Unit and Assessment Specification

Unit title	Undertake Energy Assessments of Existing Level 5 Non-Dwellings Using the Dynamic Simulation Models (DSMs)
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Title	Undertake Energy Assessments of Existing Level 5 Non-Dwellings Using the Dynamic Simulation Models (DSMs)
Learning Outcomes **The learner will:**	**Assessment Criteria** **The learner can:**
1 Understand the equipment and resources needed to undertake energy inspections.	1.1 Explain the principles of building structure elements, fabric, services and overall design philosophy as relevant to energy assessment. 1.2 Identify equipment and resources needed to undertake the inspection. 1.3 Explain the detailed inspection requirements that apply to a property as described in relevant guidance documents and Conventions. 1.4 Explain the definitions and conventions embodied within the approved software used to calculate energy performance ratings 1.5 Identify, from drawings and building structures, the various types of building construction, materials and services. 1.6 Explain how to conduct the inspection in a thorough, methodical and consistent manner. 1.7 Identify the range of measures to improve the energy performance of a property that may be included within an EPC recommendations report.
2 Understand the implications of building characteristics affecting the energy performance of a property.	2.1 Identify assumptions that are made in determining energy performance. 2.2 State the factors that are relevant to determining the energy performance of a property and those that are deemed not to affect the energy performance of the property. 2.3 Identify and evaluate the relevance of building characteristics which affect the energy performance of a Level 5 building and make it distinct from Level 4. 2.4 Identify and classify variations in building use and activities, as defined in Dynamic Simulation Models (DSMs) and conventions, including the use of planning classifications. 2.5 Assess the relative sensitivity of the different building characteristics that affect the energy performance of the building structure and fabric.

		2.6	Identify critical property features and activities where incorrect choice of values will be significantly detrimental to accuracy, including: allocation of the most appropriate activity to zones, lighting, choice of default HVAC in zones where none exists, selection of HVAC efficiency and its allocation to the appropriate zone, availability of daylight and presence of Low and Zero Carbon Technologies.
		2.7	Identify the problems that can affect the energy performance of the building fabric and services.
		2.8	Review the implications of hazardous building fabric for the energy assessment and reporting.
3	Understand how to collate information from the on-site inspection and other sources to assess the energy performance of the property.	3.1	How to make accurate observations and take accurate measurements.
		3.2	How to make further investigations where observations are inconsistent with existing evidence and expected findings, and how to identify the causes of these inconsistencies.
		3.3	How to collate information required to assess the energy performance of property.
4	Understand how to prepare and issue an Energy Performance Certificate which includes recommendations for cost-effective improvements and meets relevant regulations.	4.1	State the prescribed format and content of an Energy Performance Certificate.
		4.2	State the range of energy efficiency measures that may be included within an Energy Performance Certificate.
		4.3	Identify the approved software used for the production and lodgement of completed Energy Performance Certificates.
		4.4	Explain how to correctly use the approved software for the production and lodgement of completed Energy Performance Certificates.
		4.5	Explain the principles underpinning the approved tools used to calculate the energy performance ratings.
		4.6	Explain how to input data using the approved software in order to determine energy performance ratings
		4.7	Explain how to use approved software to generate energy efficiency measures for the property.

		4.8	Explain the importance of checking that data has been inputted correctly prior to lodgement, and how to review data if the calculation will not process or appears incorrect.
		4.9	Explain the importance of checking the energy efficiency measures generated prior to lodgement, deleting any that are inappropriate, and providing your reasons.
		4.10	Explain the way in which energy efficiency measures are generated and circumstances when it is appropriate to delete them.
		4.11	Explain the importance of checking the Energy Performance Certificate and energy efficiency measures for the property to ensure they comply with relevant requirements.
		4.12	How to use the information technology underpinning the national register for lodgement and retrieval of Energy Performance Certificates, and how to provide necessary audit evidence via electronic transfer.
5	Understand how to make and maintain complete, accurate and legible records of your work.	5.1	Explain the level of detail within your records required to produce a complete and comprehensive Energy Performance Certificate and justify your decisions on the values recorded and energy efficiency measures included the importance of making and maintaining records that are complete, accurate and legible.
		5.2	Explain the reasons why it is necessary and important to record where and why accurate inspection has not been possible.
		5.3	Explain the circumstances in which records can include the fact that information is ‘unknown’ and the evidence required to support the use of defaults in these circumstances.
		5.4	Explain the importance of storing records securely allowing for future access & the purposes for which those records may be used.
6	Be able to inspect a Level 5 non-dwelling	6.1	Ensure that equipment and resources needed are available for the inspection of Level 4 non-dwellings.
		6.2	Identify yourself to those present at the property before commencing inspection.

