

# Energy Company Obligation (ECO) U-Value Consultation Questionnaire – Feb 16



Making a positive difference  
for energy consumers

## Background

The questions below relate to the consultation on requirements for over-writing U-values for cavity wall insulation measures which can be found on our website :

<https://www.ofgem.gov.uk/publications-and-updates/eco2-consultation-requirements-overwriting-u-values-cavity-wall-insulation-measures>

Our proposals consist of three main parts:

- a. introducing an upper limit for overwritten U-values,**
- b. stipulating the evidence that we expect to be in place when a U-value is overwritten and how we expect inputs to be collected, and**
- c. a regime to monitor these measures; we suggest three approaches for implementing monitoring.**

## Notes For Completion

Please complete all relevant sections of the document by selecting an answer for the question and then providing reasons/evidence for your response in the box provided. If you do not wish to answer a question please select 'N/A'. The questionnaire should be completed in typeface and returned via email to [eco.consultation@ofgem.gov.uk](mailto:eco.consultation@ofgem.gov.uk) by close of play **7 March 2016**.

## Respondent Details

Organisation Name:	Aran Services Ltd
Completed By:	Kaz Morris (Managing Director) and Ian Parris (ECO Compliance Manager)
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## 1. U-value Limit

**1.1** Do you agree that it is unreasonable for the U-value of a cavity wall measure to exceed 1.6 W/m<sup>2</sup>K in premises in the age bands B-K?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide details and supporting evidence for your response below.

Aran Services Ltd disagrees with this statement due to various different construction elements used in the age brackets mentioned above which can majorly impact the U-Value, leading the overall cavity wall to have a higher U-Value than 1.6Wm<sup>2</sup>/K.

Typically with a property built between 1900 - 1975 you would expect the make-up of the wall to consist of plaster, with or without dot and dab/timber battened plasterboard, dense block or brick inner leaf (brick being used between 1900 - 1949), an empty cavity with a brick outerleaf. With the brick & dense blockwork construction this will usually give you a U-Value between 1.6 - 1.83Wm<sup>2</sup>/K; which already shows a standard construction type exceeding the 1.6Wm<sup>2</sup>/K mentioned within the question. A brick & brick construction would give off a U-Value between 1.37 - 1.52Wm<sup>2</sup>/K.

Properties from 1976 onwards would usually start to incorporate the use of a thermalite blockwork for the inner leaf which consistently will give off a U-Value of less than 1.6Wm<sup>2</sup>/K. Further from this, a lot of properties are built from stone, for example in the Cotswolds where most properties have an external leaf consisting of limestone, sandstone, random stone etc. Stone is far less thermally efficient than brick, for example limestone has a lambda value of 1.7Wm<sup>2</sup>/K whereas brick has a value of 0.77Wm<sup>2</sup>/K; therefore in a lot of these properties built in age bands B - K the overall cavity can have a U-Value in excess of 2.00Wm<sup>2</sup>/K.

**1.2** Do you agree that we should implement a limit of 1.6 W/m<sup>2</sup>K for overwritten U-values for cavity wall measures in premises in age bands B-K?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Dont Know

N/A

Please provide details and supporting evidence for your response below.

Aran Services Ltd disagrees with this statement due to reasons stated in the previous question. Although  $1.6\text{Wm}^2/\text{K}$  in most circumstances would suffice, as stated previously there are many different wall construction types which would lead to the U-Value being greater than  $1.6\text{Wm}^2/\text{K}$ .

One scenario would be for a property built between 1950-1975, where a brick & dense blockwork pattern is used which would usually give off a U-Value between  $1.6 - 1.83\text{Wm}^2/\text{K}$ ; therefore the cap of  $1.6\text{Wm}^2/\text{K}$  would not benefit this type of construction.

Another scenario would be where a property is built from stone (which is far less thermally efficient than brick/block). Here the overall cavity can have a U-Value in excess of  $2.00\text{Wm}^2/\text{K}$ .

So to summarise; for these two construction types, having a U-Value cap of  $1.6\text{Wm}^2/\text{K}$  would lead to inaccurate carbon scores, as they would have a far more inefficient wall than is being reported.

