

Detailed Land Cover Mapping

LandBase™ High Definition Land Cover Data Product

Over the years our environment has changed, but how? How much land is covered with artificial surfaces? How much forest covers the land? What is the extent of urban sprawl?

Answers to these questions can help environmental and habitat management, flood modelling, infrastructure planning, and more.

To support these applications, Infoterra has produced LandBase™ a high definition land cover mapping product.

Infoterra's new land cover product, LandBase, is a vector map of England produced using the latest digital aerial imagery and object based classification technology. This has enabled the production of land cover classifications to the highest resolution, accuracy and extent available on the market today.

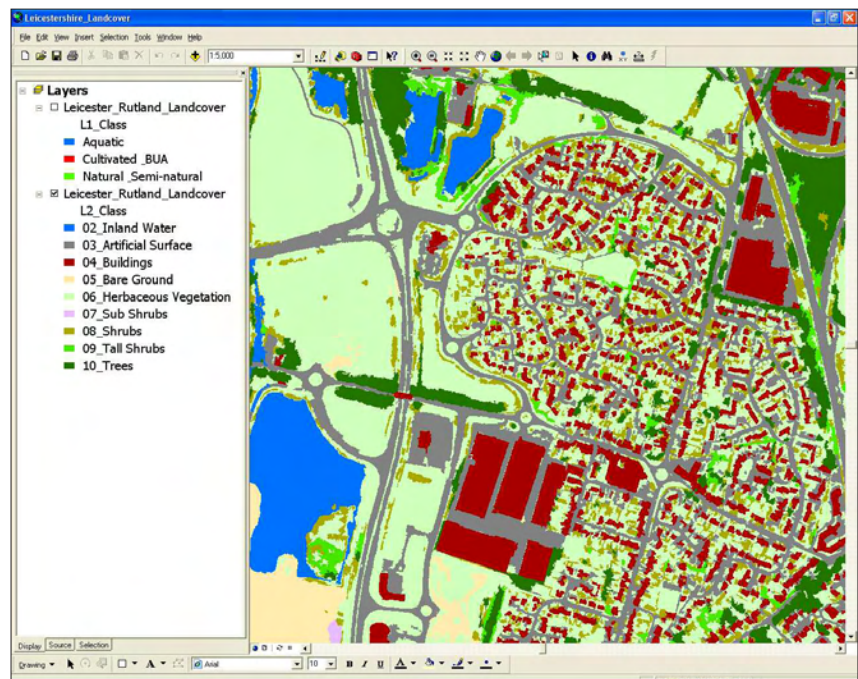
LandBase is designed as a framework, for use within a GIS system, to allow specific spatial queries - what percentage of this area is covered by trees - as well as allow the addition of further detailed classifications.

Within LandBase a spatial area can be displayed with an associate list of land cover classifications e.g. buildings, trees, artificial surfaces, inland water, and is suitable for viewing down to property level at 1:5000 scale.

This enables the extraction of meaningful land cover statistics for many applications and provides an accurate starting point for change detection.

LandBase™

- Provides unrivalled land cover resolution - to property level
- Enables higher level analysis to create custom solutions
- Compatible with existing land cover products
- Allows 3D analysis as height information built-in
- Enables cost-effective thematic mapping
- Allows spatial analysis of specified areas



Example of LandBase classifications

Example Uses

Habitat Mapping

With its classifications, built-in boundary information & flexibility for custom solutions, LandBase is an ideal tool for habitat mapping, such as woodlands & hedgerows.

Change Detection

LandBase serves as an ideal foundation for both historical change & future repeat classifications, e.g. percentage of artificial surfaces. The resolution allows change detection to be made at property level.

Land Use Mapping

With its flexible classification scheme & boundary information, LandBase is a valuable tool for land use, e.g. display of urban sprawl.

Infrastructure Planning

The existing land cover of proposed sites and corridors can be viewed & included in planning proposals.

