

# **Building Assessment Report Guidance**

**Guidance document to accompany:**

- **The Building Assessment Report Template**
- **The Building Assessment Report for  
Centralised Supply Template**

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This statutory guidance document is issued by the Scottish Ministers under section 66(1) of the Heat Networks (Scotland) Act.

This document provides accompanying guidance to be used alongside the Excel files 'Building Assessment Report Template' and 'Building Assessment Report for Centralised Supply Template'.

This statutory guidance should be read alongside the Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023.

## 1 Introduction

The role of a Building Assessment Report (BAR) is to help assess the suitability of a non-domestic property<sup>1</sup> for connecting to a heat network, as defined in Part 5 of the Heat Networks (Scotland) Act 2021<sup>2</sup> (herein referred to as the Act). This duty currently applies to non-domestic properties that Scottish public authorities have an interest in as specified by section 67 (a) of the Act<sup>3</sup>. The primary use of BAR information, as set out in the Act, is to inform decisions on the particular suitability of areas for the construction and operation of a heat network, and subsequently to inform designation decisions, should these areas be progressed for consideration for designation.

Given the primary use of BAR information is to support consideration of an area, rather than a defined project, there is a restriction imposed on the assessment of connection suitability due to the lack of definition at this stage on the type of network a property could be connecting to. For this reason, the BAR process is primarily an information-gathering process, rather than a process which will make a direct assessment of the connection suitability of a property.

Completion of BARs will enable more informed decision making regarding the review of heat network opportunities (see section 47 of the Act) and the designation of Heat Network Zones (see section 48 of the Act). Should a heat network develop in proximity to a property for which a BAR has been requested, the network may be able to supply this property with low carbon heat, potentially offering a heat supply decarbonisation pathway not available through consideration of property-level solutions in isolation. The cost of low carbon heat from a heat network may also be favourable in comparison to that available from property-level low carbon solutions.

Experience from piloting suggests that a first BAR may take between 30 and 60 minutes to complete. For organisations where BAR information has been requested

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<sup>1</sup> **Property** - A structure or space that is used for domestic or non-domestic classes with an addressable location. These are typically associated with a Unique Property Reference Number (UPRN). **Building** - In most instances a building is defined as property which has a UPRN. However, in some instances, properties are grouped under a Parent UPRN to identify the shared structure that they are a part of (such as units in a shopping mall). The properties which share a Parent UPRN are considered as a single building.

<sup>2</sup> [Heat Networks \(Scotland\) Act 2021](#)

<sup>3</sup> In future Scottish Ministers may specify by regulations others than a Scottish public authority that are required to complete a Building Assessment Report as specified by section 67 (b) of the Heat Networks (Scotland) Act 2021.

for multiple properties, experience from piloting suggests a steep reduction in completion time for subsequent BARs, to approximately 5 to 15 minutes.

The Building Assessment Report Template is made up of approximately 30 questions, split into five main groups:

1. Identification / data cataloguing – covers information relating to identification of the building and noting who completed the BAR. This includes the main data item used to aggregate the BAR into a wider database and geolocate it. Most of the fields in this section are free text.
2. Requirement of further detail – a short section to complete to establish if any further information is required, to avoid placing the burden of a BAR on smaller businesses or operators or if the property is for example unheated. This section is primarily completed through a series of drop-downs or manual entry of numeric values.
3. Property type / ownership – establishes the use and ownership of the property. It also includes some key characteristics for building categorisation.
4. Heat details – the main section of the BAR. Contains a combination of drop-down options for non-numeric details, with numeric elements being entered manually.
5. Additional details – information which does not fit into the four previous sections (including upcoming changes in heat demand); some of these are optional fields to complete. Although optional the information is very useful for all properties, those with heat demands greater than 250 MWh/yr should look to complete these.

Information for how to fill in different elements of the BAR is included within this guidance and where possible embedded in the template. This includes:

- Whether the information is to be typed manually or selected using a drop-down list
- A description of the information required, and where suitable, guidance on how to gather the relevant information
- An example of the information expected to be included

Given development time constraints to date, Microsoft Excel was selected as the only viable option to develop a BAR template. The amount of information that can be embedded in Excel is limited, and to overcome this issue, this BAR guidance document has been developed to accompany the template. This document provides a more detailed guide on how to complete the BAR, overcoming the limitations of how much information can be imbedded in Excel. Overall, we expect that this guidance, and the BAR template, will evolve over time.

