Tystiolaeth Ategol – Ymatebion i'r Ymgynghoriad Heriau a Dewisiadau

Cyhoeddwyd gan:
Cyfoeth Naturiol Cymru
Tŷ Cambria
29 Heol Casnewydd
Caerdydd
CF24 0TP

0300 065 3000 (Llun-Gwenwr, 8am - 6pm)

ymholiadau@cyfoethnaturiolcymru.gov.uk
www.cyfoethnaturiolcymru.gov.uk

[H] Cyfoeth Naturiol Cymru

Cyfoeth Naturiol Cymru
Natural Resources Wales

Tabl Ymatebion i'r Ymgynghoriad

Cyfeirnod	Enw	Sector	Ardal Basn Afon
CC01	Cymdeithas Chwaraeon Cymru	Hamdden	Cymru Gyfan
CC02	Institute of Civil Engineers Cymru	Busnes a Diwydiant	Cymru Gyfan
CC07	Parc Cenedlaethol Arfordir Sir Benfro	Cadwraeth and Hamdden	Gorllewin Cymru
CC12	Grosvenor Caving Club	Hamdden	Dyfrdwy
CC15	Ymddiriedolaeth Afonydd Teifi	Cadwraeth	Gorllewin Cymru
CC16	Cyngor Defnyddwyr Cymru	Y Diwydiant Dŵr	Gorllewin Cymru
CC18	Murco	Busnes a Diwydiant	Gorllewin Cymru
CC19	Inland Waterways Association	Mordwyaeth	Dyfrdwy
CC20	Rossett & Gresford Fly Fishing Club	Pysgodfeydd	Dyfrdwy
CC22	Consumer Council for Water	Y Diwydiant Dŵr	Dyfrdwy
CC23	Dŵr Cymru	Y Diwydiant Dŵr	Dyfrdwy
CC24	Welsh Dee Trust	Cadwraeth	Dyfrdwy
CC25	Parc Cenedlaethol Eryri	Cadwraeth a Hamdden	Cymru Gyfan
CC26	Dŵr Cymru	Y Diwydiant Dŵr	Gorllewin Cymru
CC28	Llangollen/ Maelor Angling Club	Pysgodfeydd	Dyfrdwy
CC29	Afonydd Cymru & Salmon & Trout Association	Cadwraeth	Gorllewin Cymru
CC30	Cyngor Sir Ddinbych	Awdurdod Lleol	Dyfrdwy
CC31	Undeb Amaethwyr Cymru	Amaeth	Cymru Gyfan
CC32	Ymddiriedolaethau Bywyd Gwyllt Cymru	Cadwraeth	Cymru Gyfan
CC33	Dee Valley Water	Y Diwydiant Dŵr	Dyfrdwy

CC34	UCA Cymru	Amaeth	Gorllewin Cymru
CC35	UCA Cymru	Amaeth	Dyfrdwy
CC36	Cyngor Tref Saltney	Awdurdod Lleol	Dyfrdwy
CC37	Energy UK	Busnes a Diwydiant	Cymru Gyfan
CC39	Y Ganolfan Dŵr Gwyn Genedlaethol	Hamdden	Gorllewin Cymru
CC40	Wildfowl & Wetlands Trust	Cadwraeth	Gorllewin Cymru
CC41	Confor	Coedwigaeth	Cymru Gyfan
CC42	Cadwch Gymru'n Daclus	Cadwraeth	Gorllewin Cymru
CC43	Pembrokeshire Angling Association	Pysgodfeydd	Gorllewin Cymru
CC44	Cyswllt Amgylchedd Cymru	Cadwraeth	Cymru Gyfan
CC45	Canal & Rivers Trust Ymateb Cenedlaethol	Mordwyaeth	Cymru Gyfan
CC46	Flood Prevention Society	Rheoli Tir	Cymru Gyfan
CC48	Canoe Camping Club	Hamdden	Dyfrdwy
CC49	Cheshire West and Chester	Awdurdod Lleol	Dyfrdwy
CC50	United Utilities	Y Diwydiant Dŵr	Dyfrdwy
CC51	Ymddiriedolaeth Afonydd De Ddwyrain Cymru	Cadwraeth	Hafren
CC53	Yr Awdurdod Glo	Mwngloddio	Gorllewin Cymru
CC54	Centre for Environment, Fisheries & Aquaculture Science	Pysgodfeydd	Cymru Gyfan
CC55	Campaign for the Protection of Welsh Fisheries	Pysgodfeydd	Gorllewin Cymru
CC57	Wye & Usk Foundation	Cadwraeth	Hafren
CC58	Coed Cadw	Coedwigaeth	Cymru Gyfan
CC60	Adborth Achlysur: Cynhadledd Partneriaeth Iechyd Dŵr Gorffennaf y	Adborth Cynhadledd	Cymru Gyfan

	24ain 2013		
CC61	Yr Awdurdod Glo	Mwngloddio	Dyfrdwy
CC62	Afan Valley Angling Club	Pysgodfeydd	Gorllewin Cymru
CC63	Ecodyfi	Rheoli Tir	Gorllewin Cymru
CC65	Green Energy Partners	Busnes a Diwydiant	Gorllewin Cymru
CC73	Avon Outdoor Activities	Hamdden	Gorllewin Cymru
CC77	Aston University Canoe Club	Hamdden	Gorllewin Cymru
CC81	Aberystwyth Canoe Club	Hamdden	Gorllewin Cymru
CC86	Blue Paddle	Hamdden	Gorllewin Cymru
CC90	Ymgynghorydd Amgylchedd	Busnes a Diwydiant	Gorllewin Cymru

Ni chynhwysir yn y tabl na'r ddogfen hon ymatebion unigolion, ond mae copïau ar gael, ond gofyn, trwy yrru neges e-bost at Ceri.Jones@cyfoethnaturiolcymru.gov.uk.

serving welsh sport
gwasanaethu chwaraeon cymru

CC01 – All Wales

Challenges & Choices Consultation- preservation of waterways in Wales

We are all aware that in Wales we are blessed with a spectacular natural environment that is a haven for outdoor pursuits. With some of the best mountains, hills, rivers and beaches in the UK, and three National Parks, outdoor pursuits in Wales attracts participants from all walks of life and socio-economic backgrounds. Outdoor pursuits also help to provide a welcome boost to hard pressed local economies in our rural communities. These activities regularly attract participants from outside Wales, with many choosing to take "active" family holidays.

We support wholeheartedly the maintaining and improving of our waterways. At the same time we need to ensure that when considering any measures the need to maintain accessibility for recreational and sporting users is taken into account. It is vital that as many people as possible are able to access our waterways and are able to enjoy a wide variety of outdoor pursuits through the sustainable use of our natural environment. The associated health benefits and well-being generated from a more active population, as well as the boost to local economies, increased tourism and job opportunities in the countryside are compelling drivers.

Hence we believe it is important that striking a balance between environmentally protective measures and providing effective public access needs to be imbedded as a central theme in the consideration of all plans.

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The Welsh Sports Association

There are approximately 33,000 voluntary and community organisations in Wales, of which 32,798 are recorded on the All Wales Database, maintained by WCVA. 23% of these are sports and recreation bodies making this by far the biggest part of the Third Sector. The Welsh Sports Association (WSA) is the recognised independent voice for sport, physical recreation and outdoor pursuits in Wales Since its foundation in 1972 the WSA has been the 'umbrella' organisation for National Governing Bodies (NGBs) of sport in Wales, providing them with representation and support. Currently around 70 NGBs are members of the WSA with an estimated 500,000 plus individual members under their banner. As well as being the voice for the sector the WSA provides a wide range of services to its members including guidance, training, information, governance support, financial management, development support and other services.

Philip Avery

Water for life and livelihoods: Challenges and choices

Event Name	Water for life and livelihoods: Challenges and choices
Comment ID	C&C2013_15
Response Date	29/06/13 20:17
Consultation Point	Views on the Severn River Basin District (View)
Status	Processed
Submission Type	Web
Version	0.4

The significant issues

1. What do you consider to be the biggest challenges facing waters in the Severn River Basin District?

pollution from agriculturs and waste water

2. Do you agree with our description of how the significant issues are affecting the water environment and society? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

yes, a good summary

3. How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource implications.

control pesticides, address storm water overflows, reduce pollution

The catchments

4. How are the significant issues in a catchment affecting the water environment and society? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Severn - agricultural pollutants, human waste water and old mines

5. How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource implications.

control pollutants, SWOs, seek ways to resolve mine pollutants

Strategic Environmental Assessment (SEA) scoping document

6. The SEA scoping document is used to identify the likely effects on the wider environment that could result from the plan to improve the water environment and are important at the river basin district level. Do you agree we are focussing on the key environmental effects?

yes

7. Is there any other information that we should be taking into account as part of this strategic environmental assessment?

none identified

If you would like your response to apply to either the Dee or Western Wales River Basin District, please visit the Natural Resources Wales website.

If you would like your response to apply to one or more of the other river basin districts, please select all that apply from the list below.

About you

When we come to analyse the results of this consultation, it would help us to know if you are responding as an individual or on behalf of an organisation or group.

Please select from the following options: Responding on behalf of an organisation or group

Please specify which organisation(s) or group(s) you are responding on behalf of and include what type it is e.g. local authority, trade association, a river's trust, academia, water company.

Institution of Civil Engineers Wales Cymru

CC07 From Pembrokeshire Coast National Park

17 September 2013

Thank you for consulting Pembrokeshire Coast National Park Authority (PCNPA) on these proposals, which we found to be clear and well set out.

Clean bathing waters are a key attraction for residents of and visitors to the Pembrokeshire Coast National Park. The quality and quantity of water in catchments is a major factor affecting the state of biodiversity, including the condition of features of European importance (including the Cleddau Rivers Special Area of Conservation and Afon Teifi Special Area of Conservation).

We are pleased to note the recognition of Wales' protected landscapes in the Strategic Environmental Impact assessment scoping report.

PCNPA aims to work with partners to help conserve and enhance water resources and quality. We would like to comment on a number of issues affecting the Pembrokeshire Coast National Park:

1 What do **you** consider to be the biggest challenges facing waters in the Western Wales River Basin District?

Water supply: Pembrokeshire Coast
Although demand is projected to remain constant, the drier summers anticipated under climate change scenarios are expected to place additional pressure on the Pembrokeshire Water Resource Zone, which covers the majority of Pembrokeshire and is forecast to fall into a supply-demand deficit by 2015, largely as a result of abstraction licence reductions resulting from the Habitats Directive.

Water quality: Pembrokeshire Coast
Most designated bathing water beaches are still achieving the higher guideline standard, although wet weather in recent years has adversely impacted on bathing water quality by increasing run-off and pollution from land. Implementation of the revised Bathing Water Directive in 2015 may make it more challenging to achieve standards.

Our understanding is that only about 20% of surface waters in Pembrokeshire are classified as of good overall (ecological and chemical) status.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community?

Water supply: Pembrokeshire Coast
Over Wales as a whole it is expected that there will be a reduction in deployable output of 16%. The greatest effect will be felt in west Wales, and particularly in Pembrokeshire where there is reliance on river abstractions and where license conditions will limit abstraction at times of low river flows. The Eastern Cleddau surface water unit and Milton groundwater unit are over-licensed, meaning that if existing abstraction licences were used to their full allocation they could cause unacceptable environmental damage at low flows.

Water quality: Pembrokeshire Coast
For the Pembrokeshire Coast National Park's 20 designated bathing water beaches over the six-year period 2007-2012, there were 111 instances of the (current) higher guideline standards being achieved (out of 120 results during the period). The remaining 9 results during the period were as follows:

- 8 occurrences of the minimum (mandatory) standard at Amroth (2008), Broadhaven (2008), Newport North (2008, 2011 and 2012), Poppit West (2012), and West Angle (2010 and 2012)
- 1 fail at Amroth (2007)

For non-designated bathing waters sampled over the seven-year period 2006-2012, there were 102 instances of the higher guideline standards being achieved, with 31 achieving the mandatory standard only, and 8 fails (out of 141 results during the period). In particular, samples at Pwllgwaelod failed to reach the mandatory standard in 5 instances out of 7.

We are therefore particularly concerned about water quality in catchments affecting bathing waters at Amroth/Wiseman's Bridge and at Pwllgwaelod.

3 How do you think these issues should be tackled, and what would you choose to do first?

Water quality: Pembrokeshire Coast
Pollution from individual outfalls and drains into rivers, estuaries and coastal waters has decreased significantly over recent decades and ecological quality has improved as a result. However, outstanding issues remain; in particular we would draw attention to the urgent need for a sewerage scheme in the Wiseman's Bridge area, where we understand there are a large number of household cesspits, some of which are compromised and/or may leak in wet weather. In addition we are aware of potential issues arising from private business. We understand that issues at Dinas Cross may be contributing to the Pwllgwaelod failures.

At Poppit and Newport we understand that the issue is more general and relates to silting and diffuse pollution load from the rivers.

As a planning authority, PCNPA will endeavour to ensure that its development planning policies take into account objectives for the Western Wales River Basin, in relation to sustainable drainage systems and disposal facilities for new development.

We agree that there are diffuse pollution issues including acidification of freshwater and nutrient enrichment and pollution related to farming and forestry practices. With partners, PCNPA aims to help promote low intensity land management and good land management practice (e.g. through targeting semi-natural habitats adjacent to water-courses in vulnerable zones).

Thank you again for the opportunity to comment.

