

Better Energy Homes  
**Quality Assurance and Disciplinary  
Procedures for Contractors**

Version 5.1 2018



## INTRODUCTION

By carrying out energy efficient upgrades in Irish homes, you are playing a vital role in helping Ireland to reduce its greenhouse gas emissions.

Ireland and the European Union are working towards a set of goals for 2020, 2030 and 2050. The aim is to make the energy usage in the EU largely carbon free by 2050. To achieve this, a number of goals have been agreed such as the reduction in greenhouse gases by 20% in 2020, compared with 1990 levels and to improve energy efficiency by 20%.

The quality of service delivery by Contractors registered on the Better Energy Homes Contractor Register is central to the reputation and effectiveness of the delivery of all domestic energy efficient works carried out under SEAI's Programmes. This is for the purpose of achieving energy savings for home owners and value for public monies. That quality of service has two key dimensions: competence and compliance.

A primary element of the Quality Assurance and Disciplinary Procedures is the performance monitoring and evaluation procedure which is applicable to findings of administrative and/or technical non-compliance with the Better Energy Homes Terms and Conditions and Contractor's Code of Practice.

### **Revised Quality Assurance and Disciplinary Procedures (QADP) version 5.1 - 2018**

This revised edition of the QADP version 5.2, 2018 incorporates the following changes:

- Some revisions to the text ;
- Inclusion of text for heat pump installations;
- Revision of the non-compliances checklist contained in Appendix 2- Checklists for Energy Efficient Upgrade works and of the list of non-compliances in Appendix 1 – Corrective Action for Non Compliance; and
- Change to the time period allowed to appeal reworks after notification.

**Note: SEAI no longer accept applications for grants for the installation of High Efficiency Boilers (both gas and oil) as of the 15<sup>th</sup> January 2018. Any applications received before this date are processed according to the current Programme rules.**

### **Important points for Contractors operating under SEAI Programmes**

- This document outlines the key elements and processes of the Quality Assurance and Disciplinary Procedures (QADP) for Better Energy Homes Contractors. All registered Contractors must ensure that they and their operators are fully familiar with the Quality Assurance and Disciplinary Procedures set out therein.
- Contractors operating under the Better Energy Warmer Homes Programme, Better Energy Finance Programme, Better Energy Communities Programme and Better Energy Partners must be registered on the Better Energy Homes Contractors register. This entails signing up to the SEAI Code of Practice and to the Better Energy Homes Contractors QADP.
- The Better Energy Warmer Homes Programme has a different Contractor Scorecard system. Contractors on the Better Energy Warmer Homes panel should refer to their contracts for further details.
- Contractors deregistered as a result of works carried out under a specific Better Energy Programme are prohibited from carrying out works under other Better Energy Programmes. It is the registered contractor's responsibility to inform their clients of any such disciplinary measures. Where a contractor is de-registered as a result of inspection on a particular measure(s), they are automatically prohibited and de-registered from all other programmes and measures.

## Table of Contents

1.	Quality Assurance System .....	4
1.1	System Overview .....	4
1.2	Audit Process and Technical Non Compliances .....	4
1.3	Administrative Non Compliances .....	5
1.4	Classification System for Audit Findings of Technical Non Compliances .....	5
1.5	Response Time to Rework Requirement Notifications .....	6
2.	Risk Based Evaluation of Contractor Performance and Disciplinary Procedures.....	6
2.1	Evaluation of Contractor Performance.....	7
2.2	Performance Categories, Corrective Actions and Sanctions.....	7
2.3	Record of Non Compliances .....	9
2.4	Immediate Deregistration Sanctions.....	10
2.5	Summary Deregistration.....	10
2.6	Deregistration Process.....	11
2.7	Re-registration.....	11
2.8	Contractor Appeals .....	11
3.	Amendments to the Quality Assurance and Disciplinary Procedure.....	12
4.	Classification of Non Compliances .....	13
	Appendix 1 – Corrective Action for Non Compliance .....	14
	Appendix 2- Checklists for Energy Efficient Upgrade works .....	15
	2.1 Attic Insulation .....	15
	2.2 Cavity Wall Insulation .....	16
	2.3 Internal Wall Insulation .....	17
	2.4 External Wall Insulation.....	18
	2.5 Oil & Gas Boiler Upgrade .....	20
	2.6 Heating Controls Upgrade.....	22
	2.7 Solar Installation.....	24
	SCORE CARDS as applied by specific Better Energy Homes Programmes .....	26
	Appendix 3 – Better Energy Homes QADP Zone Examples .....	26
	Appendix 4 – QADP Contractor Scorecard under Better Energy Homes Programme .....	27

## 1. Quality Assurance System

### 1.1 System Overview

Within the Better Energy Programmes, the overall approach by SEAI to the Quality Assurance of Better Energy Registered Contractors consists of a combination of:

- Enforcement of the Better Energy Contractors Code of Practice and Standards and Specification Guidelines through frequent audits (inspections),
- Enforcement of the terms and conditions of the programme via desk audits and administration checks.
- Promoting best practice and professional development of Quality Assurance of Better Energy Homes Contractor

In order for a contractor to properly operate within the Better Energy Programmes it is essential that they have read understand and sign up to and strictly adhere to their obligations as contain within:

- The Better Energy Homes Contractor [Registration Form](#);
- The Better Energy Homes Contractor [Code of Practice and Standards and Specifications Guidelines](#);
- The [Better Energy Quality Assurance and Disciplinary Procedure](#) (this document);
- All technical documentation as published on the [Contractor Supports page](#) on the SEAI Website; and
- All relevant technical documentation and notifications as SEAI may issue from time to time.

All of these documents can be found at the following link, and it is the version published on the web which is deemed the current applicable version: [http://www.seai.ie/Grants/Better\\_energy\\_homes/contractor/](http://www.seai.ie/Grants/Better_energy_homes/contractor/)

In addition Standard Recommendation S.R.54:2014: "Code of practice for the energy efficient retrofit of dwellings" has been developed by State Agencies and National Standards Authority of Ireland in conjunction with the Building Research Establishment to provide guidance on the energy efficient retrofit of dwellings. Better Energy Contractors are asked to familiarise themselves with the standard and put its recommendations into practice.

A link to this document can be found here: <http://www.nsai.ie/S-R-54-2014-Code-of-Practice.aspx>

**Works completed must be commissioned by "nominated personnel" and the Declaration of Works must be signed by that person to ensure that the work meets the required standard.**

The QADP document sets out the approach to detecting and scaling non compliances and the disciplinary action arising out of failure to meet the requirements of the Better Energy Homes programme and / or to adhere to the terms and conditions.

SEAI shall use all means at its disposal to ensure quality and compliance issues are identified and remedied. This includes, but is not restricted to, property audits, Contractor and homeowner phone audits, complaints investigation etc.

### 1.2 Audit Process and Technical Non Compliances

Audits, inspections and on-going continuous improvement are the main tools through which the Quality Assurance of the works and competency/compliance of Better Energy Homes registered Contractors is achieved. The aim of the Better Energy Homes Audit Process is to identify technical faults in a timely manner so that:

- Any technical errors identified can be corrected via reworks by the responsible Contractor;
- Such errors are avoided in future through feedback directly to the Better Energy Contractor concerned as appropriate through the relevant communication channels to continuously improve the service ; and
- Such errors are avoided in future through disciplinary sanctions as appropriate.

The audit process involves planning, co-ordinating, conducting of audits, reporting and acting on the findings. The selection of Better Energy Contractor/homes for an audit is carried out on both a random and a targeted basis. Selection of a Better Energy Contractor for audit should not be interpreted as there being any prior presumption by SEAI of there being error / non-compliance on the part of the Better Energy Contractor concerned. Each and every active Contractor can expect to be audited regularly.

