

Opportunities for managing the Rhondda's natural resources

The key priorities and opportunities, identified by organisations and the community (August 2016).



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1 Introduction

Wales' natural resources provide our basic needs; the air we breathe, the water we drink, and the food we eat. They give us energy, prosperity and security; they protect us and make us healthier and our lives better.

However, Wales faces many challenges, such as securing energy and fuel supply, creating jobs and income, tackling poverty and inequality, tackling the threats of climate change and flooding, and improving people's health and well-being. Meeting these challenges needs fresh ideas, a radical new way of thinking and doing things. We need to look for ways that our natural resources can provide multiple benefits for people and nature, now and into the future, whilst ensuring we continue building their resilience. A healthy and resilient environment helps sustain people and our economy. When our environment is working at its best, society as a whole thrives.

The Opportunity

The Environment (Wales) Act and the Well-being of Future Generations (Wales) Act together create modern legislation for managing Wales' natural resources and improve the social, economic, environmental and cultural well-being of Wales. They will help us tackle the challenges we face and to take better advantage of the potential opportunities for Wales. The Environment Act focuses on building resilience into our ecosystems and recognising the benefits that they provide if we manage them in a smarter way.



What is sustainable management of natural resources?

Sustainable management of natural resources is defined in the Environment Act as: “using natural resources in a way and at a rate that maintains and enhances the resilience of ecosystems and the benefits they provide. In doing so, meeting the needs of present generations of people without compromising the ability of future generations to meet their needs, and contributing to the achievement of the well-being goals in the Well-being of Future Generations Act.”

Natural Resources Wales' purpose is to pursue sustainable management of natural resources. We will apply a specific set of principles while maximising our contribution to the well-being goals. The principles and the well-being goals will change the way we work.

Area-based trials: sustainable management of natural resources in practice

To help us prepare for the new legislation, in 2014 we set up three natural resource management trials to test what works and doesn't work, and then apply the learning across our organisation. The three trials were in the Rhondda and Tawe in South Wales, and Dyfi in Mid Wales. These areas were chosen to represent a variety of places and interests. Each trial was based on a catchment, but was chosen because of its different environmental, economic and societal circumstances.

The purpose of the trials was to:

- Investigate what sustainable management of natural resources means within a local context.
- Explore Wales' emerging natural resources priorities, described in Welsh Government's Natural Resources Policy Statement.
- Think about how we apply our new duties under the Environment Act and the Well-being of Future Generations Act.
- Inform changes to NRW's ways of working in line with the new legislation. The trials were an opportunity to explore how we apply the principles in practice to shape the implementation of our new duties in the Environment Act.

2 Approach in the Rhondda

The Rhondda is blessed with an outstanding natural environment and is renowned for its industrial heritage and strong, tightly knit communities. However, the Rhondda also shares the typical range of environmental, social and economic challenges that can be found across the South Wales Valleys.



Luke Maggs.

Working with partners and the community

In early 2014, we began meeting and working with a wide range of partners and people in the Rhondda

We deliberately took an open approach to help investigate and identify the key challenges, priorities and opportunities in the area. We were flexible and adaptive, taking advantage of opportunities and trying out new ideas, and we involved local people, partners and businesses throughout the trial to test ideas, gather evidence, and agree priorities.

Honest, open dialogue encouraged discussions, knowledge sharing and creative ideas which were more in tune with the area, and enabled us to build our evidence base. This approach met with great energy and enthusiasm, and people were keen to be involved and work with us.

In 2015, we formalised the approach with a series of workshops (pictures below) to help develop a vision for the Rhondda. Working with an independent facilitator, the purpose of the workshops was to bring a wide range of people together (partners, community groups and residents), and identify the main challenges, priorities and opportunities for sustainably managing the Rhondda's natural resources. Reports from these events can be found [here](#).



Nigel Pugh, (www.nigelpugh.co.uk)

Projects

During this time, funding from Welsh Government was allocated to the three trial areas for activities / projects that deliver the widest possible benefits, and which helped develop our understanding of the practical and operational aspects of sustainably managing our natural resources.

Working with our partners in the Rhondda, we delivered several projects, including: tackling and reducing the extent of wildfires (the collaborative 'Healthy Hillside' project); investment in recreational infrastructure at Llanwynno woodland and Daerwynno Outdoor Centre; working with nature to help restore the natural water environment at Cwmparc (peatland restoration); environmental training for community groups and more. The ideas for projects came from talking and listening to our partners, and our approach was to achieve learning through active delivery on the ground. Further detail on projects is provided in section 5 below, and the appendices.

Purpose of this document

This document outlines the 5 priorities and 2 underlying principles for sustainably managing the Rhondda's natural resources. This information is based on two years of working with organisations, community groups and residents in the area, extensive evidence gathering and knowledge sharing.

As the work preceded the Environment (Wales) Act, this document is non-statutory and is not an Area Statement. However, it provides a local framework for the Public Service Board, organisations, community groups, local business and people to use and refer to. It can be used by communities and organisations to work better together and deliver outcomes which deliver multiple benefits. It can encourage better working between partners by focussing resources on clearly identified opportunities. It can also be used to support both local and landscape scale proposals for funding.

Acknowledgements

We're grateful to the public and partners for the valuable time and input over the course of the trial. We would like to thank the following organisations, community groups and individuals for their input, assistance and enthusiasm that helped us develop a vision for a healthy and vibrant Rhondda:

Rhondda Cynon Taf County Borough Council, Interlink, Fly Tipping Action Wales, Cynefin, Welsh Government, Dwr Cymru/Welsh Water, Communities First RCT, Wildlife Trust South & West Wales, Keep Wales Tidy, Dark Sky Wales, Cwm Taf Health Board, Welcome to our Woods, Groundwork Caerphilly, Daerwynno Outdoor Centre, RCT Local Access Forum, Mike Ash, Sustrans, Blaengad, Atkins, Wildlife Trust Wales, Bicycle Doctor, Coed Cymru, Glamorgan Gwent Archaeological Trust Ltd, South Wales Fire & Rescue Service, South Wales Police, South East Wales Rivers Trust, Martyn Broughton, Actif Woods, Artis Community, Simply the Best Training, Federation of City Farms and Community Gardens, South East Wales Biodiversity Records Centre (SEWBReC), Ramblers, Torfaen County Borough Council, Merthyr Tydfil County Borough Council, Caerphilly County Borough Council, Neath Port Talbot County Borough Council, Nigel Pugh, Scarlet Design, Dialogue by Design and residents and community members of the Rhondda.



3. The 5 opportunities and 2 underlying principles for sustainably managing the Rhondda's natural resources, identified by organisations, community groups and residents



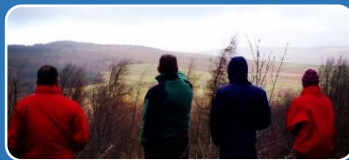
Manage the public estate for multiple benefits

- Greater opportunities for people and communities, including: renewable energy, local ownership, sustainable leisure & tourism, training/jobs, food production.
- Optimised management to improve the environment, helping to: reduce flood risk, enhance biodiversity and store more carbon.



