APRIL 2015

Sustainability Statement

11 Blackburn Road, West Hampstead

Iceni Projects Limited on behalf of
Narrowpack Ltd

April 2015

Ref: 14-S055-002v4

ICENI PROJECTS LIMITED ON BEHALF OF NARROWPACK LTD

Sustainability Statement
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1. EXECUTIVE SUMMARY

1.1 This Sustainability Statement presents the sustainability credentials for a proposed scheme at 11 Blackburn Road, West Hampstead, London.

1.2 Consideration has primarily been given to the planning policy and other requirements prior to a review of sustainability in the context of the wider community, design and construction.

1.3 The proposed scheme includes residential new build and refurbishment of the Victorian warehouse to provide artist workshop / gallery space.

1.4 At a strategic level, this is considered to be sustainable on the basis that it will help alleviate the supply-side housing shortage and assist with the rebalancing of the socio-economic factors; it will make most efficient use of land resources in line with the local context and the aspirations for growth in the West Hampstead Interchange area and retain and upgrade the employment floorspace.

1.5 A number of sustainable design features are proposed and demolition/construction will be managed to ensure minimal impact on the environment and local community.

1.6 The non-domestic and domestic refurbishment parts of the development (Victorian Warehouse) shall be assessed using the BREEAM sustainability assessment tool with a target of achieving a 'Very Good' rating.

1.7 Overall, the proposals for the scheme are in line with the overarching principles of sustainable development as well as the policy requirements of the planning authority.

2. INTRODUCTION

2.1 Iceni Projects Ltd was commissioned by Narrowpack Ltd to produce a Sustainability Statement for a proposed scheme at 11 Blackburn Road, West Hampstead.

Site & Surroundings

The Site

2.2 The site is located in West Hampstead, within the London Borough of Camden and has an area of 1,137sqm. The site has an east-west linear shape, with the footpath Billy Fury Way and railway to the north, and Blackburn Road to the south.

2.3 The site is predominantly laid to hardstanding and contains two dilapidated buildings; a Victorian warehouse and artist studio; a driveway and small forecourt area used for access and informal parking.

The Surroundings

2.4 The site is located near the West Hampstead Interchange on West End Lane, with its abundant local facilities, amenities and public transport connections.

2.5 The wider area is predominantly residential with commercial ground floor uses along West End Lane and a retail park to the east to Finchley Road.

2.6 Neighbouring buildings include an office building to the south-east and a recently completed student accommodation building further east. Terraced housing with ground floor commercial uses lie adjacent to the west.

The Proposed Development

2.7 The following is provided as the scheme description:

2.8 "Demolition of modern warehouse and replacement with seven 2bed houses, and refurbishment of Victorian warehouse to provide artist workshop / gallery space on ground floor and two x 2bed residential apartments above, together with car parking, landscaping and associated works."

Report Objective

2.9 The objective of the Sustainability Statement is to outline how sustainability has been incorporated into the development proposals.

Methodology

2.10 Consideration has primarily been given to the planning policy context; this is detailed in Section 3. The approach adopted for the appraisal of sustainability is discussed in Section 4 prior to consideration of the features of the scheme relevant to sustainability at a strategic level in Section 5. Sustainable design and construction measures are presented in section 6 and a summary is presented in Section 7.

3. PLANNING CONTEXT & OTHER CONSIDERATIONS

3.1 National, London and local planning policy relevant to sustainable development is considered in detail below:

National Planning Policy Framework

3.2 The National Planning Policy Framework (NPPF) defines "sustainable development" in the context of the planning system in England as comprising policies 18 to 219, taken as a whole, of the NPPF. A "presumption" is established in favour of sustainable development.

London Planning Policy Framework

The London Plan – Spatial Development Strategy for Greater London

3.3 The replacement London Plan was published on 2 July 2011 and replaced the *London Plan (consolidated with alterations since 2004)*; on 10 March 2015 the London Plan was updated to incorporate the Further Alterations to the London Plan (FALP). The London Plan is the overall strategic plan for London. Chapter five of the Plan details *London's Response to Climate Change* and Policy 5.3 *Sustainable Design & Construction* is pertinent to this Sustainability Statement.

Sustainable Design and Construction SPG

3.4 The Supplementary Planning Guidance aims to support developers, local planning authorities and neighbourhoods to achieve sustainable development and provides detail on the implementation of sustainable design and construction and the wider environmental sustainability policies of the London Plan.

3.5 The following issues are covered:

- Resource management and safeguarding, including land, energy, water, materials/waste and ecology/biodiversity;
- Adapting to Climate Change and Urban Greening;
- Pollution Management in Land, Air, Noise, Light and Water.

Local Planning Policy Framework

3.6 The local planning authority is Camden Council and policy is detailed within a number of statutory documents.

Camden Core Strategy: 2010-2025

3.7 The Core Strategy sets out the key elements of the vision for the borough and is a central part of the Local Development Framework (LDF).

3.8 Policies relevant to the overall approach to sustainable growth and development in the Borough include Policy CS1 (*Distribution of Growth*) and CS2 (*Growth Areas*). Policy CS1 promotes sustainable development in the most suitable locations, making best use of land resources and Policy CS2 identifies West Hampstead Interchange as a growth area where mixed use redevelopment of a "*sustainable and safe design of the highest quality that respects the character and heritage value of West Hampstead"* is promoted.

3.9 Environmental sustainability is addressed within Policy CS13; this is considered most pertinent in the context of this report and is presented below:

Policy CS13 – Tackling climate change through promoting higher environmental standards [extract]

Reducing the effects of and adapting to climate change

The Council will require all development to take measures to minimise the effects of, and adapt to, climate change and encourage all development to meet the highest feasible environmental standards that are financially viable during construction and occupation by:

- ensuring patterns of land use that minimise the need to travel by car and help support local energy networks;
- promoting the efficient use of land and buildings;
- minimising carbon emissions from the redevelopment, construction and occupation of buildings by implementing, in order, all of the elements of the following energy hierarchy:
    1. ensuring developments use less energy;
    2. making use of energy from efficient sources, such as the King's Cross, Gower Street, Bloomsbury and proposed Euston Road decentralised energy networks;
    3. generating renewable energy on-site; and
- ensuring buildings and spaces are designed to cope with, and minimise the effects of, climate change.

The Council will have regard to the cost of installing measures to tackle climate change as well as the cumulative future costs of delaying reductions in carbon dioxide emissions.

[…]

Water and surface water flooding

We will make Camden a water efficient borough and minimise the potential for surface water flooding by:

[…]

(i) requiring development to avoid harm to the water environment, water quality or drainage systems and prevents or mitigates local surface water and down-stream flooding, especially in areas of up-hill from, and in, areas known to be at risk from surface water flooding such as South and West Hampstead, Gospel Oak and King's Cross.

