

# Quick Start Guide to Change Detection Ground Data Collection

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## 1.1 Introduction

Please ensure when going out to survey that you:

- Collect Change Detection (CD) data using the Esri ArcGIS Field Maps app. The Field Maps app has specifically been designed to be light-touch and easy to use when in the field.
- When going out to collect data for LE you may pass other habitats which are not under-recorded, it is still acceptable to collect data for them. What we need to avoid is specifically going out to undertake LE surveys on habitats we already have sufficient data for.

Surveys should be targeted at specific Biogeographic Zones (BGZs) and at the habitat classes that specified by the CD team. This will optimise the usefulness of the ground data for CD. **Surveyors should prioritise transitional or changing habitat classes.**

The **annual** requirement to sustain CD is **6000 points per year**, to identify habitats which have changed or are likely to change within a two-year period.

To clarify access and data collection permissions for CD surveys:

- You **do** need to get permission from the landowner/occupier to carry out stand-alone CD surveys, even if it is on publicly accessible land.
- You **do not** need to get permissions to carry out stand-alone CD surveys on NE-owned NNRs, or in areas that have agreed permissions with major landowners (although you **do** need to check for any actions required prior to visiting these sites).
- You **do not** need to get extra permission to carry out CD surveys on land that you already have permission to survey (landowners/occupiers have already granted this permission).

## 1.2 In this Quick Start Guide

- Finding out which habitats to target in each BGZ.
- Locating these habitats in your BGZ.
- Obtaining access and data collection permissions for LE specific surveys.

## 1.3 CD Materials Library

You can find the main CD **Specification for Ground Data Collection** document within the provided information pack for full details on the UKBAP classification framework, planning CD surveys, using the ArcGIS Field Maps app, and recording CD points in the field.

## 2 Finding Out Which Habitats to Target

### 2.1 Priority 1: Target habitats & areas

For CD the focus is to identify habitats that are showing evidence of transition or change or likely change in the near future. An initial pilot phase will target BGZ06 (The Peak District and Nottinghamshire areas). This will enable future development and targeting of habitats. These initial target areas for the pilot phase are listed below and will be updated throughout the year.

BGZ06 – All habitats showing evidence of transition or change.

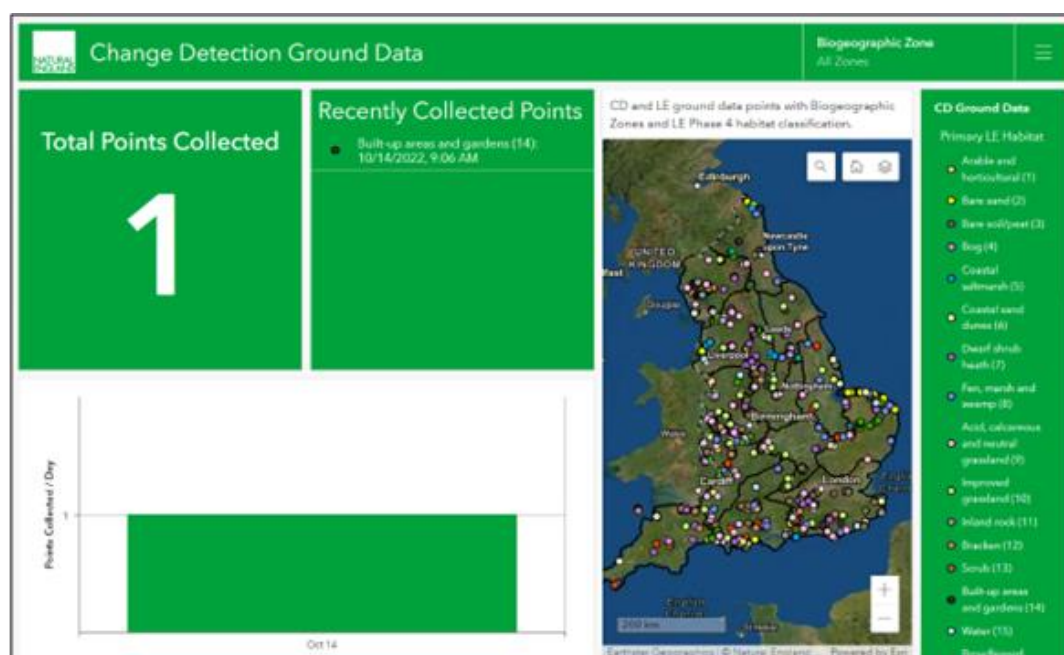
BGZ06 – Some habitats showing stable consistent habitats for a control.

