

- 8.5.19 The signal head and stopline should be located at an appropriate distance from the roundabout so as to avoid confusion regarding controls at the roundabout, as required by the DMRB. The location of the signal head will be appropriately visible for approaching vehicles as dictated by the Sight Stopping Distance for the 85th percentile road speed.
- 8.5.20 The red light should show for an appropriate amount of time for any eastbound vehicles to leave the roundabout (at which point Bearwood Road will have unrestricted flow) and the time it takes for the approximately 10 queueing vehicles to be discharged through the junction.
- 8.5.21 The model outputs presented below show the junction performance during periods when eastbound Barkham Road traffic is held. This shows queueing and delay are significantly lower on the Bearwood Road arm than is the case for the future non-improvement scenarios.

Table 8.7 B3349 Barkham Road / Bearwood Road mini-roundabout Junction Improvement Results

	Morning Peak Hour (0800-0900)			Evening Peak Hour (1700-1800)		
	RFC	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)
2040 – Do Something with Development (Improvement)						
Bearwood Road	0.92	8.7	38.94	0.82	4.3	20.84
B3349 Barkham Road (E)	0.88	6.3	32.68	0.87	5.9	29.36
B3349 Barkham Road (W)	0	0	0	0	0	0

- 8.5.22 This form of improvement is suitable for this location as it enables the mini-roundabout to be retained rather than being replaced by a fully signalised junction. The Barkham Road link east of the roundabout is approximately 430m to the Barkham Road / Barkham Street mini-roundabout allowing sufficient space to facilitate eastbound queueing in advance of Barkham Road / Bearwood Road mini-roundabout without interacting with other junctions.
- 8.5.23 This method of roundabout improvement has been used successfully elsewhere in the UK.

SECTION 9 Summary and Conclusions

9.1 Summary

- 9.1.1 Crest Nicholson (Crest) are proposing to develop land known as Barkham Square to provide up to 660 dwellings plus elderly care accommodation. This Transport Assessment (TA) has been prepared to assess the transport impacts of the proposed development in support of the outline planning application.
- 9.1.2 The site is located directly north of the Arborfield Green Strategic Development Location and offers a natural extension to the existing community. The site is well located to enable most journeys to be undertaken by sustainable modes with a range of facilities and services located within comfortable walking and cycling distance, most located within Arborfield Green.
- 9.1.3 Public transport services are also easily accessible, with the final Leopard 3 bus route to be delivered as part of Arborfield Green including bus stops within a short walk of the site. It is noted that Leopard 3 may not be routed along Princess Marina Drive in line with the planned service. However, there are alternative opportunities to route services along Langley Common Road corridor. This service offers access to several key local destinations including Reading and Wokingham town centres and railway station facilitating longer distance journeys by rail.
- 9.1.4 A review of key local walking and cycling routes has identified that the site benefits from good links to both on and off-street walking and cycling networks. The access strategy for the development integrates with these existing routes and offers permeability through the site. Whilst most of the existing routes are of good quality and suitable for the journey purpose, or will be once fully built, the review identified opportunities to improve crossing provision across Barkham Road between PROW BARK7 and School Road, which the applicant is supportive of.
- 9.1.5 The proposed development trip generation has been calculated using survey data from an occupied area of the Arborfield Green development (Oak Drive), comprising 250 homes. Given the proximity of the parcel, it provides a very good indication of the level of trips to be expected.
- 9.1.6 In addition, in line with the Transport Vision and WBC's Climate Action Plan target of reducing ICE vehicle mileage by 50%, a 10% reduction in private vehicle trips has been applied which is achievable given the design will prioritise pedestrian and cyclist movements across the site and facilitate connections to existing and planned walking/cycling infrastructure surrounding it.
- 9.1.7 On this basis, the proposed development of up to 660 dwellings and elderly care accommodation has the potential to generate:

- Up to 393 two-way vehicle movements in the morning peak hour;
- Around 326 two-way vehicle movements in the evening peak hour; and
- Some 2,806 across a 12-hour day.

9.1.8 When applying Census mode share data to the trip generation, as well as the vehicle trips there could be up to:

- 69 two-way walking trips;
- 52 two-way cycling trips; and
- 35 two-way bus trips.

9.1.9 A new roundabout on Langley Common Road will form the main vehicular access, a separate vehicular access is proposed from Commonfield Lane to serve the allotments. A secondary emergency vehicle access is also proposed from Langley Common Road to the north of the main roundabout access into the site. Vehicle access will not be permitted between the site and Arborfield Green to encourage journeys between the sites to be undertaken by active modes.

