Technical Bulletin
June 2019

Welcome to the ecmk Technical bulletin for this quarter.

In this issue we cover:

Please do contact us if you wish to see clarification of any issues for future bulletins.

Many thanks and we hope you enjoy the bulletin.

Stephen Farrow
Scheme Manager

PlanUp – New Webinar

ecmk have had recent requests to produce and deliver a PlanUp webinar as many of the DEAs within the scheme are now using the PlanUp floorplan tool to produce professional quality floorplans for their varying customers. eTech and PlanUp have integrated for use on the iPad. EPC details recorded in PlanUp will be imported to Smart Survey to help speed up the completion of the survey.

We will be holding regular webinar sessions going through PlanUp and how to use and integrate calculations within the software. You do not have to be a professional PlanUp user as we will take you through the fundamentals of producing a standard basic floorplan, right through to producing professional quality floorplans used by estate agents and other organisations to help sell or rent a property. Additional charges from PlanUp may apply. See PlanUp website for details.

PlanUp can be installed from http://www.planup.co.uk/download.aspx

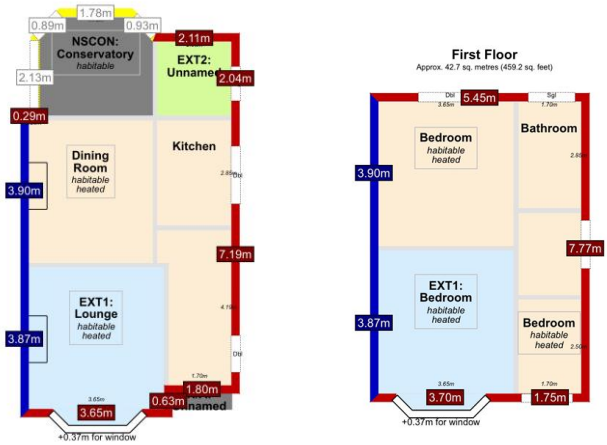
PlanUp – Missing Site Notes, Floorplan & Trouble Shooting

We have had many occasions when the DEA has used PlanUp and once completed, uploaded and calculated, the floorplan does not get processed with the report so when called for an audit and we look for the floorplan, all that is visible is a "PlanUp Error" page with no floorplan available.

We are advising all DEAs using Smart Survey to check that the floorplan has been uploaded from the PlanUp site BEFORE you lodge the report.

Trouble shooting, upload errors and missing floorplans when using PlanUp.

When drawing a floorplan in PlanUp from Smart Survey, the floorplan is uploaded to the PlanUp servers when you press submit in Smart Survey. Your iPad will jump over to PlanUp to allow you to select your account before jumping back to Smart Survey to continue calculating your EPC. If, after calculating your EPC, you return to your assessment for whatever reason before lodging, a problem will arise when you press submit for a second time. Smart Survey will then attempt to upload the floorplan for a second time but will be unable to do so as it has already been uploaded. In order to over come this problem, if you do have to go back to your assessment for a second time after initially calculating your assessment, select "Not Applicable" in the floorplan section in General and the assessment should now calculate without any problems.



However, this can then cause a problem when the site notes are uploaded to Assessor Hub as the floorplan maybe missing. If you are relying on your PlanUp floorplan to serve as your floorplan evidence this could cause problems if or when the property is audited. A simple way to overcome this is to take a screen shot of the floorplan(s), in EPC mode, this way we can easily see the different extensions and wall types. You can take screen shots in your iPad by pressing the home and sleep buttons simultaneously. This will then save the screen shot to your camera roll, which can then be imported into Smart Survey additional photos by selecting the photos from external source. This way the floorplan with it's EPC labelling will be in your site notes regardless of how many times you preview the assessments rating.

Smart Rules – V1.3 New Rules

Smart Rules are fast becoming a large part of the audit types called for audit. These have recently been amended and a new version has been produced which can be found and downloaded from the Assessor Hub website from the "scheme documents" tab.

