Energy Companies Obligation (ECO): Technical Monitoring Questions

Updated on 07/05/2014

This version of the questions must be used for all ECO technical monitoring conducted after 1 April 2014. Appendix 1 covers the changes made in this version of the questions.

Under the Energy Companies Obligation (ECO) suppliers must instruct suitably qualified independent agents to carry out technical monitoring on a sample of ECO measures that they have installed.

This document lists the questions to be used during ECO technical monitoring (TM). Ofgem have developed the questions in conjunction with industry and suppliers. The questions must be used for all ECO technical monitoring conducted after 1 April 2014. However, suppliers may decide to use them before this date. For further details on the requirements of technical monitoring, refer to chapter 13 of the Energy Companies Obligation (ECO): Guidance for Suppliers[1].

ECO technical monitoring is split into three sections:

Scoring questions (compliance): Make sure that the measure has been installed in accordance with ECO guidelines and legislation. This section also ensures that the core fields of SAP/ RdSAP have been completed correctly and are accurate. All scoring questions for all measure types are to be monitored at stage 3 only. TM agents do not need to complete the scoring questions during stage 1 and stage 2 inspections.

Competency questions: Ensure that the operatives on site meet the required competency levels for the work they are undertaking. This section is applicable only to pre- and mid- install inspections.

Installation questions (carbon/cost): Ensure that the measure has been installed in accordance with the relevant standards. One of three installation stages should be completed for every measure inspected:

- Stage 1 to be used at the pre-installation/ preparatory works stage.
- Stage 2 to be used at the mid-installation stage.
- Stage 3 to be used at the post-installation stage.

Where all three installation stages are applicable to a measure (e.g. for external wall insulation, flat roof insulation, internal wall insulation and under floor insulation), we recommend splitting the monitoring:

- 25% of monitoring should occur at stage 1.
- 50% of monitoring should occur at stage 2.
- 25% of monitoring should occur at stage 3.

Where only installation stages 2 and 3 are applicable to a measure (e.g. for room in roof insulation), we recommend this monitoring split:

[1] https://www.ofgem.gov.uk/ofgem-publications/75775/energycompaniesobligationecoguidanceforsuppliers-version11.pdf

- 60% of monitoring should occur at stage 2.
- 40% of monitoring should occur at stage 3.

Suppliers may use their own version of the forms and add additional questions if required, as long as all our questions remain.

What to do if an agent records a measure as "Fail"

The agent who completes the technical monitoring questions for a measure must record whether the measure is a "Pass" or "Fail". If the measure is a fail the agent must also record each question (and its number) against which the measure has failed.

In most cases you will (for the purpose of claiming savings) notify us of completion of a measure that has failed. In this case you must report to us your response to each Fail. Each quarter we will send you a report ('Responding to TM Fails') summarising the fails reported in the previous quarter. You must complete the report by telling us what you have done in response to each fail.

You must return 'Responding to TM Fails' report must be returned to us along with the technical monitoring results of the last quarter.

Your response to a fail will depend on which question(s) the fail has been recorded against. This will fall into one of the following three categories. A single measure may fail under more than one category in which case you will need to respond to each failure separately.

'Fail' against a question about a standard of installation or competency (ie PAS 2030 or building regulations)

You may choose to remedy the fail and so avoid losing savings for the measure. If you choose to do remedial work, you should inspect the installation again after the work is completed. An installation fail should be remedied within two months of the date of technical monitoring. A competency fail should be remedied before the installation is completed. You should confirm completion of remedial work in the 'Responding to TM Fails' report. If you are unable to complete remedial work, please explain why.

'Fail' against a question about the inputs to a SAP/RdSAP calculation

You must recalculate the savings using the correct input(s). Use the 'Responding to TM Fails' report to tell us whether the notified savings remain correct or need changing. If there's a change, we may ask you to edit your notification of that measure.

'Fail' against a question about information in the monthly notification of a measure

Some questions require an agent to confirm a matter that has been the subject of notification. For example, an agent who assesses hard-to-treat cavity wall insulation will have to judge whether the cavity meets the statutory definition of a hard-to-treat cavity. Where an agent records a fail against such a question, you should report the error in notification to us using the 'Responding to TM Fails' report. You may then have to edit the notification.

Disputing a fail

You may dispute a TM agent's finding and wish to correct it rather than take one of the actions described above. If so, please record this in the comments box in the 'Responding to TM Fails' report and, separately, contact us about the matter.

What to do if an agent finds that a notified measure has not been installed

Please report this to the ECO Fraud Prevention and Audit team.

Contact us at eco@ofgem.gov.uk where there is any doubt over the outcome of a question.

Explanatory notes – scoring questions

The scoring questions are based on SAP and RdSAP input data fields. Therefore, technical monitoring agents should verify the characteristics of the property by matching it with the corresponding SAP/RdSAP input data field. The following notes are based on SAP 2009 and its Appendix S version 9.91. The aim of these notes is to provide guidance on the scoring questions. They do not intend to strictly define any terms.

Technical monitoring agents are not expected to dismantle or remove any part of the property or appliances to verify the input data. The scoring questions ask the technical monitoring agents to verify whether a particular characteristic of the property 'matches' the SAP or RdSAP calculation. Technical monitoring agents are expected to use their best professional judgement to decide whether the data used in the calculation is an exact or best representation of the feature of the property.

