



**Cyfoeth
Naturiol**
Cymru
**Natural
Resources**
Wales

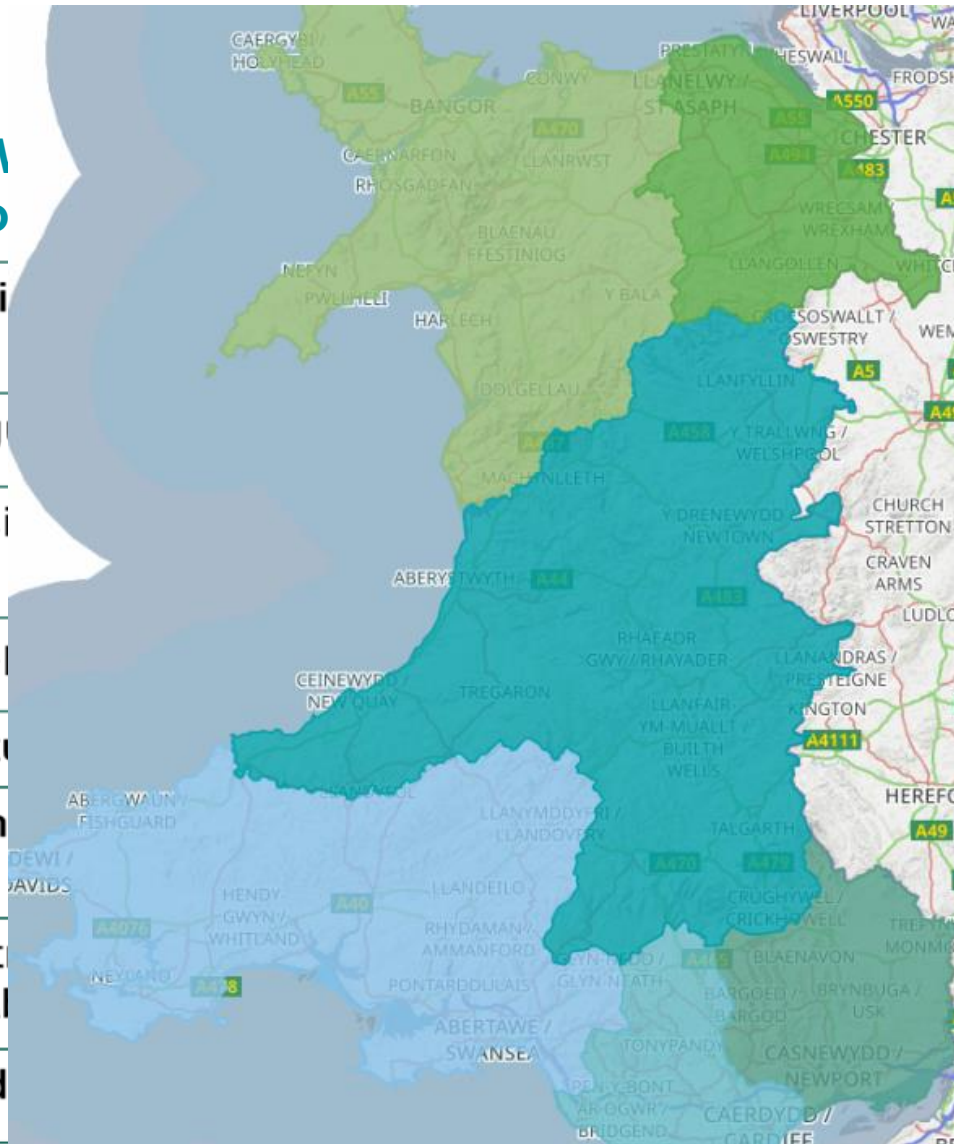


NRW's journey to Open Data and proactive data sharing

John Beattie, Data Advisor Natural Resources Wales

Who is NRW?