## 2. Evidence Requirements

**2.1** Do you agree that relevant inputs should be collected for the U-value calculation via an intrusive inspection, using a borescope for example?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Aran Services Ltd does agree with the above statement, but only to a certain extent. A drill hole must be made in order to measure the width of the cavity, and the use of a boroscope must be used in the first instance during a technical survey, as it allows the surveyor to accurately assess the current state of the cavity. It also allows them to deem whether the cavity has any partial fill in-built into the wall, so for example a 20mm phenolic board. When partial fill is present then yes a photo of the boroscope photo should be required, but when the cavity is clear and empty, although an inspection using a

boroscope is 100% required, we wouldn't necessarily require a photo of the boroscope.

This is mainly due to the fact that going off past experiences of receiving photos of the boroscope, it is largely inconsistent and very hard to actually depict what the boroscope is showing. This is due to the following reasons:

- A. Not all surveyors carry a top of the range boroscope which has the ability to take a clear photograph, meaning quite often the photo is quite grainy.
- B. If the surveyor has to take a photograph of the screen of a boroscope (as their boroscope doesn't have photo taking capabilities), unless it is dark outside, then it is nearly impossible to see what is shown on the screen.
- C. Quite often a surveyor would carry a boroscope which doesn't have a screen, and simply has a lense to look through, which makes taking some form of photographic evidence very difficult.

So when in theory the use of a boroscope is a good idea, when using it as evidence (taking a photo) for a U-Value Calculation it is impractical.

## 2.2 What types of evidence do you suggest would support the inputs used for a new U-value calculation?

Please provide reasons for your response below.

The type of evidence which Aran Services Ltd currently require are as follows:

1. Whilst on-site the surveyor will complete a 'U-Value Calculation data collection form'
2. Here they will document the construction type of the wall, along with taking the required photographs as supporting evidence in order to allow the qualified SAP Assessor to compile an accurate Pre and Post U-Value Calculation. The evidence requested on the form is as follows:
  - a. External Wall Leaf Material
    - i. A photo of the external wall is required
    - ii. A photo of the width of the external wall material is required
    - iii. If render is present, then a photo to show the depth
  - b. Cavity
    - i. A measuring device inserted into the cavity to show the cavity width
    - ii. If partial fill is present, then photographic evidence of this is required
  - c. Internal Wall Leaf Material
    - i. A photo of the internal wall is required, usually taken from the loft or via a meter box
    - ii. Photo of the plasterboard/plaster
  - d. Total Wall Thickness
    - i. A photo of a window or door reveal to show the total thickness of the wall

All of the above is documented on the U-Value Calculation data collection form, and all photos must be date stamped.

## 2.3 Do you agree that the types of evidence listed in paragraph 2.5 are practical to provide?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree

- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Yes we agree that these will be practical to provide, although it does depend on what Ofgem class as suitable evidence that supports an overwritten U-Value. We feel that this evidence should be outlined by Ofgem, making it clear on what exactly they require.

The suitable evidence we feel would be what Aran Services Ltd currently collect, as stated in question 2.2. This is because this is currently a live process, and Aran Services Ltd have been requiring the evidence stated in question 2.2 since 2014 and there has never been any issue in collecting it. The only problem that may arise would be when taking evidence of the internal material, as it may not be possible to get in the loft to take a picture, hard to see within a meter box, or it is not possible to take a photo down the drill hole. In this instance the qualified OCDEA/SAP Assessor will make a judgement call based on the age of the property.

**2.4** Do you agree that the evidence listed in paragraph 2.5 is sufficient to support an overwritten U-value?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Yes we believe that this amount of evidence is sufficient to support an overwritten U-Value.

This is due to every material in the make-up of a wall being clearly evidenced, meaning that when the construction of the wall is entered into the accredited SAP software it will provide a U-Value which is correct. Also by providing files such as the site notes, it will clearly tell Ofgem whether or not the property should have had an overwritten U-Value applied to it in the first place. If any of the evidence listed isn't provided to the qualified OCDEA, and a suitable reason isn't given then the original assessor will be required to gather more information; no U-Value Calculations will be completed without the correct evidence.

**2.5** Do you agree that the inputs for a U-value calculation should be collected by an independent person to increase

confidence in the accuracy of overwritten U-values for CWI measures?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Yes we believe that an independent person should collect the data required for overwriting a U-Value, however they should only be independent from the qualified OCDEA, not necessarily independent to the company completing the U-Values.

So the company collecting the data for input, who is also looking to install the work, can also have a qualified OCDEA working for the company, just as long as the OCDEA doesn't collect the information themselves.

