ECO4 Pre-Installation Heating Checklist v2.1

Introduction

The purpose of this form is to provide assurance that heating measures installed meet ECO4 requirements. It assesses a home's pre-main heat source and status with regard to insulation pre-conditions. It provides partial guidance on the heating measures that may be eligible in different circumstances but must be read in conjunction with the ECO4 Delivery Guidance.

Suppliers should ensure operatives complete this checklist and retain the completed checklist on their systems for all heating measures in ECO4. This checklist should also be used when assessing a non-boiler central heating system and/or installing a new one (such as air-to-air heat pumps). This checklist also covers projects where a district heating connection (DHC) is to be installed or repaired. Suppliers must be able to provide a copy of a completed checklist to us on request.

This checklist does not provide any detailed information on the requirements of ECO. Further information can be found in our guidance document, Energy Company Obligation (ECO4) Guidance: Delivery, available on our website[1]

Accuracy of the checklist

It is important to note that your decision to repair or replace a heat source on the basis that you consider it to be inefficient or broken down and unable to be economically repaired, does not necessarily mean that we will the same conclusion, particularly if we consider that an assessment has been incorrectly carried out. For this reason, suppliers should ensure that the checklist is completed accurately by the relevant operative(s).

When filling in the Pre-Installation Heating Checklist assessment details should not be copied from other Pre-Installation Heating Checklist, i.e. photocopying or copying and pasting should not be used to complete any part of this form.

If the information on this checklist is found to be false, Ofgem will investigate the case and may reject the associated measures.

[1] Energy Company Obligation (ECO4) Guidance: Delivery | Ofgem

Operative competency

Measures referenced in PAS 2030:2023 or MCS must be installed by, or under the responsibility of, a person who is registered with TrustMark for the purposes of that measure. These requirements are evidenced to Ofgem by a Certificate of Lodgement (CoL) awarded by TrustMark for measures.

Data Light Measures (DLMs) and Innovation Measures (IMs) which are not referenced in PAS 2030:2023 and do not fall under MCS, must be certified by a person accredited to ISO / IEC 17065:2012.

For DHC measures, except for DHCs which are the installation in the home of a GSHP connected to a shared ground loop, suitable qualifications for installers may be a Level 2 or 3 NVQ in gas, plumbing or mechanical engineering. We recommend CIBSE Heat Networks: Code of practice for the UK is followed during all phases of the DHC project where relevant. DHCs which are the installation of a shared ground loop GSHP should be installed by, or under the responsibility of, a person who is registered with TrustMark for the purposes of that measure.

For boilers not referred to in PAS, and for all boiler repairs, the assessment and repair/replacement must be carried out by operatives who meet industry competency standards for that particular fuel type.

A pre-assessment may be carried out by an assessor who may also fill out sections of the checklist. However, this assessment must be checked, and its accuracy confirmed by the operative prior to carrying out the heating measure.

Format of the checklist

Suppliers may adapt the format of the checklist to match their own systems, as long as the content is not changed. Suppliers should submit adapted checklists to us before use for confirmation that the content is acceptable.

Digital signatures are permitted providing the appropriate individual applies their signature individually to each box that requires a signature and other requirements are met.[2]

[2] Please see Chapter 8 in the ECO4 Delivery Guidance for further information.

Any evidence of forged signatures will be investigated. Any measures where suspected fraudulent activity is detected will be rejected.

Ofgem also recommends that any additional evidence collected as part of these forms be handled as the final step in the process to adhere to Data Protection Act 2018 requirements.