DEA SMART rules V1.3
Implementation date is from 1st July 2019
New rules and changes are highlighted in blue

Priority No.	Rule No	Rule
1	23	Any occurrence of 2 or more EPC lodgements for the same UPRN within a 3 calendar month period made by assessors from the same scheme.
2	1	No main heating system present, but mains gas supply available.
3	2	Main building age band is L
4	3	Heating controls of boiler energy manager
5	4	Overridden U-values for the main building walls
6	15	Wall of any building part that has insulation type unknown
7	16	Floor of any building part that has insulation type unknown
8	17	Non-pitched roof or roof room of any building part has insulation type/thickness 'unknown'
9	6	No heating controls present, but main heating system is a gas (incl. LPG) or oil boiler
10	22	Any floor of any building part room height is <1.5m or >4m
11	8	Mechanical ventilation present in property built prior to 2003 (including supply/extract)
12	21	Gas/Oil/LPG boiler main heating system and hot water from electric immersion
13	11	Age band A cavity walls
14	12	No access to main building loft
15	13	No access to HW cylinder
16	14	Multiple lodgements by same assessor on same property within 1 calender month where SAP rating was F or G but is now E or above
NA	5	Dormant - Any building part on any element has insulation type recorded as unknown
NA	9	Gas boiler main heating system and hot water from electric immersion

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For more information regarding the new Scheme Operating requirements and the Smart Audit regime, please see the September 2018 technical bulletin and visit the EASOB website.

Overwriting U-Values

Thermal transmittance is the rate of transfer of heat through matter. The thermal transmittance of a material or an assembly is expressed as a U-value. We have noticed that recently many DEAs have been using u values to record data normally reserved for "as built" data input.

Convention 3.08 states:

The U-values of existing elements (walls/roofs/floors, etc.) must be the RdSAP default values (e.g. entered "as built") and must not be overwritten unless specific documentary evidence of the thermal conductivity of individual materials of the building element of the property being assessed is provided and was undertaken in accordance with BR 443 "Conventions for U-value calculations" (BRE, 2006).

The U-value is that of the whole element, including any added insulation.
Documentary evidence applicable to the property being assessed (see convention 9.02) must be provided and recorded if overwriting any default U-value. This evidence shall be either:

- relevant building control approval, which both correctly defines the construction in question and states the calculated U-value; or

- a U-value calculation produced or verified by a person with suitable expertise and experience.

Evidence of suitable expertise and experience can be demonstrated by, but is not limited to, membership of a recognised U-value calculation competency scheme or OCDEA1 or Level 4 nondomestic energy assessor membership, or any other process recognised by Accreditation Schemes/Approved Organisations and Government. Where it is known that only part of an element has been insulated use the alternative wall if possible, for the insulated part, or use extensions.

Where it can be established that a building element has insulation beyond what would normally be assumed for the age band, this can be indicated if adequate evidence exists. Evidence can be:

- what is observed in the site inspection (e.g. loft insulation, rafter insulation, cavity wall insulation), and/or
- on the basis of documentary evidence.

Acceptable documentary evidence includes certificates, warranties, guarantees, building regulation submissions and official letters from the applicable Registered Social Landlord (RSL). The assessor must be confident, and able to demonstrate, that any documentation relates to the actual property being assessed and that there is no physical evidence to the contrary

U-value entry (walls, roofs, floors)
The U-value is that of the whole element, including any added insulation. Documentary evidence applicable to the property being assessed (see convention 9.02) must be provided and recorded if overwriting any default U-value. This evidence shall be either:

- relevant building control approval, which both correctly defines the construction in question and states the calculated U-value; or
- a U-value calculation produced or verified by a suitably qualified person.

Evidence of suitable qualification is through membership of a recognised U-value calculation competency scheme (BBA/TIMSA (UK)), OCDEA membership (England & Wales, Northern Ireland) or level 4 on-construction non-domestic energy assessors.

