



Dee Management Catchment Summary

Contents

1.	Background to the Dee Management summary	.3
2	The Dee Management Catchment	.4
3. (Current Status of the water environment in the Dee Management Catchment	.7
4	The main challenges	.9
5. (Objectives and measures	12
6. \	What next?	17
7. \	Water Watch Wales	17

1. Background to the Dee Management summary

This management catchment summary supports the current consultation on the updated river basin management plans. Along with detailed information on the Water Watch Wales website, this summary will help to inform and support delivery of local environmental improvements.

In Wales, Natural Resources Wales has adopted the ecosystem approach. This means being more joined up in how we manage the environment and its natural resources to deliver economic, social and environmental benefits for a healthier, more resilient Wales. It means considering and regulating the environment as a whole, rather than dealing with individual aspects separately; weighing up and setting priorities for the many competing demands on our natural resources in a more integrated way. In England the Environment Agency has launched the catchment based approach (CaBa), a way of working which was piloted during 2012 across 10 catchments. This has similar aims as the ecosystem services approach in Wales. CaBa aims to deliver positive and sustained outcomes for the water environment by promoting a better understanding of the environment at a local level; and to encourage local collaboration and more transparent decision-making when both planning and delivering activities to improve the water environment.

Partnership working is essential to achieve our ambition. By working together in this management catchment we will:

- understand the issues in catchments and how they interact
- understand how the issues are affecting the current local benefits and future uses of water
- involve local people, communities, organisations and businesses in making decisions by sharing evidence
- identify which issues to tackle as a priority.

The Water Framework Directive provides a major overarching framework for river basin management. The Floods Directive sets out a strategic approach to flood risk management planning. A flood risk management plan has been produced for consultation in parallel to the river basin management plan and can also be found on our website. The flood risk management plan details how we propose to manage flood risk across the river basin district by prioritising those communities that are most at risk of flooding and detailing the measures we intend to take to manage their risk.

The flood risk management plan and the river basin management plan will shape important decisions, direct considerable investment and action, and deliver significant benefits to society and the environment.

As part of the consultation we are asking you for your input on priority opportunities and how we can make these summary documents as useful and relevant to the management catchment as possible. Within the river basin management plan consultation documents are a number of consultation questions; these will provide a useful starting point to gather your ideas in order to improve not only this document but partnership options to ensure that we work together to provide the best environmental options. We encourage you to look at the river basin management plans and respond to the consultation questions which you can find on our website.

2. The Dee Management Catchment



Figure 1. Dee Management Catchment

The Dee management catchment covers an area of 2,251 square kilometres, mainly in Wales but in the lower reaches the Dee often runs along the border with England. Its source is in the mountains and lakes of the Snowdonia National Park and it runs to the internationally significant intertidal and wading bird habitat of the Dee Estuary. Chester and Wrexham are the major urban centres, but the land is mainly rural with rough grazing and forestry in the upper catchment and arable and dairy farming on the Cheshire Plain.

Reservoirs in the upper part of the catchment store water and regulate flow in the Dee. They sustain abstractions for public and industrial water supply and modify flood response in the river, reducing the frequency of flooding in the Dee between Bala and Chester. Parts of the Dee catchment are underlain by a Permo-Triassic Sandstone aquifer. This aquifer is used to support agricultural, industrial and water supply abstractions and contributes to baseflows in the lower Dee and some of the tributaries. The river is an important source of drinking water for nearly three million people, in Wales and North West England. Risks from pollution have led to it becoming one of the most protected rivers in Europe. In 1999, the lower part of the Dee was designated as the UK's first, and to date only, Water Protection Zone.

The Dee and its estuary has a high conservation value, it is designated as two Special Areas of Conservation (SAC), and notified as three separate Sites of Special Scientific Interest (SSSIs). Interest features contributing to the SSSI and SAC designations of the freshwater sections of the river include floating water plantain, Atlantic salmon, lamprey,

otter, and structural changes in the meandering section of the main river. The intertidal habitats of the Dee Estuary support significant populations of wading birds and is also designated as a Special Protection Area and a Ramsar site. The Dee and its tributaries are renowned for their excellent fishing and there is an important cockle fishery in the estuary. The river Dee is popular for canoeing and the National Whitewater Centre is located on the Afon Tryweryn near Bala.

