



Competency Standard for Preliminary Habitat Survey

May 2022

Acknowledgements:

Many thanks to those who contributed to the development of this Standard: Martina Girvan – lead author (Arcadis); David Morris (Jacobs/Freshwater Habitats Trust); Veronica Barrand (Atkins); Richard Gowing (WSP); Tim Rich (TetraTech); Mihai Coroi (Mott MacDonald); Guy Stone (Arcadis); Rich Carter (RSK Biocensus); Bob Edmonds (SLR Consulting)

Development of this Competency Standard was informed by the Ecological Competences: Skills and Process document developed by the team at Atkins (2019).

Competency framework for preliminary habitat survey, e.g. to support a Preliminary Ecological Appraisal Report (PEAR), or a habitats baseline for Ecological Impact Assessment.

Notes:

- a) 'Capable' level requires achievement of all criteria for both 'basic' as well as 'capable'; 'accomplished' requires achievement of all criteria for all levels
- b) "Able to" means that you have done so on numerous occasions and are confident in doing so
- c) This table is accompanied by a mirror table which cites a variety of CIEEM approved guidance to support the framework

All practitioners should have knowledge and understanding of:	
Distribution	Knowledge of UK distribution of habitat types, including an understanding of which parts of the UK support high distinctive and threatened habitats and plant species (where relevant to habitat categorization).
Health and safety	Knowledge and understanding of health and safety issues associated with habitat and plant species surveys including identifying safe survey techniques. Able to recognise other safety issues associated with working near water, injurious plant species, unfirm ground, remote locations etc..
Biosecurity	Awareness of invasive non-native species (INNS). Awareness of appropriate biosecurity measures for surveying for self and other surveyors including cleaning of boots post survey and non-transferal of invasive non-native species material.
Key References and Reading List	See relevant section of CIEEM's Good Practice Guidance for Habitats and Species V3 (May 2021) and the mirror table associated with this standard..

Competency Standards			
Activity	Basic	Capable	Accomplished
Policy and Legislation and Nature Conservation (P1)	Awareness of working country and relevant local policy for habitats, areas, and plant species (including invasive non-native species), including any local action plans. Awareness of key working area legislation and the differing levels of protections to sites designated for their habitats and to individual plant species. Awareness of habitat and plant species	Understands the working country and relevant local policy for habitats and plant species. Good understanding of key working area legislation and awareness that there are differences between working countries. Able to advise when legislative offences may be triggered and may be able to suggest existing mitigation that could reduce or avoid offence. Awareness of the criteria for	Awareness of new policy priorities and positive management, action plans etc. In-depth knowledge of working area legislation and is informed on changes to legislation. Knowledge of the different legislative criteria between working countries. Able to advise when legislative offences may be triggered and to suggest existing or emerging mitigation that

Competency Standards			
Activity	Basic	Capable	Accomplished
	conservation status, threats and reasons for their decline and/or scarcity.	designations of sites and the parameters for prioritisation of habitats and species.	could reduce or avoid offence. Awareness of changes to conservation status and new threats.
Habitat survey design, planning and fieldwork: Guidance (S1.1)	Awareness of relevant survey guidance for preliminary habitat survey standards and knowledge of their preferred local standard as described in S3.1. May have awareness of secondary, more detailed, survey standards (e.g. NVC). Awareness of survey skills required, maps, data collection methods, manuals, identification guides, H&S, biosecurity, equipment, access consent, seasonality etc. May be able to undertake surveys on simple, small sites and assist on less complex small and medium sized sites.	Understands and follows relevant survey guidance for preliminary habitat survey standards in their local area as described in S3.1, awareness of secondary, more detailed, survey standards (e.g. NVC). and may have knowledge of other regional or national survey standards. Able to design, plan and lead surveys for straightforward , small and medium sized sites and large sites and able to assist with more complex surveys. Able to assist with drafting survey recording templates.	Able to design bespoke methods for implementing preliminary and secondary, more detailed habitat survey standards (e.g. NVC) where required and may train others on survey methods for their local area. Has an awareness of survey standards and guidance from other regions and nations. Able to design, plan and lead complex surveys at all spatial scales. . Able to write guidance on the application of habitat surveys at a company or project level.
Habitat survey design, planning and fieldwork: Desk-study (S1.2)	Able to obtain and collate data from relevant sources including online interactive maps, aerials, online databases, private data sources, atlas, red lists, other online sources. Able to assist in preparation of maps and summary data for surveys. Awareness of recommended zones of influence and data limitations.	Able to obtain, collate, analyse and interpret data from relevant sources. Able to prepare maps and analyse data for field survey, awareness of the potential presence of scarce species and/or habitats. Knowledge of recommended zones of influence and data limitations.	Able to interpret and review the quality of existing information from relevant sources and can validate use for reporting. Able to integrate underlying soil, geological and other technical and spatial data. Able to use a range of relevant databases and critically evaluate zones of influence and data limitations.
Habitat survey design, planning and fieldwork: Mapping (S1.3)	Able to map simple habitats (under supervision or independently) using standard colours/codes/apps to an appropriate mapping scale and/or is competent in the use of digital data collection tools for site data collection. Able follow and complete structured preliminary habitat survey forms as appropriate to the Basic level.	Able to confidently map most habitats and use traditional and/or digital data collection tools, from pre-site visit data preparation, and site data collection, through to post site data collation and analysis. Able to follow and complete structured preliminary habitat survey forms. May incorporate additional collected data, where relevant.	Able to lead on habitat mapping using a variety of traditional and digital methods throughout preparation, survey and analysis. Able to advise on the content of preliminary habitat survey forms and collection tools and is able to incorporate additional collected data, where relevant.
Habitat survey design, planning and fieldwork: Field Notes (S1.4)	Able to collect photos and write fieldnotes to support Basic level habitat classifications. May denote dominant species using DAFOR.	Able to collect photos and write field notes to support Capable level habitat classification and able to denote habitat indicator species using	Able to write field notes with habitat descriptions to support Accomplished level habitat classification and to denote habitat indicator species using DAFOR for most