All scoring questions for all measure types are to be monitored at stage 3 only. Questions 13-16 are applicable only if RdSAP has been used to score the measure. This is clearly labelled on the questions.

Floor Area (SAP and RdSAP): The RdSAP input data file will provide floor dimensions for each storey. The SAP input data file will have floor dimensions for each storey as well as the total floor area. For consistency, please check the floor area for each storey. If the variation between the SAP/RdSAP input data for floor area and the measurement by the technical monitoring agent is less than 10% then this can be recorded as a 'match'.

Roof type (RdSAP only): In RdSAP the options for roof types are flat roof, pitched roof with access to loft, pitched roof with no access to loft and other dwelling above (very commonly used in mid-floor flats). The technical monitoring agent needs to check whether the description of roof type in the RdSAP input data file matches the property.

Loft insulation (RdSAP only): In RdSAP the options available for existing loft insulation are none, unknown, 12mm, 25mm, 50mm, 75mm, 100mm, 150mm, 200mm, 250mm and 300mm or more. If the existing insulation thickness falls between two of these categories, the lowest thickness option should be recorded. For example, if the insulation thickness is 270mm, it should be recorded as 250mm. 'Unknown' should be selected only as a last resort, for example when the loft cannot be accessed.

Wall insulation (RdSAP only): Includes type of wall insulation. The options available in RdSAP are filled cavity, as built (which means the cavity wall is built as per the requirements of the building regulations at the time of construction), external insulation, internal insulation, filled cavity + external, filled cavity + internal, and unknown. 'Unknown' should be selected only when the wall insulation cannot be determined, for example when it looks different from any documentary evidence available for the insulation.

Main heating type and system description (SAP and RdSAP): The technical monitoring agent should verify all SAP/RdSAP information relating to the heating system. This means whether the system includes boiler or storage heaters, system model name, boiler type etc. If there is more than one main heating system in the property then these checks should be performed on all systems. This does not include checking systems recorded as secondary heating systems in SAP/RdSAP calculations.

Percentage of measure installed (SAP and RdSAP): If the variation between the SAP/RdSAP input data and the measurement by the technical monitoring agent is less than 10% then this can be recorded as a 'match'.

Summary table of monitoring required for each measure type

Measure type	Scoring questions (stage 3 only)	Competency questions	Stage 1 (pre install) questions	Stage 2 (mid install) questions	Stage 3 (post install) questions
Boiler installation	✓	n/a	n/a	n/a	✓
Boiler repair	✓	n/a	n/a	n/a	✓
Heating controls	✓	n/a	n/a	n/a	✓
Cavity wall insulation	✓	n/a	n/a	n/a	✓
Draught proofing	✓	n/a	n/a	n/a	✓
Electric storage heaters	✓	n/a	n/a	n/a	✓
External wall insulation	✓	Only if stage 1 or 2 completed	For 25% of inspections	For 50% of inspections	For 25% of inspections
Flat roof insulation	✓	Only if stage 1 or 2 completed	For 25% of inspections	For 50% of inspections	For 25% of inspections
Glazing	✓	n/a	n/a	n/a	✓
Hard-to-treat cavity wall insulation	✓	Only if stage 1 or 2 completed	See supplementary guidance for HTTC[2] for **additional** 5% monitoring details		✓
Hot water cylinder insulation	✓	n/a	n/a	n/a	✓
Internal wall insulation	✓	Only if stage 1 or 2 completed	For 25% of inspections	For 50% of inspections	For 25% of inspections
Loft insulation	✓	n/a	n/a	n/a	✓
Room in roof insulation	✓	Only if stage 2 completed	n/a	For 60% of inspections	For 40% of inspections
Under floor insulation	✓	Only if stage 1 or 2 completed	For 25% of inspections	For 50% of inspections	For 25% of inspections

[2] https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-supplementary-guidance-hard-treat-cavity-wall-insulation

ECO Technical Monitoring

Boiler Replacement ☐ Boiler Repair ☐

Stage 3 (post install)

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____ Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No

10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated using RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-20 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Installation Questions

21) Does the make of the new boiler match SAP/ RdSAP calculations? ☐ Yes ☐ No

22) Does the model of the new boiler match SAP/ RdSAP calculations? ☐ Yes ☐ No

23) Is the boiler connected to a functioning domestic central heating (and, if applicable, hot water) system? ☐ Yes ☐ No

24) Does the efficiency of the new boiler match SAP/ RdSAP calculations? ☐ Yes ☐ No

25) Where a new cylinder has been installed, is it of appropriate size? ☐ Yes ☐ No ☐ N/A

26) Are the water pipes connected to the cylinder insulated? ☐ Yes ☐ No ☐ N/A

27) Does the occupant confirm they know how to use the new boiler? ☐ Yes ☐ No ☐ N/A

28) Is all reinstatement work to an acceptable standard? ☐ Yes ☐ No ☐ N/A

Comments

Comments must be provided where a No, N/A or Not known response is given.