Yours faithfully,

Michel Regelous
Conservation Policy Officer/Swyddog Polisi Cadwraeth
Pembrokeshire Coast National Park Authority/Awdurdod Parc Cenedlaethol Arfordir Penfro
Llanion Park/Parc Llanion
Pembroke Dock/Doc Penfro
Pembrokeshire/Sir Benfro
SA72 6DY
01646 624827
www.pembrokeshirecoast.org.uk / www.arfordirpenfro.org.uk

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CC12

Response from the Grosvenor Caving Club to the Dee

From: _____ _____
Sent: 17 October 2013 16:03
To: Holden, Jo F
Cc: _____
Subject: Re: A chance to have your say about the River Dee

Dear Jo,
thank you for your invitation to comment upon the River Dee.
I would make the following suggestions for the future enjoyment of this beautiful river and its continuing health.:

1 a continuing effort to clean up the rubbish and other non-natural materials in the river and on its banks. At the moment this is done (or co-ordinated) only once a year and even then the timing is perverse, for example, our being asked to get down into the mud (not a problem in itself as we get equipped for it), but the times we were asked to come were during high tide (see my photo The Estuary) "because it fitted some national schedule". Perhaps more frequent efforts, perhaps quarterly, starting with your list of those who have helped in the past. If this runs smoothly one or two organizations could be asked to undertake a joint venture setting their own firm dates. An invitation to go any time and clean up any section will pass away like all good intentions but if there is a committment to another organization to turn up with specific kit on a definite day, then it is more likely to happen. Once a year and people lose touch, forget names and lose committment.

2 Encourage those who deny access to permit it. The All Wales Coastal Path has been a success in the lower reaches of the Dee
if you are producing leaflets of the paths and access to the River, state where it is not permitted and name those who have refused access, for example certain fishing clubs.
In certan years it has not been clear who is organizing it or whether Bid Dee Day is going to happen, so we have only discovered at short notice that there is a job for us. We heard nothing at all this year.
Flintshire County Council seem to do a lot but I do not live in Flintshire so do not hear until quite late. Their Officers have always been complimentary about the work done by my Club. The Council Leader always makes a point of coming personally to say thank you. They use phrases like "We can ask you to do the jobs we cannot get anyone else to even look at."

3 Debris in the tributaries of the Dee. for example rafts of plastic bottles etc. trapped by fallen timber in the Clywedog at Erddig. it usually waits for Winter floods to send it downstream. The National Trust will not spend time on it because the activity attracts no income. The Gwenfro is very visible in parts of Wrexham advertising itself as a repositary for litter. It is not deep and I am sure there are volunteers who could walk down it in waders (Teenagers find this fun) and remove the simpler materials like baskets and bottles, leaving bigger items for the Council to consider as their contribution to a voluntary effort.

Yours sincerely,

Stephen Brown

----Original Message----
From: jo.holden@environment-agency.gov.uk
Date: 17/10/2013 11:20
To: "Holden, Jo F"<jo.holden@environment-agency.gov.uk>
Cc: "Mike_Taylor@flintshire.gov.uk"<Mike_Taylor@flintshire.gov.uk>, "Beech, Dawn"<Dawn.Beech@cyfoethnaturiolcymru.gov.uk>
Subj: A chance to have your say about the River Dee

Dear Big Dee Day Supporter,

I wanted to let you know that there is an opportunity for you to have your say on what you think about the River Dee, through Natural Resources Wales' "Challenges & Choices" consultation which runs until 22 December.

What do you consider to be the biggest challenges for the Dee?
How should these issues be tackled?
Which ones would you do first?

The intention of this consultation is to get a real feel for what people think are the significant issues affecting the water environment, how to solve them and in what order. We are keen to get a broad range of responses for the River Dee, reflecting the views of as many people as possible, so please feel free to share this link or circulate the attached flyer.
We would really value your response and I would appreciate it if you could mention it to any other groups you are involved with.

Please find a link to the consultation info, including how to respond online, below:

http://naturalresourceswales.gov.uk/our-work/consultations/list-of-current-consultations/challenges-and-choices-consultation/?lang=en

Additionally, the Environment Agency has just awarded funding to the Welsh Dee Trust and Cheshire Wildlife Trust to host **new catchment partnerships** for the Middle and Tidal Dee, which will look at prioritising a_ctions that will improve, for example, the health, biodiversity and amenity value of the Dee. It is very early days for the partnerships but further information will be sent to you shortly so that we can gauge how you may wish to be involved.

Many thanks,
Jo

Jo Holden | Catchment Coordinator for Cheshire | Cheshire Land and Water |
Environment Agency - Richard Fairclough House, Knutsford Road, WARRINGTON, WA4 1HT |
Mobile ☎ 07901 671198 | Fax ☎ 01925 415961 | www.environment-agency.gov.uk

PLEASE NOTE: My working days are Tuesday, Wednesday & Thursday

Follow us on twitter @EnvAgencyNW
Visit our website at www.environment-agency.gov.uk

Help to influence the choices we make about your water environment by responding to our Challenges and Choices consultation before 22 December 2013.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name Dr Ian Thomas

Organisation and Sector _Teifi Rivers Trust

Contact Details 01239 851505

River Basin District Response for South West Wales

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Diffuse agricultural pollution
Metal mines
Water acidification
Obstruction to fish passage
Invasive non native species

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Yes we agree with your description
With regard to diffuse agricultural pollution, this is causing low invert counts on many tributaries of the Teifi. With regard to metal mines, we are grateful for the NRW's efforts in ameliorating this problem. There is a major obstruction to fish passage on the Clettwr, which is well known to the fisheries department at NRW, and a solution is currently being sought. Acidification is being aggravated by current forestry activities, and there is a huge problem in the catchment with INNS.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

We regard the biggest problem as diffuse agricultural pollution, and would like to see more action taken in cleaning up agriculture's act. This should be done on a catchment basis, concentrating initially on headwaters and upland tributaries before spreading down stream. Having been involved in carrying out habitat improvement work for the past six years, we are not convinced that enough is being done on the agricultural scene to identify and remedy pollution. Neither are we convinced that riparian fencing is a sustainable solution as it is only going to last as long as the fence posts, which may be up to ten years if lucky.
Owing to lack of volunteers progress has been slow and we have only covered a tiny percentage of the catchment, and with funding drying up we do not anticipate any acceleration in our activities.

We would hope that acidification will improve with better communication between forestry and environment within the new organisation, and improved forestry practices.

INNS again need to be tackled in a systematic catchment wide top down approach, but will prove to be very labour intensive.

4 Who should we work with to achieve the environmental outcome?

Rivers Trusts, the Wildlife Trusts, local councils and community councils, angling clubs riparian owners, third sector organisations, and the Welsh Government.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

The Teifi Catchment.

Severe decline in the quality of angling on the Teifi is leading to diminishing club membership and fewer visiting anglers to the Teifi Valley causing loss of revenue within the rural community. Fewer youngsters are taking up angling leading to lower levels of environmental awareness within the youth of today.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

The Teifi Catchment.

The catchment has been in urgent need of some serious conservation measures for some time as it has been in decline for the past thirty years. I would advocate a no-kill fisheries policy for at least the next five years with estuary nets off allied to a big effort in tackling agricultural pollution and habitat restoration, with a periodic review of the situation.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

We agree that you know what the problems are, but we don't see much remedial action being taken.

2 Is there any other information that we should be taking into account as part of the assessment?

In previous dealings with the Environment Agency, we have found bureaucracy to be exceptionally tiresome, and we have also had suspicions that information provided by the agency may have been politicised for our benefit.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices

Written Consultation Response

Name:	Mansel Thomas
Organisation and Sector:	Consumer Council for Water, representing water consumers
Contact Details:	CCW Wales Office, Caradog House, 1-6, St Andrews Place, Cardiff CF10 3BE
River Basin District Response for:	Western Wales RBD

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues - Overview of CCWater response

i. We agree with the NRW's overall approach towards developing a programme for tackling the problems facing Western Wales waters under the Water Framework Directive (WFD). However, for this to be effective, we consider it is vital to consider the measures within the context of all three rounds of river basin planning.

ii. In particular, we would like NRW to have regard to the following:
- Appropriate allocation of responsibilities and costs - encouraging sectors other than the water industry to tackle problems in the water environment that they are responsible for, including improving enforcement where appropriate;
- Acceptability and affordability - what water customers are willing to pay for in the future, especially in the light of other pressures on their income and the prevailing economic climate; and
- Value for money - making sure that, wherever possible, the measures are sustainable and will help to reduce future water pollution, and subsequent costs of tackling this.

iii. We believe that the best way to achieve this is for NRW to consider measures that will actively encourage other sectors to recognise their responsibilities and get involved in tackling the problems. NRW should also encourage the appropriate pacing of improvements.

iv. In addition, it is important to present information in a clear and transparent manner to encourage the public to engage with the issues. Our response to specific questions follows.

1 What do you consider to be the biggest challenges facing waters in your River Basin District?

1.1 We consider that one of the biggest priorities is to make sure that sectors other than the water industry are involved in tackling water pollution that they are responsible for and that they bear an appropriate proportion of the costs of doing this. During the first round of river basin planning Dŵr Cymru Welsh Water's water customers in Western Wales River Basin District (WWRBD) bore the majority of costs even though other sectors shared responsibility for many of the problems[1]. For example, evidence from the Environment Agency[2] (prior to it becoming NRW) suggests that the agriculture

[1] Environment Agency (2008) – Impact Assessment accompanying the Dee River Basin Management Plan.
[2] http://www.geostore.com/environmentagency/Phosphorus_Evidence_Base_v2_1_external.pdf

sector is responsible for 40-45% of phosphorous pollution. During the first round of river basin planning, however, the sector in Wales contributed less than 1% of the costs towards tackling phosphorous pollution.

1.2 It is particularly important that other sectors take responsibility since, in the future, there is likely to be an increased burden on water companies to ensure that the quality of the water environment does not deteriorate, which is a mandatory requirement under the WFD. Since the water companies' business plans will be constrained by what water customers are able to pay, there may be less money available for water companies to invest in the schemes that fall outside this criterion. Hence, there will need to be a broader range of measures for other sectors and there will need to be greater input from them if desired improvements are to be met.

1.3 We explain how we feel that these issues should be tackled further below.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

2.1 Broadly speaking, we agree that the relevant issues have been identified.

2.2 Of particular significance is diffuse pollution from rural areas, from forestry and agriculture, the major cause of failure in the WWRBD. Diffuse pollution has had a marked effect on water quality throughout the region. Pollution draining into lakes and reservoirs has been the cause of algal blooms on the waters which has affected water quality from an aesthetic perspective but also from an economic standpoint. At Llysyfran Reservoir for instance, which is used for recreation, the algal blooms are not attractive. In addition Dŵr Cymru is forced to introduce additional treatment measures at its water treatment works and therefore additional costs for water customers.

2.3 The additional cost is sometimes a major influence on the tourism industry such as during the wet summer of a few years ago when field run off onto the beach at Amroth caused the loss of Blue Flag status which obviously affects tourist numbers and therefore the economy as a whole.

2.4 On a presentational point, we feel that the descriptions of how the significant issues are affecting the water environment and society would be enhanced by a table outlining the impacts, which sector would be affected by them and the scale of the impact. It may also be useful to add further detail on how each issue is managed now and the possibilities for further action in the future.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

3.1 As mentioned above, the main priority should be encouraging sectors other than the water industry to play their part in preventing pollution.

3.2 To this effect, we support the emphasis on implementing measures at a catchment level. There are already successful examples of effective catchment level actions in Wales and we would support any decision to extend these. This can be an effective way to attract investment from a range of sectors. In the same way, an ecosystem approach will help to identify the range of benefit to be gained from identifying the sectors which need to be involved in managing the environment. We also support the initiative to introduce payments for enhanced land management.

3.3 However, we feel that there could be more emphasis on the opportunities for different sectors to work together, or 'partnership working', and how to increase these opportunities. This is important since partnership working can increase both the finance available to carry out work and the outcomes of that work. This can be facilitated by clearly identifying the range of benefits that can be gained from a well-functioning environment and the sectors that need be involved in managing that environment.

3.4 This is particularly important in the light of the costs that the water industry already bears in relation to tackling the problems of the water environment. In general, where water industry investment is proposed, it must be supported by robust evidence and cost-benefit analysis, so that it is both affordable and acceptable to water customers.

3.5 We are pleased to note, therefore, the recent emphasis on cost benefit analysis that NRW is promoting in Wales. We look forward to continuing our involvement in developing the approach on this issue.

3.6 In general, we feel that water company investment needs to be prioritised and paced effectively to avoid the possibility of water companies, and their customers, incurring costs needlessly, especially where these are likely to create very sharp bill increases that will alienate customers.

3.7 For example, the section 'Pollution from sewage and waste water' refers to intermittent discharges from combined sewer overflows (CSOs). We agree that this is a potentially significant problem but we would like to see a proportionate response. Diffuse pollution, by its very nature, can come from a number of sources, so we feel that any investment requirements that are made of water companies, including the installation of event duration monitoring (EDM), should, in the first instance, be targeted at the areas where there is a high certainty that the pollution from those CSOs is causing a problem. Targeting the installation of EDM will help to keep the cost of the work to Dŵr Cymru reasonable and, therefore, limit the impacts on the company's customers. Evidence from this monitoring can then help to build a database of information to support further investment as necessary.

