

Air Quality - Response to Havant Borough Council Environmental Health Comments

32 New Lane, Havant, Hampshire

Presented to Havant Borough Council c/o Havant Property Investment LLP

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Delta-Simons Project Number: 20-1275.03

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1. Introduction

Delta-Simons was instructed by Havant Property Investment LLP (the 'Client') to undertake an Air Quality Assessment (the 'DS Report') in support of a planning application for the proposed B8 Distribution Facility (the 'Proposed Development') at 32 New Lane, Havant, Hampshire (the 'Site').

A planning application (reference: APP/21/00200) was submitted to Havant Borough Council (HBC) in February 2021 for 'Demolition of existing buildings and redevelopment of site comprising erection of distribution warehouse (class B8) with ancillary offices and related facilities, vehicle storage deck, new access, landscaping and associated infrastructure.' This was accompanied by the DS Report (Delta-Simons ref: 20-1275.01; dated 26th January 2021).

The report concluded:

*'The Proposed Development is expected to result in a **negligible** impact associated with the operational phase traffic on nearby receptors and the residual effects are considered to be **not significant**. As such, in accordance with the assessment criteria, additional mitigation is not required. [...]*

Furthermore, it is considered that the Proposed Development complies with national and local policy for air quality.'

Subsequent to the submission of the DS Report, comments were received from the HBC Environmental Control Officer (ECO) on 27th April 2021, requesting further clarification of aspects of the road traffic emissions dispersion modelling detailed within the DS Report.

The remainder of this note addresses these comments.

2. HBC Comments and Delta-Simons Responses

Comment 1

'Air Quality - Impact Assessment, Construction Phase (Construction Management Plan)

Comments relate to the Delta Simons Air Quality Assessment Report Ref: 20-1275.01 iss.2 (April 2021) & the TSL Construction Management Plan dated 12/01/21 issue 1.

The Air Quality report concluded that unmitigated construction activities would represent up to high risk of dust soiling impacts and medium risk of increases in particulate matter concentrations, but that through the implementation of suitable mitigation measures, the effect of dust and PM₁₀ releases would be significantly reduced (to a low/negligible risk). Suggested measures are outlined within section 6.1, and these measures are agreed to represent good practice.

The measures given in section 6.1 of the air quality report are broadly represented in the TSL management plan. I would recommend that the TSL management plan be listed as an approved supporting document comprising an integral part of the scheme, so as to make it's contents (in principle) 'enforceable'. I don't believe that a specific compliance condition is strictly necessary.

If the Development Management service considers it necessary to include a specific condition requiring that the CMP be observed, please let me know and I will draft some condition wording which refers to compliance the submitted framework document & establishes a requirement for LPA approval to be obtained for revisions in respect of certain sections (e.g. working hours, dust suppression etc.).'

Response 1

As stated in paragraph 6.1.1 of the DS Report, 'a Construction Management Plan has been provided and summarises the systems, procedures and controls that will be adopted by the Principal Contractor and the Sub-contractors to minimise any adverse environmental effects during construction.' This is the TSL Management Plan referred to above.

Specific detail with regard to the works schedule and methods were not available when the assessment work for the DS Report was undertaken.

Comment 2

'Air Quality – Impact Assessment, Operational Phase

Comments relate to the Delta Simons Air Quality Assessment Report Ref: 20-1275.01 iss.2 (April 2021).

The report refers to the EPUK & IAQM industry guidance 'planning for air quality' v1.2 2017 in determining significance of any changes to local air quality. The report does reference both National & Local Policy, but does not recognise that the industry guidance pre-dates both the NPPF & LP2036 Policies, nor that there is a compelling argument to make that the significance scales given within the industry guidance is no longer compatible with prevailing policy. Relevant illustrative text from the NPPF is quoted within the report.

In addition, emerging policy from the LP2036 deliberately aims to better the degree of protection offered by the industry guidance, and the extant policy (DM10) includes wording which is compatible with the latest version of the NPPF (i.e. including 'health' focus in addition to a 'standards focus'. I refer to this policy context in light of uncertainty in the reliability of the outputs of the assessment, and of the conclusions that are based upon these outputs.'

Response 2

The DS Report (dated 26th January 2021) referred to the significance criteria from the EPUK/IAQM (2017) guidance for the operational phase assessment of vehicle emissions. Whilst this industry-standard guidance pre-dates the latest version of the NPPF, used in combination with worst-case model inputs it is considered to represent a robust assessment.

