LAND AT RECTORY FARM (NORTH), YATTON
CUMULATIVE IMPACT ASSESSMENT

1.0 INTRODUCTION

1.1 This Cumulative Impact Assessment (CIA) is prepared further to the pre-application response from North Somerset Council received on the 16th February 2023. As confirmed in the Screening Opinion received on the 2nd February 2023, the development does not constitute EIA development; however the Screening Opinion suggested consideration of cumulative assessment as set out below:

On 02 February 2023, following due consideration of the 'Request for formal EIA Screening Opinion', the Local Planning Authority, under reference 22/P/2963/EA1, concluded that the proposed development does not constitute 'Environmental Impact Assessment' Development and therefore an Environmental Statement is not required as part of a planning application for the following reasons:

> ***It is considered likely that the proposal is most likely to have localised impacts only, which can be addressed through the planning application process. However, to confirm this, the following assessment will be required as part of the planning application process:***
>
> - ***Cumulative Impact Assessment - to include potential impact on existing traffic movements, flooding, drainage, ecology, existing character of settlement, noise and air quality, historic landscape character and healthcare/school provision,***
> - ***Surveying requirements for sites within Zone B of the Mendip and North Somerset Bats Consultation Zone. Set out in the North Somerset and Mendip Bats SPD.***

1.2 Through the pre application response itself however consideration of cumulative assessment was further refined by the Council to:

- Noise
- Dust
- Traffic

1.3 It is noted that these matters would be considered as part of the planning application in any case, however for the avoidance of doubt, we have combined into a single document as requested. However, they are not considered in the context of regulations pertaining to the production of Environmental Impact Assessments and so are cumulative in planning terms. It should also be noted that this is an outline planning application.

1.4 Finally, we are aware that there is a development immediately south / south east of the application Site which is considered in the reports submitted within this application as necessary.

2.0 NOISE

Cumulative Road Traffic Assessment
Assessment Criteria
Design Manual for Roads and Bridges, LA 111 Noise and Vibration

2.1 With regard to the consideration of cumulative noise impacts. The approach to assessing noise and vibration effects from roads is described in Design Manual for Roads and Bridges (DMRB). The DMRB approach to assessing noise and vibration impact is to compare the noise levels for the 'do something' (with scheme) scenario against levels that would occur if the proposed development did not take place, i.e. 'do minimum' (without scheme) scenario.

2.2 The assessment methodology considers the change in noise levels due to the scheme in the short and long term and provides a description of the magnitude (reproduced in Table 1).

Table 1: Short-Term and Long-Term Magnitude of Change in Road Traffic Noise, according to DMRB

Level of Magnitude	Short Term Change in Noise Level L10,18hour dB(A)	Long Term Change in Noise Level L10,18hour dB(A)	Significance of Impact – as described in DMRB
High	≥ 5.0	≥ 10.0	Major
Medium	3.0-4.9	5.0-9.9	Moderate
Low	1.0-2.9	3.0-4.9	Minor
Negligible	0.1-0.9	0.1-2.9	Negligible
	0.0	0.0	No Change

2.3 DMRB is intended for use in the assessment of new or altered highways. However, it provides a useful reference for considering the impact of traffic increases due to other types of development.

Assessment

2.4 In order to assess changes in noise levels caused by increases in traffic flows, Hydrock have calculated Basic Road Noise Level ("BNL") for each modelled road link. The BNL has been calculated based on the methodology described in CRTN and traffic data provided by the transport planners. The BNL describes the annual average road noise level (L A10, dB) over 18-hours at a normalised distance of 10m from the kerb. The BNL is used to give an indication of the noise change due to the traffic of the Proposed Development.

2.5 Some of the road links included within the assessment have low predicted flows (< 1000 veh/ 18-hour day). CRTN states the following with regards to low traffic flows:

> *"Calculations of noise level for traffic flows below 50 veh/ h or 1000 veh/ 18-hour day are unreliable and measurements should be taken when evaluating such cases."*

2.6 As an outline planning application, Hydrock have been unable to take measurements of the future Do-Something or Do-Minimum scenarios, and no alternative methodology for calculating noise levels from roads with low traffic flows is available, Hydrock have used the CRTN BNL calculation for all road links associated with the proposed development.