People benefit from being outdoors

- An improved environment providing a natural health service which helps improve people's health and wellbeing.
- Greater awareness and quality of access to natural spaces (urban and countryside) for people to use and enjoy.
- Children using and interacting with the outdoors.



Create safe, healthy and resilient places for people to use and enjoy

- Public bodies working better together to help tackle crime and anti-social behaviour, and supporting opportunities for increased local ownership to help create 'Capable Guardians'.
- Well-connected, multi-functional green infrastructure network delivering a wide range of benefits for communities, the local economy and environment.



Work with nature to help restore the natural water environment

- Restoration of upland habitats.
- Work with natural processes to help reduce flooding and deliver European water quality objectives.
- Minimise impacts to water from the urban environment / infrastructure.



Change perceptions

- The Rhondda promoted as an outstanding area for sustainable recreation, leisure and tourism.
- Safeguard and build on the area's cultural and historic heritage.

Key underlying principle to working 1:
Nature recovery

Key underlying principle to working 2:
Organisations and communities working better together

Manage the public estate for multiple benefits

Overview

The Environment (Wales) Act recognises the multiple benefits our natural resources can provide. Sustainably managing the public estate in Wales can provide a wide range of ecosystem services, bringing multiple benefits to people, the environment and economy.

During NRW's stakeholder engagement in the Rhondda, organisations, community groups and residents shared their view that the public estate (particularly NRW and local authority managed land) should be managed to bring greater benefits to the area.

You told us

You told us the NRW managed Welsh Government Woodland Estate (WGWE) is a fantastic asset that is underused, and NRW and other public bodies are perceived as risk averse in decision making, which can prevent wider opportunities for communities and the local economy being realised.

You said there should be a greater understanding and transparency of the value and benefits the WGWE provides, and NRW should be an exemplar land manager to inspire others, bigger and bolder with its ambitions and acting on a landscape scale. You also said there's a tremendous opportunity to help halt the decline of Biodiversity on publically managed land.

You told us community groups want to manage and take ownership of areas of publicly owned land in their local areas for a wide range of reasons (e.g. social enterprise, training, access and recreation, food production, renewable energy etc), but felt that achieving this should be more straightforward and less bureaucratic. You also said communities want access to 'good quality' greenspace, and should be more involved in decisions made on publically owned land close to them, e.g. 'succession landscape' planning of forestry.

You told us the South Wales valleys need joined-up solutions, and organisations and communities must work together to maximise opportunities, and not be focussed on single objectives. You also mentioned that funding opportunities in Wales should target ideas and projects which seek to deliver multiple benefits.

Focus areas

Two key focus areas for managing publically owned land were identified:

- Greater opportunities for people and communities, including: renewable energy, local ownership, sustainable leisure & tourism, training/jobs, food production.
- Optimised management to improve the environment, helping to: reduce flood risk, enhance biodiversity and store more carbon.

Why is this important for the Rhondda?

Publically managed land accounts for approximately two-thirds of the Rhondda, and much of this consists of large upland areas and valley hillsides. These areas provide a variety of benefits, which when managed appropriately, can help alleviate some of challenges facing the area, both now and in the future.



Did you know?

Despite only covering 5.6% of the land area in Wales, deep peat soils contain approximately 30% of the country's total soil carbon stock¹. However, many of these areas have been degraded due to drainage, plantation forestry and overgrazing.

Restoring semi-natural habitat in these areas is underway. Peatland in good condition performs a range of ecosystem services. It holds water and regulates downstream flood peaks, enhances biodiversity, improves water quality and stores carbon.

The key opportunities

The relatively large proportion of publically managed land in the Rhondda offers Natural Resources Wales, RCT Council and communities a tremendous opportunity to **work together** to help sustainably manage the area's natural resources.

The Wellbeing of Future Generations (Wales) Act (WFG) requires public bodies to think differently, and explore more integrated, innovative ways of working which provide cost-effective, multiple benefits with fewer resources.

NRW influencing the Public Service Board (PSB) to work together, share information and ideas that help deliver multiple benefits ranging from improved health and wellbeing, community resilience to nature recovery and training / education.



The challenges

- Sustainable land management, and the benefits it provides, recognised by the PSB and its partners as a priority.
- Securing commitment and action from all parties to work together to address some of the challenges facing the area, through pro-active land management.
- Enabling new delivery mechanisms (including new income streams) for the better management of land.
- Public bodies working better with communities to create the conditions for local opportunities to be realised.

The risk

The risk of not acting upon this opportunity is public bodies spending more in the long run dealing with a wide range of problems, ranging from ill-health to flood risk.



Case study: Healthy Hillides

Appendix 1 provides further details on 'Healthy Hillides', a collaborative approach to better manage the Rhondda's natural resources that helps minimise the impact and severity of wildfires.

The approach incorporates pro-active land management measures to reduce the risk of wildfires spreading, through positively managing habitats to reduce the build-up of dead vegetation, e.g. conservation grazing, controlled burns to create fire breaks, bracken management.

A wide range of benefits are anticipated, including: protection and improvements for access and recreation; enhancement and resilience of habitats / wildlife; better protection of heritage sites; partners working together and sharing ideas/resource/expertise; greater public awareness; resilience to climate change; and exploring sustainable management opportunities with community groups.



People benefit from being outdoors

Overview

The outdoor environment provides a natural health service, and encouraging outdoor physical activity is a low cost option to help improve people's physical and mental health. Research has found evidence that spending time in nature provides protection against a wide range of diseases (e.g. depression, diabetes, obesity, ADHD, cardiovascular disease, cancer and more), due to nature's ability to enhance the functioning of the body's immune systemⁱⁱ.

In the UK, green spaces are worth at least £30bn a year in health and welfare benefitsⁱⁱⁱ. The Department of Health recognises that a poor physical environment is detrimental to the public's physical and mental health^{iv}. Research has shown that people are more active if they live within an attractive and inspiring natural environment^v.

For children, access to natural play space and contact with nature is important and brings positive impacts on their learning and physical and emotional wellbeing.

During NRW's stakeholder engagement in the Rhondda, people recognised the role outdoor physical activity can play in improving people's physical and mental health, and identified the area's countryside as a key asset to help deliver health and wellbeing benefits for its people.

You told us

You told us the Rhondda's countryside is a tremendous asset and there are opportunities to deliver health benefits for people, but there should be better joined up working and promotion to make the most of the recreational opportunities in the area. You mentioned that organisations and communities can build on successful outdoor exercise initiatives such as Actif Woods, and develop new projects in areas most at need. You said investing in a high quality environment is preventative and could save money in the long term, but better joined up working and coordination is needed between the health sector, public bodies and outdoor providers, particularly in highlighting the benefits of being outdoors, informing future decision making and identifying cost effective health solutions.

You felt that in relation to access and recreation, there should be better coordination between partners, particularly NRW and the local authority, to focus on the bigger picture. You said the priority should be maintaining and improving existing access, and actively inviting more people to use and enjoy it, rather than creating new access routes. You felt the WGWE should be more inviting and better signposted (with new NRW branded signs) for access and recreation, as permission to access can be unclear and communities are uncertain if/where they can access their local countryside.

You provided lots of ideas on how to attract residents and visitors to enjoy routes across the area (these are included below), and recognised there should be better links to the health sector. With regard to children and teenagers, you said there's a lack of activities and 'things to do' for them, and you felt this may sometimes result in negative, anti-social behaviour.

