RISE | Retrofit information, support & expertise

Low-carbon heating in heritage homes: planning considerations

Supply chain advice pack

February 2026

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Introduction

There are approximately 6.5 million traditional pre-1919 buildings[1], 370,000 listed buildings[2], 400,000[3] entries on the National Heritage List for England (NHLE) and there is estimated to be 540,000 homes which are heritage or in a conservation area[4]. The volume of buildings and their associated carbon emissions are a critical part of the decarbonisation journey and it is therefore essential to upskill the supply chain on treating older buildings, including homes. This pack explores tips for the retrofit supply chain to make the most of low-carbon heating options in heritage settings. It primarily focuses on the Warm Homes scheme which is based in England. This will be an overview and there are other RISE advice packs on heat pumps, heritage and more for further details if desired.

Estimated

Homes which are heritage or in a conservation area[4]

540,000

Estimated

Traditional pre-1919 buildings[1]

6.5 million

1. Heritage and listed - what do we mean?
2. What we mean by low carbon heating
3. Planning permission considerations
4. General considerations

What do we mean by low carbon heating?

Here we mean the actual heating technology itself, to differentiate between fabric first terms. Low carbon heating can include heat pumps, biomass, electric storage heaters or heat networks. Please note this is a rough guide and it will vary per home – the PAS process will determine which measures are most suitable.

Low carbon			**Higher carbon**
Heat pumps	High Heat Retention Storage Heaters	Oil and LPG systems	Coal
Biomass	Hybrid systems		

[1] Historic England, Heritage Specialist Training and Qualifications, available here
[2] Historic England, What Are Listed Buildings? Available here
[3] Historic England, Understanding list entries, available here
[4] Committee on Climate Change, sixth carbon budget and Historic England data, available here

This pack will focus on what measures are considered as low carbon heating measures for the Warm Homes schemes. Warm Homes is a Government funded scheme designed to improve the energy efficiency of housing stock in England. The Warm Homes: Social Housing Fund Wave 3 (WH:SHF), guidance **here**, is designed for social housing and the Warm Homes: Local Grant (WH:LG), guidance **here**, is designed for private sector housing. Both schemes run until 30th September 2028.

What is classed as low carbon heating in the Warm Homes schemes?

Warm Homes: Social Housing Fund – Low carbon heating guidance

Whilst it is not a requirement for Wave 3 applications to include low carbon heating, Department for Energy Security and Net Zero (DESNZ) encourages applications which include low carbon heating, given its vital role on the journey to Net Zero, as was the case in Wave 2. Applicants may propose low carbon heating (LCH) installations in any eligible home, provided that the following key principles are complied with:

- Bills must not increase as a net result of all retrofit works to the home, relative to what they would have otherwise been.
- Post retrofit, homes must comply with WH:SHF performance outcomes.
- All measures need to be compatible with the latest version of SAP/RdSAP
- Heating systems which are solely fuelled by fossil fuels are not eligible
- There is adding funding uplift for installing low carbon heat

Warm Homes Social Housing Fund - Measure Hierarchy

There is a measure hierarchy (see the guidance for more) which outlines that Grant Recipients should focus on heat pumps as the priority for low carbon measures and heat networks once eligible under the scheme them move onto:

- Shared ground loops or ground source heat pumps
- Air to air heat pumps (once eligible under the scheme)
- Heat batteries (once eligible under the scheme)
- High retention electric storage heaters (in electrically heated flats and small dwellings only)
- Solid biomass to be considered when determining the next best option for deliverability, value for money, affordability, sustainability, and air quality

Main focus

Heat pumps

Source: EDF Energy

Specifically, air to water as air to air is not eligible under Warm Homes yet due to lack of MCS route.

