

Listed Building Consent Application

Heritage Asset Statement

Grove House, Malt Kiln Brow, Chipping, PR3 2GP

Client: Sara and Rob Pullen

LPA: Ribble Valley Borough Council



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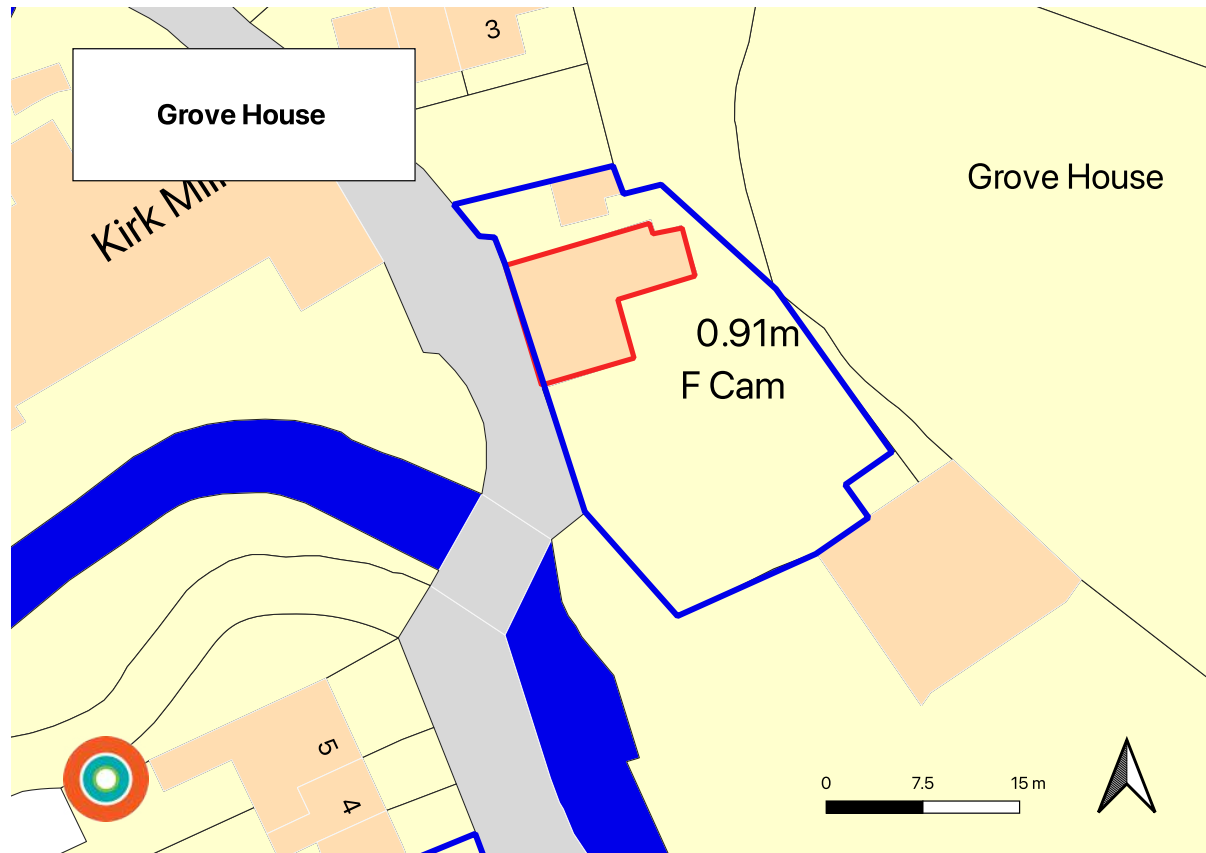
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1. Introduction

Prospus Group has been instructed by Chipping Community Energy (in agreement with the homeowner) project to prepare a listed building application for Grove House, Malt Kiln Brow, Chipping, PR3 2GP(the Property).

Within this document Prospus Consulting will demonstrate a clear understanding of the site's constraints and opportunities and show a sensitive proposal that meets the particularities of the site and the requirements of the client.

