

DESIGN & ACCESS STATEMENT

Manor Farm Cottage, Newholm, Whitby, YO21 3QY

This statement relates to the above property which is part of the grade 2 listed asset Manor House Farm and is in the same ownership. It is for the installation of an air source heat pump in an area of the building forming part of the grade 2 listed building Manor House Farm.

This installation is part of a scheme being funded by North Yorkshire County Council to provide air source heat pumps to households where home owners are living in fuel poor households. (ie off the gas network). The scheme is being delivered by Communitas Energy (CE) which is a regulated not for profit Community Interest Company (CIC) with the aim of making homes warmer, greener and more energy efficient.

The proposal is for the air source heat pump unit to be sited externally in a specific location on the site to accommodate the issues associated with the installation of these types of units which is primarily noise & appearance. The unit will be within a private farmyard area not accessible to the general public.

The location has been assessed by a suitably qualified person taking into account the generated noise & appearance to neighbouring properties.

In this instance the unit is being placed at ground level adjacent to the rear door of the property which will have the minimum approved impact on the neighbour both visually & acoustically. By placing of a 1.8-meter-high timber fence panel located on the boundaries of the properties to shield the unit from view and therefore provide minimum loss of visual amenity & siting the unit 8 meters from the nearest neighbouring window reducing any sound impact to the neighbour.

Due to its location, there will be no impact to access on the needs of disabled people.

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HERITAGE ASSET STATEMENT

Manor Farm Cottage, Newholm, Whitby, YO21 3QY

Significance of Asset

Manor Farm Cottage forms part of the grade 2 listed building Manor Farm House at the above address.

It is a late C182 story house built with ashlar stone, stone copings & curved kneelers, end brick chimneys, with 3 windows of late C19 sashes, projecting cils.

There is a central C20 boarded door under stone pedimented hood on brackets.

There is a new 1 storey right extension.

Proposed works

Installation of an external air source heat pump to the ground floor rear of the building within a private farm yard not accessible to the general public.

Impact on the heritage asset

Minimal impact due to its location on the ground floor at the rear of the property with the advantage of being concealed from view to any members of the public by being located and therefore hidden within an enclosure of 2 existing walls within a private farm yard area as above .

How the impact has been minimised

1. By its private location to the rear of the asset
2. Reduced impact on amenity of neighbour in a property also owned by the applicant, by the provision of a 1.8-meter-high timber fence
3. It is not attached to the building other than by cabling & pipework concealed in trunking.
4. It can be removed without any damage to the fabric of the building at any time.

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MANOR FARM COTTAGE
REAR ELEVATION

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Approx. location of
proposed air source
heat pump.
(rise to scale)

MANOR FARM COTTAGE
REAR ELEVATION SHOWING
LOCATION OF PROPOSED AIR
SOURCE HEAT PUMP.

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MANOR FARM COTTAGE
FRONT ELEVATION OF MANOR
FARMHOUSE

MANOR FARMHOUSE

Overview

Heritage Category:
Listed Building

Grade:
II

List Entry Number:
1148879

Date first listed:
10-Dec-1985

Statutory Address:
MANOR FARMHOUSE, NEWHOLM

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Map



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(<https://historicensland.org.uk/terms/website-terms-conditions/>).

The above map is for quick reference purposes only and may not be to scale. For a copy of the full scale map, please see the attached PDF - [1148879.pdf](#)

(https://mapservices.HistoricEngland.org.uk/printwebservicehle/StatutoryPrint.svc/140716/HLE_A4L_Grade|HLE_A3

The PDF will be generated from our live systems and may take a few minutes to download depending on how busy our servers are. We apologise for this delay.

This copy shows the entry on 05-Sep-2021 at 23:51:25.

Location

Statutory Address:

MANOR FARMHOUSE, NEWHOLM

The building or site itself may lie within the boundary of more than one authority.

