Isambard Environmental
127 Metal Box Factory, 30 Great Guildford Street, London, SE1 0HS
T: 07725 553 607 E: andrew@isambardenvironmental.co.uk
W: www.isambardenvironmental.co.uk

63-71 High Street
Hampton Hill
LONDON
TW12 1NH

SUSTAINABILITY STATEMENT

Job no. 33

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ISSUE SHEET

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EXECUTIVE SUMMARY

This Sustainability Statement has been commissioned from Isambard Environmental by Mr Terry Homes on behalf of Greatplanet Limited, the owners and developers of the site to support a planning application for the redevelopment of the site to include a mix of residential and non-residential uses.

For all planning applications the London Borough of Richmond upon Thames (LBRuT) requires a Sustainable Construction Checklist (SCC) to be completed showing how the development meets certain sustainability criteria. They also require an energy assessment be completed showing how much CO_2 emissions are reduced beyond part L of the Building Regulations and how much is accounted for by renewable energy; that any non-residential development achieves a BREEAM 'Excellent' rating; and that any residential development achieves a maximum water consumption of 105 litres per person per day.

Based on the proposed specification both the non-residential and residential elements of the development achieve 71 points. For the non-residential element this equates to an 'A' rating which makes a major contribution towards achieving sustainable development in Richmond. For the residential element 71 points equates to an 'A+' rating where the project strives to achieve the highest standards in energy efficient sustainable development.

As part of this Statement a BREEAM New-Construction 2014 Pre-Assessment has been completed, which, based on the proposed specification, shows that the non-residential element achieves an 'Excellent' rating.

Although LBRuT only apply a water efficiency requirement for residential development a Home Quality Mark Pre-Assessment has been completed because it is believed the Council will impose a requirement for an assessment based on the number of residential units to be completed.

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

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1.0 INTRODUCTON

This Sustainability Statement has been commissioned from Isambard Environmental by Mr Terry Homes on behalf of Greatplanet Limited, the owners and developers of the site to support a planning application for the redevelopment of the site to include a mix of residential and non-residential uses.

For all planning applications the London Borough of Richmond upon Thames (LBRuT) requires a Sustainable Construction Checklist (SCC) to be completed showing how the development meets certain sustainability criteria.

1.1 SITE CONTEXT

1.1.1 Site Location

The application site is located at 63-71 High Street, Hampton Hill, Hampton, TW12 1NH. It is rectangular in shape, measuring c. 70m by 40m and covers an area of approximately 2,800m^2. It is bounded by the High Street to the east, retail with residential over to the north on the High Street frontage and a new development of residential houses to the rear, to the west is the St Clare Business Park, accessed off Holly Road and to the south a fairly modern terrace built as offices, now largely converted for residential use (figure 1).

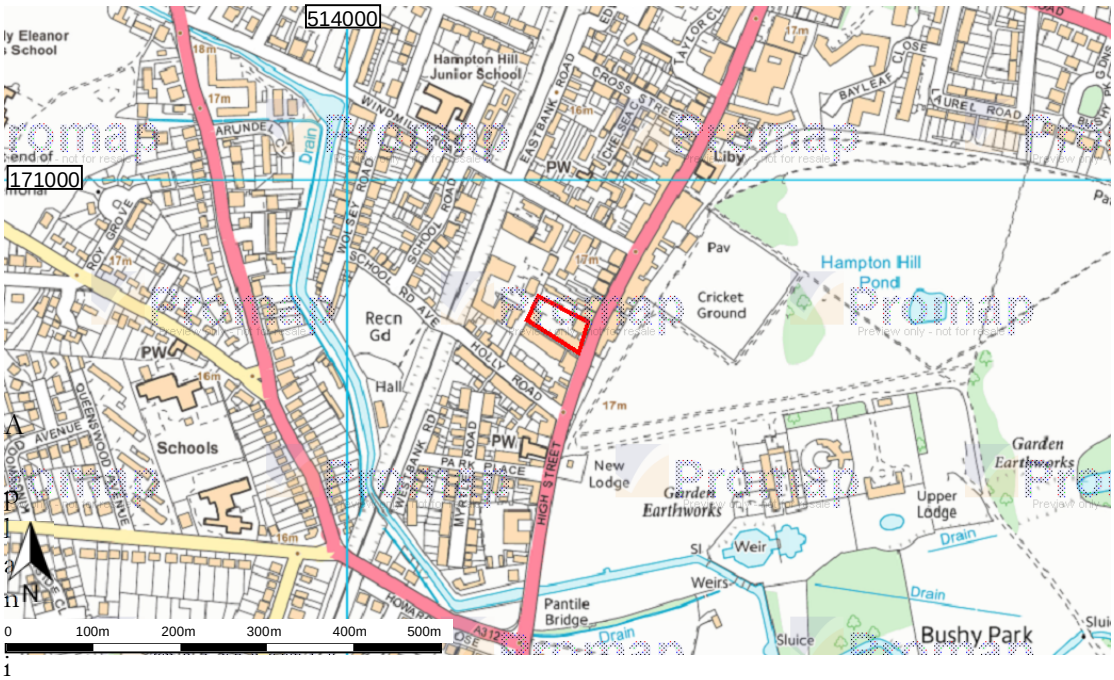

Figure 1. Location plan showing the site outlined red.

1.1.2 Proposed Development

A planning application is to be submitted for the redevelopment of the site to include demolition of the existing buildings, excavation of basement areas underlying the majority of the site and the erection of 6 townhouses, 35 apartments and two retail units of 124m^2 and 105m^2 GIA (figure 2).

