

BREEAM statement - Plot 2 B8 distribution centre

Introduction

- 1.0 This brief note has been prepared to supplement the BREEAM Pre-assessment summary submitted with application APP/15/01156, adding further information and justification for the proposed BREEAM target score for Plot 2 at Dunsbury Hill Farm (DHF), taking into consideration comments from the HBC Planning Policy team. A revised pre-assessment summary has also been provided incorporating some of the information within this note.
- 1.1 Condition B5 (d) of hybrid permission APP/15/00732 details that each reserved matters should, unless otherwise agreed in writing by the Local Planning Authority, attain BREEAM '**Excellent**' standard. The submitted pre-assessment targeted a score of **62.05%**, which is in the '**Very Good**' bracket.

HBC Planning Policy comments

- 2.0 In response to the reserved matters application, the planning policy team at HBC considered the development 'acceptable in principle', however requested further clarification on a number of specific BREEAM credits, primarily on why they couldn't be targeted as part of the scheme. These identified credits were MAN01, HEA02, ENE01, ENE04, TRA01, TRA02, WAT01, MAT03, WST05, LE02, LE03 and LE04.
- 2.1 The design team have considered the original pre-assessment summary in light of these comments and provided additional information on each which is detailed below in Section 3. Section 4 of this paper then considers the ongoing future development on DHF and ability for further plots to meet the BREEAM 'Excellent' rating. Appendix 1 shows some worked examples taking into account potential additional credits for this scheme, how this scheme may be assessed as fully fitted and finally how the scheme may have scored had it come forward at a later stage of site development (when additional credits would have been available).
- 2.2 The revised pre-assessment summary is based on credits that we are certain we can achieve, we have now identified others that we 'may' be able to achieve however this would be subject to further investigation and are uncertain at this stage. It is also worth noting that this is a shell and core assessment, so some issues that can be assessed in a fully-fitted out assessment are unavailable, and so making the choice of credits available limited (see paragraph 3.21).

Specific credit responses

- 3.0 MAN01 - HBC query - Extensive consultation took place on the Dunsbury Hill original outline planning application, including a Development Consultation Forum (DCF) which includes consultation with a number of key stakeholders. For a scheme of this size, it would have been logical to consult all third parties anyway. Clarification is sought as to which of the criteria the scheme has not met and why this is the case.
- 3.1 Response - There are 10 minimum consultation requirements that need to be met (8 of which are applicable), and need to include designated 3rd party stakeholder consultation. We have reviewed the documents used for the outline consultation with key stakeholders and DCF. Comparing the extensive evidence within this against the BREEAM criteria, it does not drill down into enough detail about the actual building. As this is a reserved matters application submitted against the hybrid permission, the additional consultation past that undertaken at outline stage was not carried out, partly due to the compressed timescales necessary to secure the tenant. To achieve this credit for future plots, additional building specific consultation will be undertaken that meets the specific BREEAM consultation requirements.
- 3.2 MAN03 - there is the potential to target a further credit under MAN03 around the monitoring of delivery and waste transportation, this would add **0.61%** to the score. Considerate constructors-exemplary credit - we will endeavour to try and achieve this credit for 40/50 in the CCS, but have not targeted as it sometimes achievement of this depends on the CCS inspector and can be subjective. However if we achieve this, as many BAM projects have, this would add **1.00%** to the score.
- 3.3 HEA02 - HBC query – it is not clear from the justification which has been provided what specifically about this project has meant that these two credits are not achievable.
- 3.4 Response – Ventilation credit: The car park and road are pollution sources, and are less than 20m from the air inlet of the building. Intake and exhausts are separated more than 10m apart in line with best practice and BREEAM requirements, however the locality of the road and car park prevent the project from attaining the credit.
- 3.5 Potential for natural ventilation credit: The mechanical engineer is re-looking at this credit against the compliance requirements, to see if it can be achieved. This would add **0.95%** if possible.
- 3.6 ENE01 - HBC query – it is not clear exactly how mechanical ventilation strategy effects the ability to gain more credits in this issue and why it is not cost effective in long term energy planning to provide a more effective building envelope or additional PV