In order to boost confidence, the OCDEA will perform a number of site audits on the data provided to them to ensure that the evidence was correct. To do this they will randomly select a number of jobs every month which have had an overwritten U-Value, personally attend site and assess the property, checking that the information provided to them in the first instance was correct.

**2.6** Do you agree that an independent person collecting the inputs for a U-value calculation would be practical to implement taking into consideration cost, time and customer journey implications?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Yes this would definitely be practical, because (so long as the independent person is not the OCDEA) it saves on the cost and time that it would take for the qualified OCDEA to personally visit each property requiring an overwritten U-Value. It also would not be feasible to send the OCDEA out to each job as not all jobs require it, and like usual these will be dotted around the country making journey times impossible.

The independent person collecting the data would attend a property in order to complete a technical survey and EPC in regards to cavity wall insulation for ECO. If when they are there, they assess the property to have been built Post 1983; they will then complete a U-Value Data Collection form and take the relevant evidence required. They would then send the U-Value request to the OCDEA who is office based, who would complete the U-Value Calculations based on the evidence provided and send the U-Value Calculations back to the independent person who collected the data. This process has been highly successful, and still continues to be.

In order to boost confidence, the OCDEA will perform a number of site audits on the data provided to them to ensure that the evidence was correct. To do this they will randomly select a number of jobs every month which have had an overwritten U-Value, personally attend site and assess the property, checking that the information provided to them in the first instance was correct.

### 3. Option 1 – Additional Monitoring Questions

**3.1** Do you agree that option 1 would increase confidence in the accuracy of overwritten U-values for CWI measures?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Aran Services Ltd do agree that additional monitoring questions are required, these should be set questions which will be implemented across the board, meaning every overwritten U-Value has been done so by an agreed process set out by Ofgem.

By having this it will allow the utilities to have the confidence in knowing that if an overwritten U-Value has been completed, then this has been done so correctly, following a standardised template.

Aran Services Ltd do feel however that along with these additional monitoring questions, there should also be a set requirement for the evidence which is collated and given to a qualified OCDEA in order to complete a U-Value Calculation. In doing this, it would prevent any 'incorrect' overwritten U-Values being completed in the first place.

**3.2** Do you agree that option 1 would be practical to implement, taking into consideration cost and time implications?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Yes this would be practical, most companies should have all of the requirements in place already, and if



not then the cost and time implications to incorporate a new process will not be much.

Aran Services Ltd already have these in place therefore it will not be an issue; everything is checked prior to submission to funders/utilities therefore there should be no differences in data provided.

**3.3** Do you agree that a score monitoring agent is suitably qualified to answer the proposed questions relating to the U-value inputs?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

A 'score monitoring agent' has to at least be a qualified OCDEA/SAP Assessor, or someone who is suitably qualified to complete U-Value Calculations in order to answer the proposed questions relating to U-Value inputs.

As the question doesn't state what Ofgem believe the qualification required to be for a 'score monitoring agent', we can therefore not correctly answer the question due to lack of information.

**3.4** Do you agree that the proposed additional score monitoring questions are appropriate for identifying where overwritten U-values are incorrect?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Yes Aran Services Ltd do agree that the questions proposed are appropriate, but again we must reiterate that the real problem is the evidence taken in the first instance. So as stated in question 3.1

Ofgem must implement a set process of evidence required to be taken by the independent person who is on site collecting the data. Because if this evidence is not sufficient, or incorrect then this is where the whole overwritten U-Value process falls down.

**3.5** Are there any additional questions that you think would help to identify inaccuracies in overwritten U-value calculations?

Please provide reasons for your response below.

Yes; Ofgem must implement a set requirement of evidence required to be taken by the independent person who is on site collecting the data, which in turn is given to a qualified OCDEA in order to complete a U-Value Calculation. In doing this, it would prevent any 'incorrect' overwritten U-Values being completed in the first place.

**3.6** Can you please estimate how long you think it will take for these new questions to be implemented into your systems?

Please provide reasons for your response below.

Once Ofgem has provided a set of new questions, it would only take 1 week to implement these into our systems, however Ofgem must allow for discrepancies as work surveyed just before this implementation date could take 4 - 6 weeks to filter out and be installed. So work installed 4 - 6 weeks after the date of implementation may not have the new questions incorporated.

**3.7** Do you foresee any issues if the questions were implemented during a monitoring quarter?

- Yes
- No
- Don't Know
- N/A

Please provide reasons for your response below.

