the timing of the link road will be primarily influenced by the levels of development on the north and south parts of KSS2, rather than the level of development on KSS3. The 2023 model runs were based on 250 units on KSS2 north and 460 on KSS2 south ie a total of 710 units. This exceeds the total development capacity of 600 units on this appeal (KSS2 north) scheme.
- 1.47 On this basis if development on KSS2 south does not come forward as quickly as anticipated in the modelling work – which now seems entirely probable - it is highly likely that more development on KSS2 north could be accommodated before the link road is required.
- 1.48 Indeed, if there is a significant delay to development on KSS2 south, I believe the whole of the appeal development on KSS2 north could be delivered without requiring the KSS2 link road to be completed.
- 1.49 Prior to the determination of the appeal application, it was agreed with WCBC officers that the KSS2 link road would be provided to the southern boundary of the site before occupation of the 250th dwelling and that the developers would proportionally contribute to the cost of connecting the road with the northern boundary of KSS2 south.
- 1.50 With these commitments (alongside the access scheme and associated A534 westbound widening works), WCBC officers agreed that the highway impacts of the appeal development were mitigated. The fact that highways is not a reason for refusal demonstrates that members agreed with this conclusion.
- 1.51 In this way WCBC has accepted that the appeal development can be completed prior to the full KSS2 link road connection to Cefn Road being made. This is a recognition that the KSS2 south development is some way behind the appeal development but also ensures the developers of the appeal site make a fair contribution to the full delivery of the KSS2 link road such that future delivery is not prejudiced.
- 1.52 This is a logical approach and one which ensures development can proceed, while protecting the local road network by ensuring the KSS2 link road can come forward as and when it is required.

Recommendation

- 1.53 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.
- 1.54 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.