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## RUGBY FOOTBALL UNION

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# Sustainable Construction Checklist

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Twickenham Stadium – East Stand Extension

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Aug 2016

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## 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):  Application No. (if known):

Address (include, postcode)   
Completed by:

For Non-Residential  
Size of development (m2)

For Residential  
Number of dwellings

### 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.

**Carbon Dioxide emissions reduction**  
What is the carbon dioxide emissions reduction against a Building Regulations Part L (2013) baseline   
*Policy DM SD 1 and London Plan Policy 5.2 (2015) require a 35% reduction in CO<sub>2</sub> emissions beyond Building Regulations 2013.*

Percentage of total site CO<sub>2</sub> emissions saved through renewable energy installation?

### 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:

<i>Non-Residential new-build (100sqm or more)</i>		
BREEAM Level	<input type="text" value="Very Good"/>	Have you attached a pre-assessment to support this? <input checked="" type="checkbox"/>
<i>Extensions and conversions for residential dwellings</i>		
BREEAM Domestic Refurbishment	<input type="text" value="Please Select"/>	Have you attached a pre-assessment to support this? <input type="checkbox"/>
<i>Extensions and conversions for non-residential buildings</i>		
BREEAM Level	<input type="text" value="Very Good"/>	Have you attached a pre-assessment to support this? <input checked="" type="checkbox"/>

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

### 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**

## 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 providing/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 **15**

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

Insulation has been improved over and above the requirement of Part L.  
Light film on glazing.  
External lighting to be compliant with BREEM Pol 04, Reduction of Obtrusive Light.

## 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:

- 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?  5  
If you have provided a Transport Assessment as part of your planning application, please tick here and move to Section 3 of this Checklist.
- 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?  -  
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 **7**

Please give any additional relevant comments to the Transport Section below

The RFU will be providing 4 No. car charging points.

**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)  
If so, please state how much in sqm?  -2 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   | <input type="checkbox"/>            | Area provided: | <input type="text"/> | sqm |
| An extensive green roof   | 5   | <input type="checkbox"/>            | Area provided: | <input type="text"/> | sqm |
| An intensive green roof   | 4   | <input type="checkbox"/>            | Area provided: | <input type="text"/> | sqm |
| Garden space  | 4   | <input type="checkbox"/>            | Area provided: | <input type="text"/> | sqm |
| Additional native and/or wildlife friendly planting to peripheral areas | 3   | <input type="checkbox"/>            | Area provided: | <input type="text"/> | sqm |
| Additional planting to peripheral areas                                 | 2   | <input type="checkbox"/>            | Area provided: | <input type="text"/> | sqm |
| A living wall   | 2   | <input type="checkbox"/>            | Area provided: | <input type="text"/> | sqm |
| Bat boxes   | 0.5 | <input checked="" type="checkbox"/> |                |                      |     |
| Bird boxes  | 0.5 | <input checked="" type="checkbox"/> |                |                      |     |
| Other   | 0.5 | <input type="checkbox"/>            |                |                      |     |

Subtotal

Please give any additional relevant comments to the Biodiversity Section below

Bird and bat boxes proposed as part of the Ecology Assessment. The RFU have confirmed these will be installed as part of 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   | <input type="checkbox"/>            | 5 |
| Use of infiltration techniques such as porous surfacing materials to allow drainage on-site | <input type="checkbox"/>            | 3 |
| Attenuate rainwater in ponds or open water features   | <input type="checkbox"/>            | 4 |
| Store rainwater in tanks for gradual release to a watercourse                               | <input type="checkbox"/>            | 3 |
| Discharge rainwater directly to watercourse   | <input type="checkbox"/>            | 2 |
| Discharge rainwater to surface water drain  | <input checked="" type="checkbox"/> | 1 |
| Discharge rainwater to combined sewer   | <input type="checkbox"/>            | 0 |
- c. Please give the change in area of permeable surfacing which will result from your development proposal:  
Please provide details of the permeable surfacing below  sqm  
*please represent a loss in permeable area as a negative number*

Subtotal

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

**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?  %
- What percentage of demolition waste will be recycled?  %
- b. Does your site have any contaminated land?
- |   |                          |   |
|---|--------------------------|---|
| Have you submitted an assessment of the site contamination? | <input type="checkbox"/> | 1 |
| Are plans in place to remediate the contamination?          | <input type="checkbox"/> | 2 |
| Have you submitted a remediation plan?                      | <input type="checkbox"/> | 1 |
| Are plans in place to include composting on site?           | <input type="checkbox"/> | 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 | <input checked="" type="checkbox"/> | 1 |
| Use of water efficient A or B rated appliances    | <input checked="" type="checkbox"/> | 1 |
| Rainwater harvesting for internal use             | <input type="checkbox"/>            | 4 |
| Greywater systems                                 | <input type="checkbox"/>            | 4 |
| Fit a water meter                                 | <input checked="" type="checkbox"/> | 1 |

Subtotal

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

Where domestic scale white goods are used, they will be A and B rated.

**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

See design and access statement

**Subtotal**

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**

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

Date #####