2.7 Table 2 presents the predicted CRTN BNL values for the 2025 Do-Minimum and Do-Something scenarios, along with the predicted dB noise change.

2.8 Appendix E of the submitted Noise Report, which should be read in conjunction with this report, contains the traffic flow data received from the transport planners used to calculate CRTN BNL.

Table 2: Summary of Cumulative Road Traffic Increases on Noise Levels

Road Link		Predicted CRTN BNL (dB, LA10,18 hour)		dB Noise Change
No.	**Name**	**2025 plus Committed Dev. (Do-Minimum)**	**2025 plus Committed Dev. Plus Dev. (Do-Something)**	**Change due to proposed development**
1	Shiners Elms	41.2[1]	52.9[1]	11.7
2	Mendip Road N	56.5	57.4	0.9
3	Grassmere Road	56.3	57.2	0.9
4	B3133 High Street N	66.2	66.4	0.2
5	Mendip Road S	56.5	57.3	0.8
6	Heathgate	54.3[1]	55.7[1]	1.4
7	Chescombe Road	57.2	57.7	0.5
8	B3133 High Street S	65.7	65.8	0.1

[1]Traffic flows below 1000 veh/ 18-hour day therefore calculations of noise level may be unreliable.

Analysis

2.9 Table 9 shows that the predicted increase in road noise levels for the majority of road links assessed is less than 1 dB, and therefore impact can be considered negligible when assessed in line with DMRB criteria as presented in Table 1.

2.10 Road Link 6, Heathgate, is predicted to see a 1.4 dB increase in noise levels caused by traffic flow associated with the proposed development. Impact for this road link and associated receptors can therefore be considered minor when assessed in line with DMRB Short Term change criteria as presented in Table 1.

Road Link 1 – Shiners Elms

2.11 Road Link 1, Shiners Elms, is currently a Cul-de-sac with no through access, and is proposed to become an access road for the proposed development. As such, there is a significant increase in predicted traffic flows between the Do-Minimum and Do-Something scenarios, resulting in a significant increase in calculated CRTN BNL values.

2.12 In order to further assess the potential impact on existing noise sensitive receptors located along Shiner's Elms, Hydrock have inputted the calculated CRTN BNL for both scenarios into 'CadnaA' Environmental Noise Modelling software, and have calculated predicted noise levels at the facades of all impacted dwellings.

2.13 Table 10 presents the predicted façade noise level for the 'worst-case' receptor along Shiners Elms, which is predicted to undergo the highest change in predicted façade noise levels between the Do-Minimum and Do-Something scenarios. It can be seen that there is a predicted 7 dB maximum change in predicted façade noise level. Appendix F contains noise plots exported from 'CadnaA' Environmental Noise Modelling software which show predicted façade noise levels for all receptors along Shiners Elms.

Summary

2.14 It is however concluded that given the nature of the development and where the access is being taken from in relation to other committed developments, there are no cumulative noise impacts which arise.

3.0 DUST

Potential Dust Emission Magnitude

Demolition

3.1 A small agricultural building located in the southern region of the Site will be demolished as part of the proposals. The total building volume to be demolished is <20,000m3 with construction materials such as metal cladding.

3.2 Based on the above, the potential dust emission magnitude for demolition is considered to be '**Small'.**

Earthworks

3.3 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling. This may also involve levelling the site and landscaping. The total area of the Site is >10,000m2, with underlying loamy and clayey soils which have a high potential for dust release when dry due to the small particle size.

3.4 Based on the above, the potential dust emission magnitude for earthworks is considered to be '**Large'**.

Construction

3.5 The key issues when determining the potential dust emission magnitude during the construction phase include the size of the building(s)/infrastructure, method of construction, construction materials, and duration of build. An estimation of the total volume of buildings to be constructed has been estimated based on the masterplan of the Proposed Development.

3.6 The total volume of buildings to be constructed was estimated to be between 25,000m3 - 100,000m3, with construction materials likely comprising masonry, concrete and glass. It has been assumed that concrete batching and sandblasting will not be undertaken onsite.