NRW
eco



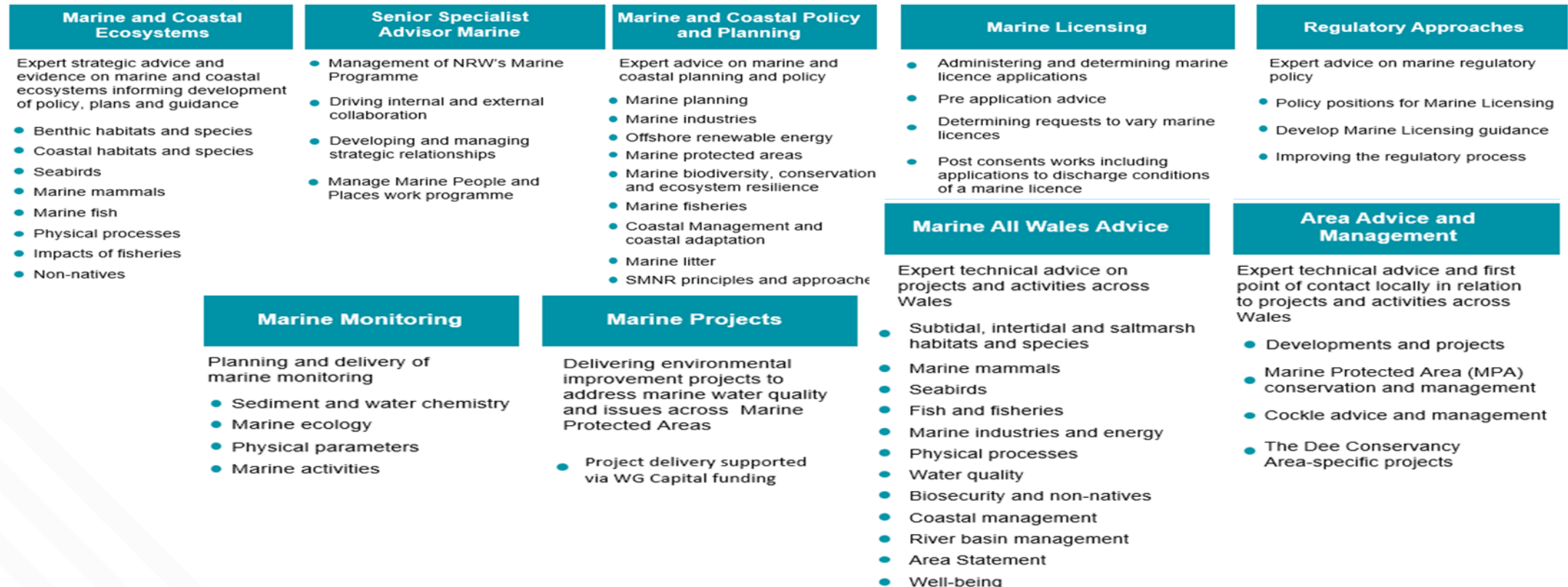
Department of natural resources in Wales to improve the social, economic and environmental well-being of Wales

Adviser to the Welsh Government, and adviser to industry and the wider public on environmental issues and communicator about issues relating to the environment
Regulator of the environment including marine, forest and waste industries, and enforces regulations that we are responsible for
Designates Areas of Scientific Interest – areas of particular value for their wildlife or geological features, Areas of Outstanding Natural Beauty (AONBs), and National Parks, as well as National Nature Reserves
Responds to reported environmental incidents a year as a Category 1 emergency
Statutory functions including applications a year
Manages 10% of Wales' land area including woodlands, National Nature Reserves, flood defences, and operating our visitor centres, recreation areas and a laboratory
Partnership with the public, private and voluntary sectors, providing grant aid, and ensuring a wide range of people use the environment as a learning resource; and supporting others' work
Evidence gathering, commissioning and undertaking research, developing and maintaining a public records body
Employer of almost 1,900 staff, as well as supporting other employment through contract work

Who is NRW

NRWs role is to: pursue sustainable management of natural resources in Wales to improve the social, economic, environmental and cultural well-being of Wales.