County:

North Yorkshire

District:

Scarborough (District Authority)

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Parish:
Newholm-cum-Dunsley

National Park:
NORTH YORK MOORS

National Grid Reference:
NZ 86659 10435

Details

NZ 81 SE NEWHOLM-CUM-DUNSLEY NEWHOLM (west side) 5/237 - Manor Farmhouse - II

House, late C18. Ashlar. Roof renewed in curly clay tiles, stone copings and curved kneelers. End brick chimneys. 2 storeys, 3 windows, late C19 sashes with projecting cills. Central C20 boarded door under stone pedimented-hood on brackets. 1-storey right extension.

Listing NGR: NZ8665910435

Legacy

The contents of this record have been generated from a legacy data system.

Legacy System number:
327313

Legacy System:
LBS

Legal

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.

End of official listing

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SOUND CALCULATION FOR THE AIR SOURCE HEAT PUMP INSTALLATION
AT MANOR FARM COTTAGE, NEWHOLM, YO21 3QY.

TABLE 2: USE ONE TABLE FOR EACH ASSESSMENT POSITION TESTED

Date calculation undertaken: 7/9/2021

Note: for the purposes of this calculation procedure:

- **Assessment position** means a position one metre external to the centre point of any door or window to a habitable room of a neighbouring property as measured perpendicular to the plane of the door or window
- **Habitable room** means a room other than a bathroom, shower room, water closet or kitchen.
- **Neighbouring property.** Means any building used for any of the purposes of Class C of the Town and Country Planning (Use Classes) Order 1987 (as amended) (includes dwellings, houses, hotels, residential institutions and houses in multiple occupation) In instances where the air source heat pump would be installed on block of flats, neighbouring property includes flats within the same block of flats (excluding the flat of the "owner(s)" of the air source heat pump

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Description of assessment position tested

(This must be detailed enough to allow for identification, including property address and exact location of window / door opening and floor level. It is recommended that a map, sketch, photo or other record be attached to these workings.)

The assessment position is 1m in front of the centre of the living room window of Manor House Farm. This is on the ground floor at the rear of the property. The assessment position is 8m from the heat pump. Direct line of sight will be hidden by a fence panel.

Example: The assessment position is the first floor bedroom window of 1 Oak Street and it is 4 metres away from the location of the proposed air source heat pump.

Issue 1.3

MCS

Date 19/06/2019

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SOUND CALCULATION FOR
AIR SOURCE HEAT PUMP AT
MANOR FARM COTTAGE
NEWHOLM YO21 3QY

Step	Instructions	MCS contractor results / notes
1	<p>From manufacturer's data, obtain the A-weighted sound power level of the heat pump. See 'Note 1: Sound power level'. The highest sound power level specified should be used (the power in "low noise mode" should not be used).</p> <p><i>ERLA08EVA</i></p> <p><i>Example: Manufacturer's data states the sound power level of the heat pump is 55 dB(A)</i></p>	<p>STEP 1 RESULT =</p> <p><i>62</i></p>
2	<p>Use 'Note 2: Sound pressure level' and 'Note 3: Determination of directivity' below to establish the directivity 'Q' of the heat pump noise.</p> <p><i>The heat pump will be mounted on feet. It will be 0.2m above the ground and 1.1m from the rear wall of the house</i></p> <p><i>Example: The heat pump is to be installed on the ground and against a single wall hence the directivity (Q) of the heat pump noise is Q4</i></p>	<p>STEP 2 RESULT =</p> <p><i>Q4</i></p>
3	<p>Measure the distance from the heat pump to the assessment position in metres.</p> <p><i>Example: Distance between heat pump and assessment position is 4 metres</i></p>	<p>STEP 3 RESULT =</p> <p><i>8m</i></p>
4	<p>Use table in 'Note 4: dB distance reduction' below to obtain a dB reduction.</p> <p><i>8 metres @ Q4 = -23db</i></p> <p><i>Example 4metres @ Q4 = -17db</i></p>	<p>STEP 4 RESULT =</p> <p><i>-23</i></p>

