



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

Our contribution to the protection and improvement of health and wellbeing



Noddir gan
Lywodraeth Cymru
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Introduction

Natural Resources Wales's (NRW) purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future. As part of this we have duties and opportunities to both protect and improve the health and well-being of the people of Wales.

Over 7% of the land in Wales is managed by us and the opportunities this represents are significant, particularly where that land may be close to where people live and work. The introduction of the Wellbeing of Future Generations Act, and the developing Environment Bill, reinforce the need for us to work with others. We work with both organisations and local communities, ensuring that we maximises our contribution to the sustainable development goals for Wales and apply the principles set out in the Act. To achieve this we have set objectives in our corporate plan¹ to:

- *provide and enable recreation and access opportunities which contribute to improving people's health and wellbeing (healthier Wales and vibrant culture goals)*
- *help ensure people are able to live, work in, and visit a good quality environment, including those in urban areas and those in our most disadvantaged communities, and will channel economic benefit to help tackle poverty (prosperous Wales and cohesive communities goals)*
- *provide and enable opportunities for people to learn in, and about, and enjoy the environment (prosperous Wales and more equal Wales goals)*
- *deliver an effective and co-ordinated response to environmental incidents and risks, such as flood events, pollution and disease outbreak, and help decrease the risk of flooding to people and properties (resilient Wales goal).*

Underpinning some of these objectives is the development of a suite of three enabling plans, covering Outdoor Recreation and Access², Education and Skills, and Communities and Regeneration.

Our remit is wide, and includes advisory, regulatory, delivery and enabling services related to health and well-being. This document provides an introduction to what we can and are doing with our limited resources. Our hope is that as resources become more constrained across the public sector we can deliver for the people of Wales through focussed partnership working. In our experience by working together we can deliver more and do so for less.

Our remit

In exercising our functions and duties we must have regard to the health and social well-being of individuals and communities³.

We have duties to promote the provision and improvement of opportunities for access to the countryside and open spaces, outdoor recreation and the understanding and enjoyment of

the natural environment³. This is also achieved by working with others from the public, private and voluntary sectors to help promote and improve access to the outdoors.

Our role is also acting as a principal advisor to Welsh Government as well as advising industry, the voluntary sector and the wider public on recreation and access. As a statutory member of the new Public Services Boards, we will be jointly responsible for the development of the Well-Being Plans across Wales⁴.

Permits issued by us discharge our duty to protect the environment and living organisms from emissions from the sites we regulate. This includes preventing harm to human health. We do this by preventing, or minimising, emissions from the sites we regulate to air, land and water; including minimisation of noise and odour⁵, by applying the national and European standards set to protect health and the environment.

A wider duty for us is to protect, monitor and maintain the quality of surface and ground waters⁶. This includes the need to prevent the deterioration of water abstracted for drinking water supply⁷, and to work with local authorities to manage the risks to water from contaminated land⁸.

The flood risk from main rivers, reservoirs or the sea is also managed by us. This includes assessing the consequences to the social and economic welfare of humans, as both individuals and communities⁹. Not only in terms of reducing the likelihood of flooding but also by ensuring that any flood defence schemes consider social and economic factors as part of their development.

As a category 1 responder under the Civil Contingencies Act 2004 we hold a legal responsibility to respond directly to incidents. We also support the incident management roles of other organisations, such as the emergency services, health boards and local authorities, by providing advice and information.

The Environment Bill White Paper proposes new duties for Natural Resources Wales to develop and implement an area-based approach for natural resources planning. These new duties, expected to come into force in mid-2016, provide an increased scope for us to work across sectors to ensure that health and wellbeing is embedded in all we do, particularly focussing on needs at a community level. This builds on the work we are currently doing with Local Service Boards.

One output from the new planning approach will be an 'Area Statement', setting out the priorities and opportunities for the management of natural resources in that area. They will provide clarity on the opportunities, risks and challenges faced; particularly aligning with the local Wellbeing Plans developed by Public Services Boards. Other delivery plans from across the public sector will also find them useful.

Health and Wellbeing Improvement – promoting healthy behaviours

Increasing levels of physical activity across Wales, particularly amongst the least active, is a stated priority for the Chief Medical Officer for Wales (CMO)¹⁰. Using the outdoors as a means of achieving this has been recognised by Welsh Government in their consultation on improving opportunities to access the outdoors for responsible recreation¹¹.

There is a robust evidence base on the contribution that physical activity makes to health and well-being. Guidance from the World Health Organisation, endorsed by Public Health Wales and the CMO, has specified the minimum levels of moderate intensity activity required to reduce the risk of many non-communicable diseases¹².