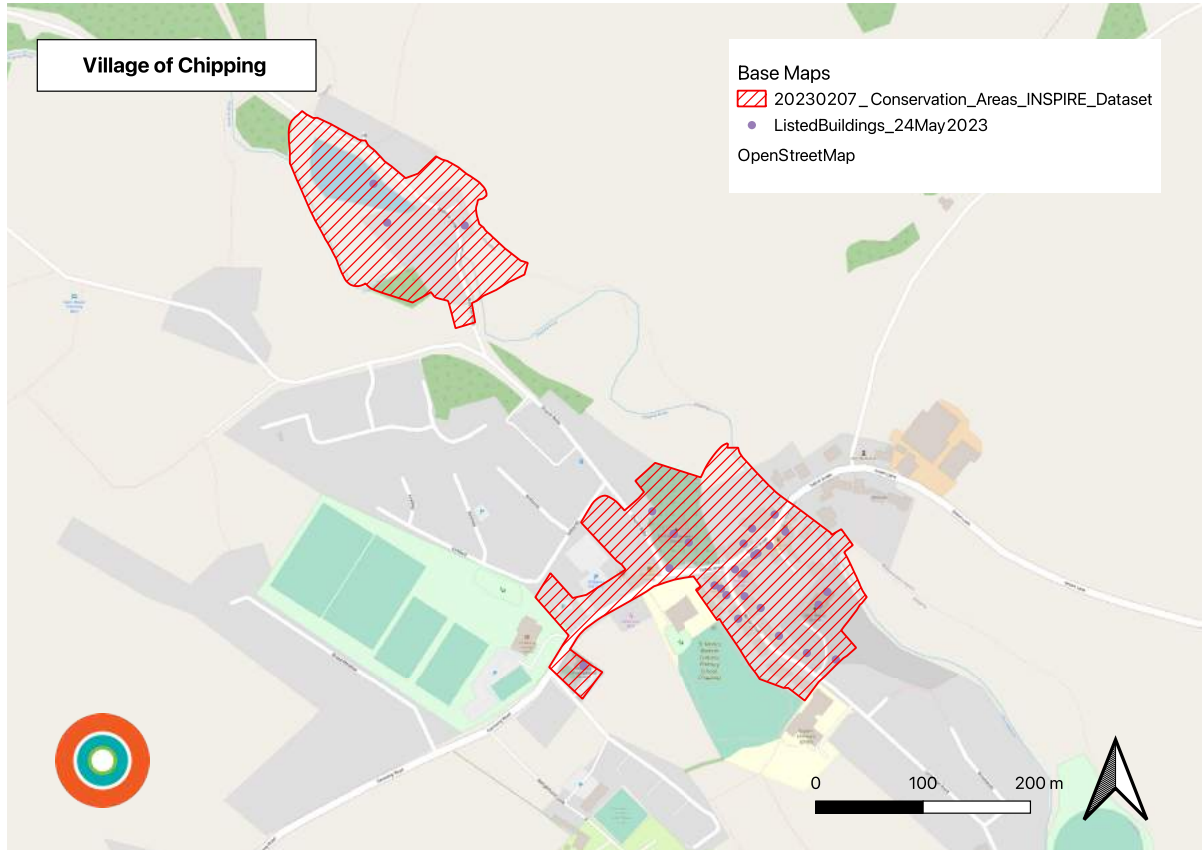


Background

This application is part of the Chipping Community Energy Project which is progressing an innovative solution of capturing ground source heat in localised or shared cluster energy networks operating at ground ambient temperature. The ambient loop will be connected to ground source heat pumps in individual dwellings, and where appropriate, supported by solar generation. These small ambient loops offer a more cost-effective low carbon energy than other heat network proposals.

2. Designations

The site lies on the northern fringe of Chipping Village which is in the Ribble Valley Borough Council. It is a Grade II (GV) listed building which lies within a cluster of listed buildings all associated with the Kirk Mill and sits within the Kirk Mill Conservation Area. The conservation area was formed to allow some protection to the industrial hamlet encompassing Kirk Mill & C19th Barn, The Grove, Grove House and Grove Square.



3. Description of the Site

The front and side of the dwelling (visible from the Malt Kiln Lane) is constructed from local squared water-shot sandstone, and the rear is constructed using sandstone which has been “slobbered” – a technique, which is common in this area, and for this era of building. The roof is constructed from Welsh slate. The main part of the facade has an asymmetrical composition over three stories, with large quoins up to the first floor. The two front windows are Georgian 10-over-10 unhorned sliding sash windows set within plain stone surrounds. The front door has six raised and fielded panels and a plain stone surround with semi-circular head and a fanlight with radiating glazing bars. To the side of the property (Malt Kiln Lane) there are three windows, the ground floor a tall Tudorarched frame, to the first floor a horned sash, and to the second floor a casement window, all encased in plain stone surrounds.