5	<p>Establish whether there is a solid barrier between the heat pump and the assessment position using Note 5: Barriers between the heat pump and the assessment position and note any dB reduction.</p> <p>A fence panel will be installed between the heat pump and the assessment position, obscuring its view. Example: There is a brick wall between the heat pump and the assessment position. Moving less than 25cm enables the assessment position to be seen. dB reduction = -5 dB.</p>	<p>STEP 5 RESULT =</p> <p>-10 dB</p>
6	<p>Calculate the sound pressure level (see Note 2: Sound pressure level) from the heat pump at the assessment position using the following calculation:</p> <p>(STEP 1) + (STEP 4) + (STEP 5)</p> <p>62 - 23 - 10 = 29</p> <p>Example (55) + (-17) + (-5) = 55 - 17 - 5 = 33 dB(A) Lp</p>	<p>STEP 6 RESULT =</p> <p>29 dB(A) Lp</p>
7	<p>Background noise level. For the purposes of the MCS Planning Standard for air source heat pumps the background noise level is assumed to be 40 dB(A) Lp. For information see Note 6: MCS Planning Standard for air source heat pumps background noise level.</p> <p>Background noise level is 40 dB(A)</p> <p>Example: Background noise level is 40 dB(A).</p>	<p>STEP 7 RESULT =</p> <p>40 dB(A)</p> <p>40 dB(A)</p>
8	<p>Determine the difference between STEP 7 background noise level and the heat pump noise level using the following calculation:</p> <p>(STEP 7) - (STEP 6)</p> <p>40 - 29 = 11</p>	<p>STEP 8 RESULT =</p> <p>11 dB(A)</p>

	<p>Example: 40 dB(A) (background) - 33 dB(A) (heat pump) = 7dB(A).</p>	
9	<p>Using the table in 'Note 7: Decibel correction' obtain an adjustment figure and then add this to whichever is the higher dB figure from STEP 6 and STEP 7. <u>Round this number up to the nearest whole number.</u> Adjustment figure is 0.3dB and the higher figure is 40dB(A) Example: Adjustment figure is 0.8 dB and the higher figure is 40 dB(A) $40 + 0.8 = 40.8 \text{ dB(A)}$ Rounded up to 41 dB(A) Final result at this assessment position is 41 dB(A)</p>	<p>FINAL RESULT=</p> <p>$40 + 0.3 = 40.3 \text{ dB(A)}$</p> <p>Rounded up to 41 dB(A)</p>
10.	<p>Is the FINAL RESULT in STEP 9 equal to or lower than the permitted development noise limit of 42.0 dB(A)?</p> <p>If YES - the air source heat pump will comply with the permitted development noise limit for this assessment position and may be permitted development (subject to compliance with other permitted development limitations/conditions and parts of this standard). NOTE - Other assessment positions may also need to be tested.</p> <p>If NO - the air source heat pump will not be permitted development. This installation may still go ahead if planning permission is granted by the local planning authority.</p> <p>Example: 41 dB(A) is equal to or lower than 42.0 dB(A)</p>	<p>Final result is equal to or lower than 42.0 dB(A)</p> <p>YES/NO (delete as appropriate)</p> <p>Final result is lower than 42.0 dB(A)</p>

NOTE 1: SOUND POWER LEVEL (STEP 1)

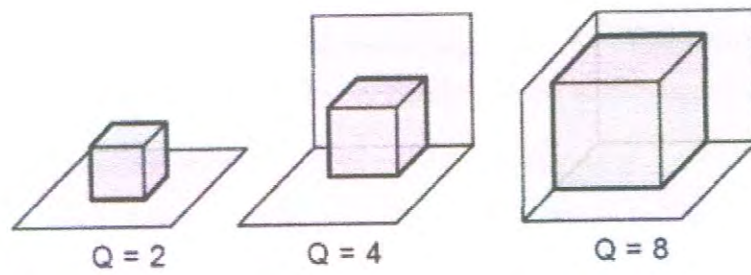
Sound power is the **total** acoustical energy emitted by a sound source and is an absolute value. It is **not** affected by the environment or the location of the listener.

