MCS Company Scheme Criteria for:

Environmental Technologies Awareness Criteria

DRAFT Consultation Document

This document shows the Competence Criteria required to be met by a company undertaking the type of work detailed above.

These competencies have been identified from the current Qualifications Credit Units (QCF) devolved from the National Occupational Standards (NOS) to cover the range of work in the scope identified on the front page.

Anybody holding:

1. An approved Environmental Technologies Awareness certificate

Is likely to have met with all of the criteria presented within this document.

An Experienced Workers Route (EWR) will cover all the competencies outlined if taken in support of a EWR covering the same detail as titled on this document.

A full list of Qualifications that have been deemed to have met this criteria can be found at http://www.microgenerationcertification.org/ along with access to EWR providers.

Please note anybody who has achieved the assessment without holding the correct mandatory Pre-requisites are likely to have to demonstrate further compliance against this company criteria.

Criteria Presentation

The criteria shown below in the following tables has been purposely presented in one of five categories:

1. Health and Safety – HS
2. Technical Skills – TS
3. Soft Skills – SS
4. Other – OT
5. Additional Information - AD

Where any box is blank these are intentionally blank.

By presenting the criteria within this format, it allows evidence to be collated for the Experienced Workers Route (EWR) options of evidencing compliance with the criteria.

Health and Safety Skills			
No.	**Objective**	**No.**	**Criteria**
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Technical Skills			
No.	**Objective**	**No.**	**Criteria**
1	Know the energy conservation legislation that applies to the building services industry	1	State the aims of energy conservation legislation
		2	General legislation
		3	Construction specific legislation
		4	Building services specific legislation
		5	Identify the responsibilities of members of the construction team under energy conservation legislation
		6	Clients (customers)
		7	Designers
		8	Employers
		9	Employees
2	Know the applications of energy sources used in the building services industry	1	Identify the types of energy used in properties
		2	High carbon
		3	Natural Gas / LPG
		4	Fuel oils
		5	Solid fuels (coal and peat)
		6	Electricity (from non-renewable sources)
		7	Low carbon
		8	Solar thermal
		9	Solid fuel (biomass)
		10	Hydrogen fuel cells
		11	Heat pumps
		12	Combined heat & power (CHP)
		13	Combined cooling, heat & power (CCHP)
		14	Zero Carbon
		15	Electricity wind
		16	Electricity tidal
		17	Hydroelectric
		18	Solar photovoltaic
		19	Identify the basic operating principles of installations containing environmental energy sources
		20	Solar thermal
		21	Solid fuel (biomass)

		22	Heat pumps (water, air and ground source)
		23	Combined heat & power (CHP)
		24	Combined cooling, heat & power (CCHP)
		25	Wind turbine
		26	Solar photovoltaic
		27	Identify organisations which give guidance and advice on energy saving and conservation techniques
		28	Identify how to use energy rating tables and their effect on component selection
		29	State where to find information on alternative energy sources
3	Know the importance of energy conservation when commissioning building services systems	1	State the role of the commissioning process in conserving energy usage
		2	State the actions to be covered during the system handover procedure to the customer that will contribute to conserving energy usage
4	Know the methods of reducing waste and conserving energy while working in the building services industry	1	Identify the working practices that can be employed to conserve energy and protect the environment
		2	State the methods used for reducing material wastage
		3	Planning work activities
		4	Accurate measurement and cutting
		5	Identify the methods of conserving material usage
		6	Reducing material over ordering
		7	Minimising damage to stored materials
		8	Prevention of loss/theft
5	Know how to safely dispose of materials used in the building services industry	1	Identify the statutory legislation for waste management on construction sites
		2	State the methods of safely disposing of waste materials
		3	Licensed waste disposal
		4	Waste carriers license
		5	Recycling
		6	Specialist disposal – asbestos and other forms of hazardous waste
		7	Specify the approved processes for recycling materials
		8	Metals
		9	Plastics
		10	Wood/cardboard
		11	Identify the disposal requirements of potentially hazardous materials
		12	Asbestos
		13	Electrical and electronic equipment
		14	Refrigerants (fluorinated gases)
		15	Identify what action to take if work activities endanger the environment