The key identifier which is required in the BAR template is a Unique Property Reference Number (UPRN) - this is a unique code for each property with an address in Great Britain (how to find a UPRN is detailed in the section below). The aim of the BAR process is for every relevant property with a UPRN to have a completed BAR. It should be noted a UPRN can also be given to objects without a postal address, such as bus shelters or electricity sub-station – such objects are not of interest to the BAR templates.

## 1.1 How to Find a UPRN

If you are unsure of the property UPRN please either use the One Scotland Gazetteer<sup>4</sup> or the Ordnance Survey FindMyAddress service<sup>5</sup>. To use these services search for the address of your property using the links provided in the footnotes. This will also display the selected location on a map to cross-check that the suggested location is correct.

## 1.2 Sites with Centralised Supply to multiple properties

A recognised challenge when completing a BAR is sites which have a centralised supply with multiple properties served by one common heat source. This could be a heat network, a smaller shared boiler system or a single gas offtake for multiple buildings. In these instances, it may be hard to establish demand and other fields at a property level. To overcome these issues, a “Building Assessment Report Template” should still be completed for the known fields at an individual level, and alongside this, the shorter “Building Assessment Report for Centralised Supply Template” should also be completed. The latter lists all the properties (either UPRNs or property coordinates) covered by the centralised heat source and reports the heat demand at this centralised point.

## 1.3 Building Assessment Report templates and tabs

There are two different BAR templates. The first – “Building Assessment Report Template” – is to be completed for all non-domestic properties that require a BAR and contains three tabs:

- a ‘Read me’ tab;
- a ‘BAR’ tab, where the main template for completion can be found;
- a hidden ‘Input information’ tab, which should not be altered as it acts as a reference to the template

Guidance for completion of the Building Assessment Report Template is provided in section 2.

Alongside the main BAR template, a separate, shorter, “Building Assessment Report for Centralised Supply Template” (as described in section 1.2). This template also contains three tabs:

- a ‘Read me’ tab;
- a ‘Centralised Supply’ tab, for completion if multiple properties share a heat source/meter;
- a hidden ‘Input information’ tab, which should not be altered as it acts as a reference to the template

Guidance for completion of this template is provided in section 3.

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<sup>4</sup> [One Scotland Gazetteer](#)

<sup>5</sup> [Ordnance Survey FindMyAddress](#)

## 2 Building Assessment Report Template – accompanying guidance and question detail

### 2.1 Identification / data cataloguing

This section collects information relating to the identification of the property, when the assessment was carried out, as well as key contact information.

#### 1. Property owner company name

Input type: free text

Description: for this section, please include the company name as listed in Companies House, if appropriate.

Example: Company X

#### 2. Part of centralised system

Input type: drop-down

Description: As mentioned in the BAR guidance tab, there can be challenges when multiple properties are part of a centralised system and served by one common heat source. Should this be the case, the Building Assessment Report for Centralised Supply Template should also be completed. This question is a yes/no drop-down to identify if this is relevant.

- Yes – part of a district heat network
- Yes – part of a communal heat network
- Yes - a single gas offtake for multiple building
- Yes - other types of centralised system
- No: the heating system is decentralised and only serves one property. As such, the full heat load relates to just the one property of the BAR.

In some instances, properties with a Yes answer to this question will not be able to complete all aspects of the BAR template, as information may not be available at property level. On these occasions, fields which can be completed should be, and consideration should be given as to whether it would be appropriate to complete the Building Assessment Report for Centralised Supply Template.

#### 3.a UPRN (up to 12 digits)

Input type: free text

Description: for this section, please include the Unique Property Reference Number (UPRN) for the property (up to 12 digits). If you are unsure what the UPRN for your property is, it can be found either through the [One Scotland Gazetteer](#) or the [Ordnance Survey FindMyAddress](#) .

Should multiple properties – each with their own UPRN - be served by a centralised and shared heat source, please fill in one BAR template per property. In addition, please include all UPRNs connected to the shared heat source in the Building Assessment Report for Centralised Supply Template.



If you have completed 3a, you do not need to complete 3b. Instead type 'Not applicable'

Example: 906270179

### 3.b Location if UPRN is missing

In some, rare instances, a UPRN may not be available for a property. In these instances, type 'Not Applicable' in 3a and move on to 3b.

#### 3.1.b Coordinate Type

Input type: drop down

If a UPRN is missing, coordinates are used to capture the location of the property. For this section, select the coordination type from the drop-down list:

- Latitude and longitude
- Easting and northing (i.e. the UK National Grid standard coordinate system)

#### 3.2.b Latitude or Easting

Input type: free text

Description: please include your coordinate input that corresponds to your response in 3.b.1. If you selected 'Latitude and longitude', include 'Latitude' in this field. If you selected 'Easting and northing' please include 'Easting' in this field.

