

# APPENDIX 3

## Major Residential Developments

To be completed for development of over 10 dwellings or more

Table 2.1 - Major New Build Residential Properties (Policy SCR6)			
<ul style="list-style-type: none"> <li>• Full applications or outline/reserved matters applications for Appearance</li> <li>• To discharge the condition prior to occupation</li> </ul>			
<p><b>Please tick:</b></p> <p><input type="checkbox"/> The proposal is for multiple identical dwellings</p>			
A	<b>Space Heating (kWh/m<sup>2</sup>/annum)</b>	Policy requirement 30kWh/m <sup>2</sup> /annum	<b>SAP</b> (10 - 25 dwellings) use final values from Energy Summary Tool 1  <i>or</i> <b>PHPP</b> (over 25 dwellings):
B	<b>Total Energy Use (kWh/m<sup>2</sup>/annum)</b>	Policy requirement 40kWh/m <sup>2</sup> /annum	<b>SAP</b> (10 - 25 dwellings) use final values from Energy Summary Tool 1  <i>or</i> <b>PHPP</b> (over 25 dwellings):
C	<b>On-Site Renewable Energy Generation (kWh/m<sup>2</sup>/annum)</b>	Policy requirement to match total energy use	
D	<b>Residual Renewable Energy Generation (kWh/m<sup>2</sup>/annum)</b>		



1. [insert text and add rows as needed]			<b>SAP</b> (10 - 25 dwellings) use final values from Energy Summary Tool 1  <i>or</i> <b>PHPP</b> (over 25 dwellings):	<b>SAP</b> (10 - 25 dwellings) use final values from Energy Summary Tool 1  <i>or</i> <b>PHPP</b> (over 25 dwellings):				
-----------------------------------------	--	--	---------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

<b>Table 5 – Sustainable Construction Strategy</b>
<p>All required sections are to be completed in 500 words or less per section, although further detail may be requested. A summary is to be provided of the approach, <u>not simply a reference to other documents</u>, although additional detail should be signposted via references to <u>named documents and drawings</u>. Outline applications should state if reserved matters applications will contain further detail.</p>
<p><b>1. Passive Design</b> e.g. addressing overheating, building form, orientation and shading, including orientation of roofs to maximise solar energy potential. Please note - this is an important consideration for Layout, so applications covering Layout should provide a full explanation of the approach.</p>
<p><i>[Insert text here]</i></p>
<p><b>2. Renewable and Low Carbon Energy</b> e.g. solar PV, battery storage, heat pumps, solar thermal and heat networks. Please cite any drawings of renewable/low carbon technology.</p>
<p><i>[Insert text here]</i></p>
<p><b>3. Total Renewable Energy on the Whole Proposal</b></p>

Technology type (e.g. PV)	Description: Number and location of installations	Total site-wide capacity (kWp)	Estimated total annual generation (kWh)	Total CO <sub>2</sub> saving from this technology (kgCO <sub>2</sub> )
<i>[insert text and add rows as needed]</i>				
<b>4. Energy Efficiency</b> e.g. appliances, low energy fixtures, state U-values of building elements.				
<i>[Insert text here]</i>				
<b>5. Heating, Cooling and Hot Water</b> e.g. heat pumps, responsive heating controls, underfloor heating, mechanical ventilation with heat recovery, waste water heat recovery.				
<i>[Insert text here]</i>				
<b>6. Ventilation and Indoor Air Quality</b> e.g. airtightness performance, natural or mechanical ventilation, windows. Note how the building will be ventilated in winter other than by opening windows if a high airtightness target is proposed.				
<i>[Insert text here]</i>				
<b>7. Thermal Bridging Reduction:</b> Please list in further detail the ways in which thermal bridging will be minimised.				
<i>[Insert text here]</i>				
<b>8. Energy Performance Gap:</b> Please note how the Performance Gap will be addressed both during and after construction				
<ul style="list-style-type: none"> <li>a. Construction management practices</li> <li>b. Aftercare and post-occupation measures to ensure correct commissioning (including seasonal commissioning) and thorough handover</li> <li>c. Post-occupation performance monitoring to record whether targets are met in-use.</li> </ul>				
<i>[Insert text here]</i>				

**9. Smart Infrastructure** e.g. smart meters and appliances, energy storage, electric vehicle charging, building management systems.

*[Insert text here]*

**10. Waste** e.g. re-use of materials, recycling, on-site waste etc.

*[Insert text here]*

**11. Water** e.g. SuDS, surface water run-off, water storage, efficient water use and rainwater harvesting.

*[Insert text here]*

### Table 8 - Water (Policy SCR5)

**Required for:** Full applications or outline/ reserved matters applications for Appearance for residential development, or the residential element of a mixed-use scheme. Pre-applications within this scope are encouraged to provide a summary of the approach in the box below.

Outline below the approach to water efficiency e.g. low-flow rate sanitary ware and white goods. Please also describe rainwater harvesting methods to be used.