3.7 Based on the above, the potential dust emission magnitude for construction is considered to be '**Medium**'.

Trackout

3.8 The risk of impacts occurring during Trackout is predominantly dependent on the number of vehicles accessing the Site on a daily basis. However, vehicle size, speed and the duration of activities are also factors which are used to determine the risk of impacts.

3.9 It is expected that the number outwards movements from the Site will fall into the IAQM's medium category. No unpaved surfaces over 50m are likely to be utilised, as it has been assumed that site traffic would be routed along the existing road network.

3.10 Based on the above, the potential dust emission magnitude during Trackout is considered to be '**Medium**'.

Summary

Table 8 below shows a summary of the potential dust emission magnitudes from each activity.

Table 3: Potential Dust Emission Magnitude Summary

Activity	Dust Emission Magnitude
Demolition	Small
Earthworks	Large
Construction	Medium
Trackout	Medium

Sensitivity of Area

3.11 The prevailing wind direction for the closest regionally representative meteorological measurement station to the Site, at Bristol Airport, is shown in Appendix B of the Air Quality Assessment. The wind rose shows that the prevailing winds are from the south-west.

3.12 Figure 6 shows the construction phase distance buffers (20m, 50m, 100m and 350m) around the Site boundary, as well as identified high sensitivity receptor locations within these buffers.

