

To: Castlewood Properties Ventures Ltd

From: SLR Consulting Limited

Project No. 410.065205.00001

**RE: Land South of White Horse Business Park, North Bradley – Air Quality
Technical Memorandum**

1.0 Introduction

SLR Consulting Ltd (SLR) has been commissioned by Castlewood Properties Ventures Ltd to undertake an air quality assessment to appraise an outline planning application for a proposed residential development ('Proposed Development'), on land south of White Horse Business Park, North Bradley, Trowbridge (the 'Site').

1.1 Application Background

An outline planning application was submitted in June 2020 for up to 100 dwellings and vehicular access from the A363 (Wiltshire Council (WC) application reference: 20/03641/OUT). As part of the planning submission, an air quality assessment was undertaken by SLR (SLR document reference 410.11511.00001_Land South of White Horse Business Park V1.1) which assessed the potential impacts associated with the construction and operational phases of the Proposed Development. The findings of the air quality assessment concluded that the impacts associated with the construction and operation of the Proposed Development were considered to have an insignificant effect on local air quality. In addition, the Site was found to be suitable for the proposed residential use. Effects associated with the likely exposure of future occupants was considered 'not significant' and no air quality mitigation measures were required.

Following planning submission, amendments have been made to the Proposed Development design, resulting in a reduction in dwellings to 70. This technical memorandum therefore addresses any implications of the design changes on the assessment outcomes as well as changes to air quality policy and guidance in the interim following initial submission.

The changes to the Proposed Development and the implications for the assessed works are presented and discussed in Table A.

2.0 Assessment Change Implications

A review of the design changes and updates to air quality policy and guidance in relation to the previous assessment outcomes has been undertaken in order to identify any implications to the previous assessment outcomes and is presented in Table A.

Table A: Assessment Change Implications

Assessment Section	Previous Assessment	Design Change	Updated Assessment	Assessment Implication
Policy and Legislation	The PM _{2.5} assessed annual mean Ambient Air Quality Assessment Level (AQAL) was 25µg/m ³ .	-	The PM _{2.5} annual mean AQAL has changed to 20µg/m ³ . Local Policy has remained consistent with the previous assessment.	No implications to previous assessment outcomes.
Guidance	The Department of Environment Food and Rural Affairs (Defra) Local Air Quality Management Technical Guidance (LAQM.TG(16)) was used.	-	LAQM.TG(22) has since been published and adopted but there are no material amends to the assessment methodology undertaken.	No implications to previous assessment outcomes.
Baseline and Monitoring	2019 was used to establish baseline environment using WC passive diffusion tubes data and Defra mapped background concentrations.	-	Monitoring data collected during 2020 and 2021 are expected to be atypical due to the COVID-19 pandemic. As such, the baseline air quality review from the previous assessment remains valid.	No implications to previous assessment outcomes.
Construction	A qualitative assessment of the potential dust impacts during the construction phase was undertaken in line with the IAQM guidance. The Site was found to be at worst 'medium risk' in relation to dust soiling effects on people and property and 'low risk' in relation to human health impacts. Provided mitigation measures are implemented such as those detailed in Section 7.1 of the air quality assessment, residual effects from dust emissions during	Reduction in number of residential dwellings from 'up to 100' to 70.	The reduction in the number of dwellings will not change the dust emission magnitude for earthworks, construction and trackout. The red line boundary has not changed and as such, the assessed sensitivity of the area remains unchanged.	The findings of the construction dust assessment remain unchanged and the commensurate mitigation measures remain relevant to the updated design.