2.1 The catchment approach

In 2013 the Environment Agency launched the catchment based approach (CaBa). Both Natural Resource Wales and Environment Agency place value on collaborative decision making and local action to help deliver improvements to water bodies across the Dee catchment.

The Welsh Dee Trust in collaboration with Cheshire Wildlife Trust successfully bid for Environment Agency money to develop catchment partnerships in the Middle Dee and the Tidal Dee in 2013. A cross-border approach was adopted from the outset to enable joint working and with a view to obtaining funding from Wales to support future work. Both partnerships are supported by a steering group.

The Tidal and Middle Dee partnerships aim to maintain, enhance and protect the Dee catchment and estuary by integrating the catchment based approach to promote sustainable use of the environment, enhance wildlife value and provide recreation and access to nature.

A stakeholder workshop was held in December 2013 at Little Sutton to collate baseline information on what was already happening in the Middle and Tidal Dee catchments, and to identify future projects and funding opportunities. Opinions were also sought on whether the estuary should be managed separately to the Middle Dee catchment or if a combined approach would be advantageous. Based on the feedback received it was decided to develop both partnerships separately, but remain aware of the need to work together on many issues. A second follow-up workshop, "Muddy Boots drop-in" was held on March 26th 2014. This was an opportunity for people who hadn't attended a catchment workshop before to find out more and a chance to have a say on some of the projects and potential future project ideas.

Natural Resources Wales held a workshop to cover the upper part of the Dee catchment during February 2014 at the White Water Hotel, Llangollen.

During recent workshops the benefits of the Dee catchment were captured. These included:

- Water supply from the Dee, Llangollen canal and reservoirs
- Flood control
- High quality landscape e.g. Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB)
- Recreation and tourism importance for local economy and employment, particularly water based recreation around Llyn Tegid, National White Water Centre and angling at many of the reservoirs
- Vibrant rural communities
- Biodiversity
- Farming of livestock and crops
- Forestry & Native woodlands

Views on the wider benefits of a healthy water environment were also captured, these were wide ranging and included a better quality of life, increased well-being, high

biodiversity, rivers that people can swim in, healthy fishing industry for mussels and cockles, good for tourism and recreation and rivers that local people are interested in

Natural Resources Wales and Environment Agency continue to work in partnership with a range of partners and sectors in innovative ways so that we can achieve even more together. Some of the projects that have been delivered within this management catchment over the last 3 years together with projects in development are included below:

Project Name	Project Description	Partners	Funding sources
Afon Alwen	Removal of barriers	Afonydd Cymru	WFD TSO fund
Afon Camddwr	Middle section habitat scheme	Afonydd Cymru	WFD TSO fund
Afon Eitha	Fish pass and eel pass	Afonydd Cymru	WFD TSO fund
Afon Meloch	Barrier removal and replace fence to stop poaching	Afonydd Cymru	WFD TSO fund
Survey of fish population and habitat improvement	Improve habitat on the River Alyn using stream side fencing and tree planting	Rossett and Gresford Flyfishers Club	WFD TSO fund
Himalayan Balsam control	Working with angling clubs to manage invasive plant species	Welsh Dee Rivers Trust	WFD TSO fund
Habitat restoration on Camddwr	Working with the Woodland Trust to restore stream side woodlands on the river Camddwr near Corwen	Afonydd Cymru	WFD TSO fund

 Table 1. Partnership projects in the management catchment

2.1 Key facts

We use the term water bodies to help understand and manage the water environment. A water body is part, or the whole, of a river, lake, ground water or coastal water. The number and type of water bodies in the management catchment is shown in the table below.

Table 2. Number and type of water bodies.

Number of water bodies	Natural	Heavily Modified	Total
River*	49	22	71
Lake	7	17	24
Coastal			0
Estuarine	0	1	1
Groundwater	5		5
Total	61	40	101

There are areas in the catchment where the water environment is recognised as being of particular importance, including rare wildlife habitats, bathing waters or areas around drinking water sources. These areas are known collectively as protected areas and are detailed in the table below.

Protected Area	Number
Bathing Waters	0
Drinking Water Protected Areas	33
Natura 2000 and Ramsar sites	22
Nitrate Vulnerable Zones	45315ha
Shellfish Waters	1
Urban Waste Water Treatment Directive - Sensitive areas	1

Table 3. Number and type of protected area.