Camden Development Policies: 2010-2025

3.10 The Development Policies LDF document sets out detailed planning criteria that are used to determine applications for planning permission in the borough.

3.11 The policies of Section 2 "*Meeting Camden's needs – Providing homes, jobs and facilities"* endorse the principles of sustainable development with a focus on social and economic sustainability.

3.12 The policies of Section 3 "*Tackling climate change and improving and protecting Camden's environment and quality of life"* are all relevant to sustainable development with a focus on environmental protection and enhancement.

3.13 Policy DP22 elaborates on the key sustainable design and construction measures expected in new schemes as follows:

Policy DP22 – Promoting sustainable design and construction

The Council will require development to incorporate sustainable design and construction measures. Schemes must:

(a) demonstrate how sustainable development principles, including the relevant measures set out in paragraph 22.5 below, have been incorporated into the design and proposed implementation; and

(b) incorporate green or brown roofs and green walls wherever suitable.

The Council will promote and measure sustainable design and construction by:

(c) expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016.;

(d) expecting developments (except new build) of 500sqm of residential floorspace or above or 5 or more dwellings to achieve "very good" in EcoHomes assessments prior to 2013 and encouraging "excellent" from 2013;

(e) expecting non-domestic developments of 500sqm of floorspace or above to achieve "very good" in BREEAM assessments and "excellent" from 2016 and encouraging zero carbon from 2019.

The Council will require development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures, such as:

(f) summer shading and planting;

(g) limiting run-off;

(h) reducing water consumption;

(i) reducing air pollution; and

(j) not locating vulnerable uses in basements in flood-prone areas.

3.14 Other Section 3 relevant policies considered are Policies DP23 (*Water);* DP28 (*Noise and Vibration*)*;* and DP32 (*Air Quality and Camden's Clear Zone*).

Camden Planning Guidance – CPG3 Sustainability

3.15 The guidance provides information on ways to achieve carbon reductions and more sustainable developments; it covers a range of issues including – energy, water efficiency, sustainable use of materials, sustainability assessment tools, climate change adaptation, and biodiversity.

Emerging Local Policy – Draft Local Plan

3.16 Camden Council is reviewing its main planning policies and is currently consulting on a draft Local Plan. When finalised, the Local Plan will replace the Core Strategy and Camden Development Policies documents.

3.17 The draft policies have been reviewed in preparation of the energy strategy for the development; of most pertinence to this statement are draft policies CC1 (*Climate Change Mitigation*) and CC2 (*Adapting to Climate Change*).

Pre-Planning Consultation

3.18 Pre-application advice was sought from Camden Council and the following was stated in the Planning Officer's response (dated 29 July 2014) with regards to sustainable design:

> *"The new residential units would be required to meet as a minimum 'Code Level 4' in a Code for Sustainable Homes Assessment and the new commercial floorspace would be expected to meet 'very good' in a BREEAM Assessment. An assessment should be submitted as part of any application submission, with a post construction review to be carried out as a condition/legal agreement of any approval.*
>
> *The proposal should make provision for water run-off attenuation measures and should ensure green roofs, brown roofs and green walls are proposed where possible".*

Eric Pickles Written Statement to Parliament (25 March 2015)

3.19 On the 25 March 2015, the Department for Communities and Local Government and The Right Honourable Eric Pickles produced a Written Statement to Parliament. This included the following statements in relation to the Code for Sustainable Homes.

> **Plan Making** [extract]
>
> From the date the Deregulation Bill 2015 is given Royal Assent, local planning authorities and qualifying bodies preparing neighbourhood plans should not set in their emerging Local Plans, neighbourhood plans, or supplementary planning documents, any additional local technical standards or requirements relating to the construction, internal layout or performance of new dwellings. This includes any policy requiring any level of the Code for Sustainable Homes to be achieved by new development; the government has now withdrawn the Code, aside from the management of legacy cases.

3.20 The Deregulation Bill was given Royal Assent on 26 March 2015.

Decision Taking, Transition and Compliance [extract]

From the date the Deregulation Bill 2015 is given Royal Assent until 30 September 2015: The government's policy is that planning permissions should not be granted requiring, or subject to conditions requiring, compliance with any technical housing standards other than for those areas where authorities have existing policies on access, internal space, or water efficiency.

Where there is an existing plan policy which reference the Code for Sustainable Homes, authorities may continue to apply a requirement for a water efficiency standard equivalent to the new national technical standard, or in the case of energy a standard consistent with the policy set out in the early paragraph of this statement, concerning energy performance.

Sustainability Standards

BREEAM

3.21 The Building Research Establishment's Environmental Assessment Method (BREEAM) is an environmental assessment for new build and refurbishment projects of non-domestic buildings; the methodology can also be used to assess domestic refurbishment projects.

3.22 BREEAM goes beyond Building Regulations requirements to encourage best practice in: Management; Health & Wellbeing; Energy; Transport; Water; Materials; Waste; Land Use & Ecology; and Pollution.

3.23 The standard measures sustainability by awarding "credits" against "issues" relevant to nine design categories. An additional Innovation category exists for the purpose of rewarding exemplar performance.

3.24 BREEAM uses a rating system to communicate the extent to which performance has been achieved. There are six levels with ratings ranging from "Unclassified" to "Outstanding" and certain issues require a mandatory level of performance depending upon the sought BREEAM rating.

Code for Sustainable Homes (now withdrawn)

3.25 The Code for Sustainable Homes ("the Code") which was introduced in England in April 2007 as a voluntary national standard to improve the overall sustainability of new homes is now withdrawn (as of 26th March 2015, please see above) and the registration of new schemes is no longer available.

4. DEVELOPMENT NEED & SITE CONTEXT

4.1 This section highlights those socio and economic aspects of sustainability that relate to the proposed use and site location. Environmental matters are considered in greater detail in other documentation accompanying the application.

Development Need

4.2 Both nationally and regionally there is a shortfall in housing, which is leading to property prices rising significantly faster than earnings; with implications for affordability and ownership.

4.3 This phenomenon is most acutely felt by for those people who are not yet on the housing ladder and who have not benefited in the increase in property asset values. Typically, these people will be the younger and those with lower incomes.

4.4 The lack of housing supply is therefore causing an intergenerational imbalance meaning that the ability of future generations to meet their housing needs is being compromised. This is inconsistent with the principles of "sustainable development" as defined by Brundtland; and if not addressed, will have longer term societal and economic implications.

4.5 The proposed scheme will offer a mix of housing including family sized units and appeal to a broad range of potential residents.