Key Marine Areas Include:

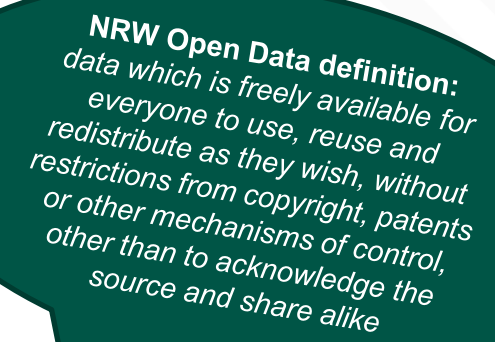


Open Data – our 10 year journey

Where did we start?

We needed to:

- Agree a single position in terms of adopting open data as a default position for our raw data
- Separate raw data for England and Wales into Wales only and store centrally in new NRW infrastructure
- Identify datasets that should be considered for proactive release
- Develop an assessment criteria (relevant to the kind of data we hold) to identify where release may be limited (sensitive/confidential information)
- Select or create appropriate licences (OGL for open data, NRW conditional licences or Contractor Licence for restricted data)
- Find a suitable mechanism to publish our Open Data through, to maximise its use.



NRW Open Data definition:
data which is freely available for everyone to use, reuse and redistribute as they wish, without restrictions from copyright, patents or other mechanisms of control, other than to acknowledge the source and share alike

Open Data – Our 10 Year Journey

Our process - Rapid Assessment Criteria & Decision process

NRW Open Data Position:

“NRW recognises the importance of providing our customers with easy access to our data and, where possible, permitting re-use with minimal restriction. Our policy is based on a presumption to share our raw data openly unless there is a good legal or business reason to restrict access”

- **Pass**



- **Fail**



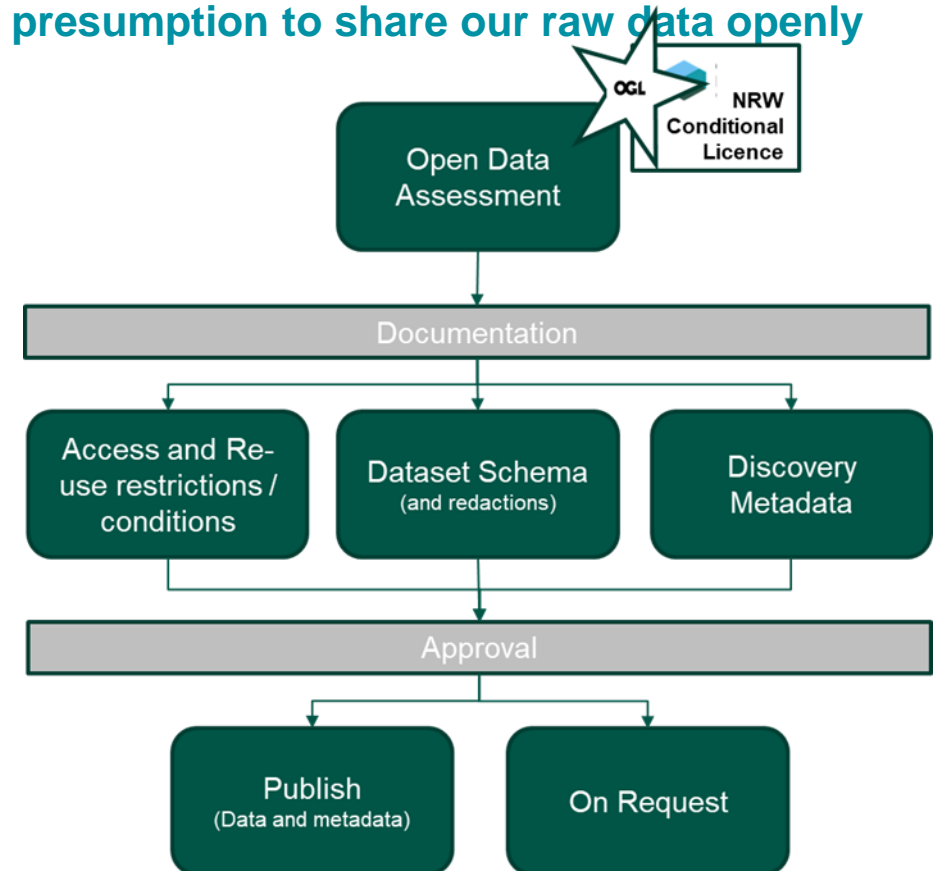
1	Personal data	As defined under Data Protection legislation unless part of a Public Register
2	3 rd Party Data	May including new NRW data derived from third party data. We always need to refer back to 3 rd party data licence
3	Confidential Information	e.g. commercially confidential information
4	National Security concerns	e.g. information about radioactive substances or public water supplies
5	Safety of staff/public, sites/property, habitats/wildlife	e.g. monitoring equipment and loggers or species/habitats identified as vulnerable to deliberate harm
6	Enforcement or legal information	e.g. information that could invalidate or damage ongoing criminal investigation
7	Other sensitivities	e.g. where a short term embargo on release is in place, where information could be misleading or misunderstood
8	Free text fields	Need to check for comments and other free text that may include any of the above or comments that could cause damage to NRW reputation

