

# **TM52 & TM59 Overheating Assessment Checklist**

Dynamic modelling

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## Dynamic modelling

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### 1. Address

We need to know the location of the building to apply the correct regional climate data to the assessment.

### 2. Floor plans

We use these to determine the size and internal layout of the building.

### 3. Elevations

We use these to measure glazing and doors.

### 4. Section drawings

We use these to measure internal floor to ceiling heights, and ensure we model the shape of the building correctly where there are vaulted ceilings or other complex aspects.

### 5. Site plan

We use this to determine the orientation of the building and if there is any shelter factor provided by surrounding buildings.

### 6. Build specification for all heat loss areas

This includes build-ups for all wall, floor and roof types which have heated internal space on one side, and unheated space on the other side. We use these to calculate the fabric heat loss of the building.

### 7. Doors and glazing

Details including open-ability, opening angles, U-values and G-values (if known) of doors and glazing, including any glazed doors and roof lights. We use these to calculate the solar gains and fabric heat loss of the building.



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#### **8. Ventilation**

Type of ventilation system including make and model for system 3 or system 4 as soon as known. We use the maximum flow rate of mechanical ventilation systems to model maximum possible airflow during periods when the building is at high risk of overheating.

#### **9. Heating**

Type of heating system including control system, emitter type/s, and make and model of heater and hot water cylinder (if applicable) as soon as known. We use this to model the building accurately.

#### **10. Solar PV**

Details including orientation and physical size of any solar PV panels. We can model the shading effect that solar panels often provide on the roof of the property. This can help reduce the risk of overheating.

#### **11. Details of any restrictions on openings (e.g. due to noise or security issues)**

We use this to model a more realistic simulation of hours when windows will likely not be openable.

#### **12. Vulnerable occupants**

Let us know if the building is designed to home vulnerable occupants, as this will affect the classification of overheating.