3.8 In general, it is vital for NRW to consider, wherever possible, how to implement sustainable measures, aimed at changing behaviour in the long term. Catchment management or agri-environment schemes focus on helping the agriculture sector to manage their fertiliser use in a way that avoids excessive pollution. These schemes can be more cost effective in comparison to 'end-of-pipe' treatment, which may be more costly in terms of funding and its impact on the environment.

3.9 To this effect, we would also support the introduction or development of measures that are aimed at ensuring that negligent, deliberate or persistent polluters contribute financially towards tackling the pollution that they are responsible for. The following examples are not exhaustive:

- To tackle pollution from chemicals – measures to improve enforcement of EU regulations on chemical use, pesticide and fertiliser management and management of leachate from landfill sites; and
- To tackle faecal contamination and sanitary pollutants – measures to ensure that small, private sewage sources are being correctly operated and maintained to prohibit polluting discharges.

3.10 In addition, more investigation is needed in some areas to identify the nature of the problem. For example, on 19th March, the Environment Agency held a chemicals stakeholder workshop. One of the outcomes of this was that there are a number of chemicals which may have a potentially significant detrimental effect on the ecological status of a water body but further investigation is needed to fully identify the causes, effects and remedies of these. More work is also needed to identify the interaction between groups of chemicals to understand how this impacts on water pollution.

4 Who should we work with to achieve the environmental outcomes?

4.1 It would appear that the membership of the WWRBD already contains most of the key partners for achieving environmental aims. The main problem appears to be maintaining the interest and enthusiasm of members. There are some sectors that are not strongly represented, such as local government and tourism and a major challenge must be to identify these groups and engage them in meaningful actions.

4.2 However it would seem appropriate to work with as wide a range of interested organisations as possible. There are already many successful catchment schemes in operation. The 'Love Your Lake' Scheme organised by Dŵr Cymru at Llyn Padarn in Gwynedd involves the whole community in measures aimed at improving the quality of the lake water. The NRW has already been involved in the Prosiect Pontbren which is a farmer led approach to sustainable land management in the uplands of Mid Wales. There are many examples of River Trust Schemes such as those on the Tywi, the Wye and Usk where collaboration has brought about an improvement of the river quality. In each of these examples there is a sharing of the costs of improvement and workload.

Cyfoeth Naturiol Cymru
Natural Resources Wales

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

5.1 There are examples of how significant issues affect the catchments of the WWRBD throughout its area and we shall refer to only a few examples to illustrate the nature of the problem and the successful work that has begun in improving water quality.

5.2 We have already referred to examples of how significant issues have affected the water environment in the Cleddau and Pembrokeshire Coastal Rivers catchment, namely the algal blooms on one of the reservoirs, Llysyfran and agricultural run off in periods of heavy rainfall on the bathing water beach at Amroth and how this has affected the mainly tourist economy of the area. Blue Flag status is a major factor in attracting tourists to a coastal resort and the loss of this status would be a major blow to the area.

5.3 In a similar way the septic tank regulation in many rural communities could have an effect on the quality of groundwaters which could flow into streams and rivers. Such is the case in Freshwater East, which also has a bathing beach. This type of problem needs to be carefully monitored throughout rural West Wales.

5.4 There are also physical modifications such as at Westfield Pill flowing into Milford Haven and these have had catastrophic effects on fish migration and breeding patterns. These features have obviously been located in the catchment and the problem now is to identify volunteers and funding sources to tackle the problem.

5.5 Pollution from towns and transport is also a concern, as rainwater running over man-made surfaces carries pollutants into streams. Such is the case in Llanelli in the Carmarthen Bay and Gower catchment. As in most towns surface run off is a problem, but in Llanelli, in the Stebonheath area of the town, Dŵr Cymru has developed its 'Rainscape' scheme to minimise the impact of surface water on the capacity of the sewer network as well as the environmental quality of the water environment. This is typical of problems in most towns and is the type of solution that should be more widespread. We think project like that should go a step further to remove excess surface water from public sewers.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

6.1 In general, we agree with the measures that are proposed but we would like NRW to reconsider some of the possible requirements on Dŵr Cymru and we would like to see more clarity about what the agricultural sector can do in some catchments, as follows.

6.2 In Clwyd, the document states that discharges from the water treatment works **probably** (our emphasis) contribute to phosphate failings. The benefits of any proposed works, such as installing or updating treatment works to tackle pollution, need to be in proportionate to the costs of that work. If there is uncertainty that the water company is to blame for the problems in the water environment, this could result in ineffective investment and customers bearing unacceptable costs. All sectors need to pay their fair share of the costs of tackling pollution, based on clear evidence of both what causes the pollution and the best way to addressing it.

6.3 In general, we would like to see a strengthening of the references to the wide range of measures that the agricultural sector could undertake. For example, there appears to be no specific mention of farmers in the Conwy and Ynys Mon catchments. Similarly, although agricultural land management is listed as a cause of pollution problems in the Lleyn and Eryri, there is no mention of how this sector will tackle the issue.

6.4 In addition, there are several references to 'encouraging best practice' by land owners. We feel the document would be more transparent if it referred to what this best practice related to or, if necessary, explained why certain measures might not be appropriate.

Enquiries:

For enquiries relating to this response, please consult [Wales CCWater]. Address as noted earlier.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name: B P Brown

Organisation and Sector: Murco Petroleum Limited – Industry and Commerce

Contact Details: bernard_brown@murphyoilcorp.com (01646 696483)

River Basin District Response for: West Wales River Basin District

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Please note that the response to this consultation is in the context of challenges and impacts on the "Refining Sector." It is clear from the evidence presented within the consultation that industry is having a minimal impact on the current, or potential, water quality across the River Basin District, rather than the reverse. The most significant issue for industry will be the cessation of the release of 'priority hazardous substances' beyond 2020, namely cadmium and mercury. It is unlikely that suitable treatment technology will be available by that time to remove all traces of these substances, and therefore a derogation is likely to be sought.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

The only relevant issue for Milford Haven Refinery would be from the release of ammonia into estuarine waters. However, the Refinery operates under an Environmental Permit and therefore all releases are controlled (i.e. set limit). It is considered that, under normal operation, releases from the Refinery are not significantly affecting the water environment, through how it is regulated. In relation to the impact from other activities (regulated or not) the Refinery is not in a position to comment, however, recognises excessive releases of certain parameters will affect the water environment.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

As indicated above, current and future releases of ammonia, and other pollutants, from the Refining sector are controlled under the Environmental Permitting Regulations (EPR). During 2014 the European Industrial Emissions Directive (IED) will be implemented. This will establish new emission limits for certain pollutants that will then need to be transposed into UK regulations. It is likely that some time in the future these restrictions will become fully aligned with the Water Framework Directive.

4 Who should we work with to achieve the environmental outcome?

To achieve environmental outcomes as highlighted above (i.e. transposition of European Legislation into UK Regulations and effective implementation within Industry) NRW need to effectively communicate with Industry. NRW also needs to

continue effective communications with the River Basin Management Plan Liaison Panels. This communication channel is considered to be the most effective way in identifying and dealing with the most significant issues at a catchment level.

Any activity / establishment that cause releases of pollutants should be considered by NRW as a potential group requiring communication.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

No comment.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

No comment.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes, however the visibility of hazardous and priority hazardous substances should be increased.

2 Is there any other information that we should be taking into account as part of the Assessment?

A link between the WFD and EPR needs to be established to ensure that the latest and most accurate data and information is used as input into assessments e.g. Pollution Reduction Plans

Dee River Basin District : Challenges & Choices - Consultation

Who We Are

The Inland Waterways Association is a registered charity, founded in 1946, which advocates the conservation, use, maintenance, restoration and development of the inland waterways for public benefit. We have over 17,000 members including 350 corporate members with a combined membership representing a voice of well over 50,000 people supporting and involved with the inland waterways. IWA works closely with navigation authorities, national and local authorities, voluntary, private and public sector organisations. We campaign and lobby for support and encourage public participation in the inland waterways. IWA also manages the Chelmer & Blackwater Navigation for the public benefit, through its subsidiary Essex Waterways Ltd, having stepped in to prevent its closure in 2005.

Consultation questions :

1 What do you consider to be the biggest challenges facing waters in the Dee River Basin District?

Although the health of the water bodies is reported to have improved by 2% since 2009, which is welcome, this rate of clean-up is far from sufficient. Specifically taking into account the NRW target to improve water health by a further 20% in 2 years. Urgent and positive measures need to be taken to reduce the levels of pollutants across the board.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? *Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.*

IWA agrees with the definitions of significant issues presented and considers Pollution from Sewage & Waste Water specifically.
The registration of private sewage treatment systems is welcomed however the focus on enforcement of standards rather than provision of guidance should be a priority.
Similarly stronger enforcement of agreed standards by the existing failing commercial water treatment agencies should become a priority.
e.g. A recent fine of approx £8,000 imposed on “South West Water” for failing to report a serious problem does seem to be rather low considering this organisation posted a profit of £83 Million.

3 How do you think these issues should be tackled, and what would you choose to do first? *Please specify which issue(s) your response refers to. Please consider any resource limitations.*

The increase in serious water pollution incidents, which doubled in 2011, must not be allowed to continue. IWA would expect to see the imposition of significant fines on such authorities failing to meet the Water Framework Targets. At least in the short term, the revenue gained for these higher fines may alleviate expenditures elsewhere to reduce water pollution as reported in the NRW list of significant water issues.
In terms of monitoring and consequential reduction of incidents, the use of intelligent telemetry solutions, rather than manual abstraction and testing, to detect such pollution events must be considered essential in establishing cost effective enforcement methods.

Pollution from rural areas
IWA welcomes the close relationship NRW have with farmers and agricultural agencies to minimise the impact of excessive nutrients pesticides and herbicides contained in run off from their premises. Given the continuing emphasis on farm productivity which may have contributed to poor environmental practices, this issue deserves specific monitoring and vigilance.

Pollution from mines
Given the proliferation of mining in the area and subsequent decline of this industry, we recognise that a sustainable solution to this legacy is difficult and expensive. It is also recognised that a significant pollution legacy exists, currently contained, in quarries and other toxic dumping sites. e.g. Rhos Brick & Clay Quarry.

4. Who we should work with to achieve the environmental outcomes?

The proliferation of multiple management and quasi Governmental agencies does not contribute to the cost effectiveness or application of essential solutions in this water environment. Often we know what the solution is but cannot bring effective resources into play due to externally generated issues such as cross border management, departmental budget constraints and short term funding reductions. Recent changes to the governance and management of the Dee Basin seems to have led to a step back at a very crucial time when perhaps progress on a more sustainable funding plan for the long term projects would have been more appropriate.

The IWA has always advocated the establishment of a UK wide Waterways Conservancy which includes EA waters. This policy has many advantages as the longer term solutions needed for improving the health of rivers and waterways demand long term funding commitments that are not subject unplanned cuts in Government expenditure brought about by unrelated circumstances outside the control of the EA.
A Waterway Conservancy, as a charitable trust, is also able to mobilise alternative funding streams that are currently not open to the Governmental agencies and EA .
The integration of EA waters with the recently established Canal & River Trust would be an ideal model for management of EA Waterways, providing long term funding, economies of scale and wider opportunities for fund raising.

IWA recognises the cost and scale issues faced in the River Dee Basin District and recommends stricter enforcement of agreed standards with private and commercial sewage treatment agencies.

IWA welcomes the focus on reducing and containing leakages of toxic materials from disused mine workings, however, the authorities are urged to continue to use suitable drain and dispose solutions at known, existing and contained, toxic sumps. In addition, by identifying suitable contractors who may utilise such materials for recycling. (e.g. lead and tar by-products), the cost of disposal can be offset.

5. How are the significant issues in the Dee catchment affecting the water environment and the local community ? *Please provide relevant information to help explain your answer.*

The IWA considers the levels of pollution originating from the catchment area as the the

most significant issue. This must be given urgent attention. The fact that 29 water bodies currently fail to reach the minimum required standards as a result of waste water treatment plants failing to comply to standards is far from acceptable and direct action must be urgently taken to enforce agreed standards.
Also the reported 19 affected water bodies which suffer due to agricultural practices associated with cattle farming need specific attention. A focus on enforcement of best practices rather than simply giving advice is to be encouraged.

6. How do you think the challenges affecting the catchment should be tackled and what would you choose to do first ? *Please consider any resource limitations.*

The IWA support the catchment approach taken by the EA where local partnerships are empowered to reduce their impact on the water quality which ultimately flows into the natural environment.

The IWA has recently presented a vision for the Waterways of Chester which are not currently exploited as an interlinked system. With a little imagination, the waterspace and its surroundings could be the focus for major regeneration around water-based activities as has been done elsewhere in the UK and Europe. As a driver for change and regeneration this vision can only benefit the whole River Dee basin.

Increased involvement with the community and specific interest groups is to be encouraged. The IWA has been involved in many waterway regeneration projects where it has consistently been proven that increased involvement with the local communities is the key to success. By encouraging waterway users to the area for boating, paddle sports and other leisure activities this positively focuses the local interest groups fostering more ownership in promoting and improving their waterway environment.

The encouragement of a sense of ownership of the waterspace and its catchment area brought by local boaters, canoeists, fisherman, walkers etc. always leads an overall increase in interest by the whole community who eventually become supporters and volunteers willing to assist in keeping the waterway clean and tidy.

