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# Preliminary Assessment
## BREEAM 2008
## Travis Perkins Industrial Warehouse

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**Prepared for:**
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# Issue Status

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# Travis Perkins Industrial Warehouse

| | |
|---|---|
| Environmental Consultant | Gilly Fisher |
| Company Name: | Eight Associates |
| Signature: |  |

| | |
|---|---|
| Quality Assessor | Emma Storey |
| Company Name: | Eight Associates |
| Signature: |  |

| Revision Number: | Issue Date: | Issued by: |
|---|---|---|
| Revision 1 | 14.03.2011 | Gilly Fisher |

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## Travis Perkins Industrial Warehouse

# Introduction

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## Travis Perkins Industrial Warehouse

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|---|---|
| Introduction | Eight Associates have been appointed, as registered BREEAM assessors, to provide a Preliminary Assessment of the likely score of the proposed Travis Perkins Industrial Warehouse, under the BREEAM 2008 Industrial criteria.<br><br>This preliminary assessment is based on outline drawings and completed BREEAM questionnaires provided by both Applied Energy and Bells Cooley Architects to Eight Associates. |
| Building Summary | The industrial unit is located at 11 - 13 St Pancras Way, Camden. The unit is on the ground floor. It consists of a large industrial storage space and a small sales office that is less than 500m$^2$. Covered floor area is 3815.2m$^2$ and uncovered floor area is 437.7m$^2$.<br><br>The unit is considered large as it is greater than 500m$^2$ in total, it has an unheated operational area, vehicle delivery bays and a waste management area. There are no lifts or cold storage areas within the unit. |
| Camden Council Planning Requirements | The development is under the London Borough of Camden Local Authority. As part of their planning requirements, the council requires the following:<br><br>Achieve the following BREEAM assessment rating:<br>• Achieve a VERY GOOD BREEAM rating.<br><br>In addition:<br>• Achieve at least 60% of the credits within the energy and water sections under the industrial assessment criteria;<br>• Achieve at least 40% of the materials credits under the industrial assessment criteria; and<br>• Achieve a target of on-site renewable energy generation of at least 10% in line with the London Plan and Council policies. |
| Energy | In order to comply with Camden Council planning requirements, 60% of the credits available within the BREEAM Energy section must be achieved. For this assessment, this means that a minimum of 14 credits will need to be achieved in the energy section. |
| Water | In order to comply with Camden Council planning requirements, 60% of the credits available within the BREEAM water section must be achieved. For this assessment, this means that a minimum of 6 credits will need to be achieved in the water section. |
| Materials | In order to comply with Camden Council planning requirements, 40% of the credits available within the BREEAM Materials section must be achieved. For this assessment this means that a minimum of 5 credits will need to be achieved in the materials section. |

# Score Summary

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## Travis Perkins Industrial Warehouse

### Score Summary

This preliminary assessment confirms a score of 71.25% (BREEAM rating of Excellent) is to be targeted for the Travis Perkins Warehouse. It also shows all of the BREEAM mandatory requirements for Excellent have been met.