*[Insert text here]*

**Please tick both boxes below to confirm compliance**

The 110 litres per person per day requirement will be met

Rainwater harvesting, collection tanks for rainwater flushing or other methods of capturing rainwater for use by the residents (e.g. water butts) has been included

**Please tick one of the boxes below to confirm compliance**

If the Water Calculator approach to Part G compliance has been taken, please attach the output from an accredited Part G water calculator, demonstrating compliance with the 110 litre “Optional Standard” This is required for registration of the application. **OR**

If the “fittings” approach to Part L compliance is being used, please tick here to confirm that fittings will not exceed the consumption levels set out in the table for the 110-litre standard in the Part G document.

### **Table 11 - Non-Compliance**

We expect development to be able to comply with the policy requirements. If non-compliance with any of the requirements is proposed on the grounds of viability or technical feasibility, a full open-book viability test or technical rationale is likely to be required and the applicant will be expected to pay the cost for an independent review to determine its validity.

**In the case of proposed non-compliance, the Checklist is still to be completed in full, making it clear which sections are non-complaint.**

**Please tick here if non-compliance with any of the policies above is proposed**

Please summarise below the policies for which non-compliance is proposed and summarise the rationale for non-compliance and reference the background reports.

*[Insert text here]*

- If non-compliant on cost/viability grounds: An open-book viability test is attached
- If non-compliant on technical feasibility: An open-book technical rationale is attached

**Energy Summary Tool**

Insert page 4 summary here



## Overheating

The following overheating methodologies and guidance are not a policy requirement. However, exemplary residential and non-residential developments are strongly recommended and encouraged to complete the overheating assessments and tables as follows.

### **Table 9.1 - Overheating Mitigation Strategy**

Please describe how the Cooling Hierarchy has been followed. All sections are to be completed giving a summary of the response to the issue and cross-referencing where further detail can be found, in 500 words or less per section.

**Minimising internal heat generation through energy efficient design:** For example, passive design that minimises solar gain on south facing facades in buildings likely to overheat e.g. offices; heat distribution infrastructure within buildings should be designed to minimise pipe lengths, particularly lateral pipework in corridors of apartment blocks, and adopting pipe configurations which minimise heat loss e.g. twin pipes.

*[Insert text here]*

**Reducing the amount of heat entering the building in summer:** For example, through use of carefully designed shading measures, including balconies, louvres, internal or external blinds, shutters, careful planting of trees and vegetation to provide shade. Please also state the glazing ratios and explanation of mitigation of overheating/ daylight if the overall ratio is greater than 20% or smaller than 15%.

*[Insert text here]*

**Use of thermal mass and high ceilings to manage the heat within the building:** When carefully designed, exposed thermal mass (dense materials that can absorb and release heat slowly) can help to absorb excess heat within the building. Please cite floor to ceiling heights.

*[Insert text here]*

**Passive ventilation:** For example, through the use of openable windows, cross-ventilation, dual aspect units, designing in the 'stack effect'

*[Insert text here]*

**Mechanical ventilation:** Mechanical ventilation can be used to make use of 'free cooling' where the outside air temperature is below that in the building during summer months. If Mechanical Ventilation with Heat Recovery (MVHR) is used, please confirm that there is a by-pass on the heat recovery system for summer mode operation.

*[Insert text here]*

**Table 9.2 - Overheating in Residential Development, CIBSE TM59**

Zone Name and Room Use	Criterion A: Hours of exceedance for living rooms, kitchens and bedrooms			Criterion B: Hours of exceedance for bedrooms only			Result <i>To meet the benchmark, Criteria A &amp; B to be met for current climate</i>
	A. Occupied Hours	B. Max. no. hours exceedance (3% occupied hours)	C. Calculated No. hours exceeding Comfort Range – <b>Not to exceed "B"</b>	D. Annual Night time occupied hours	E. Max. no. hours exceedance (1% occupied hours)	F. Calculated no. hours exceeding Comfort Range – <b>Not to exceed "E"</b>	
Example: Bedroom 1	3,672	110	90	3285	32	25	Pass ☑
Example: Living room	1,989	59	40	n/a	n/a	n/a	Pass ☑
<b>CURRENT CLIMATE - CIBSE DSY1.</b> Results expressed in hours							
[Add rows as needed]							Pass ☐
<b>FUTURE CLIMATE:</b> Results expressed in hours							
Add rows as needed]							Pass ☐
<input type="checkbox"/> Please tick to verify that modelling cover sheets for “current climate” and “future climate” assessments are attached summarising performance and that a written report for TM59 has been produced in line with the CIBSE methodology. <u>This is required for registration of the application</u>							
<input type="checkbox"/> For accommodation with vulnerable occupants such as babies, elderly or disabled people, tick to verify that the Type 1 occupancy parameters in CIBSE TM52 been used							
Which building/s were selected to model and why? Please reference the				[Insert text here]			

relevant plans	
Which part/s of the building/s were selected to model and why? Please reference the relevant drawings	<i>[Insert text here]</i>
Modelling inputs including the climate datasets, locations, software used and emissions scenario	<i>[Insert text here]</i>
If the standard has not been met for the future climate scenario, please outline the future proofing strategy; how the current design enables future measures	<i>[Insert text here]</i>
<i>Name and company of independent assessor conducting the assessment: [Insert text here]</i>	