Yes, as stated in question 3.6, work surveyed just before the implementation date will not have the new questions incorporated, therefore if the job was installed 4 weeks later using an overwritten U-Value and then monitored it would then appear that we have not answered the questions.

Aran Services Ltd therefore suggest that after the implementation date, any job surveyed before that date should be overlooked.

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#### 4. Option 2 – Ongoing Monitoring

**4.1** Do you agree that option 2 would increase confidence in the accuracy of overwritten U-values for CWI measures?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Random reviews of 5% of work installed by a supplier would definitely increase the confidence in overwritten U-Values.

In making the sample random, it would ensure that the supplier/installer would aim for 100% accuracy on all jobs, on the off chance that it would be selected for review.

**4.2** Do you agree that option 2 would be practical to implement, taking into consideration cost and time implications?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Aran Services Ltd feel that this option would be impractical to implement, as the time and resources taken to select 5% of all works which have had an overwritten U-Value each month, collate all of the required information and send to Ofgem would be large.

So although in theory it is a good idea, realistically it would be very tricky for both sides. Ofgem would have to monitor and examine 5% of all work submitted by every supplier every month which would lead to a high workload for themselves.

**4.3** If we were to implement a new monitoring regime in order to verify the accuracy of overwritten U-values for CWI measures, do you agree with the sample size and reporting timeframes outlined in paragraph 2.12?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

If this option were to be implemented, then yes we agree that the sample size and turnaround time would be acceptable.

## 5. Option 3 – Audit Regime

**5.1** Do you agree that option 3 would increase confidence in the accuracy of overwritten U-values for CWI measures?

- Strongly Agree
- Agree

- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Aran Services Ltd feel that although a one off audit conducted on a large amount of overwritten U-Value's would be beneficial, it would have its disadvantages. On the plus it would lead to the supplier aiming for 100% accuracy on all jobs on the off chance that it would be selected for review; it would however decrease confidence as having to gather all of the evidence required for an audit out of the blue can be time consuming and not cost efficient.

Taking a large sample for audit all at once wouldn't give Ofgem a clear picture of how the supplier is performing, as it would largely be focusing on work installed around the same time, as opposed to annually.

Finally there is no confirmation on how 'large' this audit would be, and how many times a supplier would be subjected to it.

**5.2** Do you agree that option 3 would be practical to implement taking into consideration cost and time implications?

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree
- Don't Know
- N/A

Please provide reasons for your response below.

Aran Services Ltd feel that this option would be impractical to implement, as the time and resources taken to gather all of the required evidence for a potentially large amount of jobs at such a short notice would be detrimental to the company. The staff required would have to be taken off their usual tasks in order to work on gathering the evidence, which would lead to back-logs in work.

So although in theory it is a good idea, realistically it would be very tricky for both sides. Ofgem would have to examine a large amount of data all at once, leading to a high workload for themselves.

## 6. Additional Questions

**6.1** Do you have concerns with U-values being overwritten for other ECO measure types?

Please provide details and supporting evidence for your response below.

The only other measure to which Aran Services Ltd work with which could have an overwritten U-Value is loft insulation, and we feel that there are not many variables involved, meaning performing a U-Value Calculation would be time consuming, along with providing little gains.

**6.2** If you do not agree with any of proposals outlined, could you please suggest an alternative approach which you consider would provide assurance that U-values are being accurately overwritten for CWI measures?

Please provide details and supporting evidence for your response below.

Aran Services Ltd do agree with option 1 which has been outlined above, however as previously stated additional monitoring questions are required, these should be set questions which will be implemented across the board, meaning every overwritten U-Value has been done so by an agreed process set out by Ofgem.

By having this it will allow the utilities to have the confidence in knowing that if an overwritten U-Value has been completed, then this has been done so correctly, following a standardised template.

Aran Services Ltd do feel however that along with these additional monitoring questions, there should also be a set requirement for the evidence which is collated and given to a qualified OCDEA in order to complete a U-Value Calculation. In doing this, it would prevent any 'incorrect' overwritten U-Values being completed in the first place.

**6.3** Do you agree that the proposals outlined above will enable U-values to continue to be overwritten for CWI measures where this is appropriate?

Please provide reasons for your response below.

We believe that the proposals outlined will certainly improve the quality and consistency of all overwritten U-Values, along with strengthening the accountability of the qualified assessors; however we do feel that more needs to be implemented at the front end as opposed to just post install.

