

LONDON SOUTHEND AIRPORT
BREEAM NEW CONSTRUCTION 2014
PRE-ASSESSMENT SUMMARY



EXECUTIVE SUMMARY

London Southend Airport are proposing the development of two extensions to London Southend Airport; a single storey extension approximately 1,242m² (for HBS) and a single storey extension approximately 2,095m² (for baggage reclaim). Condition 6 of the planning permission requires that a BREEAM pre-assessment is prepared demonstrating that the development can achieve a rating of 'Excellent' or that if this is not achievable, details shall be provided and the highest rating achieved.

A pre-assessment has been prepared by Michael Davey (Legacy: McCann Sustainability – McCann and Partners), a licenced BREEAM Assessor and Sustainability Champion, which demonstrates a score of 64.96% ('Very Good') is realistic and achievable and an 'Excellent' rating is unlikely to be achieved.

This report summarises the main reasons why a number of credits that are either unavailable or very difficult to achieve, which is to be read in conjunction with the pre-assessment.

UNAVAILABLE CREDITS (6.99%)

Credits that are not secured and have been deemed unavailable are as follows:

- Man01: Project Brief and Design, Credits 3 and 4 (Sustainability Champion – Design & Monitoring Progress); A sustainability champion was not appointed from RIBA Stage 1; therefore these credits cannot now be secured.
- Hea02: Indoor Air Quality, Credit 5 (Potential for Natural Ventilation); Ventilation is being provided via a mechanically ventilated systems to comply with the airport HVAC design guideline.
- Ene04: Low Carbon Design, Credit 2 (Free Cooling); As per Hea02 above.
- Mat06: Material Efficiency, Credit 1; A strategy outlining the activity relating to material efficiency was not undertaken at RIBA Stage 1; therefore this credit cannot now be secured.
- Wst06: Functional Adaptability, Credit 1; The development (by its nature) will not be used for anything other than its intended use (an airport); therefore this credit cannot be secured.
- LE01: Site Selection, Credit 2 (Contaminated Land); The land is not contaminated; therefore this credit cannot be secured.
- LE04: Enhancing Site Ecology, Credit 2 (Increase in ecological value); Constraints on site (due to airport safeguarding) prohibit the provision of increased ecology.
- Pol02: NOx Emissions, Credits 1 to 3. In order to gain credits under this issues, NOx emissions must be less than 100mg/kWh. Grid source electricity has NOx emissions in excess of 617mg/kWh; therefore these credits cannot be secured.

CREDITS WHERE COMPLIANCE IS NOT GUARANTEED (13.12%)

Credits that are not secured and require further investigation before deeming achievable are as follows:

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- Man01: Project Brief and Design, Credit 2 (Third Party Consultation); Third party consultation is currently ongoing but unknown at this stage whether the feedback will be of any use.
- Hea01: Visual Comfort, Credit 2 and Innovation Credit 1 (Daylighting); Preliminary calculations will be carried out to determine whether the required level of daylighting (average daylight factor of 2%) can be achieved (unlikely due to regulatory visual screening requirements for airport baggage areas).
- Hea02: Indoor Air Quality, Credit 2 (Ventilation); It is unknown at this stage whether or not it is possible to ensure that all intakes and exhaust are at least 10m apart, and intakes are at least 20m from external sources of pollution.
- Hea02: Indoor Air Quality, Credit 4 and Innovation Credits 1 and 2 (Formaldehyde Testing); Whilst every effort will be made to ensure that formaldehyde levels meet the relevant standards, the contractor is required to implement all recommendations (if any) to award the credit.
- Hea06: Safety and Security, Credit 1 (Safe Access); Cycle lanes and pedestrian pathways required.
- Tra03: Cyclist Facilities, Credit 1; Cycle racks already exist at the airport and the number required (at least 55 double racks) is not deemed necessary as part of the development at this stage for airport passengers.
- Mat01: Life Cycle Impacts, Credit 6 and Innovation Credit 1 (Environmental Performance); Preliminary calculations will be carried out to determine whether maximum credits can be achieved – additional credits a risk at this stage.
- Wst02: Recycled Aggregates, Innovation Credit 1; All aggregates must be sourced from suppliers within a 30km radius.
- LE01: Site Selection, Credit 1 (Previous Occupied Land); At least 75% of the proposed footprint must be on an area of land that has been previously used.
- Pol03: Surface Water Run-off, Credit 5 (Minimising Watercourse Pollution). First 5mm of rainfall must be prevented from leaving the site.

CREDITS THAT WILL INCUR ADDITIONAL APPOINTMENT/ CAPITAL COSTS (5.35%)

Credits that will incur additional appointment and/ or capital costs are as follows:

- Man02: Life Cycle Costing (LCC) and Service Life Planning, Credits 1 to 3 (Elemental and Component Level LCC); It is estimated that this would cost circa £4,000 and requires input from RIBA Stage 2.
- Man03: Responsible Construction Practices, Credit 3 (Sustainability Champion – Construction); Requires regular attendance on site during construction (the fee for this is likely to exceed £5,000 if targeted). Money may be better spent elsewhere (more PV to enhance energy performance credits (Ene01)).
- Mat01: Life Cycle Impacts, Innovation Credits 2 and 3 (IMPACT Assessment); A life cycle assessment appraisal using IMPACT complaint software to measure the environmental performance of materials. Cost for this is estimated to be circa £3,000 and money may be better spent elsewhere (as per Man03 above) and cheaper credits available elsewhere (Wst05 for example).

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- Wst05: Adaptation to Climate Change, Credit 1. It is estimated that this would cost circa £1,000 and requires input from RIBA Stage 2.

CONCLUSION

There are a number of credits that are unavailable given the timing of the project. There are also a number of credits that have been deemed possible that require further investigation (not guaranteed) and others that will incur additional appointment and capital costs.

The BREEAM Pre-assessment submitted to support the Client's planning application demonstrates that this scheme should comfortably achieve a BREEAM 'Very Good' rating. Credits required to secure 'Excellent' are either not available, compliance is not guaranteed, or not justified in the context of the nature of this development.