

Wombwell Lane, Barnsley

BREEAM 2014 New Construction Pre-Assessment Report

November 2017

Quality information

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Revision History

Revision	Revision date	Details	Approved	Name	Position
1	23 rd November 2017	BREEAM report	GS	Gill Smith	Sustainable Buildings Team Leader

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1. Introduction

Advice and guidance has been provided to the Design Team for embedding BREEAM into the design and specification of the commercial unit at Wombwell Lane, Barnsley so that BREEAM credits can be targeted.

The application seeks planning permission for an unrestricted Open A1 retail unit (shop/retail warehouse).

Ground floor plan (Drawing No: P04, Rev #, October 17) shows the unit is c.1900m². This plan was used as the basis for this BREEAM Report and to aid the reader a copy is contained in Appendix 1.

2. Planning Policy

The site is located within Barnsley which falls within Barnsley local planning authority. Their adopted Core Strategy (2011) contains Policy CSP 2 – Sustainable Construction, which says:

“All non-residential development will be expected to achieve at least BREEAM standard of ‘very good’ or equivalent.”

3. Information

Information has been received which has fed into this energy and carbon report including:

- Plans and elevations as follows:
 - Location Plan. Drawing No: P01, October 2017
 - Proposed Site Plan. Drawing No: P04, October 2017
 - Proposed Elevations and Section. Drawing No. SK05, Rev A, October 2017
- Publically available aerial mapping
- Bus Timetables as follows:
 - Travel South Yorkshire: 22a, 22c, 22x
 - Travel South Yorkshire: 222
 - Travel South Yorkshire: 226

The application seeks planning permission for an unrestricted Open A1 retail unit (shop/retail warehouse). As the fit out and end operator are not currently known we have had to make a number of assumptions including:

- Indicative materials as follows:
 - External walls - Coated steel built up profiled panel with insulation and steel liner on steel support, structural steel frame, cement-bonded particle board, light steel frame, vapour control layer, plasterboard on battens, paint.
 - Roof - Steel standing steel roof, PIR insulation, steel inner lining, galvanised steel joists.
 - Aluminium curtain walling system.
- The pre-development site is of low ecological value and contains no features of ecological value.
- There is a neutral change in ecological value of the site is a result of the proposed development.

We provided the client with a full list of the assumptions for them for their review. They did not request that any of the assumptions were changed. If the information received or the assumptions change this could impact on the modelling and the findings of this report.

4. BREEAM

Building Research Environmental Assessment Method (BREEAM) can be used to guide and inform the design. It is essential that environmental sustainability measures are incorporated into a scheme at the correct stage so that the scheme, and with it the environment, can benefit fully from them.

The current BREEAM Regulations for new commercial units are BREEAM 2014 and these have therefore been used for the site at Wombwell Lane, Barnsley.

A BREEAM pre-assessment is an essential tool to check that the scheme as submitted for planning is on target to achieve the desired rating.

Once planning permission is granted the BREEAM assessment contains the following stages:

Interim Design Stage - leading to an Interim BREEAM Certificate

Final Construction Stage - leading to a Final BREEAM Certificate

To complete an assessment at the design stage the design must be advanced to the point where the relevant information is available to enable the BREEAM assessor to demonstrate, in a robust manner, the building's performance against the reporting and evidential criteria of the BREEAM technical guidance.

The design stage assessment and subsequent interim BREEAM Certification represents the ability of the unit to target a rating and this is typically completed at RIBA stage 3 and 4 and prior to commencement on site.

A construction assessment is undertaken during the construction phase of the development. It is strongly recommended this is completed whilst the Principal Contractor is on site so that if there are any issues they are still on hand to rectify them.

The construction assessment and subsequent BREEAM final Certification represents the 'as built' performance and BREEAM Rating.

5. BREEAM Ratings

A BREEAM rating is made up of a combination of mandatory requirements and score. The scores are shown in Table 5.1.

Table 5.1: Scores for BREEAM ratings

BREEAM Rating	Percentage Point Score
Unclassified	<30
Pass	>30
Good	>45
Very Good	>55
Excellent	>70
Outstanding	>85

6. BREEAM Pre-Assessment

Each of the credits available to the shell unit have been considered and advice and guidance has been provided to the client and the client's team as to the requirements in order for the Wombwell Lane unit to be able to target the credit.

This resulted in a certain number of credits being able to be targeted however they were not sufficient to enable the rating as set out in the policy to be targeted. The client was therefore advised that several items will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to respond by the 2nd November if they knew of any reason why the item required for the specific credit could not be delivered for this unit. Where a response has not been received it has been assumed that the credit can be targeted. If that is subsequently found not to be the case the credit will need to be replaced or the rating may not be achieved.

