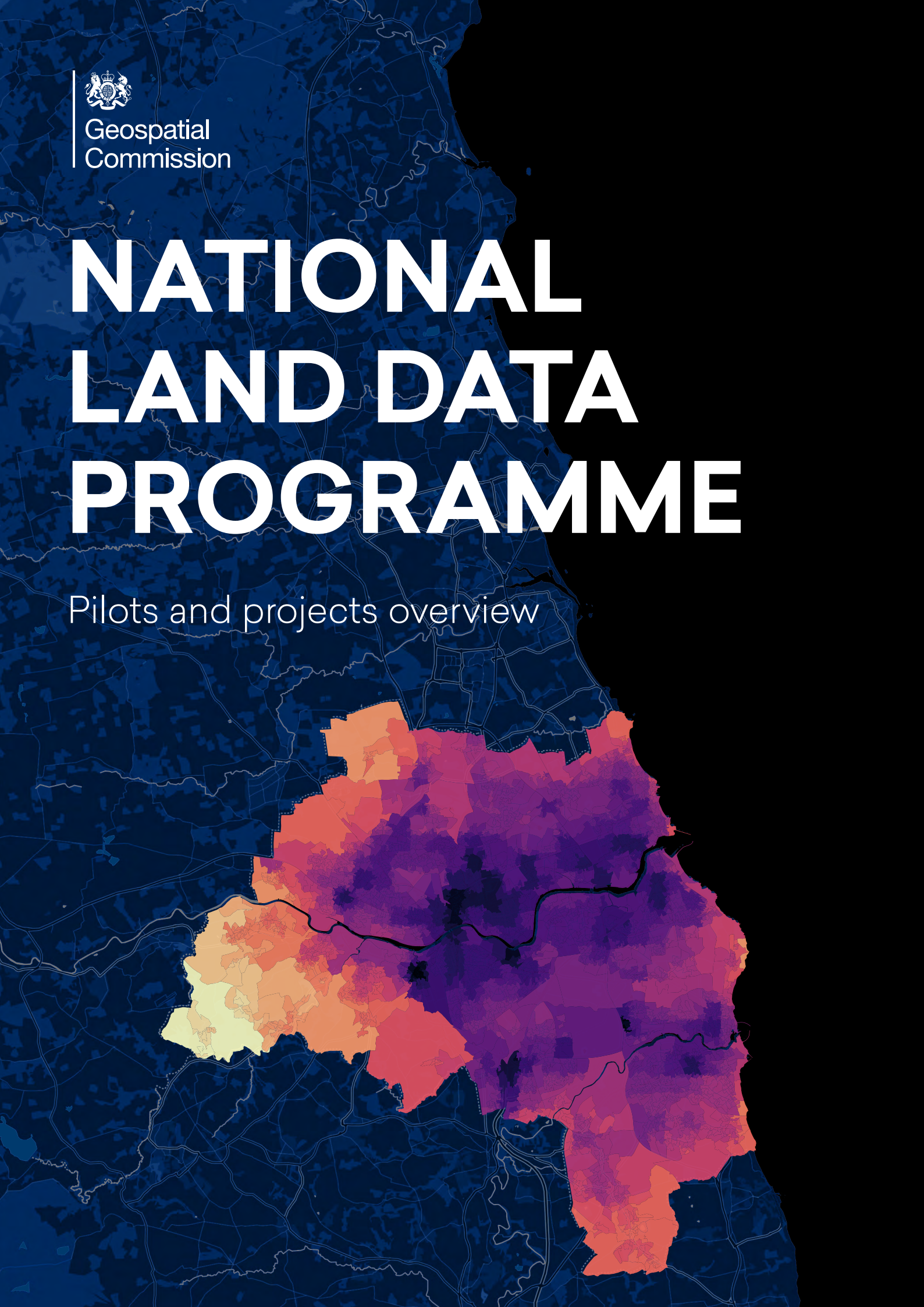
Geospatial Commission

NATIONAL LAND DATA PROGRAMME

Pilots and projects overview



CONTENTS

INTRODUCTION

Land is a finite resource, however it faces increasing demands for housing, food, water and energy, as well as from adapting to climate change and protecting the environment. Meeting these demands will require coordinated decisions to be made about how to best use land which effectively considers the spatial and system impacts of land use change. These decisions will need to be taken at the national scale through effective policies, but also at regional and local scales by people who govern, own, manage and use land.

The Geospatial Commission initiated the National Land Data Programme (NLDP) to demonstrate how these complex decisions around land use can be supported by spatial data and modelling, to enable better and more informed decision making. The programme was made up of a series of national scale projects and regional pilots in Devon, Cambridgeshire and Peterborough, Northern Ireland, and Newcastle, to explore and demonstrate how data and modelling can better support land use decision making at different scales.

Our Land Use Dialogues project, in partnership with the Open Innovation Team, brought together stakeholders across local and national government, academia and industry to explore the land use challenges associated with a range of policy priorities and the data and modelling tools that could help improve decisions. The dialogues focused on the three land use sectors of energy, housing and water.

Through regional pilots we explored how data analysis and modelling could support local land use decision making in:

- **Devon and Cambridgeshire:** We, alongside the British Geological Survey, supported the Food, Farming and Countryside Commission to develop local land use frameworks, and design prototype decision support tools that help articulate the impacts of different land use change scenarios to local stakeholders
- **Newcastle:** We worked with The Alan Turing Institute and Newcastle City Council to develop a prototype scenario modelling tool, leveraging data science and AI to help inform land use decision making at a local authority scale
- **Northern Ireland:** We partnered with Ordnance Survey Northern Ireland to develop a prototype land use and land cover map to bring together disparate land use and land cover datasets which are often hard to access

We also partnered with Ordnance Survey GB to design a logical data model and data product specification, which can improve the interoperability of UK land datasets.

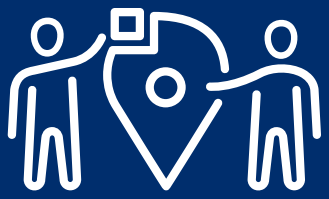
These pilots and projects involved a variety of activities, including running stakeholder engagement events on key land use issues, designing interactive prototype decision support tools to address local land use challenges, using AI techniques to create land use change scenarios, combining land datasets and creating a comprehensive data specification. This brochure provides an overview of our pilots and projects, summarising our key findings for each. Findings and recommendations from NLDP as a whole are set out in the NLDP 'Finding Common Ground' report.