### 1.3 Administrative Non Compliances

The continued efficient administration of the scheme requires contractors to fulfil their obligations in respect of registration and installation documentation. In the course of routine grant administration and auditing SEAI may become aware of cases where installers are not fully compliant with the scheme Terms and Conditions or aspects of the Code of Practice, other than specific technical issues previously referenced in Section 1.2.

In instances where these Administrative Non Compliances are deemed serious, they may result in sanctions being applied under the scheme Quality Assurance and Disciplinary Procedures, emphasising the importance of maintaining professional administration and customer service at all times.

Where insurance or eTax expires, the CO shall be automatically deregistered. The CO is obliged to update their records in order to be reregistered. No penalty points are applied for this.

Administrative Non Compliances are set out in Appendix 1 – Corrective Action for Non Compliance to this document. (SEAI retains the right to add to / amend this appendix as required to maintain the integrity of the scheme).

### 1.4 Classification System for Audit Findings of Technical Non Compliances

An audit finding of non-compliance may arise from a technical error or non-compliance with the Contractors Code of Practice and Standards and Specifications Guidelines, or the Contractor Registration terms and conditions.

Each non-compliance is assigned a severity rating and penalty points are assigned to each severity rating for the purpose of evaluating a contractor’s performance in accordance with SEAI’s evaluation method.

The severity ratings of Non Compliances are defined as follows:

Severity Rating	Severity 1	Severity 2	Severity 3
Classification	Possible health and safety risk or highly non-compliant, potential to impede payment.	Potential to compromise the effectiveness of the installation, potential to delay payment. Not to standard.	Not best practice
Rework Requirement	Reworks required	Reworks required	Reworks required

<b>Penalty Points Applicable</b>	3 penalty points	2 penalty points	1 penalty point
----------------------------------	------------------	------------------	-----------------

Technical Non Compliances are contained in Appendix 2- Checklists for Energy Efficient Upgrade works. SEAI retains the right to add to/amend these appendices as required to maintain the integrity of the Programme.

### 1.5 Response Time to Rework Requirement Notifications

The allowable period for Contractor reworks to take place is determined by the severity level discovered at the time of audit. All reworks instructions must be responded to within the timeframe indicated (varies depending on severity).

- **Severity 1:** Contractor is notified within 1 week of audit and he / she must undertake reworks and submit confirmation of same to SEAI within 28 days of dated notification. Three penalty points are awarded.
- In certain instances a Severity 1 merits immediate action to ensure the issue is made safe and in such circumstances SEAI notifies the Contractor that immediate remedial action is required. This rework must be completed as a matter of urgency and confirmation of completion of same submitted to SEAI within 48 hours of notification of rework requirement.
- **Severity 2 and 3:** Contractor is notified within 1 week of audit and he/she must undertake reworks and submit confirmation of same to SEAI within 28 days of dated notification. Two or one penalty points respectively are awarded.

The contractor receives a Reworks Notification from SEAI with a deadline of four weeks to complete reworks and return the attached Reworks Form to the stated SEAI address.

A reworks notification may be appealed within 2 weeks , in writing only, by using the Reworks Appeal form (available at [http://www.seai.ie/Grants/Better\\_energy\\_homes/contractor/](http://www.seai.ie/Grants/Better_energy_homes/contractor/)).

**Failure to comply with a direction to undertake reworks will result in deregistration from the SEAI Better Energy Homes Contractor register.**

See Section 2.6 for Deregistration and Section 2.8 Contractor Appeals for more details.

## 2. Risk Based Evaluation of Contractor Performance and Disciplinary Procedures.

SEAI assess Contractor performance by way of risk-based analysis of a Contractor's performance over a particular time period which takes account of:

- The proportion of houses inspected which have reworks (Sev 1, Sev 2 or Sev 3)
- The severity of these reworks (gross penalty point average for all homes that did not pass).

This approach takes account of the volume of activity being undertaken; level of inspections and the severity of instances of Non Compliance identified in particular properties.

Based on this evaluation, SEAI may issue guidance to Contractors on actions necessary to reach the required standard. The intention of any corrective actions is to assist Contractors in improving their work standards, reputation and competitiveness in accordance with the requirements of the Better Energy Programmes.

Should a Contractor fail to reach the required standard when following direction on corrective action, then, in accordance with warnings issued, disciplinary action will follow, up to and including deregistration from the SEAI Better Energy Homes Contractor register.

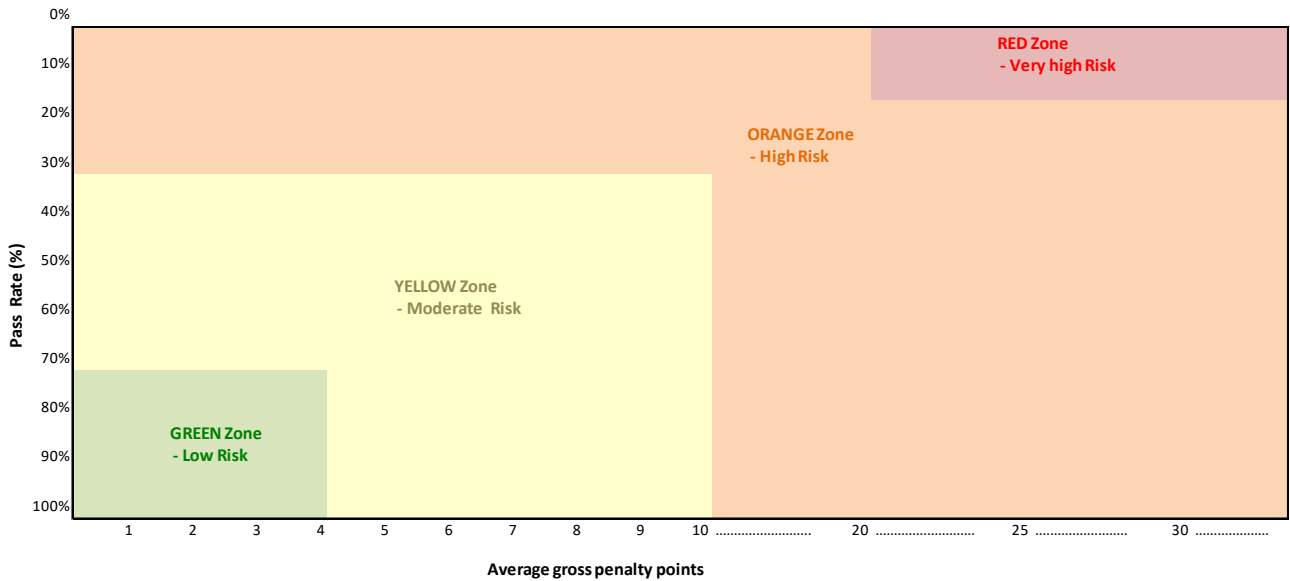
## 2.1 Evaluation of Contractor Performance

- All Contractors will be audited on a regular basis with respect to technical and administrative compliance with the codes and standards of the Better Energy Programmes.
- Each Contractor's audit results for the previous six months will be evaluated on a regular basis to determine the:
  - **% of properties as a proportion of inspected** which pass inspection (no issues on the Sev 1 to Sev 3 scale) with a target pass rate of  $\geq 70\%$ .
  - **Average gross penalty points, across** all issues identified, for failed properties (Sev 1, 2 & 3 issues identified) with a target of  $\leq 4$  points.
- Contractors will be advised regularly of their evaluation results. See Appendix 4 – QADP Contractor Scorecard under Better Energy Homes Programme for an example of the type of report which will be provided to contractors.
- SEAI may review quality records more frequently and reserve the right to communicate same more frequently, particularly where signs of risk of non-compliance are emerging.
- Where a contractor's performance falls outside of the required performance levels then appropriate guidance and / or sanctions will be notified to the contractor.
- Where a contractor works in conjunction with a Counterparty, carries works out under other Better Energy Programmes SEAI will share performance results with that Counterparty.
- SEAI reserves the right to publish the names of top performing Contractors.
- SEAI may publish and make public information concerning any deregistration from the Registered Contractors list.