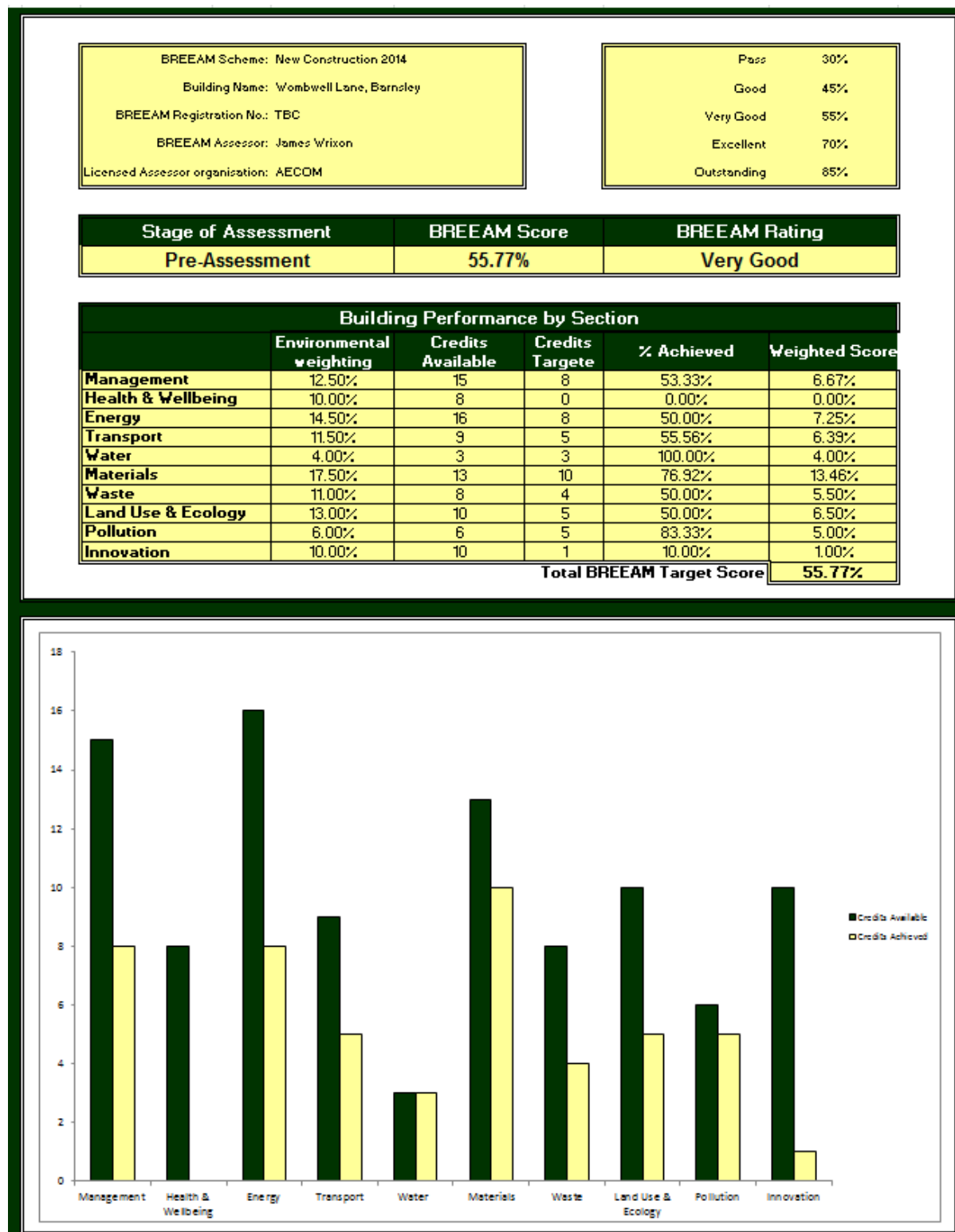
This work resulted in a BREEAM Pre-Assessment which is contained in Appendix 2.

The BREEAM Pre-Assessment contains:

- Credit reference number;
- Credit Title;
- Aim of the credit;
- Credits available for a shell unit;
- Credits targeted for this shell unit; and
- Comments on why this credit has been targeted.

7. Targeted Rating

The score sheet in this section is based on the details contained in the Pre-Assessment in Appendix 2 for a shell unit on the Wombwell Lane, Barnsley site. The Pre-Assessment indicates a score of 55.7% points and the mandatory requirements can be targeted which equate to a rating of 'Very Good'.