References

- PAS 2030:2012
- Gas Safety (Installation and Use) Regulations 1998
- Domestic heating by gas: boiler systems – guidance for installers and specifiers (Energy Saving Trust)

ECO Technical Monitoring
Cavity Wall Insulation ☐
Stage 3 (post installation)

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated using RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-22 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No

22) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

Installation Questions

23) Material used: ☐ Mineral wool ☐ Grey Bead ☐ White Bead ☐ Foam ☐ Other _____

24) Is the insulation material suitable for use with the property's exposure level to wind driven rain? ☐ Yes ☐ No

25) Is the form of construction and condition of the property suitable for the material being installed? ☐ Yes ☐ No

26) Does the drilling pattern ensure an even distribution of material, and conform to the appropriate materials compliance certificate? ☐ Yes ☐ No

27) Have all injection holes been made good? ☐ Yes ☐ No

28) Are cavity brushes fitted where required? ☐ Yes ☐ No ☐ N/A

Comments

Comments must be provided where a No, N/A, Unable to validate or Not known response is given.

ECO Technical Monitoring
Draught Proofing ☐
Stage 3 (post installation)

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-22 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No

22) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

Installation Questions

23) Has the draught proofing been securely fixed leaving all doors and windows fully operational? ☐ Yes ☐ No

24) Are all newly treated windows and doors fully operational? ☐ Yes ☐ No

Comments

Comments must be provided where a No, N/A, Unable to validate or Not known response is given.

References

- PAS2030-1012 Edition2 Annex B2 Draught proofing
- Energy Saving Trust CE83 Energy Efficient Refurbishment of Existing Dwellings

ECO Technical Monitoring
Electric Storage Heaters
Stage 3 (post installation)

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-20 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Installation Questions

21) Have storage heaters been installed in the rooms specified in the manufacturers/ system designers instructions and/or the pre-installation survey instructions? ☐ Yes ☐ No

22) Is there an Economy 7 or equivalent meter installed at the premises? ☐ Yes ☐ No

23) Are all storage heaters fitted with an automatic charge control? ☐ Yes ☐ No

24) Are all storage heaters fitted with a heat output control? ☐ Yes ☐ No

25) Where a direct acting convector heater is incorporated is it controlled by a thermostat? ☐ Yes ☐ No ☐ N/A

26) Is the fan on fan-assisted storage heaters controlled by a thermostat? ☐ Yes ☐ No ☐ N/A

27) Does the householder confirm that they know how to use the controls? ☐ Yes ☐ No

Comments

Comments must be provided where a No, N/A or Not known response is given.

References

- PAS 2030:2012 Edition 2 Annex D1 Electric Storage Heaters
- Energy Saving Trust – Improving electric systems
- The Green Deal Directory – Electric Storage Heaters

ECO Technical Monitoring

External Wall Insulation

Stage: 1 (pre-installation/ preparatory works) ☐ 2 (mid-installation) ☐ 3 (post-installation) ☐

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP (Stage 3).

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-22 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No

22) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

23) What is the insulation material used (carbon stage 2 only)?
- ☐ Expanded polystyrene and render
- ☐ Extruded polystyrene and render
- ☐ Mineral wool slab and render
- ☐ Urethane foam and render
- ☐ Other (please specify) _____

24) Has the pre-installation survey been completed correctly (applicable to stage 1 and 2 carbon only)? ☐ Yes ☐ No ☐ Not known

Competency Questions

25) Name of installation company: _____ ☐ Not known

26) Is there a carded operative at the site that meets the competency requirements for the measure being installed (applicable to stage 2 carbon only)? ☐ Yes ☐ No ☐ Not known

27) Is the measure/system being installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement (applicable to stage 2 carbon only)?
☐ Yes ☐ No

Installation Questions

Stage 1

28) What is the nature of the original wall? ☐ Cavity ☐ Solid

29) What is the thickness of the original wall? ☐ <220mm ☐ 220mm – 350mm ☐ >350mm

30) What is the construction of the original wall? ☐ Stone ☐ Block ☐ Brick ☐ Timber Frame ☐ Steel Frame ☐ Concrete

31) Has all preparatory work been completed as specified in the project plan? ☐ Yes ☐ No

Stage 2

32) Is the type of insulation being installed as specified within the project plan? ☐ Yes ☐ No

33) Is the thickness of insulation being installed as specified within the project plan? ☐ Yes ☐ No

34) Are insulation boards tightly butted together in a break bond pattern? ☐ Yes ☐ No

35) Are insulation boards cut at right angles to allow tight butting? ☐ Yes ☐ No

36) Are only full or half insulation boards fitted at corners in an interlocking pattern? ☐ Yes ☐ No

37) Are all insulation boards undamaged? ☐ Yes ☐ No

38) Have cavities within cavity walls been filled or closed off to prevent an air path behind the insulation board?
☐ Yes ☐ No ☐ N/A

39) Have gaps been sealed to prevent an air path between the insulation board and substrate? ☐ Yes ☐ No

40) Is the detailing of insulation boards around external fitments as specified in the project plan (e.g. meter boxes)?
☐ Yes ☐ No

41) Are the insulation boards bonded and/or anchored as specified in the project plan? ☐ Yes ☐ No

Stage 3

42) Where services have penetrated the insulation board have these been sealed appropriately? ☐ Yes ☐ No ☐ N/A

43) Has the finishing coat/cladding been applied as specified in the project plan and the installation water tight?
☐ Yes ☐ No ☐ Unable to validate

Comments

Comments must be provided where a No, N/A, Unable to validate or Not known response is given.