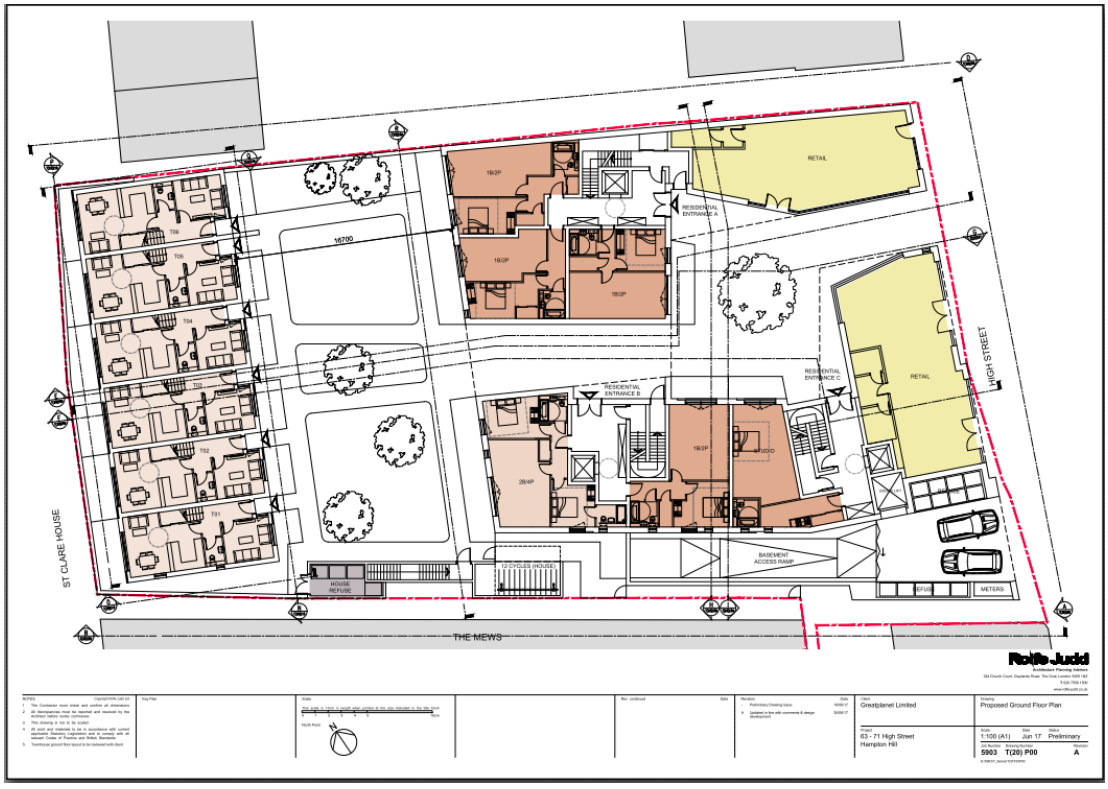

Figure 2. Indicative site layout and landscape plan (not to scale)(copyright: Rolfe Judd).

2.0 METHODOLOGY

This Sustainability Statement has been completed following the principles established in LBRuT's Sustainable Planning Document *Sustainable Construction Checklist Guidance Document* Adopted January 2016.

It first establishes the context of the development and then outlines the main policies and applicable standards and guidelines. It then goes on to explain the contents of the SCC.

As part of the SCC additional reports are required which provide greater depth of sustainability issues. These are provided separately and referred to when appropriate. The additional reports include: the Energy Report prepared by SVM Consulting Engineers; the BREEAM New Construction 2014 Pre-Assessment Report; and BREEAM Home Quality Mark Pre-Assessment both prepared by Isambard Environmental (IE, 2017a & b).

The specification is yet to be finalised therefore the statements made in this statement and pre-assessment reports are based on professional experience. [in order for the development to achieve a 'B' rating in the SCC, an 'Excellent' rating in the BREEAM New Construction 2014 Pre-Assessment Estimator and '4 star' rating in the BREEAM Home Quality Mark Pre-Assessment Estimator.

3.0 POLICY AND REGULATORY CONTEXT

The relevant policy and regulations relevant to the development are summarised below.

3.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published by the Government in March 2012 and sets out the Government's planning policies for England and how these are expected to be applied. The principle of sustainable development is a fundamental part of the framework as stated by paragraph 6:

> *The purpose of the planning system is to contribute to the achievement of sustainable development. The policies in paragraphs 18 to 219, taken as a whole, constitute the Government's view on what sustainable development in England means in practice for the planning system.*

This is further amplified by paragraph 7 which states:

> *There are three dimensions to sustainable development: economic; social; and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:*
>
> - ***An economic role** – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;*
>
> - ***A social role** – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of the present and future generations; and by creating a high quality built environment, with accessible location services that reflect the community's needs and support its health, social and cultural well-being; and*
>
> - ***An environmental role** – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.*

The NPPF goes on to state in paragraph 14:

> *At the heart of the National Planning Policy Framework is a **presumption in favour of sustainable development,** which should be seen as a golden rule through both plan-making and decision-taking:*
>
> *For **plan-making** this means that:*
>
> - *Local planning authorities should positively seek opportunities to meet the development needs of their area;*
>
> - *Local plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:*
>
> - *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or*
>
> - *specific policies in this Framework indicate development should be restricted.*
>
> *For **decision-taking** this means:*
>
> - *Approving development proposals that accord with the development plan without delay; and*
>
> - *Where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:*
>
> - *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or*
>
> - *specific policies in this Framework indicate development should be restricted.*

In Section 10 the NPPF addresses ***Meeting the challenge of climate change, flooding and coastal change*** and in paragraph 95 requires LPA's *when setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards*

3.2 The London Plan

The London Plan is the overall strategic plan for London setting out a fully integrated economic, environmental, transport and social framework for the development of the capital to 2031. It forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the London Plan. The current plan was consolidated in 2011 with alterations incorporated in October 2013, March 2015 and March 2016.

Chapter 5 *London's Response to Climate Change* outlines the policies which will mitigate climate change including reducing carbon dioxide emissions; procuring materials from sustainable sources; using renewable technology; and reducing flood risk. Policy 5.3 *Sustainable Design and Construction* is the most pertinent to this statement:

Strategic

A The highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime.

Planning decisions

B Development proposals should demonstrate that sustainable design standards are integral to the proposal, including its construction and operation, and ensure that they are considered at the beginning of the design process.