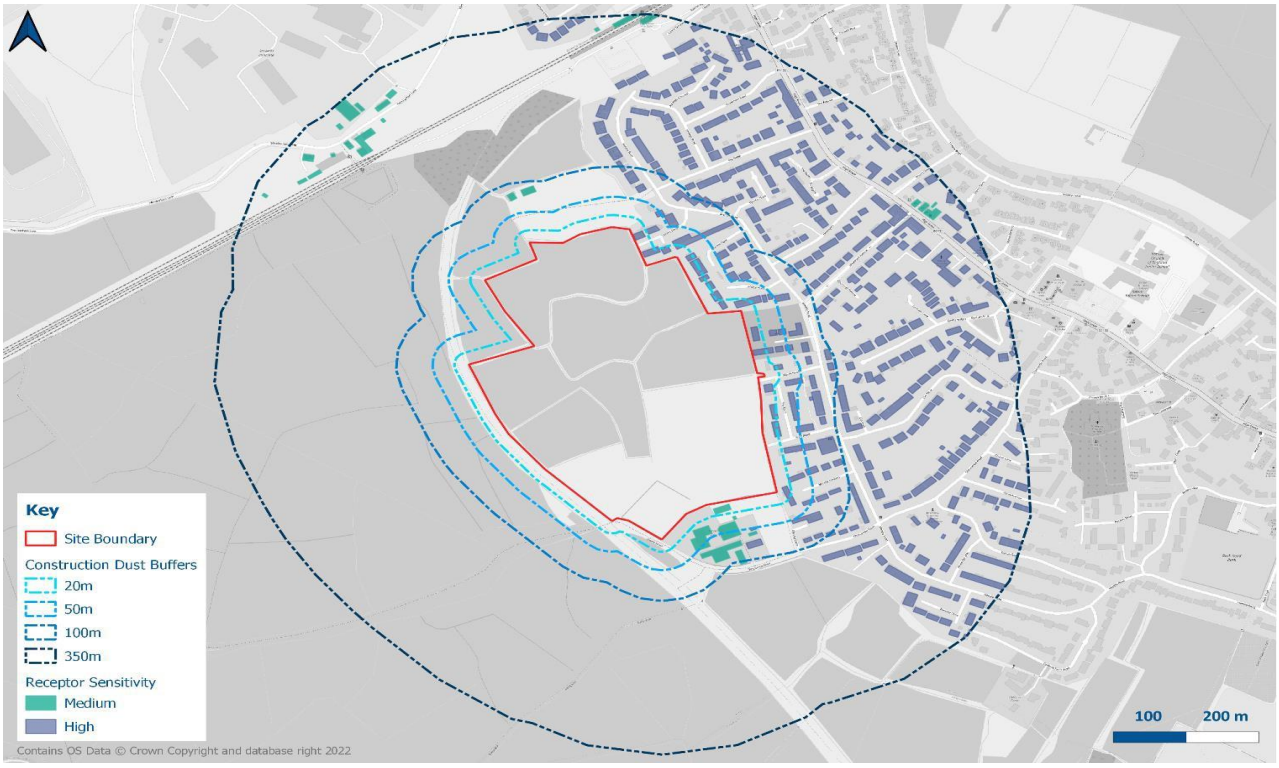

Figure 6: Construction Phase Receptors

Dust Soiling Impacts

3.13 Figure 6 illustrates there are more than 10 high sensitivity human receptors within 20m of the Site boundary. As such, the overall sensitivity of the surrounding area to nuisance dust soiling effects during Demolition, Earthworks and Construction, according to IAQM guidance, is defined as '**High'**.

3.14 With regard to Trackout, the sensitivity for Medium size sites is assessed where receptors are located within 50m from Trackout routes up to 200m from the Site. As there are more than 10 high-sensitivity receptors within 20m of potential Trackout routes from the Site, the sensitivity to dust soiling impacts from Trackout is defined as '**High**'.

Human Health Impacts

3.15 Defra mapped background predictions (Table 6) show that annual mean concentrations of PM10 are not likely to exceed 24µg/m3 in the vicinity of the Site34, based on 2019 estimates. According to IAQM guidance, where PM10 concentrations are <24µg/m3 and there are less than 100 high sensitivity receptors within 20m of construction works, the overall sensitivity of the surrounding area to human health impacts is defined as '**Low**' for Demolition, Earthworks, Construction and Track.

Ecological Impacts

3.16 Biddle Street, Yatton SSSI lies within 50m of the Site boundary.

3.17 Box 8 of the IAQM construction guidance provides indicative examples of ecological receptor sensitivities. It states that SSSI designations with dust sensitive features are considered to be medium sensitivity receptors. As the dust sensitivity of the habitat within the Biddle Street, Yatton SSSI is unknown, the ecological site has been conservatively assumed to be a medium sensitivity receptor, in accordance with the IAQM guidance.

3.18 On this basis, the overall sensitivity of the surrounding area to ecological impacts during Demolition, Earthworks, Construction and Trackout stages, according to IAQM guidance, is defined as '**Medium**'.

Summary of Area Sensitivity

3.19 The sensitivity of the surrounding area for the potential impacts discussed above is summarised in Table 4 below.

Table 4: Sensitivity of Local Area

Potential Impact	Sensitivity of Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	High
Human Health	Low	Low	Low	Low
Ecological	Medium	Medium	Medium	Medium

Risk of Impacts

3.20 Using the methodology prescribed in the IAQM guidance, the overall risk of impacts can be defined by combining the sensitivity of the area with the potential dust emission magnitude of each stage of the construction phase as described above.

3.21 Table 5 provides a summary of the construction dust risk assessment. Overall, the Proposed Development is considered to be **High Risk** for nuisance dust soiling effects, a **Low Risk** for PM_{10} health effects, and a **Medium Risk** for ecological impacts, in the absence of mitigation.

Table 5: Risk of Adverse Impacts During Construction Phase

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	High Risk	Medium Risk	Medium Risk
Human Health	Negligible	Low Risk	Low Risk	Low Risk
Ecological	Low Risk	Medium Risk	Medium Risk	Low Risk

Cumulative Impacts

3.22 The overall construction dust risks associated with the Proposed Development are 'High'. Through managed mitigation, the impacts can be reduced to negligible. The site-specific measures are outlined in Appendix E of the Air Quality Assessment.

3.23 Where local committed developments are constructed concurrently, managed implementation of their respective Construction Management Plans will minimise risks. Moreover, regular communication and meetings (when appropriate) between developers to ensure plans are co-ordinated will further minimise the effects of any associated emissions.

Table 6: Summary of Worst-case Noise Impact on receptors along Shiners Elms.

Link Road Receptors	Predicted Façade Noise Level – Worst Case Receptor along Shiners Elms (dB, LA10,18 hour)		dB Noise Change
	2025 plus Committed Dev. (Do-Minimum)	2025 plus Committed Dev. Plus Dev. (Do-Something)	Change due to proposed development
Shiners Elms	46	53	7

3.24 Table 6 shows that the maximum predicted increase in façade noise level for receptors along Shiners Elms is 7 dB. When assessed in line with the DMRB criteria presented in Table 4, this suggests a 'major' impact is likely when assessed against the baseline. However, it is important to

assess the absolute noise level, and consider this in context. Receptors situated along Mendip Road and other local residential roads are likely to be currently experiencing façade noise levels that exceed predicted facade noise levels at Shiners Elms for both modelled scenarios.