NATIONAL LAND DATA PROGRAMME IN NUMBERS

89 PUBLIC SECTOR ORGANISATIONS ENGAGED

28 PRIVATE SECTOR ORGANISATIONS ENGAGED

23 ACADEMIC INSTITUTIONS ENGAGED



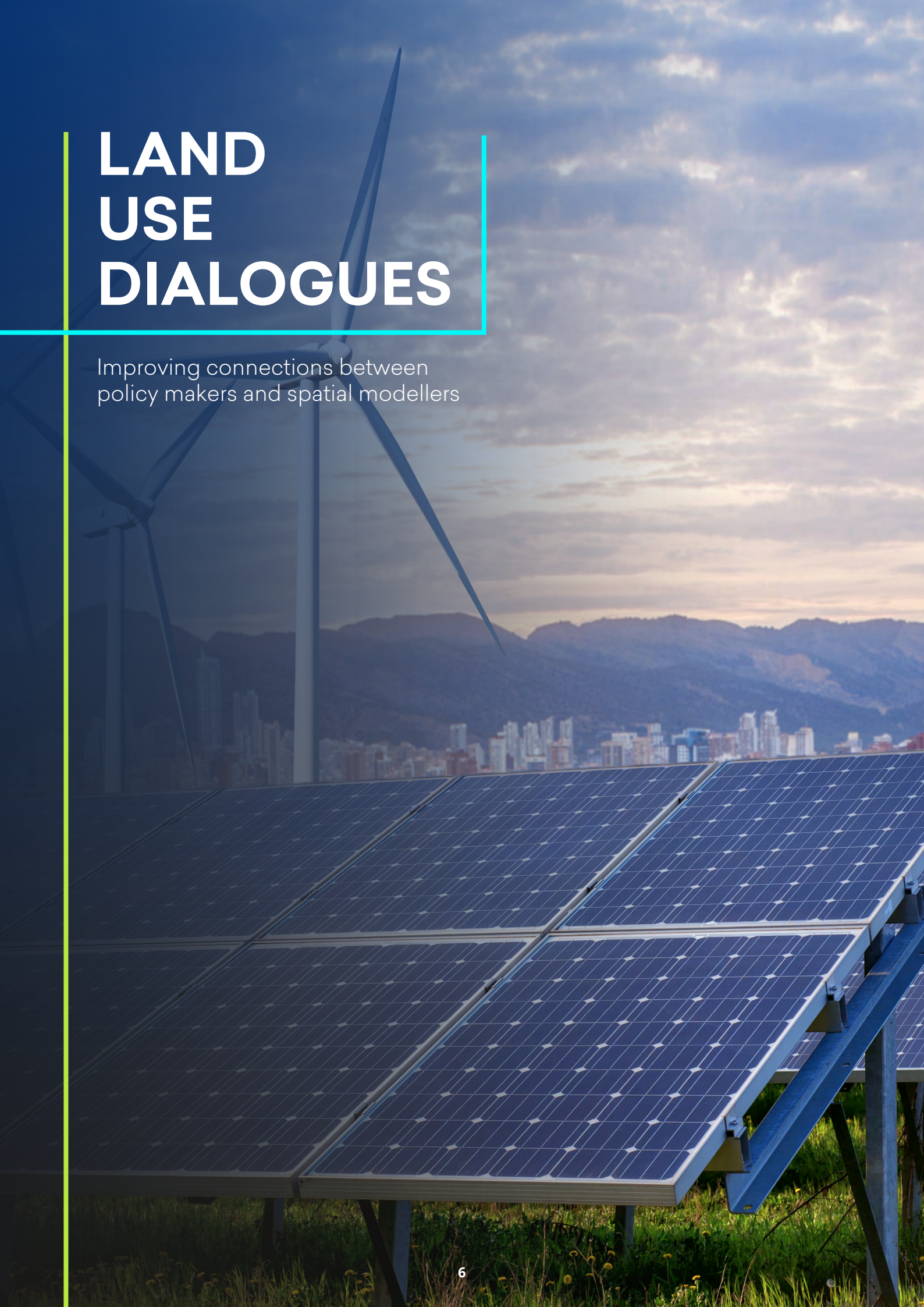
306 STAKEHOLDERS ENGAGED

11 EVENTS HELD

55 DATASETS CONSIDERED

LAND USE DIALOGUES

Improving connections between policy makers and spatial modellers



To mediate the different, and often competing, demands placed on land in the UK, an integrated and holistic approach is required that draws from a shared evidence base, underpinned by spatial data.

Land use modelling is a way to enable land use decision makers to consider different policy demands and identify and optimise opportunities and trade-offs for land use change. There are multiple clusters of land use modelling activity in the UK however, there is no single, unified land use modelling community.

As a result, there is an acute need to advocate for a more integrated approach to making strategic decisions on land use across multiple policy demands and promote the role of spatial data and modelling in underpinning joined-up decisions on land.

Approach

The Geospatial Commission partnered with the Open Innovation Team to run the Land Use Dialogues programme, with the aims of exploring the land use implications of key policy priorities across government and highlighting where spatial data and land use modelling can support better decision making.

The Land Use Dialogues programme aimed to establish new pathways to policy impact by convening new forums to raise policy and industry awareness and encourage closer working on specific government objectives. This included bringing together land use modellers to investigate how modelling approaches could be made more flexible and responsive in order to better suit policy development which can change rapidly.

Throughout the engagement programme, key findings, blogs, articles and videos were published on the Land Use Dialogues microsite to reach as wide an audience as possible.

In numbers

- 13 public sector organisations engaged
- 1 private sector organisation engaged
- 15 academic institutions engaged
- 92 stakeholders engaged
- 4 events held

Findings

The Land Use Dialogues programme focussed on three key policy challenges which have significant land use implications and trade-offs: improving energy security, increasing the supply of housing and managing the UK's water security. General findings included:

The UK faces many cross-sectoral land use challenges – These challenges will likely grow more acute in the coming decades due to population increases, lifestyle changes and the impact of climate change.