Focus areas

Three key focus areas for people benefitting from the outdoors were identified:

- An improved environment providing a natural health service which helps improve people's health and wellbeing.
- Greater awareness and quality of access to natural spaces (urban and countryside) for people to use and enjoy.
- Children using and interacting with the outdoors.



Why is this important for the Rhondda?

Health statistics point to populations in the South Wales Valleys being amongst the unhealthiest in England and Wales. In RCT, recent statistics show that approximately 63% of adults are overweight or obese, 14% of residents say they are being treated for a mental illness (the highest number in Wales), and over a quarter of adults smoke^{vi}. Physical inactivity costs Wales an estimated £650 million every year. The estimated total cost of mental health problems in Wales is £7.2 billion.

The Rhondda is predominantly open access and the wider County Borough (Rhondda Cynon Taf) has over 700 kilometres of trails and established walks linking communities and villages to woodlands and mountains^{vii}. With integrated planning and investment, there is potential to work with the area's significant assets to help provide better quality access, infrastructure and awareness of greenspaces.

People's connection to their natural environment has substantially declined, a modern phenomenon known as 'Nature Deficit Disorder' (NDD)^{viii}. Consequences of NDD are impacts to people's health and diminishing social interaction. Good quality greenspace is a cost-effective way of gaining positive health outcomes, and a low cost option for improving people's physical and mental wellbeing. For example, one study showed that 90-94% of people who took part in green exercise reported better mental and physical health^{ix}.

1 in 4 children in Wales never play outside and just under 90% of children find themselves disconnected from the natural world. Welsh children are the least connected to nature in the UK^x. Play Wales highlight how playing in nature strengthens resource to cope with stress, encourages an interest in looking after the environment, and contributes towards agility, balance, creativity, social cooperation and concentration^{xi}.



The key opportunities

NRW influencing the PSB and its partners to **work together** to improve public health locally, by increasing the extent, quality and accessibility of natural spaces in urban and rural areas.

Addressing the obstacles which prevent communities using their local outdoor spaces (urban and countryside), and encouraging greater use and ownership.

The WFG (Wales) Act requires public bodies to **think differently**, and is an opportunity to value the wider benefits people experience from being in the outdoors and with groups of people, e.g. the social gains from meeting new people, making friends, developing social skills, and learning new things. These are important in themselves as contributors to good health.

The environment in the Rhondda offering a safe, great place for **children to play, learn and interact** with the natural world.

The challenges

- Securing action from the PSB and its partners to deliver good quality, accessible and connected greenspace as a low cost option to help improve people's physical and mental health.
- Achieving meaningful behavioural change, against the backdrop of increasing physical inactivity.
- The provision of safe, professional outdoor activity services which health professionals can use with confidence as an alternative to traditional treatments and referrals.
- A safe, healthy environment for children to use.

The risks

The risks could include: increased ill-health, spiralling costs treating ill-health and physical inactivity, further reductions in community cohesion and interaction, and adults and children increasingly disconnected from their local landscape and greenspace.

Case studies and video

- **Actif Woods**
Restoring the [link](#) between people and woodlands.
- **Llanberis Surgery, Gwynedd**
[One](#) of four 'NHS Forests' in Wales.
- **Green dreams project**
A [social enterprise](#) that provides social support for those who are unemployed, isolated and whose quality of life is so poor it has impacted upon their health and wellbeing.
- **Free the kids – dirt is good**
A thought provoking US [film](#) about who spends more time outside: a child or a maximum-security prisoner?

Some of your ideas for improving health

- An 'Active Travel' community route through the Rhondda Fawr. The valley is the most significant built up area of RCT without a continuous route.
- Leaflets with easy/medium level walks around local communities available at GP surgeries, pharmacies, dentists and hospitals in the Rhondda.
- Top 10 trails and viewpoints in the County Borough to give people confidence that they can follow accessible routes.



Create safe, healthy and resilient places for people to use and enjoy

Good quality greenspace can provide a safer and more welcoming local environment for people, and investment in green infrastructure underpins economic, social and environmental success by supporting sustainable growth.

You told us

You told us that crime and anti-social behaviour in the South Wales valleys brings down the area and impacts people's confidence to spend time outdoors, and partners need to work better together to help tackle it. You said communities should be more involved in their local areas to encourage greater local ownership which would help create 'Capable Guardians'. However, you felt it should be more straightforward for community groups to do this, and public bodies should work with and listen to communities to help build greater trust.

Despite the relatively high amount of green space in the Rhondda, you felt it's often fragmented, under managed, and not achieving its potential. You told us communities want access to 'good quality' greenspace, and improved access to the WGWE with better, more welcoming signage. In urban areas, you said people are disconnected from rivers, often physically separated from them by high walls / flood defences, but suggested green infrastructure could provide opportunities to help people connect with their local environment.

You felt that for organisations and communities to work better together, public bodies need officers who are skilled in community engagement and understand the principles of approaches such as Asset Based Community Development (ABCD).

You said you'd like to see more local people and visitors using the Rhondda's great assets, but improved connectivity is needed. For example, you told us the Rhondda Fawr is one of the few valleys in South East Wales which does not have a continuous, connected active travel community route running through it. This could provide a wide range of benefits, including: improved health and wellbeing, reduced road traffic, better air quality, community cohesion, a sustainable travel choice for schools and journeys to work, more visitors and opportunities for local events.

Focus areas

Two key focus areas for creating safe, healthy and resilient places were identified:

- Public bodies working better together to help tackle crime and anti-social behaviour, and supporting opportunities for increased local ownership to help create 'Capable Guardians'.
- Well-connected, multi-functional green infrastructure network delivering a wide range of benefits for communities, the local economy and environment.

Why is this important for the Rhondda?

In the Rhondda, tackling crime and anti-social behaviour was highlighted as one of the main priorities at NRW's stakeholder workshops, and via the Priority Woodlands work streams in 2014. It was also the most common response from residents of the Rhondda when we asked what they would most like to see to improve their area^{xiv}. Its impacts are far-reaching.

Crime and anti-social behaviour is a constant challenge to public bodies, and a significant barrier for people using and enjoying their local green spaces in the Rhondda. It undermines the safety and wellbeing of residents, impacts the local economy and environment, hinders prosperity, and reinforces negative perceptions of the Rhondda and wider South Wales Valleys. Public bodies, including NRW and the local authority, are also victims of crime which results in significant annual costs.



What is green infrastructure?

Green infrastructure is the living network of green spaces, water and other environmental features in both rural and urban areas. Examples include: parks, community gardens, trees, woodlands, hedges, informal spaces, allotments, rivers, lakes, wetlands and the sea shore.

It gives communities an enhanced sense of place and increases community cohesion, reduces the effects of poverty, health inequalities and lowering crime rates, and increase people's health and wellbeing. For the local economy, green infrastructure can increase property values, levels of development / occupation rates, attract skilled workers, business and inward investment, and help increase visitor spend, making local areas more attractive to visitors and tourists. For the environment, it can reduce flooding, improve air and water pollution, help capture greenhouse gases and create beautiful landscapes, helping people re-connect with nature.