3. Current Status of the water environment in the Dee Management Catchment

We assess the condition of water bodies through monitoring which produces an annual classification. The current status for each water body is shown in figure 2. Note, since 2009, we have updated some of the systems we use to classify water bodies, including changes to some standards and water body boundaries.



Figure 2 Current status of the Dee Management Catchment (new building blocks, interim 2013 classification)

4. The main challenges

We have carried out a programme of investigations to better understand why water bodies are not meeting the required standards. The results of our findings are summarised in Figure 3.



Figure 3. Reason for not achieving good status in the Dee Management Catchment

Water bodies are often affected by more than one issue. Acidification affects the Gelyn above Llyn Celyn and the Alwen above Alwen reservoir while elevated concentrations of metals from abandoned mines impacts the Afon Clywedog near Wrexham and the Afon Y Garth which drains direct to the estuary near Ffynnongroyw. Continuous discharges from wastewater treatment works are contributing to elevated concentrations of phosphate in Pulford, Worthenbury and the Alyn catchments. Reducing pollution from diffuse rural sources will help address reasons for not achieving good in water bodies throughout the catchment, including tributaries above Llyn Tegid at Bala, in some tributaries in the Alwen catchment and in many parts of the lower Dee. Further work is required to identify issues and mitigate any impacts from water resource impoundments including at Llyn Celyn and Tryweryn.

4.1 Workshop feedback on challenges

We need to work together to ensure the overall aims of the Water Framework Directive are met. In order to work together effectively we need to agree on the issues and solutions. The following section includes some of the issues that were raised at the recent Dee workshops; however it is not a full list. All of the comments received will be taken into account and the following are examples:

Pollution from metal mines

- Low populations of salmon in the Upper Dee
- Need for more education and awareness raising
- Need to clear debris from rivers to reduce flood risk trees, gravel bars, dredge
- Rapid upland drainage impacting on designated sites, WQ and flooding
- Invasive non-native species
- Local planning different in Wales no emphasis for Neighbourhood Plans
- Economic benefit of good interest environments (coastal/river/birds/biodiversity)
- Bathing water quality, microbiological quality, as well as water company investment the land and water management, agricultural etc
- NRW Navigation Authority for whole estuary (except Mostyn Dock)

Case study: Finchetts Gutter water quality improvements

Finchetts Gutter runs through the 29Ha Countess of Chester Community Country Park. Approximately 30,000 people (10% of Chester's population) live and work in the surrounding area. With the Countess of Chester Hospital NHS Foundation Trust, the Environment Agency have reduced diffuse pollution issues affecting Finchetts Gutter. This is part of a wider project to enhance the Community Park. The vision for the park is to improve wildlife habitat, its ecology and for the local communities to enjoy it.

In 2011/12 the Environment Agency and partners created a reedbed and improved the channel flow. In 2012/13 a further 130m of its old course was excavated and an additional reedbed created to improve water quality. Volunteers helped plant up the bed with phragmites reeds and iris. Once embedded, the improvements will have created space for water, reduced flood risk downstream and improved habitats.





Before

Case study: Dee Invasive Non Native Species (DINNS) Project

The project covers the entire River Dee catchment in Wales (1,722 km²). The Dee Catchment is an important area for biodiversity and this is recognised by the many designated sites (national, local and EU) that are located within it. One of the biggest threats to this important biodiversity are invasive non-native species (INNS). INNS also have negative impacts on local people and businesses and can cause a potential health risk such as Giant Hogweed.

The DINNS Project is a catchment-wide partnership initiative which aims to co-ordinate control of INNS within the Dee catchment. A strategic action plan is already in place and includes management action, surveillance, awareness raising and biosecurity planning.

A project officer coordinates action between a wide range of partners including Wildlife Trusts, several local authorities, Welsh Dee Trust, Keep Wales Tidy and local angling groups as well as statutory organisations such as NRW, Environment Agency and Natural England.

Future funding is being sought to expand the project and provide a long term project for the Dee. This should result in increased ecosystem resilience and diversity of the Dee catchment.



5. Objectives and measures

This section outlines what we are aiming to achieve and the proposed new measures that need to be put in place. We aim to develop a single integrated programme of measures by 2021 that meets Water Framework Directive objectives:

• Prevent deterioration in status

Water body status will not be allowed to deteriorate from the current reported status.