Appendix S

Reduced Data SAP (RdSAP) has been developed by government for use in existing dwellings based on a site survey of the property, when the complete data set for a SAP calculation is not available. It consists of a system of data collection (defined in Table S19) together with defaults and inference procedures, as defined by the rules given in this Appendix, that generate a complete set of input data for the SAP calculation. For any item not mentioned in this Appendix, the procedures and data given elsewhere in this document apply.

The calculation starting from reduced data is done in two stages. First the reduced data set is expanded into a full data set (see S14 for rounding rules), and then the SAP calculation is undertaken using the expanded data set. The actual SAP calculation is therefore identical, whether starting from a reduced data set or a full data set.

This Appendix forms part of SAP 2012 and provides a methodology for existing dwellings that is compliant with the Energy Performance of Buildings Directive. It is not appropriate for new dwellings for which all data for the SAP calculation should be acquired related to the dwelling concerned.

This Appendix contains the data and rules for expanding the data collected in a Reduced Data survey into the data required for the SAP calculation

Storage Heaters – Manual or Auto Charge Control

It has been brought to our attention through auditing, that some storage heaters have been misidentified. In this bulletin we aim to clarify the different types of storage heating controls and how they are identified. Storage heaters are designed to operate on a dual rate tariff that will allow the device to charge up during the night on the off-peak rate and discharge the heat throughout the day. Therefore, storage heaters will only become an option in the software when a dual rate electricity meter is selected. Please note that storage heaters are typically floor mounted due to the heavy storage blocks within them.

The control options for storage heaters are limited to Manual charge control, Automatic charge control and controls for HHRSHs. Most storage heaters have Manual charge controls and would typically consist of two dials top of the storage heaters. These are commonly labelled as “input” and “output”, but sometimes labelled as “room temperature”, “auto-set control” or “overnight charge” as seen in the examples below.

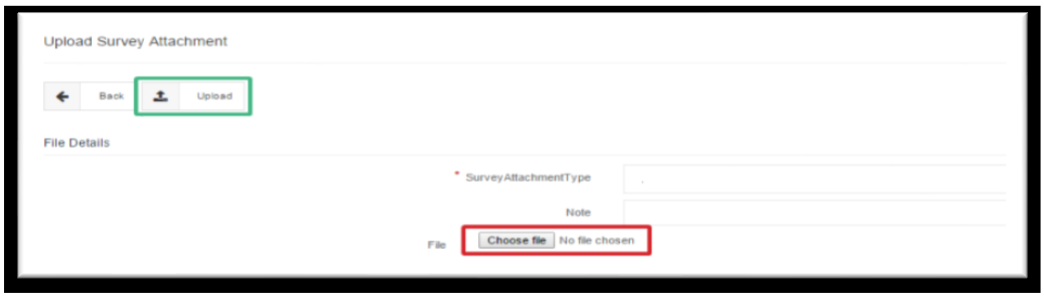
Automatic charge control is quite rare and can be achieved using internal thermostat(s) or an external temperature sensor to control the extent of charging of the heaters. Availability of electricity to the heaters may be controlled by the electricity supplier based on daily weather predictions when used in conjunction with a 24-hour tariff; this should be treated as automatic charge control.

Controls for high heat retention storage heaters should only be selected when HHRSH are present. They are usually integrated as part of the unit as seen in the image below. It incorporates a timer and electronic room thermostat to control the heat output that are user adjustable. It is also able to estimate the next day's heating demand based on external temperature, room temperature settings and heat demand periods.

Audit Evidence & What is Acceptable

When you receive an audit request, you are given the opportunity to provide additional evidence to support your data entry. Most of our domestic assessors use the Smart Survey App to capture their evidence which is generally all that is required for an audit. However, our Non-Domestic, DEC, SAP and some Domestic assessors submit all their evidence through Assessor Hub.