Example (latitude): 55.953457

Example (easting): 326228

#### 3.2.b Longitude or Northing

Input type: free text

Description: Please include your coordinate input that corresponds to your response in 3.b.1. If you selected 'Latitude and longitude', include 'Longitude' in this field. If you selected 'Easting and northing' please include 'Northing' in this field.

Example (longitude): -3.1830072

Example (northing): 674013

## 4. Full Property Address

This question is split into multiple parts for completion.

### 4.1 Property Name/Number

Input type: free text

Description: please include the unit number, as well as associate letters if applicable, that correspond with the property. In some instances, the property has a name instead of a number, please include the property name in this field.

Example: 1a

## **4.2 Street**

Input type: free text

Description: please include the street name in text format that corresponds with the property.

Example: High Street

## **4.3 Postcode**

Input type: free text

Description: please include the standard format of a Scottish postcode. Ensure that the post code corresponds with the UPRN or coordinates for this property. Include space between first and second part of postcode.

Example: EH1 2EH

## **4.4 Local Authority**

Input type: drop down

Description: please select the relevant local authority from the drop-down list.

## **5 Assessor Details**

This question is split into multiple parts for completion. This is important for establishing a point of contact for enabling wider elements of the Act.

### **5.1 First name**

Input type: free text

Description: for this section, please include the first name of the assessor in text format.

Example: Alex

### **5.2 Last name**

Input type: free text

Description: for this section, please include the last name of the assessor in text format.

Example: Smith

### **5.3 Email address**

Input type: free text

Description: for this section, please include the email address of the assessor in text format.

Example: [firstname.lastname@company.co.uk](mailto:firstname.lastname@company.co.uk)

## 5.4 Company role

Input type: drop-down

Description: please select from the bullet points the best description of the role of the assessor's company.

- Owner operator: if the assessor is the owner and runs the operation the building.
- Operator / occupier: if assessor runs the operation of the building or occupies the building.
- Owner: if the assessor is the owner of the building.

## 6. Date of BAR

Input type: free text

Description: for this section, please include the date that the BAR is submitted. The format for this input is dd/mm/yyyy.

Example: 18/02/2022

## 2.2 Requirement for Further Detail

This section indicates if the property needs to answer every question that applies within the BAR template or if only a limited number are required. The only reason that a full BAR is not required is for properties where the annual heat demand is known to be less than 73 MWh/year.

Where an annual heat demand is unknown, and only the fuel demand is known, a full BAR is required. For properties that are heated using combined heat and power technology (CHP), and where it is not possible to separate out the heat demand, a full BAR is required.

Properties with a known heat demand of less than 73 MWh/year are required to complete questions 7, 8 and 9 (if needed) and then also complete question 17 or 18.

## 7. Full BAR required

Input type: drop-down

Description: this section focuses on whether a full BAR is required for the property.

- Yes: a full BAR is required.
- No: a full BAR is not required for the property. Justification is required in adjacent field(s) (see 8. and 9.). In addition, the following elements are still required to be completed:
  - 17. Heat demand or 18. Fuel demand

Note that if 'No' is selected, the BAR is complete when additional fields (17 or 18) are filled in.

## 8. Reasons if No

Input type: drop-down

Description: this field allows you to justify why a full BAR is not required for the property.

- Heat demand below 73 MWh/year: complete 17. or 18. to justify this option.
- Not Applicable: select this option if a full BAR is required for the property.

## 9. Additional justification notes – if required

Input type: free text

Description: the only exemption for not completing a full BAR is if the known heat demand is less than 73MWh/yr. However, if significant challenges are experienced during the completion of the BAR then contact Scottish Government's Heat Network Regulations Team at [heatnetworkBAR@gov.scot](mailto:heatnetworkBAR@gov.scot).

This section establishes the type of property, both in terms of use and ownership.

