Substantive response of the Local Highway Authority to a planning consultation received under The Development Management Order.

Leicestershire County Council

Response provided under the delegated authority of the Director of Environment & Transport**.**

APPLICATION DETAILS:

Planning Application Number: P/21/2639/2

Highway Reference Number: 2021/2639/02/H/R4

Application Address: Land North of Barkby Road Syston Leicestershire

Application Type: Outline (with access)

Description of Application:

Re-consultation. Outline application for up to 195 dwellings with all matters reserved except access.

GENERAL DETAILS

Planning Case Officer: Liam Ward

Applicant: Taylor Wimpey (UK) Ltd

County Councillor: Mr Tom Barkley

Parish: Syston

Road Classification: Class C

Substantive Response provided in accordance with article 22(5) of The Town and Country Planning (Development Management Procedure) (England) Order 2015:

The Local Highway Authority does not consider that the application as submitted fully assesses the highway impact of the proposed development and further information is required as set out in this response. Without this information the Local Highway Authority is unable to provide final highway advice on this application.

Advice to Local Planning Authority

Background

The Local Highway Authority (LHA) has been re-consulted on an outline with access planning application for up to 195 dwellings to be located on land north of Barkby Road, Syston.

In its previous response dated 3rd October 2022, the LHA requested further information to be submitted with regard to a number of elements.

These highway observations are in response to the following document and drawings which have now been submitted to Charnwood Borough Council in support of the planning application.

- SJT/SC 20060_10 Transport Note (TN) prepared by David Tucker Associates dated 13th December 2022;
- Drawing 20060-02-2 Rev D (Swept Path Analysis);
- Drawing 20060-02-2 Rev D (Site Access Plan);
- Drawing 20060-06 (Roundabout Dimensions); and
- Drawing 2060-06-2 (Roundabout Tracking)

Site Access

Revised swept-path analysis demonstrated in drawing 20060-02-2 now shows a Phoenix 2-23 W 6x4 refuse vehicle manoeuvring in and out of the site access. It is noted that some of the manoeuvres show that the refuse vehicle will encroach onto the other lane, notwithstanding this, as these movements will occur infrequently the LHA consider the swept path analysis to be acceptable.

As requested in its previous comments, the site access plan, drawing 20060-02 Rev D has been revised to include layout dimensions for the proposed ghost island and right turn lane provision, along with the proposed footway running adjacent to the kerb line. It should however be noted that the drawing indicates lane widths of 3.0m. Widths of 3.25m should ideally be provided for the through lanes along the bus route. The drawing indicates a 55m length for deceleration / turning / queuing lengths. This would meet CD116 requirements for a 70kph design speed, including an allowance of 5m for queuing length. However, the 55m distance should be measured to the centre line of the side road and not to the right turn arrow as shown.

The lane direction arrows are also located slightly too far beyond the centre line of the access road, and their locations need to be adjusted. No dimensions have been shown for the width of the right-turn lane and this needs to be indicated on the drawing. The taper length over which right-turn ghost island is developed also needs to be shown; this should be 1 in 20 as per CD116 Table 6.1.1 guidance. The LHA considers that the length shown on the drawing is too short. The LHA is concerned that the amendments to the design required would push the start of the central hatching closer to the existing junction with Queniborough Road. There will need to be sufficient space to fit the 1:20 taper in before the stop line, how=ever this may not be achievable.

An orange line has been added to indicate the highway boundary, and this indicates that land would need to be transferred into the publicly maintained highway. This would need to include visibility splays, footway widths and required verge widths.

It is noted that the wide verge provision between the footway and carriageway edge has now been removed, and that 2.0m wide footways are being proposed which is considered acceptable.

Whilst the LHA note that a Stage 1 Road Safety Audit was undertaken for the proposed site access, the LHA would request for an updated RSA and accompanying Designer's Response once the requested changes mentioned earlier in these comments have been addressed.

Site Access Roundabout Option

The LHA have reviewed the submitted drawings 20060-06 (Roundabout Dimensions); and 2060-06-2 (Roundabout Tracking) and have the following comments.

The drawing indicates a proposed Inscribed Circle Diameter (ICD) of 34.0m for the roundabout layout. It would appear that a compact roundabout is being proposed but no dimensions have been provided for the central island diameter and overrun area, and these are required to be submitted for review. It is noted from the Roundabout Tracking drawing that a central overrun area may not be necessary, and if possible, this should be avoided.

Although no circulatory carriageway width information has been provided, it would appear that the circulatory carriageway is wider than CD116 para 3.6.8 guidance, in which case this should be amended accordingly.

Entry path curvature has been shown for the Barkby Road approaches to the roundabout, but not for the side road approaches, and these would also need to be submitted for review.

Further information for the geometrical design parameters of the roundabout is required to be submitted including entry widths, entry angles, exit widths, exit kerb radius and exit width tapers.

For the Barkby Road Eastbound approach to the roundabout, a stopping sight distance of 90m is shown to the give way line, however this would need to be 120m based on the 85th percentile speed measurements recorded for this direction. The Applicant should ensure that this is amended.

Forward visibility for the side road approaches to the roundabout also needs to be advised on the drawing.

No provision has been shown for pedestrian movements at the roundabout, and it is likely that the provision of footway to the Western side of the junction would be required across the Western arm.