With regard to crime, easily accessible and safe green spaces have been found to reduce levels of violence and certain types of crime such as assault robbery and burglary^{xii}. This is due to increased surveillance in vegetated spaces and the therapeutic effects of vegetated landscape.

Did you know? A report by the Land Trust Society shows that for every £1 spent on green infrastructure, society benefits by £30 in reduction for health care provision and £23 towards reducing crime and anti-social behaviour^{xiii}.

The key opportunities

The WFG (Wales) Act requires public bodies to think differently, and is an opportunity for the PSB and communities to **work better together** and identify effective actions that help reduce crime and anti-social behaviour.

Supporting **community ownership and activity** in the outdoors, enabling people to connect with, value and own their local places.

NRW influencing the PSB to **invest in green infrastructure** to deliver across a wide range of public priorities, from regeneration and inward investment to preventative and restorative healthcare.

A continuous **active travel community route** through the Rhondda Fawr, bringing benefits to people, the local economy and environment.



The challenges

- Understanding the multiple and complex causes of crime and anti-social behaviour.
- Public bodies understanding the true cost of crime.
- Creating capacity for organisations and communities to work together, to plan and deliver joined up interventions.
- Achieving meaningful behavioural change in communities where crime and anti-social behaviour is deep rooted.
- Coordinating the planning and investment of good quality green infrastructure.

The risks

Public bodies spending more in the long run, working reactively in response to incidents; continued impacts to the wellbeing and cohesion of communities; negative perceptions of the area; and disconnected/poor quality greenspace.

Case studies

- **Seeing Community for the Trees**
The [Links](#) among Contact with Natural Environments, Community Cohesion and Crime.
- **Belo Horizonte, Brazil**
A number of initiatives are transforming the city into an example of best practice for sustainable transport, people-oriented spaces, and resilience to landslides and floods.
- **Creating safe, healthy and vibrant places**
Approach in NRW's Rhondda Trial. See appendices for case study.

Work with nature to help restore the natural water environment

Overview

Climate change, population growth, economics, and environmental legislation necessitate a move towards a more integrated, catchment based approach to the management of land and water. Managing land and water together at a catchment scale can bring about whole catchment improvements and multiple benefits to people, the environment and economy.

A key component of this integrated catchment approach is the recognition of working with natural processes, which can provide sustainable, cost-effective and multi-purpose solutions, and help build resilience and meet the challenges facing Wales.

You told us

You told us there's a great opportunity in the Rhondda to make significant improvements in relieving the pressure on existing drainage systems, both in the rural/upland setting, and in the urban area.

You felt this is a long term challenge but the sooner it starts, the sooner the financial and environmental benefits can be demonstrated. You also said there's a need to consider and implement land use and management changes to help restore the area's hydrology, hold more water, increase infiltration and slow the flow of water.

You said we need to make better use of green space to intercept surface water, as too much rain is going through the drainage systems which causes sewers to overflow into rivers. You said there are frustrations at the opportunities around sustainable drainage being missed, and sustainable drainage schemes should be mandatory for new development, as opposed to voluntary (which is currently the case).

You said NRW must make the most of the big opportunities on its doorstep, e.g. habitat management at the Pen y Cymoedd windfarm site. You felt people in the Rhondda and wider South Wales valleys are often disconnected from rivers because of the high walls / flood defences, but green infrastructure can help people re-connect with their local environment. You also said people are worried about larch removal, and how this could impact communities in relation to surface water flooding and debris blocking culverts.



Focus areas

Three key focus areas to help restore the Rhondda's natural water environment were identified:

- Restoration of upland habitats.
- Work with natural processes to help reduce flooding and deliver European water quality objectives.
- Minimise impacts to water from the urban environment / infrastructure.

Why is this important for the Rhondda?

Flood risk in the Rhondda is high and expected to increase in the future. The level of rainfall in the Rhondda is higher than the national (UK) average, and sees between 2,000-3,000mm of rain every year^{xix}.

The two main rivers in the Rhondda are the Rhondda Fawr and the Rhondda Fach which flow through two steep sided, heavily urbanised valleys. The high rainfall and topography in the area results in a characteristically reactive and flashy river system, especially during winter periods. Localised surface water and sewer flooding are also an issue. Existing sewerage systems are old (Victorian era) and exceed their designed capacity. There are a number of discharges into the rivers, which often run adjacent to old and existing sewerage systems. There are approximately 4km of flood defences and

maintained channels in the Rhondda, and some communities are very dependent on the defences to reduce the likelihood of flooding^{xv}.

Under the 2050s medium emissions scenario for climate change, Wales is anticipated to see a 14% increase in mean winter rainfall, and a 17% reduction of mean summer rainfall^{xvi}. These risks present very serious consequences for harm to life and critical community assets.

NRW will continue to maintain defences and provide flood warnings, but it may not be justifiable or acceptable to increase the height of defences in the future. To help address these challenges, we cannot rely on traditional flood defences alone, and must consider a wide variety of approaches^{xvii}.

For example, the timing and magnitude of run-off, flooding and aquifer recharge can be strongly influenced by changes in land cover and management. The Rhondda is located at the southern edge of the upland peat bog range in Wales. Whilst a great deal of the upland peat bog within the Rhondda has been lost or is in poor condition (due to plantation forestry, drainage and overgrazing), there are opportunities for its restoration. Restoring peatbog can bring benefits to people, the environment, and contribute to climate change resilience, by storing and regulating the flow of water, improving water quality, and storing carbon.

Did you know? The cost of flooding to the UK in winter 2015 is expected to **exceed £5bn**^{xviii}.

The key opportunities

NRW, RCT Council and key partners **working together** to help minimise the risks of surface water and river flooding.

Identifying areas (particularly on publically managed land) where NRW/RCT Council can **work with natural processes** to provide sustainable, cost-effective and multi-purpose solutions that help reduce flood risk, improve water quality, enhance biodiversity and build resilience.

Organisations working with communities to identify and **help restore natural catchment responses in urban areas** to manage surface water through a range of innovative, attractive solutions, e.g. swales, filter strips and grass channels.



The challenges

- Creating capacity for organisations to plan and deliver joined up interventions.
- The willingness of organisations to consider a wide variety of approaches and act upon opportunities, in both rural and urban areas.
- Robust and accepted evidence for working with natural processes.

The risks

The risks of not acting upon this opportunity are: potential harm to life and critical community assets, likely to increase with climate change predictions; increased public spend in the long run, reacting to more flood events; missed opportunities to improve the urban environment, enhance biodiversity and store carbon.

Case studies

- **Upstream thinking**
[Re-wetting at Exmoor Mires](#) by blocking drainage ditches reduced storm flows to 32% of the pre-restoration level, which equates to 8,000 cubic metres per hectare per year^{xx}.
- **Sheffield's 'Grey to green'**
A [project](#) to transform Sheffield's Riverside Business District.
- **Working with natural processes in the Rhondda**
Approach in NRW's Rhondda Trial. See appendices for case study.

Change perceptions

Overview

The Rhondda is perhaps best known for its world-famous mining legacy and strong, close knit communities. Blessed with such a beautiful natural environment, there are opportunities to build on this and promote the Rhondda as an outstanding area for recreation and sustainable tourism.