In a catchment area where the community is empowered and shows a sense of ownership, the state and quality of the waterway becomes a subject for discussion where previously there was little support and debate. Such organisations and individuals failing to comply to agreed standards may find it much harder to ignore the agreed standards and practices, when the focus on water and environmental quality is led by the community.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name Eddie Wilkinson

Organisation and Sector Rossett & Gresford Fly Fishing Club

Contact Details

River Basin District Response for Dee River Basin

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

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Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

a) Invasive non native species – Himalayan Balsam
b) Introduction of Triploid Brown Trout to rivers

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

a) Physical modifications – Natural Resources Wales does not seem to follow it's own guidelines. A recent development at Rossett Mill on the River Alyn where earth burms were put in, without consent, were allowed to remain despite flooding problems for the local residents. A study by Natural Resources Wales indicated it would not substantially affect the flood waters entering the designated flood plain ? 2012's floods proved this information flawed. Still the earth mounds remain ? This issue was discussed at the local Council meeting in November 2013 with Natural Resources Wales in attendance.

b) Pollution from sewage & waste water - As Natural Resources Wales are aware there is a court case pending over this issue where Natural Resources Wales have failed to force water companies to clean up their act & remove pollutants from entering water courses. More must be done to halt non compliance from water companies. More court cases should be publicised with any fines coming out of water company profits not the rate payers.

c) Pollution from rural areas – More work is needed to educate Farmers & the Forestry on how this can be achieved. Fully implement the "buffer strip" & where livestock are near water courses make "fencing" a condition for the land.

d) Pollution from mines – Mine workings & slag heaps also need to be considered & monitored, due to their unstable nature. It took two years for the EA as was to respond & repair a section of the River Alyn at Worms Wood.

e) Invasive non native species – The biggest threat to bankside erosion on the Dee & its tributaries is Himalayan Balsam. It is a constant threat as there is always more appearing despite "local" removal. It only takes one part of the river to be missed for a season to start the spread again. This will require ongoing effort.
One hopes that Natural Resources Wales has a full time training & resource team in

place ready to give advice & training to all voluntary groups.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

a) Tighten up control & enforce infringements.
b) Take on the water companies if there is non compliance
c) Have a full time training & information group. Get out & talk to Farmer & Foresters
d) Speed up response to incident repairs
e) Have a full time training & resource team in place ready to give advice & training to all voluntary groups.

4 Who should we work with to achieve the environmental outcome?

Water companies, voluntary groups, Farmers, Foresters, land owners & the Welsh Assembly

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

See question 2a. - Flooding & the lack of action by Natural Resources Wales, also the lack of communication between NRW & local councils over flood problems i.e. who does what & when.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Dee catchment

Flood Risk must come 1st Listen more to local people who have “local” information & knowledge, do not put all reliance in “desk top studies”. Control Himalayan Balsam before it creates an unstable river bank system

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

No – Too much talk not enough response

2 Is there any other information that we should be taking into account as part of the assessment?

Local input

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices

Written Consultation Response

Name	Paul Roberts
Organisation and Sector	Consumer Council for Water, representing water customers
Contact Details	**01829 270013**
River Basin District Response for	Dee RBD

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues - Overview of CCWater response

i. We agree with the NRW's overall approach towards developing a programme for tackling the problems facing ~~Western Wales~~ Dee River Basin waters under the Water Framework Directive (WFD). However, for this to be effective, we consider it is vital to consider the measures within the context of all three rounds of river basin planning.

ii. In particular, we would like NRW to have regard to the following:
- Appropriate allocation of responsibilities and costs - encouraging sectors other than the water industry to tackle problems in the water environment that they are responsible for, including improving enforcement where appropriate;
- Acceptability and affordability - what water customers are willing to pay for in the future, especially in the light of other pressures on their income and the prevailing economic climate; and
- Value for money - making sure that, wherever possible, the measures are sustainable and will help to reduce future water pollution, and subsequent costs of tackling this.

iii. We believe that the best way to achieve this is for NRW to consider measures that will actively encourage other sectors to recognise their responsibilities and get involved in tackling the problems. NRW should also encourage the appropriate pacing of improvements.

iv. In addition, it is important to present information in a clear and transparent manner to encourage the public to engage with the issues. Our response to specific questions follows.

1 What do you consider to be the biggest challenges facing waters in your River Basin District?

1.1 We consider that one of the biggest priorities is to make sure that sectors other than the water industry are involved in tackling water pollution that they are responsible for and that they bear an appropriate proportion of the costs of doing this. During the first round of river basin planning Dŵr Cymru's water customers bore the majority of costs arising in the Dee River Basin District (DRBD) even though other sectors shared responsibility for many of the problems[1].

1.2 For example, evidence from the Environment Agency[2] (prior to it becoming NRW) suggests that the agriculture sector is responsible for 40-45% of phosphorous pollution in Wales. During the first round of river basin planning, however, the sector in Wales contributed less than 1% of the costs towards tackling phosphorous pollution. Although

[1] Environment Agency (2008) – Impact Assessment accompanying the Dee River Basin Management Plan.
[2] http://www.geostore.com/environmentagency/Phosphorus_Evidence_Base_v2_1_external.pdf

we recognise that agricultural schemes for tackling this type of pollution tend to be lower cost than water industry schemes, there is growing evidence that the agriculture sector can contribute effectively towards mitigating the levels of phosphorous in the environment. Therefore, we consider that NRW should review how the sector can increase its contribution in this area.

1.3 It is particularly important that other sectors take responsibility since, in the future, there is likely to be an increased burden on water companies to ensure that the quality of the water environment does not deteriorate, which is a mandatory requirement under the WFD. Since the water companies' business plans will be constrained by what water customers are able to pay, there may be less money available for water companies to invest in the schemes that fall outside this criterion. Hence, there will need to be a broader range of measures for other sectors and there will need to be greater input from them if desired improvements are to be met.

1.4 We explain how we feel that these issues should be tackled further below.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

2.1 Broadly speaking, we agree that the relevant issues have been identified.

2.2 On a presentational point, we feel that the descriptions of how the significant issues are affecting the water environment and society would be enhanced by a table outlining the impacts, which sector would be affected by them and the scale of the impact. It may also be useful to add further detail on how each issue is managed now and the possibilities for further action in the future.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

3.1 We consider that the main priority should be encouraging sectors other than the water industry to play their part.

3.2 To this effect, we support the emphasis on implementing measures at a catchment level. There are already successful examples of effective catchment level actions in Wales and we would support any decision to extend these. This can be an effective way to attract investment from a range of sectors. In the same way, an ecosystem approach will help to identify the range of benefit to be gained from identifying the sectors which need to be involved in managing the environment. We also support the initiative to introduce payments for enhanced land management.

3.3 However, we feel that there could be more emphasis on the opportunities for different sectors to work together, or 'partnership working', and how to increase these opportunities. This is important since partnership working can increase both the

finance available to carry out work and the outcomes of that work. This can be facilitated by clearly identifying the range of benefits that can be gained from a well-functioning environment and the sectors that need be involved in managing that environment.

3.4 We feel that this is particularly important in the light of the costs that the water industry already bears in relation to tackling the problems of the water environment. In general, where water industry investment is proposed, it must be supported by robust evidence and cost-benefit analysis, so that it is both affordable and acceptable to water customers.

3.5 We are pleased to note, therefore, the recent emphasis on cost benefit analysis that NRW is promoting in Wales. We look forward to continuing our involvement in developing the approach on this issue.

3.6 In general, we feel that water company investment needs to be prioritised and paced effectively to avoid the possibility of water companies, and their customers, incurring costs needlessly, especially where these are likely to create very sharp bill increases that will alienate customers.

3.7 In general, it is vital for NRW to consider, wherever possible, how to implement sustainable measures aimed at changing behaviour in the long term. Catchment management or agri-environment schemes focus on helping the agriculture sector to manage their fertiliser use in a way that avoids excessive pollution. These schemes can be more cost effective in comparison to 'end-of-pipe' treatment, which may be more costly in terms of funding and its impact on the environment.

3.8 To this effect, we would also support the introduction or development of measures that are aimed at ensuring that negligent, deliberate or persistent polluters contribute financially towards tackling the pollution that they are responsible for. The following examples are not exhaustive:

- To tackle pollution from chemicals – measures to improve enforcement of EU regulations on chemical use, pesticide and fertiliser management and management of leachate from landfill sites; and
- To tackle faecal contamination and sanitary pollutants – measures to ensure that small, private sewage sources are being correctly operated and maintained to prohibit polluting discharges.

3.9 In addition, more investigation is needed in some areas to identify the nature of the problem. For example, on 19th March, the Environment Agency held a chemicals stakeholder workshop. One of the outcomes of this was that there are a number of chemicals which may have a potentially significant detrimental effect on the ecological status of a water body, but further investigation is needed to fully identify the causes and effects of these and the actions needed to tackle them. More work is also needed to identify the interaction between groups of chemicals to understand how this impacts on water pollution.

Cyfoeth Naturiol Cymru
Natural Resources Wales

4 Who should we work with to achieve the environmental outcome?

4.1 It would appear that the membership of the RBD already contains most of the key partners for achieving environmental aims. The main problem appears to be maintaining the interest and enthusiasm of members. There are some sectors that are not strongly represented, such as tourism, and a major challenge must be to identify these groups and engage them in meaningful actions.

4.2 We believe that it is important that CCWater continues to contribute in this area. We meet with water companies and other stakeholders on a regular basis and, where appropriate, encourage parties to find cost effective ways to tackle problems, including sharing best practice. We also have a role in informing water consumers on water issues – their rights and responsibilities and the challenges facing the sector. We can continue to help raise awareness and encourage consumers to play their part. We will also continue to ensure that consumers are given a voice in the discussions at RBLP meetings.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

5.1 We have no comment on this.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

6.1 In general, we agree with the measures that are proposed but we would like to see more clarity about what the non-water industry sectors can do about failure to meet water quality standards. In the section on the Dee catchment, the consultation says that private wastewater treatment plants, septic tanks and industry are responsible for 18 water bodies failing to meet water quality standards and that discharges from the water industry are causing a further 11 water bodies to fail to meet the required standards. However, while the actions required of Dŵr Cymru are explained, the actions that other sectors will take on this pollution are not. We feel that further clarity on this point, or investigation if necessary, would signal a commitment to encouraging other sectors to play their part.

Dŵr Cymru
Welsh Water

Pentwyn Road
Nelson
Treharris
Mid Glamorgan
CF46 6LY

Tel: +44 (0)1443 452 192
Fax: +44 (0)1443 452 332
Web site: www.dwrcymru.com

Heol Pentwyn
Nelson
Treharris
Morgannwg Ganol
CF46 6LY

Ffôn: +44 (0)1443 452 192
Ffacs: +44 (0)1443 452 332
Safle gwe: www.dwrcymru.com

Jill Brown,
Natural Resources Wales,
Ty Cambria,
29, Newport Road,
Cardiff,
CF24 0TP

11th December 2013

Dear Jill,

DEE RIVER BASIN DISTRICT: CHALLENGES AND CHOICES

Thank you for consulting on your summary of significant water management issues (SWMI) in relation to the Dee River Basin District (RBD). Dŵr Cymru was also very grateful to be given the opportunity to discuss the draft SWMI with Natural Resources Wales (NRW).

These comments are from Dŵr Cymru Welsh Water, the statutory water and sewerage undertaker that supplies over three million people in Wales and some adjoining parts of England: our supply area includes the Dee River Basin District (RBD). We are owned by Glas Cymru, a single purpose, not-for-profit company with no shareholders. We provide essential public services to our customers by supplying their drinking water and then carrying away and dealing with their wastewater. In this way we make a major contribution to public health and to the protection of the Welsh environment. Our services are also essential to sustainable economic development in Wales.

The SMWIs are an important stage in the statutory processes to deliver the EU's Water Framework Directive (WFD). Forming part of the Directive's provisions on public participation, SMWIs are intended to encourage a debate about the priorities for each RBD.

Dŵr Cymru continues to play an active role in the Dee WFD Liaison Panel which provides a useful forum for co-delivering sectors to identify and offer their perspectives on the significance of issues that are relevant to the District. As part of the SMWI consultation exercise, Dŵr Cymru understands that NRW intends to organise a series of catchment workshops, including one about the Dee, to try to encourage a wider cross section of local interests to share their knowledge and ideas. We think that these sessions could be very worthwhile and, for example, help to 'ground truth' assumptions made about the priorities and costs of remedial action. Dŵr Cymru hopes to be able to attend at least some of these workshops.

We agree that all water management issues identified in your consultation paper are significant.

In terms of issues of particular relevance to our company, we are pleased that the section about 'Pollution from Sewage and Waste Water' recommends that NRW and Dŵr Cymru should work together to decide which environmental schemes should be undertaken, while also trying to ensure that water bills are kept affordable for our customers. We also very much welcome the recognition given to the Dee's importance as a source of drinking water for some three million people in Wales and England: the need to maintain this key ecosystem service must be prioritised in the draft River Basin Management Plan (RBMP) that NRW and the Environment Agency will publish next year.

Dŵr Cymru acknowledges that some of our activities have an impact on WFD compliance. We note, for example, that the supporting "Facts and statistics" document confirms that point source discharges contribute to 19 WFD failures (the main SWMI consultation refers to water industry discharges causing 11 failures) while flow problems contribute to 9. These figures are put into their proper context when compared with the 23 failures attributed to rural pollution (19 according to the main document) and the 33 failures attributed to physical modification. In working toward the achievement of good status in the RBD we hope that NRW and the Environment Agency - and their respective Government sponsors - will be mindful of the 'polluter pays principle' that is enshrined within WFD and that there will be no suggestion that our customers should help meet the costs of remedying poor practice by others.

