Without NIMA the Quiet Areas web apps could have cost DAERA in the region of **£378,000** to develop.
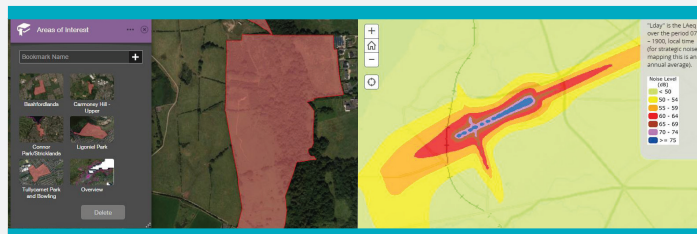
Web based GIS used to support NI Noise Regulation policy making

Land and Property Service (LPS) collaborated with DAERA's Air and Environmental Quality (AEQ) unit to map environmental noise data. AEQ is tasked with the local implementation of the EU Environmental Noise Directive (END), which was transposed in Northern Ireland (NI) through the Environmental Noise Regulations 2006. The END has three main objectives: to determine the noise exposure of the population through mapping; to make information on environmental noise available to the public; and to develop action plans based on the mapping results to reduce noise levels where necessary and to preserve environmental noise quality where it is good.

Challenge

In order to meet END requirements, AEQ required tools to make use of NI's environmental noise datasets to inform policy development, including:

1. Mapping and analytical support to inform the "Quiet Areas" site designation process, which aims to preserve public areas with good environmental noise quality.

2. Data dissemination tools to make information accessible for the purposes of public and stakeholder consultation.

What is Geographic Information (GI)?
Over 80% of data used by our public sector services can be described as GI because it has a geographic element i.e. an address; and because of this, it can be mapped.
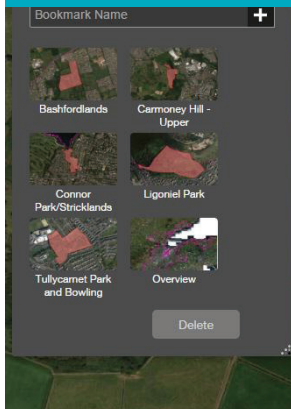
What is a Geographical Information System (GIS)?
(GIS) refers to a range of software packages that helps organisations harness the geographic element of data, not only to map the data, but to analyse it in new and more powerful ways.

LPS GI Consultancy Services
LPS provides a free GI consultancy service to the public sector in NI. The team provides tailored advice and assistance on how GI can improve processes and service provision; how to interrogate and present data and statistics using GIS.

Web-based mapping application in support of the Quiet Areas site designation process.

"The Quiet Area app has enabled us to adopt an innovative approach to policy making in a very technical subject area. This bespoke policy making tool allows visualisation of a vast quantity of data on a single webpage and enables scientifically accurate and legally robust policy decisions to be made."
Dave Foster Director of RNRPD, DAERA

Web-based mapping application of NI's environmental noise datasets for public access.
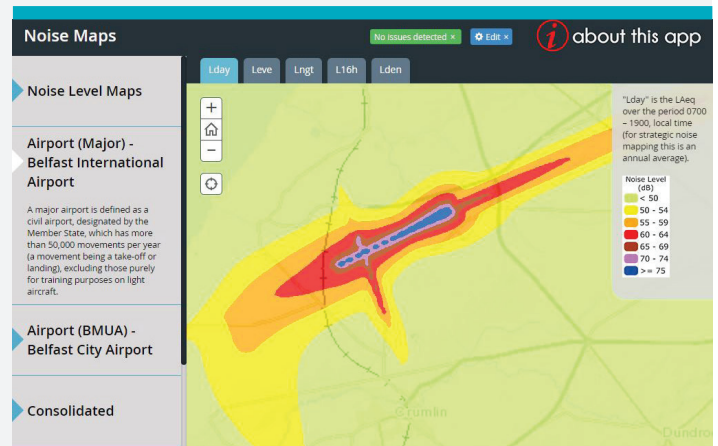
The Solution

As a Northern Ireland Mapping Agreement (NIMA) customer DAERA was able to access data and GI consultancy services from LPS.

The GI consultant created a GIS database of environmental noise datasets, which underpins a GIS-based model for determining areas with the potential for preservation as "Quiet Areas." The database also underpins two web-based mapping applications that make NI's noise datasets open and accessible to the public.

The first web application visualises the results of the Quiet Areas model in an understandable manner and was used to support policy decisions and the public consultation process. The second web application interactively displays NI's environmental noise maps and contains contextual and supporting information to facilitate public understanding of the regulations and their implementation.

The Benefits

- The development and implementation of the GIS database and its associated web applications provide AEQ with a robust method for identifying proposed areas, which is scientifically and legally sound.

- AEQ is able to avail of cutting-edge mapping and web-based technologies to support public policy. The result is a novel digital approach to the development of environmental policy in NI, which helps inform decisions and engage all stakeholders in the decision-making process.

- The web applications also allow a more efficient and streamlined public consultation process, quicker information request response times, and a user friendly forum for the public to access information. This allows public stakeholders to directly access the information and data used to support the implementation of the regulations.

- AEQ realised potential cost savings in the region of £35,000 for consultancy services and £343,000 for data products through NIMA over the course of this project.