ECO Technical Monitoring

Flat Roof Insulation

Stage: 1 (pre-installation/ preparatory works) ☐ 2 (mid-installation) ☐ 3 (post-installation) ☐

Scoring Questions

1) Reference: _____

2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____

6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No

10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations?
☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP (Stage 3).

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

17) Does the area of the flat roof that has been insulated match the RdSAP calculations? ☐ Yes ☐ No

18) Does the thickness of the insulation installed match the RdSAP calculations? ☐ Yes ☐ No

Questions 19-24 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

19) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

22) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

23) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No

24) If less than 100% of the measure installed, does the reason match the reason provided to the supplier?
☐ Yes ☐ No ☐ Unable to validate

25) What type of insulation has been used (carbon stage 2 only)? ☐ Polyurethane ☐ Expanded Polystyrene ☐ PIR ☐ Extruded Polystyrene ☐ Phenolic foam ☐ Wool / Fibre ☐ Other _____

26) Has the pre-installation survey been completed correctly (only applicable to stage 1 and 2 carbon)? ☐ Yes ☐ No ☐ Not known

Competency Questions

27) Name of installation company: _____ ☐ Not known

28) Is there a carded operative at the site that meets the competency requirements for the measure being installed? (applicable to stage 2 carbon only) ☐ Yes ☐ No ☐ N/A

29) Is the measure/system being installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement (applicable to stage 2 carbon only)? ☐ Yes ☐ No

Installation Questions

Stage 1

30) What is the construction of the original roof deck? ☐ Concrete ☐ Timber ☐ Other _____

31) Has the existing wall been built up to the underside of the new insulated roof deck? ☐ Yes ☐ No ☐ N/A

Stage 2

32) Is the type of insulation being installed as specified within the project plan? ☐ Yes ☐ No

33) Is the thickness of insulation being installed as specified within the project plan? ☐ Yes ☐ No

34) Are boards butted together with no gaps at abutments? ☐ Yes ☐ No

35) Has a 300mm insulation 'Up stand' been installed from the bottom surface of the horizontal layer around the perimeter of the roof on the internal façade of any parapet or penetrating service riser? ☐ Yes ☐ No ☐ N/A

36) Have existing cavity trays been raised and/or new ones provided at abutment of roof and wall (cavity wall only)? ☐ Yes ☐ No ☐ N/A

Stage 3

37) Has a waterproof membrane been applied over the whole of the insulated area, including 'Up Stands' after the laying of the insulation board? ☐ Yes ☐ No

Comments

Comments must be provided where a No, N/A, Unable to validate or Not known response is given.

References

- PAS 2030:2012 Edition 2 Annex B5 Flat Roof Insulation
- Kingspan Insulation – Domestic Refurbishment March 2012
- Celotex Insulation – The Celotex Handy Guide September 2011
- Part L1B of the Building Regulations in England and Wales
- Section 6 of the Domestic Handbook of the Building Regulations in Scotland

ECO Technical Monitoring

Glazing ☐

Carbon Stage: 3 (post-installation)

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-23 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No

22) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

23) Does the area of windows and doors that have been replaced match the SAP/ RdSAP calculations? ☐ Yes ☐ No

24) Have the frames of the windows and doors also been replaced? ☐ Yes ☐ No

Installation Questions

25) What is the form of the glazing units? ☐ secondary ☐ double ☐ triple

26) Have all windows and doors in the premises that haven't been treated before now been treated? ☐ Yes ☐ No

Comments

Comments must be provided where a No, N/A or Not known response is given.

References

PAS 2030:2012 Edition 2 Annex B3 Energy efficient glazing and doors

ECO Technical Monitoring

Hard to Treat Cavity Wall Insulation

Carbon Stage: 1 (pre-installation) ☐ 2 (mid-installation) ☐ 3 (post installation) ☐

Scoring Questions

1) Reference: _____

2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP (Stage 3).

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-22 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No
22) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

Compliance

23) Is the cavity hard to treat, as defined by the ECO guidance? ☐ Yes ☐ No ☐ Unable to validate (option available at stage 3 only)

24) Type of Cavity (carbon stage 1 and 2 only):

- ☐ Standard
- ☐ Sub 50mm If yes, what is the width of the cavity? _____
- ☐ 3-storey + If yes, confirm number of storeys _____
- ☐ Substantial remedial work required _____
  If yes, do the remedial works match that stated in the chartered surveyor report ☐ Yes ☐ No
- ☐ Metal frame
- ☐ Prefabricated Concrete
- ☐ Random Stone /Uneven Cavity
- ☐ Unsuitable to insulate with standard insulation materials or techniques

25) Has the hard to treat cavity wall been treated with a cavity wall insulation or a solid wall insulation solution?
☐ Cavity wall insulation ☐ Internal wall insulation ☐ External wall insulation

26) Has the pre-installation survey been completed correctly (Only applicable to carbon stage 1 and 2)?
☐ Yes ☐ No ☐ Not known

