

**LBRUT Sustainable Construction Checklist - June 2020**

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 select TRUE.

**Carbon Dioxide emissions reduction**  
What is the on site carbon dioxide emissions reduction against a Building Regulations Part L (2013) baseline  
*Policy LP 22 B. and Draft London Plan Policy 9.2.5 require a 35% onsite reduction in CO<sub>2</sub> emissions beyond Building Regulations 2013.* %

What is the percentage reduction from efficiency measures alone  
*Policy LP 22 C. and Draft London Plan Policy 9.2.6 require a 10% onsite reduction in CO<sub>2</sub> emissions beyond Building Regulations 2013 from efficiency measures for residential and 15% for non-residential.* %

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

What is the total remaining carbon to be offset  
*Policy LP 22 B. and Draft London Plan Policy 9.2.4 require Major developments to achieve Zero Carbon after offsetting.* Tonne

Are remaining emissions going to be offset through offset fund payment in accordance with current guidelines issued for the cost per tonne of CO<sub>2</sub>?

What is the total predicted cost of offset?  
*The London Plan sets this as £95/tonne per year over 30 years, this should be updated based on As Build calculations.* £

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

**Environmental Rating of development:**

Non-Residential new-build (100sqm or more) BREEAM Level <input type="text" value="Excellent"/>	Have you attached a pre-assessment to support this?	<input type="text" value="TRUE"/>
<i>Excellent required under Policy LP22 A 3</i> Extensions and conversions for residential dwellings BREEAM Domestic Refurbishment <input type="text" value="Please Select"/>	Have you attached a pre-assessment to support this?	<input type="text" value="Please Select:"/>
<i>Excellent required under Policy LP22 A 4</i> Extensions and conversions for non-residential buildings BREEAM Level <input type="text" value="Please Select"/>	Have you attached a pre-assessment to support this?	<input type="text" value="Please Select:"/>

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

**1B MINIMUM POLICY COMPLIANCE (RESIDENTIAL)**

**Water Usage**  
Internal water usage after gray/rainwater systems 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.   
*110l/p/d Required for new dwellings under Policy LP22 A 2 105l/p/d required under Draft London Plan Policy S15*

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	FALSE
	Reduce heat entering a building through providing/improving insulation and living roofs and walls	2	TRUE
	Reduce heat entering a building through shading	3	TRUE
	Exposed thermal mass and high ceilings	4	TRUE
	Passive ventilation	3	TRUE
	Mechanical ventilation with heat recovery	1	TRUE
	Active cooling systems, i.e. Air Conditioning Unit	0	FALSE
	<i>See Draft London Plan SI4</i>		
<b>2.2 Heat Generation</b>			
b.	How have the heating and cooling systems, with preference to the heating system hierarchy, been selected (defined in London Plan policy <b>SI3</b> ) Tick all heating and cooling systems that will be used in the development:	Score	
	Connection to existing heating or cooling networks powered by renewable energy	6	FALSE
	Connection to existing heating or cooling networks powered by gas or electricity	5	FALSE
	Site wide CHP network powered by renewable energy	4	FALSE
	Site wide CHP network powered by gas	3	FALSE
	Communal heating and cooling powered by renewable energy	2	TRUE
	Communal heating and cooling powered by gas or electricity	1	FALSE
	Individual heating and cooling	0	FALSE
	<i>See Draft London Plan SI3</i>		
<b>2.3 Pollution: Air, Noise and Light</b>			
a.	Does the development plan to implement reduction strategies for dust emissions from construction sites?	2	TRUE
b.	Does the development plan to include a biomass boiler?		FALSE
	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 complete the information request form found on the Richmond website.		
c.	Has an air quality impact assessment been provided?		FALSE
	If yes, has 'Emissions Neutral' been achieved?	1	Please Select:
	If yes, have occupants of new development been protected from existing pollution?	1	Please Select:
	If no to any of the above are there any sensitive receptors as defined in Policy LP 10 present?	-1	Please Select:
	<i>see Policy LP 10</i>		
d.	Please tick only one option below		
	Has the development taken measures to reduce existing noise and enhance the existing soundscape of the site?	3	TRUE
	Has the development taken care to not create any new noise generation/transmission issues in its intended operation?	1	TRUE
	<i>see Policy LP 10</i>		
e.	Has the development taken measures to reduce light pollution impacts on character, residential amenity and biodiversity?	3	TRUE
	<i>see Policy LP 10</i>		
f.	Have you attached a Lighting Pollution Report?	-	
		<b>Subtotal</b>	<b>24</b>

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

With respect to the first question about energy efficient design incorporating specific heat demand to less than or equal to 15kWh/sqm, this is not applicable as active cooling is not provided or required in this scheme. Cooling is provided by passive means. An Indoor Air Quality Plan produced to minimise indoor air pollution. An acoustician will be appointed to advise and carry out testing for sound insulation and indoor ambient noise levels, and a Noise Impact Assessment will be required. Please refer to BREEAM pre-assessment.