Additional BGZs – expand surveys to other BGZs

*Last Updated: 9<sup>th</sup> November 2022*

### 2.2 Priority 2: Annual CD requirements

The **ArcGIS Online (AGOL) CD Dashboard** (Fig. 1) contains all the information needed to find out where points have already been collected and which habitat transitions have been recorded in each BGZ. The dashboard is updated automatically as new points are uploaded from the ArcGIS Field Maps app.



**Figure 1: ArcGIS Online (AGOL) Dashboard showing a national summary of CD ground data points recorded. Background source: Esri, Maxar, Earthstar Geographics, and the GIS User Community; Open Street Map.**

Use this to identify which habitat transition points have been recorded for each habitat class to keep a track of progress across each BGZ. The dashboard shows recently collected points and the total number of points collected. You can see where the points have been recorded on the map and will be able to view the number of points per BGZ.

Any feedback on the Change Detection Ground Data Collection Tool would be appreciated. This is collated here: <https://forms.office.com/e/FB3HiK6hBD> and please state your organisation under additional notes.

**Table 1: LE habitats required for Change Detection ground data collection in Phase 5**

LE Habitat	Ground Data Accepted	Ground Data Required	Justification
1 Arable and Horticultural	✓	✗	Only if the area has changed from or to
2 Bare Sand	✓	✓	
3 Bare Soil/Peat	✓	✓	
4 Bog	✓	✓	
5 Costal Sand Dunes	✓	✓	
6 Coastal Saltmarsh	✓	✓	
7 Dwarf Shrub Heath	✓	✓	
8 Fen, Marsh and Swamp	✓	✓	
9 Acid, Calcareous and Neutral Grassland	✓	✓	
10 Improved Grassland	✓	✓	
11 Inland Rock	✓	✓	
12 Bracken	✓	✓	
13 Scrub	✓	✓	
14 Built-up Areas and Gardens	✓	✓	
15 Water	✓	✗	Separate LE algorithm
16 Broadleaved, Mixed and Yew Woodland	✓	✓	If area has/likely to change
17 Coniferous Woodland	✓	✓	If area has/likely to change

## 3 Locating Survey Areas

### 3.1 Using the Phase IV Habitat Probability Map

The Living England Phase IV Habitat Probability Map is displayed in the ground data dashboard as well as being available at [Living England Habitat Map \(Phase 4\) \(arcgis.com\)](https://arcgis.com).

This is a modelled probability map which predicts the most likely habitat present within a segment (A\_pred) as well as stating the modelled probability (A\_prob) and providing a secondary prediction (B\_pred). The ground data dashboard will display the predicted habitats against where ground data

points have already been collected and can help to indicate the possible location and extent of those habitats with fewer ground data points collected.

In addition to the LE habitat map, please use the datasets identified in Table 2 to identify areas of likely change and thus regions to target for field surveys. Please provide any feedback on the usefulness of these datasets and any others that may be beneficial.