You told us

You told us this needs a bold vision and a joined-up approach between public bodies, communities and local business. You felt local entrepreneurs, alliances and businesses were best placed to help shape this, and public bodies could support those who want to work with, and help enhance the area's natural assets.

It was acknowledged that this isn't a new idea, but a new approach is needed to build a better future and this includes greater trust between public bodies and communities.

You said the Rhondda's industrial and cultural heritage defines the area, but doesn't have to determine its future. You said there are negative perceptions of the valleys, from both within the communities themselves, and from outside. You felt people are disconnected from their natural environment, and you'd like to see more local people and (and visitors) using the Rhondda's great assets, but improved connectivity is needed to help this happen.

You recognised the fantastic recreational potential of the Rhondda and wider county borough, particularly walking and cycling, and felt this should be built upon to provide a first class experience. However, you said the economic benefits should be felt within the community to benefit people living and working there.

You also felt communities could manage more of their local areas, empowering local people and potentially offering training and employment opportunities. You suggested more needs to be done to inform local people that the surrounding countryside is there for them to use and enjoy.

Focus areas

Two key focus areas were identified:

- The Rhondda promoted as an outstanding area for sustainable recreation, leisure and tourism.
- Safeguard and build on the area's cultural and historic heritage.

Why is this important for the Rhondda?

At NRW's events in the Rhondda, people acknowledged the area's industrial and cultural heritage, but were keen to build on this and work with the area's incredible landscape, natural assets and heritage to create good quality experiences and adventures, which in turn benefit the local community.

The Rhondda enjoys a greater area of accessible land in comparison to the average community in Wales, with over 700 kilometres of trails and established walks, linking communities and villages to woodlands and mountains in the wider County Borough^{xxi}. Walking is recognised as a key activity for increasing visitor numbers and engaging local communities. In addition to access on foot, the Welsh Government Woodland Estate allows access to the forest tracks for cyclists and horse riders.



Cycling is increasingly popular and worth £3bn a year to the UK economy^{xxii}. The Rhondda is blessed as an outstanding and increasingly popular venue for cycling, helped by its popular Bwlch and Rhigos road climbs. Local cycling clubs are increasingly popular (catering to all ages), and the area is home to the annual Valleys Velo Sportive. With its fantastic road climbs and the potential re-opening of the Rhondda Tunnel, there are opportunities to build on the area's potential as a premium cycling destination in Wales.

However, the Rhondda Fawr is one of the few valleys in South East Wales which does not have a continuous active travel route running through it. This would help bring a wide range of benefits to the community, e.g. sustainable recreation and tourism, better health and wellbeing, and improved access to outdoor spaces.

The Rhondda has terrific arts and culture, providing a scenic, affordable home for creatives. There's a growing network to support and promote them and their bases as tourist destinations. An increasingly popular activity is stargazing, and the Rhondda is currently home to 4 Dark Sky Discovery Sites.

The collection of adventure projects in north Wales included in the case studies section (right), show how it's possible to work with an area's natural assets and heritage to create unique experiences which in turn help regenerate communities.

Did you know?

The more people cycle, the more money is saved to the local economy with regard to traffic congestion, the local environment with lower pollution levels, and the local health board with fewer work-sickness absences. A 2011 report produced by the London School of Economics highlighted that a 20% increase in cycling by 2015 would save the economy £207m in reduced traffic congestion, £71m in lower pollution levels, and £52m in NHS costs (research shows cyclists take fewer sick days per year), when compared with non-cyclists.

The key opportunities

The PSB and partners **promote a compelling vision** for the South Wales valleys as an integral part of the City Region, as an outstanding area to live, work and enjoy.

A **joined-up approach** between public bodies, communities and local business to deliver and promote sustainable leisure and tourism.

Support communities who want to work with and improve their local natural assets, **encouraging more local ownership**.

Case studies

- **Zipworld, North Wales**
Entrepreneurs working with their local landscape to deliver large [tourist attractions](#). Now one of the UK's premier destinations for adventure, tourism is thriving in the area.
- **The development of a sharing economy**
The website [Shareable.net](#) showcases how sharing initiatives benefit people, the economy and environment.

Some of your ideas for changing perceptions

- A café at the top of the Rhigos to build on the increasing number of visitors and cyclists who stop and park at the main viewpoints.
- Private (business) sponsorship of local parks / woodlands to provide funding for improvements and community involvement.

The challenges

- Addressing crime and anti-social behaviour, a source of negative perceptions which limits the potential of the Rhondda, and the wider South Wales valleys .
- Capacity of public bodies to work with communities and entrepreneurs to develop and deliver ideas.

The risks

The risks of not acting upon this opportunity are: less investment/visitors/contribution to the local economy/growth.



Luke Maggs.

The two underlying principles to help deliver the 5 priorities

1) Nature recovery

Overview

Nature enriches our lives and provides us with the foundations and protection for life. Healthy ecosystems provide us with natural resources and services to humans, and build resilience to both climatic and other changes. For example: flood protection, pollination for crops and flowers, improved air / water quality, carbon storage. However, many of our ecosystems are degraded and their capacity to respond to impacts and provide resources is not unlimited.

You told us

You told us you're concerned that the current climate of austerity means nature conservation is likely to become less of a priority, and that we need to work together to redress the imbalance, before irreversible damage is done. You said NRW and its partners need to be bold with their ambitions, acting on a landscape scale to help halt the loss of biodiversity by 2020.

You said Area Statements, a requirement under the Environment (Wales) Act, will need to deliver for nature conservation, and funding should be made available from wider areas given that healthy ecosystems fundamentally underpin both society and the economy.

Throughout discussions, you felt that a healthy natural environment and resilient ecosystems are essential, both now and in the future, and should be prioritised in the Rhondda and wider South Wales valleys area.

Focus areas

Three focus areas for nature recovery were identified:

- Habitat connectivity.
- Biodiversity awareness: education of the public, and participation, awareness and action as a duty to all public bodies under the NERC Act.
- Resilient ecosystems to help deliver essential ecosystem services.

Why is nature recovery a key principle?

Wales' landscape, environment and wildlife are amongst its greatest resources worth more than £8bn to the Welsh economy^{xxiv}. However, the 'State of Nature' report published in 2013, with input from 25 of the UK's nature conservation and research organisations, set out the current state of wildlife, showing that 60% of the 3,148 species that were assessed had declined in the last 50 years^{xxv}. Five main pressures on nature were highlighted: habitat change, climate change, pollution, over-exploitation and invasive non-native species^{xxvi}.

The Rhondda is home to a complex mosaic or patchwork of habitats. Its hillsides (known as ffridd or Coed Cae), are a diverse habitat comprising a mixture of acid grassland, heath, bracken, woodland, scrub and flushes, and is the bridge between the lower valley and the uplands. Throughout the South Wales valleys, there are remnant coal spoil areas supporting unique and diverse micro-habitats due to the varied topography and geology brought up from the deep during mining activities. These tips are unique in their biodiversity value, and some of the best examples of lichen-heath in Wales occur on old coal spoil tips in the Rhondda valley.