• Achieve the objectives for protected areas

Achieve the standards set by the relevant directive under which they were designated. For water dependent Natura 2000 sites we will aim to achieve conservation objectives, achieving good status by 2021 is a milestone towards this objective.

• Aim to achieve good overall status for surface and ground waters

Implement measures to achieve good overall status where they are technically feasible and not disproportionately costly.

5.1 Measures

We have reviewed the reasons why water bodies are failing to achieve objectives and identified potential measures. Measures are divided into two groups. National measures apply to the whole of Wales, or the United Kingdom. In general these set the legislative, policy or strategic approach. Examples include a national ban on using a particular chemical or a national strategy for prioritising and funding the remediation of abandoned mines. Local measures are specific to the river basin district or a part of it. For example, the removal of invasive plants along a length of designated river or a local campaign targeting misconnections across an industrial estate. Many of the actions listed will also have multiple benefits. For example, sustainable urban drainage (SuDs) schemes help to reduce urban pollution, sewage pollution and changes to water levels.

A list of all national measures, both new and existing, and the local measures at the water body scale are detailed on Water Watch Wales. If you know about any others or want to suggest new measures, please tell us in your response to the consultation. The river basin management plan will become a statutory document hence the importance of ensuring that the correct measures are identified through this consultation.

The table below summarises the local measures for the management catchment, including those identified for protected areas. The high level categories describe the types of action required and broadly the options that are available, including voluntary and regulatory measures. At the local scale some of the options described might not be considered appropriate. There is overlap between some categories.

Table 4. Summary of local measures for the management catchment

Measure	Description	Total
Acidification restoration	Emissions controls and upland restoration: blocking drainage, restoring blanket bog, within forestry plantation blocking forest drains and establishing native trees within the riparian zone, liming options. Some overlap with "address air pollution".	3
Address air pollution	Emissions controls to reduce nitrogen and acidic deposition. Some overlap with "acidification restoration".	36
Address point source pollution	Investigate and regulate pollution from	24

Measure	Description	Total		
	point sources. Overlaps with "reduce			
	pollution from sewage discharges" and			
Complete first cycle investigation	All ongoing WFD investigations from first	46		
	cycle programme.	40		
Drainage and water level	Investigate and implement changes to	25		
management	restore water levels.	25		
	Includes reducing siltation at source			
Dredging and silt management	through land management, and	2		
Dredging and sin management	implementing sustainable dredging and	2		
	silt disposal regimes.			
Improve fish passage and habitat	passage	30		
	Reduce impacts of regulated flows and			
	abstractions, restore more natural flow			
Improve flows and water levels	regimes, implement options to improve	28		
	recycling measures alternative sources			
	and supplies.			
	Eradication and/or management of			
	invasive non-native species in line with	39		
Manage invasive non-native species	current national invasive species Action			
	Plans. Includes biosecurity good			
	and Be Plant Wise.			
	Coal and metal mine, and contaminated			
Mine water and contaminated land	land remediation - including passive and	40		
remediation	active mine water treatment, capping of	10		
	channel diversion			
	Reduce impacts of flood defence			
	structures and operations - improve			
	connectivity, habitat, and morphology by			
Mitigate impacts of flood and coastal	Implementing options through capital and			
defences	engineering, opening culverts, upgrading	27		
	tidal flaps, changing dredging and			
	vegetation management. Includes the			
	national habitat creation programme to			
Mitigate impacts of water resource	Address coastal squeeze.			
impoundments	improving fish passage and habitat.	4		
	Includes investigations for all new			
New Investigation	failures, deterioration, and drinking water	61		
	protected areas.	51		
Reduce impacts of other physical	Improve connectivity, babitat and			
modifications	morphology through soft engineering and	2		