Biomass boilers

Source: The biomass hut

Although this is expected to apply to minimal cases as the Warm Homes guidance outlines "Whilst solid biomass is an eligible measure, these boilers should only be installed in exceptional circumstances where heat pumps and other low carbon heat solutions are unsuitable for the dwelling, and only in rural areas." (Warm Home: Local Grant Policy)

Warm Homes and types of heat pump

Type of heat pumps	About
Air to water	This is the most common type in the UK. Heat is taken from the air and transferred to a 'wet central heating system'. Heating is provided through radiators or underfloor heating pipes and hot water from a cylinder. This approach replaces the boiler as the primary heating system. **Warm Homes:** eligible for Warm Homes.
Air to air	Otherwise known as 'air conditioning' (AC). Can either heat or cool. **Warm Homes:** "Air-to-air heat pumps are currently **not** eligible for the WH:SHF, until all relevant MCS tools and standards (notably MCS 026 and MCS 031) are updated to accommodate air-to-air

	products and systems" (WH:SHF) guidance. Please see the guidance here for any future changes.
Water source	Heat is taken from pipes laid in a large water body and transferred to the 'wet central heating system'. Requires a body of water nearby so is more location dependent and is therefore less common for residential projects. **Warm Homes:** This type is currently **not** an eligible Warm Homes scheme measure (October 25).
Ground source heat pump	These heat pumps take heat from the ground which typically retains heat to a greater degree than air. You would need access to reasonable outdoor space for this installation. **Warm Homes:** eligible for Warm Homes.
Integrated and compact hybrids	Integrated and compact hybrids (where the heat pump and gas boiler components are integrated in a single unit) are **not eligible** measures. This is because integrated and compact hybrids contain a new gas boiler, and new gas boilers cannot be funded by the Warm Homes: Social Housing Fund.
Retrofit and packaged hybrids	For retrofit and packaged hybrids (where the heat pump and gas boiler components are in separate units) the **eligibility depends**, see the guidance for more. E.g. Where a new gas boiler needs to be fitted, only the heat pump component can receive Warm Homes: Social Housing Fund funding.

Heritage, historic and listed

Heritage and listed buildings

A **heritage** building is one of specific character and/or historical interest, it could be through the materials, use from a historical figure or for a historical use which is no longer used. Whereas a **listed** building is a building of special architectural or historical interest which is then on a special list or register. This listed labelling "began in the 1940s, with the Town and Country Planning Acts of 1944 and 1947" (Historic England).

Listed categories

Category	Descriptions	% of listed buildings
Grade I	Exceptional interest[5]	Only around 2.5% of listed buildings are Grade I[6]

[6] Historic England available here

Grade II*	Particularly important buildings of more than special interest.[5]	Around 5.8% of listed buildings are Grade II*[6]
Grade II	Special interest. [5]	Around 91.7% of all listed buildings are in this class and it is the most likely grade of listing for a homeowner[6]

Source: Historic England and GOV.UK

Examples of listed houses:

Baltic Cottage, 60, Friday Street, Henley-on-Thames

Source: Historic England, David Lovell

- **Heritage Category:** Listed Building
- **Grade:** II
- **Date first listed:** 28-Oct-1974
- **Reasons for designation:** "*Baltic Cottage is designated at Grade II for the following principal reason: * Architectural: incorporates part of a mid-C15 hall house with a mid-C16 cross-wing, both retaining much of their original timber framing*" (Historic England).

40 and 42 Swan Street, Suffolk

Heritage Category: Listed Building
Grade: II
Date first listed: 10-Jul-1980
Information: "This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest" (Historic England).

Source: Historic England, Bob Kindred

Why it matters?

- There are estimated to be over 370,000[6] listed buildings in England and with retrofit being a critical part of the decarbonisation journey it is important to know how to treat older homes.
- Installing a measure without the appropriate consent could lead to legal action, fines and remediation work.

- The rules exist to retain the special characteristics which provide that special value, any non-compliant work risks that.