The listing entry for the property states:

Grove House of late-C18 date and extended in the mid- to late C19, is listed at Grade II for the following principal reasons:

Architectural interest:

A largely intact late-C18 dwelling which falls within the 1700-1850 time-frame when there is a presumption in favour of listing.

The articulation of the principal elevation and the good use of materials, combine to produce an attractive composition;

It retains a largely intact plan-form and a suite of original late-C18 features including a staircase, doors and fitted cupboards, unified by the incorporation of a reeded decoration;

It illustrates the conventions of a higher status dwelling modified by a vernacular approach within a strong local context.

Historic interest:

Constructed by the owners of one of the earliest cotton spinning mills in England, which included the pioneering designer of textile machinery Peter Atherton.

Group value:

It benefits from a spatial, historic and functional group value with the Grade II-listed Kirk Mill and Kirk House.

4. Documented history of the site

Grove House is situated adjacent to Kirk Mill (Grade II) on the northern fringe of Chipping. It is thought to date from the late C18, when it was built by the mill owners of the second cotton-spinning company, established after the first went bankrupt in 1787. At this time the owners were Peter Atherton, his son in law Ellis Houlgrave (cotton manufacturer), William Harrison and John Rose (spinner). It is possible that the new dwelling was partially fashioned from an earlier building on the site, and it has been suggested that it was constructed as a house for one of the mill owners. The building is thought to largely retain its original plan form. In 1793 a new mill owner's residence, Kirk House (Grade II) was constructed, at which time Grove House was thought to become the mill manager's residence.

Following the decline of the cotton spinning industry, the mill and its associated buildings were sold in 1866 to H J Berry who used them as a chair-making factory until 2010; Grove House was occupied by members of the Berry Family until 2017. Historic mapping indicates that a half-width, single-storey extension and slightly later lean-to were added to the east gable between 1844 and 1892. At an unknown date, the east gable of the building containing the chimney flues and stacks was modified and partially rebuilt, indicated by unbonded quoins to the north-east corner and a projecting moulded eaves cornice to the south-east corner. The fenestration to the north elevation has also been modified.

The below OS map shows Grove House in 1844 before the kitchen extension was added.



The map below shows Grove House in 1893 with the additional Kitchen and WC Extension



5. Planning History

Ref	Description	Decision
3/2022/0402	Discharge of Condition 3 (Materials) of planning permission 3/2021/0813.	Approved
3/2021/1047	Fell Leyland cypress	Approved
3/2021/0813	The removal of existing garden shed and greenhouse and the construction of a combined shed/greenhouse in the same location.	Approved
3/2020/0470	Fell large conifer T1 and assess felling of small conifer T2.	Approved
3/2020/0141	Repair and renew, like for like, damaged cast iron guttering/downpipes at front of kitchen and main dwelling. Replacement of black PVC downpipe adjacent to front door with cast iron equivalent. Rationalise arrangement of pipes and hopper above/adjacent to front door to reduce visual impact if possible. Removal of cement-based repair mortars with hand tools and repoint worn lime mortar joints to match existing lime mortar using traditional methods. Installation of traditional style glass roofed veranda to side of main dwelling. Installation of a glass roofed link between kitchen and wash house to allow secure dry route between buildings.	Approved
3/2019/0551	Demolition of existing lean-to garage and potting shed and replacement with double garage with workshop and storage above. Construction of single storey extension to side and single storey glazed link between the existing kitchen and wash house. Re-point with lime mortar and repair and replace cast-iron guttering (like for like).	Refused
3/2019/0401	Fell Leyland cypress	Approved
3/2014/0998	Cut back large branches from Hawthorn Tree. Trim back Elm Tree. Remove 2 dead Trees	Approved

6. Description of Proposal

The following is offered as a formal description of the proposal:

Drilling of boreholes within the domestic curtilage and installation of heat pump unit and associated pipework.