Input type: drop-down

Description: please select the option from the list that best aligns with your property (this list aligns to typology categories within LHEES<sup>6</sup>). If your property has more than one typology please select the typology that best fits with the predominant use of property. Please note we have included a wide range of building types to ensure this guidance remains relevant should Ministers decide to extend BAR reporting requirements to private sector non-domestic building,

- Cafes, pubs, restaurants, and takeaways: all the hospitality sector apart from hotels described in BEES<sup>7</sup>.
- Clubs and community centres: a broad group of buildings from small sports clubs like tennis court and bowls clubs to village halls and youth centres.
- Education: all education sector buildings from nurseries through to university (this does not include student accommodation).
- Emergency Services: this includes the police, ambulance, and fire services, as well as similar organisations like mountain rescue and the RNLI.
- General sports & leisure: this is a broad group including large sporting venues, gyms, swimming pools and general indoor and outdoor leisure activity.
- Health: this contains a broad range of buildings from large hospitals to small dentists and GP practices.
- Heavy manufacturing / industry: note difference between heavy and light manufacturing. The heavy industry sector contains the larger, high-intensity energy users like factories, distilleries, steel works and cement manufacturers.
- Hotels: this group draws out hotels, motels, and similar properties. It also includes care homes, B&Bs and youth hostels.
- Large entertainment sites (e.g., theatres, cinemas, conference centres): these are large sites, characterised by having large spaces to heat.
- Light manufacturing / industry / workshop: note difference between heavy and light manufacturing. Light industrial sites capture a large number of buildings. This includes workshops, some manufacturing and servicing garages.
- Military and prison:

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<sup>6</sup> LHEES Non-Domestic Analysis – Detailed Practitioner Approach

<sup>7</sup> BEES refers to the [Building Energy Efficiency Survey](#) carried out by UK Government

- Museums, art galleries, libraries, law courts:
- Offices:
- Places of worship: this covers all places of worship.
- Residential: this captures many different buildings used as residences, including houses of multiple occupancy and student accommodation
- Retail: this sector contains all shops and financial services making it a broad category.
- Storage / distribution: this includes warehouses, storage depots and smaller sites such as garages.
- Other: this a broad catch all for many remaining buildings, this could include various agricultural buildings, transport hubs and buildings with other classifications.

## 11. SIC Code

Input type: drop-down

Description: a SIC code is the standard industrial classification of economic activities. Select the SIC code from the drop-down that best describes the nature of the property. You can enter a search term through the link, if desired, on the [Companies House website](#) . Even if your company is dormant (99999) or non-trading (74990) you'll still need to provide the appropriate SIC code.

If more than one SIC code applies, please select the SIC that best fits with the predominant economic activity in the property.

## 12. Gross internal floor area (GIFA) (m<sup>2</sup>)

Input type: free text

Description: for this section, please include an estimate of the gross internal floor area of the property in square meters. If you are unable to find this documented, please include a high-level estimate. Based on property footprint and number of stories related to the property UPRN.

Consider all floors related to the property UPRN and exclude the thickness of the walls. The input is a numerical value.

Example: 500

## 13. Property Occupancy

Input type: drop-down

Description: please give a high-level indication of the property occupancy. In this instance property occupancy is a description of how heavily the property is used and any seasonality in use. When occupancy information is analysed, it may be done so in conjunction with other information such as property typology. For example, if a property typology is Education, it will generally be assumed to have a lower demand in summer and at the weekends. The occupancy provides greater detail on top of this; e.g. if an office is heavily used it assumes constant use between standard office operating hours (e.g. 08:30 to 17:30), Monday to Friday. Occupancy refers to when space is heated for purposes such as storage as well as direct use by people.

The options for occupancy are split into two groups; general usage and seasonality (so if the property is closed in the summer only consider the occupancy for the remaining three seasons).

### **13.1 General usage**

- High occupancy: heavily used all the time (within standard operating hours).
- Medium occupancy: used frequently but not in constant use. This could be a separate gym building in a school or an office which is only open two or three days a week.
- Low occupancy: the property can go long periods without being used.

The second set of occupancy information is based on seasonality, some buildings like hotels can close over winter months whilst in the summer schools tend to see much lower usage. This section is to capture insight into this, please be aware this is indicative so if you are not aware of any large deviations, please select normal occupancy.

Please select the most relevant option for each season:

### **13.2 Spring**

- Normal occupancy
- Higher occupancy
- Lower occupancy
- No occupancy

### **13.3 Summer**

- Normal occupancy
- Higher occupancy
- Lower occupancy
- No occupancy

### **13.4 Autumn**

- Normal occupancy
- Higher occupancy
- Lower occupancy
- No occupancy

### **13.5 Winter**

- Normal occupancy
- Higher occupancy
- Lower occupancy
- No occupancy

## **14. Property Tenure**

Input type: drop-down

Description: please select the most suitable tenure for the property:

- Public owner and occupier: if the property is both owned and used by the public sector.
- Public owner and other occupier: if it is a publicly owned property but it is occupied by another user (schools and theatres can often follow this model).
- Private owner and public occupier: if the property is owned by a private company but has a public sector occupier.
- Private owner and occupier: one company both owns the property and is the occupier.
- Private owner and other occupier: this is a relatively common tenure, with one private company owning the building and another using the space.
- Other: if the building is best described by a combination of any of the above.

