LANDMAP methodology datasets

The Welsh approach to describing and evaluating landscape character through the Geological Landscape, Landscape Habitats, Visual and Sensory, Historic Landscape & HLCA and Cultural Landscape Services spatial datasets.

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Document Owner: Planning, Landscape and Energy Group

Document Author: Jill Bullen FLI

What is this document about?

This document is a supplementary part of the LANDMAP methodology guidance for the Geological Landscape, Landscape Habitats, Visual and Sensory, Historic Landscape & HLCA and Cultural Landscape Services.

This supplementary document explains the intention of the five LANDMAP datasets.

The complete set of LANDMAP Methodology guidance includes:

GN007a	LANDMAP Methodology Overview
GN007b	LANDMAP Methodology Datasets
GN007c	LANDMAP Methodology Classifications and Definitions
GN007d	LANDMAP Methodology Survey Questions and Definitions
GN007e	LANDMAP Methodology Quality Assurance

You can download the LANDMAP Methodology Guidance Note from the LANDMAP webpage page: Natural Resources Wales / LANDMAP - the Welsh landscape baseline

Who is this document for?

This guidance is aimed at all users of LANDMAP as a landscape evidence resource for Wales that need to understand how LANDMAP information is derived, and the definitions of terms, classifications and evaluations.

Key users will be local authority and National Park landscape and planning officers, consultants engaged in landscape assessments, woodland planners, land management decision makers and those using landscape information as an opportunity.

The guidance is also aimed at those preparing new, or updating existing, LANDMAP datasets ensuring it is consistent and robust evidence.

Contact for queries and feedback

Planning, Landscape and Energy enquiries@naturalresourceswales.gov.uk

Version History

Document Version	Date Published	Summary of Changes
1.0	03-2024	Document published
2.0	04-2026	Update explaining change from Historic Landscape to Historic Landscape & HLCA

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To report issues or problems with this guidance contact guidance.development@cyfoethnaturiolcymru.gov.uk

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LANDMAP overview

LANDMAP is a complete all-Wales GIS based landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated into a nationally consistent data set. Natural Resources Wales is responsible for commissioning LANDMAP assessments and the management and accessibility of the resource.

LANDMAP embraces a whole landscape approach that covers all landscapes, designated and non-designated, rural and urban to the low water mark. Landscape information is collected in a structured and consistent way that is defined by the LANDMAP methodology.

LANDMAP comprises five spatially related datasets representing aspects of the landscape, geographical landscape areas are called aspect areas. The five LANDMAP datasets are explained below.

Geological Landscape

The Geological Landscape considers the physical, primarily geological, influences that have shaped the current landscape. It identifies landscape qualities which are linked to the influence exerted by bedrock, surface processes and hydrology. Emphasis is on recording the strongest influences on the landscape.

Geology can have a strong influence on the landscape, affecting landform, surface water patterns, vegetation cover, the historical development of settlements and natural resources.

Landscapes may have been formed during the ice-age or earlier phases, or through geologically more recent processes from the end of the last ice age around 11,000 years ago.

Geological Landscape areas are defined and evaluated by their intrinsic character. The hardness or softness of bedrock, or their juxtaposition, creates hills, cliffs, valleys and low ground. Fault lines and the tilting or folding of different rock types may form ridges in the landscape. Sculpting of the bedrock by wind, water and ice and the associated deposits introduces diversity at a variety of scales. Bedrock geology and its topographic influence may be visible as an erosional upland landscape or hidden beneath depositional sediments floodplains or glacial outwash landscapes.

The Geological Landscape therefore identifies and maps an area’s distinct geological history and surface processes where they visibly influence the physical character of the landscape. Geological details, processes, rarity, designations and educational value are examples of information within the survey records.

Landscape Habitats

Landscape Habitats focuses on recording habitats, features, characteristics and their spatial relationships within the context of the wider landscape. Landscape scale areas may encompass whole valleys, a dominant habitat or a mosaic of habitats.

Semi natural habitats and vegetation cover influence the landscape, habitat networks, ecological resilience, land use and, for many, our enjoyment of connecting with nature.

The Landscape Habitats spatial dataset identifies and maps habitats and land cover from an integrated landscape perspective. The presence of semi natural habitats can influence the landscape at a variety of scales, from integrating small scale habitat features within a wider landcover matrix, to swathes of habitat evident at a landscape scale.