It has been noted by our audit team that some of the evidence uploaded via Assessor Hub is not being labelled. This is an MHCLG requirement and helps identify key information within your evidence. Please ensure that all photos are annotated by using the "note" box on the upload screen shown here.



All evidence must be uploaded to Assessor Hub within 15 working days or when the audit has been requested as per the Scheme Operating Requirements (SORs).

If assessors are using the eTech iPad application, ecmk will already have a copy of the site notes and photographs. The assessor has 15 working days to upload any further evidence to meet the requirements of this procedure.

When we request an audit, you will need to supply sufficient evidence from the survey to enable one of our auditors to re-create the EPC without using the Data Input Report. In other words, every entry you have made in the software must be supported by a photograph, floorplan sketch, written site notes or other acceptable documentary evidence. If the auditor cannot verify that every entry in the software is accurate, they will mark it as 'FAIL (Evidence)', which will result in additional audits being requested and could mean that the lodged certificate is deemed 'Defective'. The audit evidence must include:

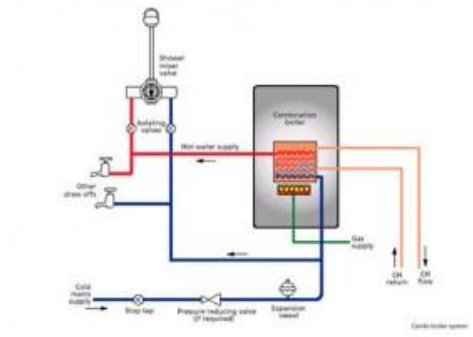
- Photographs
- Floorplan sketch
- Site notes
- Any other acceptable documentary evidence (where applicable)

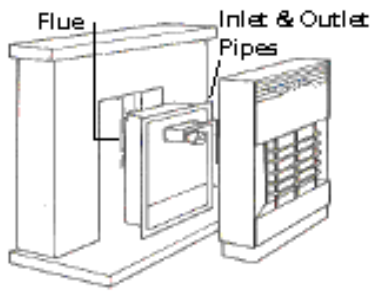
APPENDIX 5, TABLE 1: Minimum Evidence Requirements

REQUIRED EVIDENCE	COMMENTARY
Data file, and / or RDSAP Data Collection Forms, relating information used by DEA to calculate the EPC, which allows QAAs to assess the accuracy of the EPC against each stage of data entry associated with RdSAP.	
Floor Plan	E.g. a sketch plan covering all levels, annotated with measurements, areas and showing the HLP.
Site notes – paper or electronic file	The DEA shall provide within the site notes anything used in support of decision making, reflective thought, or amendments to recommendations (identifying property age, construction, assessing primary heating system etc), which is not provided through other sources of evidence.
Photographic evidence requirements. Minimum Requirements: • Front elevation • Rear elevation • Side elevation for detached / semi-detached • Cavity Wall Insulation – evidence • Roof construction • Openings – windows, chimneys etc (if previous photographs don't provide sufficient evidence) • Primary Heating System (e.g. boiler showing any associated key features such as a condensate pipe or label indicating the boiler model) • Secondary Heating System • Loft Insulation – photograph which gives evidence of the depth of insulation • Evidence of wall thickness • Conservatory – photographic evidence of whether it is separated or not Where relevant, other photographs are required by Schemes to support site notes, including: • Heating System control system • Hot water cylinder and stat • Electricity and gas meters • LPG Cylinder • Fixed Low energy light fitti • Any other feature of the b limitation whose presenc ence may be reasonably considered likely to affect the SAP rating • Any other feature which supports a claim in the report that could be queried or be the subject of a complaint	Where the DEA believes that photographs are not practically achievable, but a particular element / energy using device is present, site notes shall explain why the photographic evidence is not available. QA Assessors shall assess, and record, their views as to whether the reason given is credible. In such instances the Scheme shall investigate whether there has been a trend in non-provision of information, and undertake further investigations if such trends are identified. Photographs shall be dated within the image to provide some reassurance that they relate to the property being assessed and the date of the assessment. Electronic files shall be acceptable if there is a reasonably secure means of dating the file. Photographs embedded in e.g. WORD files or otherwise altered to reduce file size for transmission purposes shall be dated within the image. The master images shall be retained in EAs' archives for possible inspection by Schemes or DCLG
Evidence that inspection of a particular element which has a significant impact on the SAP score (taken as meaning having an impact of more than one SAP point) is impractical.	As a minimum Schemes shall stipulate requirements to provide site notes or other evidence explaining why key elements associated with the SAP calculations have not been undertaken – for example if access to a loft is said to be not available the site notes shall say why, and wherever practicable photographic evidence in support of the assertion be provided. Schemes shall record trends with evidence provided by an EA, such that further investigations are required should a particular EA routinely fail to access a certain building element (eg roof insulation).
Any other evidence required to justify the suppression or inclusion of additional recommendations.	Examples of this might be a guarantee or a building control notice for improvements