As detailed in paragraph 5.3.4, of the DS Report:

'for the purposes of the assessment, traffic data for 2022 was utilised as the development opening year. Air quality is predicted to improve in the future based on expected reduction in roadside levels as a result of technological advancements as stated in Section 3.2.13. However, in order to provide a robust assessment, emission factors and background concentrations for 2019 were utilised within the dispersion model. The use of 2022 traffic data and 2019 emission factors and background

concentrations is considered to provide a worst-case scenario and therefore a sufficient level of confidence can be placed within the predicted pollution concentrations.'

It is noted that the Havant Borough Local Plan 2036 (LP2036) is yet to be adopted, although it was considered in the assessment. Policy E23 states:

'The purpose of this policy is therefore at least to sustain existing levels, and where possible secure improvements in air quality by requiring new development to offset its associated emissions.'

As no significant change to pollutant concentrations is anticipated as a result of the Proposed Development, it is considered to comply with this draft policy, in terms of sustaining existing levels of air pollution. However, as detailed in paragraph 6.2.2 of the DS Report:

'the occupier will be introducing electric vehicles to its fleet and associated charging infrastructure at the Site 'in order to limit the impact of the Site's operations on the environment'.

Further details of the proposed mitigation measures that could benefit air quality were not available at the time the DS Report was completed. However, a Travel Plan produced by the Project Transport Consultant (PTC) (Vectos; dated January 2021) has since been submitted in support of the planning application. The Travel Plan includes the following measures that will reduce overall emissions to air associated with the operation of the Proposed Development:

- ▲ Welcome packs and notice boards to inform employees of the Travel Plan;
- ▲ Measures to promote the use of public transport, including provision of details of local bus and rail services to staff;
- ▲ Measures to promote walking and cycling to and from the Site, including segregated routes on Site, cycle parking, lockers and changing facilities;
- ▲ Promotion of car sharing schemes and national events; and
- ▲ Ongoing monitoring and review of the Travel Plan.

Comment 3

'I note that the baseline traffic figures used for the assessment are crude; there is poor resolution in traffic flow estimates between road links and the figures quoted do not appear to correspond to the values given by the referenced source; differing substantially in the estimate of proportion of traffic representing HGV's, for example. Some values attributed to key road links differ significantly from estimates used in assessments undertaken for other developments – differing by up to a -1/3rd (Park Road North / Park Road South in particular). This will reduce the accuracy of the model. Where the verification points are close to the affected road links (e.g. DT22), this will serve to increase the magnitude of the adjustment factor that needs to be applied. Where verification points are not on affected road links (e.g. if adjacent to an accurately characterised link, effects will not be fully accounted for within the verification process..'

Response 3

Whilst the base traffic flows for the Air Quality Assessment detailed in the DS Report were derived from the Department for Transport (DfT), additional flows were also obtained from a review of previous assessments in the vicinity, including those for the verification link which covers DT22/DT28.

Specifically, the additional base flow data were obtained from the Air Quality Assessment for the Former Colt International Site (WYG ref: A090070-182; dated March 2018) for use on links where DfT traffic flows were not available. These were then factored to the appropriate assessment years using TEMPro growth factors.

With reference to Appendix E of the DS Report, it should be noted that an RMSE of 1.18 was calculated, indicating a good correlation between monitored and modelled datasets at the verification locations. Furthermore, in order to manage the current traffic survey challenges, associated with prevailing low traffic flows (as a result of the recent restrictions), conservative model inputs were used for the future scenarios, including 2019 emissions factors and background pollutant concentrations.

Comment 4

'It should also be noted that the quantitative assessment of development impact is based upon overall operational trip generation figures and 'net change in trip generation' estimates which are both disputed by the Highways Authority. This raises doubts as to the validity (or 'representativeness') of the estimate of development impact (both in highway, and air quality terms).

Contradictory (development operational-phase traffic) trip distributions are also given in the transport assessment, understood to be a result of a typographical error. Allocation of the development trips to the local road network is not stated clearly in the report, and is only possible to derive by calculation. It appears the air quality assessment may have been based upon a distribution broadly corresponding to Table 5.8 of the traffic assessment (though full calculations have not been undertaken). Table 5.8 is expected to represent the 'correct' figures. Given that 57% of development traffic being expected to access the strategic road network ('SRN', A27) at the Havant Junction (approaching from the local road network, 'LRN'), and Park Road (North / South) is a road link where kerbside exceedances of national air quality standards are known to be likely to occur at junctions; I am unclear as to why no receptors have been considered on this route.'