Completing the checklist

Guidance	
Section A	**Operative and assessment details**. This section captures the details of the operative carrying out the pre-heating assessment, core details of the premises, and the details of the assessor carrying out the pre-assessment of the heating source (if different to the operative). It may be completed by the operative or assessor. All questions are mandatory and must be filled for all heating measures. Questions A8, A9 and A11 must be completed by the operative who carried out the post heating system installation.
Section B	**Central heating systems** (including district heating connections). The section must be completed if the home contains a pre-existing central heating system. The section may be completed by the operative or assessor who has inspected the heating system on-site.
Section C	**Electric storage heaters**. This section must be completed if the home contains pre-existing electric storage heaters. The section may be completed by the operative or assessor who has inspected the heating system on-site.
Section D	**Room heaters or no fixed heating.** This section must be completed if the home contains pre-existing room heaters or has no fixed heating. The section may be completed by the operative or assessor who has inspected the heating system on-site.
Section E	**Air source and ground source heat pump.** This section must be completed if the home contains pre-existing heat pump. The section may be completed by the operative or assessor who has inspected the heating system on-site.
Section F	**District heating connections and repairs.** This section is to be completed by the operative who has inspected the heating system on-site.
Section G	**Insulation pre-conditions and off-gas hierarchy**. This section collects information to show how insulation pre-conditions are met and, for off-gas premises, how the heating hierarchy has been applied. The section is mandatory and must be completed for all heating sources assessed. The section contains a declaration which must be signed by the Retrofit Coordinator.[3]
Section H	**Repair/replacement tables**. May be completed by a person who has not inspected the heating source, but the operative who has completed the assessment must sign this form to confirm that Section G has been completed accurately. If agreed with the

[3] If non-PAS measure the relevant DHC operative must complete this section.

	supplier, the quote may be provided in a different format. Please attached all relevant documentation to this form. This section may be completed by a different operative at survey or post-installation stage.
Section I	**Repair cost threshold table and average repair table.** This section is designed to identify when a boiler, electric storage heater or air source heat pump cannot be economically repaired. The tables show information such as maximum repair cost for boilers and electric storage heaters.

A. Operative And Assessment Details

A.	Operative and assessment details	
1	Full Property Address: (Building number/name, Street name, Town, City, County and postcode)	
2	Company name of operative carrying out installation	
3	Operative name (as on the accreditation record)	
4	Operative's accreditation	☐ ECS card ☐ Gas safe ☐ MCS Certified ☐ Other _____ Accreditation number: _____
6	Did premises have a gas meter before 1 April 2022?	☐ Yes: premises is on-gas
		☐ No: heating measures are subject to the off-gas hierarchy (section G2 must also be completed)
7	Is the assessment of repair/replacement completed by the same operative?	☐ Yes ☐ No (Go to 7a and enter details)
a	Name, accreditation and signature (Complete this section only if assessment and the subsequent heating measure installation or repair isn't carried out by the same operative)	Assessor/Operative Full name:
		Assessor/Operative Accreditation and number:
		Assessor/Operative signature:

A.	Operative and assessment details	
8	I confirm that the information contained in sections A, B, C, D, E, F and H of this form is true and accurate. I acknowledge and understand that it is a criminal offence to knowingly make a false declaration and that the offence is punishable by a fine, imprisonment or both.	☐ Yes
9	For First Time Central Heating I confirm that there is no evidence that at any point prior to the installation of the boiler the premises had a central heating system, district heating system, or renewable system nor, immediately prior to the installation, did the premises have a working, efficient electric storage heater(s).	☐ Yes
10	Date of assessment:	_ _ / _ _ / _ _ _
11	Operative signature:	

B. Central Heating Systems[4]

B	Initial Details of assessment	
A boiler must meet certain criteria to determine whether it is broken down and can be replaced, repaired, or upgraded. The first step is to assess whether a boiler is 'non-condensing' or 'broken down'. Please complete below.		
1	Brand and model	
2	Model qualifier	
3	Fuel type	
4	Is the boiler non-condensing, or does it have an efficiency no better than a non-condensing boiler?	☐ Yes (can be replaced as an upgrade – complete B4a and B4b, then the remaining questions in section B are not required.) ☐ No
4a	List the steps to reach the conclusion the boiler is non-condensing or has an efficiency no better than a non-condensing boiler.	
4b	SAP winter seasonal efficiency (%)?	
5	Is the boiler broken down?[5]	☐ Yes ☐ No (can only be replaced by DHC or upgraded to renewables. Remaining questions in section B are not required.)
6	Age of boiler / Year of original commissioning (if available)[6]	

[4] For renewable heating system repairs and replacements, operatives can use the below form to help determine whether or not the system is economically repairable. The funder must be satisfied that enough evidence has been presented to support the determination being made.

[5] A boiler is considered broken down if, when connected to electrical and fuel supplies, it does not respond appropriately to any demand for heat as required by the central heating system or domestic boiler system.