Back Boilers / Secondary Heating

A back boiler is so called because they are usually located at the “back” of a fire and at the bottom of a chimney breast. The boiler and the fire work independently to each other and the boiler, due to the fire being in front, is not normally seen or easily visible except through removing the flap on the underside of the fire itself which will also reveal the boiler controls. The majority of back boilers are fuelled by main gas or solid fuel and normally provide the properties hot water supply as well as space heating.





Back Boiler

Where water heating is from a back boiler or room heater with boiler, and the boiler provides water heating only, the appropriate fire or room heater is identified in the data collection process, and the water heating is identified as “from main system” or “from secondary system”.

Where the back boiler provides space heating:
- if gas, the back boiler is selected as main heating, the associated fire is selected as the secondary heating, and the water heating is from main system.
- if oil or solid fuel, the combination of room heater and boiler is selected as main heating and the water heating is from main system.

Smart Meters – Dual or Single?

There are 3 main types of electricity meter. A single rate meter (which is the most common) for users of standard rate electricity; a multi-rate meter, which allows you to take advantage of cheap-rate electricity at off-peak times such as at night (for example, Economy 7), and a pre-payment meter, where you pay for the gas or electricity that you use in advance, by means of a token, prepayment card, electronic key or coins. The type of meter at your property will determine what type of electricity tariff you can apply for.

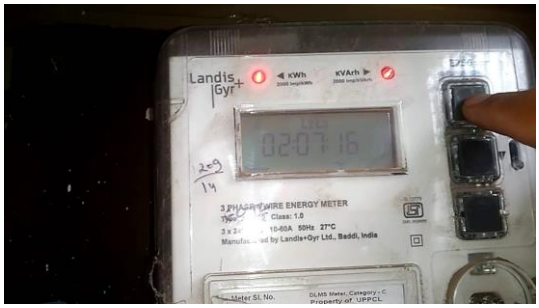
A smart meter is a new kind of gas and electricity meter that can digitally send meter readings to your energy supplier for more accurate energy bills. Smart meters come with in-home displays so you can better understand your energy usage. Every home in Britain should have been offered a smart meter from their supplier by 2020 which means DEAs will be coming into contact with more and more Smart meters on a daily basis.

Smart meters use a secure national communication network (called the DCC) to automatically and wirelessly send your actual energy usage to your supplier. This means households will no longer rely on estimated energy bills or have to provide their own regular readings.

Smart meters will also come with an in-home display. This display gives the household real-time usage info, including kWh use and cost.

So how do you check if the meter is dual or single?

Multi-rate meters come with tariffs that offer cheaper electricity at certain times of the day. They're different to single rate meters because they have two rates. The cheaper times are normally called 'off-peak'. Economy rate meters were made for electrical heating systems, like storage heaters, but they will work in any house. Economy 7 and Economy 10 are types of economy rate meters.