The Rhondda has large areas of uplands, some of which have been afforested. Open areas have expanses of bog, mire and acid grassland. Peatbogs are important for upland species of invertebrates, bird species such as snipe and lapwing, as well as a rich assemblage of plants such as bog asphodel.

Areas of peatbog in the Rhondda have been lost or are in poor condition (due to plantation forestry, drainage and overgrazing), but there are opportunities for restoration. Restoring peatbog can bring benefits to people, the environment, and contribute to climate change resilience, by storing and regulating the flow of water, improving water quality, and storing carbon.

The Rhondda supports a diverse range of semi-natural and modified habitats. In particular the South Wales coalfield is recognised as a key area in Wales for marshy grassland^{xxiii}. The cluster of this 'Rhos Pasture' habitat in the area around Tonyrefail on the southern boundary of the Rhondda is of particular importance for the marsh fritillary butterfly (*Euphydryas aurinia*) which relies on a connected network of habitat patches to maintain its metapopulation structure.

The Welsh Government Woodland Estate accounts for a relatively large proportion of the Rhondda. The biodiversity associated with forest plantations includes large populations of siskin and crossbill, and nightjars within felled areas.

A significant threat to the woodlands and forests is from disease and pests. Since 2010, *phytophthora*

ramorum has infected approximately 6.7 million larch trees in Wales, and NRW is delivering a major tree-felling operation to slow the spread of the disease. This large scale clear-felling can enable opportunities for habitat restoration, including supporting the broadleaf woodland network (planting or natural regeneration) and the restoration of priority open habitats.

Invasive species such as Japanese Knotweed and Himalayan Balsam are prevalent in the South Wales valleys, impacting local biodiversity, connectivity, out-competing native species and dominating landscapes.

Did you know?
88% of the UK population believe biodiversity is indispensable for the production of goods, such as food, fuel and medicines. 94% agree we have a moral obligation to halt biodiversity loss^{xxvii}.



The key opportunities:
NRW and RCT Council **working together to be exemplars in sustainable land management**, showcasing how investment in nature delivers multiple benefits for people and the environment.

'**Area Statements**', a requirement for NRW under the Environment (Wales) Act (commencing in 2017), **delivering for nature conservation**.

NRW, RCT Council and conservation partners **supporting communities and volunteers** who wish to improve their local areas, by offering advice and guidance to ensure activities are appropriate and benefit the local environment.

NRW's **Forest Resource Plans identifying opportunities for enhancement, restoration and connectivity of habitats**, to ensure a sustainable and resilient WGWE.

The challenges:

- Securing commitment to long-term partnership working, with support from the Public Service Board, to achieve change at a landscape scale and establish a framework in which sustainable land management can be implemented.
- Wider recognition (both organisational and public) that a healthy, natural environment provides the foundations and protection for life, and fundamentally underpins society.
- Impact and constraints of large scale land reclamation and afforestation in the area.

The risks:
Loss of functioning ecosystems and the services they provide, further deterioration of natural processes resulting in multiple negative impacts to people, the economy and environment, and reduced resilience to climate change.

2) Organisations and communities working better together

Overview

The Wellbeing of Future Generations (Wales) Act requires public bodies to think differently, and explore more integrated, innovative ways of working which provide cost-effective, multiple benefits with fewer resources.

The current financial climate necessitates better working between public organisations and local communities to help deliver common goals and objectives that benefit people, the environment and local economy. Working together helps to highlight challenges and solutions, and enables greater sustainability in planning and delivery.

In the Rhondda, NRW's officers used an approach based on the principles of co-production, and sought to bring together a wide variety of organisations, community groups and people to share their ideas. This meant the five priorities identified for managing the Rhondda's natural resource were achieved through open, honest dialogue and broad consensus, and were more in tune with the area.

Through the experience of the Rhondda Trial, delegates acknowledged the benefits of partnership working, and agreed that working better together is critical both now, and in the future.

The Rhondda Trial also provided NRW and the local authority (Rhondda Cynon Taf) with an opportunity to work closely together, focussing on cross-cutting themes and priorities, sharing learning, and identifying ways of working together to help deliver the priorities for managing the Rhondda's natural resources and the Wellbeing plans.

Focus areas

Three areas of focus were identified:

- Developing and delivering small, medium and large scale projects together which provide multiple benefits.
- Working together to support sustainable local ownership of community assets.
- Sharing expertise, evidence and support.

The key opportunity

Working collaboratively, and with communities, will enable better designed projects which address the main challenges in the Rhondda and wider County Borough, share resources and expertise, and deliver multiple benefits.

The challenges

Finding appropriate forums to bring people and ideas together; delivering joined up, inclusive stakeholder engagement; identifying organisational leads for collaborative projects.

The risks

The risks of not acting upon this opportunity are: public bodies continuing to work in isolation on single issue topics, spending more in the long run dealing with a wide range of problems, and reacting to risks and challenges, instead of proactively pursuing sustainable outcomes.



How do the priorities and principles meet the well-being goals of the Well-being of Future Generations Act?

	Manage the public estate for multiple benefits	People benefit from being outdoors	Creating safe, healthy places	Restore the natural water environment	Change perceptions	Nature recovery	Working better together
A prosperous Wales	***	***	***	**	***	***	***
A resilient Wales	***	**	**	***	**	***	***
A healthier Wales	***	***	***	**	**	**	**
A more equal Wales	*	**	***	*	***	**	**
A Wales of cohesive communities	*	**	***	*	**	*	**
A Wales of vibrant culture and thriving Welsh language	*	**	**	**	**	*	**
A globally responsible Wales	***	*	*	**	**	***	**

4. Learning, next steps and NRW developing Area Statements

Not enough time has passed to determine whether the projects within each trial have delivered the outcomes they were designed to achieve. But we're continually learning and monitoring progress and will adapt accordingly.

We received positive feedback from our partners about the approach. It allowed us to work with our partners on big societal issues, which in the past were considered too challenging or not within our remit. Partners felt more engaged with us, and welcomed the opportunity to play a role in finding solutions.



Learning is being used to assess our own business processes, and whether they can be changed to better suit these new ways of working. The lessons from the trials also help shape how we prepare to develop Area Statements, which is a requirement of the Environment Act. In the future Area Statements will help deliver the Welsh Government's National Natural Resources Policy, by identifying priorities, risks and opportunities for sustainable management of natural resources, and help us plan and prioritise working in collaboration at a local level.

In the meantime, NRW continue to work collaboratively with partners in the Rhondda (and wider County Borough) to build on progress made during the Trial.

5. Summary of projects delivered via the Rhondda Trial

Funding from Welsh Government was allocated to the three trial areas (Rhondda, Dyfi and Tawe) in 2014 for activities / projects that deliver the widest possible benefits, and which help develop our understanding of the practical and operational aspects of sustainably managing our natural resources. Below is a summarised update of some of the projects:



Healthy Hillside: working with partners to tackle wildfires and enhance hillside habitats

- Part-funded Project Officer to coordinate 'Healthy Hillside' project.
- New partnership group established (NRW, South Wales Fire & Rescue Service, Wildlife Trust of South & West Wales, RCT and others).
- New approach and focus on taking a joined up approach focussing on awareness and pro-active land management techniques to help tackle wildfires.
- Detailed prioritisation of sites for pro-active land management.