[6] When assessing the boiler age, the estimate d age should be rounded down e.g. a boiler that is 4.7 years old should be assessed as a 4-year-old boiler. Its required only for boiler replacements and repairs.

B	Initial Details of assessment	
7	How did you establish the original age of boiler / year of commissioning? (Tick relevant boxes and provide pictorial evidence)[7]	☐ Boiler name plate ☐ Installation Certificate ☐ Warranty documentation ☐ PCDB final year of manufacture ☐ Other _____
8	Serial number of boiler	
9	Are all parts required for the repair available? (e.g. if parts are available at a reasonable cost and within a reasonable timeframe or if the repair does not require any parts tick 'Yes')	☐ Yes ☐ No, please enter reasons _____ _____
10	Is the actual cost of repair more than the actual cost of a replacement boiler? Complete cost table in section H to determine.	☐ Yes – boiler may be replaced. ☐ No Cost of repair: (Exc. VAT) £ _____ Cost of replacement: (Exc. VAT) £_____
11	Is the actual cost of repair **less than** the maximum cost of repair as identified in the 'Economic Repair Cost Comparison Tables'?[8]	☐ Yes The boiler should be repaired. Please use Section H to provide details of repair undertaken. ☐ No The boiler should be replaced
12	Is it a combination boiler?	☐ Yes ☐ No
13	Are there any other boilers in the property? (Please provide details including location, make, model &serial numbers etc)	

[7] The boiler age can be determined by assessing the following information: the boiler name plate, the installation certificates and warranty documentation and PCDB Final year of manufacture. Customers' declaration about boiler age are not acceptable/valid. Its required only for boiler replacements and repairs.
[8] See Boiler repair cost comparison table in section I.

14. Broken boiler only:	
Once you have identified whether the boiler is 'broken down', you must identify all the possible faults that have caused the boiler to be broken down.	
Boiler Fault List Select the appropriate fault(s) that resulted in the boiler being broken down or not functioning efficiently and **complete all sections of this question**. (Note: this list is not exhaustive. Record any other faults not included in this list under 'Other').	
Corrosion or fouling of the boiler heat exchanger	☐
No boiler ignition	☐
Unstable firing	☐
Any other mechanical or electrical fault	☐
Results of the flue gas analyzer combustion outside boiler manufacturer tolerance	☐
Boiler and system sludge (Sludge alone may not be sufficient grounds to be considered broken in the ECO4 scheme)	☐
Poor flue condition	☐
Primary flow rate unsatisfactory or outside boiler manufacturer tolerance	☐
Primary flow temperature unsatisfactory or outside boiler manufacturer tolerance	☐
For combination boilers only: Unsatisfactory hot water flow rate or temperature which are outside of the manufacturer's specification/tolerance	☐
Boiler external corrosion	☐
Boiler installation is Immediately Dangerous (ID) or At Risk (AR) (Gas Safe definition)	☐
Other: (Provide a detailed description)	
Please write how you identified the failure and any associated symptoms. This may include any tests or checks carried out on the boiler to identify the symptoms. (This information will be used during audit to determine whether the boiler was correctly assessed. Therefore, provide as much information as possible.)	

C. Electric Storage Heaters

C.	Details of assessment (Use form as many times as necessary for the number of ESH in the property)			
1	Total number of ESH/s in the premises	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ Other_____		
2	Enter the relevant number of ESH been assessed eg ESH _1_	**ESH __**	**ESH __**	
3	Brand and Model			
4	ESH serial number (or any other unique identification detail of the ESH)			
5	ESH Responsiveness			
If any ESH has a responsiveness of 0.2 or less, that ESH is inefficient and can only be upgraded[9] or, if home meets FTCH criteria, replaced with FTCH. Remaining questions in section C can be skipped for an inefficient ESH.				
6	Is the ESH broken down?	☐ Yes ☐ No – can only be upgraded by renewables or DHC. Remaining questions in section C can be skipped.	☐ Yes ☐ No - can only be upgraded by renewables or DHC. Remaining questions in section C can be skipped.	
Once you have identified if the ESH is 'broken down', you must identify all the faults that have caused the ESH to be broken down.				
7	**ESH Fault List** - tick if fault is applicable (Note: this list is not exhaustive, please detail any additional faults in 'Other')	ESH __	ESH __	Provide details of how you identified the faults (This information will be used during audit to determine whether the ESH has been correctly assessed. Therefore, please provide as much information as possible.)