		6.3	Identify and record the method of construction of the property and the main materials used, the installed building services, and the activities which take place in the building.
		6.4	Use surveying equipment correctly and record and interpret data accurately.
		6.5	Identify circumstances when at the property which prevent you continuing with the property inspection and explain the reasons to the client(s).
		6.6	Undertake a methodical visual inspection of the property in accordance with the requirements of the approved software and current Conventions.
		6.7	Draw a suitable sketch plan and elevations where none exist.
		6.8	Confirm by on-site inspection that the building fabric and installed building services are consistent with the drawings and specifications, where provided
7	Be able to collate information from the on-site inspection and other sources to assess the energy performance of the property.	7.1	Make accurate observations and measurements which are necessary to provide data for the calculation of an energy performance rating and production of energy efficiency measures for the property
		7.2	Obtain all additional information that is needed about the property and ensure that defaults are not used except where justified.
		7.3	Identify where observations are inconsistent with existing evidence and expected findings and conduct further investigations to establish the causes of these inconsistencies.
		7.4	Identify critical property features and activities where incorrect choice of values will be significantly detrimental to accuracy and take appropriate steps to correctly represent these features to arrive at an accurate assessment of the property.
		7.5	Follow the correct procedures for collecting information to enable the energy efficiency of the property to be determined.

8	Be able to prepare and issue an Energy Performance Certificate which includes recommendations for energy efficiency measures and meets relevant regulations.	8.1	Describe the prescribed format and content of an Energy Performance Certificate.
		8.2	Explain the way in which energy efficiency measures are generated and circumstances when it is appropriate to delete them.
		8.3	Use approved software correctly to determine energy performance ratings and to generate energy efficiency measures for the property.
		8.4	Check that data has been inputted correctly prior to lodgement and review data if calculations do not work or if the result appears incorrect.
		8.5	Recognise a result that is unlikely to be correct for the property in question.
		8.6	Check the Energy Performance Certificate and energy efficiency measures prior to lodgement , ensuring compliance with relevant requirements, and make any necessary amendments.
		8.7	Take the necessary corrective action where any of your checks indicate a possible misattribution of data or error in the resulting rating or energy efficiency measures.
		8.8	Use the information technology underpinning the national register for lodgement and retrieval of Energy Performance Certificates.
		8.9	Lodge Energy Performance Certificates on the prescribed national databank on completion.
		8.10	Provide necessary audit evidence via electronic transfer.
9	Be able to make and maintain complete, accurate and legible records of your work.	9.1	Produce and maintain accurate and legible records of your findings, which are clear, complete and conform to accepted professional and statutory requirements, including investigations carried out, values recorded and options considered.
		9.2	Include in your records the level of detail required to produce a complete and comprehensive Energy Performance Certificate and justify your decisions on values recorded and energy efficiency measures selected.

	9.3 Collate relevant information as evidence to support the specific decisions made on values chosen and energy efficiency measures considered, including: ♦ legible site notes, clear site sketches (plan, elevation) to give an adequate record of the inspection for audit purposes, ♦ clear photographs containing mandated data (e.g. time and date) appropriately staged and annotated where necessary, ♦ legibly completed survey forms ♦ records of web searches or other research ♦ any other information you consider necessary to support your decisions ♦ any other information required by Scheme Operating Requirements 9.4 Explain the circumstances in which records can include the fact that information is 'unknown' and the evidence required to support the use of defaults in these circumstances. 9.5 Store records securely allowing for future access and state the purposes for which your records may be used.

Additional information about the Unit
Unit purpose and aim(s)
This Unit will help to develop the knowledge and skills needed to inspect non-dwellings to determine the energy performance of a Level 5 property, using the Dynamic Simulation Model, make recommendations for cost-effective improvements and issue Energy Performance Certificates in compliance with regulatory requirements.
Details of the relationship between the Unit and relevant national occupational standards (if appropriate)
Asset Skills NOS for Building Energy Assessment (Non-dwellings) on Construction, Sale or Rent, ASTNDEA7 Undertake energy assessments of existing Level 5 non-dwellings requiring the use of Dynamic Simulation Models (DSMs).
Details of the relationship between the Unit and other standards or curricula (if appropriate)
Energy assessment standards.
Assessment requirements specified by a sector or regulatory body (if appropriate)
Please refer to Asset Skills Assessment principles at www.assetskills.org

Assessment (evidence) Requirements
Guidance on Instruments of Assessment