4.6 The site is currently under-utilised, with the arrangement of existing buildings and their condition prohibiting the best use of the land. The site is in the West Hampstead Interchange Growth Area and has excellent local facilities and transport connections that are not fully utilised. Redevelopment of the site would therefore make most efficient use of land resources and deliver residential-led mixed uses of a high quality, compatible with the character of the locality and local planning policies supporting growth in the area.

4.7 The scheme will re-provide employment floorspace of modern standards offering the opportunity to maintain and enhance a source of economic activity; the Victorian warehouse shall be refurbished, landscaping and high quality public realm would be incorporated to the benefit of the neighbouring amenity.

Site Context

4.8 In line with the "three pillars" of sustainability, the site context has been considered with regard to its economic, social and environmental context; acknowledging that interrelationships exist between many of these issues.

4.9 Many of the social and economic issues concern accessibility, which in its broadest sense, is regarded as a combination of access to local shops, services, schools / colleges, employment opportunities; as well as access to public and other transport facilities. Therefore the accessibility of the proposed scheme to local amenities is a relevant consideration in determining whether the site represents a sustainable location in the context of transport.

Access to Amenities (Education, Health, Leisure, Public Transport)

4.10 The site is located very close to West Hampstead Interchange, near West End Lane and its associated local facilities and amenities.

4.11 The area offers access to a number of schools, small and large scale retail, and leisure facilities all within walking distance from the site; access to amenities is expected to be enhanced in the future by the mixed-use redevelopments planned or promoted within the West Hampstead Interchange "growth area". The closest medical facility is West Hampstead Medical Centre within 9min walking distance from the site.

4.12 The site has excellent transport connections with West Hampstead tube station, West Hampstead Thameslink and Overground services within 5min walking distance from the site; numerous bus services operate along West End Lane. Transport Accessibility Level (PTAL) rating of the site is 6a indicating an excellent location promoting sustainable modes of transport.

Employment Opportunities

4.13 The site's central siting in West Hampstead and close proximity to transport nodes connecting the area to other urban centres and central London shall allow future residents good access to a wide range of employment opportunities.

Development Need & Site Context Appraisal

4.14 On the basis that the nature of the proposed development will help alleviate the supply-side housing shortage and assist with the rebalancing of the socio-economic factors, the type of development is considered consistent with the objectives of sustainable development.

4.15 The proposed development will make most efficient use of land resources in line with the local context and the aspirations for growth in the area; it shall retain and upgrade the employment floorspace and enhance the public realm and character of the area.

4.16 It has also been demonstrated that the application site is appropriate for the intended use and shall offer future occupiers with the services, opportunities and broader environment underpinning a qualitative urban living.

5. SUSTAINABLE DESIGN & CONSTRUCTION

5.1 The following presents the main sustainable design and construction measures proposed for the site; the section broadly follows the contents of Camden Council's CPG3 "Sustainable Design & Construction".

Energy Strategy

5.2 The Energy Strategy is based upon the principles of the Energy Hierarchy and is consistent with the policies of Camden Council and the NPPF. An Energy Statement is submitted in support of this application, where further details can be found.

5.3 Energy efficiency has therefore been prioritised above the use of low and renewable energy systems. Passive design measures and energy efficiency measures focusing on the high quality fabric (high levels of insulation, avoidance of thermal bridging, low levels of air leakage), and efficiency of the heating system, lighting and controls have been incorporated to reduce the energy demand. It is intended that ventilation will be predominantly natural.

5.4 Environmental upgrade measures shall be specified for the Victorian warehouse with a focus on the fabric thermal performance and energy efficiency of building services.

5.5 The use of photovoltaics is proposed as the preferred renewable energy technology; PV modules shall be incorporated in the glass louvres placed vertically on the southern elevation of the new build terraced houses and horizontally above the roof level, maximising the potential of the site.

5.6 The energy strategy for the new build houses shall reduce carbon emissions by ~21.4% against the Building Regulations 2013 Target Emission Rate (Part L1A TER), with ~20% of savings attributed to the renewable energy generation by the photovoltaics. Approximately 9.6kWp of photovoltaics shall be installed and the carbon savings shall amount to 2,780.0 kg CO_2/annum in total.

Water Efficiency

5.7 It is proposed to install water efficient fittings in the dwellings to reduce the daily usage below 105 litres per person per day; this performance will be achieved through the use of low flush WCs, aerated taps, low flow showers and water efficient domestic appliances.

5.8 Water efficient fittings will similarly be specified for the non-domestic uses; incorporating additional systems and controls (e.g. solenoid valves) to prevent water leakages and wastage.

5.9 Rainwater harvesting shall be incorporated for irrigation of landscaped areas.

Sustainable Use of Materials

Building Specification

5.10 The BRE "Green Guide to Specification" will be referred to when selecting construction materials and building components; an area weighted average of "A+" to "B" shall be sought for the major building elements.

5.11 All timber shall be responsibly sourced and the vast majority of specified materials comprising the major building elements will hold environmental certification (ISO 14001/EMS, BES6001).

Demolition & Construction Waste

5.12 A demolition waste-audit and a Site Waste Management Plan shall be produced to optimise materials resource efficiency in line with the Waste Hierarchy (Reduce, Reuse, Recycle). The WRAP Quick Wins assessment, the BRE Smart Waste management plan tool or other preferred methodology/tool shall be used.

5.13 A Construction Management Plan (CMP) shall be produced incorporating the above and detailing the overall approach to sustainable use of resources and management of site impacts from demolition and construction processes.

Sustainability Assessment Tools

5.14 The refurbished Victorian warehouse shall be assessed under the BREEAM Non-Domestic Refurbishment (employment floorspace) and BREEAM Domestic Refurbishment & Fit-Out schemes (flats) with the target of "Very Good".

5.15 The BREEAM indicative pre-assessment has been undertaken by a qualified and licenced BREEAM Assessor and a summary of the scoring can be found in Appendices A2 & A3.

Brown Roofs, Green Roofs and Green Walls

5.16 Whilst the benefits of living roofs / walls are recognised, these are not proposed for the development for feasibility (small area of roof available) and cost reasons and on the basis that the site will benefit from the existing garden areas, which will enhance the biodiversity of the site.

Flooding

5.17 Appropriate management of flood risk shall be undertaken via the incorporation of sustainable drainage systems where feasible; the drainage strategy for the site shall aim to reduce surface

water run-off rates and incorporate flood proofing measures, accounting for climate change scenarios.

Adapting to Climate Change

5.18 Measures that would contribute to the successful adaptation of the development to climate change include the incorporation of thermal mass elements, greening of landscaped areas, using high-reflectance paving and/or roof surfaces, the incorporation of SUDS, water efficient fittings and natural ventilation techniques; elaborating on the available or additional options to maximise benefits shall be undertaken as the design progresses at subsequent stages.