[9] Subject to off-gas hierarchy in relevant homes (chapter 5 of the ECO4 Delivery Guidance)

C.	Details of assessment (Use form as many times as necessary for the number of ESH in the property)			
	Example: Tick if fault applicable	✓		Write a detailed explanation
	ESH Fault List - tick if fault is applicable (Note: this list is not exhaustive, please detail any additional faults in 'Other')			
	Damaged thermal fuse or input cut out			
	Failure of storage element(s)			
	Faulty charge control			
	Faulty output control			

C.	Details of assessment (Use form as many times as necessary for the number of ESH in the property)			
	Faulty electronic controller			
	Faulty or broken fan			
	Other (Please provide detailed description)			

Complete to determine whether the broken down ESH can be economically repaired			
		ESH _____	**ESH _____**
8	Age of ESH in years?		
9	State how you have established the age of the ESH?		

C.	Details of assessment (Use form as many times as necessary for the number of ESH in the property)		
10	Does the ESH contain asbestos? (A broken down ESH with asbestos 'cannot be economically repaired')	☐ Yes (If yes ESH can't be economically repaired) ☐ No	☐ Yes (If yes ESH can't be economically repaired) ☐ No
11	Are all parts required for the repair available? (if parts are available at a reasonable cost and within a reasonable timeframe[10] or the repair does not require any parts tick Yes)	☐ Yes ☐ No – ESH can be replaced. Enter details of unavailable parts: _____ _____	☐ Yes ☐ No – ESH can be replaced. Enter details of unavailable parts: _____ _____
12	Is the actual cost of repair more than the actual cost of a replacement ESH? Fill in cost tables in section H.	Cost of repair: (Exc. VAT) £_____ Cost of replacement: (Exc. VAT) £_____ ☐ Yes - ESH can be replaced by HHR ESH, a DHC, upgraded to renewables or, where the home meets the FTCH criteria, FTCH. ☐ No	Cost of repair: (Exc. VAT) £_____ Cost of replacement: (Exc. VAT) £_____ ☐ Yes - ESH can be replaced by HHR ESH, a DHC, upgraded to renewables or, where the home meets the FTCH criteria, FTCH. ☐ No
13	Is the actual cost of repair **less than** the maximum cost of repair as identified in the 'Economic Repair Cost Comparison Table'?[11]	Maximum cost of repair as identified in the 'Economic Repair Cost Comparison Table': (Exc. VAT) £_____ ☐ Yes – ESH can be repaired, replaced by DHC or upgraded to renewables. ☐ No – ESH can be replaced by HHR ESH, a DHC, upgraded to renewables or, where the home meets the FTCH criteria, FTCH.	Maximum cost of repair as identified in the 'Economic Repair Cost Comparison Table': (Exc. VAT) £_____ ☐ Yes – ESH can be repaired, replaced by DHC or upgraded to renewables. ☐ No – ESH can be replaced by HHR ESH, a DHC, upgraded to renewables or, where the home meets the FTCH criteria, FTCH.

[10] A screenshot should be retained to confirm parts were not available within a reasonable timeframe.
[11] See Electric Storage repair cost comparison table in section I.

D. Room Heaters and No Heating

D.	Existing heating source details	
1	Existing pre main heating source	☐ Bottled LPG Room Heaters ☐ Solid Fossil Room Heaters ☐ Gas Fire with Back Boiler[12] ☐ Gas Room Heaters ☐ Electric Room Heaters including direct acting room heaters ☐ No heating present ☐ Other _____
A First Time Central Heating measure may be installed if a property • does not have, and has not previously had, a wet central heating system, and • at no point since 1 April 2022 contained an efficient ESH (SAP responsiveness rating of more than 0.2) that is not broken down or if it is broken down can be economically repaired		

[12] Where the premises contains a back boiler, FTCH may only be installed if the back boiler does not supply a central heating system.

