

Memo

To:	PCC / Savills (James Brewer)		
From:	Atkins - Louise Bradbury	Email:	louise.bradbury@atkinsglobal.com
Phone:	0207 121 2325	Date:	15 Feb 2018
Ref:	5164490	cc:	Sarah Wallis
Subject:	Dunsbury Park - response to comments from Havant Borough Council (Environmental Health officer)		

Background / Context

“Variation of Condition B6 of Planning Permission APP/15/00732 to remove restriction on proportion of B8 floorspace allowed within the Dunsbury Park development, and thus provide for a maximum mixed-use floor space of 61,779sqm within Classes B1, B2 and/or B8 of the Use Classes Order 1987 as amended”.

It is considered that 2015 assessment, which was submitted as part of the current S73 application, tested the scenario of 100% B8 allocation at the site and therefore it is considered suitable to support the change to condition no B6. However, several comments have been raised by Havant Borough Council (HBC) Environmental Health (EH) Department relating to air quality and traffic data. The comments are based on the main assessment traffic flows that were submitted with the 2015 ES Addendum to support the original S73 application (Ref: APP/15/00732) for the relaxation of the B8 land use restriction. These flows are still relevant to the latest S73 application (Ref: APP/17/01324), which relates to the complete removal of the restriction.

This memo forms a response to the queries or issues raised by the Environmental Health Officer (EHO) for Havant Borough Council, relating to the traffic flows used in the air quality assessment. It is appreciated that any issues with the traffic model directly affect the air quality assessment.

Assessment to date

As stated by HBC's EHO, the re-submission of the 2015 assessment to support the current S73 application is considered reasonable, as this tested a scenario of 100% B8 allocation to the site, which would therefore be applicable to support the complete removal of a B8 restriction (i.e. potential for 100% B8 use).

It is therefore considered that the queries relate to this previous assessment in 2015, and the original 2012 application where relevant, as applicable to this current application.

Overall response to comments

HBC's EHO has commented on the PCU (passenger car units) conversion factor used. To clarify, a value of 2.3 PCUs per HGV has been used, as standard, as this refers to the physical space taken up by an HGV on the road space. This was used to inform the PCU comparable assessment that was presented as part of the transport impact assessment, to determine if the overall decrease in total vehicles predicted under the revised 100% B8 scenario was still applicable if PCUs (i.e. total vehicle space) was considered. This exercise showed that there would still be a reduction with the 100% B8 scenario from the 'approved scheme' in PCU terms. This was just carried out for the peak hour assessment, seen as a highway capacity parameter.

Regarding the impact in PCU equivalent emissions (for air quality purposes) the EHO notes an increase in PCU equivalent vehicle trips across the 24hr AADT period. This calculation was not considered as part of the previous assessment, and is not considered within the scope of a typical highway assessment or traffic analysis.

The following responses are set out to respond to the bullet point queries raised by HBC's EHO.

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EHO comment:

The principal issue is that the 2019 DM scenario is not particularly clear. Traffic parameters applied under the 2019 DM scenario differ substantially from 2011 baseline conditions, resulting in some ambiguity over whether the 2019 scenario represents i) simply 2011 baseline conditions projected to year of opening (i.e. all things being equal, no development), as would be expected - or, ii) delivery of Phase 1 as consented, without change to c. B6. The substantial differences between the character of the baseline conditions and 2019 DM conditions suggests the latter, but there are reasons to suspect that figures are intended to represent the former.

Atkins Response:

The 2019 DM scenario and 2011 base scenario do differ substantially as they have been calculated from quite different datasets. The 2011 base data has been derived from base Automatic Traffic Counter (ATC) sites for the relevant roads from 2011. The 2019 DM data has been derived from the Transport for Hampshire's Sub-Regional Transport Model (SRTM) developed by MVA Consultancy that provided the evidence base for the South Hampshire transport strategy development process. In this case the flows have been established from the AM and PM peak hour models for the relevant roads (i.e. based on movement matrices from the model) and then a factor applied (as established from the relevant ATC survey) to derive the AADT flow from these. To clarify, the 2019 DM scenario represents a baseline year of opening, with no development traffic added for Dunsbury Park.

Furthermore, in the development scenarios, as the SRTM model was based on the Core Strategy quantum of development which was consistent with the indicative masterplan of 2012, and it was not adjusted for the quantum of development with 100% B8, further factoring was applied to the traffic flows representing the 2012 'approved scheme' to establish total flows under a 100% B8 scenario. This was done using a factor derived from the change in total trips based on an assessment using the industry standard TRICS database for trip rate determination for the different land use quantum.

Whilst it is appreciated these differences between 2011 base and 2019 base are not ideal, it was considered and agreed at the time of the original application, that these were the best data sets to work with for each. For instance, as stated in Atkins Transport Assessment (TA) 2012, it was considered and agreed with the stakeholders that the SRTM model provided the best basis for analysis of the impact of the Dunsbury Park development, and indeed this data was also used for the future year assessment in the VISSIM model. However, for the Base VISSIM model assessment, it was agreed that this would be based on the 2011 data collection, rather than the SRTM model (base year 2010) due to it being the most current data at the time. Therefore, these traffic bases were followed through to the derivation of the AADT data for the environmental assessment.

EH comment:

% HDV flows on Hulbert Road (Table 9-1) under the 2019 DM scenario are +4.3% total flow (643 additional HDV trips), compared with the 2011 baseline. % HDV does not typically vary by significant amounts, and this change is not explained in conceptual terms. Figures presented for North / South of site are balanced, indicating that the site is not contributing to flows under this scenario.