C Major development proposals should meet the minimum standards outlined in the Mayor's supplementary planning guidance and this should be clearly demonstrated within a design and access statement. The standards including measures to achieve other policies in this Plan and the following sustainable design principles:

a minimising carbon dioxide emission across the site, including the building and services (such as heating and cooling systems)

b avoiding internal overheating and contributing to the urban heat island effect

c efficient use of natural resources (including water), including making the most of natural systems both within and around buildings

d minimising pollution (including noise, air and urban runoff)

e minimising the generation of waste and maximising reuse or recycling

f avoiding impacts from natural hazards (including flooding)

g ensuring developments are comfortable and secure for users, including the avoidance of the creation of adverse local climatic conditions

h securing sustainable procurement of materials, using local supplies where feasible, and

i promoting and protecting biodiversity and green infrastructure.

LDF Preparation

D within LDFs boroughs should consider the need to develop more detailed policies and proposals based on the sustainable design principles outlined above and those which are outlined in the Mayor's supplementary planning guidance that are specific to their local circumstances.

Other relevant policies of the Plan include:

- 5.2 Minimising Carbon Dioxide Emissions
- 5.5 Decentralised Energy Networks
- 5.6 Decentralised Energy in Development Proposals
- 5.7 Renewable Energy
- 5.8 Innovative Energy Technologies
- 5.9 Overheating and Cooling
- 5.10 Urban Greening
- 5.11 Green Roofs and Development Site Environs
- 5.12 Flood Risk Management
- 5.13 Sustainable Drainage
- 5.14 Water Quality and Wastewater Infrastructure
- 5.15 Water Use and Supplies

3.3 Mayor of London's Sustainable Design and Construction SPG

The Sustainable Design and Construction SPG relates to the implementation of London Plan Policy 5.3 (see above) and aims to support developers, local planning authorities and neighbourhoods to achieve sustainable development by providing guidance on how to achieve the London Plan objectives effectively.

It is intended that the SPG:

- Provides detail on how to implement the sustainable design and construction and wider environmental sustainability policies in the London Plan;
- Provides guidance on how to develop more detailed local policies on sustainable design and construction;
- Provides best practice guidance on how to meet the sustainability targets set out in the London Plan; and
- Provides examples of how to implement sustainability measures within developments.

3.4 London Borough of Richmond upon Thames Core Strategy

The London Borough of Richmond upon Thames recognises the part it can play in minimising climate change and reducing its effects both at a local and international level. Its Core Strategy which was adopted on 21st April 2009 provides the framework for development within the borough over the 15 years to 2024 (LBRuT, 2009). The core policies which will help to achieve a sustainable future in the borough are:

- CP1 Sustainable Development
- CP2 Reducing Carbon Emissions
- CP3 Climate Change – Adapting to the Effects
- CP4 Biodiversity
- CP5 Sustainable Travel
- CP6 Waste

The most pertinent to this statement are:

CP1 Sustainable Development

1.A The policy seeks to maximise the effective use of resources including land, water and energy, and assist in reducing any long term adverse environmental impacts of development. Development will be required to conform to the Sustainable Construction Checklist, including the requirement to meet the Code for Sustainable Homes level 3 (for new homes), EcoHomes "excellent" (for conversions) or BREEAM "excellent" (for other types of development). This requirement will be adjusted in future years through subsequent DPDs, to take into account the then prevailing standards in the Code for Sustainable Homes and any other National Guidance, and to ensure that these standards are met or exceeded.

The following principles will be promoted:

1.B Appropriate location of land uses

Facilities and services should be provided at the appropriate level locally, taking account of the network of town centres identified in policy CP8.

Higher density residential and mixed use developments to be in town centres, near to public transport to reduce the need to travel by car.

1.C Making best use of land

The use of existing and proposed new facilities should be maximised throughout management initiatives, such as co-location or dual use.

Redevelopment of sites should normally only take place where there can be an increase in the number of housing units and/or quantity of commercial floorspace.

1.D Reducing environmental impact

The environmental benefits of retaining and, where appropriate, refurbished existing buildings, should be compared against redevelopment.

Development should seek to minimise the use of open land for development and seek to maintain the natural vegetation, especially trees, where possible.

Local environmental impacts of development with respect to factors such as noise, air quality and contamination should be minimised.

1.E Environmental gain to compensate for any environmental cost of development will be sought.

CP2 Reducing Carbon Emissions

2.A The Borough will reduce its carbon dioxide emissions by requiring measures that minimise energy consumption in new development and promoting these measures in existing development, particularly in its own buildings.

2.B The Council will require the evaluation, development and use of decentralised energy in appropriate development.

2.C The Council will increase the use of renewable energy by requiring all new development to achieve a reduction in carbon dioxide emissions of 20% from on-site renewable energy generation unless it can be demonstrated that such provision is not feasible, and by promoting its use in existing development.

CP3 Climate Change – Adapting to the Effects

3.A Development will need to be designed to take account of the impacts of climate change over its lifetime, including:

- *Water conservation and drainage*
- *The need for Summer cooling*
- *Risk of subsidence*
- *Flood risk from the River Thames and its tributaries*

3.B Development in areas of high flood risk will be restricted in accordance with PPS25, and using the Environment Agency's Catchment Management Plan, Borough's Strategic Flood Risk Assessment and site level assessments to determine risk.

CP4 Biodiversity

4.A The Borough's biodiversity including the SSSIs and Other Sites of Nature Importance will be safeguarded and enhanced. Biodiversity enhancements will be encouraged particularly in areas of deficiency (parts of Whitton, Hampton, Teddington, Twickenham and South Kew), in areas of new development and along wildlife corridors and green chains such as the River Thames and River Crane corridors.

4.B Weighted priority in terms of their importance will be afforded to protected species and priority species and habitats in the UK, Regional and Richmond upon Thames Biodiversity Action Plans.

CP5 Sustainable Transport [extract]

5.A The need for travel will be reduced by the provision of employment, shops and services at the most appropriate level locally, within the network of town centres identified in CP8. To implement this policy the Council will:

- *Protect and enhance local facilities and employment to reduce the need to travel.*
- *Require developments which would generate significant amounts of travel to be located on sites well served by public transport.*

3.5 London Borough of Richmond upon Thames SPD Sustainable Construction Checklist Guidance Document

The SPD Sustainable Construction Checklist forms part of the assessment for planning applications for new build, conversion and retrofit properties within the borough. Its aim is to engage and inform developers of sustainability issues relevant to their development.