## 2.2 Performance Categories, Corrective Actions and Sanctions.

The evaluation of Contractor performance will place individual Contractors in the following four performance categories (identified diagrammatically below):

- GREEN: good performance / low risk
- YELLOW: medium performance / moderate risk
- ORANGE: poor performance / high risk
- RED: very poor performance / very high risk.



Performance evaluation will take place on a half-yearly basis. The performance categories are divided into separate bands and a Contractor’s placement in a band shall determine the requirement for particular actions or sanctions as defined by SEAI. Placement in the green zone means the Contractors’ performance is acceptable and no corrective actions are required.

Once contractors are identified as in a zone other than Green, they must take demonstrable action to improve performance including eliminating repeat issues.

- If in the orange zone, they must have moved to the green zone within the next three evaluations, i.e. within 18 months.
- If in the yellow zone, they must have moved to the green zone within the next two evaluations, i.e. within the next 12 months.
- If there is no demonstrable improvement, contractors shall receive a letter of deregistration pending appeal and shall have 14 days to appeal the decision of deregistration.

The table below sets out the specific actions applying to each zone.



<b>ZONE</b>	<b>SEAI ACTION</b>	<b>SANCTION</b>
<b>GREEN</b> Good Performance Low risk	Congratulations! You are doing well. Written notification of contractor scorecard. Inspection regime maintained	None
<b>YELLOW</b> Moderate Performance Medium Risk	Written notification of contractor scorecard.	<b>Deregistered for a TWO (2) month period</b> if still in the YELLOW Zone (or worse) following 3 consecutive SEAI performance evaluations, i.e. after 18 months. Performance evaluations carried out at least every 6 months.
<b>ORANGE</b> Poor Performance High risk	Written notification of contractor scorecard.	<b>Deregistered for a SIX (6) month period</b> if still in the ORANGE Zone following 2 consecutive SEAI performance evaluations, i.e. after 12 months. Performance evaluations carried out at least every 6 months.
<b>RED</b> Very Poor Performance Very High Risk	Written notification of contractor scorecard. A deregistration letter pending appeal within 14 days is issued. Contractor cannot be selected for new works, but may complete on-going works.	Deregistered for a six (6) month period if a) no appeal is received or b) appeal is rejected.

**Any contractor identified in the Red Zone shall receive a deregistration letter pending appeal within 14 days. The Contractor cannot be selected for new works, but may complete ongoing works.**

**The deregistration period begins 14 days after the date of issue of deregistration letter or email, unless an appeal is received within this time period.**

Appendix 3 – Better Energy Homes QADP Zone Examples sets out examples of various contractors to demonstrate how the assessment scheme operates. Please take time to consider the scenarios set out therein.

### 2.3 Record of Non-Compliances

The recording of Non-Compliances in the form of Severity Ratings is one element of the evaluation process described above. Contractors shall be formally notified of Non-Compliances and Severity Ratings applied by post as part of the Reworks Notification. It is important to note that:

- A Better Energy Contractor’s inspection results are recorded against their profile. Where a contractor works in conjunction with a Counterparty, SEAI will share performance results with that Counterparty.
- All Non-Compliances / severity ratings associated with individual properties will be recorded on the contractor profile.
  - Each company’s profile is treated as a single entity and the Non-Compliances / severity ratings accrued by individual nominated personnel listed on their Better Energy profile are assigned cumulatively.

- Each Contractor’s audit results for the previous six months will be evaluated. Note this is a rolling evaluation system, so for example if an evaluation takes place on 20<sup>th</sup> December of any given year only Non-Compliances / severity ratings applied from 20 June to 20 December of that year will be considered in the evaluation.
- Significantly poor performance will require corrective actions by Contractors to improve performance as directed by SEAI. Failure by a Contractor to improve performance following direction by SEAI may lead to deregistration.

## 2.4 Immediate Deregistration Sanctions

The table below lists the triggers which will result in deregistration:

Deregistration Period	Triggers
2 Months	<ul style="list-style-type: none"> <li>• Failure to attend targeted workshops / training when directed by SEAI.</li> <li>• Undertaking work without appropriate insurance cover</li> <li>• Contractor is not registered for the measure or undertaking works while deregistered.</li> <li>• Contractor applying on behalf of the homeowner or letting the homeowner use their email address (or any nominated personnel). Exception: where a Counterparty is applying on behalf of homeowner.</li> </ul>
6 Months	Fraud or intention to defraud, including but not limited to: <ul style="list-style-type: none"> <li>(a) attempt to defraud SEAI / state</li> <li>(b) attempt to defraud homeowner</li> <li>(c) any attempt to support the homeowner in their endeavours to defraud SEAI / state</li> </ul> <ul style="list-style-type: none"> <li>• Failure to do reworks within the appointed time.</li> <li>• Tampering with/moving gas network equipment.</li> <li>• Natural gas works done by a non-RGII registered person.</li> <li>• Failure to use products that are fit for purpose, or improve the energy efficiency of the building or have a detrimental impact on the structure, viability, quality or safety of the property or not installed to applicable standards.</li> <li>• Subcontracting work to a Contractor not on the Better Energy Homes list of registered Contractors.</li> <li>• Very high Risk Category after a single SEAI performance evaluation. See Appendix 1.</li> </ul>

## 2.5 Summary Deregistration

Notwithstanding the above, SEAI reserves the right to summarily deregister a Better Energy Contractor in specific circumstances involving a technical non-compliance with the Code of Practice or technical failure that risks compromising homeowner health and safety (such as a non-compliant gas installation); repeated seriously non-compliant works; or activities that could bring the programme into serious disrepute. In this case, deregistration will not be deferred for two weeks although the Contractor will still be entitled to appeal the decision. No grant related works may be conducted until the appeal has been heard.

## 2.6 Deregistration Process

When a Contractor has been identified for deregistration, e.g. for seriously non-compliant works, the contractor may appeal this decision according to the deregistration appeal process set out in section "2.8 Contractor Appeals".

When the deregistration is due to failure to complete reworks, the contractor is given the opportunity to appeal the reworks and there is no additional deregistration appeal process after the reworks appeal decision is made or the time allowed for appeal of reworks has passed. See section "2.8 Contractor Appeals".

During the deregistration period the following restrictions apply:

- A Contractor must not commence any Better Energy Homes or other Better Energy Programmes works not already started prior to de-registration
- A Contractor must not accept any new works through the Better Energy Homes Scheme or other Better Energy Programmes
- A Contractor is strictly forbidden to accept works as a change of Contractor as and from the effective date of deregistration
- The completion of any Better Energy Homes works already started by a Contractor prior to this notice, must be completed within 14 days and shall be subject to the Terms and Conditions of the scheme including audit and rework requirements.
- In order to remain registered, you must remain active. Contractors may be removed from the register if they have not carried out SEAI supported (grant-related or other) work in the last 18 months.
- The contractor must notify SEAI immediately of works intended to be carried out by him/her under other SEAI Better Energy Programmes.

## 2.7 Re-registration

**Re-registration on the Better Energy Contractor list is NOT automatic.** Once a Contractor's period of deregistration is completed, it is the responsibility of the Contractor to contact SEAI to request re-registration. The following information should be provided with the Contractor's re-registration request:

- Evidence that the basis for your deregistration has been rectified and that the Contractor's company has incorporated the necessary steps in its processes to ensure that it does not occur again.
- Up to date Insurance and Tax Clearance Certificates.

SEAI reserves the right to impose particular conditions on the Contractor before re-registration. Such conditions may include, but are not limited to, the following requirements: to provide proof of competency, to study the terms and conditions of registration, to study the current published Contractor Code of Practice and Technical Specification and QADP document (this document), to complete a training course, to pass a specified examination, or to provide an updated quality assurance statement. This list may be amended by SEAI from time to time. The number of penalty points applied, and the details of the deregistration shall be kept on record.