Competency Standards			
Activity	Basic	Capable	Accomplished
		DAFOR for commonly encountered habitats. Can provide an indicative species list.	habitats. Can provide a comprehensive species list.
Species identification (S2)	Able to identify common species when in flower and a few key indicator grasses using field guides (may be demonstrated by accreditation such as FISC level 2 or 3 or equivalent) with an awareness of the habitat differentiating species from their local survey standards. Basic awareness of invasive non-native species. Awareness that there are regional differences in species distribution.	Able to identify a wide range of species, some vegetatively, including habitat differentiating species of grasses, rushes and sedges (may be demonstrated by accreditation such as FISC level 3 or 4 or equivalent) may be able to identify habitat differentiating non-vascular species. Awareness of regional differences in invasive non-native species. May use vegetative keys in addition to field guides and may be aware of the regional differences in habitat differentiating species.	Able to identify most common species in flower or vegetatively, including habitat differentiating species of grasses, rushes and sedges and habitat differentiating non-vascular species (may be demonstrated by accreditation such as FISC level 4 or 5 or equivalent). Able to apply regional differences in invasive non-native species. Will be aware of the regional differences in habitat differentiating species. Able to use vegetative keys and may provide training and advice to others on species identification.
Habitat Identification and Evaluation: Identification (S3.1)	Knows and can assist with the identification and classification of most of their locally relevant preliminary habitat survey standard common habitats e.g. woodland, general grassland, tall herb, and miscellaneous classifications equivalent to UK Habitat Classification level 3 with aid of the local guidance.	Competent at identifying and classifying most of their locally and regionally relevant preliminary habitat survey standard habitats (some mires knowledge and differentiation of grasslands) equivalent to UK Habitat Classification level 4 with the aid of local guidance and support of online sources and/or other ecologists. Able to recognise potential habitats of nature conservation importance against recognised criteria, awareness of secondary, more detailed habitat survey standards.	Competent at identifying and classifying all their local and regionally relevant preliminary habitat survey standard habitats, including uncommon ones. May be able to identify and classify most working country relevant habitats equivalent to UK Habitat Classification level 4 and 5 (priority and Annex 1). Able to apply secondary, more detailed habitat survey standard knowledge to preliminary habitat classification and can identify habitats of nature conservation importance against recognised criteria. Able to provide guidance and support to others and may provide training.
Habitat Identification and Evaluation: Condition Assessment (S3.2)	Has an awareness of indicators used for condition assessment and how they are applied. Can collect data and undertake condition assessment with supervision of a Capable surveyor. Has an awareness of how habitat survey and condition assessment data may be used to establish a baseline for use in	Able to collect all the necessary information to undertake habitat condition assessment for common habitats aware of the requirement for accreditation for river condition assessment.	Able to collect all the necessary data for habitat condition assessment for most habitats. May meet the accreditation requirements to undertake river condition assessment.

Competency Standards			
Activity	Basic	Capable	Accomplished
	metrics such as that used for biodiversity net gain.		
Habitat Identification and Evaluation: Scoping additional surveys (S3.3)	Awareness of the existence of options for further secondary, more detailed habitat, vegetation and targeted plant surveys such as that may be required to identify protected, priority or invasive species and habitats.	Able to scope any further secondary habitat or plant surveys that may be required to identify protected, priority or invasive species and habitats.	Able to scope and design any further secondary, habitat or plant surveys, that may be required to identify protected, priority or invasive species and habitats, including targeted botanical surveys. Able to provide advice to others on survey scoping. May be able to undertake these detailed surveys.
Interpretation and evidence-based reporting (SM3)	Able to assist with data/mapping/writing the preliminary habitat survey reports and/or the relevant section in a Preliminary Ecological Appraisal Report (PEAR). May assist with preparation of the baseline habitat section of an Ecological Impact Assessment.	Able to write the preliminary habitat survey report and/or the relevant section in a Preliminary Ecological Appraisal Report (PEAR) for less complex sites involving common habitats. May check the reports of others, subject to individual company Quality Assurance procedures. Able to write baseline habitat sections of an Ecological Impact Assessment.	Able to write and to lead on the delivery of preliminary habitat survey reports for more complex sites involving uncommon habitats. Able to approve Preliminary Ecological Appraisal Reports (PEAR) and can provide training to others on report writing. Able to write, review and approve baseline habitat sections of an Ecological Impact Assessment, subject to individual company Quality Assurance procedures. Able to prepare internal templates for habitat reporting.