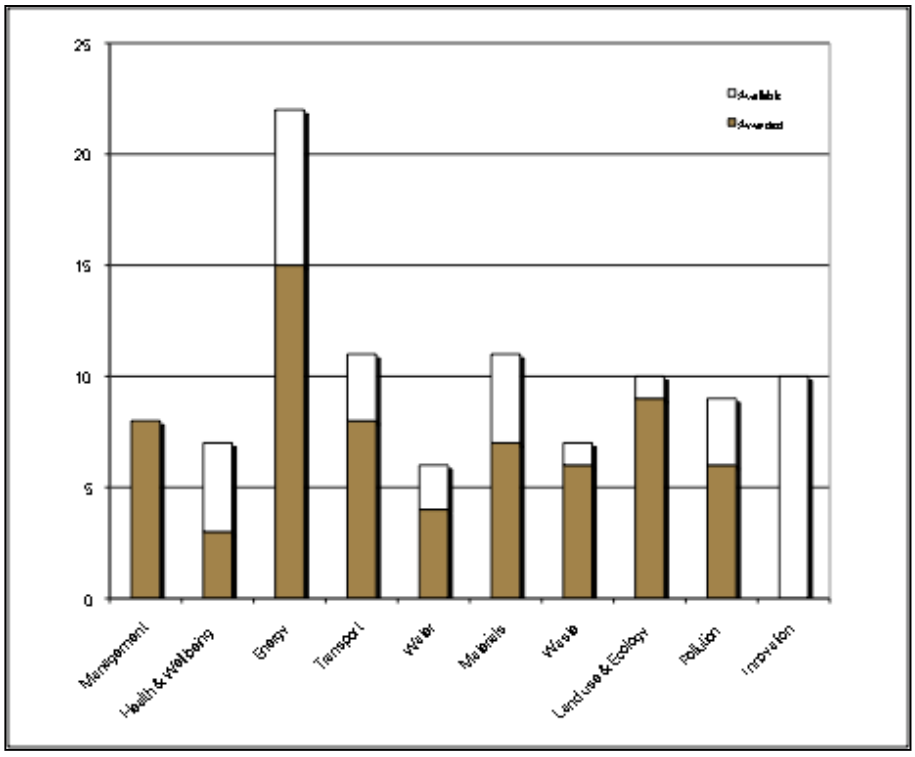
In addition the preliminary assessment confirms that 68%, 66%and 64% of the BREEAM credits are being pursued in the Energy, Water and Materials sections of BREEAM chapters respectively. Therefore all the BREEAM chapter specific planning requirements are met.

### Minimum Score Required

| | |
|---|---|
| Pass: | 30% |
| Good: | 45% |
| Very Good: | 55% |
| Excellent: | 70% |
| Outstanding: | 85% |

### Current Rating Summary

| Credit allocation | Available | Achieved | Weighting | Score |
|---|---|---|---|---|
| Management | 8 | 8 | 12.00% | 12.00 |
| Health & Well-being | 7 | 3 | 15.00% | 6.43 |
| Energy | 22 | 15 | 19.00% | 12.95 |
| Transport | 11 | 8 | 8.00% | 5.82 |
| Water | 6 | 4 | 6.00% | 4.00 |
| Materials | 11 | 7 | 12.50% | 7.95 |
| Waste | 7 | 6 | 7.50% | 6.43 |
| Land use & Ecology | 10 | 9 | 10.00% | 9.00 |
| Pollution | 9 | 6 | 10.00% | 6.67 |
| Innovation | 10 | 0 | 10.00% | 0.00 |
| Total | | | | 71.25% |
| Rating | | | | EXCELLENT |



# Management
## Travis Perkins
## Industrial Warehouse

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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Man 1 – Commissioning | A commissioning monitor will be appointed to undertake commissioning and seasonal commissioning in line with the CIBSE and BSRIA commissioning guidelines. Commissioning and seasonal commissioning will be undertaken for all simple and complex systems.<br><br>Two credits are targeted. | 2 of 2 | ✓ |
| Man 2 – Considerate Constructors | The Contractor will be required to register the development under the Considerate Constructors Scheme (CCS) and will be committed to achieve at least 32/40 points and score of no less than 3 in each section. Two credits are targeted. | 2 of 2 | |
| Man 3 – Construction Site Impacts | The Contractor will be required to monitor energy and water use on site, with a named individual responsible for weekly/monthly recording and on-site graphical display of usage patterns. Targets for energy and water use will be set for the project.<br><br>The Contractor will be required to comply with Environment Agency on-site guidelines for pollution to watercourses (Environment Agency Site Pollution Prevention Guides 1, 5 & 6) and best practices in terms of air (dust) pollution.<br><br>The Contractor will ensure that at least 80% of site timber will be reused, recycled or sourced from FSC/PEFC suppliers and 100% will be legally sourced (non-CITES listed).<br><br>In addition the Contractor will follow an Environmental Materials Policy and have a certified Environmental Management System. Four credits are targeted. | 4 of 4 | |
| Man 4 – Building User's Guide | A non-technical building user guide will be produced for the attention of the facilities manager, staff and other operators, detailing the operation of the building and the level of its environmental performance, in line with BREEAM content requirements. One credit is targeted. | 1 of 1 | |
| Man 8 – Security | Consultation with an Architectural Liaison Officer (ALO) has taken place about secure by design for the industrial unit. This has been undertaken prior to RIBA stage C. One credit is targeted. | 1 of 1 | |