You can easily check the tariff or rates by pressing the function button located on the meter. This will give you information on how many tariffs or rates are available with this meter. You can then take a good clear image showing each rate for audit evidence purposes.

CPSU & Electric Boilers

Combined Primary Storage Unit (CPSU) is a boiler and thermal store built into one unit - capable of providing both space heating & domestic hot water.

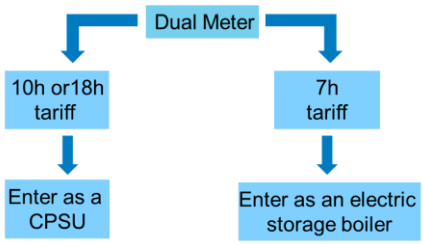
Gas CPSU: The Potterton Promax 115 HE as shown is a condensing combination boiler which incorporates a hot water store to provide domestic hot water. It can be found in the PDCF database.

How do they work?
As the water stored is at a very high temperature (usually around 85°C) the hot water reservoir, heats up a coil fed from the mains water supply, thereby delivering domestic hot water to all points of use at mains water pressure. A bit like a cylinder in reverse.

Advantage: CPSU's allow radiators to warm up very quickly & are capable of providing hot tap water at a high flow rate

CPSU's will typically be around 1.8 m tall and 60cm wide as it encompasses a [minimum] 70 litre thermal store which is integral to the appliance - as this water store is inaccessible assume as spray foam (factory fitted) insulation of 50mm thickness and cylinder thermostat as present.

This type of appliance is usually floor mounted and larger than a conventional boiler. All gas CPSUs have automatic ignition and a fan flue (if gas), the assessor will need to record if the unit is condensing or not, identified by a plastic drain pipe.



Electric CPSU: An electric CPSU is a central heating system providing space and domestic water heating. Primary water heated mainly or entirely during low-rate periods is stored in a thermal store. It can use the electric 10-hour or 18-hour tariff.

The space heating circuit operates in the same way as a wet central heating system, with controls appropriate for wet systems. For domestic hot water, secondary water flows directly from the cold mains into a heat exchanger, where it is heated by the hot water in the store before being delivered to the taps.

To record an electric CPSU into RdSAP - if not available to select from the PCDF – choose:

System type	**Boiler**
Type of boiler	**CPSU**
Fuel type	**gas electric etc**

A CPSU should be recorded as 'Water storage boiler in heated space' if it uses off-peak electricity. Convention #4.15 The water heating is from main 1 like a combi – no cylinder

Electric Boiler: A direct-acting electric boiler (also known as an electric flow boiler)
Works like a kettle
normally a tall thin white box, about 1m tall and 0.1m²
smaller and slimmer than dry core boiler units
They use on peak electricity – single rate
No flue

Pictured - The narrow white box is the actual boiler.

Electric boilers are capable of providing both heating & hot water or space heating only with an immersion providing the hot water

You need to check the pipework in order to identify the correct type of boiler

Electric boilers are very expensive to run compared with gas and they are also modelled depending on the electricity tariff they are on.

Record as an electric CPSU— (Combined Primary Storage Unit) if on a dual tariff or direct-acting electric boiler If on single tariff.

Electric water storage boilers: Can be programmed to use off peak electricity to heat a store of hot water that can be used for heating or domestic hot water purposes.

There is no option for an electric combi in RdSAP. You are required to enter it as a standard boiler, Direct acting with hot water recorded as electric instantaneous. The SAP rating will drastically change depending on the electricity tariff used.

New RdSAP Software

There will be a new version of the RdSAP software available very soon. This version will see a number of changes still to be verified.

Updated Conventions

After attending a recent Conventions meeting ecmk can confirm there will be an updated version of the RdSAP Conventions. We also spoke about the Appendices for the SAP & RdSAP calculations and how many DEAs are not actually using these sources of information for data entry and how we can turn that around and create more training opportunities for DEAs.