The natural environment has the potential to contribute significantly to increasing physical activity levels in Wales, reducing burdens to the health sector. Systematic reviews of the benefits from ‘natural’, as opposed to ‘man-made’, environments and the effects of biodiversity have been undertaken into a number of areas, including mental health. These have found some evidence that the natural environment makes a positive contribution to wider health issues^{13, 14}. It provides the opportunity for both active and passive recreation and can:

- Improve people’s health and wellbeing
- Improve social equity and cohesion of people and communities
- Increase people’s appreciation of and care for the environment
- Increase the economic benefits of recreation and amenity to Wales

Access to Green space

Research shows that when communities engage with their local green spaces, and when green spaces are fully integrated with the built environment, there are direct health and well-being benefits for people, wildlife and habitats¹⁵. Green spaces can help to create social cohesion, provide opportunities for skills development and learning, and help reduce the impacts of climate change, flooding and air pollution.

The freehold woodland we manage on behalf of the Welsh Government is accessible to the public. Across our managed estate we have 450 kilometres of walking trails, 550 kilometres of mountain bike trails, 135 kilometres of bridle paths, 75 picnic sites and five visitor centres. Whilst we provide and maintain much of this infrastructure, demand is growing for access to the Welsh Government Estate by third parties (from the public, private and voluntary sectors) to develop activities, events and projects. These range in size from small events, community managed trails and paths and collaborative community management of areas of the Estate through to large national events. In all these activities we give consideration to our obligations under the Equality Act 2010.

Access is enabled and managed through our 'Woodlands and You' scheme (soon to cover all the land we manage and re-branded Mynediad). Examples of this include Coed Lleol's Actif Woods programme (<http://www.coedlleol.org.uk/>), partnering with local health sector programmes like the National Exercise Referral Scheme (<http://www.wlga.gov.uk/ners>), community development, and outdoor activities.

We also work with other partners, particularly local authorities, in improving access to green space and promoting creation of trails and public rights of way. This involves making the space more attractive to a variety of users and increasing awareness that the green space is accessible and available to use. The Keep Wales Tidy Green Flag programme identifies good quality green space <http://www.keepwalestidy.org/greenflag> and we have an active role in this programme.

Part of our work is through influencing local and strategic development plans. By working in tandem with the planning process we advocate providing and enhancing of green space. We can also provide advice on improving the quality of local green space managed by others. Please contact health@naturalresourceswales.gov.uk.

Urban trees

Urban trees have been shown to have a range of benefits to residents and visitors alike. Many tree and shrub species have the ability to remove particulate matter (PM₁₀ and PM_{2.5}) and other pollutants from the air by acting as filters, improving air quality¹⁶. They also provide shade and aesthetic benefits, increase biodiversity and help build a greater sense of wellbeing and community. Trees also help to mitigate flood risk in urban areas.

Those which are large leaved and of greater stature deliver the greatest range of ecosystem benefits. For example, 1200 trees were planted in Port Talbot as part of the Local Service Board response to the Air Quality Management Area – the Coed Talbot Trees initiative – but many more would be required to deliver significant air quality improvements.

We can provide advice on the development of urban trees and woodlands, including the most appropriate species and planting design, to maximise a range of benefits. For further information contact coedtrefol@cyfoethnaturiolcymru.gov.uk.

Come Outside!

The Come Outside! Programme uses an evidence based model to deliver a different and innovative way of working. It has a proven track record for catalysing the connection between the outdoor sector and service providers working with people experiencing deprivation or disadvantage. These are often the people who have the most to gain from positive outdoor experiences in terms of health and wellbeing benefits. The Programme is currently operating in twelve Communities First cluster areas in North and South Wales.

The Programme targets service providers with support groups that have formed for reasons other than increasing physical activity, for example, mental health and addiction recovery

support groups. Outdoor activity taster sessions provide memorable experiences, inspiring and motivating participants, developing their confidence and increasing their physical activity levels. 'Comfortable Outdoors', the new Come Outside! Activity Skills Programme, helps people develop the skills necessary for independent, low-level outdoor activity, including valuable skills for re-entering work or education. By identifying the potential barriers to individuals, and designing interesting and varied sessions to meet people's needs, participants are more likely to return and stay involved for longer. Our participative approach to the Programme is enabling an increasing number of groups to organise and resource their own involvement in outdoor activity.