Competency Questions

27) Name of installation company: _____ ☐ Not known

28) Is there a carded operative at the site that meets the competency requirements for the measure being installed (Only applicable to carbon stage 2)? ☐ Yes ☐ No ☐ Not known

29) Has the measure/ system been installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement (applicable to stage 2 carbon only)?
☐ Yes ☐ No

Installation Questions

Stage 1 (Narrow, remedial and non-standard materials/techniques cavities only)

30) Has all preparatory work been completed as specified in the project plan? ☐ Yes ☐ No

Stage 2 and 3 (HTTC with cavity wall insulation solution)

31) Material used/ to be used: ☐ Mineral wool ☐ Grey Bead ☐ White Bead ☐ Foam ☐ Other _____
32) Is the insulation material suitable for use with the property's exposure level to wind driven rain? ☐ Yes ☐ No
33) Is the form of construction and condition of the property suitable for the material being installed? ☐ Yes ☐ No
34) Does the drilling pattern ensure an even distribution of material, and conform to the appropriate materials compliance certificate? (stage 3 carbon only) ☐ Yes ☐ No
35) Have all injection holes been made good (stage 3 carbon only)? ☐ Yes ☐ No
36) Are cavity brushes fitted where required? ☐ Yes ☐ No ☐ N/A

Stage 2 and 3 (HTTC with external solid wall insulation solution)

Stage 2

37) Is the type of insulation being installed as specified within the project plan? ☐ Yes ☐ No
38) Is the thickness of insulation being installed as specified within the project plan? ☐ Yes ☐ No
39) Are insulation boards tightly butted together in a break bond pattern? ☐ Yes ☐ No
40) Are insulation boards cut at right angles to allow tight butting? ☐ Yes ☐ No
41) Are only full or half insulation boards fitted at corners in an interlocking pattern? ☐ Yes ☐ No
42) Are all insulation boards undamaged? ☐ Yes ☐ No
43) Have cavities within cavity walls been filled or closed off to prevent an air path behind the insulation board?
☐ Yes ☐ No
44) Is the detailing of insulation boards around external fitments as specified in the project plan (e.g. meter boxes)?
☐ Yes ☐ No
45) Are the insulation boards bonded and/or anchored as specified in the project plan? ☐ Yes ☐ No

Stage 3

46) Where services have penetrated the insulation board have these been sealed appropriately? ☐ Yes ☐ No ☐ N/A
47) Has the finishing coat/cladding been applied as specified in the project plan and the installation water tight?
☐ Yes ☐ No ☐ Unable to validate

Stage 2 and 3 (HTTC with internal solid wall insulation solution)

Stage 2

48) Is the type of insulation being installed as specified within the project plan? ☐ Yes ☐ No
49) Is the thickness of insulation being installed as specified within the project plan? ☐ Yes ☐ No
50) Has the full thickness of the insulation been installed to all available areas? ☐ Yes ☐ No
51) Have all gaps behind the new insulation been sealed to prevent the circulation of cold air if applicable?
☐ Yes ☐ No ☐ N/A

Stage 3

52) Is the insulation sealed around all adjoining boards, walls, ceilings and floors? ☐ Yes ☐ No
53) Is the insulation continued 400mm along all party and solid partition walls? ☐ Yes ☐ No
54) Has the insulation been continued into the inter floor void? ☐ Yes ☐ No
55) Where services have penetrated the vapour control layer have these been sealed appropriately? ☐ Yes ☐ No
56) If the insulation is suspended timber, is the insulated dry lining bedded on a strip of pre-compressed expanding foam nailed to the floor? ☐ Yes ☐ No

Comments

Comments must be provided where a No, N/A or Not known response is given.

ECO Technical Monitoring
Heating Controls ☐
Stage: 3 (post installation)

Scoring Questions

1) Reference: _____

2) Installation date (if known): _____ Inspection date: _____ Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-20 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type and match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Installation Questions

21) What are the heating controls installed and numbers?
☐ Programmer _____
☐ Room thermostats _____
☐ TRVs _____

22) Does the occupant confirm they know how to use the new controls? ☐ Yes ☐ No ☐ N/A

Comments

Comments must be provided where a No, N/A or Not known response is given.

References

- PAS 2030:2012
- Gas Safety (Installation and Use) Regulations 1998
- Domestic heating by gas: boiler systems – guidance for installers and specifiers (Energy Saving Trust)

ECO Technical Monitoring
Hot Water Cylinder Insulation
Stage: 3 (post-installation)

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-20 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Installation Questions (stage 3 only)

21) Does the hot water cylinder insulation jacket comply with BS5615:1985? ☐ Yes ☐ No

22) Has the insulating jacket been securely fixed to the cylinder? ☐ Yes ☐ No

23) Are all parts of the cylinder covered by the insulating jacket without gaps? ☐ Yes ☐ No

24) Have required hot water pipes been insulated in accordance with DCLG 'Domestic Building Services Compliance guide'? ☐ Yes ☐ No

Comments

Comments must be provided where a No, N/A or Not known response is given.