The Checklist forms a mandatory part of the planning application for the following classes of development:

- All new residential development providing 1 or more dwellings, including conversions and extensions that create one or more new dwellings; and
- All new non-residential development providing 100m^2 or more floor area, including extensions over 100m^2.

The Checklist covers the following issues:

- Energy use and pollution;
- Transport;
- Biodiversity;

- Flooding and drainage
- Improving resource efficiency;
- Accessibility

The checklist allows for performance against these issues to be scored, with an overall score indicating the level of sustainability of the development.

3.6 Building Research Establishment's Environmental Assessment Method (BREEAM)

The Building Research Establishment's Environmental Assessment Method (BREEAM) is a sustainability rating scheme which helps clients measure and reduce their environmental impacts of their buildings. The BRE operate a number of schemes, each designed to assess the environmental performance of different types of buildings at various stages in the life cycle.

3.6.1 BREEAM New Construction 2014

The New Construction 2014 (NC 14) scheme assesses new build, domestic and non-domestic buildings. It encourages developers to go beyond the minimum requirements of the Building Regulations. Environmental performance is quantified by a number of individual measures and associated criteria stretching across a range of environmental issues: Management; Health and Wellbeing; Energy; Land use and Ecology; Pollution; and Innovation. Credits are awarded based on environmental performance of the development which, overall, is expressed as a single BREEAM rating (BRE, 2016, 22).

This rating provides an indication of the sustainability of the development based on a sliding scale from unclassified (which represents less than 30% of the available credits being achieved) to outstanding (which represents more than 85% of the available credits being achieved).

3.6.2 BREEAM Home Quality Mark

The Home Quality Mark (HQM) assesses residential buildings and recognises new homes where performance meets best practice standards which is often significantly above that required by regulation. The HQM enables consumers to make a smart choice and provides home builders with the tools to differentiate their new homes by providing a star rating, scored out of 5 stars and three indicators – my cost, my wellbeing and my footprint – ranked on a 5 point scale (BRE, 2015, 1).

As with NC14 assessment scheme environmental performance is quantified by a number of individual measures and associated criteria divided into three sections: our surroundings; my home; and knowledge sharing. Credits are awarded based on environmental performance of the development which, overall, is expressed out of 5 stars, with 5 stars being an outstanding home of this area.

3.7 Eric Pickles's Written Statement to Parliament

In a written ministerial statement (25th March 2015) following the conclusion of the Housing Standards Review which aimed to simplify government regulations into one key set driven by the Building Regulations, Eric Pickles, the then housing minister, announced:

> *From the date the Deregulation Bill 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* [those applications which have been granted permission by the date of the statement].

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

In his statement Eric Pickles went on to say:

> *Where there is an existing plan policy which references 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 earlier paragraph in this statement concerning energy performance.*

3.7.1 Implications of the Written Statement for Development in the LBRuT

Before it was withdrawn by the Deregulation Bill the Code for Sustainable Homes (CSH) was a nationally recognised environmental performance assessment method run by the BRE on behalf of the Government. Similar in operation to the New Construction 2014 and HQM assessment scheme the CSH was the benchmark standard for assessing the overall sustainability of new homes and was written into the policies of local planning authorities including that of the LBRuT which required Code Level 3 (and latterly Code Level 4) to be achieved (Policy CP1 1.A of the Core Strategy).

With the demise of the CSH there has been no nationally recognised environmental assessment standard for new homes.

The LBRuT can now only apply conditions relating to a water efficiency standard or an energy efficiency standard requiring carbon dioxide emissions to be cut beyond Building Regulation levels.

The BRE have developed the HQM (see section 3.6.2) to measure performance of new homes against a wide range of financial, wellbeing, environmental and social issues in a way other standards are unable to do (BRE, 2015, 1). Although it is intended as a voluntary standard many councils will require an HQM assessment as a condition of planning permission for residential development of more than 10 dwellings to fill the void left by the CSH.

The Statement only applies to new-build residential homes, non-residential uses are not affected and therefore the requirements for NC14 assessments still apply.

4.0 SUSTAINABLE CONSTRUCTION CHECKLIST

A SCC is required to be completed for all new residential development providing 1 or more dwellings, including conversions and extensions that create one or more new dwellings; and all new non-residential development providing 100m² or more floor area, including extensions over 100m². It therefore applies to both the non-residential and residential elements of the development.

The SCC allows for performance against these issues to be scored, with an overall score indicating the level of sustainability of the development.

There follows a discussion of the sustainability issues for the development based on the categories of the SCC. The completed SCC is included as Appendix 1.

The Energy Report (SVM, 2016); BREEAM New Construction 2014 Pre-Assessment (IE, 2017a) for the non-residential element; and BREEAM Home Quality Mark Pre-Assessment (IE, 2017b) for the residential element should be referred to as these cover many of the issues of the Sustainable Construction Checklist.

In addition, supplementary reports have been prepared for: energy use; transport; biodiversity; flooding and drainage; contaminated land; and design standards and accessibility which will be referred to in the appropriate section of the SCC, discussed below.

4.1 Minimum Compliance (Residential and Non-Residential)

An energy assessment has been completed by SVM Consulting Engineers which shows that site-wide CO_2 emissions will be reduced by 37.7% beyond those required by Part L1 of the Building Regulations 2013.

PVs will be installed which will reduce CO_2 emissions by 15.8%.

4.2 Minimum Policy Compliance (Non-Residential)

A BREEAM New Construction 2014 Pre-Assessment (IE, 2017a) has been carried out which shows that the non-residential element will achieve an 'Excellent' rating.

4.3 Minimum Policy Compliance (Residential)

Water use will be a maximum of 105 litres per person per day as demonstrated by the completion of a water efficiency calculator for new dwellings. This will be achieved by specifying water efficient appliances and fittings such as 6/4l dual flush WCs, low volume baths, dishwasher and washing machines (where specified) and flow restrictors to taps and showers. An indicative specification is:

- WCs – 4/2l dual flush
- Showers - ≤6l/min
- Baths - ≤170 litres
- Basin taps - ≤5l/min
- Kitchen sink taps - ≤6l/min
- Dishwashers - ≤1.25l/place setting
- Washing machines - ≤8.17l/kg

4.4 Energy Use and Pollution

4.4.1 Need for Cooling

An Energy Statement has been prepared by SVM Consulting Energy which has identified the following measures in order to reduce the need for cooling:

A mixture of openable windows and enhanced mechanical ventilation will be used to help mitigate against overheating within the apartments and Townhouses. Residences shall be fitted with mechanical ventilation with energy recovery systems and allow for 'free cooling' where possible to provide good levels of indoor air quality whilst being energy conscious. The system shall also be fitted with a summer by-pass to minimise internal heat generation.