3.25 The predicted façade noise levels at receptors situated along Shiners Elms are low enough such that BS 8233:2014 internal ambient noise levels can be achieved within Living Rooms and Bedrooms using standard double glazing and non-acoustic trickle ventilators for both modelled scenarios, which is likely to be the current façade specification for the existing receptors.

3.26 External noise levels within back garden amenity areas for all receptors along Shiners Elms are predicted to fall comfortably below BS 8233:2014 upper guideline values of 55 dBA for both scenarios.

Summary

3.27 It is therefore seen that, although assessment of changes in noise levels in line with DMRB criteria suggest a 'major' impact is likely for receptors along Shiners Elms when assessed against the baseline, predicted absolute façade noise levels remain low and internal noise levels within all affected dwellings are likely to readily achieve BS 8233:2014 criteria with no additional mitigation. As such there is no cumulative impact which arises in respect of dust.

4.0 TRAFFIC / TRANSPORT

Cumulative Assessment

4.1 The application has assessed the cumulative impact of the development in planning terms. This has been achieved through the use of TEMPRO growth rates to reflect background/planned growth, and the explicit inclusion of committed development where appropriate.

Committed Development

4.2 Two developments were incorporated into the committed development for the traffic flow diagrams.

4.3 Land Off Moor Road Yatton (Ref: 19/P/3197/FUL) is a residential development of 60 dwellings with supporting infrastructure and a new vehicular access. (Application was refused in July 2021 with an appeal allowed). The site is located north of the proposed development Rectory Farm (north) and is bound by Kenn Moor Road in the south-east and the B3133 North End Road in the south-west.

4.4 Rectory Farm (Ref: (21/P/0236/OUT) is a residential development of 100 dwellings with support infrastructure and a new vehicular access. Rectory Farm is located just south of Rectory Farm (North) and is bound by the Strawberry Line in the west and residential development on Chescombe Road in the east.

TEMPRO growth rates

4.5 The 2022 surveyed traffic flows have been growthed to 2025 (year of first occupation) and 2028 (future year) using the following TEMPRO growth rates for North Somerset 012 which covers the area of Yatton:

- North Somerset 012 2022-2025: 1.0577
- North Somerset 012 2022-2028: 1.0884

Operational Assessment Scenarios

4.6 The following scenarios have been modelled:

- 2025 Base AM + PM
- 2025 Base + Committed Developments AM + PM
- 2025 Base + Committed Developments + Proposed Development AM + PM
- 2028 Base AM + PM
- 2028 Base + Committed Developments AM + PM
- 2028 Base + Committed Developments + Proposed Development AM + PM

Junction Capacity Assessments

4.7 The modelling outputs are attached as Appendix G of the Transport Assessment.

Grassmere Road/B3133 High Street priority junction (PICADY)

4.8 The results of the capacity testing of the Grassmere Road/B3133 High Street priority junction are set out below at Table 6.

Table 6: Grassmere Road/B3133 High Street priority junction Summary

Year	Period	Scenario(s):	Max RFC (all arms)	Max End Queue (all arms)
2025	AM Peak (08:00-09:00)	Base	0.19	0.2
	PM Peak (17:00-18:00)	Base	0.14	0.2
	AM Peak (08:00-09:00)	Base + Committed	0.19	0.2
	PM Peak (17:00-18:00)	Base + Committed	0.14	0.2
	AM Peak (08:00-09:00)	Base + Committed + Development	0.24	0.3
	PM Peak (17:00-18:00)	Base + Committed + Development	0.17	0.4
2028	AM Peak (08:00-09:00)	Base	0.20	0.2
	PM Peak (17:00-18:00)	Base	0.14	0.2
	AM Peak (08:00-09:00)	Base + Committed	0.20	0.2
	PM Peak (17:00-18:00)	Base + Committed	0.15	0.2
	AM Peak (08:00-09:00)	Base + Committed + Development	0.25	0.3
	PM Peak (17:00-18:00)	Base + Committed + Development	0.18	0.4

4.9 Table 6 demonstrates that in the 2025 base + committed + development scenario the maximum RFC would be 0.24 during the AM peak with a queue of 0.3 vehicles on all arms. During the PM peak, the maximum RFC would be 0.17 on all arms with a queue of 0.4 vehicles. The Grassmere Road/B3133 High Street priority junction therefore has sufficient capacity to accommodate the traffic generated by the proposal.