## 15. Decade / Century of Building Construction

Input type: drop-down

Description: please select the decade or century of construction for the building from the drop-down below. If there are extensions/numerous ages to parts of the building, select input based on the highest proportion of the building.

- 2020s
- 2010s
- 2000s
- 1990s
- 1980s
- 1970s
- 1960s
- 1950s
- 1940s
- 1930s
- 1920s
- 1910s
- 1900s
- 1800-1900
- Before 1800

## 16. Decade of any Substantial Retrofit

Input type: drop-down

Description: if there has been any substantial retrofit since 1970, please select the decade where the retrofit was carried out from the drop-down below. Substantial retrofit includes changes that affect the energy efficiency of the building (e.g. change of radiators, wall and roof insulation improvements and change from single glazing to double glazing). If there has not been any substantial retrofit or if it was carried out before 1970 please, select 'Not applicable'.

- 2020s
- 2010s
- 2000s
- 1990s

- 1980s
- 1970s
- Not applicable

## 2.3 Heat Details

This section reports the scale of heat demand, as well as answering questions which are used to assess the suitability of the existing heating system for connection to a heat network. Some consideration of cooling is also included.

### 17. Heat demand (MWh/year)

#### 17.1 Primary heat demand

Input type: free text

Description: if you have data available for both the primary and secondary<sup>8</sup> heat demand for the property, please include primary heat consumption for this section. Should you not have sufficient data for a secondary system, please include total heat demand instead under this section.

Please include the annual heat consumption for the most recent full year (COVID has meant consideration of a longer period may skew data), if you have this information provided for the property. If you don't have the heat demand, please provide your fuel demand instead in the next section. It is recognised that the assessor may not be able to establish the heat demand but only fuel usage, in this instance please leave this question blank and instead complete question 18.

Please note if there is complexity with answering this question due to a technology like combines heat and power (CHP), there are further questions (e.g. 22) that capture the technology information.

Example: 350

#### 17.2 Secondary heat demand (optional)

Input type: free text

Description: if you have data available for the secondary heat demand for the property, please include the annual heat consumption for the most recent full year (COVID has meant consideration of a longer period may skew data). If you don't have the heat demand for a secondary system, please type 'Not Applicable'.

Example: 125

### 18.a Primary Fuel Demand (unit/year)

Description: If '17. Heat demand (MWh/year)' is filled in this question is not required.

Fuel demand details are required for all properties where heat demand details are not known. This question on fuel demand is split into three subsections to provide flexibility to the different types of fuel used and the different units that each type of fuel can be provided in.

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<sup>8</sup> [Guidance on how a home's energy is calculated](#)



### **18.1.a Fuel demand**

Input type: free text

Description: if you do not know the primary heat demand, but have the primary fuel demand for the property, please fill in this section. Include the annual fuel consumption for the most recent full year.

Example: 400

### **18.2.a Unit**

Input type: drop-down

Description: please select the unit that corresponds to your input of fuel demand for your primary heat system.

- MWh
- kWh
- m<sup>3</sup>
- litres
- British Thermal Units
- Tonnes
- Kg

### **18.3.a Fuel type**

Input type: drop-down

Description: please select the fuel type that corresponds to your input of fuel demand for the primary heat system.

- Natural gas
- Liquid natural gas
- Liquified petroleum gas
- Oil
- Biomass
- Coal or other solid fuel
- Electricity – just heat demand: if you are able to disaggregate electricity used for heating from overall electricity demand, please select this option
- Electricity – unable to separate out heat demand: if you are unable to separate electricity demand for heat from other electricity demand aspects, please select this option
- Other

### **18.b Secondary Fuel Demand (unit/year) (optional)**

Description: If '17.2 Secondary heat demand (optional)' is filled in, this question is not required.

This question is covered by three subsections, giving flexibility to account for the wide variety of heating systems in Scottish buildings. This section is optional and only needs to be completed if the heat demand of the building is not known and if data is available.

### **18.1.b Fuel demand**

Input type: free text

Description: if you do not know the secondary heat demand, but have the secondary fuel demand for the property, please fill in this section. Include the annual fuel consumption for the most recent full year.