More effective and efficient land use policies will require integrated approaches to land use modelling and analysis – Spatial datasets and models could highlight the multifunctional uses of land, alongside possible trade-offs and unintended consequences. Without more integrated tools, departments risk 'double counting' land, delays to infrastructure projects and missed opportunities.

The extent of geospatial analysis across government and public sector agencies varied significantly – Some departments and local authorities have developed sophisticated, spatially explicit approaches to land use analysis. However, others have yet to develop such capabilities and rely on spreadsheets and other non-spatial forms of land use analysis.

The spatiotemporal boundaries of a model need to align with the decision in question – It is often difficult to optimise models for various scales, consequently, a variety of models may be required to evaluate policy decisions at different scales.

Data limitations and tensions remain – Local authorities may not frequently update data registers or have the capacity to provide spatially explicit datasets, while commercially sensitive data constraints also remain.

Impact

The Land Use Dialogues programme has helped to establish and develop relationships between interested organisations and individuals across multiple sectors, exploring the need for a more holistic and joined up approach to strategic land use decisions.

The programme has encouraged collaboration and helped bridge the gap between policy makers and land use modellers across government and academia. This has enabled best practice to be shared across organisations to help think through complex policy challenges.

The programme also helped to highlight critical capability gaps within government, with a clear need identified for a function which can think more holistically and assess the land use implications of a policy to determine impacts on other policy areas. This has led to the Geospatial Commission recommending the establishment of a Land Use Analysis Taskforce.

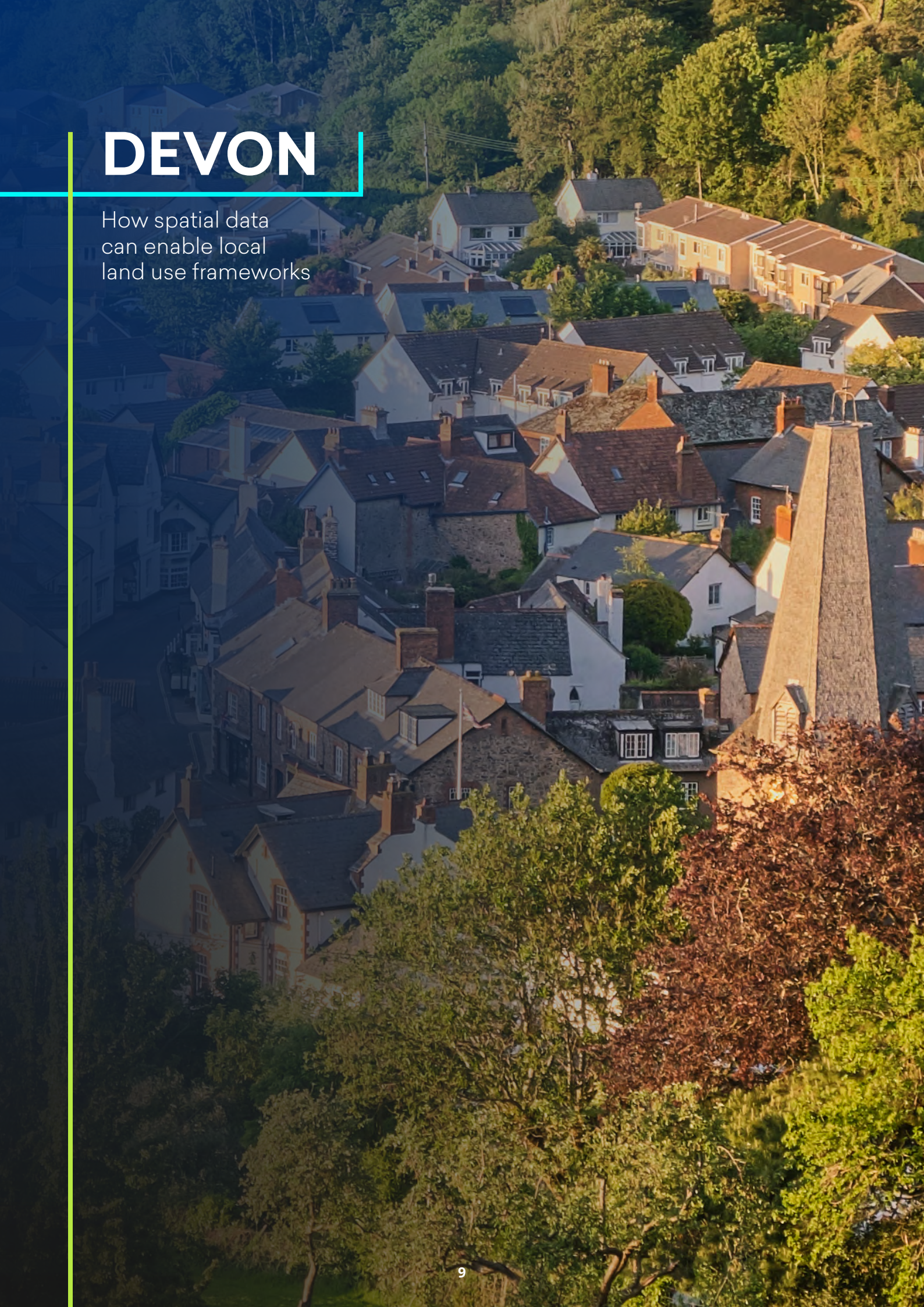
Contact

Open Innovation Team

Website: gov.uk/government/organisations/open-innovation-team

Twitter: @openinnovteam

LinkedIn: Open Innovation team



DEVON

How spatial data can enable local land use frameworks

Devon is largely a rural landscape where communities face competing land use pressures. These include enhancing biodiversity and restoring nature, food production, building new homes, improving resilience to flooding and coastal erosion and developing renewable energy infrastructure.

To manage decision-making around the competing pressures on land, the Food, Farming and Countryside Commission (FFCC) are advocating for a cross-departmental Land Use Framework. Working with local stakeholders in Devon, Cambridgeshire and Peterborough, they have been testing how a land use framework can be used to reconcile conflicting demands on land and balance different land use requirements.