## 2.8 Contractor Appeals

If an inspection returns a finding that works are seriously non-compliant, i.e. a significant portion of the work is not complete, the contractor will receive a letter of "Deregistration Pending Appeal" together with a Deregistration Appeal form. The Contractor has two weeks to appeal the deregistration in writing, and using the Deregistration Appeal form.

Appeals for deregistration due to significant non-compliance are heard by the SEAI Appeals Board. The decision of the Appeals Board is final and may not be re-appealed.

If an inspection returns a finding of Sev 1, Sev 2 or Sev 3 reworks, the Contractor receives a Reworks Notification from SEAI with a deadline of four weeks to complete reworks and return the attached Reworks Form to the stated SEAI address. The Contractor may appeal the reworks decision in writing, within 2 weeks, using the Reworks Appeal form. The reworks appeal is reviewed by the SEAI Inspections Unit. The reworks decision may be re-appealed but only under provision of new information. The re-appeal is reviewed by the Head of the Inspections Unit and the decision is final.

A contractor who fails to complete reworks by the given deadline, and does not appeal the reworks decision, is deregistered for six months.

Once a rework has been applied and not successfully appealed, penalty points are automatically awarded. Penalty points may not be appealed.

Once an appeal is received, no sanctions are imposed pending consideration of the appeal by SEAI (except in the case of summary deregistration as set out in Section 2.5 Summary Deregistration such as serious breach of Health and Safety standards). All appeals must be submitted in writing using the forms provided for that purpose. SEAI endeavours to respond with a decision to all appeals as quickly as possible.

Appeals on Reworks should be sent to:

Technical Helpdesk  
Better Energy Programmes  
SEAI  
KSN House  
Clonskeagh Square  
Dublin D14 FH90  
Email: [inspections@betterenergyhomes.ie](mailto:inspections@betterenergyhomes.ie)

Deregistration appeals (and insurance updates) should be sent to:

Administration Helpdesk  
Better Energy Homes Programme  
SEAI  
PO Box 119  
Cahiriveen  
Co Kerry  
Email: [info@betterenergyhomes.ie](mailto:info@betterenergyhomes.ie)

### **3. Amendments to the Quality Assurance and Disciplinary Procedure**

SEAI has the right to periodically update its procedures and practices. As a result, SEAI reserves the right to review and amend the systems and procedures outlined in this document and may also issue other directions to Better Energy Homes Contractors.

Contractors shall be made aware of any such proposed amendments by email or by way of an update displayed on the Better Energy Homes Contractors section of SEAI's website. SEAI may invite Better Energy Homes registered Contractors to submit comments on, or provide a response to, the proposed amendments. For the most up to date version of this document, that is binding on all Better Energy Homes Contractors, visit and download from SEAI's website at:

[http://www.seai.ie/Grants/Better\\_energy\\_homes/contractor/](http://www.seai.ie/Grants/Better_energy_homes/contractor/)

#### **4. Classification of Non Compliances**

The lists are separated into administrative and technical as appropriate.

As noted above these lists may be updated from time to time and are provided here for clarity and information.

#### **5. Technical Helpdesk**

Please use our technical helpdesk for your queries:

**Phone: (01) 2776977**

**Email: [inspections@betterenergyhomes.ie](mailto:inspections@betterenergyhomes.ie)**

## Appendix 1 – Corrective Action for Non Compliance

Reference Section	Doc Ref	Description	Immediate Sanction
1	T&C 4	Engaging in inappropriate or fraudulent behaviour	6 months
2	T&C 13	Failure to carry out remedial works as required and within the appointed deadline.	6 months
3	CoP 7.7	Natural gas works done by a non-RGII registered person	6 months
4	T&C 9, 21 COP 2.2	Failure to use products that, are fit for purpose, or improve the energy efficiency of the building or have a detrimental impact on the structure, viability, quality or safety of the property, or not installed to applicable standards	6 months
5	T&C 27	Sub-contracting to a contractor not on the Better Energy Homes scheme list of registered contractors for said measures	6 months
6	T&C 21	Failure to attend targeted workshops / training when directed by SEAI	2 months
7	T&C 7	Undertaking works without appropriate Insurance cover	2 months
8	CoP 2.1 T&C 8	Contractor is not registered for the measure or undertaking works while deregistered (where applicable this sanction runs subsequent to the earlier term of deregistration)	2 months
9	T&C 6 & 7 CoP 2.1	Undertaking works while unregistered due to failure to provide valid eTax details and/or valid Declaration of Insurance)	Dereg until received
11	T&C 18 CoP 3	Failure to provide optimal solution to homeowner where physically and economically possible (e.g. less than 100% wall / roof insulation / boiler efficiency < 90%/heat pump < 350% space heating/<250% for hot water )	2 months
12	CoP 3	Contractors should behave professionally at all times and maintain the high standards expected of the scheme from the quality of the physical works carried out to the level of professionalism with which they are completed, as per the Code of Conduct in the Contractors Code of Practice.	2 months
13	CoP 2.1	Failure to respond to SEAI email requests within the required timeframe thereby impeding the effective and efficient administration of the Scheme	Dereg until received
14	CoP 2.1	Failure to provide the correct date of works on the declaration of works (DoW) form or in a verification email, thereby impeding the effective and efficient administration of the Scheme	2 months
15	Reg Email	Unauthorised use of the SEAI logo for marketing or other purposes	2 months
16	CoP 3	Contractor applying on behalf of the homeowner or letting the homeowner use their email address (or any nominated personnel)	2 months
17	T&C 9-10	Failure to ensure that nominated personnel meet the technical competency requirements for the Scheme as specified by SEAI, and are competent, qualified and have the necessary training and experience to complete the works according to the Scheme's specifications	2 months or until personnel meets requirement ; whichever date is later
18	T&C 9	DoW signed by a non-nominated person (not on the nominated personnel list for the company)	2 months

The list of corrective actions in the table above is not exhaustive, and sanctions may also apply to other instances of non-compliance with the T&C, Code of Practice and other directions from SEAI.

## Appendix 2- Checklists for Energy Efficient Upgrade works

### 2.1 Attic Insulation

Code	2.1 Attic Insulation	Detail	Severity		
			One	Two	Three
Page 1 of 1					
B2, B3, B4	INSULATION AREA INSTALLED	<input type="checkbox"/> Whole house solution not installed	✓		
C3, C4	INSULATION DEPTH INSTALLED AS SPEC	<input type="checkbox"/> Insulation depth does not provide required U-Value	✓		
G	DOCUMENTATION	<input type="checkbox"/> Insulation Guarantee Not visible / Not available <input type="checkbox"/> Warning Signs Not visible / Not available*			✓
HA2	PIPE INSULATION	<input type="checkbox"/> No insulation	✓		
HA3	PIPE INSULATION	<input type="checkbox"/> Not all pipes insulated <input type="checkbox"/> Not to Scheme Standard		✓	
J1	WALKBOARDS	<input type="checkbox"/> Not fitted (but required) <input type="checkbox"/> Not supported safely	✓		
J2	WALKBOARDS	<input type="checkbox"/> Not fitted to Scheme Standard		✓	
K6	HATCH	<input type="checkbox"/> Insulation not to Scheme Standard <input type="checkbox"/> Draught Proofing not to Scheme Standard		✓	
L1	WATER STORAGE TANK INSULATION	<input type="checkbox"/> No Insulation fitted	✓		
L2	WATER STORAGE TANK INSULATION	<input type="checkbox"/> Not fitted to Scheme Standard <input type="checkbox"/> No ties/tape used <input type="checkbox"/> Insulated lid not fitted		✓	
N4	VENTILATION	<input type="checkbox"/> Insufficient Ventilation <input type="checkbox"/> Vents blocked	✓		
N7	VENTILATION	<input type="checkbox"/> Excessive Ventilation		✓	
O2	ELECTRICAL	<input type="checkbox"/> Recessed Ceiling lights not protected to scheme standard <input type="checkbox"/> High Powered Cables covered <input type="checkbox"/> Ancillary Electrical Items covered by Insulation <input type="checkbox"/> Work carried out by Contractor may be detrimental to electrical installation.	✓		
Z1	INSULATION AS PER SPECIFICATION	<input type="checkbox"/> Not as per Scheme Standard		✓	
Z2	INSULATION AS PER SPECIFICATION	<input type="checkbox"/> Not as per Scheme Standard	✓		

