

## Encouraging more responsible tourism

## East Lothian Council

**The Challenge**

- Overcrowded beach car parks
- Detrimental impacts of tourism on nature
- Support needed for local tourist industry

**The Benefits**

- An improved visitor experience
- Proactive management of congestion
- Reduced pressure on the natural environment
- A welcome boost to the local economy

A new mobile app, developed at the University of Edinburgh for East Lothian Council, enables members of the public to see which beaches are busiest in East Lothian and find local amenities. Combining ArcGIS with the Internet of Things, this innovative solution is reducing congestion at popular coastal hotspots and helping to encourage more responsible tourism.

**The Challenge**

In popular tourist destinations, a careful balance has to be found between meeting the needs of visitors, supporting the local economy and protecting the natural environment. Finding this balance is a particular challenge along the coast of East Lothian. 77% of people who visit the county go to the beach, but most visitors tended to head for the same, well-known coastal car parks, which often led to traffic congestion, frustration for drivers and unsustainable pressure on the environment in these tourist hotspots.

East Lothian Council wanted to increase the movement of visitors around the area and encourage visitors to go to less popular, but equally beautiful beaches just a little further along the coast. At the same time, it wanted to make visitors more aware of local businesses not far from beaches, to support growth in the local economy.

**The Solution**

An innovative solution to this challenge was developed for East Lothian Council by EDINA, a directorate within the Information Services Group at The University of Edinburgh, with government funding through the Edinburgh and South East Scotland City Region Deal.

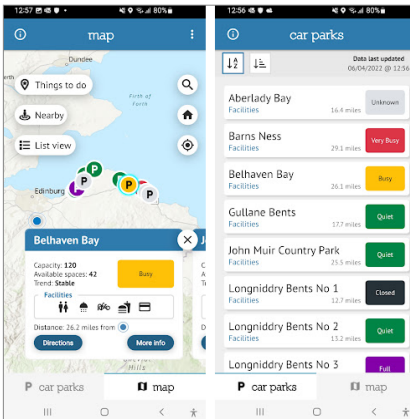
EDINA worked with the university's Internet of Things Data Technology Group, which set up sensors at ten car parks across the region. EDINA then built a mobile app using ArcGIS AppStudio to display live data from the sensors and show the number of cars entering and leaving car parks. Called 'Visit East Lothian', the Android and iPhone app displays a list of beach car parks and uses the remotely sensed data to show, for each, whether the car parks are full, very busy, busy or quiet. Users can scroll through the different beaches for more information and see nearby businesses, such as cafes, museums and accommodation.

"Visit East Lothian combines live information on traffic movements with geospatial data on the nearest local amenities," explains Anne Robertson, Head of Services at EDINA. "This project is a great example of data driven innovation in the public sector and demonstrates the real value that can be derived from combining geospatial technology with the Internet of Things."

Alongside the Visit East Lothian app, EDINA built an ArcGIS Survey123 app, enabling rangers to adjust car park occupancy rates manually, if necessary. EDINA also created an ArcGIS Dashboard for council staff that provides more detailed, live information about the concentration of visitors along the coast. "The ArcGIS Dashboard shows the council what the situation is, right now," clarifies Guy McGarva, Geospatial Consultancy Services Manager at EDINA. "Council employees can see the precise number of available spaces across all car parks and monitor real-time trends in car park utilisation, from their desktops, for the first time."

“The Visit East Lothian app directs people away from busy beaches to quieter ones and helps them to enjoy more of the region’s coastline and local amenities.”

Claire Dutton, Tourism Officer, East Lothian Council



The Visit East Lothian app presents information in a clear format that is easily understood

### The Benefits

#### *An improved visitor experience*

The Visit East Lothian app improves the visitor experience by showing people which beach car parks are busy and helping them discover other nearby beaches that are less crowded. Promoted through various media, the app was very well received and downloaded 2,350 times in the first four months alone. “The visitor experience is crucial for the tourism industry; if people don’t have a good time, they won’t come back,” says Claire Dutton, Tourism Officer at East Lothian Council. “The Visit East Lothian app directs people away from busy beaches to quieter ones and helps them to enjoy more of the region’s coastline and local amenities.”

#### *Proactive management of congestion*

The ArcGIS Dashboard gives the council live information which it can use to better manage visitor numbers at specific locations and anticipate where issues may arise. Rangers can see the car parks that are filling up quickly, foresee traffic congestion, open overflow car parks and take other measures to reduce the adverse impacts of tourism traffic on local residents. Traffic officers can also use the app to ensure they focus their time on patrolling the busiest car parks. “We can be much more proactive now and intervene to help prevent and alleviate overcrowding issues at popular beach car parks,” Dutton says.

#### *Reduced pressure on the natural environment*

East Lothian Council is a strong advocate of responsible tourism and supports a variety of initiatives that encourage people to respect and protect the coast and countryside of East Lothian. By helping to distribute visitors more evenly along the coastline, the Visit East Lothian app will help to reduce issues such as overflowing bins and parking on verges, which can harm wildlife and damage fragile habitats. In the future, the council could put messaging on the app to direct people away from specific locations at certain times of the year, such as during bird nesting times.

#### *A welcome boost to the local economy*

The Visit East Lothian app supports the local economy by promoting East Lothian’s tourism businesses. Users of the app can search near their current location or near a specific car park to find information about local cafes, restaurants, museums, shops and other businesses. “Tourism is vital to the economy of East Lothian and employs 10% of the local workforce,” explains Dutton. “The Visit East Lothian app raises awareness of local businesses and therefore helps to encourage visitors to enjoy more of the many amenities East Lothian has to offer.”

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