- 3.7 Response - these credits are based on several factors such as the air-tightness of the building, all energy consuming items such as lighting, heating, operation of plant, etc. and how much electricity the site can generate from renewable sources. Many of these factors are part of the fit-out of the building, which is beyond this assessment. The B Reg air tightness is $10\text{m}^3/\text{h}/\text{m}^2$, and we have achieved a level of $3\text{m}^3/\text{h}/\text{m}^2$, which is 3 times better. For a shell and core assessment, to produce the BRUKL document (that gives an idea of no. credits achieved), we need to input the 'worst – case' scenario/building fittings i.e. those just meeting B Regs. We are therefore limited in our capacity to ensure further credits can be achieved here.
- 3.8 ENE04 - HBC query - *no justification is provided as to why these two credits are not achievable.*
- 3.9 Response - Passive design analysis credit: the mechanical engineer is looking into achieving this credit. This would add another **0.72%** to score. Free Cooling credit: This is not achievable as none of the following technologies can be employed:
- Night time cooling – There is potential for this, but it would be of limited benefit due to the light weight construction of the building
 - Ground coupled air cooling – there is insufficient space underground to include a labyrinth of air ducts.
 - Displacement ventilation is not appropriate for the building use
 - Ground water cooling – no local sources of ground water without drilling deep bore holes. Expensive for a shell and core development
 - Surface water cooling – no local sources of surface water available
 - Evaporative cooling is possible but as the building is Shell and Core this would put undue risk and responsibility on prospective tenants due to high frequency of maintenance and water treatment regimes
 - Desiccant dehum – No waste heat available locally.
 - Absorption cooling - No waste heat available locally.
 - Active cooling is a requirement of the Specification for the building. Note that we have specified high efficiency heat pumps for the cooling systems.
- 3.10 TRA01 and TRA02 - HBC query – *As part of the outline planning permission, bus routes will be provided as well as a number of amenities. There are specific exceptions to these credits for phased developments and it is not clear if these have been considered.*
- 3.11 Response - TRA01: At this stage it is too early to give any clear indication of the likely frequency or route of bus services. This information would be borne out of commercial discussions between Hampshire CC and the bus operator (Stagecoach in all probability) once the site is up and running. However Stagecoach routes 20, 23, 37 & 39 all run in the vicinity of DHF connecting Waterlooville, Leigh Park, Havant and Portsmouth. For the purposes of calculating an 'accessibility index' it would seem logical for us to assume that

one or more of these routes would be revised to include DHF, as both HCC and HBC share the desire for the site to be served by local bus routes. However we do not yet have these details so cannot assign the credit; this position may change when we undertake the later assessments. The nearest railway stations at Havant and Rowlands Castle are too far away from the development to be considered in the calculation.

- 3.12 For TRA02, there are currently none of the core amenities in the wider site to serve this development. Whilst 3 of the 4 core amenities (access to food, cash & outdoor open space) required for the credit will be in existence as the site develops, and within 500m, we are not in a position yet to confirm the precise location and nature of these to target and achieve the credit. Clearly as the wider DHF site develops, these facilities will be in place allowing future schemes to achieve this credit.
- 3.13 WAT01 - HBC query – *it is not clear why further credits would not be economically viable for this scheme in the long term. 2 credits are the basic no. credits.*
- 3.14 Response - Further credits would probably involve greywater/rainwater harvesting to deliver at least 25% of WC/urinal flushing demand. This will be costly to implement, and inefficient as greywater harvesting is better suited to highly populated developments, where a higher supply of greywater for WC flushing is normally available, so as to make this a viable option. The below list of the sanitary ware fittings that are needed for 2/3 credits are shown below:

Table - 36: Water efficient consumption levels by component type

Component	Performance levels (quoted numbers are minimum performance required to achieve the level)						Unit
	Base	1	2	3	4	5	
WC	6	5	4.5	4	3.75	3	Effective flush volume (litres)
Wash hand basin taps	12	9	7.50	4.50	3.75	3	litres/min
Showers	14	10	8	6	4	3.50	litres/min
Baths	200	180	160	140	120	100	litres
Urinal (2 or more urinals)	7.50	6	3	1.50	0.75	0	litres/bowl/hour
Urinal (1 urinal only)	10	8	4	2	1	0	litres/bowl/hour
Greywater/ rainwater system	0%	0%	0%	25%	50%	75%	% of WC/urinal flushing demand met using recycled non-potable water