Legislation

Legislation or element	Description
The Town and Country Planning (General Permitted Development) (England) Order 2015	Outlines what amendments are permissible.
Planning (Listed Buildings and Conservation Areas) Act 1990	Outlines the requirements around listed buildings and conservation areas. Removes permitted development on listed buildings.
Article 4	Is a section of the General Permitted Development which outlines that a local authority can invoke article 4 to supersede the general permitted development rights with their own rules to protect character.

Planning considerations

Permitted development guidance

Generally speaking heat pumps are considered permitted development with the following considerations from **the planning portal**:

- *Development is permitted only if the air source heat pump installation complies with the Microgeneration Certification Scheme Planning Standards (MCS 020) or equivalent standards. Read more about the scheme. From 28 May 2026, MCS 020 will be the only permitted certification scheme.*
- *The volume of the air source heat pump's outdoor compressor unit (including housing) must not exceed 1.5 cubic metres on a house or 0.6 cubic metres for a block of flats.*
- *Only the first installation of an air source heat pump would be permitted development, on a house which is not detached or a block of flats. For detached houses, the first two air source heat pumps are considered permitted development.*
- *Development is permitted only if there is no existing wind turbine on a building or within the curtilage of that property. Additional wind turbines or air source heat pumps at the same property requires an application for planning permission.*

- *Installations on pitched roofs are not permitted development. If installed on a flat roof all parts of the air source heat pump must be at least one metre from the external edge of that roof*
- ***Permitted development rights do not apply for installations within the curtilage of a Listed Building***
- ***On land within a Conservation Area or World Heritage Site the air source heat pump must not be installed on a wall or roof which fronts a highway or be nearer to any highway which bounds the property than any part of the building***
- ***On land other than land within a Conservation Area or World Heritage Site, the air source heat pump must not be installed on any part of a wall above the level of the ground floor storey if that wall fronts a highway.***
- ***Please note: 'permitted development' rights may be removed through a planning condition, Article 4 Direction or other restriction.***

In addition, the following conditions must also be met. The air source heat pump must be:

- *Not used solely for cooling purposes*
- *Removed as soon as reasonably practicable when it is no longer needed for microgeneration*
- *Sited, so far as is practicable, to minimise its effect on the external* appearance of the building and its effect on the amenity of the area.

Exceptions
General Permitted Development rights can change if the property is located in any of the following:

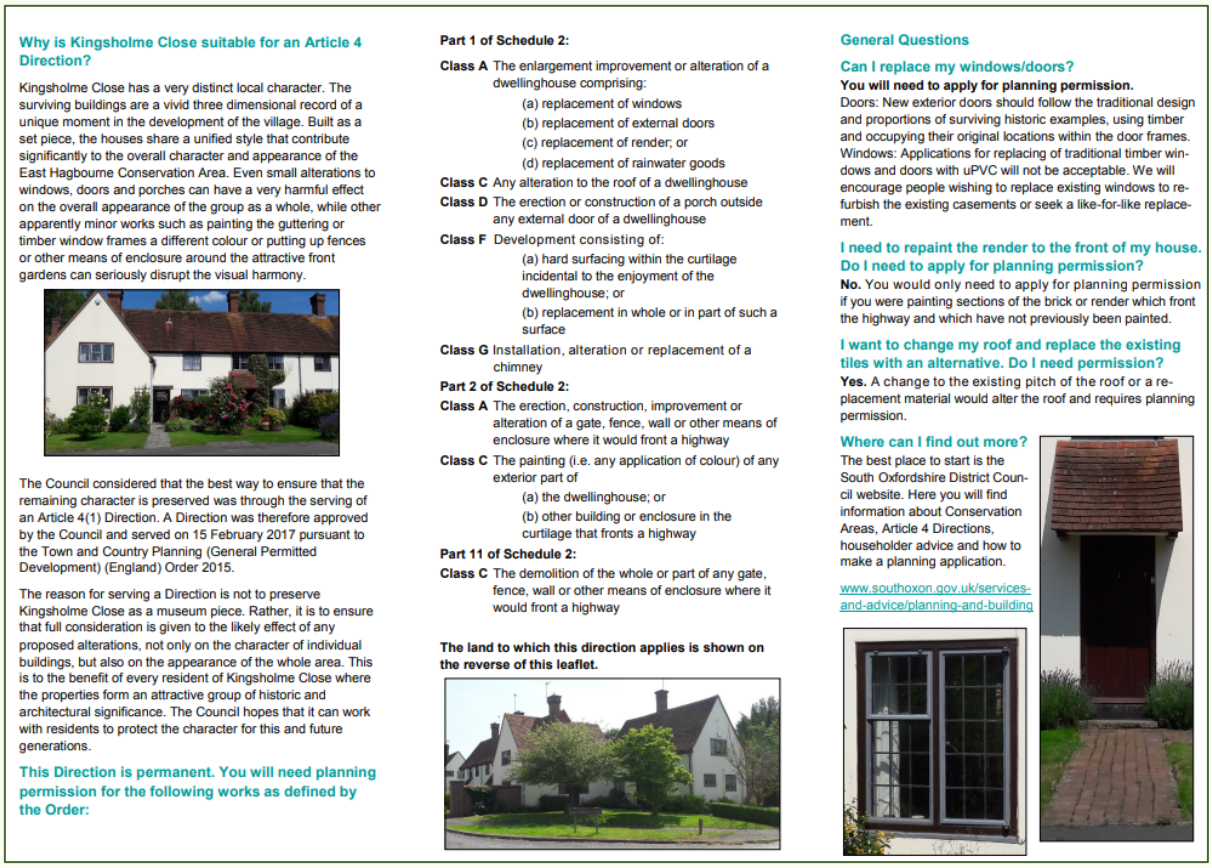
- A Conservation Area
- A National Park
- An Area of Outstanding Natural Beauty
- A World Heritage Site or
- The Norfolk or Suffolk Broads.

Article 4
Article 4 can overrule the normal permitted developments and set new conditions. Typical uses of this include restricting solar panels, conversions to house of multiple occupation (HMOs and business use types in certain areas). There will often be an accompanying map showing the boundary area.

Listed building consent
If you are looking to install a heat pump at a listed building you will need to apply for consent. This process can take a minimum of 8 weeks. It will involve outlining the impact to the building and consent is likely to have conditions that the heat pump is not visible from a main road.

Examples

South Oxfordshire council: have identified some areas of particular interest for example arts and crafts style housing where modification to the outside appearance is restricted. In such circumstances planning may be needed and you should engage with the local planning officer/teams.



Why is Kingsholme Close suitable for an Article 4 Direction?

Kingsholme Close has a very distinct local character. The surviving buildings are a vivid three dimensional record of a unique moment in the development of the village. Built as a set piece, the houses share a unified style that contribute significantly to the overall character and appearance of the East Hagbourne Conservation Area. Even small alterations to windows, doors and porches can have a very harmful effect on the overall appearance of the group as a whole, while other apparently minor works such as painting the guttering or timber window frames a different colour or putting up fences or other means of enclosure around the attractive front gardens can seriously disrupt the visual harmony.

The Council considered that the best way to ensure that the remaining character is preserved was through the serving of an Article 4(1) Direction. A Direction was therefore approved by the Council and served on 15 February 2017 pursuant to the Town and Country Planning (General Permitted Development) (England) Order 2015.

The reason for serving a Direction is not to preserve Kingsholme Close as a museum piece. Rather, it is to ensure that full consideration is given to the likely effect of any proposed alterations, not only on the character of individual buildings, but also on the appearance of the whole area. This is to the benefit of every resident of Kingsholme Close where the properties form an attractive group of historic and architectural significance. The Council hopes that it can work with residents to protect the character for this and future generations.