**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?

FALSE

Please explain:

Score

b. Does your development provide for 100% active provision for electric vehicle charging point(s) and have you successfully demonstrated that it would be able to operate satisfactorily in the future expectation of all vehicles being electrically powered?

2

FALSE

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

Please Select:

*See policy LP44*

d. **For smaller developments ONLY:** Have you provided a Transport Statement?

5

TRUE

e. Does your development provide cycle storage? (Standard space requirements are set out in the Council's Parking Standards - Local Plan Appendix 3)

If so, for how many bicycles?

2

TRUE

Is this shown on the site plans?

98

TRUE

*See Local Plan Appendix 3*

f. Will the development create or improve links with local and wider transport networks? If yes, please provide details.

2

TRUE

Subtotal **9**

Please give any additional relevant comments to the Transport Section below

EV charging provision to be provided to London Plan standards. The development will link Roehampton Gate to the Alton Estate via a deer proof gate which will improve pedestrian access to local transport networks.

**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 TRUE  
1900 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) TRUE  
TRUE
- c. Does your development plan to add (and not remove) any tree(s) on site? (Indicate if yes) TRUE
- 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 | FALSE |
| An extensive green roof   | 5   | Area provided: | 440  | sqm | TRUE  |
| An intensive green roof   | 4   | Area provided: |      | sqm | FALSE |
| Garden space  | 4   | Area provided: |      | sqm | FALSE |
| Additional native and/or wildlife friendly planting to peripheral areas | 3   | Area provided: | 1580 | sqm | TRUE  |
| Additional planting to peripheral areas                                 | 2   | Area provided: |      | sqm | TRUE  |
| A living wall   | 2   | Area provided: |      | sqm | FALSE |
| Bat boxes   | 0.5 |                |      |     | TRUE  |
| Bird boxes  | 0.5 |                |      |     | FALSE |
| Swift boxes   | 0.5 |                |      |     | FALSE |
| Other   | 0.5 |                |      |     | TRUE  |
- e. Does your development use at least 70% of available roof plate as green/brown roof  
*Policy LP 17 requires 70%* 1 TRUE

**Subtotal** 9

Please give any additional relevant comments to the Biodiversity Section below

58.6% of the total roof plate will be a green roof, this is more than 70% of the available roofplate (the remainder of the roof is occupied by the plant area and is therefore unavailable roofplate). The green roof is to be substrate based with acid grassland comprising approximately 18 grasses and wildflower species, the provision of deadwood piles and stone/rubble piles to include habitat for invertebrates, birds and bats. Native lowland dry acid grassland is proposed in peripheral areas. Bioswale planting is proposed in peripheral areas. 'Other' habitat creation is ticked for the planting of urban trees. Please refer to the BNG metric for full details of the habitats lost and gained.