Response 4

It is understood that both the predicted total operational phase trip generation of the Proposed Development and its distribution have been revised since the DS Report was completed. However, the flows used in the detailed dispersion modelling of air quality are considered to be robust.

The PTC has indicated that the net trip generation of the Proposed Development will be 466 Annual Average Daily Traffic (AADT) trips, which is significantly lower than the 599AADT considered in the DS Report. This figure is also under the 500AADT EPUK/IAQM threshold, above which 'significant' impacts on air quality are likely to occur.

A comparison of the modelled development Annual Average Daily Traffic (AADT) trips on each key road link, compared to those now predicted by the PTC, is included in the table below.

Road	AQA Modelled Scenario		Updated Scenario		Comparison of Modelled vs Predicted Flow (AADT)
	% Development traffic using route	AADT increase due to development (599 total)	% Development traffic using route	AADT increase due to development (466 total)	
New Lane North of Site	36%	216	29%	135	-81
New Lane South of Site	36%	216	1%	5	-211
Crosslands Drive	64%	383	70%	326	-57
B2148 Petersfield Road	61%	365	70%	326	-39
B2149 Park Road	55%	329	56%	261	-68

As indicated above, the predicted transport flows generated by the Proposed Development are lower on all of the assessed road links and, therefore the impacts on pollutant concentrations would be lower than those detailed in the DS Report. As such, the impact of the Proposed Development on concentrations of nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) would be **negligible**, with the resulting effect considered to remain **not significant**.

Furthermore, it should be noted that as part of the overall robust approach, in order to correspond with the surrounding road network, it was assumed that 5.2% of the development-generated traffic would be Heavy Duty Vehicles (HDVs), whereas in reality a net reduction in HDV flows is predicted. As such, it is anticipated that emissions from the traffic generated by the Proposed Development would be significantly lower than those used in the model, as detailed in Appendix E of the DS Report.

Comment 5

'The residents of Cardinal House (on the corner of Park Road South & Elm Lane are considered to represent the worst-case receptor, and the omission of this receptor undermines confidence in the conclusions of the assessment.'

Response 5

The greatest changes in pollutant concentrations as a result of the Proposed Development are anticipated in the vicinity of the Site, where the greatest changes in traffic flows will occur, as a result of the development, before it disperses. Therefore, residential properties on Park Road are not considered to be worst-case receptor locations.

Nevertheless, it is noted that the recent roadside/near-kerbside diffusion tube NO₂ monitoring records on this stretch of road were below the annual mean Air Quality Objective (AQO). Therefore, as the maximum predicted change at the most significantly affected receptor locations are not greater than 1% of the relevant AQOs, it is anticipated that any impacts on these receptors would lead to a 'not significant' effect.

Comment 6

'In terms of the actual volume of traffic accounted for, it would appear the air quality assessment has considered a net growth in traffic demand as +599 as 'total vehicles, AADT'. The vehicle type distribution assumed is unclear, and I note that both the net-change in flows and the development traffic routing choices assumed (considered as a binary choice from site access) both differ from the net figures given in the transport assessment (from -90 to +466 depending on scenario & 70/30 direction split, given in the transport assessment, compared with +566 & 60/40 split in the air quality assessment). This is illustrative of the 'fluidity' of estimates of transport demand, which I will return to in the sections below.'

Response 6

As detailed above, the current predictions for the Proposed Development's net growth in traffic flows is +466AADT, which is under the 500AADT EPUK/IAQM threshold, above which 'not significant' impacts on air quality are likely to occur. As a higher figure of +599AADT was used in the Air Quality Assessment, the DS Report is considered to be robust, as are the flows on each individual road link.

Summary

The results of the January 2021 Delta-Simons Air Quality Assessment indicate that the Proposed Development is expected to result in a **negligible** impact associated with the operational phase traffic on nearby receptors and the residual effects are accordingly, considered to be **not significant**.

Appendix A - Limitations

Limitations

The recommendations contained in this Report represent Delta-Simons professional opinions, based upon the information listed in the Report, exercising the duty of care required of an experienced Environmental Consultant. Delta-Simons does not warrant or guarantee that the Site is free of hazardous or potentially hazardous materials or conditions.

Delta-Simons obtained, reviewed and evaluated information in preparing this Report from the Client and others. Delta-Simons conclusions, opinions and recommendations have been determined using this information. Delta-Simons does not warrant the accuracy of the information provided to it and will not be responsible for any opinions which Delta-Simons has expressed, or conclusions which it has reached in reliance upon information which is subsequently proven to be inaccurate.

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