Example: 400

### **18.2.b Unit**

Input type: drop-down

Description: please select the unit that corresponds to your input of fuel demand.

- MWh
- kWh
- m<sup>3</sup>
- litres
- British Thermal Units
- Tonnes
- Kg

### **18.3.b Fuel Type**

Input type: drop-down

Description: please select the fuel type that corresponds to your input of fuel demand.

- Natural gas
- Liquid natural gas
- Liquified petroleum gas
- Oil
- Biomass
- Coal or other solid fuel
- Electricity – just heat demand: if you are able to disaggregate electricity used for heating from overall electricity demand, please select this option
- Electricity – unable to separate out heat demand: if you are unable to separate electricity demand for heat from other electricity demand aspects, please select this option
- Other

## **19. Heat Distribution System**

Input type: drop-down

Description: this question relates to how distributed within the property. Please include whether the primary heat distribution system is wet, dry or an air handling unit.

- Wet: in a wet system heated water is distributed through the building via pipes. Boiler systems will tend towards this kind of setup.

- Dry: this will tend to be an electrically based system, such as storage heaters or radiant panels.
- Air Handling Unit: although these circulate air and would thus generally be considered as dry systems, they can be more suitable for heat network connection and are thus considered separately.

## 20. Heat Network Connection

### 20.1 Connected to Heat Network Already

Input type: drop-down

Description: please select the most appropriate option for the primary heat system in relation to being connected to a heat network.

- District heat network – direct connection: the property is part of a heat network which extends across multiple buildings. For a direct connection there is direct flow of water from the heat network into the property heating system.
- District heat network – indirect connection: the property is part of a heat network which extends across multiple buildings. For an indirect connection there is a hydraulic break between the water from the heat network and the water within the heating system of the property.
- District heat network – unknown connection: the property is part of a heat network which extends across multiple buildings. This option is for if there is a lack of certainty over whether it is a direct or indirect connection.
- Communal system: the property is connected to a building heating system – that supplies heat to multiple properties within the building, this will only be applicable to properties which are part of a wider building. The building in this instance has a shared heating system which serves multiple properties in the building.
- Due to be connected: Select this option should the site be in planning stages or in the process of being connected to a heat system but is not currently connected – please include notes, including timescales, in the ‘Additional details’ section related to your current plans.
- No: if the building is not currently connected or due to be connected to a district heat network or communal system.

### 20.2 Name of Heat Network

Input type: free text

Description: If the property is connected to a heat network already, or due to be connected, please include the name of the heat network, if known.

## 21. Heating System Flow Temperature (°C)

Input type: drop-down

Description: please select the flow temperature from the building’s primary heat source. For most heating units this set point information should be readily apparent on the heating unit.

Note: if the flow temperature is not readily available, select "unknown".

- < 50
- 50 - 54
- 55 - 59
- 60 - 69
- 70 – 80
- > 80
- Unknown

## 22.a Primary Heating Technology

Description: the primary heating technology refers to the technology that is used predominately to cover the heat demand.

### 22.1.a Heating Technology

Input type: drop-down

Description: select the heating technology that describes your primary heating system from the list below

- Gas boiler
- Oil boiler
- Biogas/biomethane
- Biomass boiler
- Coal or other solid fuel boiler
- Combi boiler
- Combined heat and power (CHP)
- Air source heat pump
- Ground source heat pump
- Water source heat pump
- Liquid natural gas boiler
- Direct electric air heater/storage heater
- Electric boiler
- District Heat network/communal heating system
- Other

### 22.2.a Capacity of Heating System (kW)

Input type: free text

Description: this the rated thermal output of the primary heating system, i.e. the peak/maximum output. For CHP please provide both the kW thermal and kW electrical if known, listing these as kWth and kWe.

### 22.3.a Installation Year of Heating System

Input type: free text

Description: for this section, please select the installation year of the heating system. The format of this input is yyyy.

Example: 2015

## **22.4.a Planned Replacement Year**

Input type: free text

Description: for this section, please include the year of planned heating replacement. The format for this input is yyyy. Should this not be planned, please type 'Not applicable'

Example: 2023

## **22.b Secondary Heating Technology**

Description: the secondary heating technology provides heat to the property but is not its main heat source, e.g. a backup technology or a technology which is used to provide peak demand. A secondary heating technology may not be installed in all buildings.

