**Solar thermal**

**What is it?** Solar hot water systems use solar flat plate collectors or evacuated tubes which collect heat from the sun and use it to heat up water. This system works best in a sunny position, preferably south facing at 30-40 degrees, but they can still be efficient at other angles. You should also consider whether the accompanying heating system is compatible with solar water heating and check whether you need to replace the existing cylinder or add a dedicated cylinder with a solar heating coil.

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| **Cost** £££ |
| **Improvement** ↗↗ |
| **Disruption** ! |

**Property designations?** Is your home in a Conservation Area? Is it subject to an Article 4 Direction? Is it a Listed Building? These considerations may impact whether development to your property requires planning permission or not. An interactive map showing conservation areas and listed buildings can be [found here](https://ssa.camden.gov.uk/connect/analyst/mobile/#/main?mapcfg=CamdenConservation&lang=en-gb). Details of Article 4 Directions can be [found here](https://www.camden.gov.uk/article-4-directions-heritage-and-conservation). If you are uncertain please contact the planning service planning@camden.gov.uk

Listed Buildings - before embarking on any internal or external works, please discuss the matter with a member of the built heritage Conservation Team (planning@camden.gov.uk) or apply for listed building consent, details [available here](https://www.camden.gov.uk/listed-buildings). Listed building consent is always required for works that have the potential to affect the character or special interest of a listed building.

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| No designation (dwelling-house or block of flats) Conservation Area  | Permitted development (planning permission is not required) if:* Protrude no more than 200mm from the roof slope or wall
* No higher than the roof line (excluding chimney)

Conditions: * Must be sited so as to minimise its effect on the external appearance of the building
* Must be sited so as to minimise its effect on the amenity of the area; and
* Equipment which is no longer needed for microgeneration shall be removed as soon as reasonably practical

Permitted development – as per conditions above (‘no designation’), including:* Not installed on a wall which fronts a highway (this does not include the roof).
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| Conservation Area with Article 4 Direction in:BelsizeHampsteadSwiss CottageFrognal Way (specific properties) | **Planning permission required**This may be acceptable if it can be installed in such a way that it does not impact the appearance of the roof form, and ideally in screened locations such as on valley roofs. |
| Listed Buildings | **Planning permission and Listed Building consent required**. This may be acceptable if it can be installed in such a way that it does not harm the roof and is not visible, such as on some valley roofs. |
| Building Regulations | Part A (Structural safety) - need to confirm the roof can take the weight of panelsPart G (Sanitation, Hot Water Safety and Water Efficiency) - when altering hot water systemPart J (Combustion appliances and Fuel Storage systems) - when altering boiler systemPart P (Electrical safety)Planning portal, building regulations information on solar, see [this webpage](https://www.planningportal.co.uk/info/200130/common_projects/51/solar_panels/4). |

**Applying for planning permission (if required)**

Where planning permission is required for solar thermal the following information will be required alongside a full planning application form. Planning application forms can be filled in online through the planning portal or other digital platforms available.

* [Site location plan](https://www.camden.gov.uk/types-scale-drawings-plans-planning-applications)
* Existing plans, sections and elevations
* Proposed plans, sections and elevations of the proposed installation including:
	+ elevations, plans and sections showing any equipment and pipes;
	+ manufacturers specification.

**Other tips**

* Ensure panels are spaced evenly on the roof slope and not in an irregular pattern.
* Ensure the position of the panels would retain even distances to the roof margins
* (ridge, eaves, party walls) and/or walls margins;
* Place panels behind parapets or roof features where possible (such as chimneys), and where these features do not cause shading issues;
* Run cabling in a position to minimise visibility from the street and adjacent properties;
* Use cabling and cable ducts which are in keeping with the colour of the building exterior (such as black for brick building, white for white rendered building).

**What will be considered?**

* Location and design
* Impact on the appearance of the property, streetscene, and the historic value of the property or streetscene
* Efficiency of the panels
* Preference is for an integrated roof tile style