Biodiversity

5.19 The site as existing is considered to be of low ecological value; redevelopment shall offer the opportunity for enhancing the biodiversity by soft landscaping and the incorporation of elements (e.g. bird boxes) to support wildlife and create new habitat. All measures shall be in line with the professional ecologist's recommendations and guidance, to make best use of the site's potential.

6. SUMMARY

6.1 This Sustainability Statement provides an overview as to how the proposed scheme contributes to sustainable development in the context of the strategic, design and construction considerations.

6.2 Sustainability is a broad concept and it covers a wide range of environmental, social and economic considerations. Sustainable design and construction principles have been considered for this scheme and addressed separately and in line with Core Strategy Policy CS13 (*Tackling climate change through promoting higher environmental standards*) and DP22 (*Promoting Sustainable Design and Construction*). Consideration has also been given to the criteria identified in Camden Council's Supplementary Planning Guidance CPG3 *Sustainability*.

6.3 The proposed scheme includes the demolition of a warehouse and replacement with seven 2bed houses, and the refurbishment of a Victorian warehouse to provide artist workshop / gallery space on ground floor and two x 2bed residential apartments above, together with car parking, landscaping and associated works.

6.4 At a strategic level, the proposal is considered to be consistent with the principles of sustainable development as it will:

- help alleviate the supply-side housing shortage and assist with the rebalancing of the socio-economic factors;
- make most efficient use of land resources in line with the local context and the aspirations for growth in the West Hampstead Interchange area;
- retain and upgrade the employment floorspace and enhance the public realm and character of the area.

6.5 The site context appraisal has identified excellent accessibility to public transport, services and amenities; as well as employment opportunities.

6.6 A range of sustainable design and construction features are proposed targeting the efficient use of resources including:

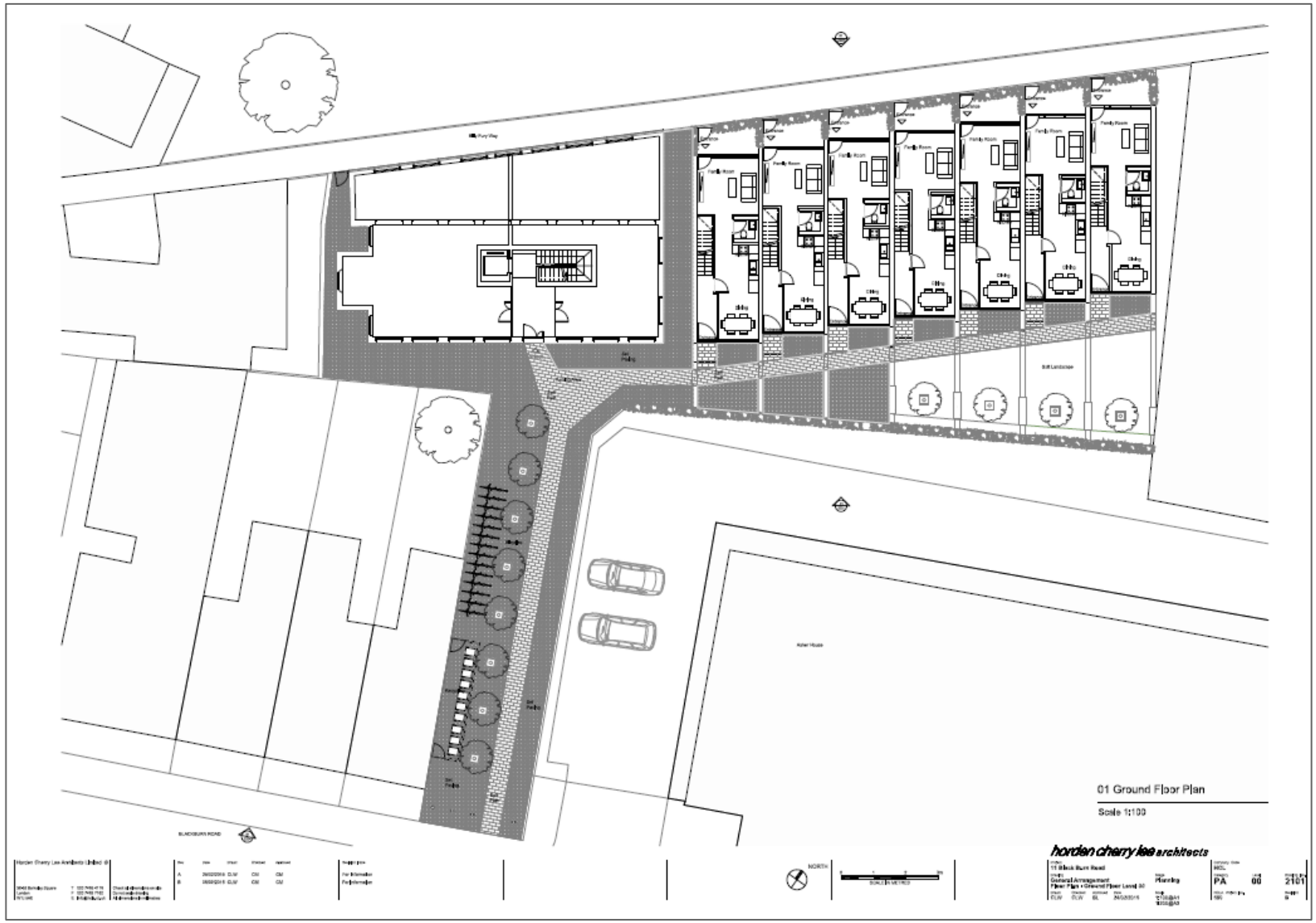
- Fabric energy efficiency and renewable energy technologies;
- Water saving measures;
- Healthy and low embodied energy, low environmental impact materials;
- Efficient demolition, construction and operational waste management;
- Biodiversity enhancements;

- Sustainable flood risk and surface water run-off management.

6.7 The non-domestic and domestic refurbishment parts of the development (Victorian Warehouse) shall be assessed using the BREEAM sustainability assessment tool with a target of achieving a 'Very Good' rating.

6.8 Overall, the proposals for the scheme are in line with the overarching principles of sustainable development as well as the policy requirements of the planning authority.