Open Data – our 10 year journey

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Open Data – our 10 year journey

Our process – Improving availability & sharing of marine data

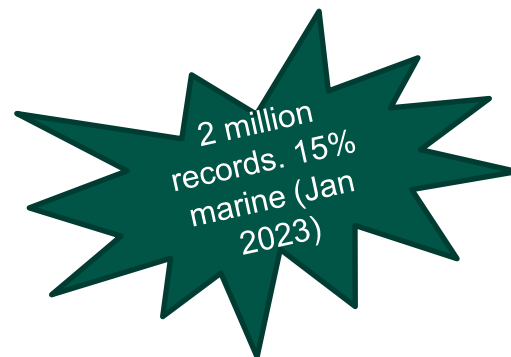
From Day 1 of NRW, we were able to make use and build on some existing legacy systems and processes to:

- Publish NRW discovery metadata catalogue on NRW website
- Harvest discovery metadata for NRW marine datasets to the MEDIN discovery metadata portal
- Functionality to harvest discovery metadata for dataset to data.gov/Find open Data
- Agreement and account in place to publish (marine) biological data on the NBN Atlas. NBN Atlas for Wales created.



But from Day 1 no mechanism to publish the rest of our (mainly geospatial) data

- Partnered with Welsh Government who were developing the Lle Geo-Spatial portal for Wales. Approved as NRW's official publishing mechanism in 2017
- By 2018 WG were looking at improving and expanding Lle and moving to new infrastructure. March 2021 new platform moved to Beta and branded as DataMapWales.



Open Data – our 10 year journey

Proactive supply– Improving availability & sharing of marine data



What is DataMapWales?

- **DMW has been developed by the Welsh Government as a replacement for the Lle Geospatial portal for Wales. DMW vision Statement:**

“To become the authoritative and recognised geo-spatial data source for public sector data in Wales. Providing a shared data platform to public authorities whilst also enabling all those who need access to use data for their own purposes.”

- **Live in Sept 2022, NRW data fully migrated Jan 2023**
- **DMW is a Catalogue, View and Download service as well as online map tool that allows users to create their own views on Welsh Public sector data**
- **NRW is using DMW as a single point of discovery for our Open Data.**
- **Customers can obtain downloads of the data or use through a WMS/WFS without the need to contact NRW saving NRW staff time**
- **NRW currently has 172 catalogue entries, made up of 500+ data layers**
- **Approx ¼ of entries relate to the marine environment in some way (Jan 2023.).**