To put it another way, it is generally acknowledged that the first RBMPs placed a disproportionate burden on the water and sewerage sector because of an absence of effective mechanisms to ensure that other sectors reduce their impact. We would certainly not want our sector to be expected to do more than its fair share during the second cycle.

The burden placed on various sectors should even-handed, reflecting robust evidence of the extent of their impact and applying the most cost effective measure to enable them to resolve the problem.

Our other main concern about the consultation paper is that it underplays some issues that we regard as potentially very significant.

Of these, the one that concerns us most is the implication of Protected Areas for the Dee RBD, particularly Natura 2000 sites. As the SWMI notes on page 10, "*Protected Areas are a priority for action to make sure they meet their statutory conditions*" and "*Almost all of the Dee's water are designated under the EU Habitats and Birds Directives, or require management that is consistent with those Directives*." Making progress toward bringing the relevant Natura 2000 waterbodies up to Favourable Conservation Status (FCS) during the next cycle would be a major win for the District's aquatic environment and for the biodiversity that relies upon it. But the challenge that will represent should not be underestimated, particularly as there will be limited availability of the WFD's derogations.

We are also awaiting clarity of the standards that will be applied to shellfish Protected Areas after this month's repeal of the Shellfish Waters Directive.

Like those needed to deliver Protected Area objectives, measures to ensure 'no deterioration' of waterbodies will not be subject to cost/benefit analyses.

The danger is that the SWMIs identified in the consultation will become largely unaffordable and/or disproportionate for some groups – including our sector and for NRW itself – because meeting Protected Area and 'no deterioration' obligations will exhaust most of the finite funds available.

This could be compounded if tougher standards, particularly UKTAG's proposals relating to phosphorus and biology, are adopted – another issue on which the consultation paper is silent. Recent research that Dŵr Cymru has seen suggests that the recommended standards would result in additional waterbody failures in the Dee RBD. The SWMI consultation would have been an ideal opportunity for NRW to test whether there is an appetite to move the goalposts in advance of the second cycle, with the implied additional failures.

Given how advanced we are in terms of planning for the WFD second cycle, as well as AMP6 Business Planning within the water industry, it is unhelpful (to say the least) that the some of the standards that will be applied during the second cycle – e.g. for phosphorus and shellfish waters - remain undecided. Depending on the standards that are eventually set, they could in themselves represent significant water management issues.

Heavily Modified Water Bodies (HMWBs) account for a significant proportion of water bodies in the Dee RBD. Another area of continuing uncertainty for Dŵr Cymru relates to how regulators intend to interpret some of the relevant WFD provisions, for example what would constitute 'significant adverse effects' on the waterbodies' uses (WFD Article 4.3(a)). Depending on the interpretation, delivering good ecological potential could be another SWMI for the Dee RBD.

Private drinking water supplies have hitherto been largely ignored in RBMP processes, but the number of large supplies (485 in North Wales according to the Drinking Water Inspectorate[1]) suggests that more Protected Areas and safeguard zones may be needed. In looking ahead to the next RBMPs, it would have been helpful if the SWMI had flagged up this significant issue and confirmed where responsibility for delivering compliance with WFD will rest.

We would also have liked the SWMI to have included an explanation of the lessons learnt from the first cycle of the WFD. The document does not tell us how many of the measures in the first RBMP have been implemented, how effective they have been (noting that biology takes time to respond) and how much those measures have cost. This important information needs to be in the public domain before the next Programme of Measures is formulated so that those who will have to bear the financial burden for delivery have the opportunity to comment and suggest better, more cost-effective alternatives. For example, information on the costs and benefits of some of the 'softer' approaches to improving waterbodies, such as those that have been carried out by the eNGO sector, could have been very useful when analysing the cost and benefit of alternative ways of enhancing waterbodies.

Particularly given the economic climate, the need to prioritise cost effectiveness, affordability and proportionality are themes that must inform the next RBMPs.

For example, many waterbodies fail for multiple reasons: how best to bring them into compliance is an overarching significant water management issue that should be considered in more depth. If improvements are to be cost-effective and worthwhile, all the pressures on a water body should ideally be tackled within the same cycle. It would not be good value for money for our customers – nor would it be fair - if phosphorus permits for some wastewater treatment works were tightened but nothing was done to address nutrients from other sources. Our customers would get much better value if their investment formed part of a concerted effort to tackle all the pressures facing a given water body (including minewaters, barriers to fish passage etc) so that their expenditure would contribute to buying good status by the end of the cycle. In its RBMPs, NRW might want to highlight this as an advantage that, at its best, the catchment approach can help deliver.

Following on from that, it would have been useful if the SWMI had sought views on the overall level of ambition for the achievement of good status in the Dee RBD by the end of the second cycle. The current economic climate is likely to influence opinions on what is achievable and affordable by 2021: this is a significant issue that should be aired. Before it prepares the draft second cycle RBMPs, NRW and the Agency should encourage a wider public debate on the extent to which the challenging economic backdrop should inform its disproportionate cost assessments and, in turn, the use of alternative objectives – this is an issue that could be usefully explored at the workshops being planned by NRW.

[1] Figure for large supplies and any size supply used in a business or public building; see "Private water supplies in Wales, July 2013, A report by the Chief Inspector of Drinking Water"

As a business that naturally plans for the long term we think it is important that, as we enter the next planning phase, we should look even further ahead to what we will need to achieve in the third cycle of WFD when we are likely to face the most difficult and intractable challenges posed by the WFD.

I hope this response will help you in scoping next year's draft RBMP. As always, Dŵr Cymru would be very happy to explore these issues with you or your NRW colleagues.

I am copying this letter to Water Branch in the Welsh Government for their information.

Yours sincerely,

Tony Harrington
Director of Environment

Email: tony.harrington@dwrcymru.com

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Names-- Dr Richard Lucas, Dr Ken O'Hara and Dr David Cragg-Hine

Organisation and Sector- The Welsh Dee Trust, 3rd Sector

River Basin District Response for River Dee

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

We feel that the correct issues are listed in the summary of significant water management issues for the river Dee, but with the following omissions

i) We feel flow problems should be included.

It is included in the list of every English River Basin District.

As a reason for water bodies failing Problems with flow ranks 5th, in numerical terms, (after excluding Natural conditions) for the Dee. However, because problems with flow result in problems with connectivity for migratory fish, their importance is disproportionately higher. This is of great importance when considering that much of the river Dee is an SAC for which Atlantic Salmon is listed as one of the features and for which it has been determined as being in unfavourable condition. This is one of the reasons why the River Dee SSSI Management Report was undertaken.

River Dee SSSI Management report

The executive summary does not give any comments regarding the effects of flow and regulation. When we questioned the consultants about this omission, they replied that they had been told not to consider flow the effects of flow and regulation. However, within the Technical report the following comments are made-

Section 6.
It is clear that flow regulation can potentially have adverse downstream impacts on species. For example a SNIFFER (2012) study describes the ecological indicators of the effects of abstraction on flow regulation in a series of conceptual models. There are many studies over the past five decades describing impacts of altered flow regimes on hydraulics and morphology and in turn on macroinvertebrates, fish and macrophytes. However, this Restoration Vision is directly concerned with morphological impacts and only considers flow regulation as a baseline condition rather than consideration of mitigation actions such as optimisation of flow releases from water storage.

Section 7.3
The principal morphological pressures that were identified from the field surveys can be grouped into six categories:
1. Flow regulation resulting in reduced flood peaks and increased low flows, thus a smoothing out of the expected natural flow duration curve that would allow for the full natural range of geomorphological processes to occur (e.g. reduces proportion of time in the year there are high scouring flows)
2. Installation of structures (bank reinforcement, weirs and embankments) which prevent natural adjustment and floodplain connection
3. Modifications to channel planform and cross-section (primarily through channel straightening in some reaches)
4. Poaching and degradation of the riparian zone leading to accelerated bank

erosion rates and reductions in marginal shelter and shading
5. Routine maintenance activities (e.g. dredging) to promote an artificial channel morphology
6. Tree clearance and debris removal

Section 7.32
The key pressure on the main stem River Dee is the regulated flow regime. The main geomorphological impacts of this are evident in the Dee meanders and in the lower tidally influenced section of the Dee where a discontinuous berm has formed below the natural bank top from fine sediment dropping out and narrowing the channel (Changxing et al. 1999). Despite this, the Dee meander reach has been classed as being in favourable condition for geomorphology. Aside from flow regulation, the main morphological pressures are the major weirs by the Trywerryn confluence, Horseshoe Falls, Manley Hall and Erbistock, which are likely to restrict upstream migration of fish and lamprey.

Section 7.4
Flow regulation needs to continue as it is a means to public water supply and also flood control. For the purposes of this project the licensed abstraction is taken as a given pressure. However, it may be that improvements can be made to the outflow regime of each reservoir to bring them in line with the natural flow regime of the river. This would perhaps bring back (at least in part) the geomorphologically and ecologically important flow variations that would have been naturally present preimpoundment.

For the above reasons, in addition to information given later in this response, we feel that flow problems should be included in the list of significant water management issues in the Summary of significant water management issues.

ii) A further issue which we would like considered is future Hydrpower schemes within the SAC on the Dee.

Key Messages(in section 3.5)from the Living North Sea Project included
1)-"Each member state should identify "no go areas" for any hydropower development . These restrictions should take into account European designations such as Nature 2000 sites, protected species, water resource availability, WFD classifications and locally important habitats"

2) The legacy cost of a hydropower installation should be considered as a part of development plans. Decommissioning hydropower facilities should be the financial responsibility of the licence holder/operator.

3) Hydropower licenses need to be time limited, to allow for changes to, mitigation or revocation of permits if the site is found to be environmentally damaging. Agreed funded environmental monitoring plans need to be in place before construction or operation of the scheme.

We would like due regard taken to these recommendations when considering hydropower applications, particularly on such sites as Erbistock and Chester Weir, within the SAC

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

With Regard to <u>Physical Modification</u>, please see
a) Comments on Hydropower in answer to the Question 1
b) Comments on the Dee SSSI report in answer to Question 1
c) Comments on the Turnpenny Horsefield Associates report below.

<u>Flow and Regulation</u>-

(Background)During the consultation round for the previous phase of the River Basin Plan (2009) we were concerned that this was not included in what was then called a list of "Significant Pressures" on the river Dee. However, as a result of our lobbying, we were invited to discuss with EAW (as it was then) regarding implementation of some of the recommendations of the APEM report in1998-"An Investigation into the impact of flow and regulation on fisheries of the river Dee" These discussions did result in some agreement of how special releases could be used to try to help salmon migration out of the estuary into the river, during periods of prolonged dry weather. We were grateful for these discussions and dialogue and hope that they will continue as the situation is monitored.

In addition, we now have concerns regarding the effects of pulsed 9 cumec releases from Celyn down the Treweryn and the effect on sediment movement, smolt migration, adult salmonid migration and deterioration of spawning habitat within the Treweryn. There has a recent investigation into Llyn Tegid sluices by Turnpenny Horsefield Associates (April 2013). This report discusses some of these issues under section 3 and then summarises them in section 7 including

Reverse flow from the Celyn into Llyn Tegid is likely to kill around 90-100% of smolts which are impacted by the condition. Smolts from the Celyn are especially unlikely to be able to get out of Llyn Tegid once they have entered the lake and most will be killed by predatory fish (predominantly pike (Esox lucius)) and birds. Smolts from other areas which drain into Llyn Tegid are unlikely to be so heavily impacted by the reverse flow events, although predation is likely to be high in Llyn Tegid in all cases.

The flows in the approach area of the sluices are sub-optimal for direction of smolts to the safest passage through the fish lock. They will find it difficult, in most flow conditions, to find the entrance to the fish lock because through-flow is too small and the lock is positioned in the centre of the structure.

In addition, the other findings need to be considered under the issue of Physical modifications

3)How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

With regard to flow,**we would like to see review of the findings (section 3) and the full implementation of the recommendations of the above Turnpenny Horsefield Associates report (section 8) along with conducting the proposed tagging study (section 9)**

In addition, we would like to see a study undertaken to see if the recommendations, referred to in *WFD 21D Sniffer (2012)- Ecological indicators of the effects of abstraction and flow regulation; and optimisation of flow releases from water storage reservoirs*-can be applied to the section of the catchment from Celyn down the Treweryn , including Llyn Tegid and its tributaries, and to include the Llyn Tegid Sluices.

With Regard to Physical modifications **we would like to see the full implementation of the recommendations of the Dee SSSI Restoration report.**
In addition, we would like to see the key messages from the Living North Sea Project applied when considering hydropower schemes within the Dee Catchment.

4) Who should we work with to achieve the environmental outcome?

Through adopting a catchment based approach, all possible local stakeholders should be involved. The Welsh Dee Trust has already been appointed to host this process for the Tidal and Middle Dee Catchments, and has already held key partners meetings and stakeholder workshops. While currently the funding to do this is coming from DEFRA via the Environment Agency, we are continuing to involve all NRW and all appropriate Welsh Stakeholders within those catchments. We are keen to clarify how NRW sees the process being carried out for the Welsh part of the Upper Dee Catchment, hoping that their plans dovetail with what the WDT and our partners are trying to set up in the lower part of the catchment.