# Health & Well-being

## Travis Perkins Industrial Warehouse

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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Hea 1 – Daylighting | Day lighting calculations are to be undertaken for both the office and operational space. However it is unclear a present whether the BREEAM day lighting calculations will be met. One credit is withheld. | 0 of 1 | |
| Hea 4 – High Frequency Lighting | All fluorescent luminaries will be installed with high frequency ballasts. This is to be specified as part of the M&E scope of works. One credit is targeted. | 1 of 1 | ✓ |
| Hea 5 – Internal and External Lighting Levels | All internal and external lighting will be specified to CIBSE recommended levels (LG6 & LG7 and the Code for Lighting 2006). One credit is targeted. | 1 of 1 | |
| Hea 9 – VOCs | Credit is not sought. | 0 of 1 | |
| Hea 12 – Microbial Contamination | All water and HVAC systems will be designed to meet the requirements of the HSE's Approved Code of Practice and Guidance L8 "Legionnaires disease the control of legionella bacteria in water systems" 2000. One credit is targeted. | 1 of 1 | ✓ |
| Hea 14 – Office Space | Blinds will be provided in office space for glare control. The office space will be modelled in line with CIBSE AM11 to ensure adequate thermal comfort in summer and winter for occupants.<br><br>Only two of the eight items are to be met, therefore the credit requirements have not been met. Two credits are withheld. | 0 of 2 | |

# Energy
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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Ene 1 – Reduction of $CO_2$ Emissions | Carbon emissions are to be calculated from SBEM calculation results to give an indication of annual carbon emissions.<br><br>The initial modelling output shows an EPC of 23 or lower will be achieved, resulting in eleven credits being targeted. | 11 of 15 | |
| Ene 2 – Sub Metering of Substantial Energy Uses | Electric sub-metering of substantive energy uses will be provided via pulsed meters. Substantive energy uses in the building will include (where present): space heating, hot water, lighting and small power. One credit is targeted. | 1 of 1 | ✓ |
| Ene 3 – Sub Metering of High Energy Load Areas and Tenancy | Separate sub metering of office and operational areas has not been specified. Credit is withheld. | 0 of 1 | |
| Ene 4 – External Lighting | No external lighting has been specified for the industrial unit. Credit is awarded by default. | 1 of 1 | |
| Ene 5 – Low zero carbon technologies | Applied Energy, who fulfils the requirements of an energy specialist[1], has carried out a fully compliant Renewable Energy Feasibility Study. A 10% reduction in the carbon emissions of the building will be achieved through the installation of CHP, as recommended by the feasibility study. Two credits are targeted. | 2 of 3 | |
| Ene 6 – Building fabric performance & avoidance of air infiltration | Credit has not been sought. | 0 of 1 | |

[1] **Energy Specialist**: An individual who has acquired substantial expertise or a recognised qualification for undertaking assessments, designs and installations of low or zero carbon solutions in the commercial buildings sector; and is not professionally connected to a single low or zero carbon technology or manufacturer.

# Transport

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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Tra 1 – Provision of Public Transport | There is good accessibility to the London public transport network from the development. Camden Town, Kings Cross St Pancras and Camden Road Rail are all within 500m of the development providing rail and underground services. In addition there are numerous bus stops on Pancras Road, which again is less than 500m from the development. Three credits are targeted. | 3 of 3 | |
| Tra 2 – Proximity to Amenities | The development is located within 500m of a post box, grocery shop and a cash machine. One credit is targeted. | 1 of 1 | |
| Tra 3 – Cyclist Facilities | There are likely to be over 100 staff working within the warehouse and office. To meet the BREEAM requirements cycle storage facilities will need to be provided for 5% (city centre location) of staff. There is provision for storage of 68 cycles on site. First credit targeted.<br><br>BREEAM compliant showers, lockers and changing facilities have not been provided for staff. Second credit is withheld. | 1 of 2 | |
| Tra 4 – Pedestrian and Cyclist Safety | Credit cannot be awarded as access to cycle storage facilities is shared with access for deliveries. Credit is withheld. | 0 of 1 | |
| Tra 5 – Travel Plan | A travel plan in line with all BREEAM guidelines and requirements has been developed in line with the needs of the building users, following a site-specific transport assessment/survey. One credit is targeted. | 1 of 1 | |
| Tra 6 – Maximum Car Parking Capacity | Five staff car parking spaces have been provided. Staff numbers are expected to exceed 100, therefore one car parking spaces is provided for every 25 building users. Two credits are targeted. | 2 of 2 | |
| Tra 8 – Deliveries and Manoeuvring Areas | Credit is not achievable as delivery areas are accessed through parking areas and share pedestrian and cyclist's routes. One credit is withheld. | 0 of 1 | |