easure Description		
	restoration techniques.	
Reduce pollution from other waste water discharges	Reduce pollution from other (non- sewage) point sources, both regulated and unregulated. Investigate and implement basic pollution prevention measures, including provision of up to date advice and guidance, such as correct handling and storage of chemicals and waste, management of trade effluent, and regulation.	1
Reduce pollution from septic tanks	Target actions to ensure septic tanks are maintained correctly. Where necessary issue formal works notices to owners to relocate or replace tanks and soakaways.	4
Reduce pollution from sewage discharges	Reducing pollution from continuous and intermittent discharges, includes additional treatment at sewage treatment works (e.g. phosphate stripping), investigating and tackling sewer blockages, and implementing sustainable drainage to reduce surface water drainage to sewers.	8
Sustainable access and recreation management	Reduce the impacts of erosion, disturbance and damage from both water- based and terrestrial access, including tackling illegal off-roading.	39
Sustainable agricultural practices	Implement basic and additional measures such as correct management of slurry, silage, fuel oil, and agricultural chemicals; clean and dirty water separation; nutrient management planning; buffer strips and riparian fencing; cover crops and soil management. In N2k sites changes to grazing regimes may be required, includes scrub management. Within NVZs comply with storage and spreading regulations.	69
Sustainable fisheries management	Includes measures for both freshwater and marine fisheries to reduce and mitigate impacts	22
Sustainable marine development	Includes off-shore energy developments, such as oil and gas exploration and tidal energy.	1
Sustainable sea fish industries	Includes measures for both freshwater and marine fisheries to reduce and mitigate impacts	1
Sustainable woodland and forestry management	Restore the riparian zone, disconnect forest drains, monitor the effectiveness of	27

Measure	Description	Total
	the 5 principle risks associated with forestry and use forestry and woodland to reduce diffuse pollution.	
Waste management	Includes appropriate management of spoil and sludge, illegal fly-tipping and litter	22
Mitigate impacts of shipping, navigation and dredging	Assess and implement options for adapting dredging regimes and reducing the impacts of physical modifications.	1

Some examples of actions that are already under way include:

- Big Dee Day (litter clean up Sept and invasive non-native species work June/July)
- Dee Estuary Strategy, Dee Conservation Group and Dee Industry Group
- Tourism projects e.g. Flint Castle
- Dee Diffuse Water Pollution Plan
- United Utilities funding with Defra Livestock Northwest farm visits for nutrient and pesticide management.
- Go with the Flow Dee Community Engagement project Cheshire Wildlife Trust
- Countess of Chester Country Park EA, NHS, Cheshire West & Chester Council (CWAC)
- Misconnections in Caldy Valley and Huntington area EA
- Middle Dee Rural Diffuse Pollution Project on the Worthenbury and Wych UU and DCWW funded
- Canal Connections Project Cheshire Wildlife Trust, Canal & Rivers Trust
- Chinese Mitton Crab project EA/NWWT
- Waterways of Chester Regeneration (Cheshire West and Chester Council)
- Coastal Country Park Project Local Authorities
- Saltmarsh engagement project (RSPB, Bat group, Local town councils, Local authorities, Wildlife Trust)
- Eryri and Hiraethog Peatland Restoration Project Snowdonia National Park, RSPB and partners
- Tidal Dee litter marine project between the catchment partnership and Cheshire Wildlife Trust
- NRW is setting up an external steering group to support investigations into how the flow regime on the Tryweryn, and the various structures in and around Bala, may be affecting fish migration in the Upper Dee catchment. The group will assess and implement adaptive management measures that may be required to overcome impacts identified during this work.

5.2 Workshop feedback on solutions

Of the challenges raised at the recent workshops, the following potential solutions were proposed:

• **Diffuse pollution from rural land management** - nitrates, sediments, pesticides **Proposed solutions include -** provide more information for farmers and foresters, buffer zones, soil testing for nutrients, free visits for nutrient planning, effective landspreading, look to use non-toxic alternative insecticides that won't damage the aquatic environment

- Water running off the catchments too quickly Proposed solutions include - Tree planting, grip blocking in the uplands, enhance storage capacity of soil, reduce erosion by buffer zones, re-meander, review role of agrienvironment schemes, look at management of moorlands/farmlands
- Low populations of salmon in the Upper Dee Proposed solutions include - Investigate flow regime, including flow reversal and migration at Bala sluices, habitat creation on tributaries
- Invasive non-native species
 Proposed solutions include on the ground action, education and awareness raising, biosecurity, secure additional funding, make landowners responsible

5.3 Alternative objectives

We have identified a small number of water bodies where because of the nature of the problem or the required measures we propose an extended deadline or less stringent objective (less than good). In each case we have provided a justification.