Through catchment partnership working, we see a role for the WDT in delivering projects that help remedy Water Framework Directive failures, maintain the features of the SAC and deliver the proposals listed in the Dee SSSI Report. We are actively seeking the support of NRW in building our capacity to best meet these aspirations.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

See Previous answers. Many correct details are already given in the Challenges and Choices documentation, but we feel the following additional comments are valid.

The issues with flow are contributing to a decline in salmon stocks and failure to reach the conservation target

.

Invasive species.

Although the DINNSP is now bringing a catchment coordinated approach to the management of Invasive species, there is a need to engage more of the general public in the problems that they pose.-eg the difficulty of getting mortgages on property close to stands of Japanese knotweed. Only with wider community based involvement can we build on the work being done by anglers and other voluntary groups throughout the catchment. Hence the importance of awareness events such as Big Dee Day The Invasion which need greater support.

As the Dee is a single catchment river basin district, all the above comments refer just to the River Dee Catchment

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

1)Removal of all weirs without function within the catchment (eg. Erbistock Weir)

2)Implement studies to assess whether current weirs used for gauging can be replaced by structureless gauges-see guidance from-

Guaging Structure Replacement or Removal-River Restoration Centre 2013

Eg. Could Manley Hall weir be replaced by structureless gauging on Penylan Footbridge?

3) Collate all information from walkover surveys recently and adequately conducted, then arrange for programme of walkovers for waterbodies that have not been adequately surveyed. These surveys should involve combining people from various organisations-eg agencies/rivers trusts/wildlife trusts/woodland trusts. This approach could then lead to combined projects that address multiple problems at the same time-ie a "total waterbody makeover" rather than addressing one single issue like fish passage or mapping of Himalayan balsam.

4) Carry out riparian and tree planting schemes as suggested in Dee SSSI Restoration plan.

5) The following paragraph is taken from the *Living Water for Wales Document* and specifically mentions the issues concerning flow-

NRW is working with impoundment owners and operators to assess impacts and possible mitigation measures such as: removing redundant structures, re-engineering structures to allow more natural sediment transport patterns, ***altering water release patterns to improve the downstream habitat,*** *and restoring in channel habitat to mitigate the impacts of impoundments.*

The Welsh Dee Trust particularly looks forward to consulting with and assisting where possible in these processes.

We have limited our response to catchment specific issues. We know that colleagues from Afonydd Cymru have responded to more general issues with regard to West Wales River Basin District. Many of their comments equally apply to the River Dee Catchment and we would like them to be considered within the River Dee River Basin District Management Plan

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes for the most part. However we would like to see our suggestion regarding flow problems considered and also refer to the points raised in Afonydd Cymru's response to the West Wales River Basin District Challenges and Choices consultation Document.

2 Is there any other information that we should be taking into account as part of the assessment?

The following documents should be added to Appendix A and be taken into account-

APEM report in1998-"An Investigation into the impact of flow and regulation on fisheries of the river Dee"

WFD 21 Sniffer (2012)- Ecological indicators of the effects of abstraction and flow regulation; and optimisation of flow releases from water storage reservoirs

Guaging Structure Replacement or Removal-River Restoration Centre 2013

Living North Sea-reconnecting the North Sea-Innovative solutions for fish migration. Final Conference Project Overview 2012

Llyn Tegid Sluices-Turnpenny Horsefield Associates for EA April 2013

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name: ***Gareth Lloyd***

Organisation and Sector: ***Snowdonia National Park Authority***

Contact Details: ***Gareth.Lloyd@eryri-npa.gov.uk***

River Basin District Response for ***Western Wales/Dee***

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Diffuse pollution from agriculture/forestry operations e.g. track construction, landfilling with imported wastes, felling operations, land drainage, flood defences.

Temporary storage/disposal of spoil from road improvement schemes e.g. A470 at Gelligemlyn where tipping on floodplain within SAC has occurred.

Invasive species – biodiversity reduction.

Proliferation of small-scale hydro schemes leading to modifications to water courses and potential for impacts on sediment transport, ecology etc.

***Minewater discharges e.g Gwynfynydd (Mawddach), Parc Mine, Pool Adit (Conwy/ Llugwy*).**

Increasing access for recreation e.g. wild swimming, non-motorised watersports.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Broadly yes, the significant issues in the National Park, which are identified in response to Q.1, are adequately summarised in the Consultation Document

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

Through a multi-agency approach to target specific issues, working to agreed targets/ objectives with shared resources.

4 Who should we work with to achieve the environmental outcome?

Welsh Government

Local Authorities

DwrCymru/WelshWater (or other relevant utilities)

Landowners (including farmers)

Local Communities

Voluntary organisations

Interested individuals

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Legacy of metal mining in some parts of the Snowdonia National Park (Mawddach, Conwy.)

Diffuse pollution from agriculture and forestry operations have led to algal blooms in Llyn Tegid in the past (Dee).

Diffuse pollution from small sewage works.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Some initiatives e.g. Metal Mines Strategy already in place which is prioritising worst discharges. (Mawddach, Conwy).

Provision of advice/information to agriculture and forestry sector regarding diffuse pollution – Catchment Sensitive Farming Scheme trialled in Llyn Tegid catchment. (Dee).

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes.

2 Is there any other information that we should be taking into account as part of the assessment?

No.

Dŵr Cymru
Welsh Water

Pentwyn Road
Nelson
Treharris
Mid Glamorgan
CF46 6LY

Tel: +44 (0)1443 452 192
Fax: +44 (0)1443 452 332
Web site: www.dwrcymru.com

Heol Pentwyn
Nelson
Treharris
Morgannwg Ganol
CF46 6LY

Ffôn: +44 (0)1443 452 192
Ffacs: +44 (0)1443 452 332
Safle gwe: www.dwrcymru.com

Jill Brown,
Natural Resources Wales,
Ty Cambria,
29, Newport Road,
Cardiff,
CF24 0TP

11th December 2013

Dear Jill,

WESTERN WALES RIVER BASIN DISTRICT: CHALLENGES AND CHOICES

Thank you for consulting on your summary of significant water management issues (SWMI) in relation to the Western Wales River Basin District (RBD). Dŵr Cymru was also very grateful to be given the opportunity to discuss the draft SWMI with Natural Resources Wales (NRW).

These comments are from Dŵr Cymru Welsh Water, the statutory water and sewerage undertaker that supplies over three million people in Wales and some adjoining parts of England: our supply area includes the Western Wales River Basin District (RBD). We are owned by Glas Cymru, a single purpose, not-for-profit company with no shareholders. We provide essential public services to our customers by supplying their drinking water and then carrying away and dealing with their wastewater. In this way we make a major contribution to public health and to the protection of the Welsh environment. Our services are also essential to sustainable economic development in Wales.

The SMWIs are an important stage in the statutory processes to deliver the EU's Water Framework Directive (WFD). Forming part of the Directive's provisions on public participation, SMWIs are intended to encourage a debate about the priorities for each RBD.

Dŵr Cymru continues to play an active role in the Western Wales WFD Liaison Panel which provides a useful forum for co-delivering sectors to identify and offer their perspectives on the significance of issues that are relevant to the District. As part of the SMWI consultation exercise, Dŵr Cymru understands that NRW intends to organise a series of catchment workshops, including about those within Western Wales, to try to encourage a wider cross section of local interests to share their knowledge and ideas. We think that these sessions could be very worthwhile and, for example, help to 'ground truth' assumptions made about

the priorities and costs of remedial action. Dŵr Cymru hopes to be able to attend at least some of these workshops.

We agree that all the water management issues identified in your consultation paper are significant.

In terms of issues of particular relevance to our company, we are pleased that the section about 'Pollution from Sewage and Waste Water' recommends that NRW and Dŵr Cymru should work together to decide which environmental schemes should be undertaken, while also trying to ensure that water bills are kept affordable for our customers. We also welcome the encouragement NRW gives to SUDs in the Western Wales SWMI: NRW will be aware of Dŵr Cymru's on-going investment in RainScape schemes in the Llanelli area so it is helpful to have an implicit acknowledgement of the value of this approach in supporting WFD delivery.

Dŵr Cymru accepts that some of our activities have an impact on WFD compliance. We note, for example, that the supporting "Facts and statistics" document says that point source discharges contribute to 61 WFD failures while flow problems contribute to 25 (although not all of these may linked to Dŵr Cymru). These figures are, however, put into their proper context when compared with the 122 failures attributed to rural pollution and the 118 failures attributed to physical modification. The relative contribution of the various sectors becomes clear from figure 11 of "Facts and statistics".

In working toward the achievement of good status in the RBD we hope that NRW and the Welsh Government will respect the 'polluter pays principle' that is enshrined within WFD. It would be unfair to expect our customers to help meet the costs of remedying poor practice by others. To put it another way, it is generally acknowledged that the first RBMPs placed a disproportionate burden on the water and sewerage sector because of an absence of effective mechanisms to ensure that other sectors reduce their impact. We would certainly not want our sector to be expected to do more than its fair share during the second cycle.

It is also disappointing that so many reasons for failure in the NRW's supporting "Facts and statistics" are assigned to "Suspect Data": at 147 water bodies, this accounts for more failures than any other single reason in the Western Wales RBD. The NRW is committed to evidence based decision making: we hope that, by the time the draft second cycle RBMP is published next year, it will be underpinned by robust evidence.

Our other main concern about the consultation paper is that it underplays some issues that we regard as potentially very significant.

Of these, the one that concerns us most is the implication of Protected Areas for the Western Wales RBD, particularly Natura 2000 sites. As the SWMI notes on page 10, "*Protected Areas are a priority for action to make sure they meet their statutory* conditions". Figure 15 in the "Facts and statistics" document shows the extent of water dependent Natura 2000 sites within this RBD.

Making progress toward delivering Favourable Conservation Status (FCS) during the next cycle would be a major win for the District's aquatic environment and for the biodiversity that relies upon it. But the challenge that will represent should not be underestimated, particularly as there will be limited availability of the WFD's derogations.

Reaching FCS will also require the NRW to attach a higher priority to controlling non-native species affecting rivers such as the Teifi, Tywi and Cleddau.

We are also awaiting clarity of the standards that will be applied to shellfish Protected Areas in Wales after this month's repeal of the Shellfish Waters Directive.

Like those needed to deliver Protected Area objectives, measures to ensure 'no deterioration' of waterbodies will not be subject to cost/benefit analyses.

Against this background, there is a real danger that many of the SWMIs identified in the consultation will become largely unaffordable and/or disproportionate for some groups – including our sector and for NRW itself – because meeting Protected Area and 'no deterioration' obligations will exhaust most of the finite funds available.

This could be compounded if tougher standards, particularly UKTAG's proposals relating to phosphorus and biology, are adopted – another issue on which the consultation paper is silent. Recent research that Dŵr Cymru has seen suggests that the recommended standards would result in additional waterbody failures in the Western Wales RBD. The SWMI consultation would have been an ideal opportunity for NRW to test whether there is an appetite to move the goalposts in advance of the second cycle, with the implied additional failures.

Given how advanced we are in terms of planning for the WFD second cycle, as well as AMP6 Business Planning within the water industry, it is unhelpful (to say the least) that the some of the standards that will be applied during the second cycle – e.g. for phosphorus and shellfish waters - remain undecided. Depending on the standards that are eventually set, they could in themselves represent significant water management issues.Heavily Modified Water Bodies (HMWBs) account for a significant proportion of water bodies in the Western Wales RBD. Another area of continuing uncertainty for Dŵr Cymru relates to how regulators intend to interpret some of the relevant WFD provisions, for example what would constitute 'significant adverse effects' on the waterbodies' uses (WFD Article 4.3(a)). Depending on the interpretation, delivering good ecological potential could be another SWMI for the Western Wales RBD.

Private drinking water supplies have hitherto been largely ignored in RBMP processes, but the number of large supplies (some 1,500 in Wales according to the Drinking Water Inspectorate[1]) suggests that more Protected Areas and safeguard zones may be needed. In looking ahead to the next RBMPs, it would have been helpful if the SWMI had flagged up this significant issue and confirmed where responsibility for delivering compliance with WFD will rest.

We would also have liked the SWMI to have included an explanation of the lessons learnt from the first cycle of the WFD. The document does not tell us how many of the measures in the first RBMP have been implemented, how effective they have been (noting that biology takes time to respond) and how much those measures have cost. This important information needs to be in the public domain before the next Programme of Measures is formulated so that those who will have to bear the financial burden for delivery have the opportunity to comment and suggest better, more cost-effective alternatives. For example, information on the costs and benefits of some of the 'softer' approaches to improving

[1] Figure for large supplies and any size supply used in a business or public building; see "Private water supplies in Wales, July 2013, A report by the Chief Inspector of Drinking Water"

waterbodies, such as those that have been carried out by the eNGO sector, could have been very useful when analysing the cost and benefit of alternative ways of enhancing waterbodies.

Particularly given the economic climate, the need to prioritise cost effectiveness, affordability and proportionality are themes that must inform the next RBMPs.

For example, many waterbodies fail for multiple reasons: how best to bring them up to Good status is an overarching significant water management issue that should be considered in more depth. If improvements are to be cost-effective and worthwhile, all the pressures on a water body should ideally be tackled within the same cycle. Our customers would get much better value if their investment formed part of a concerted effort to tackle all the pressures facing a given water body (including, for example, barriers to fish passage) so that their expenditure would contribute to buying good status by the end of the cycle. In its RBMPs, NRW might want to highlight the promotion of joined-up actions as an advantage that, at its best, the catchment approach can help deliver.