A1. SITE PLAN


01 Ground Floor Plan
Scale 1:100
horden cherry lee architects

A2. BREEAM DOMESTIC REFURBISHMENT (PRE-ASSESSMENT)

BREEAM 2014 Residential Refurbishment - Cat. 2 Domestic Conversions & Change of Use
Indicative Pre-assessment Results for 11 Blackburn Road, West Hampstead (Victorian Warehouse Flats)

Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Management						**12%**
Man 01	Home User Guide	*To recognise and encourage the provision of guidance for the home owner / tenant so they can understand how to operate their home efficiently and effectively.*	N/A	3	3	3.27
Man 02	Responsible Construction Practices	*To recognise and encourage refurbishment projects which are managed in an environmentally and socially considerate and accountable manner.*	N/A	2	2	2.18
Man 03	Construction Site Impacts	*To recognise and encourage refurbishment sites managed in an environmentally sound manner in terms of resource use, energy consumption and pollution.*	N/A	1	1	1.09
Man 04	Security	*To encourage domestic refurbishment projects where people feel safe and secure; where crime and disorder, or the fear of crime, does not undermine quality of life of community cohesion.*	N/A	2	2	2.18
Man 05	Protection & Enhancement of Ecological Features	*To protect existing ecological features from substantial damage during refurbishment and enhance the ecological value of a site.*	N/A	1	1	1.09
Man 06	Project Management	*To ensure delivery of a functional and sustainable refurbishment, designed and built in accordance with performance indicators.*	Project Roles & Responsibilities	1	1	1.09
			Handover and Aftercare	1	1	1.09
				11	11	**12.00**
Health & Wellbeing						**17%**
Hea 01	Daylighting	*To improve the quality of life in homes through the provision of good daylighting and to reduce the need for energy to light the home.*	N/A	2	0	0.00
Hea 02	Sound Insulation	*To ensure the provision of acceptable sound insulation standards and so minimise the likelihood of noise complaints.*	N/A	4	1	1.42
Hea 03	Volatile Organic Compounds	*To recognise and encourage a healthy internal environment through the specification of internal finishes and fittings with low emissions of volatile organic compounds.*	N/A	1	0	0.00
Hea 04	Inclusive Design	*Adopting an inclusive design approach to optimise the accessibility of the home and its future adaptability to cope with changing needs of a household, such as old age, fragility, a short or long-run disability or a debilitating illness.*	N/A	2	2	2.83

Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Hea 05	Ventilation	*To recognise and encourage a healthy internal environment through the provision of appropriate ventilation levels to provide fresh air and avoid problems associated with the build up of pollutants and humidity levels without excessive heat loss.*	N/A	2	1	1.42
Hea 06	Safety	*To reduce the risks to life, health and property resulting from fire and exposure to carbon monoxide.*	N/A	1	1	1.42
				12	5	**7.08**
Energy						**43%**
Ene 01	Improvement in Energy Efficiency Rating	*To recognise and encourage a reduction in CO2 emissions through improved energy efficiency of the dwelling and its services as a result of refurbishment.*	N/A	6	4.5	6.67
Ene 02	Energy Efficiency Rating Post Refurbishment	*To encourage high levels of Energy Efficiency in the refurbished dwellings, thus reducing CO2 emissions, running costs and fuel poverty.*	N/A	4	3.5	5.19
Ene 03	Primary Energy Demand	*To encourage a reduction in the absolute total regulated energy demand of a dwelling as a result of refurbishment, thus saving CO2 emissions, running costs and reducing fuel poverty.*	N/A	7	1	1.48
Ene 04	Renewable Technologies	*To encourage local energy generation from renewable sources to supply a significant proportion of the dwellings energy demand and to encourage homes to reduce the total energy demand, prior to the specification of renewable technologies.*	N/A	2	0	0.00
Ene 05	Energy Labelled White Goods	*To encourage the provision or purchase of energy efficient white goods, thus reducing the CO2 emissions from appliance use in the dwelling.*	Fridges-freezers Washing Machinges, Dishwashers, tumble dryers, washer-dryers	1 1	1 1	1.48 1.48
Ene 06	Drying Space	*To provide a reduced means of drying clothes and so encourage reductions in energy demands.*	N/A	1	0	0.00
Ene 07	Lighting	*To encourage the provision of energy efficient lighting, thus reducing CO2 emissions associated with the dwelling.*	External Lighting Internal Lighting	1 1	1 1	1.48 1.48
Ene 08	Energy Display Devices	*To encourage the provision of accessible equipment to display energy consumption data to dwelling occupants, thereby encouraging them to reduce energy use.*	N/A	2	1	1.48
Ene 09	Cycle Storage	*To encourage occupants to cycle by providing adequate and secure cycle storage facilities, thus reducing the need for short car journeys.*	N/A	2	1	1.48
Ene 10	Home Office	*To reduce the need to commute to work by ensuring residents have the necessary space and services to be able to work from home.*	N/A	1	0	0.00
				29	15	**22.24**

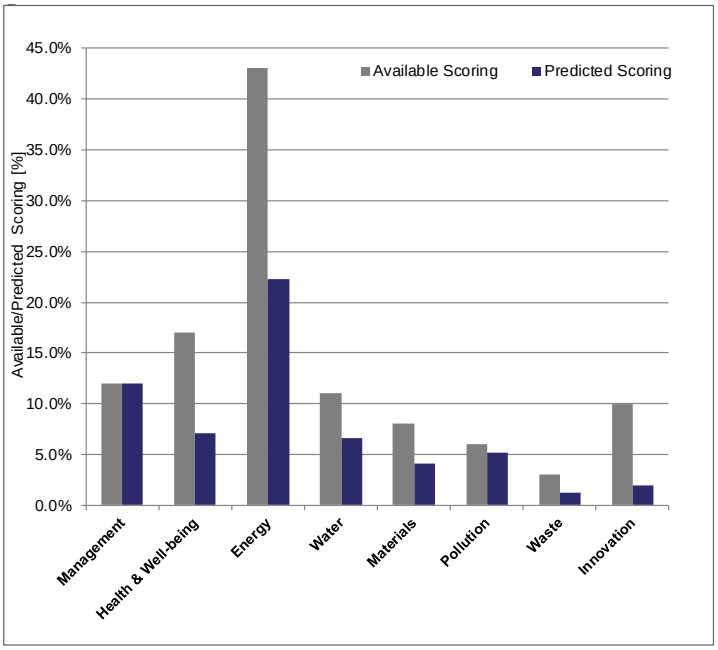
Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Water						**11%**
Wat 01	Internal Water Use	*To minimise the consumption of potable water in sanitary applications by encouraging the use of low water fittings and water recycling systems.*	N/A	3	2	4.40
Wat 02	External Water Use	*To encourage the recycling of rainwater and reduce the amount of mains potable water used for external water uses.*	N/A	1	0	0.00
Wat 03	Water Meter	*To encourage the provision of equipment to measure water consumption of dwelling occupants, thereby encouraging them to reduce water use.*	N/A	1	1	2.20
				5	3	**6.60**
Materials						**8.0%**
Mat 01	Environmental Impact of Materials	*To encourage the retention and enhancement of existing elements and where new materials are required the use of materials with lower environmental impacts over their lifecycle whilst optimising the thermal performance of key building elements.*	N/A	25	12	2.13
Mat 02	Responsible Sourcing of Materials	*To recognise and encourage the reuse of materials and the specification of responsibly sourced materials for use where required in the refurbishment process.*	N/A	12	7	1.24
Mat 03	Insulation	*To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties and has been responsibly sourced.*	Embodied Impact	4	4	0.71
			Responsible Sourcing	4	0	0.00
				45	23	**4.09**
Waste						**3.0%**
Was 01	Household Waste	*To recognise and encourage the provision of dedicated storage facilities for a dwellings recyclable or compostable waste streams, so that waste is diverted from landfill or incineration.*	Recycling Facilities	1	1	0.60
			Composting Facilities	1	0	0.00
Was 02	Refurbishment Site Waste Management	*To promote resouce efficiency via the effective management and reduction of waste related to the refurbishment process.*	SWMP	1	1	0.60
			Resource Efficiency	1	1	0.60
			Diversion from Landfill	1	1	0.60
				5	4	**1.20**

Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Pollution						**6.0%**
Pol 01	Nitrogen Oxide Emissions	*To reduce the emissions of notrogen oxides (NOx) into the atmosphere.*	N/A	3	3	2.25
Pol 02	Surface Water Runoff	*To encourage domestic refurbishments to have a neutral impact upon site run-off and recognise refurbishments that adopt opportunity measures to reduce and delay the discharge of rainfall to the public sewers and watercourses.*	N/A	3	2	1.50
Pol 03	Flooding	*To reward dwellings located in low flood risk areas and where dwellings are located in medium to high flood risk zones, to recognise where they are refurbished in accordance with a flood resilience / resistance strategy.*	N/A	2	2	1.50
				8	7	**5.25**

Innovation						**10.0%**
Inn 01	(Man 02) Responsible Construction Practices		N/A	1	0	0.00
	(Man 05) Protection & Enhancement of Ecological Features.		N/A	1	1	1.00
	(Man 06) Project Management		BREEAM Accredited Professional	1	0	0.00
			Thermographic and airtighness surveys pre and post refurbishment.	1	0	0.00
	(Hea 04) Inclusive Design		Lifetime Homes / Part M	1	1	1.00
	(Ene 02) Energy Efficiency Rating		N/A	2	0	0.00
	(Ene 08) Display Energy Devices		N/A	1	0	0.00
	(Wat 01) Internal Water Use		N/A	1	0	0.00
	(Pol 02) Surface Water Runoff		N/A	1	0	0.00
	(Was 02) Refurbishment Site Waste Management		N/A	1	0	0.00
				10	2	2

BREEAM Domestic Refurbishment 2014 - Results Summary

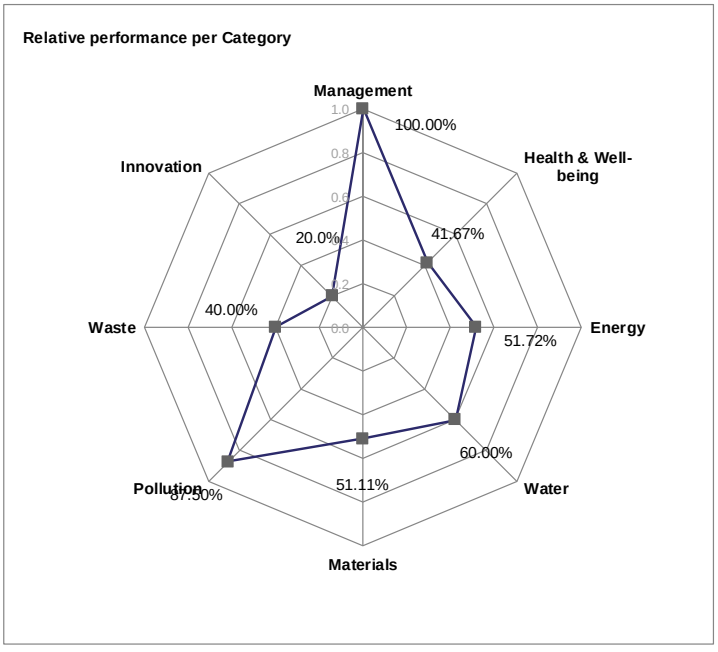
Indicative Pre-assessment Results for 11 Blackburn Road, West Hampstead - Victorian Warehouse Flats



	FINAL SCORE	
Categories	**Available**	**Predicted**
Management	12.00%	12.00%
Health & Well-being	17.00%	7.08%
Energy	43.00%	22.24%
Water	11.00%	6.60%
Materials	8.00%	4.09%
Pollution	6.00%	5.25%
Waste	3.00%	1.20%
Sub-Total	**100.00%**	**58.46%**
Innovation	10.00%	2.00%

Score	**60.46%**
Rating	**'Very Good'**

Rating Scale	**% score**
Unclassified	<30
Pass	≥30
Good	≥45
Very Good	≥55
Excellent	≥70
Outstanding	≥85



A3. BREEAM NON-DOMESTIC REFURBISHMENT (PRE-ASSESSMENT)

BREEAM 2014 - Non-Domestic Refurbishment

Indicative Pre-assessment Results for 11 Blackburn Road, West Hampstead (Artist's Studio)

Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Management						**12%**
Man 01	Project Brief and Design	*To recognise and encourage an intergrated design process that optimises building performance.*	Stakeholder Consultation (project delivery)	1	1	0.57
			Stakeholder Consultation (third party)	1	0	0.00
			Sustainability Champion (design)	1	1	0.57
			Sustainability Champion (monitoring progress)	1	1	0.57
Man 02	Life Cycle Cost and Service Life Planning	*To deliver whole life value from investment and promote economic sustainability by recognising and encouraging the use and sharing of life cycle costing and service life planning to improve design, specification and through-life maintenance and operation.*	Elemental Life Cycle Cost	2	0	0.00
			Component Level LCC Plan	1	0	0.00
			Capital Cost Reporting	1	1	0.57
Man 03	Responsible Construction Practices	*To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.*	Environmental Management	1	1	0.57
			Sustainability Champion	1	0	0.00
			Considerate Construction	2	2	1.14
			Monitoring of construction-site impacts:			
			Energy/Water	1	1	0.57
			Transport	1	1	0.57
Man 04	Commissioning and Handover	*Toi encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.*	Commissioning/Testing Schedule & Responsibilities	1	1	0.57
			Commissioning Building Services	1	1	0.57
			Testing and Inspecting Building Fabric	1	0	0.00
			Handover	1	1	0.57
Man 05	Aftercare	*To provide post-handover aftercare to the building owner/occupants during the first year of occupation to ensure the building operates and adapts, where relevant, in accordance with the design intent and operational demands.*	Aftercare Support	1	1	0.57
			Seasonal Commissioning	1	1	
			Post Occupancy Evaluation	1	1	
				21	15	8.57
Health & Wellbeing						**15%**
Hea 01	Visual Comfort	*To ensure daylighting, artificial lighting and occupant controls are considered at the design stage to ensure best practice in visual performance and comfort for building occupants.*	Glare Control	1	0	0.00
			Daylighting	3	1	0.79
			View Out	2	2	1.58
			Internal & External Lighting	1	1	0.79
Hea 02	Indoor Air Quality	*To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.*	Minimising Sources of Air Pollution			
			IAQ Plan	1	0	0.00
			Ventilation	1	0	0.00
			VOC Products	1	0	0.00
			VOC Emissions Testing	1	0	0.00
			Adaptability	1	0	0.00
Hea 03	Safe Containment Laboratories					

Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Health & Wellbeing						**15%**
Hea 04	Thermal Comfort	*To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.*	Thermal Modelling	1	0	0.00
			Adaptability to a climate change scenario	1	0	0.00
			Thermal Zoning & Controls	1	0	0.00
Hea 05	Acoustic Performance	*To ensure the building's acoustic performance including sound insulation meet the appropriate standards for its purpose.*	Sound Insulation	1	1	0.79
			Ambient Noise Levels	1	1	0.79
			Reverberation	1	0	0.00
Hea 06	Safety and Security	*To recognise and encourage effective measures that promote safe and secure use and access to and from the building.*	Security of the site & building	1	1	0.79
				19	7	5.53
Energy						**19%**
Ene 01	Reduction of Energy Use and Carbon Emissions	*To recognise and encourage buildings designed to minimise operational energy demand, primary energy consumption and CO2 emissions.*	N/A	15	7	5.78
Ene 02	Energy Monitoring	*To recognise and encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption.*	Major Energy Uses	1	1	0.83
			High Energy Load/Tenancy Areas	1	1	0.83
Ene 03	External Lighting	*To recognise and encourage the specification of energy-efficient light fittings for external areas of the development.*	N/A	1	1	0.83
Ene 04	Low Carbon Design	*To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.*	Passive Design			
			Passive Design Analysis	1	1	0.83
			Free Cooling	1	1	0.83
			LZC Technologies			
			LZC Feasibility Study	1	0	0.00
Ene 05	Energy Efficient Cold Storage					
Ene 06	Energy Efficient Transportation Systems	*To recognise and encourage the specification of energy efficient transportation systems.*	Energy Consumption			
			Energy Features			
Ene 07	Energy Efficient Laboratory Systems					
Ene 08	Energy Efficient Equipment	*To recognise and encourage procurement of energy efficient equipment to ensure optimum performance and energy savings in operation.*	N/A	2	2	1.65
Ene 09	Drying Space					
				23	14	11.57
Transport						**8%**
Tra 01	Sustainable Trasnport Solutions	*To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion.*	N/A	3	3	3.43
Tra 02	Proximity to Amenities	*To encourage and reward a building that is located in proximity to local amenities, thereby reducing the need for extended travel or multiple trips.*	N/A	1	1	1.14

Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Tra 03	Cyclist Facilities	*To encourage building users to cycle by ensuring adequate provision of cyclist facilities.*	N/A	2	1	1.14
Tra 04	Maximum Car Parking Capacity	*To encourage the use of alternative means of transport other than the private car to and from the building, thereby helping to reduce transport-related emissions and traffic congestion associated with the building's operation.*				
Tra 05	Travel Plan	*To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.*	N/A	1	0	0.00
				7	5	5.71
Water						**6%**
Wat 01	Water Consumption	*To reduce the consumption of potable water for sanitary use in new buildings from all sources through the use of water efficient components and water recycling systems.*	N/A	5	3	2.00
Wat 02	Water Monitoring	*To ensure water consumption can be monitored and managed, and therefore encourage reductions.*	N/A	1	1	0.67
Wat 03	Water Leak Detection	*To reduce the impact of major water leaks that may otherwise go undetected.*	Leak Detection System	1	0	0.00
			Flow Control Devices	1	1	0.67
Wat 04	Water Efficient Equipment	*To reduce unregulated water consumption by encouraging specification of water efficient equipment.*	N/A	1	1	0.67
				9	6	4.00
Materials						**12.50%**
Mat 01	Environmental Impact of Materials	*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.*	N/A	4	3	3.41
Mat 02	Hard Landscaping and Boundary Protection		N/A			
Mat 03	Responsible Sourcing of Materials	*To recognise and encourage the specification and procurement of responsibly sourced materials for key building elements.*	Sustainable Procurement Plan	1	0	0.00
			Responsible Sourcing of Materials	3	1	1.14
Mat 04	Insulation	*To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties.*	Embodied Impact	1	1	1.14
Mat 05	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.*	N/A	1	1	1.14
Mat 06	Material Efficiency	*To recognise and encourage measures to optimise material efficiency in order to minimise environmental impact of material use and waste.*	N/A	1	0	0.00
				11	6	6.82