This will involve the drilling of two boreholes to the side of the property where the current owners park their cars. The pipework from the boreholes will run under the existing tarmac and be connected to the heat pump which will be housed in the external wash-house. A small entry hole (~120mm diameter) below ground level will be required in the historic fabric to allow the pipes to enter the building. The heating pipes from the heat pump will then be connected to the house's

heating system through the already approved glass corridor (consent reference 3/2020/0141). Again, small holes will be required in the external wall of the dwelling to provide an access point for the pipework. The pipework will then run through the roof cavity and tee into the existing central heating network behind a modern plasterboard riser.

The proposal will involve three penetrations of the historic fabric which is marked as point A, B and C in the photos in Section 12 below.

7. Methods Statement

Installation of the Bore Holes

The Boreholes will be installed first by a hand dig of the top 1m of material in order to ensure there are no buried services that could be damaged. The full method is set out in the appended Working Method Statement provided by the Contractor. The pipe runs between the boreholes and heat pump will be buried ~500mm below the surface in hand dug trenches. See Appendix One.

Policy Assessment

8. National Planning Policy Framework

Section 16 of the 2021 NPPF refers to proposals affecting heritage assets and seeks that an assessment of the impact of a proposal be provided with any application. The assessment should be sufficient to understand the impact and no more. Further assessment under the NPPF is contained in the Heritage Asset Statement section below. Paragraph 195 states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance. Any harm to, or loss of, the significance of a designated heritage asset from its alteration or destruction, or from development within its setting), should require clear and convincing justification.

In this case the impact of the proposal is considered to be less than substantial harm. In such cases, the proposal should be weighed against any public benefit that might accrue from the benefits of the proposal.

The public benefits are the likely enhanced conservation of the host building through reduced energy bills and increased energy security. This will enhance the conservation status by ensuring that the building is heated economically making living in this listed building more desirable. This proposal will also enable the community to be more sustainable by reducing the carbon impact of heating in the village and also improving the local air quality all of which are key global issues.

9. Local Development Framework

Ribble Valley Borough Council Core Strategy 2008 – 2028 A Local Plan for Ribble Valley Adoption Version

Policy DME4 – States that it favours the protection and enhancement of heritage assets and their setting and that proposals should not harm the conservation areas.

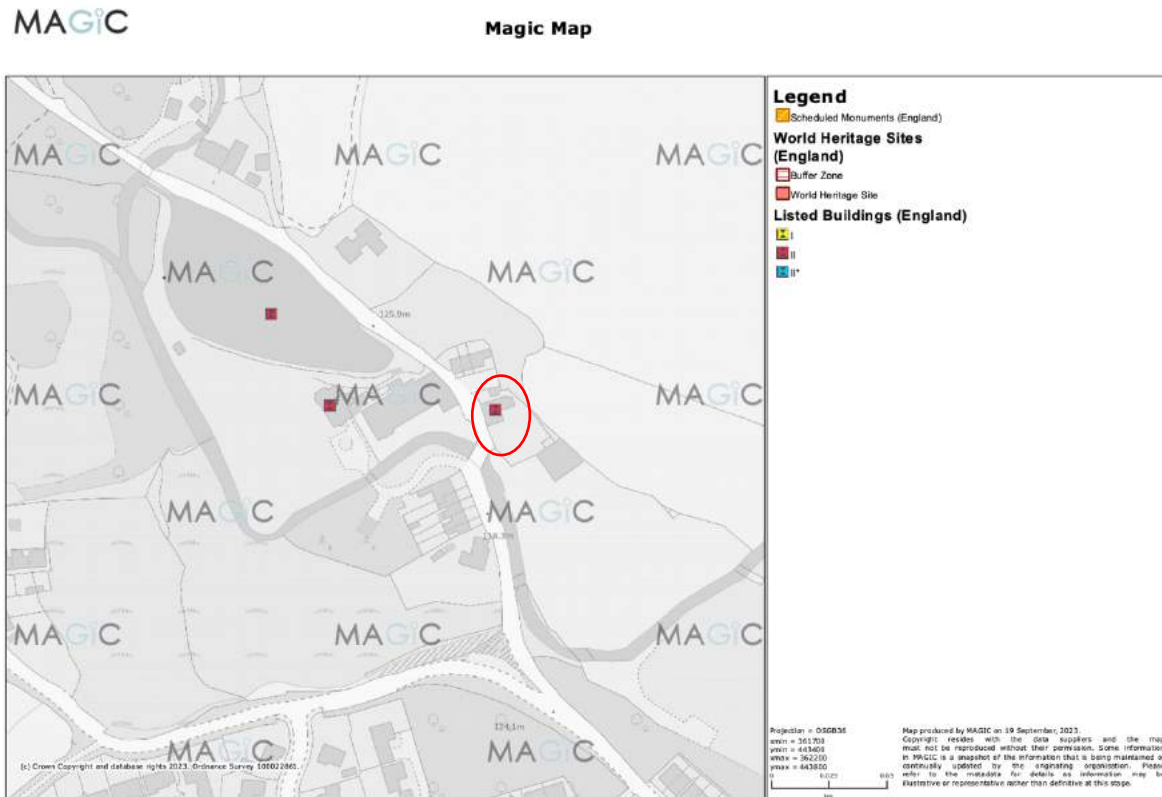
To ensure that the heritage asset is protected whilst enhancing its conservation status the heat pump will be located at the rear of the property meaning there will be no visual change to the roadside views. This will also ensure that the wider conservation area's key attributes won't be affected. By drilling the boreholes and installing the heat pump the heritage asset will remain up to date in heating technology ensuring its future and reducing its environmental impact