E. Air Source Heat Pump (ASHP)

E.	Existing heating source details	
1	Heat pump details	Brand and model: _____ Model qualifier: _____ Serial number: _____
2	Age of heat pump / year of original commissioning (Tick relevant boxes and provide pictorial evidence)	☐ ASHP name plate ☐ Installation Certificate ☐ Warranty documentation ☐ PCDB final year of manufacture ☐ Other (state below) _____
3	Is the heat pump broken down?	☐ Yes (can only be replaced or upgraded to renewables) ☐ No (Can be repaired if parts are available)
4	Are all parts required for the repair available? (e.g. if parts are available at a reasonable cost and within a reasonable timeframe or if the repair does not require any parts tick 'Yes)	☐ Yes ☐ No, please enter reasons _____ _____
5	Is the actual cost of repair more than the actual cost of a replacement heat pump? Complete cost table in section H to determine.	☐ Yes – heat pump may be replaced. ☐ No Cost of repair: (Exc. VAT) £ _____ Cost of replacement: (Exc. VAT) £_____
6	Is the actual cost of repair less than the maximum cost of repair as identified in the "Economic Repair Cost Comparison Tables"	☐ Yes, the ASHP should be repaired. Please use Section H to provide details of repair undertaken ☐ No, the ASHP should be replaced

E.	Existing heating source details
7	**ASHP Heat Pump Fault[13]**
☐ Corrosion or fouling of the boiler heat exchange ☐ Compressor failure ☐ Expansion valve failure ☐ Fan motor failure ☐ Circulator/Pump failure ☐ Damaged evaporator that affects performance of ASHP ☐ Loss of refrigerant pressure ☐ Controller/PCB fault ☐ External casing damage that affects performance of ASHP ☐ Any other mechanical or electrical fault (please describe below) ☐ ASHP and system sludge (Sludge alone may not be sufficient grounds to be considered broke in the ECO4 scheme) ☐ Primary flow rate unsatisfactory or outside ASHP manufacture tolerance ☐ Primary flow temperature unsatisfactory or outside ASHP manufacturer tolerance ☐ Other (please describe below)	
Other: (Provide a detailed description)	
Please write how you identified the failure and any associated symptoms. This may include any tests or checks carried out on the ASHP to identify the symptoms. (This information will be used during audit to determine whether the ASHP was correctly assessed. Therefore, provide as much information as possible.)	

[13] Select the appropriate fault(s) that resulted in the heat pump being broken down or not functioning efficiently and **complete all sections of this question**. (Note: this list is not exhaustive. Record any other faults not included in this list under 'Other').

F. District Heating Connection (DHC) Measures

F.	Existing heating source details where existing heat source is a DHS		
1	If the pre-main heat source is a DHS, is the existing DHC connected to:	☐ An efficient DHS[14] (Please detail) ☐ An inefficient DHS[15] (Please detail) ☐ N/A	Detail:
2	If the pre-main heat source is a DHS, is the DHC:	☐ Broken, and economically repairable (Please detail) ☐ Broken, and not economically repairable (Please detail) ☐ Working ☐ N/A	Detail:

F.	Details for DHC repairs (only complete for repairs)	
A DHC must meet certain criteria to determine whether it is broken down and can be repaired.		
3	Has the off-gas heating hierarchy been followed?	☐ Yes ☐ No ☐ N/A
4	To evidence that the DHC is broken, identify all faults. Please write how you identified the failure and any associated symptoms. This may include any tests or checks carried out to identify the symptoms. (This information will be used during audit to determine whether the DHC was correctly assessed. Therefore, provide as much information as possible.)	

[14] If yes, and working or economically repairable, a new DHC would not be eligible under ECO4.
[15] If yes, and if the premises is on-gas, then a DHC repair would not be eligible.

G. Insulation Pre-Conditions and Off-Gas Hierarchy

1 Insulation Pre-conditions[16]

Under ECO4, all heating measures including heating controls and solar PV are subject to insulation pre-conditions.

Band E, F and G homes, and band D homes receiving DHC or FTCH: pre-conditions are met if either:

- for any single relevant construction element, b) applies, or
- for all relevant construction elements, a), c) or d) applies

Band D homes except those receiving DHC or FTCH: pre-conditions are met if, for all relevant construction elements, a), b), c), or d) applies.