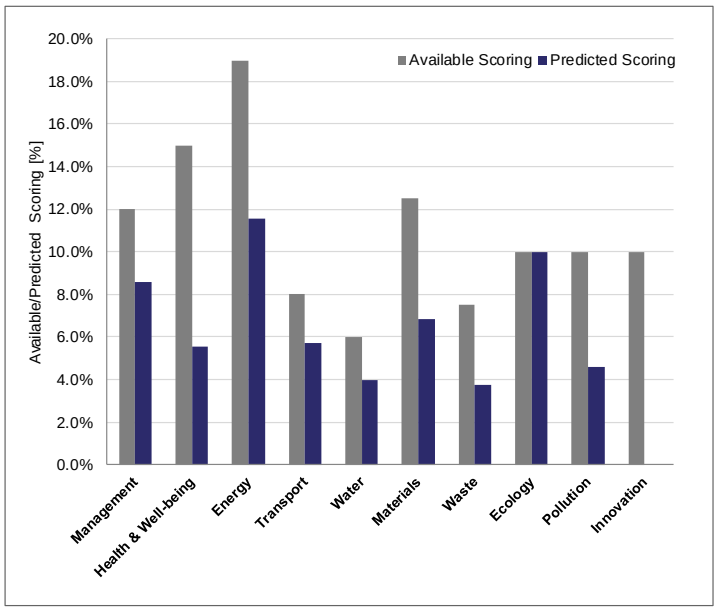
Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Waste						**7.50%**
Wst 01	Project Waste Management	*To promote resource efficiency via the effective management and reduction of construction waste.*	Pre-refurbishment audit	1	1	0.63
			Reuse and direct recycling of materials	2	1	0.63
			Resource efficiency	3	2	1.25
			Diversion of Resources from Landfill	1	1	0.63
Wst 02	Recycled Aggregates	*To recognise and encourage the use of recycled and secondary aggregates in construction, thereby reducing the demand for virgin material and optimising material efficiency in construction.*	N/A	1	0	0.00
Wst 03	Operational Waste	*To recognise the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that such waste is diverted from landfill or incineration.*	N/A	1	1	0.63
Wst 04	Speculative Finishes	*To encourage the specification and fitting of finishes selected by the building occupant and therefore avoid unnecessary waste of materials.*	N/A	1	0	0.00
Wst 05	Adaptation to Climate Change	*To recognise and encourage measures taken to mitigate the impact of extreme weather conditions arising from climate change over the lifespan of the building.*	Structural and Fabric Resilience	1	0	0.00
Wst 06	Functional Adaptability	*To recognise and encourage measures taken to accommodate future changes of use of the building over its lifespan.*	N/A	1	0	0.00
				12	6	3.75
Land Use & Ecology						**10%**
LE 01	Site Selection		N/A			
LE 02	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.*	Protection of Ecological Features	1	1	2.50
LE 03	Minimising Impact on Existing Site Ecology					
LE 04	Enhancing Site Ecology	*To recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development.*	Ecologist's Report & Recommendations	1	1	2.50
LE 05	Long Term Impact on Biodiversity	*To minimise the long term impact of the development on the site's, and surrounding area's, biodiversity.*	N/A	2	2	5.00
				4	4	10.00
Pollution						**10%**
Pol 01	Impact of Refrigerants	*To rreduce the level of greenhouse gas emmissions arising from the leakage of refrigerants from building systems.*	N/A	3	0	0.00
Pol 02	NOx Emissions	*To contribute to a reduction in national Nox emission levels through the use of low emission heat sources in the building.*	N/A	3	0	0.00

Issue ID	Description	Aim	Issue Part	Available Credits	Predicted Credits	Weighted Score (%)
Pol 03	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.*	Flood Risk	2	2	1.54
			Surface Water Run-Off	2	2	1.54
			Minimising Watercourse Pollution	1	0	0.00
Pol 04	Reduction of Night Time 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.*	N/A	1	1	0.77
Pol 05	Reduction of Noise Pollution	*To reduce the likelihood of noise from the new development affecting nearby noise-sensitive buildings.*	N/A	1	1	0.77
				13	6	4.62

Innovation					10%
Inn 1	Man03 Responsible Construction Pratices	1	0	0	
	Man05 Aftercare	1	0	0	
	Hea01 Visual Comfort	1	0	0	
	Hea02 Indoor Air Quality	2	0	0	
	Ene01 Reduction of Energy Use and Carbon Emissions	5	0	0	
	Wat01 Water Consumption	1	0	0	
	Mat01 Life Cycle Impacts	3	0	0	
	Mat03 Responsible Sourcing of Materials	1	0	0	
	Wst01 Construction Waste Management	1	0	0	
	Wst02 Recycled Aggregates	1	0	0	
	Wst05 Adaptation to Climate Change	1	0	0	
		10	10	0	

BREEAM 2014 Non-Domestic Refurbishment - Results Summary

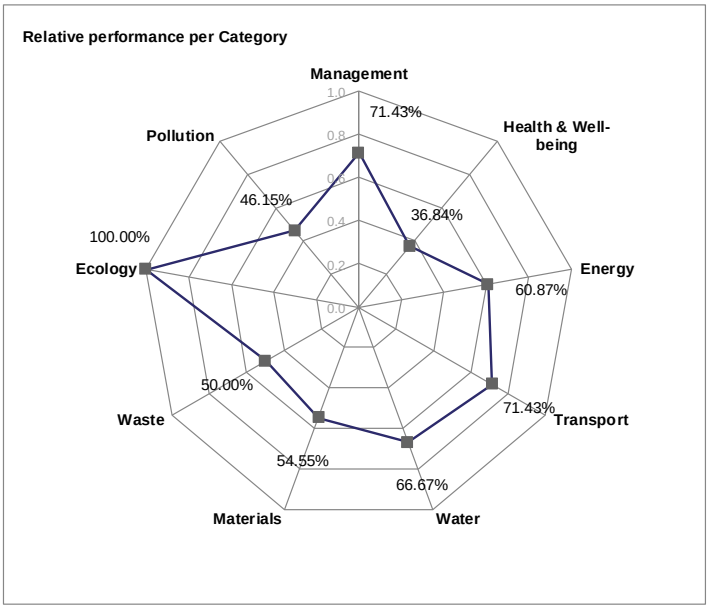
Indicative Pre-assessment Results for 11 Blackburn Road, West Hampstead - Artist's Studio



	FINAL SCORE	
	Available	**Predicted**
Management	12.00%	8.57%
Health & Wellbeing	15.00%	5.53%
Energy	19.00%	11.57%
Transport	8.00%	5.71%
Water	6.00%	4.00%
Materials	12.50%	6.82%
Waste	7.50%	3.75%
Ecology	10.00%	10.00%
Pollution	10.00%	4.62%
Total	**100.00%**	**60.56%**
Innovation	10.00%	0.00%

Score	**60.56%**
Rating	**'Very Good'**

Rating Scale	**% score**
Unclassified	<30
Pass	≥30
Good	≥45
Very Good	≥55
Excellent	≥70
Outstanding	≥85



A4. GENERAL NOTES

A4.1 The report is based on information available at the time of the writing and discussions with the client during any project meetings. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by Iceni Projects Ltd for inaccuracies in the data supplied by any other party.

A4.2 The review of planning policy and other requirements does not constitute a detailed review. Its purpose is as a guide to provide the context for the development and to determine the likely requirements of the Local Authority.

A4.3 No site visits have been carried out, unless otherwise specified.

A4.4 This report is prepared and written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in guidance may necessitate a re-interpretation of the report in whole or in part after its original submission.

A4.5 The copyright in the written materials shall remain the property of Iceni Projects Ltd but with a royalty-free perpetual licence to the client deemed to be granted on payment in full to Iceni Projects Ltd by the client of the outstanding amounts.

A4.6 The report is provided for sole use by the Client and is confidential to them and their professional advisors. No responsibility whatsoever for the contents of the report will be accepted to any person other than the client, unless otherwise agreed.

A4.7 These terms apply in addition to the Iceni Projects Ltd "Standard Terms of Business" (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing. (In the event of a conflict between these terms and the said Standard Terms of Business the said Standard Terms of Business shall prevail.). In the absence of such a written contract the Standard Terms of Business will apply.