References

- PAS 2030:2012 Edition 2 Annex C5 Heating System Insulation (ducting pipes and cylinders)
- DCLG - Domestic Building Services Compliance guide

ECO Technical Monitoring

Internal Wall Insulation

Stage: 1 (pre-installation/ preparatory works) ☐ 2 (mid-installation) ☐ 3 (post-installation) ☐

Scoring Questions

1) Reference: _____

2) Installation date (if known): _____ Inspection date: _____ Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-18 should be answered only where the ECO savings were calculated used RdSAP (Stage 3).

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No
17) Does the thickness of the insulation installed RdSAP calculations? ☐ Yes ☐ No

18) Does the material of the insulation installed RdSAP calculations? ☐ Yes ☐ No

Questions 19-25 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

19) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

22) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

23) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No
24) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

25) Has the pre-installation survey been completed correctly (only applicable to stage 1 and 2 carbon)? ☐ Yes ☐ No ☐ Not known

Competency Questions

26) Name of installation company: _____ ☐ Not known

27) Is there a carded operative at the site that meets the competency requirements for the measure being installed (applicable to stage 2 carbon only)? ☐ Yes ☐ No ☐ N/A

28) Is the measure/system being installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement (applicable to stage 2 carbon only)?
☐ Yes ☐ No

Installation Questions

Stage 1

29) What is the nature of the original wall? ☐ Cavity ☐ Solid

30) What is the thickness of the original wall? ☐ <220mm ☐ 220mm – 350mm ☐ >350mm

31) What is the construction of the original wall? ☐ Stone ☐ Block ☐ Brick ☐ Timber Frame ☐ Steel Frame ☐ Concrete

32) Has all preparatory work been completed as specified in the project plan? ☐ Yes ☐ No

Stage 2

33) Is the type of insulation being installed as specified within the project plan? ☐ Yes ☐ No

34) Is the thickness of insulation being installed as specified within the project plan? ☐ Yes ☐ No

35) Has the full thickness of the insulation been installed to all available areas? ☐ Yes ☐ No

36) Have all gaps behind the new insulation been sealed to prevent the circulation of cold air if applicable?
☐ Yes ☐ No ☐ N/A

37) Has the insulation been continued into the inter floor void? ☐ Yes ☐ No ☐ N/A

38) Where services have penetrated the vapour control layer have these been sealed appropriately? ☐ Yes ☐ No

39) If the floor is suspended timber, is the insulated dry lining bedded on a strip of pre-compressed expanding foam nailed to the floor? ☐ Yes ☐ No ☐ N/A

Stage 3

40) Is the insulation sealed around all adjoining boards, walls, ceilings and floors? ☐ Yes ☐ No

41) Is the insulation continued 400mm along all party and solid partition walls? ☐ Yes ☐ No ☐ Other*

*Other is applicable only where there is documentary evidence suggesting no insulation is required or less than 400mm insulation is required. The TM Agent must check the evidence before selecting this option. Please provide details in the comments box below.

Comments

Comments must be provided where a No, N/A, Other or Not known response is given.

References

- PAS 2030:2012 Edition 2 Annex B8 Internal Wall Insulation
- Energy Saving Trust – Internal wall insulation in existing housing – a guide for specifiers and contractors
- CITB – A trainer resource manual for insulation and building treatments – Introduction to internal wall insulation
- British Gypsum – Guide to domestic building renovations

ECO Technical Monitoring

Loft Insulation ☐

Stage: 3 (post-installation)

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP.

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP.

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-22 should be answered only where the ECO savings were calculated using SAP or RdSAP.

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No
22) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

Installation Questions

23) Thickness of original material (mm)? ☐ 0 ☐ 25 ☐ 50 ☐ 70 ☐ 100 ☐ 150
24) Thickness of material added (mm)? ☐ 100 ☐ 150 ☐ 170 ☐ 200 ☐ 250 ☐ 270
25) Total thickness of loft insulation (mm)? ☐ 250 ☐ 270 Other (please specify) _____
26) Is the type of insulation installed as specified within the project plan? ☐ Yes ☐ No ☐ Unable to validate

27) Is the thickness of insulation installed as specified within the project plan? ☐ Yes ☐ No ☐ Unable to validate

28) Has insulation been close butted? ☐ Yes ☐ No

29) Has insulation been cross laid to prevent cold bridging? ☐ Yes ☐ No ☐ N/A

30) Has the loft hatch been properly insulated as specified in PAS 2030:2012? ☐ Yes ☐ No ☐ N/A

31) Has the loft hatch been properly draught proofed as specified in PAS 2030:2012? ☐ Yes ☐ No ☐ N/A

32) Where down lighters have been fitted through the existing ceiling, have any measures been taken to prevent air leakage around down lights into roof void? ☐ Yes ☐ No ☐ N/A

Comments

Comments must be provided where a No, N/A, Unable to validate or Not known response is given.

References

- PAS 2030:2012 Edition 2 Annex B9 Loft Insulation
- CITB General requirements & guidance for the installation of loft insulation

ECO Technical Monitoring

Room in Roof

Stage: 2 (mid-installation) ☐ 3 (post-installation) ☐

Scoring Questions

1) Reference: _____
2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP (Stage 3).