Open Data – Our 10 Year Journey

Proactive supply – Improving availability

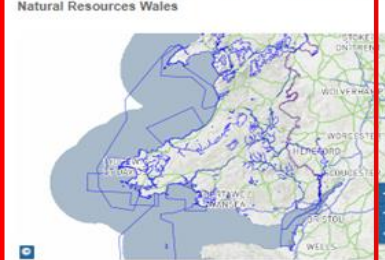
Display in map viewer

DataMapWales Sign in

DataMapWales Sign in

Special Areas of Conservation (SAC)

Natural Resources Wales



This spatial dataset contains boundaries of designated Special Areas of Conservation (SACs) in Wales. The EC Habitats and Species Directive came into force in 1992 with the aim of conserving biodiversity by protecting a wide range of habitats and species of animals and plants. All SACs, together with Special Protection Areas (SPAs) designated under the EC Wild Birds Directive to protect rare and migratory species of birds, comprise a network of sites across the EU known as 'Natura 2000'. Most SACs in Wales were first proposed in the mid 1990s and were formally designated in 2004. SACs were originally mapped on paper but since around 2000 the boundary data has been captured digitally. The sites shown in this dataset are the SACs that have completed the full legal designation process.

Attribution statement
Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Contains Ordnance Survey Data. Ordnance Survey Licence number 100019741. Crown Copyright and Database Right.

Use this data in another application

Please refer to the license to understand the conditions of using this data.

OWS endpoints
[Copy WMS endpoint link](#)
[Copy WFS endpoint link](#)

[Find out how to use OWS \(WMS and WFS\) endpoints](#)

Spatial data download
Select spatial data format ▼ Download ↓

Metadata download
Select metadata format ▼ Download ↓

Maps using this data (0)

No maps are using this data.

Attributes (29)

[Give feedback about this page](#)

Display in map viewer

Or display data on an existing map >

Type: **spatial data**

Category: [Environment >](#)

Creation date: **28 November 2022**

License: [Open Government License for Public Sector Information \(OGL\) >](#)

Keywords: [features, NRW_SAC](#)

Point of contact: opendata@naturalresources.wales

[Read full metadata](#)

Attributes (29)

SAC_name
Site_code
Status
Marine
NOTIF_DATE

Use this data in another application

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OWS endpoints

[Copy WMS endpoint link](#)