**Table 2: Datasets to help identify areas of habitat change (all OGL)**

	Dataset	Type of habitat change	Link
1	JNCC Landscape Monitoring App	Various	<a href="https://jncc.shinyapps.io/CUU_LandscapeMonitoring/">https://jncc.shinyapps.io/CUU_LandscapeMonitoring/</a>
2	EA Priority Habitat Creation and Restoration	Various	<a href="https://data.gov.uk/dataset/priority-habitat-creation-and-restoration">Priority Habitat Creation and Restoration - data.gov.uk</a>
3	National Moorland Change Map	Upland change	<a href="https://data.defra.gov.uk/dataset/national-moorland-change-map">Defra Spatial Data Download</a>
4	MoorLIFE 2000 Wildfires Log	Wildfires in the South Pennines and Peak District areas	<a href="https://www.wildfirelog.co.uk">https://www.wildfirelog.co.uk</a>
5	Forestry Commission Planting and Felling Public Register	National Planting and Felling	<a href="https://experience.arcgis.com/experience/5dbc8a02c9234b0f91e73c3b89b54429/page/Page-1/">experience.arcgis.com/experience/5dbc8a02c9234b0f91e73c3b89b54429/page/Page-1/</a>
6	Ancient Woodland	Stable woodland	<a href="https://data.naturalengland.org.uk/data/ancient-woodland">Ancient Woodland (England)   Natural England Open Data Geoportal (arcgis.com)</a>
7	Conservation and Enhancement Scheme Agreements	Various	<a href="https://data.naturalengland.org.uk/data/conservation-and-enhancement-scheme-agreements">Conservation and Enhancement Scheme Agreements (England)   Natural England Open Data Geoportal (arcgis.com)</a>
8	Midlands Heartlands Heathlands	Heathland creation in Midlands	<a href="https://data.naturalengland.org.uk/data/midlands-heartlands-heathlands">Midlands Heartlands Heathland - Nature Recovery Opportunities Map   Natural England Open Data Geoportal (arcgis.com)</a>

### 3.2 Using the Rural Payments Agency land parcels data

This data will be supplied by the Living England team and can provide useful information on land ownership. Once you have found habitat locations you wish to survey, this data should be overlaid either with software locally or within the AGOL environment, to select land parcels covering these areas. The selected land parcel information can then be used to inform the collation of access permissions, in order to survey the habitats of interest.

## 4 Access and Data Collection Permissions for CD Surveys

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### 4.1 CD Surveys on Sites with Previously Agreed Permissions

The LE, NCEA & NEFU field coordination team have also been able to get **blanket permissions** to collect LE data from selected major landowners. Refer to the LE MLG access permissions spreadsheet to find the status of landowners who have granted data collection permissions for LE and CD surveys. You must abide by the information shown in the “Surveyor Action Required Prior to Visit” column before visiting a site. For Designated Sites, please contact site managers before visiting the site as discussed in Section 4.3.

### 4.2 LE and CD Surveys on Designated Sites

For **Designated Sites** you can use the Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) layers within the CD Field Maps app to identify the name of the SSSI or NNR site within the BGZ where under-recorded habitats are present.

For the 2023 survey season we have blanket permission to collect LE data from NE owned NNRs (not NNRs owned by other bodies). Please check for NNRs that are NE owned and contact the Reserve Managers before visiting the reserve when organising survey dates and assessing risks.

Using **Designated Sites View** you can then identify the Area Team Responsible Officer (RO) for the SSSI and NNR site who can be contacted to gain their local knowledge to help identify potential survey areas within these designated sites or NNRs or enquire about other potential local sites outside the designated sites network. The RO's should have good land manager relations and information on who to contact to gain survey permissions.

From these discussions you can also gather **risk assessment information** and advice on timings of surveys to ensure you are not affecting **land, game management practices** or key **ground nesting bird periods** for these sites.

<https://designatedsites.naturalengland.org.uk/>

### 4.3 Gaining Permissions on Other Sites Using the Standard Permissions Letter

If certain habitat change classes for your BGZ are not present within an NE owned NNR or blanket permission area, you can check the Rural Land Registry (RLR) Layer for landowner contact details (if you already know the owner/occupier/land manager details, or can easily find them yourself, you can skip this step).

You can provide land owners with the **External Guidance Note for Landowners** to explain what LE and CD are and why we are carrying out surveys for ground truthing data collection.

Once you have land-owner/occupier/manager contact details, you **must** use the LE Standard Format Permissions Letter to ask for permission to carry out the survey. This has a return slip that can be attached to an email to enable easy auditing of the permission gained and ensure that the data points you collect can be used to inform the production of the LE Habitat Probability Map and CD outputs.