# Water

## Travis Perkins Industrial Warehouse

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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Wat 1 – Water Consumption | Water efficient sanitary fittings including dual flush WC's with an effective flush volume of 4.5 litres, low flow showers and taps will be installed within the building. In addition a rainwater harvesting system has been specified for irrigation of the green roof. Two credits are targeted. | 2 of 3 | ✓ |
| Wat 2 – Water Meter | A water meter with pulsed output will be specified to all building mains water supplies. One credit targeted | 1 of 1 | ✓ |
| Wat 3 – Major Leak Detection | A major leak detection system has not been specified. One credit is withheld. | 0 of 1 | |
| Wat 4 – Sanitary Supply Shut Off | All WC/urinal areas will have a PIR / infra-red activated cold water shut off system, utilising solenoid valves. One credit is targeted. | 1 of 1 | |

# Materials

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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Mat 1 – Materials Specification – Major Building Elements | Where possible, materials specified for the roof and external walls will be A or A+ rated under the Green Guide to Specification. Two credits are targeted. | 2 of 2 | |
| Mat 2 – Hard Landscaping and Boundary Protection | The specification of the hard landscaping and boundary protection is not known at present. Credit is withheld. | 0 of 1 | |
| Mat 3 – Reuse of Building Façade | Credit cannot be awarded as the development is new build. | 0 of 1 | |
| Mat 4 – Reuse of Building Structure | Credit cannot be awarded as the development is new build. | 0 of 1 | |
| Mat 5 – Responsible Sourcing of Materials | The design team will ensure that all timber building elements specified are FSC/PEFC certified and all other elements are sourced from suppliers who can provide ISO14001/EMAS/BES 6001 certification for process and extraction stage. Two credits are targeted. | 2 of 3 | |
| Mat 6 – Insulation | Two credits will be awarded as all insulants (roof, wall, floor and building services) used on site will be A or A+ rated under the Green Guide to Specification and be sourced from suppliers and manufacturers who are EMS certified under ISO 14001. Two credits are targeted. | 2 of 2 | |
| Mat 7 – Designing for Robustness | Materials and features will be specified to protect vulnerable parts of the internal and external areas of the building. This will include the following:<br>• Protection from the effects of high pedestrian traffic in main entrances and thoroughfares; and<br>• Protection against any internal trolley movement in service areas.<br>One credit is targeted. | 1 of 1 | |

# Waste

## Travis Perkins Industrial Warehouse

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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Wst 1 – Construction Site Waste Management | The contractor will be required to undertake a pre demolition audit to maximise the recovery of materials from demolition and divert 90% by weight of non hazardous demolition waste from landfill.<br><br>In addition the contractor will develop a Site Waste Management Plan (SWMP) in line with statutory guidance and BREEAM requirements to reduce waste throughout the construction phases.<br><br>Finally the contractor will be required to show that less than 12.9$m^3$ of waste will be generated per 100$m^2$ of gross internal floor area and divert 75% by weight of non hazardous construction waste from landfill.<br><br>Three credits are targeted. | 3 of 4 | |
| Wst 2 – Recycled Aggregates | This contractor will be required to use recycled aggregate for 25% of high grade aggregate used on site. One credit is targeted. | 1 of 1 | |
| Wst 3 – Recyclable Waste Storage | An area dedicated to the storage of recyclable waste will be provided. This will be clearly labelled for recycling and fully complies with BREEAM size requirements. One credit is targeted. | 1 of 1 | |
| Wst 4 – Compactor/Baler | A compactor/baler will be provided at the development. One credit is targeted. | 1 of 1 | |