Approach

The Geospatial Commission's National Land Data Programme supported the FFCC and the British Geological Survey (BGS) to run a pilot project in Devon to explore how spatial data and modelling can enable a local land use framework.

The first phase of the pilot involved conducting a series of stakeholder interviews to understand the extent to which spatial data and modelling is being used to support land use decisions and to identify where there are land use data improvement opportunities.

In the second phase of the pilot, stakeholders from Exmoor National Park, Clinton Devon Estates and Clyst Valley Regional Park were brought together to co-design a prototype land use decision support tool, which could help inform land use decisions to improve carbon sequestration, carbon storage and wider ecosystem service opportunities.

A clickable prototype tool was built, which enabled users to test how changing land use would impact carbon sequestration or storage potential, and to identify existing applicable financial incentives that could support the proposed land use change.

The tool was designed so that users would be able to perform multiple functions. It allows users to select a land parcel for which they can view a summary of the land cover and soil data. They are able to identify potential new or improved habitat types for each land parcel and assess how changing the use of land would impact carbon sequestration or storage. They are also able to see the financial benefits of these land use change options. The tool produces a 'rural carbon performance certificate' report showing the potential impact of changing land use on carbon and other ecosystem service indicators.

In numbers

- 24 public sector organisations engaged
- 13 private sector organisations engaged
- 2 academic institutions engaged
- 27 stakeholders engaged
- 9 events held

Findings

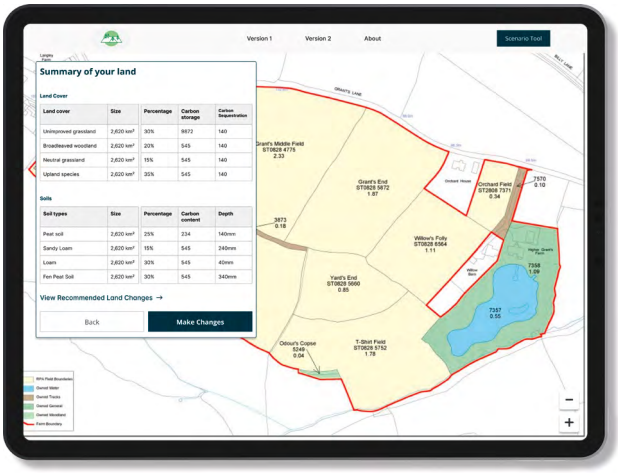
The design sprint, and the stakeholder testing of the prototype, showed that there is an appetite for user-friendly tools that incorporate easy to understand visualisations which make clear the impacts, opportunities and risks for different land use choices. This should include the multifunctional benefits and competing pressures of land use change to give a holistic picture of land use opportunities and constraints.

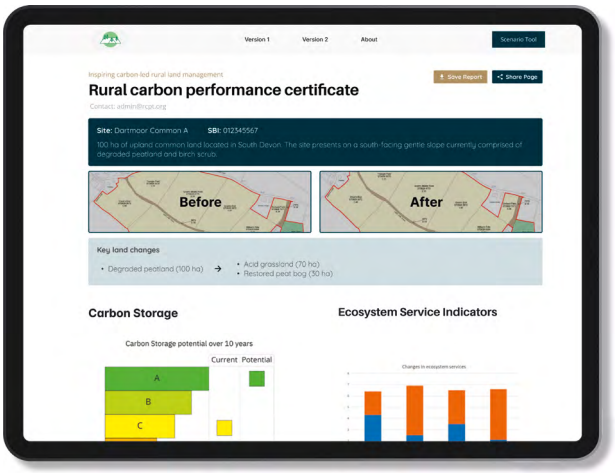
Insights showed that stakeholders did not necessarily need more data or more advanced analysis. It was about presenting information in a clear and easy to interpret way, which can help them understand business risks and make better use of financial opportunities that would support land use change.

Stakeholders highly valued the capability for a tool to display granular detail and be able to 'zoom out' to understand broader impacts and considerations across both site and landscape scales. This was driven by stakeholders wanting to assess how land use change in one area would link up with work already happening around that area.

Stakeholders wanted a tool to provide insights into both the ecological and financial benefits of combining efforts of landowners and land managers. The functionality to enable collaboration between parties interested in pursuing similar outcomes could enable smaller landowners or land managers to enter the market.

The land use framework decision making process can support users of decision support tools once they have accessed the data and evidence around their decision. Using principles and values to navigate the next steps in the decision-making process can support parties to balance the competing pressures to make optimal land use decisions.





Preview of the Devon prototype decision support tool outputs

Impact

The pilot has engaged with local stakeholders and helped to demonstrate how spatial data and modelling can improve local land use decision making, through enabling decision makers to evaluate the impacts of different land use change scenarios. Additionally, the pilot has highlighted how data and evidence can be used in collaboration with the methodologies and principles of a land use framework, making it easier for land use decision makers to use decision support tools to identify opportunities and manage land use trade-offs.

The pilot has also shown that there is a desire from local land use decision makers to use data and evidence to inform their land use choices, and that the co-design of decision support tools with local users is crucial to ensure that they meet the needs of those taking land use decisions.

FFCC will publish their findings and recommendations following the conclusion of their local land use framework pilots.