Balconies have also been integrated into the design and high performance glazing has been utilised within the proposed development to reduce unwanted solar gains. This should help to mitigate against heat entering the building in the summer.

The top floor apartments shall be equipped to have high efficiency renewable air source heat pumps for cooling.

The development incorporates a number of passive design measures which will reduce the need for cooling including:

- Enhanced building elements thermal transmittance (U values) over current Building Regulations Part L1A and L2A 2013;
- Low air permeability value of 3 m3/hr.m2 @ 50Pa to reduce heating demand during winter periods;

- Low solar energy transmittance values (g value) for all glazing systems to limit the impact of solar gain during the summer and reduce the overheating risk;
- The geometry of the building has facilitated passive ventilation with 78% of the apartments having dual aspect which allows for cross ventilation.
- Mechanical ventilation controls and the provision of metering (i.e. out-of range values and separately sub-metered).

4.4.2 Heat Generation

An Energy Statement has been prepared by SVM Consulting Energy which has identified the following measures in order to reduce the need for heat generation:

All electro-mechanical plant will be highly efficient and the main plant will be linked to a Building Energy Management System (BEMS). The BEMS will also assist in the operational management of energy consumption on the site.

High efficient mechanical heat recovery ventilation systems to achieve at least 80% efficient heat recovery and, at least, 20% improvement to Non-Domestic Building Compliance Guide 2013 low specific fan power (SFP) ratings.

A centralised gas boiler heating system has been deemed to be appropriate to serve the apartments and non-domestic areas, with individual heat interface units included in each residential apartment and non-domestic areas to provide heating and domestic hot water. The

Townhouses will be fitted with individual gas fired boilers.

Apartments will be individually metered so that residents are able to monitor their energy consumption

4.4.3 Pollution: Air, Noise and Light

An Air Quality Assessment, prepared by AQC assesses the impacts associated with the construction and operation of the development. The site lies within an Air Quality Management Area and existing conditions within the surrounding area show generally poor air quality. The report indicates that the construction works will give rise to a *Medium Risk* of dust soiling impacts during demolition and earthworks and a *Low Risk* of dust soiling impacts during construction. There will be a *Low Risk* of impacts to human health and ecology during earthworks and *Negligible Risk* during demolition and construction. With mitigation measures in place it concludes that the overall impacts during construction will be *not significant.*

The report also advises that building emissions associated with the proposed development are below the relevant Air Quality Neutral benchmarks although the proposed development exceeds the relevant emissions benchmark for transport emissions it notes that there is a reduction in the number of trips compared to the number which would be generated by reoccupation of the existing buildings on the site.

The assessment concludes that overall, the construction and operational air quality impacts of the proposed development are judged to be *'not significant'*, providing that the suggested mitigation measures are implemented.

A Noise Impact Assessment prepared by KP Acoustics Ltd concludes that subject to use of a robust glazing specification internal noise levels for all residential environments of the development will be commensurate to the recommendations of BS8233:2014 and that no further mitigation measures should be required in order to protect the proposed residential properties from external noise intrusion.

A Light Pollution Report has been prepared by SVM and concludes that the external lighting of the proposed development will not have an adverse effect locally or on the biodiversity of Bushy Park and when compared to the existing commercial development will have an overall reduction of light spill out from the building.

4.5 Transport

4.5.1 Provision of the safe, efficient and sustainable movement of people and goods

A Transport Assessment has been prepared by Royal Haskoning this concludes that the site is well located for access to services on foot and by cycle and has reasonable access to a range of non-car modes of transport (bus and trains). It also concludes that the site can fully accommodate potential resident car ownership demand and service requirements of both the residential and non-residential uses within the proposed development and that the traffic attraction of the site will reduce in comparison to the existing.

Electric car charging points for the use of all residents are being provided.

4.6 Biodiversity

4.6.1 Minimising the threat to biodiversity from new buildings, lighting, hard surfacing and people

An ecological survey has been prepared by Arbtech Consulting Limited. This found that the habitats found on site are widespread and common and while the proposals include the removal of the existing habitats this is not expected to have any adverse effect on habitats at the local level or above. Although the proposal includes the demolition of the existing buildings and removal of all the existing vegetation on site it considers that this has a low likelihood of destroying or disturbing breeding birds but it recommends a precautionary method of working to avoid impacts on breeding birds with buildings only being demolished and vegetation removal outside the breeding bird season (March to September).

The proposed landscaping scheme prepared by Bradley-Hole Schoenaich includes plant specification and habitat formation specifically aimed at enhancing the biodiversity species attraction of the site including the planting of trees; an extensive green roof; and bird and bat boxes.

4.7 Flooding and Drainage

4.7.1 Mitigating the risks of flooding and other impacts of climate change in the borough

A Flood Risk Assessment has been prepared by RAB Consultants Limited which shows that the site lies in an area of low flood risk.

There will be no change in the impermeable surface area of the site post-development.

The proposed drainage strategy is designed to comply with the London Borough of Richmond SuDS requirements while significantly reducing surface water flood risk downstream.

Post development flow rates and volume of surface water run-off will be 88.5% less than the existing offering a significant betterment and thereby reducing the flood risk downstream.

4.8 Improving Resource Efficiency

4.8.1 Reduce waste generated and amount disposed of by landfill through increasing level of re-use and recycling

The site is currently occupied by two office buildings fronting High Street which are joined at first floor level by an overhead walkway and the St Clare Studio in the south west quadrant which will require demolition to facilitate the construction of the proposed development.

It is anticipated that c.95% of demolition material will be recycled off-site. Due to the full excavation of the site to form a basement, retention and reuse of any demolition material will not be practical.