Utilities

By providing land cover information, LandBase can support both network planning & maintenance.

Flood Modelling

With data on soil sealing & land height, LandBase is an ideal dataset for including into flood models for more accurate run-off calculations.

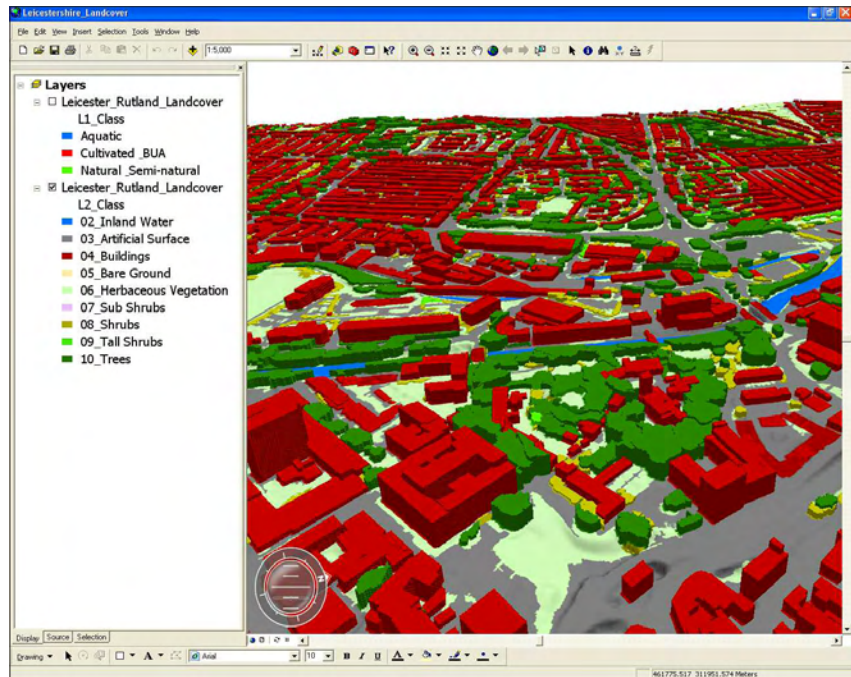
Telecoms Network Planning

LandBase can be rapidly re-configured to produce wide area clutter maps at 5m resolution.

Data Examples

Visit our website to view various examples of LandBase.

www.infoterra.co.uk/data_landbase_examples.php



LandBase classifications shown in 3D

Classifications

Level 1	Examples	MMU
Aquatic	Open ocean, inland water, marsh, fen, inter-tidal zone	1 ha
Cultivated & BUA	Agricultural land, towns, villages & cities, transportation networks, extraction sites	
Natural & Semi-natural	Ancient forest, moorland, mountainous regions, coastal margin	
Level 2	Examples	MMU
Sea & Estuary	Open ocean, estuary	50m ²
Inland Water	Rivers, lakes, canals, ponds	
Artificial Surface	Tarmac, concrete, paving, gravels, construction, extraction sites	
Bare Ground	Inland rock, coastal rock, sand, exposed soil & very sparse vegetation not part of a cultivation cycle	
Buildings	Buildings, monuments, bridges, raised transport, large pylons	
Herbaceous Vegetation	Grasses, ferns, cereals, brassicas, root crops, legumes, horticulture, exposed soil & very sparse vegetation clearly part of a cultivation cycle	1 ha
Sub-shrubs	Dwarf shrubs, heathers	50m ²
Shrubs	Bushes, hedges, gorses & immature trees, mean height typically below 2m	
Tall Shrubs & Small Trees	Tall bushes, small trees such as apple, new plantations, mean height typically 2-5m	
Trees	Mature broadleaf & coniferous trees, mean height typically greater than 5m	

NB. LandBase™ is created using; colour infra-red (CIR), aerial photography (RGB), digital surface model (DSM) & digital terrain model (DTM).

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