LANEnC4L

Conduct field surveys LEGACY

Overview

This standard covers conducting field surveys in accordance with a survey plan. It could also apply to conducting surveillance and monitoring and could be part of a wider assessment.

Field surveys may be of the following subjects: landscape and marine features; flora and fauna, including species population assessment; habitat type and condition and human impact on the environment. Most surveys will involve both primary and secondary sources of data.

You must ensure that you have the required permissions, consents and licences prior to carrying out surveys.

You must carry out your work in a way that takes account of its impact on the environment.

This standard is suitable for all environmental conservation staff who are closely involved with survey work and have responsibility for collecting and recording data from field surveys.

Performance criteria

You must be able to:

1. clarify the purpose, scope and objectives of the survey, surveillance or monitoring and the specification for data collection and recording
2. clarify your role and responsibilities in the survey and your relationship to others
3. clarify any relevant site restrictions or designations that are in place
4. confirm that you have any necessary permissions, consents or specific licences for both site access and species field data collection work
5. use survey equipment and materials safely and correctly when conducting field surveys
6. conduct all survey work in accordance with the relevant environmental and health and safety legislation, risk assessment requirements, codes of practice and policies of your organisation
7. observe biosecurity measures while conducting field surveys
8. conduct field surveys by applying the specified survey techniques and check that data is accurate to the level required in the survey specifications
9. confirm that the data gathered meets the requirements of the survey specification and is valid, reliable and sufficient
10. take prompt action in accordance with the survey plan, where data cannot be obtained
11. take the required action when protected or invasive, non-native species are identified
12. take care that the effects of your work and access do not adversely affect the condition of the survey site
13. reinstate the site to the required condition, which is consistent with the surrounding area
14. communicate with interested parties and encourage them to ask questions or seek explanations, and provide them with information
15. record all field survey data fully, in the format specified, and report within the required timescales in accordance with the survey plan
16. carry out your work out in accordance with the relevant national legislation, local regulations, guidance, codes of practice and policies of your organisation

Knowledge and understanding

You need to know and understand:

1. the purpose, scope and objectives of the survey, surveillance or monitoring and the requirements for data collection and recording
2. your responsibilities in relation to survey activity
3. the implications of relevant site restrictions or designations that are in place
4. the importance of having the relevant permissions, consents or licences for both site access and species data collection
5. the importance of providing proof of authority when conducting a field survey
6. the importance of public liability and professional indemnity insurance
7. the survey equipment and materials required, how to use them safely and correctly and any restrictions or relevant legislative constraints
8. the type of clothing and personal protective equipment (PPE) suitable for the activity
9. your responsibilities under the relevant environmental and health and safety legislation, risk assessment requirements, codes of practice and policies of your organisation, including wildlife and access legislation
10. the importance of biosecurity and the required biosecurity measures for the site
11. the relevance of landscape features, flora and fauna, different habitat types, and the impact of humans on the environment, in accordance with the survey plan
12. why different survey methodologies are used on different occasions and at different sites and why they should be implemented as specified
13. the range of field survey techniques available, their advantages and disadvantages and the principles of their use
14. the meaning of valid and reliable data and possible sources of error and bias in data collection
15. the type of data that could be relevant to the survey but that is not included in the specifications
16. the action to take where data cannot be obtained
17. the action to take when protected or invasive, non-native species are identified, the organisational and legal requirements for this and possible consequences of not taking action
18. the ways in which conducting field surveys may impact on the habitat, wildlife or landscape and how to minimise this
19. the actions to take in case of accidental damage or disturbance to habitat,

wildlife or landscape

20. the importance of seeking validation and verification of species identification
21. the importance of communicating with interested parties and providing them with information when conducting field surveys
22. the limits of your expertise and where to seek advice
23. the required format and timescales for the reporting of data
24. the relevant national legislation, local regulations, guidance, codes of practice and policies of your organisation

Glossary

Data collection methods could include: written, oral, aural, electronic, visual.

Examples of field surveys:

The term "survey" is open to broad interpretation due to the wide range of surveys, including physical, biological and cultural, that are carried out in different contexts, using a range of techniques. The following list gives a guide to survey themes and the minimum level of complexity that would be appropriate:

- **surveys of biodiversity:** the presence or abundance or distribution of a particular species of plant or animal. Species population assessment. Working with diversity indices.
- **surveys using standard classification systems used in conservation:** for example, a Nature Conservation Council Phase 1 habitat survey which uses the recognition of groups of plant species to allow a terrestrial habitat classification, such as mapping and counting of indicator species for an ancient woodland.
- **surveys of people:** for example, counting the number of visitors using a public right of way or promoted access trails, a beach; conduct visitor interviews or evaluate local support for a project.
- **surveys of the effects of farming/fishing/tourism activities:** such as an index of grazing on moorland, damage being caused to coastal dunes by visitors, the effectiveness of "motor-bike traps" on a bridleway or the destruction of marine seagrass beds by boat anchoring.
- **surveys of habitat:** that is the physical environment of any community, involving factors such as vegetation, geology, geomorphology, soils, sediments, topography, temperature, wind, rain, river flow, water quality, tides and waves.
- **surveys of contamination of the natural environment as a result of pollution:** investigations might look at the extent and intensity of chemical damage to the habitat and associated biological impacts.
- **surveys of the status of conservation effort:** examples might include mapping access networks, the condition of a footpath network and ancillary structures (signs, handrails, access points), archaeological features or the level of erosion to river-retaining banks, sand dunes and the foreshore.

- **surveys of the effects of climate change:** could include effects on biodiversity, agriculture, weather, water levels, progress towards climate change targets.

Interested parties:

- those directly involved
- those affected by, or with an interest in, the site

National and industry guidelines for surveys include:**National Vegetation Classification (NVC) Phase One Habitat Survey; British Trust for Ornithology Breeding Bird and Wetland Bird surveys; Bat Survey Guidelines; UK Butterfly Monitoring Scheme; Environment Agency River Corridor or Joint Nature Conservancy Committee Intertidal surveys.

Sources of data:

- primary
- secondary

Surveys could include: **

- a one-off activity to collect data for a prescribed purpose e.g. baseline survey
- surveillance: a repeated survey building up a picture that can detect change but does not trigger action
- monitoring: repeated observations building up a picture that can detect change and trigger action

Techniques could include:

- mapping/aerial photographs
- use of cameras, drones, GPS, radar tracking, audio telemetry and other technology
- counting and estimating
- use of citizen science
- sampling
- tagging
- trapping

Types of data:

- qualitative
- quantitative

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