

Optimising natural capital for wellbeing and biodiversity

NHS Fife

The Challenge

- Map and classify all natural capital across 45 sites

The Benefits

- Accurate data to inform strategic planning and reporting
- Optimum use of natural capital to improve wellbeing
- Expenditure reallocated to enrich biodiversity
- Effective partnerships to benefit local communities

In a quick and simple process, NHS Fife has mapped and classified all greenspaces across 45 separate hospital and healthcare sites using ArcGIS Online. It is now using its interactive Greenspaces Map to simplify its sustainability reporting, enrich biodiversity across its estate and introduce new wellbeing projects to benefit staff, patients and local communities.

The Challenge

All public bodies in Scotland have a responsibility to protect and enrich biodiversity. The Nature Conservation Act (Scotland) 2004, and subsequent Wildlife and Natural Environment (Scotland) Act 2011, require public sector organisations to take care of the nature around them and produce publicly-available reports detailing the action they have taken to improve their natural capital.

Like all NHS Boards in Scotland, NHS Fife needed to fulfil this biodiversity duty and improve the management of its greenspaces. It has ten hospitals, as well as medical practices, midwifery units, community clinics and dental health centres throughout Fife, which together make up a 130-hectare estate. However, the organisation had neither an accurate map of its greenspaces nor a centralised record of whether its greenspaces were mown grass, wildflower meadows or unmanaged woodland. Without an accurate understanding of its natural capital, it was hard for NHS Fife to adapt the way it managed its greenspaces and meet the requirement for detailed biodiversity reporting.

The Solution

With support from Esri UK, the estates team at NHS Fife used Esri's ArcGIS Online to create a digital map of natural capital across all of the organisation's 45 separate healthcare sites. "Esri UK guided us through the whole process," explains Kathryn Hastie, Sustainability Officer at NHS Fife. "It was a really rewarding project to work on and only took about six weeks."

Esri UK supported the configuration of an easy-to-use data collection app, using Esri's Sweet for ArcGIS solution, which enabled two people, who were not GIS experts, to map every individual area of land very precisely. Through this process, each area of the estate – no matter how small – was classified using sixty different categories, such as garden, shrubs, grassland, woodland, building, path and car park. The organisation also recorded subcategories, enabling it to differentiate between different types of woodland or grassland.

A second mobile app, developed with ArcGIS Field Maps, allowed the students to make notes and take pictures while making site visits. In this way, they successfully verified the greenspace data in the map, building up a very detailed and accurate picture of the organisation's natural capital. The team could also add supplementary data on features across the estate such as cycle racks, electric vehicle charging points and benches. "ArcGIS Online has given us such a clear view of the entire estate," Hastie says. "We don't just know where our greenspaces are; we also know exactly which type of greenspaces they are and what is nearby."

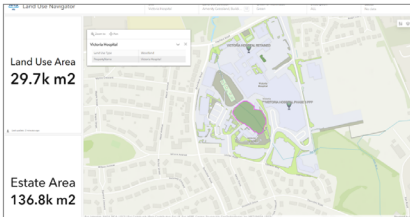
Esri UK | Millennium House
65 Walton Street | Aylesbury
Buckinghamshire HP21 7QG
T 01296 745500 | F 01296 745544
E info@esriuk.com | www.esriuk.com

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Jimmy Ramsay, Head of Sustainability, NHS Fife



NHS Fife Land Use Navigator shows available greenspace at Victoria Hospital site

The Benefits

Accurate data to inform strategic planning and reporting

NHS Fife now has a complete and accurate picture of its entire estate, 62% of which is greenspace. The data from ArcGIS has proved invaluable for informing the organisation's 2030 Greenspaces Strategy and meeting regulatory reporting requirements. “Our Greenspaces Map continues to drive our Greenspaces Strategy going forwards, highlighting ways that we can use our natural capital to benefit patients, staff, local communities and the planet as a whole,” says Jimmy Ramsay, Head of Sustainability at NHS Fife.

Optimum use of natural capital to improve wellbeing

Using the Greenspaces Map, NHS Fife is now putting in place plans to develop gardens and outdoor spaces where patients and staff can relax. At one hospital, for example, NHS Fife is planning a nature-rich garden suitable for patients with impaired mobility, close to the ward where they are treated. “As a healthcare provider, it is especially important for us to use our greenspaces to encourage people to get outside, enjoy the natural environment and improve their wellbeing,” Hastie says.

Expenditure reallocated to enrich biodiversity

NHS Fife can now use the Greenspaces Map to identify areas of grassland that can be converted into wildflower meadows, allowing budget previously allocated to grass cutting to be used to deliver new biodiversity projects instead. For example, at Lynebank Hospital, NHS Fife previously reduced grass cutting, enabling a new walking route, meadows and bird boxes to be introduced. As Ramsay says, “Esri UK has supported us in the creation of an incredibly detailed estates map that will significantly help us to identify areas of opportunity to manage our land in a more beneficial and sustainable way.”

Effective partnerships to benefit local communities

As part of its Greenspaces Strategy, NHS Fife plans to use its Greenspaces Map to work with partners, including Food4Fife and Rural Skills Scotland to identify suitable locations for community allotments, where groups can grow their own food, as well as training projects. The organisation's ArcGIS StoryMaps showcase the success of current projects and will be updated over time to keep local people, staff, patients and other stakeholders informed about projects that will make the NHS Fife estate better for the environment and for the local community.

Esri UK | Millennium House
65 Walton Street | Aylesbury
Buckinghamshire HP21 7QG
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E info@esriuk.com | www.esriuk.com

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