



Title:	Quidos Non-Domestic EPCs - Common Issues		
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Non-Domestic EPCs - Common Issues

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1.0 - Walls

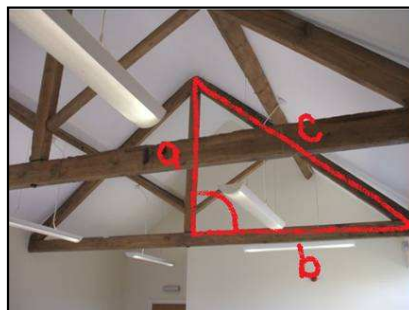
1. Ensure that the U-Values and the Km values that you have defined are appropriate for the wall that you are entering. The values within the software on the library and inferences are not always consistent, so ensure that you double check every entry.
2. When you have a warehouse style building such as the one below, you must ensure that you have defined both of the wall construction types and entered within the zone accordingly.



3. If you select a Building Regulations construction date from the library you must ensure that you have evidence that the building would have been built to that standard.

2.0 - Roofs

1. Ensure that the year of build that you have defined is accurate and can be evidenced.
2. The U-Values for the roofs within iSBEM are not always accurate – ensure that the option you have selected is correct for the roof.
3. In warehouse buildings with an exposed pitched roof, the roof area will always be larger than the floor area. In this instance you must work out the actual roof area, as you need to obtain an accurate heat loss measurement:



Knowing the length's of both a) and b), you can obtain the length of c) by using the following equation- $a^2 + b^2 = c^2$.

3.0 - Floors

1. When entering intermediate floors, pay very close attention to the Km value of the floor that you are defining. A high Km value will be appropriate for a dense concrete construction, whereas a timber floor construction should have a low Km value. This can heavily impact upon the rating, so pay close attention to getting this right.

4.0 - Doors

1. Ensure that you enter all the doors present! It is easy to forget to enter doors, but external doors should always be entered.
2. Do NOT enter internal doors.
3. The U-Values for doors can vary considerably – be sure to check them closely before defining doors.

5.0 - Glazing

1. Remember that any door with over 50% glazing should be entered as a window.
2. Do NOT enter internal glazing.
3. iSBEM automatically assumes a surface area ratio of 1.3 for all rooflights to allow for domed skylight surfaces. If the windows are flat, then ensure that you adjust this value back to 1.

6.0 - General

1. Do not click the 'Accredited Detail' box for thermal bridges unless you are certain of the values.
2. Ensure that the orientation entered is accurate.
3. Under the new conventions, you must amend the air permeability depending on the age of the building. The following values should be used:

The SBEM default value of $25 \text{ m}^3/\text{hr m}^{-2}$ for all existing buildings shall be amended as follows:

Less than $10 \text{ m}^3/\text{hr m}^{-2}$ – only with an accredited air pressure test result

$10 \text{ m}^3/\text{hr m}^{-2}$ – buildings $> 500 \text{ m}^2$ built to 2002 Building Regulations

$15 \text{ m}^3/\text{hr m}^{-2}$ – buildings $\leq 500 \text{ m}^2$ built to 2002 Building Regulations and buildings built to 1995 Building Regulations

$25 \text{ m}^3/\text{hr m}^{-2}$ – buildings built to Building Regulations pre 1995

35 m³/hr m⁻² – to be considered where buildings are pre 1995 regulations and where suitable evidence of high permeability exists, e.g. single skin metal clad structure within Planning Use Class B2 – B8 with large roller shutter doors and poor constructional details etc.

7.0 - HVAC

1. It is essential that you do your utmost to obtain accurate efficiency values for the HVAC systems entered. Defaults should only be used as a last resort. If you have used a default value, then you must document in your site notes why you have done so.
2. Any zone that would expect to be heated, MUST have a heating system assigned to it. If there is no actual system located within the zone, then the default 'electrical resistance' option should be selected from within the zone tab.
3. All direct acting electric heaters should have an efficiency of 100%. For these system always select 'direct or storage electric heater' which will automatically assign the correct value.
4. Boiler efficiency values MUST be investigated. The following sources of information should all be sourced before resorting to using the default:

1. Use ECA product list part load values at 30% and 100%* - these should be used to calculate the seasonal efficiency as per the Non Domestic Building Services Compliance Guide (NDBSCG).

2. Use ECA product list full load value* (when part load values are not given)

3. Use current SEDBUK values where available.

4. Use either manufacturer's information* or 'boiler plate*' information or information from manufacturer's technical helpdesk*. Where a gross efficiency value is established for a non condensing boiler then a deduction of 5% should be made to it to convert it to an appropriate seasonal efficiency.

5. Use SAP tables (up to 70kW output).

Only in the event that none of the above sources of information is available should the default be used.

5. Heating credits should be added as per the Non-Domestic HVAC Compliance guide.
6. When only the EER information is available for a split system, this should be entered as the SEER for the unit within the software. The EER field within the software makes no impact upon the rating, so all relevant info must be entered within the SEER field.

8.0 - HWS

1. All instantaneous and small storage systems electric systems must have an efficiency of 100% defined.
2. If the property you have surveyed does not have a HWS system present, then you MUST define a default. Under the current conventions that approach is:

Where details of the HWS are unavailable or there is no system then the HWS shall be entered as an '**instantaneous system**' with no storage with a seasonal efficiency of **50%**. Where the fuel type can be readily determined then the appropriate fuel type must be entered otherwise '**grid electric**' should be assumed.

3. Always ensure that you have included dead legs when they are present.
4. If you have a system that incorporates storage then you MUST define either the storage losses or the volume of the storage. Storage losses are preferable as they will provide a more accurate rating for the system.

9.0 - Exhaust

1. All extracts fans present should be entered.
2. The default values within iSBEM must be altered in line with the NDEPC conventions.

10.0 - Lighting

1. Under the current conventions, you MUST NOT just enter the wattage of the lighting into the software. Only if there is clear and compelling evidence relating to lux or lumens levels should you make use of these fields. In 99% of cases, you will be selecting 'lighting parameters not available' and be defining the lighting type only.
2. The option 'Tungsten or Halogen' must be used for Halogen spotlights.
3. For certain zones and activities, SBEM will automatically assume a degree of display lighting, regardless of whether or not there is display lighting present within the zone. You should check the display lighting tab within the software for all zones to see whether it has been activated. If it has, then you MUST take one of the two approaches:

1. For all general lamp types except Tungsten or Tungsten Halogen; you must enter that the display lighting uses efficient lamps and enter 50lm/cW in the relevant Lumens per circuit wattage box.

2. For Tungsten or Tungsten Halogen general lamps; you **do not** enter that the display lighting uses efficient lamps and you do not have to enter a value in the Lumens per circuit wattage box.

This is perhaps the most common error made by our assessors (and has a huge impact on the rating), so ensure that you adjust this.

11.0 - Ratings

1. Look in detail at the ratings page, and the energy usage of your actual building in comparison to the reference building. Are the values in line with what you would expect? Are any of the values out of the ordinary? Is the final rating broadly in line with what you would expect?

12.0 - Recommendations

1. Ensure that you have gone through and thoroughly amended all of the recommendations so that they are appropriate to the report.
2. If you add or remove recommendations from the report then you must provide reason for doing so.