

Natural Resources Wales protecting our environment

Introduction

Natural Resources Wales (NRW) is a Welsh Government Sponsored Body which came into being in April 2013, largely taking over the functions of the Countryside Council for Wales, Forestry Commission Wales, and the Environment Agency in Wales, as well as certain Welsh Government functions.

NRW employs almost 1,900 staff across Wales with a budget of £180 million. Its purpose is to ensure that the environment and natural resources of Wales are sustainably maintained, enhanced and utilised, now and for the future. Welsh Government define priority outcomes that NRW is required to achieve each year.

12% of the Welsh land area and 69% of Welsh inshore waters is designated to safeguard the continuing health of particular flora, fauna and earth science features in line with National and International regulations. Area-based Environment Teams are responsible for over 1000 designated Sites of Special Scientific Interest (SSSI) in Wales, many of which fall under additional international designations such as Special Areas of Conservation (SAC) and Special Protection Areas (SPA) along with National Parks, Nature Reserves and Marine Conservation Zones.

Why change?

The existing management system had become dated and no longer supported the team's requirements for reporting on, collecting and updating site information. Furthermore, it was reliant on a paperwork heavy and lengthy process for managing the legal designation of new and existing sites.

The Oracle based software was also found to be environmentally inefficient in terms of the physical set-up of the servers and databases and it was deemed necessary for a more flexible, carbon-friendly solution to be sought.

NRW ran a tender procurement exercise in which several organisations submitted responses and AMX was successfully awarded the contract in March 2019.



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“Introducing the new Protected Sites database (Safle) to staff and delivering training has been a smooth process, users report that they find the navigation intuitive, and welcome having GIS integration to easily view the plethora of different designation types quickly and simply. We now have the ability as administrators to modify/tweak data fields, which gives us the flexibility to keep the database up to date and to reflect any changes in policy or processes - the system is adaptable and future proof”

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What assets is AMX managing?

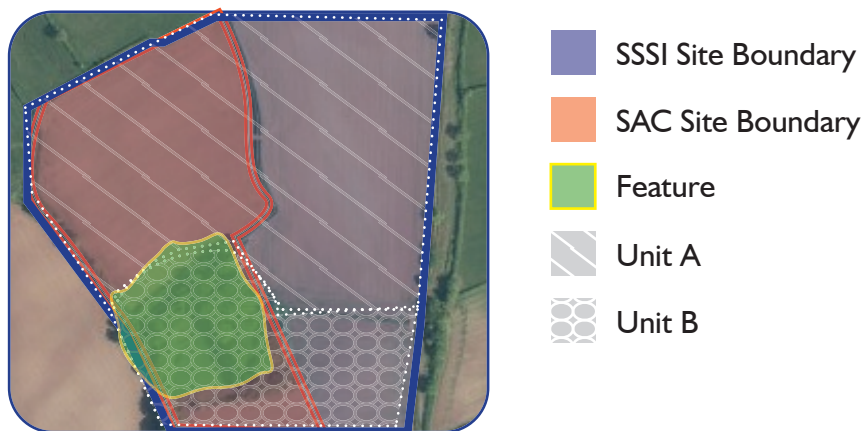
Whilst this was a very new area of use for AMX software, it was determined that the core product could be used with customisation and configuration to meet the specific needs of the existing data.

Within AMX, the managed habitats, species and earth science special interests, referred to as 'features' of a site are identified as being the 'assets'. These features all need to be spatially recorded, regularly monitored and the habitats and environment they live in managed to ensure their protection and survival.

In database terms, the assets table was used for the features as this would easily facilitate the standard AMX management functionality, similar to inspections and maintenance, and fulfil the needs of the business.

Sitting above the asset table, the geographical Sites, catalogued by legal designation, were created and, using GIS tools, interlinked and cross-referenced with each other and other pertinent map layers such as county boundaries and flood risk.

Each Site also then has its own smaller breakdowns known as 'Units' (usually following land management boundaries) to make the large Sites and Features within them easier and more manageable.



Who was involved?

The team working on the project involved a number of different stakeholders.

From NRW the project board extended to representatives from several departments involved with the day-to-day creation or management of Protected Sites. In addition there was support from Data Architects who looked after the transposition and organisation of data from the legacy system into importable formats, a business analyst to design the specific requirements to meet the business processes (some of which had previously been paper-based) and members from IT to support the integration and set-up of environments to host and move data aided by the Test team to sign-off the functionality delivered after each sprint.

Within AMX, the team had a dedicated project manager that oversaw the day-to-day elements and contributed towards the configuration of the system, in addition to a dedicated developer and test manager.

What process is AMX supporting?

Legal Designation process

The process of creating or updating Sites can take place over a long period of time involving multiple milestones which have a fundamental impact on the designation of a site.

Once a potential site has been identified, it will be verified by a conservation officer and assessed in terms of its boundaries, features, management and operations likely to damage the features of special interest. This is followed by consultation with landowners, local authorities and other relevant stakeholders prior to a final approval to proceed.

AMX has been designed to track each milestone of the process and support the data capture and business rules throughout including the point at which a site is formally notified as requiring protection, at which point it is bound under law and subject to measures of control.

Risks/Issues and Management Actions

The purpose of designating a site is to protect the features found within it. Ensuring that the site is managed appropriately to ensure favourable conservation status requires identification of any conservation management issues or risks. AMX enables the identification of all issues and potential risks, the feature it could impact and the severity and likelihood of it occurring, while supporting the documentation of identified plans/activities that can be put in place between parties to mitigate the risk.

Site Contacts

Through connecting the AMX system with NRW's own customer management database, it is possible to record the consultation process with all relevant stakeholders, assign individuals or organisations with appropriate interest in the site and enable future communications regarding implementation of risk mitigation plans and access for ongoing monitoring activities.

How did the project evolve?

AMX used an agile approach to delivering the project. Following a number of initial business requirement workshops to establish key functionality, the team worked together to devise user stories which allowed for the project to be split into smaller monthly sprints. Over a managed period of two years the system was configured, tested, integrated with other NRW applications and finally resulted in a major data import to facilitate the system going live.

These were the core themes for delivery:

- Legal Designation Process for creating a new site
- Feature information including area, count, scientific names, vulnerability
- Unit information and cross-referencing
- Risks & Issues – adding and updating
- Management Actions – adding and updating
- API integrations – with NRW CRM, GIS, Sharepoint
- Amending existing sites – updating and changing contact details, features and boundaries.

Future

The next phase of development is to successfully co-ordinate and integrate the data collection elements of caring for Protected Sites, also known as Evidence and Monitoring. This team are responsible for maintaining, in practical terms, the evidence on the features required to inform future management of any conservation management issues and risks.

This involves site visits, sample collection, data counts and information gathering and observations.

These types of activity more closely align with the original purpose of AMX and will form a relatively straight-forward roll-out and enhancement of the existing system to allow all the relevant cross-referencing of data across all geographical points and their corresponding protection designations and allow for future programming of maintenance programmes.

A further phase will also allow for stakeholders to review their management action agreements with NRW in the context of protecting features, and subsets of the Site data will be publicly available via a web page to ensure it's always up to date.

“ The ability to build bespoke reports on the conservation management issues affecting the most important areas of land and sea for biodiversity, and sharing both internally and with external partners to support collaboration and action, plays an important role in our strategy to tackle the nature and climate emergency declared in Wales.

Reconfiguring and migrating data from a long established, dated and unsupported system threw up some challenges, however the joint NRW/AMX project team worked well, and their perseverance and skills always ensured successful resolution!”

**Christine Edwards,
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