## 2.2 Cavity Wall Insulation

Code	2.2 Cavity Wall Insulation	Detail	Severity		
			One	Two	Three
Page 1 of 1					
B2, B3, B4	WALL AREA INSULATED	<input type="checkbox"/> Whole house solution not installed	✓		
C1	DRILL PATTERN	<input type="checkbox"/> Drill Pattern <input type="checkbox"/> Sealing of drill holes not as per NSAI Agréments Certificate required by Scheme standard		✓	
G1	CAVITY BRUSHES	<input type="checkbox"/> Not as per NSAI Agréments Certificate required by Scheme standard <input type="checkbox"/> Required but not installed as per NSAI Agréments Certificate required by Scheme standard		✓	
H1	TOP OF CAVITIES CAPPED	<input type="checkbox"/> Not closed/not as per NSAI Agréments Certificate required by Scheme standard		✓	
I1	NSAI AGREEMENT	<input type="checkbox"/> Not provided			✓
J1	VENTILATION	<input type="checkbox"/> Wall vents blocked <input type="checkbox"/> Insufficient Ventilation	✓		
J5	VENTILATION	<input type="checkbox"/> Mechanical vent not fitted but required <input type="checkbox"/> Background vent not fitted but required <input type="checkbox"/> Permanent vent not fitted but required	✓		
J6	VENTILATION	<input type="checkbox"/> Mechanical vent present but not installed to standard <input type="checkbox"/> Background vent present not installed to standard <input type="checkbox"/> Permanent vent present but not installed to standard <input type="checkbox"/> Mechanical extract ventilation installed in the same room as an open flued appliance		✓	
J11	VENTILATION	<input type="checkbox"/> Mechanical extract ventilation advisory note not available			✓
L1	WALL PENETRATIONS	<input type="checkbox"/> Not sealed and not water tight		✓	
M1	BEAD ADHESIVE	<input type="checkbox"/> Insufficient adhesive	✓		
N1,	BEAD SPILLAGE	<input type="checkbox"/> ESB meter box <input type="checkbox"/> Gas meter box <input type="checkbox"/> Boiler flue compromised by works	✓		
N4	BEAD SPILLAGE	<input type="checkbox"/> Bead spillage into attic area		✓	
	MIXED MATERIALS	<input type="checkbox"/> Mixed materials in cavity			
O1	ELECTRICAL	<input type="checkbox"/> Work carried out by Contractor may be detrimental to electrical installation.	✓		
Z1	INSULATION AS PER SPECIFICATION	<input type="checkbox"/> Not as per scheme standards		✓	
Z2	INSULATION AS PER SPECIFICATION	<input type="checkbox"/> Not as per scheme standard	✓		



## 2.3 Internal Wall Insulation

Code	2.3 Internal Wall Insulation	Detail	Severity		
			One	Two	Three
		Page 1 of 1			
B1	SEALING OF DRY LINING	<input type="checkbox"/> Incomplete sealing of joints		✓	
C2	IRREGULARITIES	<input type="checkbox"/> Poor surface finish <input type="checkbox"/> Dry Lining not fixed securely <input type="checkbox"/> Uneven contours on walls and/or ceiling		✓	
D1	SUPPLIER GUARANTEE	Not supplied to client			✓
E1	ELECTRICAL FIXTURES	<input type="checkbox"/> Not extended to front of dry lining <input type="checkbox"/> Not adequately sealed <input type="checkbox"/> Fixing screws missing		✓	
E4	ELECTRICAL WORKS & FIXTURES	<input type="checkbox"/> Faulty wiring observed <input type="checkbox"/> Electrical Cabling not in conduit or trunking <input type="checkbox"/> Work carried out by Contractor may be detrimental to electrical installation.	✓		
NA1	PLUMBING / HEATING GENERAL FIXTURES	<input type="checkbox"/> Not re-fitted correctly		✓	
F1	VAPOUR BARRIER	<input type="checkbox"/> None observed	✓		
G1	VENTILATION	<input type="checkbox"/> Insufficient ventilation <input type="checkbox"/> Vents blocked <input type="checkbox"/> Permanent vent not fitted but required <input type="checkbox"/> Background vent not fitted but required <input type="checkbox"/> Mechanical vent not fitted but required <input type="checkbox"/> Mechanical extract ventilation installed in the same room as an open flued appliance	✓		
G4	VENTILATION	<input type="checkbox"/> Permanent vent not installed to standard <input type="checkbox"/> Background vent not installed to standard <input type="checkbox"/> Mechanical vent not installed to standard <input type="checkbox"/> Vents not sleeved		✓	
K1, K2, K3	INSULATION AREA INSTALLED	<input type="checkbox"/> Whole house solution not installed	✓		
M1	GAS/OIL SUPPLY SERVICES	<input type="checkbox"/> Gas pipe covered by insulation <input type="checkbox"/> Gas pipe not sleeved through wall insulation and wall <input type="checkbox"/> Incorrect sealing of sleeve through wall <input type="checkbox"/> Oil pipe not sleeved through wall insulation and wall <input type="checkbox"/> Oil pipe covered by wall insulation	✓		
P3	OIL SUPPLY SERVICES	<input type="checkbox"/> Incorrect sealing of sleeve through wall		✓	
Z1	INSULATION AS PER SPECIFICATION	<input type="checkbox"/> Not as per Scheme Standard		✓	

## 2.4 External Wall Insulation

Code	2.4 External Wall Insulation	Detail	Severity		
			One	Two	Three
Page 1 of 2					
A1	NSAI AGREEMENT CERTIFICATE	<input type="checkbox"/> Not provided			✓
C1	DETAILING AROUND WINDOWS/DOORS	<input type="checkbox"/> Not as per Scheme Standard <input type="checkbox"/> Incomplete <input type="checkbox"/> Using non approved fixtures/fittings/sills		✓	
B1	IRREGULARITIES	<input type="checkbox"/> Not fixed securely <input type="checkbox"/> Uneven contours on walls		✓	
F1	JOINTS & SEALS	<input type="checkbox"/> Not as per Scheme Standard <input type="checkbox"/> Partially complete <input type="checkbox"/> Open		✓	
H2	VENTILATION	<input type="checkbox"/> Wall vents blocked <input type="checkbox"/> Insufficient Ventilation	✓		
H4	VENTILATION	<input type="checkbox"/> Mechanical vent not fitted but required <input type="checkbox"/> Background vent not fitted but required <input type="checkbox"/> Permanent vent not fitted but required <input type="checkbox"/> Mechanical extract ventilation installed in the same room as an open flued appliance	✓		
H5	VENTILATION	<input type="checkbox"/> Mechanical vent present but not installed to standard <input type="checkbox"/> Background vent present not installed to standard <input type="checkbox"/> Permanent vent present but not installed to standard		✓	
H6	VENTILATION	<input type="checkbox"/> Roof ventilation compromised by External Insulation <input type="checkbox"/> Vents not sleeved <input type="checkbox"/> Background vent not installed to standard <input type="checkbox"/> Mechanical vent not installed to standard		✓	
H12	VENTILATION	Mechanical extract ventilation advisory note not available			✓
HA2	ESB SUPPLY CABLES	<input type="checkbox"/> ESB cable buried under insulation not in accordance with ESB Job Aid Note <input type="checkbox"/> ESB cable not clipped or in trunking not in accordance with ESB Job Aid Note <input type="checkbox"/> Meter box has not been extended in accordance with ESB Job Aid Note <input type="checkbox"/> ESB supply cable anchors not in accordance with ESB Job Aid note	✓		
J1	EXTERNAL PLUMBING FIXING	<input type="checkbox"/> Not as per Scheme Standard <input type="checkbox"/> Partially complete <input type="checkbox"/> Not securely fixed <input type="checkbox"/> Not correctly reinstated		✓	
L1, L2, L3	INSULATION AREA INSTALLED	<input type="checkbox"/> Whole house solution not installed	✓		
M1	ELECTRICAL	<input type="checkbox"/> Work carried out by Contractor may be detrimental to electrical installation.	✓		
P1	GAS SUPPLY SERVICES	<input type="checkbox"/> Gas meter box not in accordance with Bord Gais Job Aid Note <input type="checkbox"/> Gas pipe covered by insulation /not in accordance with Bord Gais Job Aid Note <input type="checkbox"/> Gas pipe not sleeved through insulation and wall in accordance with Bord Gais Job Aid Note	✓		
Q1	EXTERNAL FITTINGS	<input type="checkbox"/> Electrical fittings not re-instated (e.g. lights, sensors) <input type="checkbox"/> Hardware not re-instated (e.g. gates, clothes lines, house numbers, etc.)		✓	
R1	Flue Installation (if applicable)	<input type="checkbox"/> Boiler flue compromised by works	✓		