The appointed contractor will be required to have a compliant Site Waste Management Plan which will aims to: minimise construction waste by specifying target benchmarks for resource efficiency; to have procedures and commitments to minimise both hazardous and non-hazardous waste; and to monitor and record the amount of hazardous and non-hazardous waste being produced.

A contaminated land assessment has been prepared by HBPW LLP and shows that elevated concentrations of lead were encountered within the made ground across the site. However, as the area is to remain covered by either buildings or hardstanding, the pollutant linkage does not exist, and there is no significant risk to end users of the development. It also concludes that while no asbestos containing materials were positively identified within the soils on site, asbestos containing materials may be present within existing buildings and consequently a potential low risk associated with ACM remains. Any asbestos containing materials identified prior to (and during) demolition should be appropriately removed and disposed of by a specialist contractor following best industry practice.

4.8.2 Reducing levels of water waste

In line with the requirement to conserve water use, maximum water consumption will be 105lppd for the residential element as demonstrated by the completion of a water efficiency calculator for new dwellings. This will be achieved by: specifying water efficient appliances and fittings such as 6/4l dual flush WCs, low volume baths; A rated dishwashers and washing machines (where specified); flow restrictors to taps and showers; and fitting water meters.

4.9 Accessibility

4.9.1 Ensure flexible adaption and long-term use of structures

The residential element of the development complies with the nationally described space standards for internal space and layout.

The development is designed to and will comply with the requirements of Lifetime Homes and Part M4 (2) of the Building Regulations.

Of the 39 residential apartments 10% are designed to be adaptable for occupation by wheelchair users in accordance with Part M4(3) of the Building Regulations.

4.10 Overall Scoring

An overall score of 71 is achieved for the development. According to the LBRuT's scoring matrices (separate ones for non-residential and residential development using slightly different categories) this equates to an 'A' for the non-residential element which makes a major contribution towards achieving sustainable development in Richmond. For the residential

element an 'A+' is achieved where the project strives to achieve the highest standards in energy efficient sustainable development.

5.0 CONCLUSION

This Sustainability Statement has been commissioned from Isambard Environmental by Mr Terry Homes on behalf of Greatplanet Limited, the owners and developers of the site to support a planning application for the redevelopment of the site to include a mix of residential and non-residential uses.

For all planning applications the London Borough of Richmond upon Thames (LBRuT) requires a Sustainable Construction Checklist (SCC) to be completed showing how the development meets certain sustainability criteria. They also require an energy assessment be completed showing how much CO_2 emissions are reduced beyond part L of the Building Regulations and how much is accounted for by renewable energy; that any non-residential development achieves a BREEAM 'Excellent' rating; and that any residential development achieves a maximum water consumption of 105 litres per person per day.

Based on the proposed specification both the non-residential and residential elements of the development achieve 71 points. For the non-residential element this equates to an 'A' rating which makes a major contribution towards achieving sustainable development in Richmond. For the residential element 71 points equates to an 'A+' rating where the project strives to achieve the highest standards in energy efficient sustainable development.

As part of this Statement a BREEAM New-Construction 2014 Pre-Assessment has been completed, which, based on the proposed specification, shows that the non-residential element achieves an 'Excellent' rating.

Although LBRuT only apply a water efficiency requirement for residential development a Home Quality Mark Pre-Assessment has been completed because it is believed the Council will impose a requirement for an assessment based on the number of residential units to be completed.

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

6.0 REFERENCES

AOC (2016) *63-71 High Street, Hampton Hill Air Quality Assessment.* Unpublished client report.

Arbtech Consulting Limited (2016) *63-71 High Street, Hampton Hill Ecology Report.* Unpublished client report.

Bradley-Hole Schoenaich Landscape Architects (2016) *63-71 High Street, Hampton Hill Soft Landscaping Plan.* Unpublished client report.

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Building Research Establishment (2015) *Home Quality Mark Technical Manual SD232:1.0 (Beta England) - 2015.* BRE, Watford.

Building Research Establishment (2016) *BREEAM UK New Construction Non-domestic Buildings (United Kingdom) Technical Manual SD5076:5.0 – 2014.* BRE, Watford.

Greater London Assembly (2016) *The London Plan 2016.* GLA, London.

Greater London Assembly (2014) *Sustainable Design and Construction Supplementary Planning Guidance.* GLA, London.

HBPW LLP (2016) *63-71 High Street, Hampton Hill Geoenvironmental Assessment/Contaminated Land Report.* Unpublished client report.

K P Acoustics Limited (2016) *63-71 High Street, Hampton Hill Acoustic Report.* Unpublished client report.

Isambard Environmental (2017a) *63-71 High Street, Hampton Hill, London, TW12 1NH BREEAM New Construction Pre-Assessment Report.* Unpublished client report.

Isambard Environmental (2017b) *63-71 High Street, Hampton Hill, London, TW12 1NH BREEAM Home Quality Mark Pre-Assessment Report.* Unpublished client report.

London Borough of Richmond upon Thames (2009) *Core Strategy, adopted April 2009*.

London Borough of Richmond upon Thames (2016) Sustainable Planning Document *Sustainable Construction Checklist Guidance Document, adopted January 2016*.

RAB Consultants Limited (2016) *63-71 High Street, Hampton Hill Flood Risk Assessment.* Unpublished client report.

Royal Haskoning (2016) *63-71 High Street, Hampton Hill Transport Assessment.* Unpublished client report.

SVM Consulting Engineers (2016) *63-71 High Street, Hampton Hill, TW12 1LZ Energy Statement.* Unpublished client report.

SVM Consulting Engineers (2016) *63-71 High Street, Hampton Hill, TW12 1LZ Light Pollution Assessment.* Unpublished client report.

LBRUT Sustainable Construction Checklist - January 2016

This document forms part of the Sustainable Construction Checklist SPD. This document **must** be filled out as part of the planning application for the following developments: all residential development providing **one or more new residential units (including conversions leading to one or more new units)** , and all other forms of development providing **100sqm or more of non-residential floor space**. Developments including new non-residential development of less than 100sqm floor space, extensions less than 100sqm, and other conversions are strongly encouraged to comply with this checklist. Where further information is requested, please either fill in the relevant section, or refer to the document where this information may be found in detail, e.g. Flood Risk Assessment or similar. **Further guidance** on completing the Checklist may be found in the Justification and Guidance section of this SPD.