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No
14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

Questions 17-22 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

17) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

18) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No
19) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No
22) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

23) What insulation has been used (carbon stage 2 only)? ☐ Polyurethane ☐ Expanded Polystyrene ☐ PIR ☐ Extruded Polystyrene ☐ Phenolic Foam ☐ Wool / Fibre ☐ Other _____
24) Thickness of insulation installed (carbon stage 2 only)? _____mm ☐ N/A

25) Is this a room in roof as defined as SAP/ RdSAP? ☐ Yes ☐ No
26) Has the pre-installation survey been completed correctly (only applicable to stage 2 carbon only)? ☐ Yes ☐ No ☐ Not known

Competency Questions

27) Name of installation company : _____ ☐ Not known

28) Is there a carded operative at the site that meets the competency requirements for the measure being installed (applicable to carbon stage 2 only)? ☐ Yes ☐ No ☐ N/A

29) Is the measure/system installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement (applicable to stage 2 carbon only)? ☐ Yes ☐ No

Installation Questions (Stage 2 or Stage 3)

30) Is the type of insulation being installed as specified within the project plan? ☐ Yes ☐ No

31) Is the thickness of insulation being installed as specified within the project plan? ☐ Yes ☐ No

32) Has insulation been installed to all stud walls within the room in the roof? ☐ Yes ☐ No

33) Has insulation been installed to all sloping ceilings within the room in the roof? ☐ Yes ☐ No

34) Has insulation been installed to the ceiling within the room in the roof? ☐ Yes ☐ No

35) Has insulation been installed to those areas external to the room in the roof, but within the roof space? ☐ Yes ☐ No ☐ N/A

36) Where down lighters have been fitted through the existing ceiling, have any measures been taken to prevent air leakage around down lights into roof void? ☐ Yes ☐ No ☐ N/A

Comments

Comments must be provided where a No, N/A, Unable to validate or Not known response is given.

References

PAS 2030:2012 Edition 2 Annex B10 Pitched Roof Insulation

ECO Technical Monitoring

Under Floor Insulation

Stage: 1 (pre-installation/ preparatory works) ☐ 2 (mid-installation) ☐ 3 (post-installation) ☐

Scoring Questions

1) Reference: _____

2) Installation date (if known): _____ Inspection date: _____Date of remedial works (if applicable): _____
3) Date of handover (if applicable): _____
4) Technical monitoring inspector and company: _____

5) Measure: ☐ Pass ☐ Fail If fail, please provide question number(s): _____
6) If the supplier has claimed an associated measure, is it present at the property? ☐ Yes ☐ No ☐ Not known
   If yes, measure type: _____

7) Customer name: _____
8) Building name or number: _____ Street name: _____ Town: _____ Postcode: _____

Questions 9-12 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

9) Was the measure installed as part of construction of new dwelling/ extension? ☐ Yes ☐ No
10) If yes, does the SAP/ RdSAP calculation only calculate the part of the measure that exceeds building regulations? ☐ Yes ☐ No ☐ N/A

11) Does the floor area for each storey of the property match the SAP/ RdSAP calculations? ☐ Yes ☐ No

12) Does the dwelling type (for example, semi-detached house, enclosed mid-terrace flat etc.) match the SAP/ RdSAP calculations? ☐ Yes ☐ No

Questions 13-16 should be answered only where the ECO savings were calculated used RdSAP (Stage 3).

13) Does the roof type match the RdSAP calculations? ☐ Yes ☐ No

14) Does the existing loft insulation match the RdSAP calculations? ☐ Yes ☐ No

15) Does the wall type match the RdSAP calculations? ☐ Yes ☐ No

16) Does the existing wall insulation type match the RdSAP calculations? ☐ Yes ☐ No

17) Does the thickness of the under floor insulation installed match the RdSAP calculations? ☐ Yes ☐ No

Questions 18-24 should be answered only where the ECO savings were calculated using SAP or RdSAP (Stage 3).

18) Does the main heating type match the SAP/ RdSAP calculations? ☐ Yes ☐ No

19) Does the primary fuel used for heating match the SAP/ RdSAP calculations? ☐ Yes ☐ No

20) Does the primary fuel used for hot water match the SAP/ RdSAP calculations? ☐ Yes ☐ No

21) Does the type of heating controls match the SAP/ RdSAP calculations? ☐ Yes ☐ No

22) Does the percentage of the measure installed match the SAP/ RdSAP calculations? ☐ Yes ☐ No
23) If less than 100% of the measure installed, does the reason match the reason provided to the supplier? ☐ Yes ☐ No ☐ Unable to validate

24) Does the area of the floor that has been insulated match the SAP/ RdSAP calculations? ☐ Yes ☐ No

25) What type of insulation has been used (stage 2 only)?