### **22.1.b Heating Technology**

Input type: drop-down

Description: select the heating system that describes your secondary heating system from the list below:

- Gas boiler
- Oil boiler
- Biogas/biomethane
- Biomass
- Coal or other solid fuel
- Combi boiler
- Combined heat and power (CHP)
- Air source heat pump
- Ground source heat pump
- Water source heat pump
- Liquid natural gas boiler
- Direct electric air heater/storage heater
- Electric boiler
- District Heat network/communal heating system
- Other
- None

### **22.2.b Capacity of Heating System (kW)**

Input type: free text

Description: This the rated thermal output of the secondary heating system, i.e. the peak output. If 'None' is selected for the secondary heating system, type 'Not applicable'. For CHP please provide both the kW thermal and kW electrical if known, listing these as kWth and kWe.

### **22.3.b Installation Year of Heating Technology**

Input type: free text

Description: for this section, please select the installation year of the heating system. The format of this input is yyyy. If 'None' is selected for the secondary heating system, please type 'Not applicable'.

Example: 2015

#### **22.4.b Planned Replacement Year**

Input type: free text

Description: for this section, please include the year of planned heating replacement. The format for this input is yyyy. Should this not be planned, or if 'None' is selected for the heating system, please type 'Not applicable'.

Example: 2023

### **23. Cooling Demand**

Input type: drop-down

Description: this is a high-level indication of cooling demand on site. Due to difficulties with calculating cooling demand the assessment is split into three qualitative categories:

- None/low: this includes buildings with no air conditioning unit or other major cooling demand (e.g. industrial chillers). From a heat network design perspective these properties are those where cooling demand is so negligible connection to a cooling loop of a heat network would not be viable.
- Medium: this includes buildings that have some air conditioning or similar system, but it is not often used.
- High: this is for properties with substantial cooling demand, often used throughout the year.

## **2.4 Additional Details**

This section is broadly concerned with capturing any changes in demand as well as some additional voluntary sections.

### **24. Planned Change to Heat Demand**

Input type: drop-down – allow for multiple options

Description: please give an indication if there are any planned changes that are likely to affect the annual heat demand. If there are multiple planned changes to the property, please include all that are relevant for the drop-down.

- Improve efficiency: if there already are plans in place to improve the efficiency. This may be through retrofit, change of system, change of occupancy hours, introduction of/changes to a building management system (BMS), change in heat used during nights or weekends.
- Change of use: if the building is planned to be used for another purpose than its current use, e.g. switch from factory to storage.
- Change in site size: If changes are planned for the internal space, for example, an extension, part of the site being demolished or sold off.

- Not applicable: if there are no planned changes to the heat demand. Should this option be most suitable the sections 26. 'Date of likely change' and 27. 'Impact of change' and are not required.

## 25. Year of Likely Change

Input type: free text

Description: for this section, please include the expected year of change in cooling load, change in profile and change in total demand. The format for this input is yyyy. If no date is planned, please type 'Not applicable'.

If multiple options were selected for 25 'Planned changes to heat demand' please include the year that corresponds to each change.

Example: 2023

## 26. Expected Impact of Change

Description: this contains multiple drop-down options, please select all the relevant options.

### 26.1 Change in Cooling Load

Description: this is a high-level indication related to how all the planned changes identified in 24 in combination may affect the current cooling load once fully implemented i.e. the cumulative effect.

- Increase more than 50%
- Increase 25% to 50%
- Increase less than 25%
- Decrease more than 50%
- Decrease 25% to 50%
- Decrease less than 25%
- Not applicable: if there are no planned changes to cooling load

### 26.2 Change in Profile

Input type: drop-down

Description: this is a high-level indication of how all the planned changes identified in 24 in combination may affect the current heat demand profile once fully implemented.

- Peak increase: if planned change(s) leads to an increase of the current energy peak. This would generally result in a need to increase the installed capacity of the heating system. An increase in demand will not always result in an increase in a need to change the heating system capacity.
- Peak decrease: if planned change(s) leads to a decrease of the current energy peak. This means the shape of the heat demand distribution throughout a day will remain similar but there is a general decrease in peak, alongside an overall decrease in demand.
- Profile flattened: if planned change(s) leads to a flattened profile. This would generally be an instance of heat demand at peak times being shifted to non-peak times, reducing the overall peak demand. In instances where overall

demand is increasing but the profiling is flattening, meaning peak will not increase/not increase significantly, this option should also be selected.

- Not applicable: if there are no planned changes to heat demand.

### **26.3 Change in Total Heat Demand**

Input type: drop-down

Description: this is a high-level indication of how all planned changes identified in 24 in combination may affect the total demand for the building once fully implemented.