Construction elements for homes other than mobile homes		SAP bands relevant to:
Exterior Cavity Wall:	☐ a) Pre-existing insulation meets prescribed standards[17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	All
Room In Roof:	☐ a) Pre-existing insulation meets prescribed standards [17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	All
Flat Roof:	☐ a) Pre-existing insulation meets prescribed standards [17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	All

[16] N/A should be entered where the measure is not a measure type to which the minimum insulation requirements apply.

[17] Please refer to ECO4 Guidance: Delivery

Pitched Roof:	☐ a) Pre-existing insulation meets prescribed standards[17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	All
Loft:	☐ a) Pre-existing insulation meets prescribed standards[17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	Band G, F and E. Band D if installing DHC or FTCH
External Solid Wall:	☐ a) Pre-existing insulation meets prescribed standards[17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	Band D except DHC and FTCH
Heat Loss Floor:	☐ a) Pre-existing insulation meets prescribed standards[17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	Band D except DHC and FTCH
Party Cavity Wall:	☐ a) Pre-existing insulation meets prescribed standards[17] ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ d) Construction element not present ☐ e) N/A	Band D except DHC and FTCH

Construction elements for mobile homes		SAP bands relevant to:
Mobile home: wall, roof and floor	☐ a) Insulation equivalent to BS 3632:2015 before project started ☐ b) Installed as part of project ☐ c) Could not be installed due to exemptions ☐ e) N/A	All

2	Off-Gas Heating Hierarchy [18] (This section must be filled in for homes which did not have a gas meter on 1 April 2022 – question A.5)	
Are any heating measures in the off-gas heating hierarchy above the heating measure being installed not possible to install or does an exemption apply?		☐ Yes (Tick relevant boxes below) ☐ No, the measure being installed is from the first level of the off-gas hierarchy
☐ Not reasonably practicable (shown to be not technically feasible and may result in increase of costs)		
☐ Exemption applies	Please explain reason for exemption. _____ _____	
☐ In relation to the installation of equipment for the generation of heat wholly or partly from biomass, the premises are not in a rural area		
☐ The measure is not recommended in the improvement options evaluation report produced as part of the ECO4 project		
☐ No improvement options evaluation report in relation to the premises has been produced at the start of the project and one or more EPC recommendation reports have been issued for the premises; and the measure is not amongst the measures recommended in the most recent EPC recommendation report.		
3	Pre-Insulation and Off-Gas Hierarchy Declaration	

[18] Please see chapter 5 of the ECO4 Delivery Guidance for information on the off-gas heating hierarchy.

I hereby declare that to the best of my knowledge and belief that the information provided above is true and accurate.	☐ Yes
Retrofit Coordinator or DHC Operative name	
Retrofit Coordinator or DHC Operative signature and date:	

H. Repair/Replacement Tables

Repair Quote	
Item	**Cost**
Warranty cost	
Labour estimated for _____ hours at £_____ per hour	
Total excluding VAT	
VAT 20%	
Total	

Replacement Quote	
Item	**Cost**
Warranty cost	
Labour estimated for _____ hours at £_____ per hour	
Total excluding VAT	
VAT 20%	
Total	

I. Repair Cost Threshold Table and Average Repair Table

Repair Cost Tables[19]
These tables provide guidance in determining when a mains gas or oil boiler cannot be economically repaired. Tables 1.1-3.2 show what the maximum repair costs are for boilers and ESH – the tables show the maximum repair costs for boilers and ESHs different types and ages. If the actual cost of repair is higher than the relevant maximum cost, it is considered more economical to replace rather than repair the heating system and as such it is judged that it cannot be economically repaired. The maximum costs are derived from the type of heating, the estimated average installation cost of replacing the heating system, and its age. These costs have been developed in tandem with industry. Table 4 shows representative repair costs for important boiler components to help installers come to an estimate of how much a given repair should cost – installers should keep in mind contingent factors in costs such as regional variations. These are intended as a guide to help installers come to a conclusion of how much they should be charging for a repair of common boiler parts. There are examples of how to use these tables in this document. For broken LPG boilers, operatives should use the relevant mains gas table. For broken DHCs and renewable heating systems, operatives should use the oil combination boiler table. Note that the below tables take into consideration both the costs of the parts themselves and labour. Whilst we are unable to provide separate estimates of labour costs, most boiler repairs for relatively simple issues take 1-2 hours.