- ☐ Polyurethane
- ☐ PIR
- ☐ Phenolic foam
- ☐ Other_____
- ☐ Expanded Polystyrene
- ☐ Extruded Polystrene
- ☐ Wool/ Fibre

26) Has the pre-installation survey been completed correctly (only applicable to stage 1 and 2)?
☐ Yes ☐ No ☐ Not known

Competency Questions

27) Name of installation company: _____ ☐ Not known

28) Is there a carded operative at the site that meets the competency requirements for the measure being installed (applicable to carbon stage 2 only)? ☐ Yes ☐ No ☐ N/A

29) Is the measure/system being installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement (applicable to stage 2 carbon only)?
☐ Yes ☐ No

Installation Questions (Stage 1, 2, 3)

Stage 1

30) What is the construction of the floor? ☐ Suspended Timber ☐ Suspended Beam and Block ☐ Solid Concrete ☐ Other _____

31) Has all preparatory work been completed as specified in the project plan? ☐ Yes ☐ No

Stage 2

32) Is the type of insulation being installed as specified within the project plan? ☐ Yes ☐ No
33) Is the thickness of insulation being installed as specified within the project plan? ☐ Yes ☐ No

34) Has insulation been close butted and laid in a break bond pattern on solid concrete floors? ☐ Yes ☐ No ☐ N/A
35) Has the insulation been tightly fixed between joists to avoid gaps? ☐ Yes ☐ No ☐ N/A

36) Has the insulation been tightly fixed to the underside of the floor to avoid gaps? ☐ Yes ☐ No ☐ N/A
37) Has insulation been installed in the gap between the last joist and external walls? ☐ Yes ☐ No ☐ N/A

38) Has insulation been applied to radiator pipe work below the insulation? ☐ Yes ☐ No ☐ N/A
39) Has insulation been supported in accordance with the manufacturer's guidance? ☐ Yes ☐ No

Stage 3

40) Have all gaps at floor edges been sealed adequately? ☐ Yes ☐ No
41) Have all gaps in the floor around service penetrations been sealed? ☐ Yes ☐ No ☐ N/A

Comments

Comments must be provided where a No, N/A or Not known response is given.

References

- PAS 2030:2012 Edition 2 Annex B6 Floor Insulation
- Energy Saving Trust – Energy Efficient Refurbishment of Existing Housing CE83: 2007 Edition
- Kingspan Thermafloor TF70 Insulation for solid concrete and suspended floors

Appendix 1 – Changes to Document in version 2.1.1

(Changes to this version are highlighted in blue in the table below.)

Measure Type	Question/Section	Summary of Change
All	Compliance and Carbon sections	Renamed to Scoring and Installation.
All	Explanatory note	Added to cover SAP/RdSAP questions.
All	Remedial actions to be taken where failures are identified.	Added to cover the consequences of failures.
Heating controls	All	Questions split from boiler form.
All	Was the measure installed as part of a construction of new dwelling/extension and is it to comply with building regulations?	Removed "and is it to comply with building regulations".
All	Does the floor area match the SAP/RdSAP calculation?	Added "for each storey of the property".
All	Does the number of habitable rooms match the SAP/RdSAP calculation?	Removed SAP.
All	Does the dwelling type match the SAP/RdSAP calculation?	Examples of dwelling types added.
All	Does the roof type match the SAP/RdSAP calculations?	Removed SAP.
All	Does the existing loft insulation match the SAP/ RdSAP calculations?	Removed SAP.
All	Does the wall type match the SAP/RdSAP calculations?	Removed SAP.
All	Does the existing wall insulation match the SAP/RdSAP calculations?	Removed SAP.
All	Does the main heating type match the SAP/RdSAP calculations?	System description added.
All	Is there evidence the installation (and materials) complies with building regulations?	Removed.
Boiler replacement/repair	What are the heating controls installed and numbers (post-installation)?	Removed.
Boiler replacement/repair	Does the occupant confirm they know how to use the new boiler/controls?	Reference to controls removed.
Draught proofing	Does the draught proofing material comply with BS7386:1997?	Removed.
Draught proofing	Have all windows and doors not previously treated in the premises now been treated, leaving all doors and windows fully operational?	Reworded to "Are all newly treated windows and doors fully operational?"
EWI	Has the finishing coat/cladding been applied as specified in the project plan and the installation water tight?	Added additional tick box "Unable to validate".
HTTC	Is the cavity hard to treat, as defined by the ECO guidance?	Added additional tick box "Unable to validate" (stage 3 only).
HTTC	Type of cavity?	Added "(carbon stage 1 and 2 only)". However, where this can be answered for stage 3, it should be.
HTTC	Has the pre-installation survey been completed correctly (Only applicable to carbon stage 2)?	Added applicable to stage 1.
HTTC	Installation (Stage 1) – Narrow, remedial and non-standard materials cavities	New section and question added.
Internal wall insulation	If the floor is suspended timber, is the insulated dry lining bedded on a strip of pre-compressed expanding foam nailed to the floor?	Added additional tick box "N/A".
Internal wall insulation	Is the insulation continued 400mm along all party and solid partition walls?	Added additional tick box "Other".
Loft insulation	Is the type of insulation installed as specified within the project plan?	Added additional tick box "Unable to validate".
Loft insulation	Is the thickness of insulation installed as specified within the project plan?	Added additional tick box "Unable to validate".

Loft insulation	Has insulation been cross laid to prevent cold bridging?	Added additional tick box “N/A”.
Under floor insulation	Does the thickness of the insulation installed/to be installed match the SAP/RdSAP calculations?	Reworded to “Does the thickness of the under floor insulation installed match the RdSAP calculations?” (stage 3 only).
EWI, FRI, HTTC, IWI, RIR and UFI	Is the measure/system being installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement?	Is the measure/system being installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement (applicable to stage 2 carbon only)?