

Frequently Asked Questions for Land Cover Map

1. I am student/academic. How do I access Land Cover Map for education/research?

The full series of Land Cover Maps is available for free to subscribers of the [EDINA Environment Digimap](#) Service, which includes all staff and students at more than 130 UK further and higher educational establishments.

2. If my academic institution is not signed up to Edina, how do I access Land Cover Maps?

If your academic institution is not signed up to Edina, you can still access the data under licence direct from us at UKCEH. While we do not charge data and royalty fees, administration fees of £300 plus VAT apply. The licence could last for a maximum of three years.

Land Cover Map raster (1km, 10m, 20m, 25m) data are available to download free of charge from the UKCEH Environmental Information Platform for non-commercial use, which includes academic research and education.

UKCEH offers 'corporate' licences, which cover academic and educational use of Land Cover Maps by all staff and students at a university (or a department of a university if preferred). Licences can be issued for up to three years and the price is £300 plus VAT. However, these licences place responsibility on the University to distribute the data in a controlled way, to make each user aware of the terms of use as described by the licence, and for any inappropriate use of the data.

3. I am an individual acting in a private capacity and wanting to access Land Cover Map. How do I go about this?

Land Cover Map raster (1km, 10m*, 20m*, 25m) data are available to download free of charge from the UKCEH Environmental Information Platform for non-commercial use, which includes Personal Use.

For Personal Use of Land Cover Map vector versions, data fees and royalties are waived, but administration fees of £300 plus VAT are charged. These Land Cover Maps are provided under licence, which can last up to three years.

*Note – the 10m data is only available for LCM2020 onwards, whilst the 20m data is only available for LCM2017, LCM2018 and LCM2019.

4. Can charities access LCM data for free?

All the raster versions of Land Cover Maps are available as direct and free downloads for all non-commercial purposes meaning no charge for use within, or on behalf of public sector, charitable and other non-profit organisations.

Also, we do not charge data fees for use of our GB Land Cover Map vector land parcels data for non-commercial use. While data fees are not charged, administration fees (total of £300 plus VAT) apply and the data are only available under a bespoke licence. The licence covers perpetual use of all our Land Cover Maps for Great Britain.

Data fees, royalties and administration fees apply to use of Land Cover Map vector data for Northern Ireland.

5. I am working as a contractor. How do I access Land Cover Maps?

If you are working on behalf of an organisation, which will use the data for non-commercial use (i.e. on behalf of public sector, charitable and other non-profit organisations), you can access all the **raster** versions of Land Cover Maps as direct and free downloads.

If you want to use **vector** Land Cover Map, the organisation for whom you are working will need to be issued with a licence. Then they will need to issue you with a contractor licence to use the data on their behalf. There is no charge for issuing a contractor's licence and the instructions are in the main licence.

When Land Cover Map vector data is being used for commercial Internal Business Use, this can become a little more complicated. If the actual data needs to be passed to the organisation for whom you are working, they will need to hold the licence and issue you with a contractor licence. However, if you are just supplying a report and the recipient does not need the actual data, you could be the Licensee.

6. Are Land Cover Maps publically available for free?

The way we license our Land Cover Maps depends upon how they will be used.

For **academic and educational use**, the full series of Land Cover Maps can be accessed for free to subscribers of the [EDINA Environment Digimap](#) Service, which includes all staff and students at more than 130 UK further and higher educational establishments.

For **non-commercial use** (and use on behalf of non-profit organisations), the raster versions are available entirely free of charge. However, administration fees of £300 plus VAT are payable for access to vector versions for Great Britain. Commercial Internal Business Use charges apply for vector versions for Northern Ireland.

For commercial **Internal Business Use**, we reserve the right to charge data and administration fees. This allows us to reinvest in future development, such as the next Land Cover Map, and our wider environmental research.

7. What does the Web Mapping Service offer and how do I access the data?

UKCEH provides a Web Mapping Service for Land Cover Map 2007, 2015, 2017-2019, 2020 25m raster data, as well as Land Cover Map 2007 and 2015 1km raster data, and Land Cover Map 2020 10m raster.

Use this link: [Search - EIDC \(ceh.ac.uk\)](#) and then Search the Catalogue for 'Land Cover Map web map service'.