Habitat diversity contributes to landscape character, visual amenity and ecological distinctiveness, each can be influenced through management changes or lack of management, habitat loss or expansion. Survey records include information to help our understanding and interpretation of these aspects at a landscape scale. Examples of survey information include key Phase 1 habitats, habitat features, the presence of protected areas or locally important sites, key species, fragmentation, evaluation and management recommendations.

More localised information should be accessed through data sets such as Phase 1 Habitat Survey, specialist habitat inventories and species-specific records.

Visual and Sensory

Visual and Sensory relates the physical attributes of landform and land cover, elements and features, visible patterns and interrelationships together to identify landscapes with distinctive characteristics and qualities.

The Visual and Sensory spatial dataset identifies how the landscape is perceived and experienced through our senses, primarily visually. Landscapes are recognised and characterised by multiple components including their topographic form, landcover, settlement pattern and field boundaries. Variations and combinations of components and landscape elements underpin landscape character and distinctiveness.

This dataset records distinctiveness, or commonplace, in landscape character throughout Wales by describing and mapping landscape areas. Examples of survey information includes physical attributes, combinations and patterns of elements, perceptual qualities, dark skies, tranquillity, sense of enclosure, scale and views. Uniquely the character and qualities of Visual and Sensory areas are evaluated from a Welsh national to local scale of landscape importance, recognising that all landscapes matter.

Terms that are commonly understood in the landscape profession ensure understanding, objectivity and consistency is achieved by using the LANDMAP methodology definitions.

Historic Landscape & HLCA

Historic Landscape records prominent landscape characteristics that depend on key historic land uses, patterns and features. These contribute to the overall historic character of the present landscape.

The Historic Landscape Character Areas (HLCA) on the Register of Historic Landscapes have been integrated into the LANDMAP Historic Landscape dataset creating a unique, unified and more accessible historic landscape dataset for Wales.

How people have used and shaped the land in the past is reflected in the multitude of physical features and remains in the landscape reflecting their beliefs, choices, traditions and values. The Historic Landscape & HLCA dataset captures the landscape characteristics evident today that have been visibly and strongly influenced by historic land uses, settlement and field boundary patterns and historic and archaeological features.

It is a landscape scale assessment of all historic landscapes across Wales, not of individual historic sites or features. The collective combination and context of the dominant features and characteristics define an historic landscape area. For example, a fieldscape where the traditional field boundary types and patterns associated with the medieval period are prominent and contribute to the current overall historic character would be defined at a landscape scale. A standing stone, rather than being an isolated historic asset would be set in the context of its surroundings, which may be a prehistoric landscape.

This inclusivity and landscape scale context means the more commonplace historic features and landscapes are recognised and valued as well as individual pre-eminent historic sites and monuments.

Cultural Landscape Services

Cultural Landscape Services connects some of the non-material, intangible benefits people may experience from landscapes and nature with place, contributing to our understanding of cultural ecosystem services. Examples include landscapes as natural settings, places for aesthetic appreciation, tranquillity and inspiration, as well as associations with cultural heritage, identity and sense of place.

All landscapes deliver cultural services, some landscapes may deliver to a greater extent or across a wider range of cultural services. By considering cultural services we can better understand the connections and benefits to communities and their health and well-being.

Mapping intangible cultural ecosystem services is complex. The LANDMAP Visual and Sensory landscape boundaries therefore provide the spatial framework for reporting and mapping. Selected information from the four LANDMAP datasets are brought together in this dataset. This information can highlight areas where provision is significant and areas where action would be most beneficial, especially near communities.

Although Cultural Landscape Services areas do not have a unique overall evaluation, survey questions 10, 14, 15 and 16 draws in the evaluations from the LANDMAP datasets. The Geological Landscape, Landscape Habitats and Historic Landscape overall evaluations are not added together to create a single value, the proportion of each evaluation within the Cultural Landscape Services context is reported instead. Visual and Sensory overall evaluation is duplicated. Higher evaluations indicate higher landscape value, with potentially greater landscape or visual sensitivity, depending on the nature and level of any change.

Cultural Landscape Services replaces the LANDMAP Cultural Landscape dataset.