8. Conclusion

Planning Policy CSP 2 of the Core Strategy says:

“All non-residential development will be expected to achieve at least BREEAM standard of ‘very good’ or equivalent.”

As can be seen from the score sheet in Section 7 and the Pre-Assessment in Appendix 2, the shell unit is on target to meet the policy requirement.

Appendix 1 – Site Plan



Appendix 2 – BREEAM Pre-Assessment

BREEAM Scheme: New Construction 2014
 Building Name: Wombwell Lane, Barnsley
 BREEAM Assessor: James Wrixon
 Licensed Assessor Organisation: AECOM



Ref	Title	Aim	Credits Available	Credits Targeted	Comments
Management					
Man 1	Project Brief and Design	To recognise and encourage an integrated design process that optimises building performance.	4	2	2 credits can be targeted for appointing a BREEAM Accredited Professional (AP) to support the design process (email 31.10.17, 18:06). The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Man 3	Responsible Construction Practices	To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.	6	6	6 credits can be targeted for requiring the Principal Contractor to undertake the following: <ul style="list-style-type: none"> • Operate an Environmental Management System (e.g. ISO 14001). • Accord with PPG6 (Pollution Prevention Guidelines). • Monitor and record transport data in the form of fuel consumption, CO₂ emissions & distance travelled. • Monitor and record energy and water consumption. • Ensure all timber is FSC, PEFC or recycled/reclaimed. • Achieve a Considerate Constructors Scheme score of at least 40 with at least 7 in each section. • Appoint a BREEAM AP/SSM to ensure construction compliance with BREEAM targets. The client has been advised (31.10.2017 18:06) that items including these will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Man 4	Commissioning and Handover	To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.	1	0	Credit not sought
Energy					
Ene 1	Reduction of Energy Use and Carbon Emissions	To recognise and encourage buildings designed to minimise operational energy demand, primary energy consumption and CO ₂ emissions.	12	7	The BRUKL Output Document (01.11.17) based on the assumptions within the energy report indicates 7 credits can be targeted.
Ene 3	External Lighting	To recognise and encourage the specification of energy efficient light fittings for external areas of the development.	1	1	1 credit can be targeted for ensuring the external lighting design meets the following requirements: <ul style="list-style-type: none"> • All external lighting to have either an automatic time switch or daylight sensors, as well as presence detectors in areas of intermittent pedestrian traffic. • The average initial luminous efficacy of external fittings is not less than 60 lumens per circuit watt. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Transport					
Tra 1	Public Transport Accessibility	To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion.	5	1	A review of the site's access to public transport has been undertaken (October 2017) and found that it has an Accessibility Index which allows 1 credit to be targeted.

Ref	Title	Aim	Credits Available	Credits Targeted	Comments
Tra 2	Proximity to Amenities	To encourage and reward a building location that facilitates easy access to local services and so reduces the environmental, social and economic impacts resulting from multiple or extended building user journeys, including transport-related emissions and traffic congestion.	1	1	A review of the site's access to public amenities has been undertaken (October 2017) and found that it allows the credit to be targeted.
Tra 3	Cyclist Facilities	To encourage building users to cycle, so promoting exercise and helping reduce congestion and emissions, by ensuring adequate provision of cyclist facilities.	2	2	2 credits can be targeted for providing covered, lit and secure cycle parking. The client has been advised (31.10.2017 18:06) that items including these will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Tra 5	Travel Plan	To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of reliance on forms of travel that have the highest environmental impact.	1	1	1 credit can be targeted for producing a Transport Assessment and Travel Plan. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Water					
Wat 2	Water Monitoring	To ensure water consumption can be monitored and managed, and therefore encourage reductions.	1	1	1 credit can be targeted for installing a water meter with a pulsed output on the mains water supply. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Wat 3	Water Leak Detection	To reduce the impact of water leaks that may otherwise go undetected.	1	1	1 credit can be targeted for installing a water leak detection system on the mains water supply which can detect leaks within the building and between the building and the utilities water meter. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Wat 4	Water Efficient Equipment	To reduce unregulated water consumption by encouraging specification of water efficient equipment.	1	1	1 credit can be targeted for either installing no irrigations systems, or drip fed subsurface irrigation systems. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Materials					
Mat 1	Life Cycle Impacts	To recognise and encourage the use of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building.	5	5	Areas from the proposed plans and elevations have been reviewed and, along with indicative materials, input into the BREEAM Mat 1 calculator tool which shows that 5 credits can be targeted.