The debate regarding “unheated space” or “suspended floor” is nearing its conclusion and we will soon have an answer which will also be within the new RdSAP Conventions.

The current guidance indicates rooms and floors above garages are to be entered as a floor above an unheated space.

A floor above an unheated basement is to be entered as suspended floor and location as 'Ground Floor' until further clarification has been received and NOT to be entered as floor location 'above an unheated space'

If you do have any further questions or queries, then please contact us via:

Email: **accreditation@ecmk.co.uk**

Upcoming Courses @ ecmk Solihull

Cert DEA Training Course, Solihull
Cost £1295 plus VAT
Monday 10 June – Friday 14 June

The DEA training course includes full training in the RdSAP methodology used to assess existing homes and the use of ecmk's government-approved software which is designed to produce the EPC.

It also includes the opportunity to assess real homes under the guidance of ecmk's qualified trainers.

Candidates must also assemble a Portfolio of Evidence of their competence, including EPCs for five real homes.

Each candidate is assigned to a Qualification Assessor to guide them through this process.

The Qualification Assessor formally assesses the Portfolio to verify that the candidate meets the requirements of the National Occupational Standards for a DEA.

Places are limited. Please book via our online booking system here.

DEA Bootcamp Refresher CPD (1 day)
Wednesday 12 June 0900-1700 (qualifying 8 hours CPD)
Cost £95 + VAT (ecmk members) and £155 + VAT (non-ecmk members)

This course is aimed at all existing DEAs (both ecmk members and non-members) and intends to cover a wide variety of topics within RdSAP. This is a flexible course that can be tailored to fit the needs of the attendees. The course also enables DEAs to top up their mandatory annual Continued Professional Development (CPD).

Places are limited. Please book via our online booking system here.

Legionella Risk Assessment Course (1 day)
Wednesday 3 July 0900-1700
Cost £125 + VAT

The Legionella Risk Assessment Training (ABBE Level 2 Award Awareness of Legionella) is designed for individuals who wish to carry out Legionella Risk Assessments and gain a recognised qualification.

This course includes a background into Legionella and the legislative requirements. Candidates will gain an understanding of hot and cold water (domestic) systems, control measures and risk assessment software demonstrations, using eTech's Legionella Assessment iPad App.

Places are limited. Please book via our online booking system here.

Upcoming CPD Webinars

	June	Cost (+ vat)*
Evidence: Photographs & Documents	Mon 3 @ 1300-1400	£15.00
Primary Heating Fundamentals	Tues 4 @ 0830-0930	£15.00
Secondary Heating	Wed 5 @ 1300-1400	£15.00
Flats & Maisonettes	Thurs 6 @ 0830-0930	£15.00
Walls – Construction, Party & Alternative	Fri 7 @ 1600-1700	£15.00
Smarter Surveys – An Introduction to the Smart ECP App	Tues 11 @ 0830-0930	£15.00
Advanced Heating	Wed 12 @ 1300-1400	£15.00
Heating Controls	Thurs 13 @ 1600-1700	£15.00
Measuring & Modelling	Fri 14 @ 1600-1700	£15.00
Flats & Maisonettes	Mon 17 @ 1300-1400	£15.00
Practical Legionella	Thurs 20 @ 0830-0930	£15.00
Water Heating	Fri 21 @ 1600-1700	£15.00
Evidence: Photographs & Documents	Mon 24 @ 1300-1400	£15.00
Secondary Heating	Tues 25 @ 0830-0930	£15.00
Lighting & Storage Heaters	Thurs 27 @ 1600-1700	£15.00
Glazing	Fri 28 @ 1600-1700	£15.00

Costs listed are for ecmk members

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If you are looking for something more bespoke, we can deliver courses nationwide.

For further information, more course dates and to book your place:
Email: training@ecmk.co.uk or Visit: www.ecmk.co.uk/training