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Spatial data download

Select spatial data format ▼ Download ↓

Metadata download

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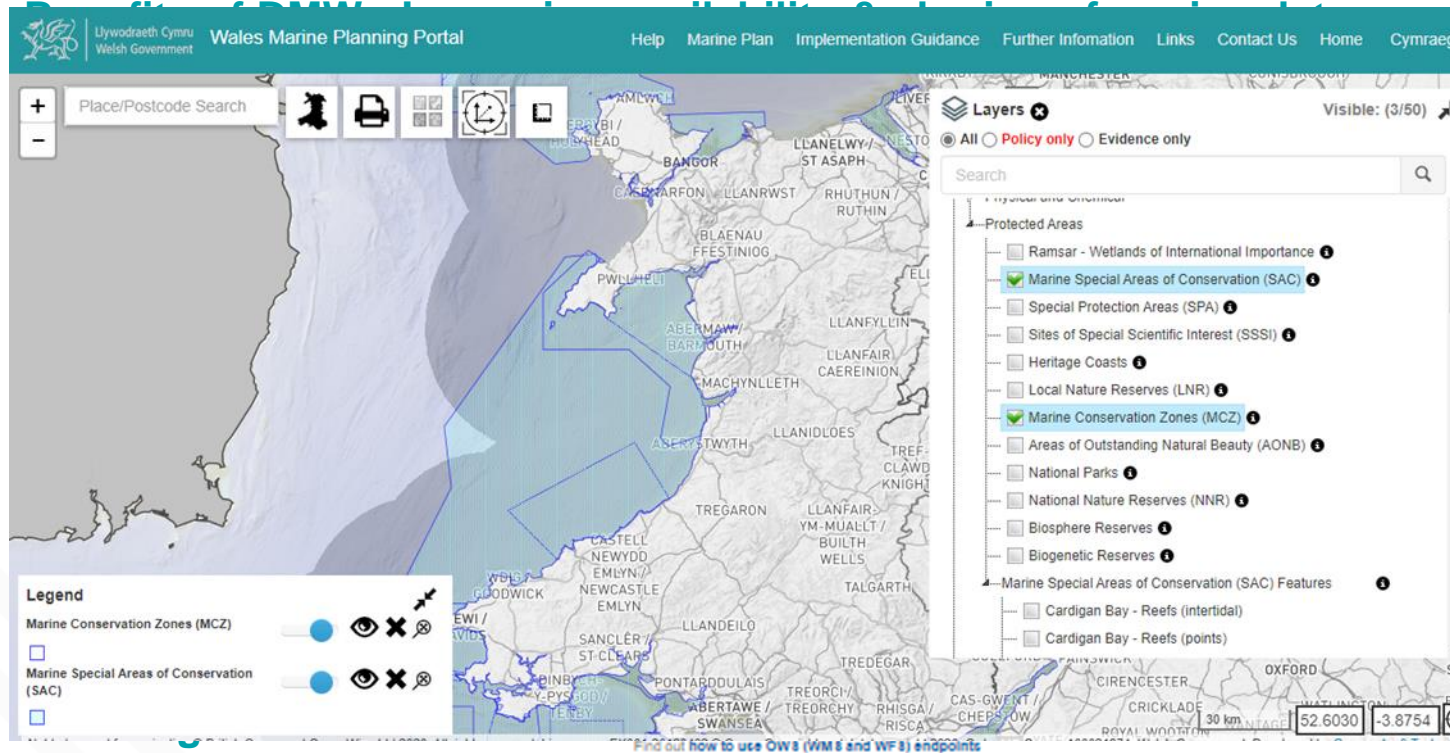
CART_AREA
ISIS_ID
METADATA
GlobalID
fme_geometry

Conservation

Conservation (SACs) in Wales. The EC Habitats and Species Directive came into force in 1992 with the aim of conserving biodiversity by protecting a wide range of habitats and species of animals and plants. All SACs, together with Special Protection Areas (SPAs) designated under the EC Wild Birds Directive to protect rare and migratory species of birds, comprise a network of sites across the EU known as 'Natura 2000'. Most SACs in Wales were first proposed in the mid 1990s and were formally designated in 2004. SACs were originally mapped on paper but since around 2000 the boundary data has been captured digitally. The sites shown in this dataset are the SACs that have completed the full legal designation process.

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Open Data – Our 10 Year Journey



...ted by WG to
 ... of open for
 ...oring a phys
 ...atial format c
 ...al to better sl

- WG/NRW developing FME processes to automate data loads and updates

Spatial data download

Select spatial data format

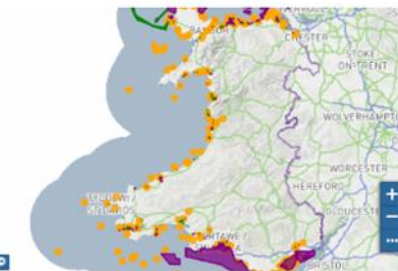
- CSV
- DXF
- Excel
- GeoJSON
- GML 2.0
- GML 3.1.1
- OGC Geopackage
- Ziped Shapefile

DataMapWales

Home > Data catalogue > Marine Licence Archive

Marine Licence Archive

Natural Resources Wales



Display in map viewer >

Or display data on an existing map >

Type: Spatial data
 Category: Planning Cadastre >
 Creation date: 16 June 2017
 License: Open Government Licence for Public Sector Information (OGL) >
 Point of contact: opendata@naturalresourceswales.gov.uk

Read full metadata

The records contain coordinate data associated with historic and expired marine licence applications in Wales. The data allows the location of applications to be mapped to assess any in combination effects with other proposals.