Policy DME5 – States that the borough council will support the development of renewable energy providing it can be shown that such development would not cause unacceptable harm to the local environment or local amenity.

To ensure that this renewable energy product doesn't cause unacceptable harm the heat pump will be located at the rear of the property meaning there will be no visual change to the roadside views. This proposal will improve the local environment by reducing the carbon impact of heating the property and improving the air quality in the village.

Heritage Asset Statement

10. Heritage Assets



Magic map extract – the proposal site is located in the red circle

The heritage assets local to the proposal site include:

Scheduled Ancient Monuments

None

Listed Buildings

1465964 Grove House GV II. (Full listing details are included in the appendices.)

1147319 KIRK HOUSE GVII

1401593 Kirk Mill and its associated mill ponds retaining walls, outflow and stone-built leat GV II

Conservation Areas

Kirk Mill Conservation Area consists of the following features

Rarity: it is a rare surviving example in the north-west of an Arkwright-type cotton spinning mill that exhibits two phases of C18 development

Intactness: it retains its contemporary water management system comprising the mill pond's retaining walls, outflow and leat *

Survival of original and early features: it retains many windows and doors, the wheelpit and the waterwheel and its driving gears, together with evidence of how associated drive shafts and belts powered the early machinery

Historical: Kirk Mill was built in 1785. it is one of the oldest surviving cotton spinning mills in the north-west and thus represents one of the earliest examples of a textile factory that soon became a crucial component of the Industrial Revolution.