This Direction is permanent. You will need planning permission for the following works as defined by the Order:

Part 1 of Schedule 2:

Class A The enlargement improvement or alteration of a dwellinghouse comprising:
- (a) replacement of windows
- (b) replacement of external doors
- (c) replacement of render; or
- (d) replacement of rainwater goods

Class C Any alteration to the roof of a dwellinghouse

Class D The erection or construction of a porch outside any external door of a dwellinghouse

Class F Development consisting of:
- (a) hard surfacing within the curtilage incidental to the enjoyment of the dwellinghouse; or
- (b) replacement in whole or in part of such a surface

Class G Installation, alteration or replacement of a chimney

Part 2 of Schedule 2:

Class A The erection, construction, improvement or alteration of a gate, fence, wall or other means of enclosure where it would front a highway

Class C The painting (i.e. any application of colour) of any exterior part of
- (a) the dwellinghouse; or
- (b) other building or enclosure in the curtilage that fronts a highway

Part 11 of Schedule 2:

Class C The demolition of the whole or part of any gate, fence, wall or other means of enclosure where it would front a highway

The land to which this direction applies is shown on the reverse of this leaflet.

General Questions

Can I replace my windows/doors?

You will need to apply for planning permission.
Doors: New exterior doors should follow the traditional design and proportions of surviving historic examples, using timber and occupying their original locations within the door frames. Windows: Applications for replacing of traditional timber windows and doors with uPVC will not be acceptable. We will encourage people wishing to replace existing windows to refurbish the existing casements or seek a like-for-like replacement.

I need to repaint the render to the front of my house. Do I need to apply for planning permission?

No. You would only need to apply for planning permission if you were painting sections of the brick or render which front the highway and which have not previously been painted.

I want to change my roof and replace the existing tiles with an alternative. Do I need permission?

Yes. A change to the existing pitch of the roof or a replacement material would alter the roof and requires planning permission.

Where can I find out more?

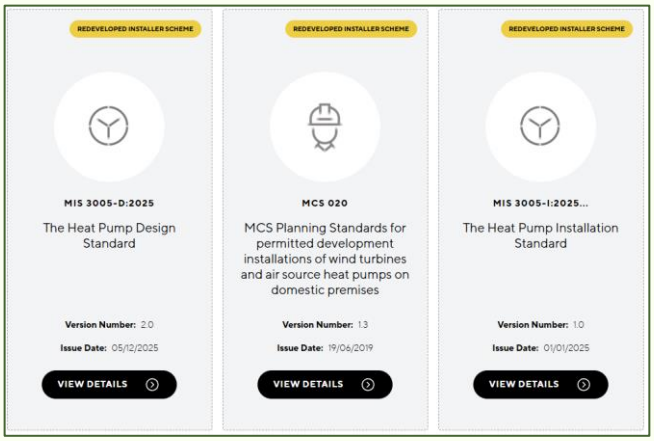
The best place to start is the South Oxfordshire District Council website. Here you will find information about Conservation Areas, Article 4 Directions, householder advice and how to make a planning application.

www.southoxon.gov.uk/services-and-advice/planning-and-building

Source: South Oxfordshire Council

MCS guidance

MCS have a suite of standards for heat pumps and in the design standard it states: "For air source heat pumps, where an installation is intended to proceed with



Source: MCS

Permitted Development Rights for air source heat pumps in England, MCS 020. Planning Standards must be complied with."

3.1.c is a calculation method around heat pump noise thresholds. Noise may require further consideration if the heritage materials are less soundproof than a modern home.

> 3.1 The MCS Planning Standard for air source heat pumps is as follows:
>
> (a) The air source heat pump product shall be certificated in accordance with MCS 007[3];
>
> (b) The air source heat pump shall be installed by an MCS Contractor in accordance with MIS 3005[4]; and
>
> (c) The installation shall be carried out in compliance with the calculation procedure contained in Table 2. MCS Contractors must complete the 'results/notes' column in Table 2 for each step of the calculation procedure to show how it has been followed.