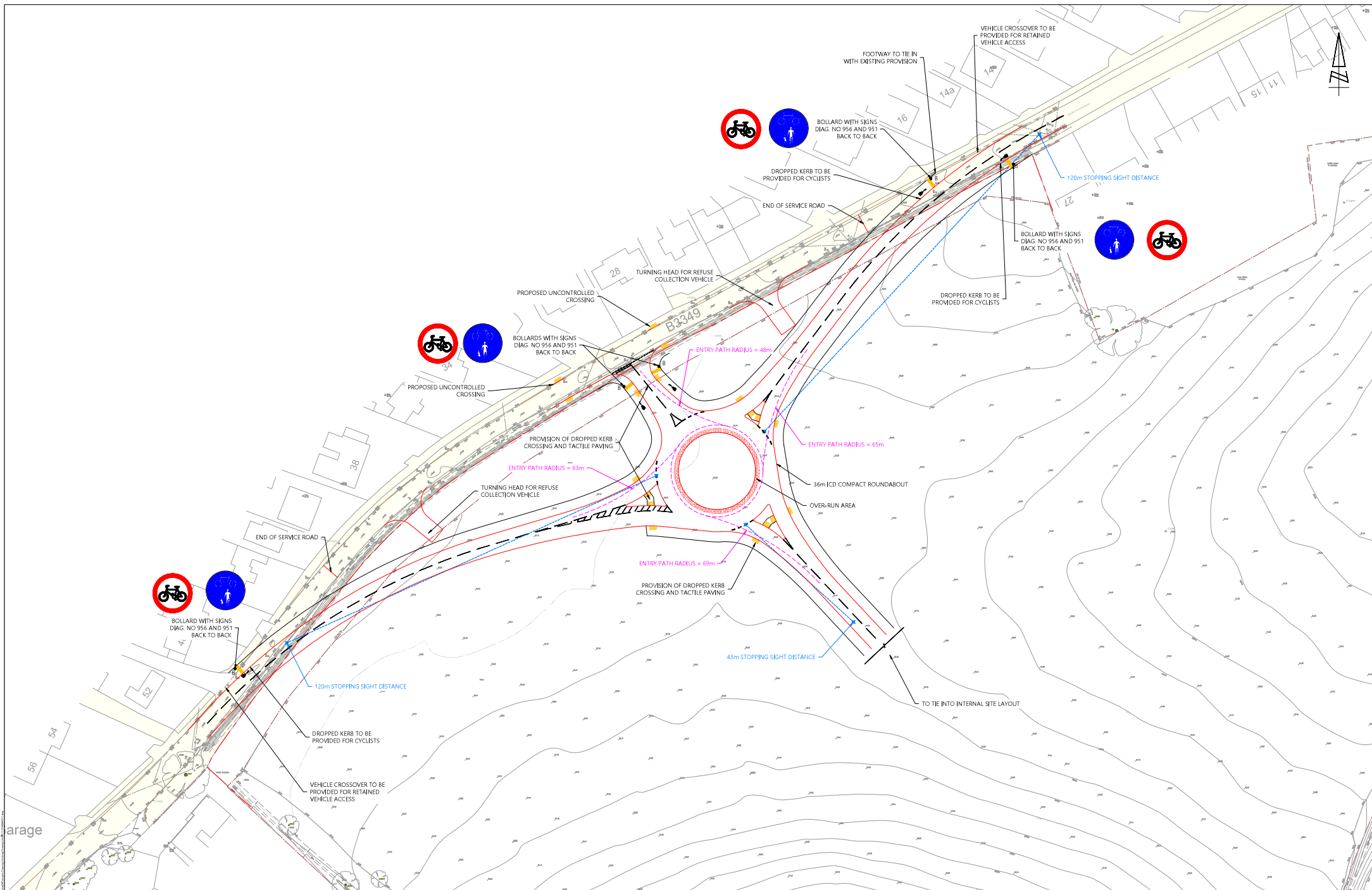
9.1.10 The development has been modelled using the WBC strategic model and individual junction modelling has also been undertaken. The results of these assessments have demonstrated the development does not result in a 'severe' impact on the local highway network.

9.2 Conclusion

9.2.1 When assessing the site against the key transport tests set out in the NPPF and other national and local policies, this TA concludes that the site:

- Will fully take up opportunities to promote sustainable transport modes;
- Safe and suitable access to the site can be achieved for all users;
- The design of site layout including streets, car and cycle parking, and servicing reflect current national guidance, including the National Design Guide and the National Model Design Code. This will be addressed in more detail at the reserved matters stage; and
- The proposed development will not generate unacceptable impacts on highway safety and, as demonstrated by both strategic and local highway modelling, falls far short of the high bar 'severe' test set by the NPPF.

APPENDIX A. PROPOSED SITE ACCESS LAYOUTS



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SCALE BAR @ 1:500
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KEY	
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1	ISSUED FOR INFORMATION	21/09/21	TH		
2	FOR INFORMATION	21/09/21	TH		

PROPOSED CONCEPT COMPACT ROUNDABOUT ACCESS GENERAL ARRANGEMENT		DATE	BY	CHK	APP
BARKHAM SQUARE		21/09/21	TH		
CREST NICHOLSON		21/09/21	TH		

PROJECT No	SCALE	DATE	APP
TL11337	1:500	21/09/21	TH
DRAWING No		TL11337-GA-001	C