Ref	Title	Aim	Credits Available	Credits Targeted	Comments
Mat 2	Hard Landscaping and Boundary Protection	To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking into account of the full life cycle of materials used	1	1	1 credit can be targeted for specifying hard-landscaping and boundary protection which achieves an A Rating under the Green Guide to Specification The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Mat 3	Responsible Sourcing of Materials	To recognise and encourage the specification and procurement of responsibly sourced materials for key building elements.	4	2	2 credits can be targeted for requiring the Principal Contractor to produce a Sustainable Procurement Plan and source materials from suppliers / manufacturers certified under a responsible sourcing certification scheme. The client has been advised (31.10.2017 18:06) that items including these will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Mat 4	Insulation	To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties.	1	1	1 credit can be targeted for specifying insulation products within the external walls, ground floor and roof which achieve an insulation index of 2.5. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Mat 5	Designing for Durability and Resilience	To recognise and encourage adequate protection of exposed elements of the building and landscape, therefore minimising the frequency of replacement and maximising materials optimisation.	1	1	1 credit can be targeted for incorporating durable building protection measures into the building and conducting a review of the building's external elements predicted performance against environmental material degradation. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Waste					
Wst 1	Construction Waste Management	To promote resource efficiency via the effective management and reduction of construction waste.	4	4	4 credits can be targeted for requiring the Principal Contractor to undertake the following: <ul style="list-style-type: none"> • Conduct a pre-demolition audit and reuse materials if feasible, or if not then maximise the recovery of materials for high-grade/value applications. • Produce a Resource Management Plan. • Generate no more than 13.3m³ of non-hazardous construction waste (excluding demolition + excavation waste) per 100m² GIA. • Divert 70% of non-demolition waste, and 80% demolition waste (by volume) from landfill. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.
Land Use and Ecology					
LE 1	Site Selection	To encourage the use of previously occupied and/or contaminated land and avoid land which has not been previously disturbed.	2	1	Aerial images do not appear to show the site comprises developed land, in which case 1 credit can be achieved for development of previously developed land.
LE2	Ecological Value of Site and Protection of Ecological Features	To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.	2	2	2 credits can be awarded where the site is of low ecological value. Aerial images do not appear to show any tree or other ecological features however if this is not the case an ecologist would need to be appointed to make an assessment. The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.

Ref	Title	Aim	Credits Available	Credits Targeted	Comments
LE 3	Minimising Impact on Existing Site Ecology	To minimise the impact of a building development on existing site ecology.	2	2	<p>2 credits can be awarded where the development does not lower the ecological value of the site. Aerial images do not appear to show any significant ecological value however if this is not the case an ecologist would need to be appointed to make an assessment.</p> <p>The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.</p>
Pollution					
Pol 3	Surface Water Run-Off	To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, thereby minimising the risk and impact of localised flooding on and off-site, watercourse pollution and other environmental damage.	5	4	<p>4 credits can be targeted for undertaking a Flood Risk Assessment which finds the site to be at low risk of flooding from all sources, as well as ensuring the drainage design meets the following requirements:</p> <ul style="list-style-type: none"> • The development does not increase the site's peak rate run-off. • The development does not increase the site's volume of run-off. • The development does not flood in the event of a local drainage system failure. <p>The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.</p>
Pol 4	Reduction of Night Time Light Pollution	To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.	1	1	<p>1 credit can be targeted for ensuring the external lighting design meets the following requirements:</p> <ul style="list-style-type: none"> • External lighting to be compliant with ILP Guidance for the Reduction of Obtrusive Light 2011. • All external lighting (except safety and security lighting but including signage) can be automatically turned off between 23:00 and 07:00. • Safety and security lighting to comply with lower levels of ILP Table 2 between 23:00 and 07:00. <p>The client has been advised (31.10.2017 18:06) that items including this will have to be undertaken in order to achieve sufficient credits to target BREEAM Very Good. The client was asked to advise us by the 2.11.2017 if they knew of any reason why this item could not be delivered for this unit. We have not been advised this is the case and have therefore had to assume that it can.</p>

Appendix 3 – Limitations

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The methodology adopted and the sources of information used by AECOM in providing its services are outlined in this Report. The work described in this Report was undertaken between October and November and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

Studies have not been undertaken, except where specifically referenced, to support this report. This includes but is not limited to Building Regulations, energy assessments, daylight calculations, NOx emission calculations, manufacturers and operators specification claims, ecology assessments, flood risk assessments, noise assessments, light pollution evaluation, job creation data, contaminated land assessments and transport assessments.

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