Investment at Llanwynno: People benefit from being outdoors

- Investment in recreational infrastructure, including gates, picnic tables, new pathway and clearance works.
- Investment at Daerwynno Outdoor Centre (renewable energy supply and outdoor learning equipment for children).
- Car / people counters installed to build evidence base of usage.
- TBC: Recreation & Access Plan for Llanwynno.



Working with nature to help restore the natural water environment

- Winter 2015-16: Restoration of peatland on NRW managed estate near Cwmparc for flood attenuation, carbon storage and benefits to biodiversity.
- Summer 2015: In-channel, large woody debris installed to reduce the energy of the river, trap debris and sediment to help restore the riverbed for wildlife.
- Spring 2015: 'Live' river level / flow monitoring station installed.



Creating safe, healthy and vibrant places for people to enjoy

- Working with internal and external partners to better understand the challenges, costs, impacts of crime and anti-social behaviour. And identify opportunities to work better together to help address the challenges.
- Developing approach with partners to help understand the issues to prepare a holistic approach to crime and anti-social behaviour on publically owned land.
- Feed into NRW's Incident Management Review so incidents of crime on the NRW managed estate are captured and acted upon consistently across Wales.
- Focusing on preventative work with young people to enable long term change.



Llyn-Fach Nature Reserve

- Partnership project with Wildlife Trust of South and West Wales (WTSWW) to create a nature reserve in the Rhondda Valleys, on NRW managed estate.
- Site: designated SSSI in unfavourable condition. A number of priority and protected species present: water vole, nightjar, peregrine, water lobelia and fir club moss.
- £50k secured by WTSWW in grant money (with NRW support) to undertake habitat restoration and positive management for wildlife and achieve favourable condition.



People and the environment

- Environmental training for community groups, including: biodiversity recording, brush cutting, pesticide control.
- Bio-blitz event to record wildlife species on NRW managed estate.
- Working with school groups to develop teaching and community gardens, allotments and a beehive.

6. Opportunities and ideas suggested during consultation

Manage the public estate for multiple benefits

Suggestions from NRW's stakeholder engagement workshops in the Rhondda for managing the public estate for multiple benefits

Strategic / policy	<ul style="list-style-type: none"> • Clear direction and purpose of the Welsh Government Woodland Estate (WGWE).
Working better together	<ul style="list-style-type: none"> • A land management steering group, comprising key organisations working together and delivering integrated land management which provides multiple benefits to people, the environment and local economy. • Better links with academia to gather evidence and help inform future approach. • Better engagement between public bodies and local communities, particularly where community groups wish to sustainably manage areas of publically owned land.
Evidence	<ul style="list-style-type: none"> • NRW's Forest Resource Plans to consider more appropriate land management for their respective areas, to deliver wider benefits. • NRW's 'Good for People' toolkit used to identify areas and opportunities for communities to utilise the WGWE for small scale community gain. • Mapping to identify strategic opportunities on publically owned land, in relation to the key local and national challenges.
Local assets	<ul style="list-style-type: none"> • NRW working with partners and community groups to enable local management of non-productive areas of timber on WGWE through lease / management agreements. • Teams and officers across NRW identifying opportunities for optimised management of WGWE to improve the environment.
Local communities	<ul style="list-style-type: none"> • An improved and more user-friendly way for communities to propose activities, events and ideas on the WGWE. • Use local knowledge to raise awareness to NRW and local authorities of opportunities to better manage publically owned land, e.g. local management of access routes such as 'adopt a path' schemes etc.

People benefit from being outdoors

Suggestions from NRW's stakeholder engagement workshops in the Rhondda for people to benefit from the outdoors

<p>Strategic / policy</p>	<ul style="list-style-type: none"> • A Wales wide strategy / initiative linking the outdoors with better health. • The Public Service Board works to deliver the 7 wellbeing goals of the Wellbeing of Future Generations Act, with health and the outdoors a key component.
<p>Working better together</p>	<ul style="list-style-type: none"> • Public bodies work together to develop physical activity projects and activities, such as community growing, allotments, green exercise, health walks, cycling events, community events in parks and natural play facilities. • Public bodies work with academia to identify the barriers between communities and their use of local countryside. • NRW and partners work with Public Health Wales and General Practitioners to help build confidence in outdoor referral schemes. • Seek investment and/or opportunities from the public health budget to enhance areas of greatest need, to provide cost effective health solutions. • Better coordination of the existing access network between organisations, particularly NRW, LA and the local access forum. • Develop outdoor resources funding (including travel costs), so people can go outdoors, and gain from the health and wellbeing benefits it provides. • Partners support opportunities for children to interact with the outdoor environment.
<p>Evidence</p>	<ul style="list-style-type: none"> • New legislation such as the Wellbeing of Future Generations Act and Social Services and Wellbeing Act potentially offering new ways of evaluating 'success', 'what we do', and 'outcomes'. • Build on successful initiatives such as Actif Woods and developing new projects in areas most at need. • Work with the Health sector to compile a base of evidence outlining the benefits of being outdoors, and identifying cost effective health solutions. • Standardise data collection and tools (e.g. WEMWEB, Outcome Stars, EQSD) into one place. • Establish robust and useful monitoring and evaluation framework, to inform future decision making. • Build / share a network of established outdoor groups GPs can refer to, and have coordinators in between to deliver. • Use NRW's new 'Good for People' toolkit to identify opportunities in areas most at need for quality, accessible greenspace. • Greater collaboration between public bodies and academia.

<p>Local assets</p>	<ul style="list-style-type: none"> • Increase the quality, accessibility and awareness of natural spaces in both the urban and countryside setting for people to enjoy. • Identify opportunities to improve and ‘green’ the active travel network in communities to provide affordable and effective travel alternatives. • A one stop shop for all routes and maps to coordinate and promote outdoor walks / trails in the South Wales valleys area. • Restore existing paths which have been lost, particularly on the WGWE. • Support volunteer networks for increased local ownership. • Provide safe, open spaces for play and opportunities for outdoor learning.
<p>Local communities</p>	<ul style="list-style-type: none"> • Healthy, outdoor walking routes promoted at doctors / hospitals / dentists / pharmacies, and better signposting to communities. • Encourage local ownership of outdoor areas where possible. • Explore a technology based approach to help adults and children connect with the outdoors. • Communities ‘Adopt a field / mountain’ to help instil pride and local ownership of landscapes. • Help develop and support physical activity projects and activities, such as community growing, allotments, green gyms/exercise, health walks, cycling events, community events in parks and natural play facilities.

Create safe, healthy and resilient places for people to use and enjoy

Suggestions from NRW’s stakeholder engagement workshops in the Rhondda for creating safe, healthy and resilient places for people to use and enjoy

<p>Strategic / policy</p>	<ul style="list-style-type: none"> • Welsh Government policy changes to require sustainable drainage systems (SuDS) as mandatory for all new developments, not just advisory. • Planning and development actively seeks to enhance local greenspaces (and connectivity), where possible. • Promote the voluntary sustainable drainage (SuDS) standards published by Welsh Government to developers and builders.
<p>Working better together</p>	<ul style="list-style-type: none"> • PSB works together to break down the barriers (perceived and real) to communities accessing their local environment to help increase local usage. • Raise awareness of communities reporting crime and anti-social behaviour by calling 101. • Increase public awareness of the places around them in a coordinated way, and involving communities (particularly children and teenagers) in the planning and design of local initiatives to help encourage local pride and ownership.