Assessment Section	Previous Assessment	Design Change	Updated Assessment	Assessment Implication
	the construction phase were considered to be 'not significant'.			
Operational Phase – Road Traffic Screening Assessment	Developmental vehicle trips were provided by Badingham UK Limited – the appointed transport consultant: The maximum development generated vehicle trips as distributed onto the local road network (based on 110 dwellings - a conservative consideration) were found to be: • 313 annual average daily traffic (AADT) light duty vehicles (LDV); and • 3 AADT heavy duty vehicles (HDV). Development generated vehicle trips were therefore found to be below the relevant EPUK and IAQM indicative screening criteria for detailed assessment. Road traffic impacts associated with the operational phase were therefore considered as having an insignificant effect on local air quality.	Reduction in number of residential dwellings from 'up to 100' to 71.	Updated developmental vehicle trips have been provided by Badingham UK Limited – the appointed transport consultant. The updated maximum development generated vehicle trips as distributed onto the local road network are found to be: • 202 AADT LDV; and • 2 AADT HDV. Following design changes, development generated vehicle trips remain below the relevant EPUK and IAQM indicative screening criteria for detailed assessment. Road traffic impacts associated with the operational phase are therefore considered as having an insignificant effect on local air quality.	The findings of the operational phase road traffic screening assessment remain unchanged. No further assessment is required.
Operational Phase – Site Suitability Assessment	A qualitative site suitability assessment was undertaken with reference to publicly available air quality datasets. The Site was considered suitable for the Proposed Development without the inclusion of scheme-specific mitigation measures. As such, effects associated with the likely exposure of future occupants was considered to be 'not significant'.	Reduction in number of residential dwellings from 'up to 100' to 71 (no change to the red line boundary).	Since the time of the previous air quality assessment, no air quality management area (AQMA) has been declared in the Site locale. The nearest AQMA remains >4.5km to the south (Westbury AQMA). As such, the Site is not considered sensitive in relation to air quality. Due to the implications of the COVID-19 pandemic, no updated representative monitoring data is available. The WC local monitoring data used to inform the site suitability assessment remains relevant. Concentrations therefore remain 'well below' the relevant AQALs (including	The findings of the previous site suitability assessment remain unchanged.



Assessment Section	Previous Assessment	Design Change	Updated Assessment	Assessment Implication
			consideration of the updated PM _{2.5} AQAL). Defra mapped background annual mean NO ₂ , PM ₁₀ and PM _{2.5} concentrations remain 'well below' the relevant AQALs.	



3.0 Conclusion

SLR Consulting Ltd has been commissioned by Castlewood Venture Properties Ltd to undertake an air quality assessment to appraise an outline planning application for a proposed residential development comprising up to 70 dwellings, on land at North Bradley, Trowbridge.

SLR has undertaken an air quality assessment for a previous design iteration comprising of 'up to 100' dwellings. Following submission, a design change resulted in the number of dwellings reducing to 70 units. A review of the design changes has been undertaken in relation to the previous assessment outcomes in addition to consideration of updates to policy and guidance in the interim. The findings indicate that the previous assessment outcomes remain unchanged and no further assessment is required. As such, no additional mitigation measures than those presented in the previous air quality assessment are required.

For clarity, the operational phase measurements included to address WC Environment Health Officer (EHO) comments have been replicated herein. The EHO outlined the following requirement within pre application correspondence and reiterated in response to the original assessment:

"1. No development shall commence on site until a scheme of Ultra Low Energy Vehicle infrastructure has been submitted to the LPA. The scheme must be approved by the LPA prior to implementation and thereafter be permanently retained."

Reason: *Core Policy 55; Development proposals, which by virtue of their scale, nature or location are likely to exacerbate existing areas of poor air quality, will need to demonstrate that measures can be taken to effectively mitigate emission levels in order to protect public health, environmental quality and amenity."*

Addressing the above requirement, electric vehicle charging facilities will be provided in accordance with local policy requirements. Transport related mitigation measures proposed within the transport assessment would reduce the impact of the proposed development on air quality. The Travel Plan will bring forward an array of measures to encourage sustainable travel including walking and cycling improvements together with financial commitments.

Furthermore, in response to the original assessment the EHO also requested the following:

"Section 106: monies are requested in respect of Air Quality and the ongoing monitoring activity that takes place in the Trowbridge area. A 106 contribution of £10000 towards the updating of air quality monitoring equipment and its maintenance is required."