Code	2.4 External Wall Insulation	Detail	Severity		
			One	Two	Three
Page 2 of 2					
R2	Flue Installation (if applicable)	<input type="checkbox"/> Flue graded incorrectly		✓	
S1	OIL SUPPLY SERVICES	<input type="checkbox"/> Oil pipe not sleeved through wall insulation and wall <input type="checkbox"/> Oil pipe covered by wall insulation	✓		
S3	OIL SUPPLY SERVICES	<input type="checkbox"/> Incorrect sealing of sleeve through wall		✓	
Z1	INSULATION AS PER SPECIFICATION	<input type="checkbox"/> Not as per Scheme Standard		✓	

## 2.5 Oil & Gas Boiler Upgrade

**Note: SEAI no longer accept applications for grants for the installation of High Efficiency Boilers (both gas and oil) as of the 15<sup>th</sup> January 2018. Any applications received before this date will be processed according to the current Programme rules.**

Code	2.5 Oil & Gas Boiler Upgrade	Detail	Severity		
			One	Two	Three
Page 1 of 2					
A3	HEATING STANDARD	<input type="checkbox"/> No expansion vessel, no pressure relief valve, no facility for expansion on a heating system	✓		
B1	BOILER 90%+	<input type="checkbox"/> Boiler less than 90% efficient		✓	
C1	BOILER CONDITION	<input type="checkbox"/> Boiler damaged	✓		
D1	BOILER LOCATION	<input type="checkbox"/> Not to regulation	✓		
D2	BOILER LOCATION	<input type="checkbox"/> Difficult to access		✓	
E1	PIPE WORK NOT ACCEPTABLE	<input type="checkbox"/> Under sized <input type="checkbox"/> Damaged		✓	
F1	CONDENSATE PIPE WORK	<input type="checkbox"/> Not lagged externally or not in larger diameter pipe <input type="checkbox"/> Not to gully/drain (internal /external) <input type="checkbox"/> Not to soak away <input type="checkbox"/> Incomplete <input type="checkbox"/> Incorrect materials used		✓	
G7	SAFETY VALVE/ DISCHARGE	<input type="checkbox"/> Pipework not installed <input type="checkbox"/> Pipework installed incorrectly		✓	
G9	SAFETY VALVE/ DISCHARGE	<input type="checkbox"/> Not installed	✓		
H1	OIL\GAS SUPPLY	<input type="checkbox"/> In poor condition <input type="checkbox"/> Not adequately supported <input type="checkbox"/> Gas not ventilated in casing <input type="checkbox"/> Remote fire valve not fitted on oil line/ not to standard	✓		
H3	OIL\GAS SUPPLY	<input type="checkbox"/> Under sized		✓	
HA1	FLUE INSTALLATION	<input type="checkbox"/> Not to regulation <input type="checkbox"/> Slope not graded properly <input type="checkbox"/> Not sealed properly <input type="checkbox"/> Not adequately supported <input type="checkbox"/> Flue incorrectly sealed through wall (risk of fumes re-entering building)	✓		
HA6	FLUE INSTALLATION	<input type="checkbox"/> Flue incorrectly sealed through wall (poor finish around flue)		✓	
HC2	VENTILATION	<input type="checkbox"/> Permanent ventilation not as per Building Regulations Part J <input type="checkbox"/> Permanent vent blocked	✓		
HC4	VENTILATION	<input type="checkbox"/> Permanent vent not installed to standard		✓	
K1	BOILER LOG BOOK/PASSPORT/BE NCMARK	<input type="checkbox"/> Not available <input type="checkbox"/> Not filled in properly		✓	
Q1/ ZB3	GAS SUPPLY SERVICES	<input type="checkbox"/> Gas pipe work not sleeved through wall insulation and wall	✓		
Q2/ ZB1	GAS SUPPLY SERVICES	<input type="checkbox"/> Not as per scheme standard		✓	
Q3/ ZB4	GAS SUPPLY SERVICES	<input type="checkbox"/> Incorrect sealing of sleeve through wall	✓		
X1	INSTRUCTION GIVEN	<input type="checkbox"/> None given <input type="checkbox"/> Inadequate instruction given		✓	

Code	2.5 Oil & Gas Boiler Upgrade	Detail	Severity		
		Page 2 of 2			
Y1	USER DOCUMENTATION	<input type="checkbox"/> User Manuals not left with homeowner		✓	
** The following is for Oil Installations Only					
ZA1	OIL TANK LOCATION/INSTALLATION	<input type="checkbox"/> **Location of new oil tank not satisfactory <input type="checkbox"/> **Location of old oil tank in imminent danger <input type="checkbox"/> **Base not satisfactory <input type="checkbox"/> **Oil line not satisfactory <input type="checkbox"/> **Fire barriers required	✓		
ZA2	OIL TANK LOCATION/INSTALLATION	<input type="checkbox"/> **Location old oil tank not in imminent danger, not satisfactory		✓	
*** The following is for gas installations only					
ZA1	GAS COMPLIANCE CERTIFICATE	<input type="checkbox"/> No Gas Compliance certificate provided			✓