# Land Use and Ecology

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| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| LE1 – Reuse of Land | The warehouse is being developed on a previously developed brownfield site. One credit is targeted. | 1 of 1 | |
| LE2 – Contaminated Land | At present the existing land is not deemed as contaminated. Therefore this credit will not be awarded. | 0 of 1 | |
| LE3 – Ecological Value of Land and Protection of Ecological Features | The existing site has no ecological value. Therefore there are no ecological features that need to be protected. One credit is targeted. | 1 of 1 | |
| LE4 – Mitigating Ecological Impact | An ecologist has been appointed to advise on mitigating the ecological impact of the development. At present a green roof is to be installed on the site, therefore it is likely there will be no negative change in the ecology of the site. Two credits are targeted. | 2 of 2 | ✓ |
| LE5 – Enhancing Site Ecology | A suitably qualified ecologist[2] has been appointed to carry out an ecological study of the site. A green roof is to be installed on the site and all of the ecologist's recommendations for general enhancement of the site will be implemented. Three credits are targeted. | 3 of 3 | |
| LE6 – Long Term Impact on Biodiversity | A suitably qualified ecologist has been appointed to carry out an ecological study of the site. In addition the contractor will be required to nominate a biodiversity champion to minimise impacts on biodiversity during construction. Two credits are targeted. | 2 of 2 | |

[2] **Suitably qualified ecologist (SQE)**: An individual achieving all the following items can be considered to be "suitably qualified" for the purposes of a BREEAM assessment:

1. Holds a degree or equivalent qualification (e.g. N/SVQ level 5) in ecology or a related subject.
2. Is a practising ecologist, with a minimum of three years relevant experience (within the last five years). Such experience must clearly demonstrate a practical understanding of factors affecting ecology in relation to construction and the built environment; including, acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures. Examples of relevant experience are: ecological impact assessments; Phase 1 and 2 habitat surveys and habitat restoration.
3. Is covered by a professional code of conduct and subject to peer review.

# Pollution

## Travis Perkins Industrial Warehouse

| | | Likely Credits | Mandatory requirement (V.Good) met? |
|---|---|---|---|
| Pol 1 – Refrigerant GWP – Building Services | This credit cannot be awarded because it is likely that the refrigerants used on site will have a GWP in excess of 5. One credit is withheld. | 0 of 1 | |
| Pol 2 – Preventing Refrigerant Leaks | A refrigerant leak detection system will not be installed within the development. One credit is withheld. | 0 of 1 | |
| Pol 4 – $NO_x$ Emissions of Heating Source | Credit requirements cannot be met. One credit is withheld | 0 of 1 | |
| Pol 5 – Flood Risk / Water Run Off | A site-specific Flood Risk assessment (FRA) is being carried out for the development. The development is located in an area of low flood risk therefore two credits are targeted.<br><br>A third credit are likely to be awarded as attenuation measures will be specified to ensure that the peak rate of run off from the site to the watercourses will be no greater for the developed site than it was for the pre developed site. This will also take into account climate change. Three credits are targeted. | 3 of 3 | |
| Pol 6 – Minimising Watercourse Pollution | Sustainable urban drainage systems (SuDS) will be specified in areas of relatively low watercourse pollution and oil and petrol interceptors will be specified for areas of high risk pollution. One credit is targeted. | 1 of 1 | |
| Pol 7 – Reduction of Night Time Light Pollution | No external lighting has been specified for the industrial unit. Credit is awarded by default. | 1 of 1 | |
| Pol 8 – Noise Attenuation | A noise impact assessment will be carried out by a fully UKAS/ACA registered and qualified acoustician[3] in compliance with BS 4142:1997. Results / recommendations from the assessment will ensure the rating level of the noise source(s) from the site and building is equivalent to or less than the background noise level. Credit is targeted. | 1 of 1 | |

[3] **Suitably qualified acoustician:** Those organisations or individuals having UKAS accreditation or accredited by a European equivalent of UKAS. The definition includes organisations or individuals registered to schemes that are UKAS accredited, or equivalent, to ensure consistency and technical competence in sound testing. At the time of writing the Association of Noise Consultants (ANC) Registration Scheme is in the process of obtaining UKAS accreditation and can be deemed to comply with this requirement until advised otherwise.