4.10 Table 6 demonstrates that in the 2028 base + committed + development scenario the maximum RFC would be 0.25 during the AM peak with a queue of 0.3 vehicles on all arms. During the PM peak, the maximum RFC would be 0.18 on all arms with a queue of 0.4 vehicles. The Grassmere Road/B3133 High Street priority junction therefore has sufficient capacity to accommodate the traffic generated by the proposal.

4.11 Queue data recorded for the existing Grassmere Road/B3133 High Street priority junction has been analysed for the peak hours to provide a layer of validation for the queues shown in the existing model.

4.12 The analysis demonstrated that the modelled and observed queues are within typical daily variations in queue lengths. There is minimal queueing at this junction in both peak periods. It is considered that the models reflect the observed operation of the Grassmere Road/B3133 High

Street priority junction.

Chescombe Road/B3133 High Street priority junction (PICADY)

4.13 The results of the capacity testing of the Chescombe Road/B3133 High Street priority junction are set out below at Table 7:

Table 7: Chescombe Road/B3133 High Street priority junction Summary

Year	Period	Scenario(s):	Max RFC (all arms)	Max End Queue (all arms)
2025	AM Peak (08:00-09:00)	Base	0.10	0.2
	PM Peak (17:00-18:00)	Base	0.18	0.4
	AM Peak (08:00-09:00)	Base + Committed	0.13	0.2
	PM Peak (17:00-18:00)	Base + Committed	0.20	0.5
	AM Peak (08:00-09:00)	Base + Committed + Development	0.17	0.3
	PM Peak (17:00-18:00)	Base + Committed + Development	0.22	0.5
2028	AM Peak (08:00-09:00)	Base	0.10	0.2
	PM Peak (17:00-18:00)	Base	0.19	0.5
	AM Peak (08:00-09:00)	Base + Committed	0.14	0.2
	PM Peak (17:00-18:00)	Base + Committed	0.21	0.5
	AM Peak (08:00-09:00)	Base + Committed + Development	0.17	0.3
	PM Peak (17:00-18:00)	Base + Committed + Development	0.23	0.6

4.14 Table 7 demonstrates that in the 2025 base + committed + development scenario the maximum RFC would be 0.17 during the AM peak with a queue of 0.3 vehicles on all arms. During the PM peak, the maximum RFC would be 0.22 on all arms with a queue of 0.5 vehicles. The Chescombe Road/B3133 High Street priority junction therefore has sufficient capacity to accommodate the traffic generated by the proposal.

4.15 Table 7 demonstrates that in the 2028 base + committed + development scenario the maximum RFC would be 0.17 during the AM peak with a queue of 0.3 vehicles on all arms. During the PM peak, the maximum RFC would be 0.23 on all arms with a queue of 0.6 vehicles. The Chescombe Road/B3133 High Street priority junction therefore has sufficient capacity to accommodate the traffic generated by the proposal.

4.16 Queue data recorded for the existing Chescombe Road/B3133 High Street priority junction has been analysed for the peak hours to provide a layer of validation for the queues shown in the existing model.

4.17 The analysis demonstrated that the modelled and observed queues are within typical daily variations in queue lengths. There is minimal queueing at this junction in both peak periods. It is considered that the models reflect the observed operation of the Chescombe Road/B3133 High Street priority junction.

Sensitivity traffic impact assessment

4.18 A sensitivity assessment of the development traffic's impact on the surrounding highway network was carried out considering the use of Shiners Elms as the only vehicular access.

4.19 This sensitivity assessment has been undertaken to support the phased delivery of the site. As set out within Section 5.2, the development proposes two accesses which form the basis for the access strategy.