Property Name (if relevant): 63-71 High Street

Application No. (if known): not known

Address (include. postcode): 63-71 High Street, Hampton Hill, LONDON, TW12 1NH

Completed by: Andrew Francis, Isambard Environmental, 127 Metal Box Factory, 30 Great Guildford Street, LONDON, SE1 0HS

For Non-Residential
Size of development (m2): 229

For Residential
Number of dwellings: 41

1 MINIMUM COMPLIANCE (RESIDENTIAL AND NON-RESIDENTIAL)

Energy Assessment

Has an energy assessment been submitted that demonstrates the expected energy and carbon dioxide emissions saving from energy efficiency and renewable energy measures, including the feasibility of CHP/CCHP and community heating systems? If yes, please tick. yes

Carbon Dioxide emissions reduction

What is the carbon dioxide emissions reduction against a Building Regulations Part L (2013) baseline: 37.7

Policy DM SD 1 and London Plan Policy 5.2 (2015) require a 35% reduction in CO $_2$ emissions beyond Building Regulations 2013.

Percentage of **total** site CO2 emissions saved through renewable energy installation? 15.8

1A MINIMUM POLICY COMPLIANCE (NON-RESIDENTIAL AND DOMESTIC REFURBISHMENT)

Please check the Guidance Section of this SPD for the policy requirements

Environmental Rating of development:

Non-Residential new-build (100sqm or more)
BREEAM Level: Excellent — Have you attached a pre-assessment to support this? ☑

Extensions and conversions for residential dwellings
BREEAM Domestic Refurbishment: Please Select — Have you attached a pre-assessment to support this? ☐

Extensions and conversions for non-residential buildings
BREEAM Level: Please Select — Have you attached a pre-assessment to support this? ☐

Score awarded for Environmental Rating:
BREEAM: Good = *0* , Very Good = 4, Excellent = *8,* Outstanding = *16*

Subtotal 8

1B MINIMUM POLICY COMPLIANCE (RESIDENTIAL)

Water Usage

Internal water usage limited to 105 litres person per day. (Excluding an allowance 5 litres per person per day for external water consumption). Calculations using the water efficiency calculator for new dwellings have been submitted. ☑ *1*

Subtotal 1

2. ENERGY USE AND POLLUTION

2.1 Need for Cooling

		Score
a.	How does the development incorporate cooling measures? Tick all that apply:	
	Energy efficient design incorporating specific heat demand to less than or equal to 15 kWh/sqm	☐ 6
	Reduce heat entering a building through providng/improving insulation and living roofs and walls	☑ 2
	Reduce heat entering a building through shading	☑ 3
	Exposed thermal mass and high ceilings	☑ 4
	Passive ventilation	☑ 3
	Mechanical ventilation with heat recovery	☑ 1
	Active cooling systems, i.e. Air Conditioning Unit	☐ 0

2.2 Heat Generation

b.	How have the heating and cooling systems, with preference to the heating system hierarchy, been selected (defined in London Plan policy **5.6**)? Tick all heating and cooling systems that will be used in the development:	
	Connection to existing heating or cooling networks powered by renewable energy	☐ 6
	Connection to existing heating or cooling networks powered by gas or electricity	☐ 5
	Site wide CHP network powered by renewable energy	☐ 4
	Site wide CHP network powered by gas	☐ 3
	Communal heating and cooling powered by renewable energy	☐ 2
	Communal heating and cooling powered by gas or electricity	☑ 1
	Individual heating and cooling	☑ 0

2.3 Pollution: Air, Noise and Light

a.	Does the development plan to implement reduction strategies for dust emissions from construction sites?	☑ 2
b.	Does the development plan include a biomass boiler?	☐ -
	If yes, please refer to the biomass guidelines for the Borough of Richmond, please see guidance for supplementary information. If the proposed boiler is of a qualifying size, you may need to completed the information request form found on the Richmond website.	☐ -
c.	Please tick only one option below	
	Has the development taken measures to reduce existing noise and enhance the existing soundscape of the site?	☐ 3
	Has the development taken care to not create any new noise generation/transmission issues in its intended operation?	☑ 1
d.	Has the development taken measures to reduce light pollution impacts on character, residential amenity and biodiversity?	☑ 3
e.	Have you attached a Lighting Pollution Report?	☑ -

Subtotal 20

Please give any additional relevant comments to the Energy Use and Pollution Section below

An Energy Stement and Light Pollution Assessment has been prepared by SVM Consulting Enginners which provides further details on the heating and cooling strategies and the mitigation measures to control air, noise and light polluton from the proposed development.

3. TRANSPORT

3.1 Provision for the safe efficient and sustainable movement of people and goods

a.	Does your development provide opportunities for occupants to use innovative travel technologies?	

Please explain:

A Transport Assessment has been prepared by Royal Haskoning which provides further details on the transport measures proposed for the development.

b.	Does your development include charging point(s) for electric cars?	☑ 2
c.	**For major developments ONLY**: Has a Transport Assessment been produced for your development based on TfL's Best Practice Guidance?	
	If you have provided a Transport Assessment as part of your planning application, please tick here and move to Section 3 of this Checklist.	☑ 5
d.	**For smaller developments ONLY**: Have you provided a Transport Statement?	☐ 5
e.	Does your development provide cycle storage? (Standard space requirements are set out in the the Council's Parking Standards - DM DPD Appendix 4)	☑ 2
	If so, for how many bicycles? 52	
	Is this shown on the site plans?	☐ -
f.	Will the development create or improve links with local and wider transport networks? If yes, please provide details.	☐ 2

Subtotal 9

Please give any additional relevant comments to the Transport Section below

A Transport Assessment has been prepared by Royal Haskoning which provides further details on the transport measures proposed for the development.