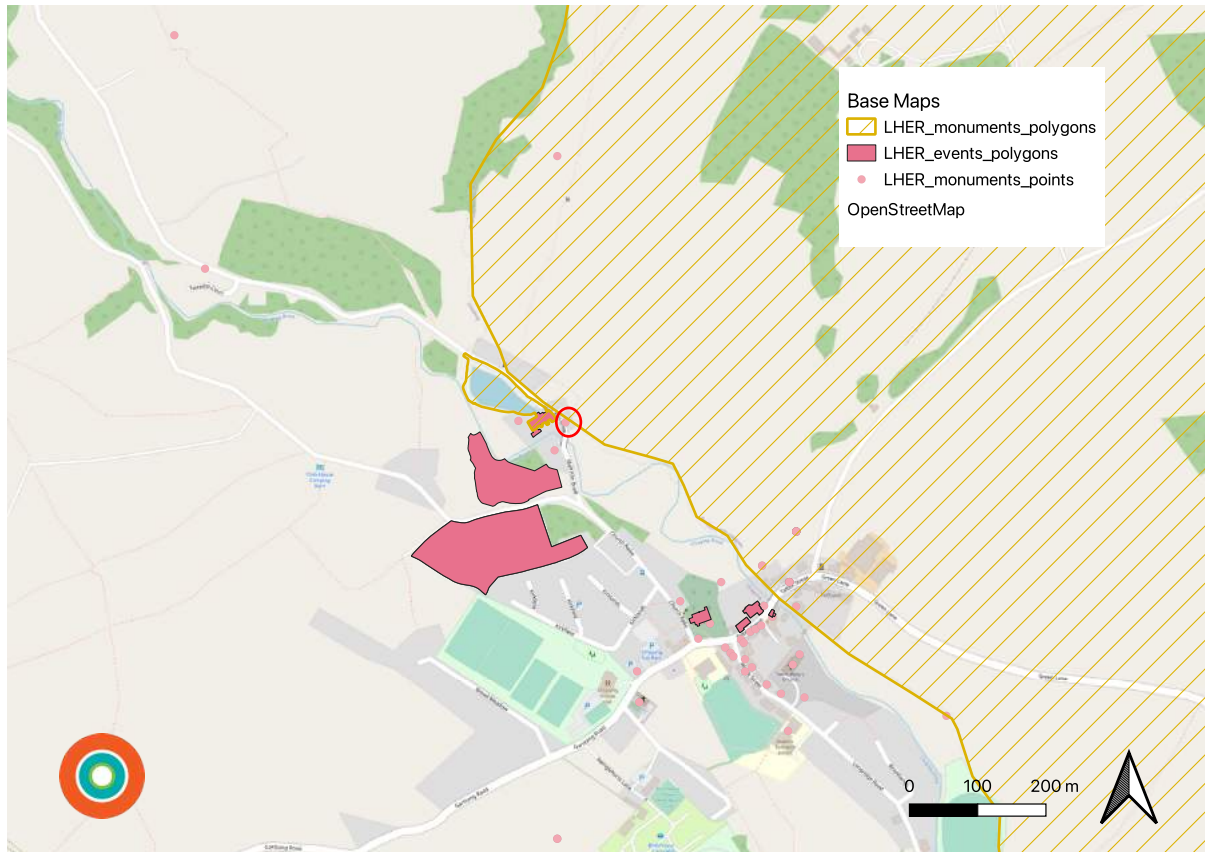
Layout: the mill's development over its two hundred year history remains clearly legible



World Heritage Sites

None

Historic Environment Record



No Finds for Associated Events / Activities are recorded at the site. To the north of the site is the Leagram Deer Park the proposal will have no impact on the Deer Park and all other information within 100m is already mentioned in the report through the listed building section and conservation areas.

11. Heritage Appraisal

The following appraisal adheres to guidance published by English Heritage (2008) and relates specifically to the requirement contained in clause 128 of the NPPF as follows:

“In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic

environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary.”

The appraisal begins by identifying the potential range of heritage values attributed to the building, before evaluating these values and expressing them concisely within a ‘statement of significance’. This statement is then used as a basis for developing and critically assessing the design of new proposals, making sure to prioritise conservation of significance where possible and appropriate.

Heritage Values

The following appraisal of the heritage values devotes particular interest to how these values might be affected by emerging proposals for development. The values are distilled under the following headings: evidential value; historic value; communal value; aesthetic value.

Evidential Value

English Heritage (2008) suggests that ‘Evidential value derives from the potential of a place to yield evidence about past human activity’.

Grove House has great historic significance due to being the home of the owners and then the manager of Kirk Mill since its completion in 1790. Since the Mill went into administration the house has remained a key building in the Kirk Mill conservation area being a fine example of a Georgian house. This house has remained relatively untouched with all of the windows and doors in their original location and finish. The major changes came with the extension of the kitchen in 1844 and then the further extension to the kitchen and indoor WC.

Historical Value

English Heritage (2008) suggests that - “Historical value derives from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be *illustrative or associative*”.

Grove House is a reminder in the local area of the prosperity Kirk Mill brought to the area bringing investment and jobs; and as a reminder of the significance of the Kirk Mill which was the source of that wealth.

Communal Value

English Heritage (2008) suggests that: “Communal value derives from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory”.

Many local people worked at Kirk Mill (Berry's chair-works) until it closed in 2010 - Kirk Mill and its surrounding buildings, including. Grove House is a reminder to those local workers of the experience they shared.

Aesthetic Value

English Heritage (2008) suggests that: “Aesthetic value derives from the ways in which people draw sensory and intellectual stimulation from a place”.

The aesthetic value of Grove House lies in its close proximity to the other associated listed structures and general built form locally which together provide a relatively unaltered vignette of late C18 early C19 industrial and domestic development.