4.20 Detailed operational assessments have been carried out to determine the potential impact of the proposed development on the performance of the following junction:

- *Grassmere Road/B3133 High Street priority junction*

4.21 As vehicles will no longer be routing along Chescombe Road as part of this sensitivity assessment, it is not considered necessary to include the Chescombe Road/High Street priority junction in the modelling assessment.

4.22 The assessment of this junction has been undertaken using the PICADY module within the TRL 'Junctions' software.

4.23 The results of the capacity testing of the Grassmere Road/B3133 High Street priority junction are set out below at Table 8.

Table 8: Grassmere Road/B3133 High Street priority junction sensitive summary

Year	Period	Scenario(s):	Max RFC (all arms)	Max End Queue (all arms)
2025	AM Peak (08:00-09:00)	Base	0.19	0.2
	PM Peak (17:00-18:00)	Base	0.14	0.2
	AM Peak (08:00-09:00)	Base + Committed	0.19	0.2
	PM Peak (17:00-18:00)	Base + Committed	0.14	0.2
	AM Peak (08:00-09:00)	Base + Committed + Development (Sensitivity)	0.29	0.4

	PM Peak (17:00-18:00)	*Base + Committed + Development (Sensitivity)*	*0.19*	*0.4*
2028	*AM Peak (08:00-09:00)*	*Base*	*0.20*	*0.2*
	PM Peak (17:00-18:00)	*Base*	*0.14*	*0.2*
	AM Peak (08:00-09:00)	*Base + Committed*	*0.20*	*0.2*
	PM Peak (17:00-18:00)	*Base + Committed*	*0.15*	*0.2*
	AM Peak (08:00-09:00)	*Base + Committed + Development (Sensitivity)*	*0.30*	*0.4*
	PM Peak (17:00-18:00)	*Base + Committed + Development (Sensitivity)*	*0.20*	*0.5*

4.24 Table 8 demonstrates that in the 2025 base + committed + development (sensitivity) scenario the maximum RFC would be 0.29 during the AM peak with a queue of 0.4 vehicles on all arms. During the PM peak, the maximum RFC would be 0.19 on all arms with a queue of 0.4 vehicles. The Grassmere Road/B3133 High Street priority junction therefore has sufficient capacity to accommodate the traffic generated by the proposal.

4.25 Table 8 demonstrates that in the 2028 base + committed + development scenario the maximum RFC would be 0.30 during the AM peak with a queue of 0.4 vehicles on all arms. During the PM peak, the maximum RFC would be 0.20 on all arms with a queue of 0.5 vehicles. The Grassmere Road/B3133 High Street priority junction therefore has sufficient capacity to accommodate the traffic generated by the proposal.

4.26 Queue data recorded for the existing Grassmere Road/B3133 High Street priority junction has been analysed for the peak hours to provide a layer of validation for the queues shown in the existing model.

4.27 This sensitivity assessment demonstrates that the total development can be served by a single access if required as part of the construction phasing.

Development Traffic Impact Summary

4.28 This section has taken a robust approach by undertaking junction capacity modelling of two junctions.

4.29 The modelling revealed that both the Grassmere Road/B3133 High Street priority junction and the Chescombe Road/B3133 High Street priority junction reach a maximum RFC of 0.25, indicating that the junctions would operate within capacity. Furthermore, the largest increase in RFC resulting from the development was 0.4 RFC, which is not considered to indicate a material change in the operation of the junction.

4.30 This demonstrates that the proposed development would not have a material impact on the operation of the local highway network and its impact would not be severe.

4.31 The sensitivity traffic impact assessment demonstrates that the modelled and observed queues are within typical daily variations in queue lengths. There is minimal queueing at this junction in both peak periods. It is considered that the models reflect the observed operation of the Grassmere Road/B3133 High Street priority junction.

4.32 This therefore demonstrates that the proposed development would not have a material adverse impact on the operation of the local highway network with the sole use of the northern access, and therefore its impact would not be severe.

5.0 SUMMARY

5.1 In summary, the work carried out with the application, and summarised as appropriate in this report, confirms that there will be no adverse cumulative impact that cannot be appropriately mitigated.