Over the last 18 months over 100 service providers and community groups have become involved with Come Outside!, helping nearly 3,000 people. This work also benefits the environment as people develop a sense of ownership and value for it. The current Programme is funded by Natural Resources Wales, Welsh Government and Big Lottery until March 2016. We are working to embed this approach in the work Natural Resources Wales and others do.

We can provide advice on the Come Outside! model and facilitate contacts between outdoor activity providers and community support organisations. For further information on the Programme please contact us at: comeoutside@naturalresourceswales.gov.uk

Outdoor learning

We have an education team working across Wales with partners in the public and private sectors, to support and facilitate others using the outdoors for education. Approaches to deliver this include:

- Training events for education providers across Wales
- Facilitation of the Outdoor Learning Wales Network
- Long term programmes such as Forest School

Research has shown that children are more active during outdoor learning than on the typical school days¹⁷. There are also benefits to mental health, for example research has shown that learning in an outdoor environment can help to stabilise anger¹⁸.

We can provide advice and guidance on outdoor learning, including training for teachers and other group leaders, and facilitate contact with other providers. For further information please contact the education team at education@naturalresourceswales.gov.uk.

Visitor Centres

We have five visitor centres across Wales based within our forests and nature reserves. These provide a variety of amenities to meet different needs and interests, including trails for walking and cycling that cater for different abilities. Many have picnic sites and children's play parks providing opportunities for family activities. More information on the facilities available at each centre is available at www.naturalresourceswales.gov.uk/out-and-about

Health Protection – avoiding harm

The way we regulate large industrial sites, sites discharging radioactivity e.g. nuclear power stations and hospitals, waste sites and discharges to water is through issuing Environmental Permits¹⁹. Conditions in the permits are set to protect both human health and the environment. Part of the process is consulting with professional partners, seeking their input to ensure that any local health issues are taken into consideration. The permitting process cannot be changed where a site can be located. It is important that where such issues may affect health they are addressed through the planning process. We also work with local authorities and health professionals in managing the impact and remediation of contaminated land.

Our incident management role requires us to play an active part in helping to protect people, businesses and the environment from incidents. These range from pollution of land, water or air to flooding, plant and animal health and habitat degradation. We work with local authorities, health boards, Public Health Wales and through Local Resilience Fora to respond to environmental incidents, including those that have the potential to affect public health²⁰. This includes notifying Public Health Wales of any environmental incidents that have the potential to affect human health and providing advice and data to support the response of other organisations.

Flooding

Flooding presents a number of risks to both physical and mental health. Individuals can be affected by the stress of damage to homes and the loss of treasured possessions as well as potential contamination of houses and water supplies and other critical infrastructure.

Our flood warning and informing role provides us with a duty to inform all those at risk from flooding. We may also provide support to communities, and other organisations who lead on social welfare provision, to assist both during the incident and with the recovery operations.

Air quality incidents

During major incidents that affect air quality we can provide a management and monitoring response service for up to 72 hours, through a multi-agency Air Quality Cell (AQC). The monitoring data is provided to the AQC, made up of health and environmental professionals, to assess potential health issues for the communities affected and provide recommendations to the multi-agency incident command team.

The decision to convene the AQC is taken by us in discussion with Public Health Wales and Public Health England if:

- a Multi-Agency Co-ordination Group (Gold or Silver) or other multi-agency group has been or may be established and requests AQC support; or

- there is deemed to be significant potential risk to public health or the environment through exposure to pollutants released to air.

Water borne infection outbreaks

We can provide support, within scope of our remit, to the investigation of infectious disease outbreaks where natural waters may have been a pathway for infection. For example, we have supported outbreak teams investigating a cryptosporidium outbreak where diffuse contamination of a water supply reservoir was a possible cause. Where appropriate, we can participate in Outbreak Control Teams.

Evidence and Data

We hold a range of data sets and wider research which provide information about the environment that can be used to provide information on risks to health and opportunities for improving health.

Wales Index of Multiple Deprivation – Environment Domain

We provide data for the Environment Domain of the Wales Index of Multiple Deprivation (WIMD). This domain is intended to model the factors related to the physical environment which may affect quality of life, it is not necessarily a measure of the impact on health. The domain consists of 3 sub-domains; Flood Risk, Air Quality and Proximity to regulated sites. The Environment domain contributes 5% to the overall Index of Multiple Deprivation. Data is provided for Lower Super Output Areas.

We can provide Environment Domain data as either the combined or sub domain data sets. For further information contact health@naturalresourceswales.gov.uk.