NOTE 2: SOUND PRESSURE LEVEL (STEP 2)

Sound pressure is what we hear. It is a pressure disturbance at a specific point in the atmosphere whose intensity is influenced not only by the sound power of the source, but also by the surroundings and the distance from the source to the point at which the sound is heard.

NOTE 3: DETERMINATION OF 'DIRECTIVITY' (STEP 2)

The sound pressure level increases with the number of reflecting surfaces. Use the illustrations below to establish the directivity 'Q' for the installation. A reflective surface is any surface (including the ground) within 1 metre of the air source heat pump.



The following examples may be used as a guide:

- Q2 = an air source heat pump with one reflecting surface (i.e. the ground or a single wall if mounted on a wall off the ground).
- Q4 = an air source heat pump with two reflecting surfaces (i.e. ground mounted and against a wall or mounted off ground level against two walls).
- Q8 = an air source heat pump with three reflecting surfaces (i.e. ground mounted and against two walls or mounted off ground level between three walls).
- **NOTE - an air source heat pump with more than three reflective surfaces (for example those within small lightwells) will not meet the MCS planning standards.**

NOTE 4: DB DISTANCE REDUCTION (STEP 4)

		Distance from Heat Pump (metres) (STEP 3 RESULT)													
		1	1.5	2	3	4	5	6	8	10	12	15	20	25	30
Q (STEP 2 RESULT)	2														
	2	-8	-11	-14	-17	-20	-21	-23	-26	-28	-29	-31	-34	-36	-37
	4	-5	-8	-11	-14	-17	-19	-20	-23	-25	-26	-28	-31	-33	-34
	8	-2	-5	-8	-11	-14	-16	-17	-20	-22	-23	-25	-28	-30	-31

Where a precise distance is not indicated in the above table, then the next lowest value for that distance should be used. E.g. if the distance was 2.5m, then the values for 2m should be used.

NOTE 5: BARRIERS BETWEEN THE HEAT PUMP AND THE ASSESSMENT POSITION (STEP 5)

A correction should be made for attenuation due to barriers between the air source heat pump and an assessment position. A correction will be necessary if an MCS Contractor is unable to see an assessment position from the top edge of the air source heat pump. Use the following instructions to determine whether a correction is appropriate:

- For a solid barrier (e.g. a brick wall or a fence) that completely obscures an MCS Contractor's vision of an assessment position from the top edge of the air source heat pump, attenuation of -10 dB may be assumed.
- Where a solid barrier completely obscures an MCS Contractor's vision of an assessment position from the top or side edges of the air source heat pump, but moving a maximum distance of 25 cm in any direction to the air source heat pump allows an assessment position to be seen, attenuation of -5 dB may be assumed.
- If it is possible for an MCS Contractor to see any part of an assessment position from the top or side edges of the air source heat pump, no attenuation may be assumed.

NOTE 6: MCS PLANNING STANDARD FOR AIR SOURCE HEAT PUMPS BACKGROUND NOISE LEVEL (STEP 7)

The MCS Planning Standard assumes a background noise level of 40 dB(A) for the purposes of the air source heat pump calculation procedure. A different value for background noise should not be used as part of this calculation procedure.

NOTE 7: DECIBEL CORRECTION (STEP 9)

Please note that the left hand column should be used for both positive and negative differences (e.g. a difference of +3 and -3 both attract a correction of 1.8 dB).