To illustrate the point, the legacy of the historic mining industry continues to blight many waterbodies within the Western Wales RBD (74 according to the consultation paper). From Dŵr Cymru's perspective, it would be a waste of our customers' money – many of whom struggle to pay their water bills – if our company takes action to reduce our own impact on relevant waterbodies, whilst other impacts such as minewater pollution continue unabated. Before requiring co-deliverers such as Dŵr Cymru to invest in improvements in affected waterbodies, ways must be found to fund sustainable solutions to problems like minewater pollution.

Nor would it represent good value for money for our customers if phosphorus permits for some wastewater treatment works were tightened but nothing was done to address nutrients from other sources.

Given that many large forestry plantations are now in the ownership of the NRW itself, the River Basin Management Plan is going to have to be far more specific about what you intend to do to reduce the adverse impact of forestry during the second cycle: the SWMI just says that NRW intends to improve the forestry under its control by 2027.

Following on from that, it would have been useful if the SWMI had sought views on the overall level of ambition for the achievement of good status in the Western Wales RBD by the end of the second cycle. The current economic climate is likely to influence opinions on what is achievable and affordable by 2021: this is a significant issue that should be aired. Before it prepares the draft second cycle RBMPs, NRW and the Agency should encourage a wider public debate on the extent to which the challenging economic backdrop should inform its disproportionate cost assessments and, in turn, the use of alternative objectives – this is an issue that could be usefully explored at the workshops being planned by NRW.

As a business that naturally plans for the long term we think it is important that, as we enter the next planning phase, we should look even further ahead to what we will need to achieve in the third cycle of WFD when we are likely to face the most difficult and intractable challenges posed by the WFD.

I hope this response will help you in scoping next year's draft RBMP. As always, Dŵr Cymru would be very happy to explore these issues with you or your NRW colleagues.

I am copying this letter to Water Branch in the Welsh Government for their information.

Yours sincerely,

Tony Harrington
Director of Environment

Email: tony.harrington@dwrcymru.com

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name ___Llangollen Maelor Angling
_____

Organisation and Sector __fishing club_____

Contact Details ____01978-860106_____

River Basin District Response for ___Dee_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?
We agree with and endorse the response of the Welsh Dee Trust and Afonydd Cymru

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.
Flow and abstraction are the major issues on the Dee

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.
There first needs to be an acceptance by NRW that this is an issue.NRW cannot sit on the fence and pretend the problems do not exist.

4 Who should we work with to achieve the environmental outcome?
The Welsh Dee Trust. This is the only properly established charitable environmental body on the whole catchment.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.
See responses of the Welsh dee Trust and Afonydd Cymru

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.
Flow, abstraction,habitat in that order.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects No

2 Is there any other information that we should be taking into account as part of the assessment

There are numerous reports available to you on flow and abstraction and the effect on migratory species. These should be your priority and starting point.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name ___Frank Jones____

Organisation and Sector, Afonydd Cymru and the Salmon and Trout Association (Cymru), 3rd sector

Contact Details

River Basin District Response for __WWRBD_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

The key issues currently are agricultural land use, forestry and fisheries management policy although clearly the relative importance of these and other issues need to be considered at a catchment level to prioritise the most cost effective remedial actions.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Physical Modification

Hydropower – Clearly there will still be risks of damage even if NRW is "working with developers to minimise impacts on the water environment" – it is not an exact science. Currently there are no satisfactory arrangements in place to monitor their impact, or enforcement arrangements to ensure that schemes are operating within the terms of their licence. There have been examples of schemes that have been operating illegally which have been picked up by River Trusts. Current monitoring and enforcement arrangements are clearly inadequate. Also there are no arrangements in place for decommissioning should a scheme not be adequately maintained or where an adverse effect is demonstrated.

Urban areas suffer disproportionally from structures that impede the movement of fish. In addition poorly designed flood management structures, weirs and culverts frequently create both inaccessible and aesthetically displeasing riparian and in-stream environments which impact on invertebrate populations, retain litter and prevent effective bank management.

Pollution from Sewage and Waste water

The negative effects of litter from storm water overflows should be added.

Pollution from Towns Cities and transport

Detrimental effects of litter and sewage derived litter on the urban environment should feature, together with its detrimental effects on local communities in terms of their perception and enjoyment of their local environment.

Pollution from Rural Areas

Chronic organic pollution from agriculture needs to be added. The range of impacts of forestry needs to be extended to include increased runoff as a result of drainage causing

higher peak flows/increased risk of flooding and also the threat from pesticide use for forest spraying operations.

Invasive non-native species

The potential risk of new invasives should be included linked to the clear shortfalls in existing bio-security controls and horizon scanning within the UK. What about the threat posed by the spread of diseases – eg Chalara fraxinea disease of Ash trees?

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

Pollution from Rural Areas

There needs to be a balance of regulation and incentives to improve sustainable land use. The regulation of agricultural pollution is currently ineffective and has been for some time as demonstrated by the WFD failure statistics. Chronic pollution is tolerated on a wide scale. The major impacts relate to sedimentation, resulting from soil erosion caused by livestock and inappropriate planting of arable crops and chronic organic/nutrient pollution arising from inadequate waste management systems together with yard and track runoff. There are regulatory powers available to WG (Cross Compliance regulations) and NRW (various powers under the pollution legislation and Salmon and Freshwaters Fisheries Act, Wildlife and Countryside Act etc) that are simply not being enforced. Most other industries have reduced their impacts by appropriate measures or have investment programmes to ensure that the costs of addressing the environmental consequences of their activities are internalised. This is not the case in agriculture or forestry where other sectors (tourism, fisheries, water companies etc) are left to suffer the financial consequences of the resulting environmental damage.

Clearly agriculture needs support to reduce the impacts of its activities through appropriate incentives including financial support to move to more sustainable land use, but this has to be alongside effective enforcement of regulatory powers. This is a fundamental issue – if this is not done there is no chance of achieving WFD targets. The text in the document as it stands paints a rather different picture of voluntary action by farmers supported by "proportionate regulatory activity". This simply doesn't equate with the actual situation. Unless we say it as it is we will always have the same outcome and targets won't be met! (This comment applies generally to other parts of the text – someone reading it might think that compliance was near to 100% as opposed to the actual 37% figure!).

The coverage of forestry as an issue in the consultation document is inadequate. In terms of impacts per unit area, forestry has a greater impact than agriculture. At a Wales level about 8% of failures relate to forestry which covers only 7% of land area. If the exacerbating effects of forestry on acidification were also taken into account this rises to about 16%. And forestry is often located at the very start of river systems in upland headwater areas that have a high potential ecosystem services value in terms of their contribution to biodiversity,

water resource management (water supply and flooding), fisheries etc. All this together with the fact that management of forestry is now a responsibility for NRW makes it a high priority for action. Again the form of words used in the report suggests that all is well eg “Natural Resources Wales is improving forest management to reduce the impact of acidification and protect rivers from sediment”. This doesn’t reflect the extent of the problem and the level of intervention required to address the impacts.

The various impacts of forestry are not covered and the document fails to make any reference the potential and actual threat from pesticide use. A serious pollution incident of the Brefi (Teifi catchment) in 2007 was found to be caused by forestry spraying of Cypermethrin and since then monitoring by EAW has determined contamination of watercourses from this practice in other areas (ref Monitoring of Cypermethrin Use in Welsh Forests 2011-2012 – EAW report March 2013). This threat should be acknowledged in the report especially as NRW is seeking extension of its derogation for the use of Cypermethrin for forestry spraying. There may be allegations of hypocrisy if such facts are excluded.

The Rivers Trusts in Wales have demonstrated their ability to work with landowners to tackle pollution problems. Physical damage has been rectified though habitat improvement schemes and other measures to reduce soil erosion and land runoff. These measures have helped with day to day farm management requirements, such as stock segregation and containment, as well as improving the river environment ie they have been “win win” outcomes. Examples of working with forestry have been few because of the reluctance of FCW to work in partnership. This culture needs to change within NRW. There needs to be a meaningful move to sustainable forestry practices that needs to overcome the inertia/denial in the sector. There are positive opportunities for RT’s to work in partnership such as the selective felling of conifer plantations in source areas together with the blocking of forestry drains in combination with liming to counter acidification – as is being undertaken by the Wye and Usk Foundation in the Irfon catchment (Severn RB). NRW needs to determine an overall policy for tacking acidification. Afonydd Cymru has raised this issue at WRBMP meetings and was told that the matter would be addressed through the Fisheries Strategy being prepared by NRW. But it is now clear that this will not be the case.

The Pontbren study, supported by Coed Cymru and Coed Cadw, demonstrated the benefits of the planting of broadleaf woodland shelter belts on farm land which include reducing surface water runoff and soil erosion. These are extensive problems in the WWRB which can be ameliorated by appropriate planting programmes. With appropriate funding. Afonydd Cymru can work in partnership with these organisations to deliver these improvements.

Adequate funding needs to be secured to undertake the above. Funding sources available to NRW and WG should be reviewed to maximise their contribution to Directive outcomes. River Trusts can gear up funding by using it to match fund other funding sources that are not available to statutory agencies.

Fisheries management

The coverage of fisheries issues is minimal in the document. This is surprising given that low fish numbers is the most common cause of failure to achieve Good Ecological Status. In addition the status of migratory fish stocks in Wales continues to decline. 50% of salmon

rivers are in the “At Risk” category and there is evidence of a 60% decline in sea trout in recent years. Clearly addressing the various issues outlined in the document will help to restore stocks but there are fishery management tools that can also be taken to assist recovery. The level of exploitation is a particular issue in some catchments. For salmon this is, to an extent, covered by the formal assessment of stock levels and determination of catch and release policy. However, there are no such measures in place for sea trout which is an iconic species in Wales particularly in the WWRB area. Angling and angling tourism has “green growth” opportunities for Wales. It has been valued at £150m annually to the Welsh economy. This value could be raised particularly in the WWRB area if sea trout stocks were managed more sustainably. Controls on exploitation need to be reviewed both for commercial and rod fisheries. Large broodstock fish should be protected by placing an upper limit on the size of fish that can be retained.

Fish stocking policy is generally a shambles in Wales. Policy on many rivers is largely angler driven and often is contrary to the principles of good stock management. Research including that undertaken by Swansea University has demonstrated the shortcomings of current practice which has risks to maintaining the genetic integrity of fish stocks. In addition NRW does not have the powers to inspect privately owned hatcheries to examine management practices. This is the responsibility of CEFAS. There are inevitable problems of communication and access to independent information on the hatchery practices which are critical to effective fisheries management. NRW through Welsh Government should seek powers to inspect private hatcheries. NRW should also review its stocking policy and not provide section 30 consents for stocking which falls outside that sanctioned by it. Stocking of SAC rivers is a particular issue which may contravene the Habitats Directive if there is a genetic risk to SAC designated species. This matter should be covered by an overarching Fisheries Strategy but again it appears this will not be the case.

Rivers Trusts are willing to play their part in promoting a more sustainable fisheries management policy. We have demonstrated our ability to undertake fisheries improvement schemes ranging from simple easements of obstructions to the passage of fish to more demanding schemes such as weir removal, constriction of “rocky ramp” fish passes and schemes directed at land management and habitat improvement.

4 Who should we work with to achieve the environmental outcome?

3rd sector organisations can play a major part in meeting WFD targets. We are helping to do this through a positive influencing role on environmental policy such as the publication of “Valuing our Freshwaters”. This document identifies what we consider as the environmental priorities for improving our freshwater environment. We have promoted these priorities in stakeholder consultation meetings including those concerning the Water Strategy, Rural Development Plan and other European funded programmes. In addition we have demonstrated the range of projects that we can undertake to improve the river environment. But the scale of involvement and the resources available to the 3rd sector need to be substantially increased if we stand any chance of achieving WFD targets. River Trusts regard themselves as the natural lead for river improvement initiatives. We have the understanding and expertise necessary to undertake a wide range of remedial schemes.

3rd sector organisations can bring a number of advantages to partnership working with NRW and the WG which include:

- Better engagement with local communities and landowners
- A trained volunteer workforce
- Access to funding sources not available to statutory agencies which can be used to gear up funding support from WG and NRW.
- Reduced overheads compared to government agencies
- Engagement with local contractors and volunteers to improve the skills base that is required to tackle a wide range of challenging environmental improvement schemes

The positive opportunities of working with the 3rd sector should feature more strongly in the report.

NRW and WG can also engage more effectively with DCWW to secure a greater amount of funding for WFD. DCWW has offered to match fund the amount of money that WG provides for WFD. This year it was only £150k - considerably less than the previous year (£400k). This level of funding is completely inadequate in relation to the work that needs to be undertaken. WG should increase their funding to take full advantage of DCWW's offer. An overall budget of £2m would provide better stimulus for 3rd sector engagement and make a more positive contribution to meeting WFD targets. Funding levels should be reviewed annually in relation to costing the amount of investment needed to achieve the overall goals.

NRW and DCWW WFD funding programmes need to be better co-ordinated to maximise their benefit. Currently there is insufficient collaboration to agree on the priorities for remedial work.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Clearly the relative effects of each issue vary within the different catchments as outlined to an extent in the consultation document. Further work in each of the catchments will be required to put each issue into perspective and determine the priorities for investment. A risk based, cost benefit approach should be undertaken for each catchment. Minimum/low cost measures such as removal of small/medium barriers to the movement of fish which have the potential of delivering relatively rapid improvements can be identified with this approach. More costly/challenging projects can be programmed over the medium term.