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Use this data in another application

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OWS endpoints

Copy WMS endpoint link

Find out how to use OWS (WM & WF) endpoints

Spatial data (3)

Spatial data download

Marine Licence Archive - NRW - Marine Licences Archive (Points)
 Please see layer group metadata

Select spatial data format Download

Marine Licence Archive - NRW - Marine Licences Archive (Polygons)
 Please see layer group metadata

Select spatial data format Download

Marine Licence Archive - NRW - Marine Licences Archive (Lines)
 Please see layer group metadata

Open Data – Our 10 Year Journey

Our Data – Important Marine data categories

Approx. quantities

- Statutory
- Coastal
- Bathing
- Flood e
- Marine
- Marine
- Species data (N
- Marine
- National

Full MEDIN discovery n

FILTER SEARCH

You searched for:

Free search: 'Marine Licence'

UK regions: Wales

Originator: Natural Resources Wal...

TIME PERIOD

From:

To:

SEASON OF INTEREST

Dataset contains:

GEOGRAPHICAL BOX

Search item completely within bounding box

North

West East

South

DATA THEME

Marine Biodiversity (27)

Fisheries and Aquac... (25)

Bathymetry and Sea (12)

RESULTS

Found 33 | Show Page (1 of 1) | Previous | Next

Click on the green button to access resource online

Bathing Water Quality at Designated Beaches
Natural Resources Wales (NRW)
Sat 1 Jan 2000 - Thu 30 Jun 2022

Click on the green button to access resource online

Saltmarsh Extents
Environment Agency (EA); Environment Agency Wales; Natural Resources Wales (NRW)
Thu 1 Jan 2009 - Wed 1 Mar 2017

Click on the green button to access resource online

Coastal Design - Extreme Sea Levels
Environment Agency (EA); Environment Agency Wales; Natural Resources Wales (NRW)
Fri 1 Jan 1915 - Sun 1 Jun 2008


Click on the red button for resource contact details

Shoreline Management Plan and Coastal Erosion
Natural Resources Wales (NRW)
Sat 1 Dec 2012

Click on the green button to access resource online

Marine Conservation Zones (MCZ)
Natural Resources Wales (NRW)
Fri 31 Dec 2010 - Fri 1 Apr 2016

Click on the green button to access resource online



Search for marine data across UK organisations

About

Contact

Share

Results

Refine search

New search

Metadata: Bathing Water Quality at Designated Beaches


Abstract:
Natural Resources Wales (NRW) monitors bathing water sites identified under EC Bathing Waters Directive 2006/7/EC in Wales. Samples are taken throughout the bathing season from May to the end of September and analysed for two parameters: Escherichia coli and intestinal enterococci. A classification of bathing water quality, generally based on 4 years of sample results, is produced for each bathing water at the end of each season.

Data holder:
Natural Resources Wales (NRW)

Online resource present: Click on the green button to access resource online

Use constraints:
There are no access restrictions on this data. NRW may release, publish or disseminate it freely.

Geographic Extent:



coastal distribution

MEDIN

- MEDIN format (XML) - Dublin Core format (XML)