STATEMENT OF SIGNIFICANCE

Having assessed the heritage values associated with the site, it is possible to take a more informed approach to the assessment of site significance, giving specific consideration of plans to implement change. In this context a statement of significance is given below.

The prime significances of the site, derived from an appreciation of its related heritage values, may be summarised as follows:

Grove House is a key feature of the Kirk Mill Conservation area and is a fine example of a Georgian house. It was constructed by the owners of one of the earliest cotton spinning mills in England, which included the pioneering designer of textile machinery Peter Atherton. The group setting of this building and its association to Kirk Mill are key to its heritage status.

Analysis of the Proposals

General Principles

General guidance on assessing proposed changes to heritage assets is given in chapter 16 of the National Planning Policy Framework (2021). This establishes that conserving significance should be a guiding principle when developing proposals for any new scheme. In order to satisfactorily do this, it is first necessary to conduct an appraisal of heritage values and identify the significance(s) of heritage assets before commencing with design work. This heritage statement fulfils this need, and the findings have informed the development of the new scheme. There follows an objective review of the finalised scheme to verify to what extent conservation of significance has either been secured or compromised. The review is guided by local and national policy.

Summary of Proposals

To drill boreholes within the curtilage of the building and install a heat pump in the existing wash-house which will connect to the existing heating network via the already approved glass corridor replacing the existing oil-fired boiler.

12. Brief photographic survey of elements to be altered

There will be little impact from the public realm due to the new pipe being housed in the glass walkway part of the planning application 3/2020/0141. This has allowed space for these pipes to be included in the roof space hiding them from view.



The parking space where the boreholes will be located



The inside of the wash-house where the heat pump will be located.

The heat pump will be installed inside the wash-house. The pipes from the boreholes in the driveway will come in through the wall and connect to the heat pump unit. The outflow pipes will then travel along the internal wall of the washroom before exiting the building and lining up within the new glass walkway.



The passage way between the wash-house and the dwelling.

The pipes will then emerge through the wall of the house connecting up inside as shown below.

Within the property, the pipes will run within the ceiling void to a modern riser void behind the modern plasterboard above the kitchen cabinets.



Kitchen ceiling



Kitchen ceiling

National Policy Discussion

To establish a clearer, objective assessment of the proposals in the context of the NPPF, the following commentary considers how the proposed scheme aligns itself to the three criteria set out in NPPF 197.

1. The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation

The proposal will ensure the occupation of the heritage asset is more viable in the future making it a more desirable place to live. This will ensure its upkeep and protection in the future whilst ensuring that the historic value of the building remains.

2. The positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality;

This proposal is making the community a more sustainable place to live, something that is becoming more relevant as a result of the climate emergency. This proposal will also reduce the heating costs for the residents and protect them from any future energy crises.

3. The desirability of new development making a positive contribution to local character and distinctiveness;

This proposal is neutral in its impact on the significance of the heritage assets and on the significance of the setting of the heritage assets due to the proposed alterations being negligible in scale generally unobtrusive.

13. Summary

To ensure this building's long term sustainability the installation of the heat pump will allow for lower cost heating of the property and reduce the environmental effect of heating the property.

There will be a neutral impact to the conservation area due to the boreholes and pipework being underground. The heat pump will be located in an existing out building where the pipe work will connect into the house through the already approved glass walk way (3/2020/0141). This will ensure that there is neutral impact to the listed building and conservation area.

Appendix One – Methods Statement

Borehole drilling process overview Chipping

Summary

The planning application for the low carbon heat network in Chipping relies on the installation of boreholes up to 200m deep adjacent to dwellings adopting a ground source heat-based heating system.

Once drilled the borehole, which comprises a drilled shaft of around 130mm (~5 inch) in diameter will have a continuous flow and return pipe installed throughout its length and then the gap between the pipe and the surrounding rock will be filled with grout to maintain the integrity of the surrounding rock and its strata, as required.

The flow and return pipe will be filled with water, pressure tested and sealed, or connected to the ground source heat pump in the adjacent property, through pipe work installed in trenches. The heat pump will then extract ambient heat from the rock by circulating chilled water through the borehole, and working like a fridge in reverse, will convert this ambient heat to usable heat for the property's heating and hot water.