Alternative objective	Justifications	Number of water bodies	Water body
Extended deadline	Natural conditions – recovery time from acidification	3	Alwen - above Afon Brenig Lliw Gelyn
Extended deadline	Natural conditions - naturally acidic, unlikely to change	1	Tryweryn - Llyn Celyn to Llyn Treweryn Inlet
Less stringent objective	Technically infeasible - minewater scheme	1	Clywedog - Gwenfro to Black Brook Dee Carboniferous Coal Measures

Table 5. proposed alternative objectives and justifications

5.4 Opportunities for partnerships

There are several external funding opportunities, which could support projects that contribute towards Water Framework Directive outcomes. Each fund has its own priorities, budgetary allocation and application process. Types of funding for consideration include:

- European funds The EU provides funding from a broad range of programmes go to the Welsh European Funding Office website for more information.
- Lottery Funding such as Heritage Lottery Fund, Postcode Lottery and BIG Lottery Fund which have a range of programmes from £5000 up to £millions.
- Charities, trust & foundations there are many of these operating and they often have a specific focus – either geographically or topically and will support local charities and projects.
- Businesses and sponsorship opportunities including making the most of the Welsh carrier bag charge!

- Public bodies Local authorities, Welsh Government, UK Government, Natural Resource Wales and EA may have annual funding opportunities or one-off competitions for their priority areas.
- Crowdfunding gathering support from a wide range and number of funders, often including individuals and usually using the internet to raise awareness for a specific project needing funds.
- Trading Increasingly funders are looking to support organisations with longer term sustainability in mind so developing trading opportunities can be something to consider too.

Your local County Voluntary Council and Wales Council for Voluntary Action will have up to date information on opportunities such as these as well as a host of other support available.

6. What next?

This summary is intended to be a snap shot of the management catchment and should enable you to be able to access further detail using Water Watch Wales. We welcome your views on how we can improve how we do this.

The summary supports the current consultation on the updated river basin management plans. We encourage you to look at the river basin management plans and respond to the consultation questions which you can find on our website. If you have any questions, please e-mail:

ardalbasnafondyfrdwy@cyfoethnaturiolcymru.gov.uk deerbd@naturalresourceswales.gov.uk

7. Water Watch Wales

During the implementation phase of the first river basin management plan many of our partners and stakeholders requested access to data and information to assist them in helping to deliver local environmental improvements. It was quite clear early on that the first plan was difficult to navigate and access at a local scale. Consequently with both the support and input from the river basin district liaison panels a web based tool has been developed. This tool is called Water Watch Wales. This is an interactive spatial web-based tool that provides supporting information and data layers which can assist partners.

We are continuing to develop this tool and see it as a critical link between the more strategic river basin management plan and local delivery. It should enable the user to access information on:

- classification data at the water body scale
- reasons for not achieving good status
- objectives
- measures/actions, including protected area information
- partnership projects

Data can be retrieved in a number of formats (spreadsheets and summary reports). A user guide together with frequently asked questions is included with the tool and can be accessed from a link on the home page.

Figure 4. Opening screen shot for Water Watch Wales

Water Watch Wales Map Gallery

The Natural Resources Wales Water Watch Map Gallery is a collection of web maps related to the Water Framework Directive in Wales. Find out more about the Water Framework Directive by viewing the gallery below. Content of the website will be developed and added to over time. Use the send feedback button on the right of this page to email us with comments and suggestions.



RBMP Consultation Map

A map providing information for the River Basin Management Plan Consultation for Cycle 2 of WFD.

22.

View map ゝ



WFD Comparison Map

This map shows Water Framework Directive river waterbody catchments in Wales, with overlap into neighbouring regions of England, symbolised according to the baseline classification in 2009 and the latest assessment classification.

View map >

WFD Projects Map

WFD projects added by partners and co-deliverers. Add project. View map >



WFD Rivers and water-bodies in Wales

Cycle 1 WFD Rivers and other water-bodies in Wales with classifications, reasons for failure and summary reports

View map >





Published by: Natural Resources Wales Cambria House 29 Newport Road Cardiff CF24 0TP

0300 065 3000 (Mon-Fri, 8am - 6pm)

enquiries@naturalresourceswales.gov.uk www.naturalresourceswales.gov.uk

© Natural Resources Wales

All rights reserved. This document may be reproduced with prior permission of Natural Resources Wales