Searching multiple platforms

Open Data – Our 10 Year Journey

Next Steps – Priorities for future

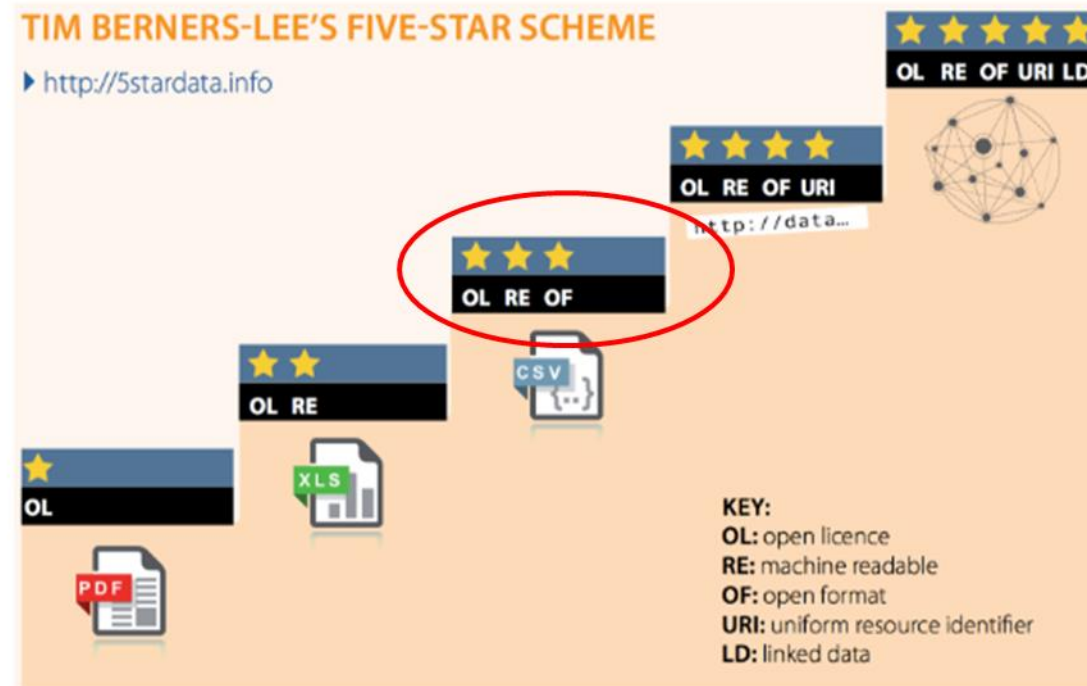
Open data

- Can we increase the level of “
- More use of automation to ext
- Improving and rationalising o
- Improve the metadata held on
- **More Marine Data!! – What do**

DMW

What do WG have in store for DMW?

- Developing tools based on DMW platform and data e.g. constraints planning tool
- Investigate discovery metadata ingest from Gemini XML feeds
- Gov.notify messaging e.g. messages when data changes
- Geostories (similar to ESR Storymaps)
- Finalise Cloud optimised geotiffs (COGS).
- Mobile improvement
- Secure groups and organisation groups to allow collaborative work to develop datasets across different public bodies or share restricted data
- More Welsh Public sector data and suppliers



Open Data – Our 10 Year Journey

Next Steps – Priorities for future work

Data Visualisation and Interpretation

- NRW MapViewers (Flood viewers, Peatland Data Portal, Bathing water quality)
- Wales Environmental Information Portal

The image displays two screenshots of the BETA: Wales Environmental Information Portal. The left screenshot shows the main portal interface with a search bar and a map of Wales. The right screenshot shows a detailed view of the 'Ecosystem effects' section, which includes a title, a question 'What are the effects of INNS on Wales' ecosystems?', a paragraph of text, and a map of Wales showing the distribution of INNS. The text in the right screenshot reads: 'INNS affect all ecosystem types in Wales, reducing their resilience, economic productivity and ability to provide well-being benefits for us. Freshwater and marine ecosystems are affected by the widest variety of priority INNS species, followed by woodlands and semi-natural grassland. Using data from the National Biodiversity Network (NBN) Wales INNS Portal, the occurrence records of the INNS of priority were mapped to provide an indication of their distribution. They correlate closely with urban areas, harbours/ports, and along waterways, reflecting their pathways of introduction and spread.'

Open Data – Our 10 Year Journey

Contacts and Information

NRW support pages

- NRW Website: [Natural Resources Wales / Accessing our data](#)

Contacts

- NRW open data support opendata@cyfoethnaturiolcymru.gov.uk
- DMW support dmwsupport@gov.wales & WG data support data@gov.wales

Other Links

- NRW Library and Metadata Catalogue (use Search Option “Dataset Titles”) <https://libcat.naturalresources.wales/folio/>
- DataMapWales: <https://datamap.gov.wales/>
- [NRW Wales Environmental Information Portal](#)
- NBN Atlas for Wales <https://wales.nbnatlas.org/>

Thank you!