Using the map viewer, high-resolution data for the whole of Great Britain can be seen, but not downloaded. It is often used for contextual background. Images of Land Cover Map data can be captured but, if these are published, they must be acknowledged appropriately.

8. What is the difference between Land Cover and Land Use?

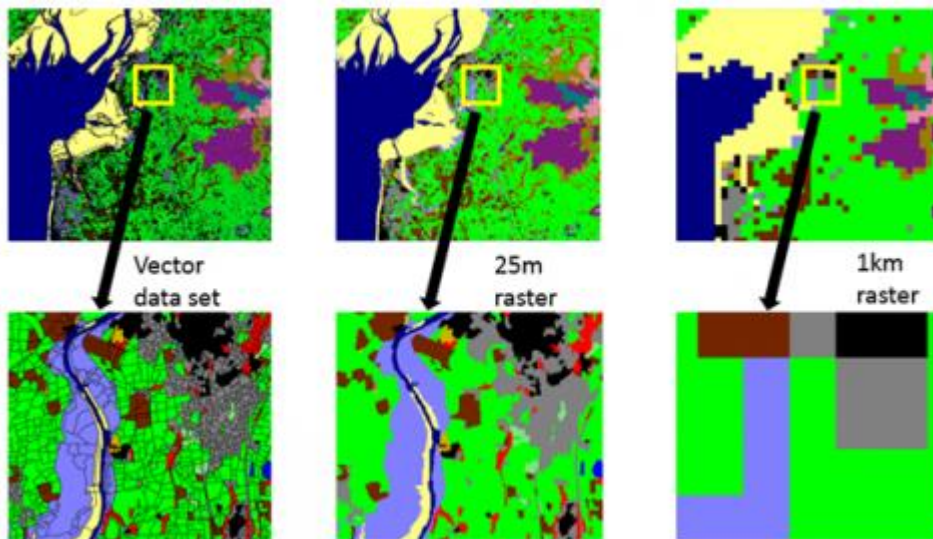
Our Land Cover Maps (LCMs) map **Land Cover**. They do this by describing the physical material on the surface of the United Kingdom. Whilst land cover may be synonymous with land use, this is not always the case. An arable crop cover denotes arable land use, but often land use cannot be inferred, for example grass used for recreation is similar to that which is grazed.

9. When will the next LCM be released?

Each year a new Land Cover Map will be released.

10. What is the difference between vector land parcels and raster formats?

Land Cover Maps are available in vector and various raster formats to suit users' requirements. The level of spatial detail in these is illustrated below:



Comparison of the level of spatial detail in the vector data set, 25m raster data set and 1km dominant cover raster data set for an area ~ 35km x 35km (top images) and ~ 6km x 6km (lower images). (LCM2015 is used for illustrative purposes). © UKCEH 2017. © Crown Copyright 2007. Ordnance Survey Licence number 100017572.

Vector Land Parcels: Each polygon represents a parcel of land and has attributes describing land cover and metadata outlining how this information was derived. Regarding scale, the minimum mappable unit for land cover parcels is 0.5 hectare.

Raster: The raster gives the most likely UK Biodiversity Action Plan Broad Habitat for each pixel (10m, 20m, 25m or 1km).

11. What formats are available for the different Land Cover Maps?

All our Land Cover Maps are available in vector and 25m raster formats.

Only LCM2017, 2018 and 2019 are available in 20m raster format

Only LCM2020 is available in 10m raster format.

There are four raster 1km products for each of LCM1990, LCM2000, 2007 and 2015.

12. Can I use Land Cover Maps to detect land cover change?

The challenge when comparing two land cover maps to detect change is product error (noise). The annual rate of land cover change is typically less than 5%, whereas in some regions product error will be as high as 20%. When comparing one year to the next, therefore, it very difficult to know which differences are due to real-world change versus noise.

One way to overcome this problem is to increase the interval. This is why UKCEH has released a 25-year change product* ([Land Cover Change 1990-2015](#), representing the interval 1990 to 2015) as we were confident that the ratio of real-world change to noise had shifted towards demonstrating real change in the environment.