Atkins Response:

It is agreed that the percentage HGVs substantially on Hulbert Road between 2011 and 2019 DM scenarios, which may be unexpected. However, based on the explanation above for the use of different datasets for both 2011 and 2019 it is understood that these differences arise from the different datasets. The % HGVs for 2011 were calculated from the ATC data for Hulbert Road. However, in contrast, the 2019 % HGVs were calculated from the SRTM matrix model flows, which gives all vehicles and HGVs, for the relevant movements passing Hulbert Road. As these were for the AM peak hour, these were then factored to AADT %HGVs based on a factor derived from the ATC data.

Whilst it is appreciated these differing methods and calculations can give rise to the increase, these methods were the agreed assessment methods for the Transport Assessment. Most importantly, a consistent approach was adopted between the future baseline and with development scenarios, both being based on the SRTM model, therefore comparison between these is appropriate.

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EH comment:

Total AADT flows on Purbrook Way East of ASDA Roundabout is 181% of baseline flows under the DM 2019 scenario, increasing by more than 15000 trips/day. This substantial change is not explained in conceptual terms.

Atkins Response:

The total flows on Purbrook Way, east of the ASDA roundabout, do increase substantially between the 2011 and 2019 DM scenarios. This again is due to the quite different ways of calculating these in each scenario. The 2011 base data was calculated from an ATC at the specific location. The 2019 DM data was calculated from the SRTM model flow matrices, where this section of Purbrook Way represents a zone entry / exit in the matrix. These flows were then factored to AADT flows from the factor derived from the ATC.

EH comment:

The 2019 DM scenario anticipates a substantial reduction in HDV traffic on the A3(M) ranging from just 37% to 59% of 2011 flows (representing a reduction of between 1600 & 3000 HDV trips on the national trunk road). This substantial change is not explained in conceptual terms, and corresponds to a period of growth in total flows on these road links. Similar (likely related) reductions on slip roads remove HDV traffic between 2011 baseline years & 2019 DM scenario, meaning that HDV trips allocated to these links under the 2019 DS (development) scenario simply restore trips to baseline levels (or only alter these levels in a minor way).

Atkins Response:

The %HGV data for the A3(M) was established from Highways England TRADS (traffic database) for the 2011 base year and from the SRTM model for the 2019 base, which were then factored to AADT 24hr data based on the factor derived from the ATC. These different data sources are giving rise to the differences, however each was considered the best data to go with at the time, for each respective scenario. Again, the comparison between future baseline and with development scenarios is appropriate, and these are based on consistent datasets, being the SRTM model.

EH comment:

The routing model applied to the 2019 DS scenario has a strong southbound trip bias, allocating the majority of HDV trips to route via the ASDA roundabout to J4 of the A3(M), as opposed to accessing the Strategic Road Network (SRN) via J3 (an arguably favourable route). There are good routing reasons why routing Westbound trips local via Purbrook Way would be preferable, but trips with destinations >15 miles distant to the East or West are likely to be better routed via the A3(M) and A27 (Via the Rusty Cutter roundabout for Eastbound trips). The routing model does not include detail beyond Purbrook Way East of College Rd (i.e. not routing to/via the SRN), so trip distribution between College Road and Purbrook Way (Westbound to Stakes Rd. etc.) is unclear.

Atkins Response:

The 2019 DM model does have a strong southbound trip bias from the site, routing most vehicles and HGVs via Junction 4 (via the ASDA roundabout) rather than Junction 3, which is arguably more realistic. The distribution of development trips is based on the SRTM model, which is a strategic model thus incorporating route choice. It is noted from the trip distribution as presented in Table 5.2 in the 2012 TA, that a large proportion of trips are routed on the A3(M) southbound, rather than northbound. However, it is also apparent that for access to the A3(M) South the SRTM model includes routing of 70% via Junction 4 and 30% via Junction 3. It is apparent that this routing could be unrealistic due to congestion at the Hulbert Road / Purbrook Way roundabout, and indeed this was picked up by the VISSIM model run. A more likely route choice was considered to be 85% of vehicles via Junction 3 and 15% via Junction 4.

However, the SRTM data, that the AADT traffic data is based on has remained as is, and in terms of traffic flows on the local roads could be considered a worst-case assessment. For instance, MVA's Transport for South Hampshire's Evidence Base Dunsbury Hill Farm Report (August 2011), notes that it is interesting that most of traffic from the site uses Junction 4 rather than Junction 3, but that it could be due to congestion northbound on the A3(M) or Junction 3 itself. Therefore, as it is a result of route choice within this model, and this model was considered the most appropriate tool for assessing the development, this has remained within the assessment as a worse-case scenario.

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Summary

Overall the queries from HBC's EHO relating to the traffic flows used in the assessment focus on the validity of the 2019 DM assessment flows, compared to the 2011 base flows, with differences reported in flows and HGV percentages, which appear unrealistic between these years. In addition, some queries relating to the routing of vehicles from the development site have been noted.

This memo has attempted to explain the reasons for the differences, being the different datasets used for the 2011 and 2019 base data, the former based on 2011 ATC data, and the latter on the SRTM model flows or corresponding HGV proportions. In addition, further discrepancies have been added with the use of factors to derive 24hr AADT flows (from the model AM and PM peak hour flows) and again to align the model development traffic, based on the 'approved scheme' quantum of development to the 100% B8 development scenario.

Importantly however, the main impact of the scheme is assessed between the future year base and with development scenarios, and it is to be clarified that these are based on a consistent dataset, being the SRTM model traffic flows, as considered by stakeholders to be the best basis for analysis of the Dunsbury Park development.

Notwithstanding the above, it is envisaged that it would be possible, and desirable, to implement operational traffic routing plans which specify desirable routes for HGVs to the strategic highway network, which avoid the more sensitive locations of residences for example on Hulbert Road and Purbrook Way.