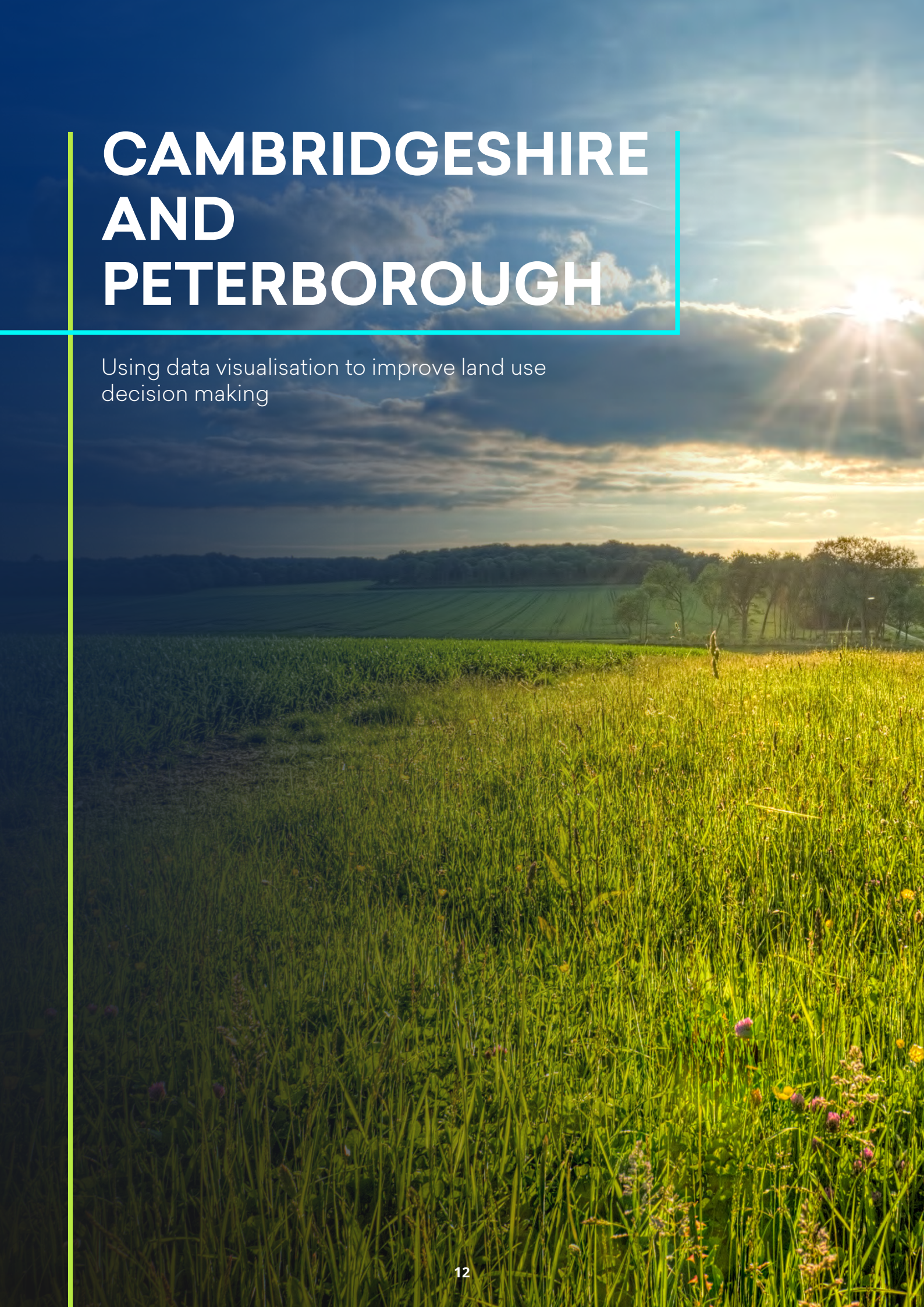
Contact

British Geological Survey

- Website: bgs.ac.uk
- Twitter: @BritGeoSurvey
- LinkedIn: British Geological Survey

Food Farming and Countryside Commission

- Website: ffcc.co.uk
- Twitter: @FFC_Commission
- LinkedIn: Food Farming and Countryside Commission



CAMBRIDGESHIRE AND PETERBOROUGH

Using data visualisation to improve land use decision making

Cambridgeshire and Peterborough face a number of pressures on land, including meeting the increased demand for housing; building new reservoirs to meet water demand, increasing transport connectivity between rural and urban areas and increasing renewable energy deployment. These need to be balanced with managing social and environmental pressures, including habitat fragmentation and species decline, considering the visual and heritage impact of solar deployment on farmland, and monitoring how land use changes will impact flood and drought risks, which are increasing due to climate change.

The Geospatial Commission worked with the FFCC and Vizzuality to explore how spatial data and modelling can enable a local land use framework in Cambridgeshire and Peterborough. This supported the FFCC's Cambridgeshire pilot, initiated in 2021, which sought to understand the value a land use framework could have in supporting better land use decision making. Working with local institutions, FFCC have identified the potential of data visualisation to foster collaboration and enable a more strategic approach to land use challenges.

Approach

The Geospatial Commission worked with the FFCC to develop a data visualisation tool to support land use decision making, which has been delivered by Vizzuality, a company specialising in data design and digital tools.

The pilot convened a group of local stakeholders, including local authority planners, farmers, NGOs, community leaders, industry and academia, to better understand the priority land use challenges in Cambridgeshire and Peterborough and to draw up and test principles and processes for better land use decision making.

This group of stakeholders have been developing the idea of a local land use framework as an approach that could help address multiple land use challenges in the area around housing, water, farming, nature, transport and energy. They acknowledged that land use decisions in these sectors need to be better integrated and decisions in one sector need to consider the impacts on other sectors to take a systems wide view of land use change.

Stakeholders identified the need for better engagement with land use data and evidence. The pilot has therefore worked on the design and build of a prototype land use visualisation tool. The tool was designed to address the data visualisation needs of the group, and to enable the communication of key land use data to local land use decision makers and members of the local community.

The prototype tool developed through this pilot brought together an array of siloed land cover and land use data layers, into a single, easy-to-use platform. In its current prototype stage, the tool displays agricultural land use classification, flood risk, sites identified for development in local plans and priority landscapes for conservation. The tool aims to clearly visualise this data in a simple mapping tool which can engage a wide array of stakeholders, including those without data expertise.

In numbers

- 15 public sector organisations engaged
- 13 private sector organisations engaged
- 2 academic institutions engaged
- 35 stakeholders engaged
- 5 events held

Findings

The pilot has shown there is an appetite among stakeholders for tools with intuitive data visualisations which can empower them to better understand their land and the wider landscape around them. Data visualisations that are easy to understand and interpret by a wide audience were recognised as a powerful way to facilitate conversations about land use change. These visualisations could aid internal conversations with partners and could support public consultation and engagement processes to better inform planning decisions.