Steps to take

Engage with a local planning officer	This is a valuable aspect to start early as a local planning officer can help guide on any local exceptions or rules. They can also guide on any application timescale if planning permission is required. For if article 4 is enacted it can remove overrule permitted development rights.
Refer to the General Permitted Development regulations	This gives general rules, but you should be aware that there are exceptions to this and engagement with a local planning officer can help determine this.
Understand MCS requirements	Permitted Development Rights outline you must install a heat pump to MCS standards so an installer should be familiar with these requirements.
Understand and plan items specific to your project	Now that you have the specific planning requirements you can plan your budget, skills needed and timescale around this.
Check you have the right skills in your team	Now that you have the specific planning requirements you can plan your budget, skills needed and timescale around this.

Considerations

There could be a few categories to consider:

- **Listed buildings:** may need listed building consent and planning permission. And consent may required that you cannot see the heat pump or any biomass boiler flues from a main road.
- **Resident reassurance:** residents may be protective over changes which may threaten the character of their home. Some extra consideration and patience on this should go far.
- **Air tightness testing:** this is a routine exercise to comply with PAS 2035, however older homes are likely to be more draughty
- **Blending in:** The examples below shows examples such as a heat pump being put on a similar coloured wall to blend in to a 19th century property.
- **Snow and flooding height clearance for heat pumps:**
- **Cylinder requirements for heat pumps:** if the previous heating system already had a hot water cylinder this may be a like for like replacement, but if it didn't it is worth considering any heritage protection for any internal changes too.

Source: PTL Group

Examples

Source: Saveonenergy

Fixings:

Fixing a bracket and pump onto the side of a listed or heritage building is unlikely to be allowed for 2 reasons:

1) Aesthetically there could be less invasive options
2) It could be a traditional material that can be hard to replace

Camouflage:

Some companies offer covers designed to still allow performance alongside a closer match on physical appearance

Source: Airsourcecovers

Top source: Historic England

Bottom source: Historic Environment Scotland

Placement:

Top image: In this example the heat pump is put on a similar colour wall to blend in – it also has snow and flood clearance levels.

Bottom image: this heat pump has been placed on a side wall, likely not visible from the main road to appear more hidden.

Training and skills

- **MCS** certification
- Level 3 NVQ Diploma in Heritage Skills (Construction)
- Construction Skills Certification Scheme (CSCS) cards
- Level 3 Award in **Understanding Repair and Maintenance of Traditional pre-1919 Buildings**
- Level 3 Award in Energy Efficiency Measures for Older and Traditional Buildings – offered by **NOCN** and **ABBE**
- Level 4 NVQ Diploma in **Construction Site Supervision (Construction) Traditional and Heritage Building**
- Level 5 Apprenticeship **Heritage Construction Specialist**
- Level 6 NVQ Diploma in **Construction Site Supervision (Construction) Traditional and Heritage Building**

Summary

- **Engage:** with the local planning authority and officer early
- **Understand:** permitted development rights and any exceptions
- **MCS:** follow the MCS standards and guidance.
- **Appropriate sizing:** as with all heat pumps it will need to be sized appropriately, however heritage properties are likely to be draughtier necessitating larger radiators which could impact visual appearances.
- **Plan:** costs and timing association with gaining any planning permission.
- **Assess:** skills in your business to deliver the work required.
- **Resident engagement:** plan time for responding to any queries.

Resources

Podcast: All RISE podcasts are available **here**.

Podcast: Heat Pump Lessons from Retrofit with Kensa **here**.

Masterclass: All RISE masterclasses are available **here**.

Masterclass "Heritage Buildings Planning and Retrofit" available **here**.

Advice pack: All RISE advice packs available **here**.

Advice pack: "Heritage Planning Toolkit Introduction" available **here**).

Heat pump advice packs

Available on the RISE website

This pack aims to share insights, good practices, and lessons learned from the sector. It is intended for informational purposes only and does not constitute as recommendations or endorsements of specific suppliers, products, or services or as legal advice. Please always check the latest regulations.

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