

Technical Note

Project: Land North of Bryn lane, Wrexham

Planning Reference Number: P/2023 /0497

Date: 3rd October 2024

This Technical Note provides additional information setting out the proposed highway improvements as part of the KSS3 planning application.

Background

The proposed KSS3 application consist of two phases:

- Phase 1 - Detailed Component:
 1. Demolition of existing buildings, site clearance and preparation works, including removal of vegetation and reprofiling of topsoil, where necessary;
 2. Phase 1 – Total 61,423 sqm of employment use (B2 24,569sqm / B8 36,854sqm); and
 3. 592 car parking spaces, 138 HGV trailer spaces and HGV lorry spaces are proposed within the detailed component.
- Phase 2 - Outline Component:
 1. Total 45,510sqm of employment use (B2 18,204sqm / B8 27,306sqm);
 2. Hotel – 100-room hotel, with a floor area of approximately 3,600 sqm GEA;
 3. Drivethrus – 1,106 sqm GEA A3 uses;
 4. Local Centre – 2,450sqm;
 5. The remaining floorspace (8,994 sqm GEA) has been assumed for sui generis / lorry park / EV charging (worstcase assumes it is B8); and
 6. Up to 908 car parking spaces and up to 138 HGV trailer spaces and HGV lorry spaces are proposed across the application site.

It has been assessed within the traffic impact assessment and Wrexham's Local Development Plan VISSIM modelling that the trigger point for highway improvements associated with the KSS3 site occurs once 50% of the site is developed. The trigger point for highway improvements, therefore, occurs upon first occupation of KSS3 Phase 2 as set out in the committee report for KSS2 north as shown in Table 1.

Table 1: KSS2 North Highways Improvements Measure

Mitigation	Timing
Signalisation of the A534 / Blackwood Way roundabout as well as an additional 100m long west-bound approach lane and an additional circulatory lane on the southern quadrant of the A5156 / A534 / Holt Road roundabout	Required when 710 dwellings are occupied on KSS2, assumed to be 250 dwellings on the northern part of KSS2 (i.e. the application site) and 460 dwellings on the southern part) and approximately half of KSS3 has been developed
Spine road through KSS2 from the A5156 / A534 Holt Road to Cefn Road	Required for the number of dwellings occupied in KSS2 to exceed 710, again assumed to be 250 dwellings on the northern part of KSS2 and 460 on the southern part
An additional 100m long south bound approach lane, additional circulatory lane on the northern quadrant and signalisation of the A5156 / A534 / Holt Road	Required when the remainder of KSS2 is built out and for KSS3 to be fully developed

The applicant for KSS3 accepts the above findings, and therefore, sets out what highway contribution are to be proposed in order to allow the KSS3 site to be developed.

The split in contributions have been based on the total traffic generated at each junction. It has been assumed that the delivery of the remaining 970 dwellings of KSS2 and KSS3 Phase 2 would be the trigger for requiring for highway improvements identified above. This has informed our modelling approach and Table 2 summarises the total development trips, as relevant to KSS3.

Table 2: Total Trips at Each Junction

	A5156 / A534 / Holt Road			Blackwood Way Roundabout				
	AM	PM	Total	Total as % of overall trips	AM	PM	Total	Total as % of overall trips
KSS2 Remaining 970 Units	498	489	987	69%	135	132	267	33%
KSS3 Phase 2	217	218	435	31%	266	266	532	67%

Note for the calculation of trips generated by the remaining KSS2 development the trip distribution for KSS2 North has been utilised which routes 27% of trips towards Wrexham Industrial Estate. The KSS2 South Transport Assessment (effectively a draft document) put forward as part of their public consultation utilises a different figure which is lower. However, the 27% figure within the KSS2 North transport assessment is seen as more reasonable, noting that eventually both KSS2 North and South will benefit from connection to Byrn Lane via the proposed Link Road. 50% of the trips from KSS2 routed towards Wrexham Industrial Estate

Road has been assumed to go to KSS3. This split has been arrived at through professional judgement and reflects that KSS2 and KSS3 represents planned housing and economic growth within Wrexham. More widely, KSS3 represents a significant amount of employment growth within the LDF. Therefore, it is not unreasonable to assume that the jobs created at KSS3 could lead to residents choosing to live within KSS2. These trips, therefore, have been removed from the KSS3 trip generations to avoid double counting.

The proportional contribution based on Table 2 are as follows:

- 1) The A5156 / A534 / Holt Road Roundabout Junction – 69% KSS2 / 31% KSS3.
- 2) A534 / Borrass Hall Lane / Sandy Lane (Blackwood Way) Roundabout Junction - 33% KSS2 / 67% KSS3.

As part of discussions with Wrexham Council it is agreed that an additional £25k is to be contributed each by KSS2 North, KSS2 South and KSS3 for signal improvements at the Greysford roundabout junction.

A5156 / A534 / Holt Road Roundabout

The A5156 / A534 / Holt Road Roundabout Junction improvement costs has been estimated to be approximately £593k. In absence of WCBC developing and a costing a scheme for this junction, the cost estimate has been arrived at from professional judgement and is considered reasonable, based on understanding of similar schemes and their delivery. The improvements are provided in Appendix A.

The proposed contribution for KSS3, therefore, is £158k (31% of total cost, reflecting trip generation %).

Blackwood Way Roundabout Improvements

The A534 / Borrass Hall Lane / Sandy Lane (Blackwood Way) Roundabout Junction improvement costs has been estimated to be approximately £473k. The improvements are provided in Appendix B. In absence of WCBC developing and a costing a scheme for this junction, the cost estimate has been arrived at from professional judgement and is considered reasonable, based on understanding of similar schemes and their delivery

The proposed contribution for KSS3, therefore, is £315k (67% of total cost, reflecting trip generation %).

Summary

Table 3 below summarises the highway improvement contributions for the KSS3 site prior to the occupation of Phase 2. Further decision is required between the Applicant and WCBC to agree any detailed trigger points for payment, however this should be deferred until after the principle of the overall cost has been agreed.

Table 3: Highway Contribution Summary

Highway / Transport Improvements	Cost (£'000)	
	KSS2	KSS3
Gresford Roundabout	50	25
A534 / Wrexham Golf Club Access / KSS2 Roundabout	411	158
A534 / Borrass Hall Lane / Sandy Lane Roundabout Junction	181	315
Total	643	498

APPENDICES



APPENDIX A



BORRAS HALL LANE

WREXHAM ROAD

A534

INDUSTRIAL ESTATE ROAD

SANDY LANE

Rev.	Date	Revision Details	Drawn	Check	App.



Barnett House
53 Fountain Street
Manchester
M2 2AN
T: 0161 235 6365
F: 0161 235 6566
E: info@cbotransport.co.uk
W: www.cbotransport.co.uk

Client		
Barratt Homes and Bloor Homes North West		
Project		
KSS2 / KSS3		
Drawing Title		
Industrial Estate Roundabout Improvement Scheme		
Drawn	Checked	Approved
LPB	PC	PC
Scale / Size		Date
1:500 @ A2		25.08.2019
Status	Drg No	Rev
Information	CBO-0322-015	

APEENDIX B