	<ul style="list-style-type: none"> • Support, up-skill and train community / volunteer groups to help them achieve more. Make best use of local enthusiasts that exist in communities in the Rhondda to encourage people to spend time outdoors. • NRW: more focus on outcomes (and challenging its perceived risk averse culture) to help address the issue of liability (as land manager) which can prevent opportunities from being realised. • Positive engagement with communities to deliver message that the outdoors can be accessed and enjoyed by all the community. • Climate of austerity necessitates key partners working better together, sharing learning and resources to help address and reduce CASB. • Key partners work together to help develop Green Infrastructure plans, to develop, enhance and manage a linked network of high quality greenspaces that provide a wide range of benefits. • Explore public, private and community led funding opportunities for green infrastructure. • Partners consider sustainable solutions to soil and riverbank erosion, working with nature for river restoration, flood management and biodiversity enhancement.
Evidence	<ul style="list-style-type: none"> • Understand the existing costs of CASB, and build the case for prevention as saving. • Identify communities potentially most at risk from the impacts of climate change, and identify opportunities to adapt using the natural environment to reduce and manage impacts and risks. • Use NRW's 'Good for People' toolkit to help identify opportunities for improved green infrastructure in areas most at need.
Local assets	<ul style="list-style-type: none"> • Public bodies support opportunities for increased local ownership of local assets. Actively encourage positive use, e.g. 'Adopt a path' scheme. • Improve signage and accessibility on the WGWE to create a more welcoming feel, encouraging local use.
Local communities	<ul style="list-style-type: none"> • More reporting of crime and anti-social behaviour by reporting incidents via 101.

Work with nature to help restore the natural water environment

Suggestions from NRW's stakeholder engagement workshops in the Rhondda for working with nature to help restore the natural water environment

Strategic / policy	<ul style="list-style-type: none"> • Welsh Government policy requiring sustainable drainage systems (SuDS) as mandatory for all new development, not just voluntary. • In the meantime, promote the voluntary sustainable drainage standards to developers and builders, published by Welsh Government in January 2016.
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	<ul style="list-style-type: none"> • Influence the planning process to encourage use of proven green infrastructure techniques such as green roofs, urban SUDS or Urban trees. • Planning and development actively seeks to enhance local greenspaces (and connectivity), where possible. • NRW and local authorities deliver sustainable solutions to soil and riverbank erosion where appropriate, working with nature for river restoration, flood management and biodiversity enhancement.
Working better together	<ul style="list-style-type: none"> • NRW and the local authority work together to identify and trial natural flood management techniques which store and attenuate water, increase infiltration through land management and slows the flow of water, in areas most at risk. • Identify a combination of green infrastructure techniques to tackle urban runoff and surface water flooding, and help prevent overloading of existing sewerage systems. • Explore funding opportunities (public, private and community led) for green infrastructure / SuDS schemes techniques. • Improve existing infrastructure (including Combined Sewer Overflows, culverts etc), e.g. the work demonstrated at Llanelli and Greener Grangetown. • Consider land use and management changes to help restore the area's hydrology. • Invest in habitat restoration to reduce surface water runoff and encourage soil infiltration (woodlands, hedgerows and marshy grassland).
Evidence	<ul style="list-style-type: none"> • Target communities at significant risk of flooding, combined with poor water quality data to identify upstream opportunities. • NRW's Forest Resource Plans incorporate measures to help store more water, deliver against European directives, and improve habitats. Examples: ensure opportunities for native reforestation of hillsides, with natural SUDS and water storage techniques built into coup plans; woodland gully planting or natural regeneration; upland wetland restoration and creation; control erosion and encourage large woody debris in plantations. • Identify areas for storage of water, via the creation of wetlands, ponds, SuDS.
Local assets	<ul style="list-style-type: none"> • Restore upland / afforested areas of peat across the Rhondda to help reduce flooding, enhance habitats and store carbon. • Investment and asset management plans tackle misconnections.
Local communities	<ul style="list-style-type: none"> • Increased awareness of flood risk in communities, and actions they can take to help manage the risk/consequences.

Change perceptions

Suggestions from NRW's stakeholder engagement workshops in the Rhondda to help change perceptions

Strategic / policy	<ul style="list-style-type: none"> • Develop a bold vision for the area with a new message.
Working better together	<ul style="list-style-type: none"> • Involve entrepreneurs, community connectors, local associations and businesses (including local cafes, B&Bs, shops) in the discussion. • Integrate a smart social media strategy for promoting the area's fantastic natural assets. Encourage positive news stories. • Address crime and anti-social behaviour • Positive news stories. • NRW have coordinators to work effectively with communities to maximise benefits for local people and the environment.
Evidence	<ul style="list-style-type: none"> • Build base of evidence of numbers of recreational users.
Local assets	<ul style="list-style-type: none"> • Improve green infrastructure to enhance quality of access and experience, e.g. a connected walking / cycling route through the Rhondda Fawr. • Work with and support local ideas and initiatives that work with, and enhance the area's natural assets. • Focus on the area's unique selling points. • Raise awareness of local 'hidden gems'.
Local communities	<ul style="list-style-type: none"> • Ensure economic benefits from proposals and schemes go back to the community. • Increase confidence in communities about their local greenspace. • Adopt local fields / mountains / woodlands. • Greater awareness in communities about their local environment.

Nature recovery

Suggestions from NRW's stakeholder engagement workshops in the Rhondda to help nature recovery

Strategic / policy	<ul style="list-style-type: none"> • A bold, inspiring vision to help partners deliver at a landscape scale.
Working better together	<ul style="list-style-type: none"> • Work with the Local Biodiversity Action Plan (LBAP) as an existing established network with wide reaching influence and experience of delivering.

	<ul style="list-style-type: none"> Enhancements and key areas to be identified through NRW's Forest Resource Planning process. This will contribute to key areas for connectivity, but also restoration of habitats.
Evidence	<ul style="list-style-type: none"> Use connectivity mapping to identify opportunities for Forest Resource Plans and development and planning, including Local Development Plans.
Local assets	<ul style="list-style-type: none"> Identify SINC sites and opportunities to undertake management. Good volunteer opportunities for NRW environmental leave days (and other businesses) to undertake environmental work to benefit their brand integrity. Could set up a scheme to share these skills.
Local communities	<ul style="list-style-type: none"> Community volunteer opportunities for conservation work.

Working better together

Suggestions from NRW's stakeholder engagement workshops in the Rhondda to help organisations and communities work better together:

Strategic / policy	<ul style="list-style-type: none"> The PSB and its partners work collaboratively with communities, share resources/evidence/expertise that helps deliver multiple benefits.
Evidence	<ul style="list-style-type: none"> Public bodies share evidence. One place for data.
Local assets & communities	<ul style="list-style-type: none"> Work with and support local ideas and initiatives that work with, and enhance the area's natural assets. Encourage local ownership of outdoor areas where possible.
Local communities	<ul style="list-style-type: none"> Explore community volunteer opportunities for conservation work.

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