[19] Note that all costs shown are exclusive of VAT.

i. Boiler Tables

Table 1.1 Maximum repair cost for mains gas combination boiler	
Age of boiler	Cost
1	£3,492
2	£3,201.60
3	£2,910
4	£2,619.60
5	£2,328
6	£2,037.60
7	£1,746
8	£1,455.60
9	£1,164
10	£873.60
11	£582
12	£291.60
13+	£ nil

Table 1.2 Maximum repair cost for mains gas regular boiler	
Age of boiler	Cost
1	£1,992
2	£1,826.40
3	£1,660
4	£1,494
5	£1,328
6	£1,161.60
7	£996
8	£830.40
9	£664
10	£498
11	£332
12	£165.60
13+	£ nil

Table 2.1 Maximum repair cost for oil combination boiler	
Age of boiler	Cost
1	£5,304
2	£4,862.40
3	£4,421
4	£3,979.20
5	£3,538
6	£3,096
7	£2,654
8	£2,212.80
9	£1,771
10	£1,329.60
11	£888
12	£446.40
13+	£ nil

Table 2.2 Maximum repair cost for oil regular boiler	
Age of boiler	Cost
1	£2,304
2	£2,112
3	£1,920
4	£1,728
5	£1,536
6	£1,344
7	£1,152
8	£960
9	£768
10	£576
11	£384
12	£192
13+	£ nil

Example of how to use these tables:

Boiler type: Mains gas,
Regular
Age: 4 years

If boiler repair work costs over £1,494, this boiler can be replaced. If the boiler repair work costs less than £1,494, boiler repair should be carried out.

Age of boiler	
1	£1,992
2	£1,826.40
3	£1,660
4	£1,494
5	£1,328
6	£1,161.60
7	£996
8	£830.40
9	£664
10	£498
11	£332
12	£165.60
13+	£ nil

Average repair cost of boiler components			
Boiler part	**Average cost**	**Boiler part**	**Average cost**
Air pressure switch	£160	Diverter valve	£240
Ignition	£140	Heat exchanger	£330
Timer	£70	Pump	£200
Thermocouple	£80	Pressure relief valve	£95
Overheat thermostat	£95	Gas valve	£210
Burner	£100	Printed circuit board	£240
Automatic air vent	£90	Fan	£235
Flue	£125	Expansion vessel	£230

ii. Electric Storage Heater Tables

Example of how to use this table:

ESH type: Fan storage heater
Age: 6 years

If ESH repair work costs over £715, this ESH can be replaced. If the ESH repair work costs less than £715, ESH repair should be carried out.

Go through this process for each ESH being assessed in a given property.

Table 3.2 Maximum repair cost for fan storage/high heat retention storage heater

Age of boiler	Cost
1-4	£858
5	£787.20
6	£715
7	£643.20
8	£572
9	£500.40
10	£430
11	£357.60
12	£286
13	£214.80

iii. Heat Pump Tables

Table 4.1 Maximum repair cost for air source heat pump	
Age of boiler	Cost
1	£10,233.3
2	£9,551.1
3	£8,868.9
4	£8,186.6
5	£7,504.4
6	£6,822.2
7	£6,140.0
8	£5,457.8
9	£4,775.5
10	£4,093.3
11	£3,411.1
12	£2,728.9
13	£2,046.7
14	£1,364.4
15	£682.2
16+	£Nil

Example of how to use this table:

Heat pump type: Air source heat pump

Age: 10 years

If ASHP repair work costs over £4,093.30, this ASHP can be replaced. If the ASHP repair work costs less than £4,093.30, then ASHP repair work should be carried out unless the actual cost of repair is greater than the actual quoted cost of replacing the ASHP.

Table 4.1 Maximum repair cost for air source heat pump	
Age of boiler	Cost
1	£10,233.3
2	£9,551.1
3	£8,868.9
4	£8,186.6
5	£7,504.4
6	£6,822.2
7	£6,140.0
8	£5,457.8
9	£4,775.5
10	£4,093.3
11	£3,411.1
12	£2,728.9
13	£2,046.7
14	£1,364.4
15	£682.2
16+	£Nil