6	Know the methods of conserving and reducing wastage of water within the building services industry	1	Identify the statutory legislation for water wastage and misuse
		2	State the criteria for water efficiency calculations for new dwellings
		3	State the methods for reducing water wastage
		4	Flow reducing valves
		5	Spray taps
		6	Low volume flush WC
		7	Identify the methods available for capturing surface water and recycling used water
		8	Identify the uses of captured and recycled water in properties
		9	State the basic working principles of captured and recycled water systems
		10	Rain water harvesting
		11	Grey water systems
7	Know the fundamental working principles of micro-renewable energy and water conservation technologies	1	Identify the fundamental working principles for each of the following heat producing micro-renewable energy technologies:
		2	Solar thermal (hot water)
		3	Ground source heat pump
		4	Air source heat pump
		5	Biomass
		6	Identify the fundamental working principles for each of the following electricity producing micro-renewable energy technologies:
		7	Solar photovoltaic
		8	Micro-wind
		9	Micro-hydro
		10	Identify the fundamental working principles of the following co-generation technologies:
		11	Micro-combined heat and power
		12	(heat-led)
		13	Identify the fundamental working principles for each of the following water conservation technologies:
		14	Rainwater harvesting
		15	Greywater re-use
8	Know the fundamental requirements of building location/building features for the potential to install micro-renewable energy and	1	Clarify the fundamental requirements for the potential to install a solar water heating system to exist
		2	Clarify the fundamental requirements for the potential to install a solar photovoltaic system to exist
		3	Clarify the fundamental requirements for the potential to install a ground source heat pump system to exist

	water conservation systems to exist.	4	Clarify the fundamental requirements for the potential to install an air source heat pump system to exist
		5	Clarify the fundamental requirements for the potential to install a biomass system to exist
		6	Clarify the fundamental requirements for the potential to install a micro wind system to exist
		7	Clarify the fundamental requirements for the potential to install a micro hydro system to exist
		8	Clarify the fundamental requirements for the potential to install a micro-combined heat and power (heat led) system to exist
		9	Clarify the fundamental requirements for the potential to install a rainwater harvesting/greywater re-use system to exist
9	Know the fundamental regulatory requirements relating to micro-renewable energy and water conservation technologies	1	Confirm what would be typically classified as 'permitted development' under town and country planning regulations in relation to the deployment of the following technologies:
		2	Solar thermal (hot water)
		3	Solar photovoltaic
		4	Ground source heat pump
		5	Air source heat pump
		6	Micro-wind
		7	Biomass
		8	Micro-hydro
		9	Micro-combined heat and power
		10	(heat-led)
		11	Rainwater harvesting
		12	Greywater re-use
		13	Confirm which sections of the current building regulations/building standards apply in relation to the deployment of the following technologies:
		14	Solar thermal (hot water)
		15	Solar photovoltaic
		16	Ground source heat pump
		17	Air source heat pump
		18	Micro-wind
		19	Biomass
		20	Micro-hydro
		21	Micro-combined heat and power
		22	(heat-led)
		23	Rainwater harvesting
		24	Greywater re-use
10	Know the typical advantages and disadvantages	1	Identify typical advantages associated with each of the following technologies:

	associated with micro-renewable energy and water conservation technologies:	2	Solar thermal (hot water)
		3	Solar photovoltaic
		4	Ground source heat pump
		5	Air source heat pump
		6	Micro-wind
		7	Biomass
		8	Micro-hydro
		9	Micro-combined heat and power
		10	(heat-led)
		11	Rainwater harvesting
		12	Greywater re-use
		13	Identify typical disadvantages associated with each of the following technologies:
		14	Solar thermal (hot water)
		15	Solar photovoltaic
		16	Ground source heat pump
		17	Air source heat pump
		18	Micro-wind
		19	Biomass
		20	Micro-hydro
		21	Micro-combined heat and power
		22	(heat-led)
		23	Rainwater harvesting
		24	Greywater re-use

Soft Skills			
No.	**Objective**	**No.**	**Criteria**
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Other			
No.	**Objective**	**No.**	**Criteria**
			Intentionally Blank

Additional Guidance
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