## 2.6 Heating Controls Upgrade

Code	Heating Controls Upgrade	Detail	Severity		
			One	Two	Three
Page 1 of 2					
A1	HEATING STANDARD	<input type="checkbox"/> Controls not working correctly <input type="checkbox"/> Heating not working correctly		✓	
A3	HEATING STANDARD	<input type="checkbox"/> No expansion vessel, no pressure relief valve, no facility for expansion on a heating system	✓		
E3	PIPE WORK NOT ACCEPTABLE	<input type="checkbox"/> Badly graded			✓
E4	PIPE WORK NOT ACCEPTABLE	<input type="checkbox"/> Not adequately supported <input type="checkbox"/> Leaking		✓	
HB1	CARBON MONOXIDE ALARM	<input type="checkbox"/> *Not installed when required	✓		
J3	THERMOSTATIC RADIATOR VALVE (TRV)	<input type="checkbox"/> Minimum required number of TRV's not installed <input type="checkbox"/> TRV installed in room with room stat		✓	
L1	AUTO BYPASS	<input type="checkbox"/> None installed <input type="checkbox"/> Manual bypass fitted <input type="checkbox"/> Incorrectly sited		✓	
M1	BOILER INTERLOCK	<input type="checkbox"/> Not installed <input type="checkbox"/> Not working <input type="checkbox"/> Pump over-run not installed correctly (where applicable)		✓	
N1	CYLINDER STAT	<input type="checkbox"/> Poor location <input type="checkbox"/> Not fitted <input type="checkbox"/> Not working		✓	
O1	SPACE AND WATER HEATING ZONES	<input type="checkbox"/> Motorised valve not working <input type="checkbox"/> Lever valve fitted		✓	
O4	SPACE AND WATER HEATING ZONES	<input type="checkbox"/> Not fitted	✓		
P1	EXTRA ZONE	<input type="checkbox"/> Not fitted correctly <input type="checkbox"/> Neither 3rd zone nor TRVs fitted		✓	
R1	7 DAY (2/3 CHANNEL) PROGRAMMER	<input type="checkbox"/> Not fitted correctly <input type="checkbox"/> Poor location (inaccessible) <input type="checkbox"/> Not fitted <input type="checkbox"/> Incorrect programmer fitted		✓	
S1	HOT WATER/HEATING	<input type="checkbox"/> No separate hot water only <input type="checkbox"/> No separate heating only <input type="checkbox"/> Heating and/or hot water not working correctly <input type="checkbox"/> Radiators Heating on Hot Water only		✓	
T1	ROOM STAT	<input type="checkbox"/> Poor location <input type="checkbox"/> Wrong height (1.5m) <input type="checkbox"/> In direct sunlight <input type="checkbox"/> Subject to draughts		✓	
T5	ROOM STAT	<input type="checkbox"/> Not fitted <input type="checkbox"/> Not working	✓		
U1	IMMERSION HEATER TIMER	<input type="checkbox"/> Not fitted but required <input type="checkbox"/> Not working <input type="checkbox"/> No immersion switch fitted with timer		✓	
U4	IMMERSION HEATER TIMER	Unsuitable immersion timer fitted	✓		

Code	Heating Controls Upgrade	Detail	Severity		
Page 2 of 2					
V1	ELECTRICAL WORK	<input type="checkbox"/> Incorrectly fused <input type="checkbox"/> No spur switch visible/ poorly located <input type="checkbox"/> Bonding not present on pipework to ETCl rules (at boiler and hot press) <input type="checkbox"/> Earthing not to ETCl rules <input type="checkbox"/> Cross bonding in Hot Press incomplete & not to ETCl rules <input type="checkbox"/> Earthing/bonding fitted to gas supply is not to ETCl rules <input type="checkbox"/> Home owner not issued with 'Electrical Safety notice to home owner' if required		✓	
V13	ELECTRICAL	<input type="checkbox"/> Work carried out by Contractor may be detrimental to electrical installation.	✓		
W1	CONTRACTOR MAKING GOOD	<input type="checkbox"/> Property not returned to manner in which it was found		✓	
X1	INSTRUCTION GIVEN	<input type="checkbox"/> Inadequate instruction given <input type="checkbox"/> No instruction given		✓	
Y1	USER DOCUMENTATION	<input type="checkbox"/> User Manuals not left with homeowner		✓	
ZB1&2	CONTROLS AS PER SPECIFICATION	<input type="checkbox"/> Not as per Scheme Standard		✓	

## 2.7 Solar Installation

Code	Solar Installation	Detail	Severity		
			One	Two	Three
Page 1 of 2					
A1	SYSTEM DETAILS	<input type="checkbox"/> System not designed as per SEAI Spec and COP <input type="checkbox"/> Cylinder not sized correctly		✓	
A4	SYSTEM DETAILS	<input type="checkbox"/> Aperture Area of panels/tubes not correctly sized by house area	✓		
B1	INSTALLATION OF COLLECTORS	<input type="checkbox"/> Collectors not adequately fastened to the roof <input type="checkbox"/> Panel/tubes are visibly damaged	✓		
B2	INSTALLATION OF COLLECTORS	<input type="checkbox"/> Collectors not properly oriented and angled <input type="checkbox"/> Potential for shading of collectors (trees, buildings, etc.)			✓
D2	SOLAR CONTROLLER/ PUMPING STATION	<input type="checkbox"/> The electrical controls, including immersion and temperature sensors are not operating correctly. <input type="checkbox"/> Circulation indicator for the solar loop not present/visible <input type="checkbox"/> The circulating pump not operating correctly <input type="checkbox"/> Temperature and controller settings incorrect <input type="checkbox"/> Solar controller fitted at wrong height		✓	
E1	DOMESTIC HOT WATER INSTALLATION	<input type="checkbox"/> Anti-water boiling controls not in place <input type="checkbox"/> Auxiliary heating not set-up to allow raising water temperature above 60 deg. C regularly to avoid legionella risks	✓		
E2	DOMESTIC HOT WATER INSTALLATION	<input type="checkbox"/> Hot water cylinder not insulated properly <input type="checkbox"/> No mechanism in place for unwanted circulation <input type="checkbox"/> No temperature interlock present between solar heated storage and auxiliary heating <input type="checkbox"/> Safety Notice not provided to homeowner where TMV was not installed		✓	
F1	INTEGRATION WITH SPACE HEATING	<input type="checkbox"/> Sensor for space heating control incorrectly placed		✓	
G1	COMMISSIONING AND HANDOVER	<input type="checkbox"/> Maintenance instructions and schedules not provided to customer/end user <input type="checkbox"/> All safety and information labels not in place. <input type="checkbox"/> Customer/end user has not been instructed in correct operation of system <input type="checkbox"/> System documentation and operating manual have not been supplied to end user			✓
G3	COMMISSIONING AND HANDOVER	<input type="checkbox"/> Antifreeze concentration does not comply with manufacturers requirements <input type="checkbox"/> Home owner not issued with 'Electrical Safety notice to home owner' where required		✓	
H1	COMMISSIONING	<input type="checkbox"/> Commissioning report not available for inspection <input type="checkbox"/> Commissioning report not completed		✓	
J1	SOLAR LOOP ANCILLARY/VALVES	<input type="checkbox"/> Expansion and pressure release valve not installed	✓		