Where use of UKCEH's [Land Cover Change 1990-2015](#) dataset does not give you the answers you require, annual land cover maps can be used for change detection provided care is taken and the associated issues are understood. In fact, the main reason for UKCEH producing annual land cover maps is to tackle the change problem.

With the UKCEH annual maps, when comparing one year with the next the noise problem will remain. However, errors are random in space and time, so confidence will increase rapidly when comparing three or more annual maps, since it is very unlikely that the same errors will occur in exactly the same locations. As the annual time series matures, errors will tend to flicker on and off, but real changes will persist. Indeed, the richer this series becomes the more powerful it becomes as a resource for tracking land cover changes across the UK.

In 2023 UKCEH will release the 6th map in the annual time series which started with LCM2017. In future years we also hope to close some of the historical gaps in our land cover map series and so extend the annual sequence.

In the past, the UKCEH land cover team have cautioned users on using our maps to detect change. We now encourage you to do so: it is what they are for! If you develop reliable methods, we'd love to hear from you.

*<https://catalogue.ceh.ac.uk/documents/fe69e8bb-5fe6-43be-8681-baa54df1399a>

13. If I use Land Cover Maps to create a new dataset or map, can I publish or pass on what I have created?

You are allowed to create products using Land Cover Maps.

What you can do with the product depends on a number of factors including whether it is defined as Derived Data e.g. whether the Land Cover Maps form a substantial part of its content. Questions around this can be difficult to answer so it is best to discuss your specific example with the UKCEH Licensing Team.

Generally, if your product is not defined as Derived Data, then it can be published so long as the source is appropriately acknowledged.

If your product is defined as Derived Data, you are not allowed to publish it, or supply it to other organisations who are not directly contracted to you without prior agreement. Also, you may need to maintain a licence for the original Land Cover Map.

14. Can I take a look at Land Cover Map simply to develop my ideas for a new product or service or see what opportunities it could potentially bring?

Yes. We can make Land Cover Map available to you free-of-charge under an Innovation Use licence. This will give you access to the data initially for three months.

The innovation licence will allow you to evaluate the data and develop your ideas for new products/services. You can demonstrate what you have created, but your product or service cannot be supplied to another party until a follow on commercial agreement (a bespoke Value added Reseller agreement) has been put in place with us.

15. What happens if I want to sell a new product or service that makes use of Land Cover Map?

If you decided to sell your product/service, which makes use of our data, to your customers, payment to UKCEH would be based around some form of revenue share agreement rather than up-front fees for data use. This would mean that you would return an agreed percentage royalties to us (with a minimum royalty payment each year of £350 plus VAT). The decision on the royalties would depend upon the value you assign to your products/services and the role/relative contribution of our data to them. Our approach to this discussion is to help you to create a viable offering and we wouldn't want to set royalties that potentially damage that.

16. What is the difference between CORINE and Land Cover Map?

CORINE data covers Europe and the smallest mapable data unit is 25 hectares. This dataset is available from the European Environment Agency and can be downloaded free of charge from their web site.

Land Cover Maps cover the UK and are spatially more detailed (the range of products includes 10m, 20m, 25m and 1km raster data sets, as well as a vector product) and the land cover classes used are different to CORINE. The UK Land Cover Maps are available from the UK Centre for Ecology and Hydrology.

17. Do Land Cover Map classes correspond directly to CORINE Land Cover classes?

Comparison of Land Cover Map classes to CORINE land cover classes is not at all straightforward because the two datasets do not directly align.

Firstly, it is complicated by the different spatial scales of the two products. The minimum mappable unit of Corine is 25 hectares, compared to <0.5 hectares for Land Cover Map.

Another major problem is that CORINE classes can contain a mixture of land cover types, whereas LCM classes represent a single land cover type. For example, the CORINE class 2.4.3 is defined as 'Land principally occupied by agriculture, with significant areas of natural vegetation'. This class covers much of the UK countryside, and a 2.4.3 land parcel will typically contain arable land, improved grassland, semi-natural grassland, woodland and small water bodies. Therefore, the only way to map LCM to CORINE Land Cover is to look at the regional context of the pixel and assess against the CORINE nomenclature. This process is very subjective, and different analysts produce conflicting results.