

HAVANT BOROUGH COUNCIL

Town & Country Planning Act 1990

Consultation on Planning Application

MEMORANDUM

From:	Environmental Health	To:	Development Control
Our Ref:	CONS/17/00652	Your Ref:	APP/16/00774
EH Case Officer Extn:	44 6677	Date:	06 April 2017
DC Case Officer:	Daphney Haywood		
DC Case Officer Extn:	44 6513		
Application Number:	APP/16/00774		
Site Address:	Land North of Havant Road and west of Selangor Ave, Emsworth		
Proposed Development:	Erection of 161 dwellings with associated parking, access, landscaping, and surface water drainage, pumping station, sub station and signalised junction onto Havant Road (amended scheme)		

Observations / Comments:

I have reviewed the revised application, in particular the Addendum Transport Statement, Minerals Assessment Report, Geophysical Survey Report and Drainage Sheets.

Ground Quality / Contamination

The Geophysical survey report identified a couple of features of potential interest - large dipolar anomaly at M4, and smaller anomaly at the northern extent of the survey area, associated with an iron pipe visible at the surface.

Other than the above, no new geo-environmental data (or assessment / interpretation) is presented, and my previous comments therefore are considered to remain applicable. I would still recommend that features of interest are targeted by a proportionate site investigation, alongside an element of 'random' sampling to confirm the assumed low risk elsewhere on- (across the majority of-) the site.

Condition wording is suggested in my response dated 22/08/2016, relating to further investigation / assessment / remediation, verification, and unexpected contamination.

Contribution of new vehicle trips to local air pollution

As the scheme relates to a reduced quantum, I would agree the transportation addendum report trip rate reduction is appropriate, and would support the omission of a revised air quality assessment.

Exposure of future occupants to existing air pollution

Despite a material scheme change, my previous comments remain valid - I have no significant concerns to raise.

Traffic & Highways Impacts of the Development (Air Quality)

Site Access

It is understood that overriding safety issues have resulted in the selection of a signalised junction to serve the site, in preference to a priority T-junction. Modelling demonstrates that this is likely to significantly impact traffic flows on Emsworth Road, resulting in peak period queue length increases of around 24 vehicles in either direction on the A259. This impact is estimated to increase to over 40 vehicle peak queues in 2026.

This selection will have the effect of exacerbating the air quality impact of this development, not only relating to the traffic directly attributable to the development, but through an increase in average emissions in this locality from the existing traffic on the local road network (as a result of flow impedance, stop/start conditions, acceleration from standstill etc.).

I do note however that queuing traffic would be in locations where there is either good 'set back' to the relevant receptor, or where there are no receptors adjacent.

I also note that the assessment appears to have assumed an evenly distributed signal timing, which is unlikely to represent the most efficient timing to reflect the flow bias commensurate with an A classified road (relative to a residential area access road).

As a result of this design change, it is considered that the development will have an adverse impact on local air quality, though not likely of sufficient magnitude to justify an objection to this access arrangement. From an air quality perspective, I would favour a priority junction with ghost island, to minimise flow disruption on the A259, in preference to the signal controlled junction. In the likely event that the preference of HCC highways is given precedence, I would strongly recommend that some further scenario modelling be undertaken to establish optimal signal timings to minimise impedance of flow on the A259.

Junction Capacity, A27 Emsworth Junction Dumbbell Roundabouts

Modelling of this junction has been substantively revised in the addendum report, considering both roundabouts as a single 'linked' junction, with lane flow assignment. The results identify baseline peak period queue lengths in future years that are substantially greater (>250%) than would be expected by compound network flow volume inflation, even before accounting for the development traffic flows. Junction arms particularly affected are the A27 Westbound Off-slip, Emsworth Road (North of A27 Emsworth Junction), and Emsworth Road

This result either suggests some fundamental reason to assume an increase in tidal (Westbound AM, Eastbound PM) traffic flow bias on A27 at rates outstripping network growth (built into the model), or that some congestion threshold is exceeded within the junction, causing queues to grow disproportionately to traffic volume.

Given that 2-way traffic volume on the A27 between Havant & Emsworth has been broadly static over the past 15 years (2014 volume = 98% of the average annual traffic calculated over the preceding 14 years, and max / min annual volumes over this period vary by <+/-15%), the indicated baseline structural reduction in ratio of flow to capacity (RFC) appears to be a potentially unrealistic assumption, as it doesn't appear to have a causal driver that is borne out by historic data.

Modelling is typically poor at representing driver behaviour (particularly gap utilisation and lane selection), especially under congested conditions where lane blocking can occur.

I note that the assessment parameters have been agreed with HCC & HE, so I must defer to

their expertise, in this regard. I note that baseline + development scenario's are not presented, so it is difficult to establish the benefit of the mitigation comparably with that previously indicated - it does appear however (from the comparison of "baseline" with "baseline + development + mitigation" scenarios) that the anticipated benefit appears to be more realistic than that previously concluded.

I would tentatively agree that the amendments to junction geometries proposed are likely to represent an improvement to flows, and consequently are likely to limit the impact of development traffic at this location. From an air quality perspective, I note that maximum queue lengths are no longer considered likely to be of sufficient length as reach locations where facades of residential property are within 4m of the kerbside.

Surface Water Drainage Scheme - SuDS

I note that the Wilson Bailey Geotechnical & Environmental Minerals Assessment highlights shallow depth to groundwater, stating that *"...winter groundwater level monitoring has indicated groundwater to be significantly shallower during winter months, with levels as shallow as 0.2m below ground level..."*.

Whilst I suspect that the standing water level in the monitoring well is not representative of the groundwater levels within the soil units underlying the site, the above statement does serve to highlight a potentially significant issue for the drainage strategy.

I would assume given the heavy reliance on soakaway & infiltration drainage, that soakage tests have been undertaken for the site, and were positive (viable), it is less clear whether these were undertaken during winter conditions (or the results have been interpreted with adequate account being taken of the seasonal variability in groundwater conditions. I do acknowledge that that in places significant ground raising is proposed by way of a cut & fill operation, but the converse is also true, where soakaway & infiltration drainage will need to remain viable where ground level reductions are planned.

The scheme as designed is robust in terms of water quality (pollutant interception & treatment), the design implies a robust and complete understanding of the groundwater regime over the natural seasonal ranges (and the degree to which the range may vary under worst case meteorological conditions). Certainly the site investigation data I have seen to date would not appear to be sufficiently detailed to permit a detailed understanding of the local groundwater regime.

I also note that the scheme makes significant use of permeable roadway construction appearing to be represented (in the schematics) as block surface. The applicant will need to specify a block specifically designed for a permeable paving system (permeable matrix and open jointing) - other sites within the district have assumed that any pavements will be suitable due to the jointing, and from speaking with leading manufacturers, it would appear that this is not uncommon. Failure to specify a system with sufficient permeability may result in the system not performing as expected, which is a particular risk where the scheme is so reliant on permeable hardstanding. I would expect the LLFA to provide detailed comment on demonstrating that the groundwater regime is permissive of the proposed scheme, that storage volumes (under permeable surfacing) are sufficient to accommodate the surface water distribution box inputs, and that the surfacing system has sufficient permeability. In the absence of any specific comments, it may be prudent to secure confirmation of these aspects by condition.

Mr. Jonathan Driver
Environmental Control Officer