The tracking shown indicates that the design vehicle would overrun the proposed kerb-lines at a number of locations, and so the design layout should be amended to avoid this. The vehicle tracking would need to be resubmitted using a 15kph vehicle speed and indicating a 0.5m clearance to kerb-lines.

There is also concern that on both Barkby Road approaches to the roundabout, the design vehicle is also shown as conflicting with opposing traffic exiting the junction. The design layout must be amended to avoid this.

As mentioned earlier, the tracking for a vehicle on the circulatory carriageway suggests that a central overrun area may not be required and this should be avoided if possible. However, this would be subject to revisiting the tracking once the other concerns raised above have been addressed.

The junction has been subject to detailed capacity analysis using ARCADY. As part of the wider allocation, the southern parcel is forecast to deliver around 200 homes served from the southern arm of this proposed roundabout. Given that the assignment of trips to/from the site is yet to be determined, an estimation of the number of trips from the southern arm has been estimated by applying a factor of two of the proposed development trips (i.e., a total of c 400 houses from the south). The trips have also been assigned using the same distribution percentages as the proposed development traffic. A summary of the assessment is shown below in Table 1.

Trip Generation

The LHA requested that the 'Oadby' trip rates be used as the actual predicted trip rates in the assignment. The Applicant has confirmed that the requested trip rates have been used and the LHA are now satisfied with the proposed trip rates.

Junction Capacity Assessments

The LHA requested classified turning counts to be undertaken with covid factors applied. The LHA also requested that once the new surveys have been undertaken, the detailed junction capacity assessments should be re-rerun and that the Fosse Way/ High Street and Barkby Road/ Pembroke Avenue junctions be included within the assessment. The LHA requested that the 2022 base flows should be factored up to a future year of 2027 following application of Covid factors, with the TEMPro growth factor to also be revised and committed developments added.

The junction capacity assessments have been re-run following the application of Covid factors provided by the LHA to the base year traffic flows. The adopted rates and flow matrices are provided at Appendix C of the TN.

The LHA also requested which committed developments were included within the assessment and these have been provided below. The Applicant has stated there are only two sites in the area which could be considered committed as follows, but neither have a direct impact / material on the junctions within the scope of the TA:

1. P/20/2349/2 (50 dwellings) - Impact is 30 trips so wider assessment was scoped out and

2. P/20/2383/2 (270 dwellings) - There is minimal trips through the potential overlapping junctions (less than 10 trips so this has been scoped out. It is likely that those numbers could dissipate through the network before reaching the assessed junctions, but even as a worst case, they are considered to be minimal.

3. Hallam and DWH were both recently refused and all other applications north of Syston are either built out or expired (P/13/1696/2 Queniborough Lodge for 125 dwells was granted in Jan 2015 and no Reserved Matters)

The LHA consider the above to be acceptable and consider both committed developments do not have a material impact on the junctions within the study area.

The results of the revised capacity analysis undertaken at each junction by DTA are shown in Table 1 extracted from the TN below:

Table 1: Junction Capacity Assessment Summary

Junction	Base Year (2021/2022)	2027	2027 + Development
Site Access Roundabout	-		Within capacity (highest RFC of 0.29 and Q of 0) Development flows (excluding HA1) through junction: 147 AM, 146, PM
1. High Street/Melton Road/Barkby Road	Within capacity (highest RFC of 0.84 and Q of 5)	Approaching capacity (highest RFC of 0.89 and Q of 7)	Approaching capacity (highest RFC of 0.93 and Q of 10) Development flows through junction: 48 AM, 48, PM
2. Barkby Road/ Queniborough Road	Within capacity (highest DoS of 71.6% and Q of 9)	Within capacity (highest DoS of 75.6% and Q of 9)	Within capacity (highest DoS of 80.3% and Q of 11) Development flows through junction: 60 AM, 60, PM
4. Barkby Road/ Pembroke Avenue	Within capacity (highest RFC of 0.34 and Q of 1)	Within capacity (highest RFC of 0.36 and Q of 1)	Within capacity (highest RFC of 0.44 and Q of 1) Development flows through junction: 87 AM, 87, PM
5. Goodes Lane/ Melton Road;	Within capacity (highest RFC of 0.82 and Q of 7)	Approaching capacity (highest RFC of 0.89 and Q of 11)	Nearing capacity (highest RFC of 0.97 and Q of 20) Development flows through junction: 40 AM, 39, PM
6. Fosse Way/ High Street	Within capacity (highest DoS of 78.2% and Q of 18)	Within capacity (highest DoS of 89.2% and Q of 22)	Approaching capacity (highest DoS of 92.9% and Q of 25) Development flows through junction: 44 AM, 44, PM

The results of the revised assessment demonstrates that junctions 1m, 5 and 6 are forecast to operate above the theoretical capacity threshold of 0.85 RFC when development traffic is added.

The LHA would request for the modelling files for J1-J6 to be submitted so the LHA can review and verify the models. It should be noted that the LHA may seek mitigation at the aforementioned junctions following a review of the models.

For a consistent and robust approach, as advised in the LHA's response for planning application P/22/0354/2 (Land at Barkby Road/ Queniborough Road Syston - 251 dwellings - HA2), the LHA would request for the Applicant to undertake and submit a sensitivity test which would consider the cumulative impacts of all of the draft allocation sites included in the Draft Charnwood Local Plan, which will include sites in Syston and Queniborough in particular.

Date Received	Case Officer	Reviewer	Date issued
14 December 2022	**Suraj Dave**	**AW**	**27 January 2023**