**Ground source heat pumps**

**What is it?** Ground source heat pumps use a loop of pipes filled with water and antifreeze buried in the ground to absorb this heat and transfer it through a heat exchanger into the heat pump, which delivers the heat around the building. Heat pumps are most efficient in buildings that: are well insulated and draught proofed; and have either underfloor or warm air heating as they operate at lower temperatures.

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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](mailto: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) | Permitted development (planning permission is not required) |
| Conservation Area (with or without Article 4 Direction) | Permitted development (planning permission is not required) |
| Listed Buildings | **Listed Building consent required**  Associated plant has the capacity to harm the setting of the listed building. |
| Building Regulations | Part E (Resistance to sound)  Part G (Sanitation, Hot Water Safety and Water Efficiency) – when altering hot water system  Part P (Electrical safety)  Permission not required if installed under Competent  Person Scheme  Planning portal, building regulations information on heat pumps, see [this webpage](https://www.planningportal.co.uk/info/200130/common_projects/27/heat_pumps/4). |

**Other considerations**

* Space required for horizontal system or to sink a vertical system.