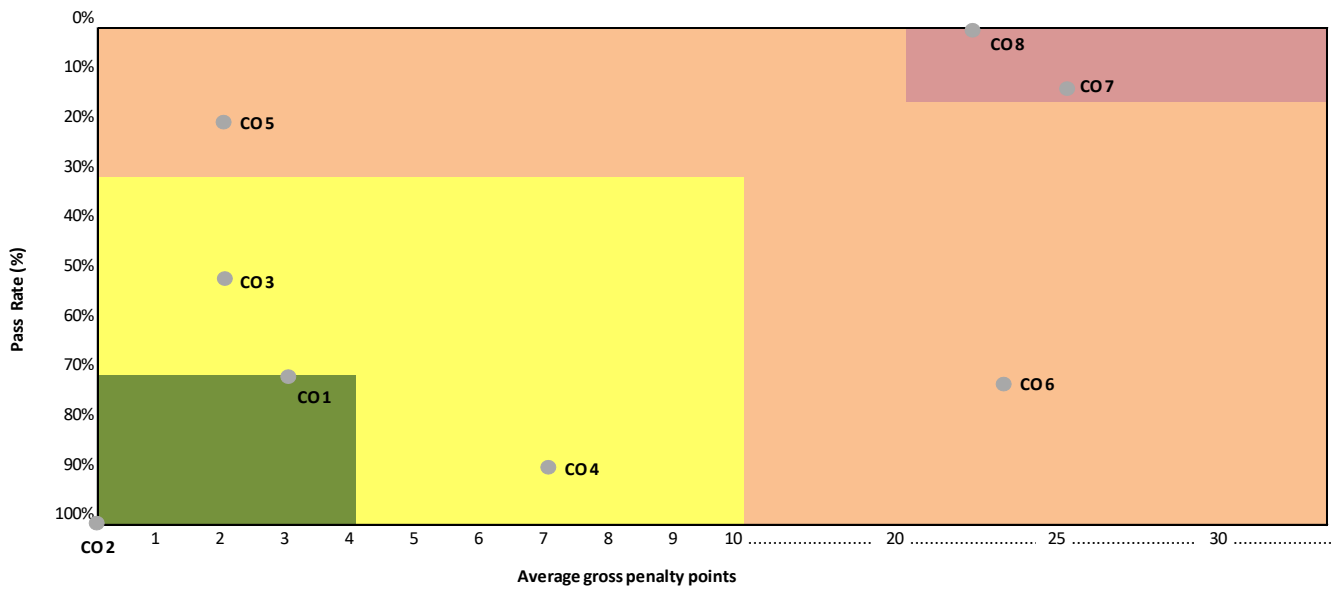
Code	Solar Installation	Detail	Severity		
			One	Two	Three
Page 2 of 2					
J <sub>2</sub>	SOLAR LOOP ANCILLARY/VALVES	<input type="checkbox"/> Pressure release valves are caught open or closed <input type="checkbox"/> Connection of solar loop to storage tank heat exchanger is incorrect <input type="checkbox"/> Expansion vessel not sized correctly/suitably rated as per solar manufactures recommendations <input type="checkbox"/> Unsuitable collector or no collector from pressure relief valve in place <input type="checkbox"/> Anti-reverse-circulation measure not in place (e.g. non-return valves in solar station as per manufactures details)		✓	
K <sub>11</sub>	SOLAR LOOP SYSTEM DETAILS	<input type="checkbox"/> Pressure in the solar loop incorrect as per manufacturer's instructions		✓	
L <sub>1</sub>	SOLAR LOOP PIPEWORK	<input type="checkbox"/> Solar loop pipe or components leaking <input type="checkbox"/> Pipe penetrations of building fabric not sealed <input type="checkbox"/> Pipes not securely fixed		✓	
M <sub>2</sub>	SOLAR LOOP INSULATION	<input type="checkbox"/> Pipe work in the solar loop (internal & external) has not been thoroughly insulated <input type="checkbox"/> High temperature insulation not fitted <input type="checkbox"/> Solar loop external pipe and fittings not insulated with UV resistant insulation		✓	
N <sub>1</sub>	SOLAR WATER HEATING SYSTEM AS PER SPECIFICATION	<input type="checkbox"/> Not as per Scheme Standard			✓
P <sub>1</sub>	ELECTRICAL	<input type="checkbox"/> Permanent Electrical wiring not installed/ not to ETCl rules and untidy (not temporary extension lead) <input type="checkbox"/> Cables not clipped/untidy <input type="checkbox"/> Home owner not issued with 'Electrical <input type="checkbox"/> Safety notice to home owner' if required		✓	
P <sub>3</sub>	ELECTRICAL	<input type="checkbox"/> Probes/sensors not securely fixed <input type="checkbox"/> Non switchable spur not visible/ poorly located <input type="checkbox"/> Bonding not present on pipework to ETCl rules (on solar loop and hot press) <input type="checkbox"/> Earthing not to ETCl rules <input type="checkbox"/> Work carried out by Contractor may be detrimental to electrical installation.	✓		

## 2.8 Heat Pumps

To follow.

# SCORE CARDS as applied by specific Better Energy Homes Programmes

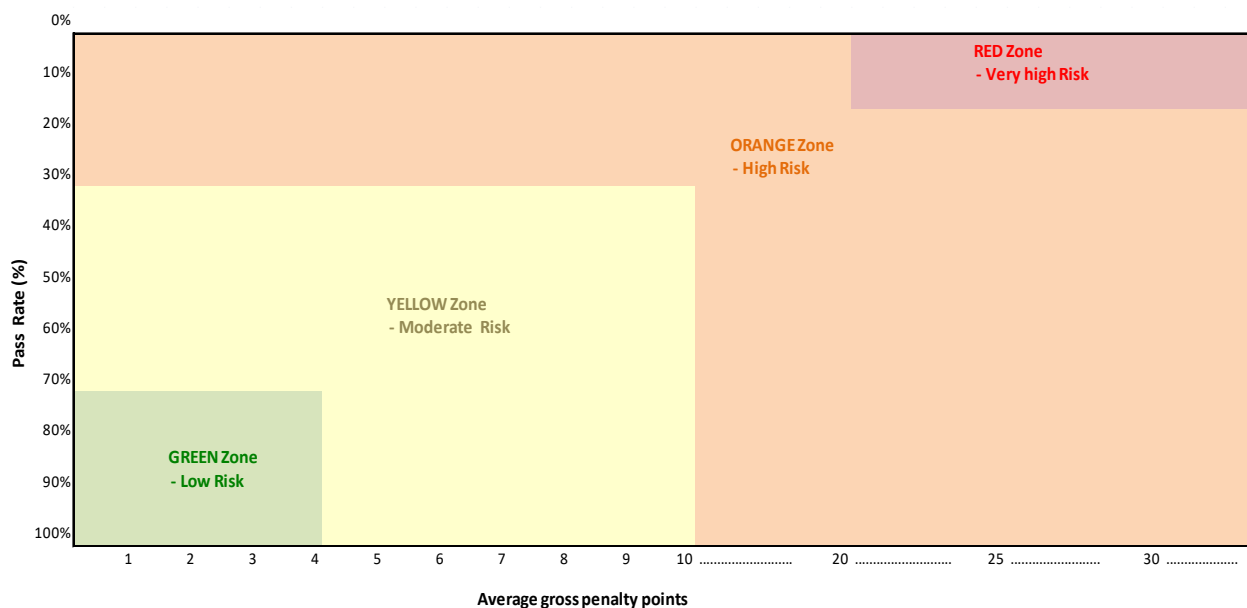
## Appendix 3 – Better Energy Homes QADP Zone Examples



	Green		Yellow		Orange		Red	
CO	Contractor 1	Contractor 2	Contractor 3	Contractor 4	Contractor 5	Contractor 6	Contractor 7	Contractor 8
# Installations	600	10	75	850	350	100	210	5
# Inspections	55 (9%)	2 (20%)	8 (10.6%)	80 (9%)	30 (8.5%)	7 (7%)	24 (11%)	1 (20%)
# Pass (i.e. No reworks)	<b>39 (71%)</b>	<b>2 (100%)</b>	<b>4 (50%)</b>	<b>72 (90%)</b>	<b>6 (20%)</b>	<b>5 (71%)</b>	<b>3 (12.5%)</b>	<b>0 (0%)</b>
# Fail (Sev 1 and/or sev 2)	16 (29%)	0 (0%)	4 (50%)	8 (10%)	24 (80%)	2 (29%)	21 (87.5%)	1 (100%)
Gross penalty points	48	0	8	56	48	46	525	22
Average gross penalty points	<b>3</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>2</b>	<b>23</b>	<b>25</b>	<b>22</b>

## Appendix 4 – QADP Contractor Scorecard under Better Energy Homes Programme

Below is an example of how Contractors will be advised of their performance in the preceding assessment period.



Report Date: 8<sup>th</sup> August 2016  
 Report Period: Period 3  
 Contractor ID: 123456  
 Contractor: AC Construction Ltd

	6 month	3 month	1 month
# Installations	600	150	60
# Inspections	90	15	6
# Fail (require reworks)	70 (78%)	6 (40%)	2 (33%)
# Pass	20 (22%)	9 (60%)	4 (67%)
Gross penalty points	770	42	6
% Pass Rate	22%	60%	67%
Average gross penalty points	11	7	3
Zone	Orange	Yellow	GreenYellow
Risk	High	Moderate	Low

\*\*The SEAI website is regularly updated with technical information and other relevant material for contractors. The Better Energy Homes Code of Practice and Technical Specification is reviewed regularly. Please see our website for the most recent versions of these documents: <https://www.seai.ie/energy-in-business/contractor-supports/>