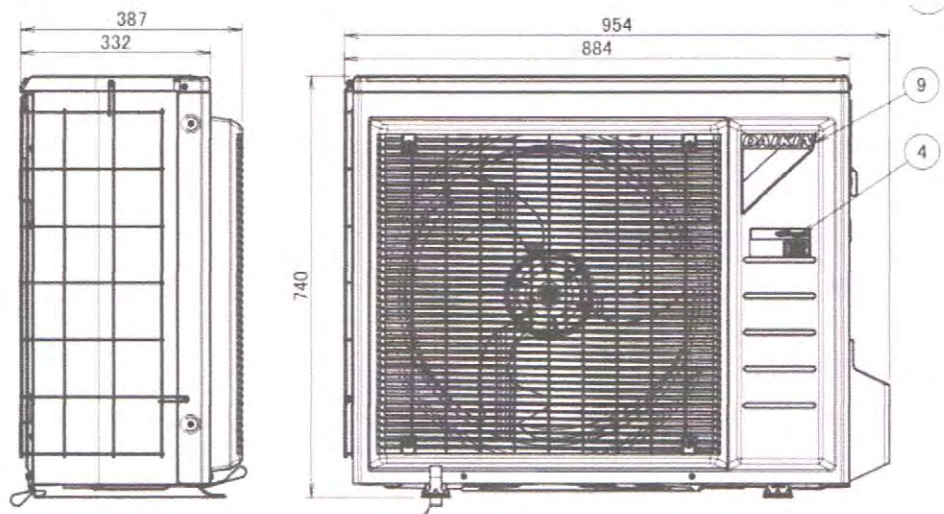
Difference between the two noise levels (db) (+/-)	Add this correction to the higher noise level (db)
0	3.0
1	2.5
2	2.1
3	1.8
4	1.5
5	1.2
6	1.0
7	0.8
8	0.6
9	0.5
10	0.4
11	0.3
12	0.3
13	0.2
14	0.2
15	0.1

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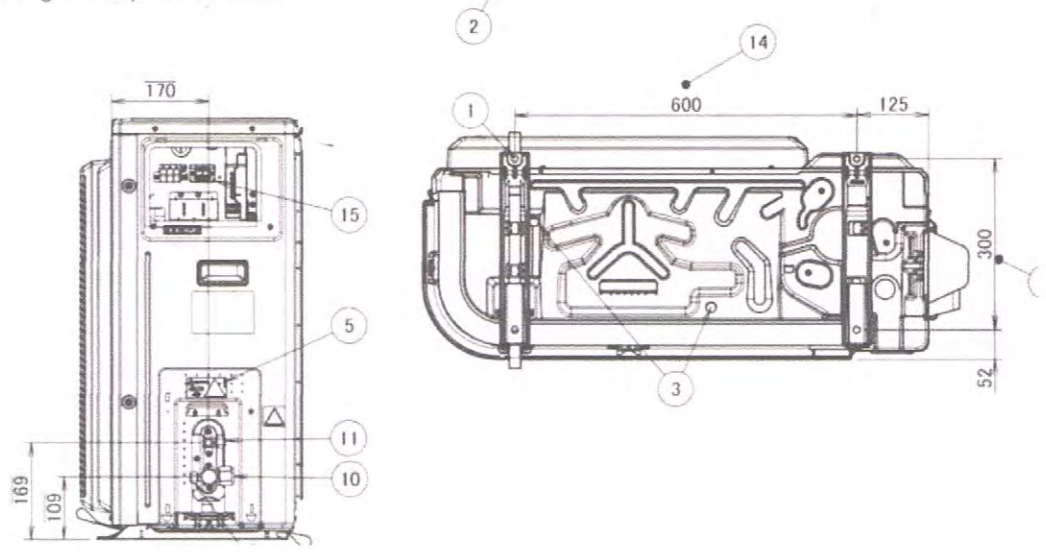
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MANOR FARM COTTAGE
AIR SOURCE HEAT PUMP.
ERGAOBEVA



In case of removing the stop valve cover.



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*DIMENSION DRAWING OF
 PROPOSED AIR SOURCE HEAT
 PUMP ERGAOBEVA AT
 MANOR FARM COTTAGE
 NEWHOLM YO21 3QY*