Green space mapping

NRW is developing a GIS data set of potentially accessible natural green space in Wales, including urban areas. This has primarily been developed to assist local authorities in maintaining their green space inventories but this information is available more widely on request from our GIS team. We are doing further work with some local authorities to refine that data set so it shows the green spaces most likely to be identified by local communities as accessible natural green space. For further information contact health@naturalresourceswales.gov.uk.

Good for People GIS tool

Our work to implement the area-based Natural Resource Management (NRM) approach and our corporate objectives¹ has identified a range of challenges to, and opportunities for, ensuring that people are safe, can enjoy and benefit from natural resources, and understand their relevance in their day to day lives.

To support the delivery of this work we have commissioned the Good for People GIS toolkit. This toolkit helps to inform decisions around the use and targeting of resources in order to

best deliver priorities and outcomes that are 'Good for People'. The toolkit will be used to support strategic and operational decision making within NRW, in particular to strengthen decisions involving the needs of local communities and the benefits they derive from using and engaging with the natural environment.

The tool kit uses a range of interactive data sets and mapping which include overall health and well-being *and* causes of ill-health. For example, we can look at childhood obesity in Rhondda Cynon Taff and then overlay the green space close to those communities, then overlay the Rights of Way network or the sustainable transport routes to see where and how we could encourage people to use the outdoors for increased physical activity. If we see that there are no rights of way, we can work with partners to create permissive routes, or with local authorities in their Rights of Way Improvement Plans.

The Toolkit complements Public Health Wales' Health Assets tool and the longer term objective is to make the Toolkit available externally to our partners and stakeholders. For further information email health@naturalresourceswales.gov.uk

Wales Outdoor Recreation Survey

The Welsh Outdoor Recreation Survey (WORS)²¹ measures participation in outdoor recreation amongst people living in Wales, including their levels of physical activity. The survey is representative of the adult population, and is classified as Official Statistics. The findings provide robust, detailed data on:

- Use of the outdoors for informal outdoor recreation
- Types of activities and places visited, on land and water
- Levels of physical activity (intensity, frequency, and duration)
- Motivations for using the outdoors
- Barriers to visiting the outdoors
- The future demand for outdoor recreation

Full geo-demographic information is provided for each respondent, to allow the results to be analysed against a range of social factors, such as deprivation and equality. The survey is repeated every 3 years, with data available for 2008, 2011, and 2014.

2014 Welsh Outdoor Recreation Survey has now been completed, and the results are now published on our website. Comparative analysis with the 2008 and 2011 data provides results on trends in participation, including changes to levels of physical activity.

Physical Activity, Recreation and Health Segmentation

Using data from the Welsh Outdoor Recreation Survey, these profiles provide a detailed segmentation of the adult population in Wales based on their different levels of physical activity. Using the latest World Health Organisation (WHO) and CMO Guidance on intensity, frequency, and duration, the analysis defines seven groups, each with a distinct level of physical activity and associated health benefits. A full profile is available for each group,

detailing activity preferences, motivations, and barriers, along with demographic attributes and trend analysis, identifying statistically significant changes in physical activity levels.

These physical activity Profiles provide a robust, population-level segmentation, allowing for more informed and targeted interventions. For further information contact health@naturalresourceswales.gov.uk.

Health Economic Assessment Tool: Wales Coast Path

NRW has pioneered the use of the WHO's Health Economic Assessment Tool (HEAT) in identifying the value of recreational walking. Using the Wales Coast Path as a case study, the HEAT has been tested and adapted to expand its use beyond commuting and transport, to take account of the additional health benefits derived from recreational physical activity. The value of the health benefits of walking on the Wales Coast Path was calculated as £18.3 million per year, providing a significant return on investment.

The method developed in this innovative case study is now available to be utilised by other projects to quantify the economic value of the health benefits of recreational walking. For further information contact health@naturalresourceswales.gov.uk.

Incident data and evidence

We are developing an evidence based communications programme, collecting and analysing incident information to identify trends and issues that will influence our 'prevention' agenda. The sharing of this data with Public Health Wales and health professionals will help us collectively influence risk registers and organisational preparedness to mitigate incident occurrences and consequences.

Training and secondments

We can provide input to training days for public health professionals and to the lead officer training programme. For example, we are working with Public Health Wales on the development of their Incident Management Team training programme on incident management.

We would welcome secondments from other organisations which can help us develop our health agenda. We are currently exploring opportunities as part of the training programme for consultants in public health. For further information on secondment opportunities please contact health@naturalresourceswales.gov.uk.

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