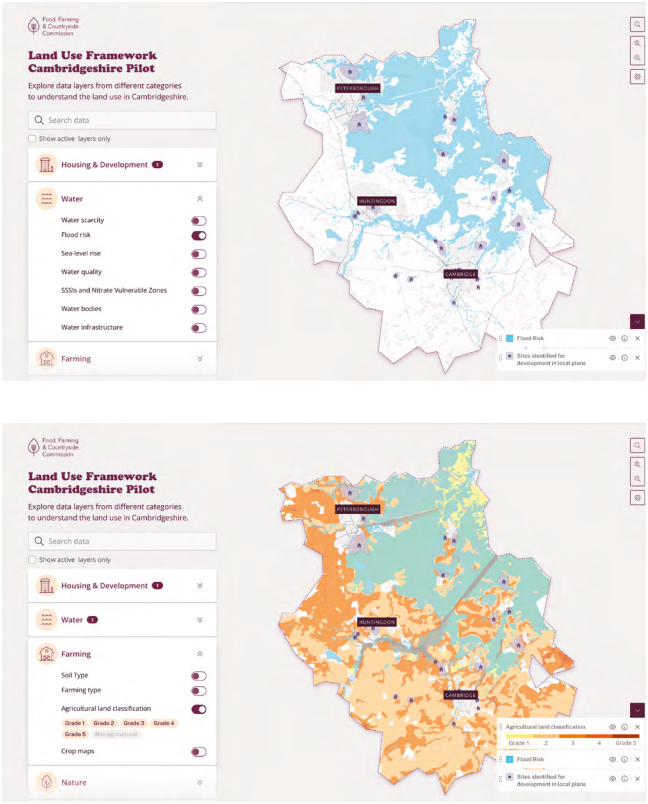
Stakeholders recognised that there are plenty of datasets available for each land use sector, however they mentioned that these can be widely dispersed and hard to interpret. They were interested in a tool that could synthesise data from key land use sectors and signpost to more specific tools where appropriate, to improve the efficiency of land use decisions making and to allow decision makers to take a more holistic and integrated view of land use change options, which could facilitate cross-sector collaboration on multifunctional land use projects.

It was recognised that to maximise the benefits of the prototype tool, there is a need for greater standardisation and consistency with regards to use of spatial data and Geographical Information System (GIS) tools and regular maintenance of tools would be needed to maintain their accuracy.

Impact

The prototype tool shows what enhanced data visualisation could achieve and sharing this with local land use decision makers and the local community has provided useful insights into how spatial data can be presented and communicated in the most impactful way to increase its usage and better support land use decisions at the local level.

FFCC will publish their findings and recommendations following the conclusion of their local land use framework pilots.



Preview of the Cambridgeshire prototype decision support tool outputs

Contact

Food Farming and Countryside Commission

Website: ffcc.co.uk

Twitter: @FFC_Commission

LinkedIn: Food Farming and Countryside Commission

Vizzuality

Website: vizzuality.com

Twitter: @Vizzuality

LinkedIn: Vizzuality

NEWCASTLE

Using spatial data and AI to support more efficient local planning

Newcastle City Council are looking to build their evidence base to optimise the use of land in the city to ensure that it meets the needs and aspirations of current and future generations. Newcastle City Council faces challenges in identifying sites for future housing development in assessing housing land supply, due to the land constraints they face. Development options are limited by the River Tyne running through the city and the tightly drawn surrounding Green Belt area.

Identifying sites for housing development therefore requires the consideration of different approaches and options including brownfield redevelopment and urban densification. Understanding where these options are viable can be challenging and Newcastle City Council needs to take into account how these different options will have an impact on their wider policy priorities, including inclusive economic prosperity, moving towards net zero emissions, improving environmental outcomes and delivering accessible housing to sustainably meet the needs of local communities and a growing population.

Approach

The Geospatial Commission worked with The Alan Turing Institute to develop a prototype modelling system, leveraging their data science and AI capabilities, to help Newcastle City Council identify sustainable residential and non-residential development locations and better manage the inherent complications in land use planning.

The model will support Newcastle City Council planners to make difficult decisions around land use, especially where there are conflicts, trade offs and constraints to manage. It will aid the planning of strategic interventions by:

- Evaluating the impact of high level development options against policy priority indicators
- Using machine learning and AI to assess and suggest a wide array of interventions which could deliver policy objectives

The first stage of the pilot was to gain an understanding of the priority competing aspects of land use in Newcastle that could be used as indicators in the modelling of scenarios and to establish a baseline. This will help Newcastle City Council assess the impacts of different delivery options for policy priorities such as housing supply. Through a number of collaborative workshops, involving Newcastle City Council policy makers and The Alan Turing Institute data scientists, the following indicators were determined: access to jobs, house prices, air quality and access to green space.

Publicly accessible datasets have been identified to quantify these indicators, alongside the Urban Grammar and Synthetic Population Catalyst land use data products previously developed by The Alan Turing Institute.

The model tested the impact of four planning scenarios on these indicators and highlighted where opportunities and trade offs exist:

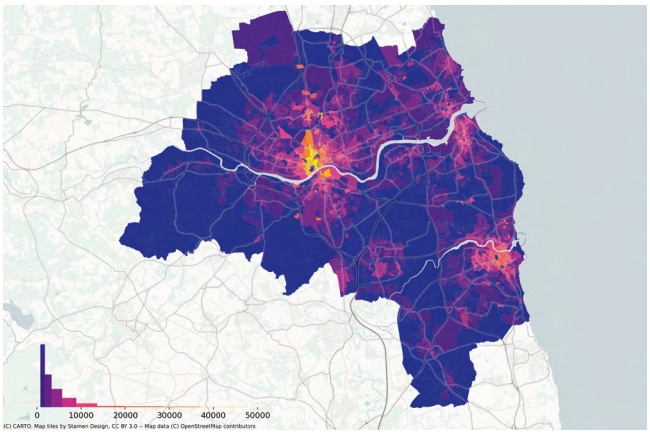
- Consideration of low-density or mid-density residential development
- Densification of inner city areas
- Redeveloping brownfields into dense neighbourhoods
- Combinations of the above

The modelling system can illustrate the trade offs between competing objectives through an evaluation of the key indicators.

An Ensemble Engine is also being developed which can suggest scenarios that would lead to desired targets along the indicators of interest. Planners will be able to input targets for each of them into the model, which then uses machine learning and artificial intelligence to suggest a number of interventions that would achieve the desired outcome.