4 BIODIVERSITY

4.1 Minimising the threat to biodiversity from new buildings, lighting, hard surfacing and people

a. Does your development involve the loss of an ecological feature or habitat, including a loss of garden or other green space? (Indicate if yes) ☐ -2

If so, please state how much in sqm? sqm

b. Does your development involve the removal of any tree(s)? (Indicate if yes) - ☑

If so, has a tree report been provided in support of your application? (Indicate if yes) - ☑

c. Does your development plan to add (and not remove) any tree(s) on site? (Indicate if yes) - ☐

d. Please indicate which features and/or habitats that your development will incorporate to improve on site biodiversity:

Pond, reedbed or extensive native planting	6	☐	Area provided:	sqm
An extensive green roof	5	☑	Area provided: c.190	sqm
An intensive green roof	4	☐	Area provided:	sqm
Garden space	4	☑	Area provided: c.900	sqm
Additional native and/or wildlife friendly planting to peripheral areas	3	☑	Area provided: c.300	sqm
Additional planting to peripheral areas	2	☑	Area provided: c.170	sqm
A living wall	2	☐	Area provided:	sqm
Bat boxes	0.5	☑		
Bird boxes	0.5	☑		
Other	0.5	☐		

Subtotal 15

Please give any additional relevant comments to the Biodiversity Section below

An Ecological Survey has been prepared by Arbtech Consulting Limited and a soft landscaping plan by Bradley-Hole Schoenaich which provides further details on the biodiversity measures proposed for the development.

5 FLOODING AND DRAINAGE

5.1 Mitigating the risks of flooding and other impacts of climate change in the borough

a. Is your site located in a high flood risk zone (Zone 3)? (Indicate if yes) ☐ -2

Have you submitted a Flood Risk Assessment? (Indicate if yes) ☑ -

b. Which of the following measures of the drainage hierarchy are incorporated onto your site? (tick all that apply)

Store rainwater for later use	☐ 5
Use of infiltration techniques such as porous surfacing materials to allow drainage on-site	☑ 3
Attenuate rainwater in ponds or open water features	☐ 4
Store rainwater in tanks for gradual release to a watercourse	☑ 3
Discharge rainwater directly to watercourse	☐ 2
Discharge rainwater to surface water drain	☑ 1
Discharge rainwater to combined sewer	☑ 0

c. Please give the change in area of permeable surfacing which will result from your development proposal: 0 sqm

Please provide details of the permeable surfacing below *please represent a loss in permeable area as a negative number*

Subtotal 7

Please give any additional relevant comments to the Flooding and Drainage Section below

A Flood Risk Assessment has been prepared by RAB Consulting Limited which provides further details on the measures proopsed to mitigate against the impacts of flooding and drainage for the proposed development.

6 IMPROVING RESOURCE EFFICIENCY

6.1 Reduce waste generated and amount disposed of by landfill though increasing level of re-use and recycling

a. Will demolition be required on your site prior to construction? *[Points will only be awarded if 10% or greater of demolition waste is reused/recycled]* ☑ 1

If so, what percentage of demolition waste will be reused in the new development? c.5 %

What percentage of demolition waste will be recycled? c.95 %

b. Does your site have any contaminated land? ☐ 1

Have you submitted an assessment of the site contamination? ☑ 2

Are plans in place to remediate the contamination? ☐ 2

Have you submitted a remediation plan? ☐ 1

Are plans in place to include composting on site? ☐ 1

6.2 Reducing levels of water waste

a. Will the following measures of water conservation be incorporated into the development? (Please tick all that apply):

Fitting of water efficient taps, shower heads etc	☑ 1
Use of water efficient A or B rated appliances	☑ 1
Rainwater harvesting for internal use	☐ 4
Greywater systems	☐ 4
Fit a water meter	☑ 1

Subtotal 5

Please give any additional relevant comments to the Improving Resource Efficiency Section below

The BREEAM New Construction 2014 Pre-Assessment Report and Home Quality Mark Pre-Assessment Report, both prepared by Isambard Environmental, provide further details on how the proposed development will improve resource efficiency.

7 ACCESSIBILITY

7.1 Ensure flexible adaptable and long-term use of structures

a. **If the development is residential,** will it meet the requirements of the nationally described space standard for internal space and layout? ☑ *1*

If the standards are not met, in the space below, please provide details of the functionality of the internal space and layout

AND

b. **If the development is residential**, will it meet Building Regulation Requirement M4 (2) 'accessible and adaptable dwellings'? ☑ *2*

If this is not met, in the space below, please provide details of any accessibility measures included in the development.

For major residential developments, are 10% or more of the units in the development to Building Regulation Requirement M4 (3) 'wheelchair user dwellings'? ☑ *1*

OR

c. **If the development is non-residential,** does it comply with requirements included in Richmond's Design for Maximum Access SPG ☑ *2*

Please provide details of the accessibility measures specified in the Maximum Access SPG that will be included in the development

As ashell and core building the proposed retail elements comply with all relevant aspects of the Design and Maximum Access SPG by providing double leaf doors with a minimum opening of 1000mm and level access throughout.

Subtotal **6**

Please give any additional relevant comments to the Design Standards and Accessibility Section below

LBRUT Sustainable Construction Checklist- Scoring Matrix for *New Construction* **(Non-Residential and domestic refurb)**

TOTAL ***71***

Score	Rating	Significance
80 or more	*A+*	Project strives to achieve highest standard in energy efficient sustainable development
71-79	*A*	Makes a major contribution towards achieving sustainable development in Richmond
51-70	*B*	Helps to significantly improve the Borough's stock of sustainable developments
36-50	*C*	Minimal effort to increase sustainability beyond general compliance
35 or less	*FAIL*	Does not comply with SPD Policy

LBRUT Sustainable Construction Checklist- Scoring Matrix for New Construction **Residential new-build**

Score	Rating	Significance
81 or more	**A++**	Project strives to achieve highest standard in energy efficient sustainable development
64-80	*A+*	Project strives to achieve highest standard in energy efficient sustainable development
55-63	*A*	Makes a major contribution towards achieving sustainable development in Richmond
35-54	*B*	Helps to significantly improve the Borough's stock of sustainable developments
20-34	*C*	Minimal effort to increase sustainability beyond general compliance
19 or less	*FAIL*	Does not comply with SPD Policy

Authorisation:

I herewith declare that I have filled in this form to the best of my knowledge

Signature Andrew Francis for Greatplanet Limited Date 25th July 2017