- 3.15 MAT02 - an additional credit may be achievable here, depending on the availability of locally sourced recycled sub-base. There is the opportunity to use material from the construction of the access link road and this will be explored further by the design team as the construction methodology and site investigation results are appraised. This would add 1.45% to the score.
- 3.16 MAT03 - HBC query - *it is not clear which materials will be sought with environmental ratings and which ones would not. It is also not clear why it would not be feasible to source more of the building materials from more environmentally sustainable sources.*
- 3.17 Response - The BRE tier system at present makes impossible to achieve the highest no. of credits, as the top 5 no. tiers, that would score most points, are currently unpopulated. Also, there is a limited number of suppliers who have BES 6001 certification (carrying a tier rating of 5 out of 10) and many of those who have ISO 14001 are 'Key Process' which carries a tier rating of 1 out of 10. Those which have ISO 14001 with 'Supply Chain' as well only provide 2 out of 10 so the scope to score well is very limited until the BRE create new responsible sourcing protocols which looks very unlikely in the short term over the duration of this scheme.
- 3.18 WST05 - HBC query – *it is not specifically why this credit is not achievable. Clearly the fact that it is a new element of BREEAM 2014 does not in itself make it unachievable.*
- 3.19 Response - Although this is a new BREEAM 2014 credit, and a 'risk' as currently we are unsure as to what the BRE will deem as acceptable evidence, our ME is looking into achieving this credit. This would add 1.19% to the score.
- 3.20 LE02, LE03 and LE04 - HBC query – *it is not clear why these credits are not achievable. Given that an ecologist is part of the design team already, it should be possible to confirm for certain whether these can be achieved.*
- 3.19 Response - LE02 - the ecologist has considered the potential credit targets and the land has a 'high' ecological value so only the credit around protecting existing ecological features during construction is available. LE03 - due to the removal of existing species and proposed re-planting scheme, one credit not achievable as eventual reduction in number of species across the site post development is outside the parameters necessary to score both credits. LE04 - the credit for preparing and following the Ecologist's report and recommendations is targeted; however as with LE02 the high ecological value of the site means required increases to the ecological value cannot be achieved for further credits.
- 3.21 Following the review of credits above, the additional scores combine to total 5.92%, increasing the target score to 67.97%, which is at the highest end of the 'Very Good' classification. Appendix 1 shows this as a worked example (Potential revised Plot 2 assessment shell & core), identifying where the additional credits may be achieved.

3.24 Appendix 1 also includes a potential completed Plot 2 assessment using the fully fitted weighting for scoring. The purpose of this is to demonstrate which additional credits may be achievable for the completed building (initially flagged as MAN05 & ENE08) that had to be excluded from the shell and core assessment. Achieving these would take the targeted score up to 69.93%, at the very cusp of Excellent. There may be others that can be targeted to further increase the score and achieve an 'Excellent' rating, for example a single additional Innovation credit would help attain a score over 70.00%. Other potential areas that could deliver further credits are listed below:

- HEA02 - Indoor air quality - 3 credits available for air quality plan, relevant products with low VOCs, VOC testing at PC
- HEA04 - Thermal comfort - 1 credit for using thermal model to inform the thermal zoning and control strategy
- HEA05 - Acoustic performance - 2 further credits available

Future development plots at DHF

4.0 The development under consideration is the first plot to come forward on DHF, and has come about in direct response to the need to retain and secure a major local employer in the region, whilst also meeting their future expansion plans. In combination with this, a number of site wide benefits will materialise over the initial years of development at DHF meaning credits not attainable for this first scheme will be achievable for future development. For example, an additional 3 credits would be secured under MAN01, TRA01 and TRA02 which have been discussed in Section 3. Applying these to the potential fully fitted Plot 2 assessment mentioned in paragraph 3.24 would result in a targeted score of 72.50%, achieving the required 'Excellent' rating. This is shown as a worked example in Appendix 1 and demonstrates that future plots can target the required BREEAM rating.

4.1 It is also worth noting that a BREEAM excellent rating is much harder to achieve on a speculative industrial unit than for instance office development. There are several issues where Industrial buildings have credits excluded from the scope of the BREEAM assessment. This can result in projects needing to target extra credits in other areas to ensure the score is great enough to achieve the targeted rating. These credits include:

- HEA01 - Daylighting - 1 credit available for industrial building, other scheme have up to 2 credits
- HEA05 - Although 3 credits are available, unlike most schemes to achieve the 3rd credit in Industrial requires the acoustician to create bespoke set of performance criteria.
- TRA01 - 3 credits available in Industrial scheme, where as there are up to 5 credits available in other schemes
- MAT01 - Only 2 credits in the Industrial scheme, other schemes can achieve up to 6 credits
- POL02 - Only 2 credits under Industrial, up to 3 credits in other schemes

Summary

- 5.0 Following a consideration of the issues raised by the HBC policy team, there may be the potential for additional credits to be targeted as part of the shell & core assessment that would increase the rating to a position very close to 'Excellent'. This could increase further once a fully fitted assessment is carried out. The applicant would be willing to comply with a suitably worded planning condition for Plot 2 that seeks to ensure as higher score as possible is targeted as the development evolves. It can also be demonstrated that future plots will be able to target further credits that will assist in ensuring development complies with Condition B5 (d) of APP/15/00732.

Appendices

- Appendix 1 - BREEAM worked examples
- Appendix 2 - Updated Pre-assessment summary