In numbers

- 7 public sector organisations engaged
- 4 academic institutions engaged
- 10 stakeholders engaged
- 5 events held
- 10 datasets used in the development of the prototype model



Newcastle pilot prototype decision support tool policy priority indicators

Impact

Newcastle City Council will be able to use the exploratory visualisation tool to take a systems wide view of land use and comprehensively analyse the trade offs between policy priority indicators to support land use decision making, and simulate the impacts of proposed land use change to mitigate the risk of disbenefits and unintended consequences.

Findings from this pilot will be published separately once the project has concluded in Summer 2023. The Alan Turing Institute is an advocate for the benefits of open AI and data science, the model code and outputs will be open-source and published in due course.

Contact

The Alan Turing Institute

Website: turing.ac.uk

Twitter: @turinginst

LinkedIn: The Alan Turing Institute

Newcastle City Council

Website: newcastle.gov.uk

Twitter: @NewcastleCC

LinkedIn: Newcastle City Council

NORTHERN IRELAND

Combining land cover and land use data to inform decision making

In order to make effective decisions about what we do with our land, we need a consistent baseline of what is on the land surface (land cover) and what the land is being used for (land use). At present, various data products exist to inform our understanding of land, including land cover maps such as the UK Centre for Ecology and Hydrology (UKCEH) Land Cover Maps or CORINE Land Cover Map, and land use statistics such as those produced by the Department for Levelling Up Housing and Communities (DLUHC), which are based on Ordnance Survey data. However, there are no national scale products which combine land use and land cover datasets together in the UK.

Information on land use and land cover is often held in disparate data sets which vary in accessibility, availability and format. It can therefore be difficult to get a clear picture of land use and land cover across an area, leading to duplication of information gathering by decision makers and ultimately inefficient use of land. Improving this baseline information can help decision makers identify where change is beneficial and feasible to best optimise land use and manage competing demands.

Approach

The Geospatial Commission supported Ordnance Survey Northern Ireland (OSNI) to produce a single map which combined land cover and land use data. This was piloted in the Derry City and Strabane District Council area, with the aim of showing that key decisions on land need to be informed by both its cover and use.

The map brought together a number of authoritative data sources already available across Northern Ireland. This methodology aimed to address challenges faced by stakeholders who cited a lack of accessible high resolution land cover data and land use maps in Northern Ireland.

Land use maps are difficult to create from remotely sensed data as land use characteristics are not always obvious from an image. For example, whilst buildings can be identified from a birdseye image, what they are used for can be very challenging to ascertain. Additionally, this method has the potential to be more cost effective and more efficient by reducing findability, accessibility, interoperability and reusability (FAIR) data issues through the join up of disparate land datasets into one unified land cover and use map which will reduce the risk of duplication and reduce time spent sourcing land data.

Geospatial data from public sector organisations, for example, on agriculture, housing, council assets and forestry, was brought together within a Geographical Information System (GIS). OSNI sourced and combined over 15 authoritative public sector land cover and land use datasets into a single mapping layer, with any data gaps infilled by 4-band orthophotography.

Features were then assigned a land cover and land use classification based on the National Land Use Database, which was used as a baseline given the detailed list of classifications and definitions it provides. However, the map methodology also allows for classifications to be refined to reflect the availability of data and the needs of end users. Uniquely, the map allows multiple land uses to be assigned to a single parcel of land which provides a better understanding of land use in cases where, for example, the ground floor of a building is a shop whilst the first floor is a flat.

In numbers

- 38 public sector organisations engaged
- 2 private sector organisations engaged
- 5 academic institutions engaged
- 125 stakeholders engaged
- 5 events held
- 15 data sets used

Findings

The map was tested with an array of stakeholders across local councils, central government and the private sector, which included policy officials, planners and analysts. The majority stated that they would choose a joint land cover and use map over individual maps, and all agreed on the benefit of a consistent land use classification that could be used across the UK.

One of the key findings from stakeholder engagement was the belief that the map can reduce costs for organisations as it utilises public sector data which is already available to them, reducing the need to purchase other data and resources required to develop their own individual mapping product. Linked to this, it can also save organisations and individual users time negating the need to analyse separate data sources and reduces the risk of duplication of effort as the data has already been collated into an accessible GIS environment.

Additionally, stakeholders felt that the mapping product will enable the analysis of land use change over time as long as an update process is incorporated to refresh datasets when possible and also to include new datasets as they become available. The use of national mapping and unique identifiers, derived from OSNI Fusion and Pointer, within the map allow additional data sets to be more easily incorporated.

Combined land cover and use map of Strabane with polygons representing land parcels and 42 colours representing land use categories

Impact

Stakeholders were clear that the map has great potential to be used in assessing land use change over time, comparing land cover and use together and assisting in policy development and decision making in a range of areas such as planning, environmental modelling, green space access, identifying land for regeneration, housing, net zero and biodiversity.

Due to the success of the project and positive feedback from stakeholders, further funding from OSNI has been secured to roll out the land cover and land use map across the entirety of Northern Ireland. The map has considerable potential to support activities in response to the Northern Ireland Climate Change Act, both in developing a strategy and monitoring change. A Northern Ireland land cover and land use map could be ready for release across government and council areas in 2024.

Contact

Ordnance Survey Northern Ireland

Website: nidirect.gov.uk/campaigns/ordnance-survey-of-northern-ireland

Twitter: @osni_maps

LinkedIn: Ordnance Survey Northern Ireland

LAND DATA PRODUCT SPECIFICATION

Improving land cover and land use data interoperability

Spatial modelling and simulations can help appraise how changes to land use could work. These simulations can support justifications for land change and highlight potential undesirable outcomes. Modelling and simulation of land relies on having coherent data, especially if we want to undertake an appraisal of many potential options.

Approach

The Geospatial Commission supported Ordnance Survey GB to create a conceptual data model, which could facilitate the harmonisation of land cover and land use data across the UK to support strategic land use options appraisal.

The data model would enable the ingestion of an array of land cover and land use datasets. A Land Data Product Specification (DPS) was also developed to improve data interoperability and enable spatial models in the future to use land cover and land use data in a consistent way, which would in turn improve the interoperability between modelling systems, enable data reuse and enhance the use of this data in land use decision making processes.