- Increase more than 50%
- Increase 25% to 50%
- Increase less than 25%
- Decrease more than 50%
- Decrease 25% to 50%
- Decrease less than 25%
- Not applicable: if there are no planned changes to heat demand.

### **27. Identification of any Recoverable Heat**

Input type: free text

Description: in this section include if the property may have any opportunity to recover heat that currently is not captured. This could include data centres, supermarket chillers, waste heat from industrial processes.

### **28. Voluntary Section – Geographical Context**

Input type: free text

Description: in this section include if there is anything you think might be relevant to include about the site itself and surrounding area. This may include, but is not limited to, historical information, relevant characteristics of the site and open space, such as car parks nearby.

### **29. Voluntary Section – Most Recent EPC LMK Key**

Input type: free text

Description: the LMK key is a long unique code for each EPC, rather than type manually it is suggested this is copy and pasted from the EPC report as it is a combination of ~60 characters made up of letters and numbers.

### **30. Voluntary Section – Most Recent DEC LMK Key**

Input type: free text

Description: the LMK key is a long unique code for each DEC (Display Energy Certificate), rather than type manually it is suggested this is copy and pasted from the DEC report as it is a combination of approximately 60 characters made up of letters and numbers.



## 31. Voluntary Section – Energy Action Plan

Input type: drop-down

Description: indicate if you would be able to provide the most recent Energy Action Plan for this property if requested. For clarity there is no need to provide this at the point of submitting this Building Assessment Report.

- Yes: If you can provide your most recent energy action plan, upon request
- No

### **3 Building Assessment Report for Centralised Supply Template - accompanying guidance**

A recognised challenge when completing a BAR is sites which have multiple properties served by one common heat source. This could be a heat network, a smaller shared boiler system or a single gas offtake for multiple buildings. In these instances, it may be hard to establish demand and other fields at a property level. To overcome these issues, a separate “Building Assessment Report Template” should still be completed for the known fields for each property, and alongside this, the shorter “Building Assessment Report for Centralised Supply Template” should also be completed. The latter lists all the UPRNs or coordinates for properties covered by the centralised heat source and reports the heat demand at this centralised point.

This Centralised Supply Template is much shorter than the main BAR template and consists of similar fields. Please see the supporting text above for descriptions of how to complete the relevant questions. For technical questions, these all relate to heat demand and guidance for completion is provided in questions 17, 18 and 23 detailed above – for clarity the equivalent questions in the Centralised Supply Template are respectively questions 8, 9 and 10. The main difference for the Centralised Supply Template is that this aggregates information for multiple properties – as listed in question 6 of the Centralised Supply Template - so for heat demand (i.e. question 17 main BAR or 8 in Centralised Supply Template) this is the total heat demand for all properties with a centralised supply, or in the case of fuel use (question 18 or 9 in Centralised Supply Template) this could be the total gas demand for one centralised meter. For cooling, this follows the same qualitative approach outlined in question 23 above for question 10 in Centralised Supply Template.

For the non-technical cataloguing questions, the main deviation is that all properties that share a centralised supply need to be listed. In question 6 of the Centralised Supply Template this list links relevant main BAR templates to a Centralised Supply Template. Question 6 here lists either the UPRN or coordinates for each property that share a common heat source. The shortened format of the Centralised Supply Template avoids having to reproduce all the information in the main BAR template, and also helps mitigate dangers of duplication of demands, which is a known source of error in assessing the viability of heat networks at strategic level.

## 4 Submitting your completed BAR

Once all sections of the Building Assessment Report Template and if appropriate, Building Assessment Report for Centralised Supply Template have been completed and checked for accuracy, please email the completed template(s) to:

- (1) The local authority in whose area the building is situated
- (2) Scottish Ministers, via the email address: [heatnetworkBAR@gov.scot](mailto:heatnetworkBAR@gov.scot).

Please keep a copy of the complete BAR on file, as you are required, under the Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023, to renew the BAR submission “within 5 years after the notification of the BAR”.

**Error remediation:** if the assessor spots an error after submitting a BAR, please correct the error on the BAR and resend (with a brief explanation), as soon as practicable, to:

- (1) the local authority in whose area the building is situated
- (2) Scottish Ministers, via the email address: [heatnetworkBAR@gov.scot](mailto:heatnetworkBAR@gov.scot).

**Queries:** If you have any questions or issues relating to this guidance or the associated templates, please contact the Scottish Government’s Heat Network Regulation Team at [heatnetworkBAR@gov.scot](mailto:heatnetworkBAR@gov.scot).



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