5 FLOODING AND DRAINAGE			
<b>5.1 Mitigating the risks of flooding and other impacts of climate change in the borough</b>			
a.	Is your site located in a high flood risk zone (Zone 3)? (Indicate if yes)	-2	FALSE
	Have you submitted a Flood Risk Assessment? (Indicate if yes)		TRUE
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	FALSE
	Use of infiltration techniques such as porous surfacing materials to allow drainage on-site	3	TRUE
	Attenuate rainwater in ponds or open water features	4	TRUE
	Store rainwater in tanks for gradual release to a watercourse	3	TRUE
	Discharge rainwater directly to watercourse	2	FALSE
	Discharge rainwater to surface water drain	1	TRUE
	Discharge rainwater to combined sewer	0	FALSE
	Have you submitted a Drainage Statement (Indicate if yes)		TRUE
	<i>See Policy LP 21 and Draft London Plan SL 13</i>		
c.	Please give the change in area of permeable surfacing which will result from your development proposal:	67.5	sqm
	Please provide details of the permeable surfacing below <i>please represent a loss in permeable area as a negative number</i>		
Please give any additional relevant comments to the Flooding and Drainage Section below		<b>Subtotal</b>	<b>11</b>
<p>The drainage strategy will include 952sq.m of proposed permeable paving, a swale, and an attenuation tank which will drain to the Beverley Brook with a hydrobrake that will restrict flow to 3.6l/s using a 47mm opening. The existing permeable surfacing is 4840sq.m comprising of hardcore (50% permeable) and 3960sq.m of soft landscaping. The proposed permeable surfacing is 925sq.m of permeable paving, 295.4sq.m hardcore path (50% permeable) and 3687sq.m of soft landscaping, resulting in an increase of 67.5sq.m.</p>			
6 IMPROVING RESOURCE EFFICIENCY			
<b>6.1 Reduce waste generated and amount disposed of by landfill though increasing level of re-use and recycling</b>			
a.	Will demolition be required on your site prior to construction? <i>[Points will only be awarded if 10% or greater of demolition waste is reused/recycled]</i>	1	TRUE
	If so, what percentage of demolition waste will be reused in the new development?	0	%
	What percentage of demolition waste will be recycled?	80-90	%
b.	Does your site have any contaminated land?	1	FALSE
	Have you submitted an assessment of the site contamination?	2	FALSE
	Are plans in place to remediate the contamination?	2	FALSE
	Have you submitted a remediation plan?	1	FALSE
	Are plans in place to include composting on site?	1	FALSE
c.	Will a waste management plan and facilities be in place in line with Policy LP24		Yes
<b>6.2 Reducing levels of water waste</b>			
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	TRUE
	Use of water efficient A or B rated appliances	1	TRUE
	Rainwater harvesting for internal use	4	FALSE
	Greywater systems	4	FALSE
	Fit a water meter	1	TRUE
Please give any additional relevant comments to the Improving Resource Efficiency Section below		<b>Subtotal</b>	<b>3</b>
<p>The existing structures will be demolished. There is a commitment to reuse demolition material on the site where this is considered appropriate. Any demolition waste removed from the site would be sorted and taken to a recycling centre to be disposed of or recycled in accordance with all relevant legislation. There is a requirement to carry out a pre-demolition audit, and it will be targeted to divert 80% of demolition material by volume or 90% by weight. A dedicated, accessible and properly sized storage space for recycling in addition to general waste storage will be provided. Please refer to the BREEAM Pre-Assessment.</p>			

7 ACCESSIBILITY				
7.1	<b>Ensure flexible adaptable and long-term use of structures</b>			
a.	If the development is residential, will it meet the requirements of the nationally described space standard for internal space and layout? If the standards are not met, in the space below, please provide details of the functionality of the internal space and layout	1	<b>Please Select:</b>	
<b>AND</b>				
b.	If the development is residential, will it meet Building Regulation Requirement M4 (2) 'accessible and adaptable dwellings'? If this is not met, in the space below, please provide details of any accessibility measures included in the development.	2	<b>Please Select:</b>	
	For major residential developments, are 10% or more of the units in the development to Building Regulation Requirement M4 (3) 'wheelchair user dwellings'?	1	<b>Please Select:</b>	
<b>OR</b>				
c.	If the development is non-residential, does it comply with requirements included in Richmond's Local Plan LP1, LP28.B, LP30 & LP45 Please provide details of the accessibility measures specified in the Local Plan that will be included in the development	2	<b>TRUE</b>	
	Disabled parking bays to London Plan standard. Part M compliant accessible WC in public toilet block, ambulant male and female WCs. Staff WC in the café is accessible, as is the staff WC in the cycle hire facility.			
		<b>Subtotal</b>	<b>2</b>	
Please give any additional relevant comments to the Design Standards and Accessibility Section below				
	Level access is to be provided to all facilities. Slopes will be incorporated into landscaping to avoid use of ramps to entrances unless absolutely necessary.			

LBRUT Sustainable Construction Checklist- Scoring Matrix for New Construction (Non-Residential and domestic refurb) TOTAL **66**

Score	Rating	Significance
84 or more	A+	Project strives to achieve highest standard in energy efficient sustainable development
75-83	A	Makes a major contribution towards achieving sustainable development in Richmond
56-74	B	Helps to significantly improve the Borough's stock of sustainable developments
40-55	C	Minimal effort to increase sustainability beyond general compliance
39 or less	FAIL	Does not comply with SPD Policy

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

Score	Rating	Significance
85 or more	A++	Project strives to achieve highest standard in energy efficient sustainable development
68-84	A+	Project strives to achieve higher standard in energy efficient sustainable development
59-67	A	Makes a major contribution towards achieving sustainable development in Richmond
39-58	B	Helps to significantly improve the Borough's stock of sustainable developments
24-38	C	Minimal effort to increase sustainability beyond general compliance
23 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 \_\_\_\_\_