The data model is based on the INSPIRE directive and its Land Use (covering both current and planned land use), Land Cover, Natural Risk Zones and Protected Sites themes. The data model builds upon these and adapts them for identified use cases. This approach provides a balanced view on what we need to understand about land for strategic level decision making.

Contact

Ordnance Survey

Website: ordnancesurvey.co.uk

Twitter: @OrdnanceSurvey

LinkedIn: Ordnance Survey

With so many disparate datasets which provide land cover and land use information, they need to be combined in a meaningful way to enable decision making. The DPS was created to provide guidance on how to create and maintain an interoperable land cover and land use dataset. The specification has been designed to:

- Assist data owners who wish to create datasets that conform to part or all of the data model
- Assist data users who wish to analyse data already conforming to the data model
- Assist data users who wish to undertake national scale spatial modelling of land data, for whom a common target model would enable easier comparison of datasets from different jurisdictions
- Assist developers who wish to create datastores conforming to the data model

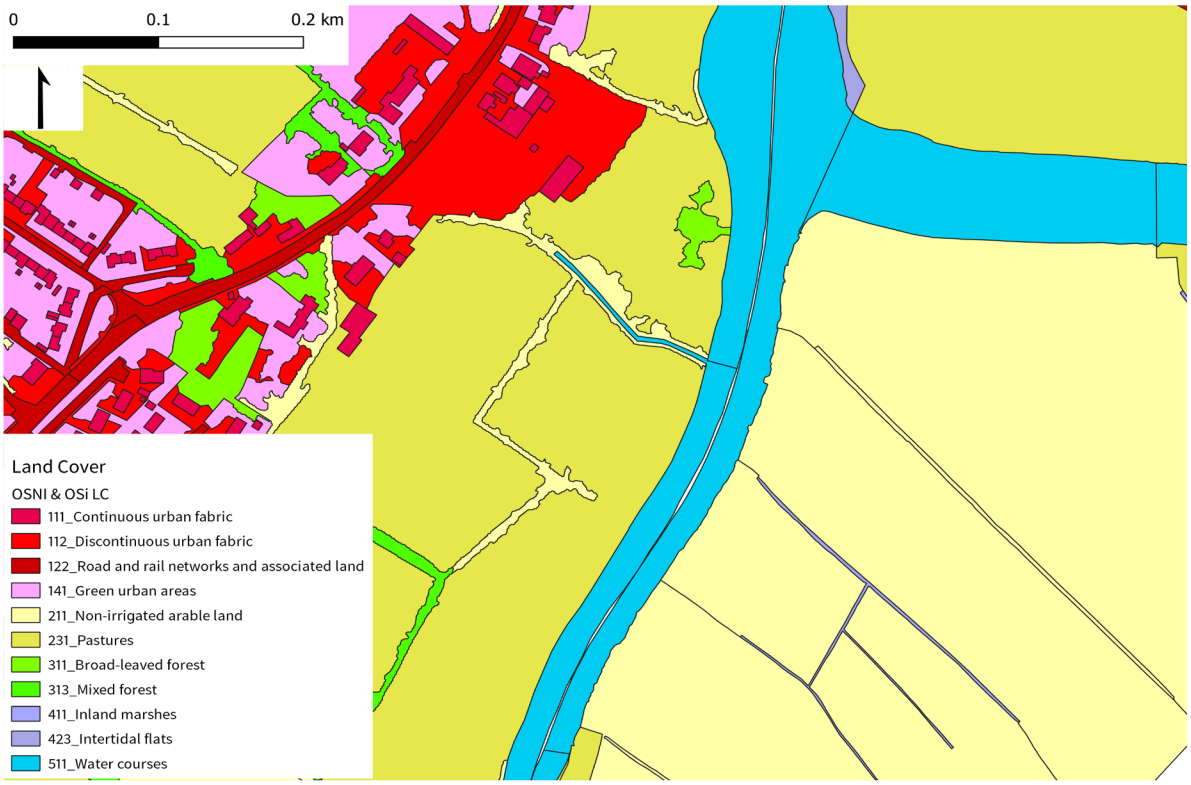
Findings

Through the development of the data model and DPS, we found that land use and land cover need to be considered together to support effective land use decisions. We established that three perspectives need to be considered when making land use decisions:

As Is: How is the land utilised currently? – This typically means the land use and land cover. Land use provides the current land function and land cover its form. Very often one defines the other.

Constraints: What can impact our choices? – This can include our preferences to how we protect the land, e.g. historic buildings or national parks, and also hazards such as flooding, subsidence or erosion.

Opportunity: What are the potential options for land? – Land can be typified according to combinations of its topology, climate, soil and infrastructure amongst others to support particular potential uses, e.g. carbon sequestration, recreation, renewable energy.



Testing the consistency of land cover data sets from OSNI and OS Ireland using the NLDP land data model

We found that if the 'opportunity' is combined with the 'constraint' and the 'as is', it provides a good basis for strategic decision making, striking a balance between precision and ease of use.

The data model was successfully tested using 13 land cover and land use datasets from 10 organisations, which included OSNI, Natural England, Environment Agency, DLUHC and UKCEH. Datasets that were tested included: flood hazard maps, greenbelt designations, nature reserve designations, national land cover maps and historic mine workings. We found that despite their diversity, all could be loaded into the data model, providing a common representation of land cover and land use which could be used as the basis for spatial modelling and analysis.

Impact

The benefits of using a common data model is that data ingestion and processing systems know what to expect from the data. These systems are the foundations for products and services which visualise the data or those which use algorithms to undertake spatial modelling and simulations. Currently, considerable time and effort is required to transform land cover and land use data into a format that is usable, and if this is not done in a consistent manner, the analysis of the data can be inaccurate.

The DPS lays the foundations for a more consistent, holistic approach to land cover and land use data management, which would make it more efficient to undertake rapid and robust spatial analysis of land use change options.

Any enquiries regarding this publication should be sent to us at geospatialcommission@cabinetoffice.gov.uk.

This document is also available from our website at www.gov.uk/government/organisations/geospatial-commission.