

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):	<input type="text" value="St Catherine's School"/>	Application No. (if known):	<input type="text"/>
Address (include postcode):	<input type="text" value="Cross Deep, Twickenham, TW1 4QJ"/>		
Completed by:	<input type="text" value="Tim Ronalds Architects"/>		
For Non-Residential Size of development (m2)		For Residential Number of dwellings	<input type="text" value="N/A"/>
<input type="text" value="483 Gross External Area (320 additional GEA created)"/>			

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.	<input type="text" value="TRUE"/>
Carbon Dioxide emissions reduction	What is the on site carbon dioxide emissions reduction against a Building Regulations Part L (2013) baseline <i>Policy LP 22 B. and Draft London Plan Policy 9.2.5 require a 35% onsite reduction in CO₂ emissions beyond Building Regulations 2013.</i>	<input type="text" value="36% (above 2021) %"/>
	What is the percentage reduction from efficiency measures alone <i>Policy LP 22 C. and Draft London Plan Policy 9.2.6 require a 10% onsite reduction in CO₂ emissions beyond Building Regulations 2013 from efficiency measures for residential and 15% for non-residential.</i>	<input type="text" value="13% (above 2021) %"/>
	Percentage of total site CO ₂ emissions saved through renewable energy installation?	<input type="text" value="26% (above 2021) %"/>
	What is the total remaining carbon to be offset <i>Policy LP 22 B. and Draft London Plan Policy 9.2.4 require Major developments to achieve Zero Carbon after offsetting.</i>	<input type="text" value="n/a"/> 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 ₂ ?	<input type="text" value="FALSE"/>
	What is the total predicted cost of offset? <i>The London Plan sets this as £95/tonne per year over 30 years, this should be updated based on As Build calculations.</i>	<input type="text"/>

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	<input type="text" value="Excellent"/>	Have you attached a pre-assessment to support this?
<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?
<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?
<i>Excellent required under Policy LP 22</i>		
Score awarded for Environmental Rating:		Subtotal <input type="text" value="8"/>
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. <i>110l/p/d Required for new dwellings under Policy LP22 A 2 105l/p/d required under Draft London Plan Policy SI5</i>	Score <input type="text" value="1"/>
		Subtotal <input type="text" value="0"/>

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
See Draft London Plan SI4	

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 SI3) 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
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
See Draft London Plan SI3	

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 to 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 complete the information request form found on the Richmond website.	
c. Has an air quality impact assessment been provided?	
If yes, has 'Emissions Neutral' been achieved	1
If yes, have occupants of new development been protected from existing pollution	1
If no to any of the above are there any sensitive receptors as defined in Policy LP 10 present?	-1
see Policy LP 10	
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
Has the development taken care to not create any new noise generation/transmission issues in its intended operation?	1
see Policy LP 10	
e. Has the development taken measures to reduce light pollution impacts on character, residential amenity and biodiversity?	3
see Policy LP 10	
f. Have you attached a Lighting Pollution Report?	-

Subtotal 28

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

Connection to a CHP network or other existing network isn't a viable option for this project. An air source heat pump and photo-voltaic panels will be used for renewable energy.

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:

The development is within an existing School and travel arrangements will remain as they are currently. The School has a Travel Plan achieving Gold accreditation under the TFL Stars scheme. There are high levels of walking and cycling, and minimum car usage.

	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
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
See policy LP44	
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 Council's Parking Standards - Local Plan Appendix 3)	2
If so, for how many bicycles?	20
Is this shown on the site plans?	
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

Subtotal 2

Please give any additional relevant comments to the Transport Section below

A Transport Statement was not requested, because the School has a Travel Plan using the TFL Stars system, achieving Gold accreditation. There will be no increase in pupil or staff numbers. Existing numbers are included in the Educational Needs Statement in Appendix 1 of the Planning Statement. Although transport to and from the school is very sustainable, we unfortunately lose 5 points because we aren't submitting a formal Transport Statement.

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:	<input style="width: 100%;" type="text"/>	sqm
An extensive green roof	5	Area provided:	<input style="width: 100%;" type="text"/>	48 sqm
An intensive green roof	4	Area provided:	<input style="width: 100%;" type="text"/>	sqm
Garden space	4	Area provided:	<input style="width: 100%;" type="text"/>	sqm
Additional native and/or wildlife friendly planting to peripheral areas	3	Area provided:	<input style="width: 100%;" type="text"/>	30 sqm
Additional planting to peripheral areas	2	Area provided:	<input style="width: 100%;" type="text"/>	3 sqm
A living wall	2	Area provided:	<input style="width: 100%;" type="text"/>	20 sqm
Bat boxes	0.5			
Bird boxes	0.5			
Swift boxes	0.5			
Other	0.5			
- e. Does your development use at least 70% of available roof plate as green/brown roof 1
Policy LP 17 requires 70%

Subtotal

Please give any additional relevant comments to the Biodiversity Section below

We are unable to make 70% of the roof plate green roof because much of the main roof is taken up by solar panels. The lower roof will be a green roof. The site is quite constrained and there isn't space for a pond or reedbed, but trees, planting and a green wall will be added.

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
Have you submitted a Drainage Statement (Indicate if yes)	

See Policy LP 21 and Draft London Plan SL 13
- c. Please give the change in area of permeable surfacing which will result from your development proposal: sqm
Please provide details of the permeable surfacing below *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

The permeable areas will be planting beds. There will also be an extensive green roof, which isn't included in the 33 sqm permeable area. All rainwater from roofs and hard surfacing will be directed to existing soakaways. This is a relatively sustainable approach, but achieves a low score here (3/18). (We would have achieved a higher score if some of the rainwater is discharged directly to a watercourse or surface water drain, even though this would be less sustainable.)

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? 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
- c. Will a waste management plan and facilities be in place in line with Policy LP24

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

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

I think we should be achieving 1 point in relation to reuse and recycling of demolition waste, but this doesn't seem to have been added to the subtotal.

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

Not applicable

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.

Not applicable

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 Local Plan LP1, LP28.B, LP30 & LP45 2

Please provide details of the accessibility measures specified in the Local Plan that will be included in the development

The proposals will provide social and community infrastructure in accordance with LP28, as local groups and schools will be invited to use the facilities. The School has a Travel Plan achieving Gold accreditation under the TFL Stars scheme, and high levels of walking and cycling will be maintained for pupils and staff. This is consistent with LP30. Policy LP45 is not relevant as there will be no change in pupil or staff numbers, and no change to the parking provision is required. The proposals comply with LP1, but as the site is a School, it does need to be gated.

Subtotal 2

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

The new building will be fully accessible and a lift will be installed to serve all floors, in accordance with Approved Document M. See the Design and Access Statement for further information.

LBRUT Sustainable Construction Checklist- Scoring Matrix for New Construction

(Non-Residential and domestic refurb)

TOTAL 64.5

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 *Pamela Jeff* Date 29-11-23