The total length of the borehole will be carefully assessed to ensure that the surrounding rock can sustainably deliver heat to the property in the long-term. This heat will be recharged from surface summer heat & geothermal heat from the surrounding rock, to ensure that each year the extracted heat is naturally replenished.

The borehole size will depend on the amount of heat required by the house, calculated through detailed energy modelling for the property, using a computer simulation (based on the property size, rooms, usage, and fabric) and local weather data. A modern, well insulated 4 bed property may require a single borehole 50m deep, whereas an older large 5 bed stone property may require 2 boreholes of 200m in depth.

Drilling the borehole

The drilling of each borehole will be carefully managed with a method statement and risk assessment and in compliance with the MCS Specification for Ground Source Closed-loop Drilling.

As part of the risk assessment and method statement, the drilling contractor will undertake a risk assessment to evaluate the risks associated with the borehole and mitigation measures required. This process will include (but will not be limited to): a desk top search for buried services and utilities; an assessment of Coal Authority records for current or historical mine workings; and an evaluation the risk of artesian ground water. The risk assessment and method statement will also include suitable mitigation plans for the identified risks, including hand digging for approximately the first metre for each borehole; safety fencing to keep members of the public at a safe distance from the works; and arrangements to drain any water emerging from the borehole as it is being drilled to suitable disbursement areas or drains.

Whilst the drilling rig technology for boreholes varies, they typically have a drilling rig and a supporting compressor unit, which are connected by hydraulic pipe. The sediment arising from the drilling process is removed by continuous process, typically involving the pumping water from a hose pipe through the borehole to collect the sediment dislodged by the drill head. This sediment is then filtered out of the water extracted from the borehole and piped to a skip, for removal from site. The filtered water is then discharged to a suitable disbursement area or drains. The number of skips will vary depending on the total depth on the borehole but would typically be between 1&2 skips per borehole. The use of the water to remove the spoil also prevents any dust from being generated during the process.

The drilling process does induce some local vibration, but the drilling teams will comply with the MCS Specification for Ground Source Closed-loop Drilling, which also requires adherence to the Ground Source Heat Pump Association Vertical Bore Hole Standard and the Good practice guide for ground source heating and cooling.

The following photo was taken when the trial borehole was being installed at the Community Hall in Chipping and is considered reasonably reflective of what will be required the next phase of the works in Chipping. The photo shows the drilling rig, connected by orange pipe to the compressor unit and the water circulation and spoil removal pipe (black), which is connected to a filtration unit and a skip. Both the compressor unit and the skip can be located remotely from the drilling rig.

The drilling rig is highly manoeuvrable and comes with its own ground mats where required, as illustrated in the photograph.



Once the borehole has been drilled the flow and return pipes are installed along its entire length (as shown in the following photograph) and then the gap between the pipe and the borehole is grouted (as required). Once the work is completed and the borehole pipes are connected by underground trench to the property there remains no visible presence on the surface once the works have been completed and the surface treatment has been re-instated, or the grass / vegetation has grown back.



Drilling safety and environmental protection

The drilling of each borehole will be supported by a method statement and risk assessment. This includes appropriate safety precautions for each site, including:

- Full risk assessment completed.
- Hand digging down to 1 m in depth to locate any unrecorded services or utilities prior to drilling.
- The drilling site will be securely fenced off.

The works will be undertaken in accordance with:

- Health and Safety at Work Act 1974.
- Management of Health and Safety at Work Regulations 1992.
- Guidance on Managing the Risks of Hazardous Gases when Drilling or Piling Near Coal
- Closed-loop Vertical Borehole Design, Installation & Materials Standards

The Method statement will detail the working methods to mitigate environmental impacts.

Borehole installation programme

It typically takes 2 – 3 days to drill the borehole and install the associated pipework, grout and then tidy and reinstate the site.

Subject to the overall programme the pipes can then be sealed and covered (to be connected to the property heat pump at a later date) or connected to the pipes laid in the trenches to the individual properties.

Third party impacts

The process does create some noise, but this noise will be managed by the delivery contractors and will be within the noise levels for temporary construction works as defined by BS 5228.

The drilling rig and associated equipment will be located on privately owned land, with agreement from the landowner, or in areas agreed in advance with the Highway Authority to manage impacts on road users.

The location and movement of skips or other equipment using the highway will be subject to the usual highway licensing arrangements.