The focus of this response has been on the rural impacts because of the predominance of agricultural and forestry land use in the WWRB area. However, there are other issues that are of greater importance in some of the urban catchments in the area particularly in the western Valley catchments of the Tawe, Neath, Afan and Ogmore. These include the effect of physical modifications and structures that affect fish movement, impacts from the

sewerage systems and litter that degrades the environment and affects the communities perception of the quality of their environment which encourages negative behaviours.

Over engineered utilitarian flood defences exclude local communities, encourage the accumulation of litter and aid the success of non native species. Other impacts of poorly designed flood engineering is the perception of the river as a threat and its downgrading to little more than drain status ref, Bridgend, Swansea and Port Talbot town centres in particular.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

The first step would be to establish in each catchment a group representative of the local community working in partnership with NRW. This group would be tasked with identifying the issues impacting the catchment, establishing the priorities based on a cost benefit approach and implementing a programme of remedial work. NRW would provide the expertise for provision and analysis of monitoring data and ensure that monitoring and enforcement programmes complement local efforts of environmental improvement ie a balanced carrot and stick approach. It is essential that all the sectors involved with the major issues affecting the catchment should be represented (eg agriculture, forestry, water supply, waste disposal, Industry/business and fisheries management) with a clear commitment to drive forward environmental improvements. Local Authorities and other organisations involved with land management (wildlife trusts, rspb, national trust etc as appropriate) should also be represented. The group should be tasked with identifying and securing funding to gear up WG/NRW/DCWW funding support. Adequate resources should be provided at the outset to allow establishment of the group with appropriate professional support which would be a balance between that provided by NRW and appointment/s to be made by the group itself. It is critical that there is an integrated approach between local initiatives and national policy for improving the water environment. NRW will need to ensure that clear policies/strategies are in place to guide local decisions and initiatives.

Real progress is being made in England with the Catchment Based approach (CaBa) initiative. Defra is providing funding for the establishment of catchment groups charged with identifying issues and also funding for implementing improvement schemes. At the moment we are in the situation of part catchment CaBa initiatives funded by DEFRA on the English parts of the Dee and Wye systems. We need a similar initiative in Wales or we will fall behind England in the progress being made to achieve WFD targets.

Strategic Environmental Assessment Consultation Questions

Cyfoeth Naturiol Cymru
Natural Resources Wales

1. Do you agree that we are focused on the key environmental effects?

Clearly this is just a scoping document for the SEA and as such reads as a cursory examination of the issues although the level at which each is dealt with is disproportionate to the most likely effects. The WFD statistics on the reasons for failure for water bodies needs to be given greater regard to guide the full analysis of the SEA. The key issues for the area are rural issues of unsustainable land use related to agriculture and forestry. These need to be given prominence. The impacts on fisheries also does not receive much attention despite low fish numbers being the most common reason for failures to achieve Good Ecological Status. The economic value of freshwater fisheries and their contribution to the economy of the area does not feature despite their importance. The full SEA needs to have an appropriate depth and proportionate analysis of issues specific to the area.

Some specific comments follow:

P6 Table 1 Effects on fisheries and the interrelationship with the way that they are managed is a serious omission. Fisheries management policies in relation to factors such as exploitation and stocking can have major effects on the sustainability of fish populations. In turn fisheries have a major social and economic value which again does not appear These factors are not considered.

P8 The value of angling for recreation and tourism should feature.

P9 Many of the rivers in the WWRB area have their sources in the Cambrian Mountains whose geology and soils are vulnerable to acidification. These are also the areas typically planted with conifer plantations which exacerbate surface water acidification. Despite the improvement in air quality, conifer afforested catchments are not showing evidence of recovery and there are there impacts from forestry inc soil erosion, pesticide pollution (Cypermethrin) and reduced retention of water leading to peaks in surface water runoff. All this happens at river sources. The critical importance of sustainable land use in upland areas and the range of ecological services reliant on them should feature strongly in the Strategic Assessment. Forestry (conifer plantations) can be argued to have a greater impact compared to agriculture in that it causes between 8 and 16% (latter figure includes exacerbating effect on acidification) of WFD failures in Wales whilst representing 7% of land use.

P9 The impacts of agriculture receive scant coverage. They need to be covered proportionate to their contribution to the reasons for failure of WFD (35% of failures in Wales). Given the predominance of dairying in many catchments in the WWRB area, a risk analysis should be included of the current trend towards intensification in the sector which is predicted to increase in future. This intensification threatens increased waste management problems, greater poaching damages to pasture leading to increased runoff and soil erosion together with other negative impacts on riverine habitats.

P9 Climatic factors will also have implications for species

P10 there is no mention of the value of freshwater fisheries to the local economy particularly to sea trout for which the region is renowned but threatened by evidence of a 60% decline in the last 10 years.

Is there any added value of the statement that flood defences in the river basin district protect homes, businesses industry and farmland?

P10 There is a long list of potential issues related to landscape which is disproportionate compared to other factors which are likely to be affected to a greater extent.

P13 In determining the positive or negative environmental impacts of the plan, constraints to delivery of the required improvements need to be evaluated. Key to this is the current lack of funding to address the key impacts of agriculture and forestry. These sectors have contributed negligible resources to the first phase of the plan. The evaluation should therefore consider how these issues will be rectified in the second phase. What resources will be available? How will the plan turn around the unsustainable land use practices in agriculture and forestry that together are responsible for about 50% of WFD failures in the WWRB area?

Another question is how will the plan achieve fisheries improvements to address the fact that low fish populations is the most common cause of failure to achieve good ecological status?

2 Is there any other information that we should be taking into account as part of the assessment?

Yes. As outlined above fisheries need to be properly taken into account and more detailed consideration of the primary issues affecting WFD compliance viz Agriculture and Forestry,

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name	Lizzy Webster
Organisation and Sector	Denbighshire County Council
Contact Details	elizabeth.webster@denbighshire.gov.uk / 01824 708263
River Basin District Response for	Dee

Please note, these are my own views and this consultation response has not been agreed by Denbighshire County Council.

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

I agree with your issue headings (physical modifications, pollution from sewage and waste water, pollution from rural areas, pollution from mines and invasive non-native species) and do not feel any major areas have been omitted.

The biggest challenge, in terms of difficulty in solving it, is diffuse pollution from rural areas. With agriculture being the biggest land use in the catchment, a huge amount of work would be required to reduce the issue of diffuse pollution. How this would be achieved is uncertain since it requires a change in agricultural practice over a large area.

I am pleased that the severe impact of invasive non-native species within the catchment has been recognised.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Yes, I broadly agree.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

n/a

4 Who should we work with to achieve the environmental outcome?

Local authorities should not be forgotten as delivery partners – for example we have been involved with the Alyn Valley Himalayan balsam project since its inception. The project is jointly managed by Denbighshire and Flintshire County Councils (biodiversity officers). The heavy involvement of LAs in such projects doesn't appear to be recognised in the consultation document. In addition we have significant expertise and experience in delivering successful projects within Denbighshire Countryside Service and would be keen to offer staff time if appropriate funding can be provided.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Diffuse rural pollution - within the last year or so the freshwater pearl mussel project (NRW, Snowdonia NPA, Denbighshire CC and others) has decided not to continue pursuing conservation of the species or any reintroduction in the River Dee due to agricultural pollution being too high – the water is simply not clean enough to support the species. This is obviously a real shame for this species, which is listed as Endangered on the IUCN Red List. The same issue must be affecting countless other invertebrates and other species within the river.

Invasive non-native species are a real problem for biodiversity and the wider environment – the issues are well rehearsed (displacement of native species, bank erosion etc). INNS could also be having a negative impact on the important tourism economy in the area (e.g. outdoor adventure tourism in the Llangollen area, angling, walking etc) by restricting access to river banks and reducing recreation options.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Diffuse pollution - Glastir needs to deliver for water quality and biodiversity – currently the uptake appears not to be high enough even with the right prescriptions.

Invasive non-native species in the catchment should be tackled by continuing support and secure funding for the post of Dee Catchment Invasive Species Project Officer, currently held by Lyn Byrne at North Wales Wildlife Trust. The post is currently only funded for a short period and in order to achieve success in reducing the problems caused by INNS in the catchment the post needs to be continued for a number of years. Since the problem of INNS is recognised as a serious challenge to preventing water body deterioration, it makes sense for the post to be funded by WFD money.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Cyfoeth Naturiol Cymru
Natural Resources Wales

2 Is there any other information that we should be taking into account as part of the assessment?

UNDEB AMAETHWYR CYMRU
FARMERS' UNION OF WALES
PRIF SWYDDFA * HEAD OFFICE

Llys Amaeth, Plas Gogerddan, Aberystwyth, Ceredigion, SY23 3BT ***E-bost/Email: head.office@fuw.org.uk***
Ffôn/Tel: 01970 820820 Ffacs/Fax: 01970 820821 ***Rhyngrwyd/Internet: http://www.fuw.org.uk***

Ein Cyf/Our ref: AG/MS/E/35
Dyddiad/Date: 18th December 2013

Ms Jill Brown
Natural Resources Wales
Ty Cambria
29 Newport Road
CARDIFF
CF24 0TP

and

Ms Suzanne Bennett
Environment Agency
Sapphire East
550 Streetsbrook Road
SOLIHULL
B91 1QT

Dear Ms Brown and Ms Bennett

WATER FOR LIFE AND LIVELIHOODS – DEE/WESTERN WALES/SEVERN RIVER BASIN DISTRICTS CHALLENGES AND CHOICES

Thank you for inviting the Union's views on the Environment Agency's second consultation on the review of the River Basin Management Plans.

The Farmers' Union of Wales (FUW) represents farmers and landowners from across Wales and thus these comments and views, unless specified, are relevant to all three River Basin Districts – the Dee, Western Wales and Severn.

Following an internal consultation with its membership and consideration by the Union's Standing Committee on Land Use and Parliamentary issues, the following comments are submitted for your consideration.

For Natural Resources Wales and the Environment Agency to meet the objectives of the Water Framework Directive, there needs to be a viable agricultural industry to help deliver the outcomes. Unlike other industrial sectors, farmers are cost takers meaning that they are unable to pass on any increased costs to the consumer as a result of regulation. Any actions should be proportionate so that the profitability of the sector is not compromised when seeking to achieve targets.

The Union believes that, as agriculture is the predominant land use alongside the majority of watercourses in Wales, it is imperative that Natural Resources Wales makes every effort, either directly or through stakeholders such as the FUW, to work and form partnerships with as many individual farmers and landowners as possible in implementing the second round of River Basin Management Plans to ensure that they are fit for purpose and build on the work initiated under the current Plans.

The Union is aware that a significant number of its members already engage with Natural Resources Wales' Catchment Sensitive Farming Officers. These Officers have made a positive contribution to break down the barriers between farmers and the Regulators resulting in excellent working relationships being developed with farmers in their local area. The Union trusts that these relationships will continue under the second iteration of the

Management Plans.

In responding to the 'Working Together' consultation, published last year, and the consultation on the approach to develop the Flood Risk Management Plans, the Union favoured the adoption of the catchment scale approach as a means of developing and implementing local initiatives to address localised issues within individual catchments. The Union notes and welcomes from the current consultation, that Natural Resources Wales agrees with this view and has adopted the catchment based approach as the basis for the second round of River Basin Management Plans.

Without prejudice to the preceding comments, the Union's response to the questions highlighted in the consultation are given below.

The significant issues

Question 1

What do you consider to be the biggest challenges facing waters in your River Basin District?

Aside from the challenges which have been identified in the consultation, there are a number of additional issues which the Union believes will impact on the management of all River Basin Districts. The first issue is the financial constraints placed on the budgets of Natural Resources Wales and the impact this will have on the day-to-day work to tackle the challenges that have been identified. The second issue is the effect of climate change on rising water temperatures and the associated ecological impacts this brings and increased rainfall bringing with it increased risk of flooding.

Invasive Non-native Species (INNS) are identified as "*not being considered to be a significant issue*" in the Dee and Western Wales Districts and "*not currently causing widespread problems*" in the Severn District. The FUW believes that Natural Resources Wales and the Environment Agency should adopt a pro-active approach to prevent INNS becoming a significant issue within the River Basin Districts in the future.

Dee River Basin District

Based on the evidence highlighted in the consultation, the Union believes that the biggest challenges facing the Dee River Basin District are Pollution from Sewage and Waste Water and Invasive Non-native Species.

Pollution of watercourses in Wales by phosphates needs to be tackled. As highlighted in the consultation, discharges from nineteen public sewage works appear to be a significant problem for the eleven water bodies in the District which are reported as failing for their phosphorus content. Natural Resources Wales is already working with farmers to reduce the amount of nutrients which enter surface and ground waters, including the input of nitrates via the designation of Nitrate Vulnerable Zones, and therefore the Union believes that more should be done to reduce the input of nutrients from non-agricultural sources.

Western Wales River Basin District

Due to the size and the number of catchments within the Western Wales River Basin District it is difficult to propose which of the challenges raised could be considered as having the greatest effect on the District due to the influences of a number of factors including geographical location and time of year. For example, it could be argued that within the catchments that surround Aberystwyth the biggest challenge would be the impacts of winter discharges from the numerous former metal mines in the area whereas in other areas of the Western Wales District there are other challenges which are more prominent. Also coastal areas, popular with tourists in the summer, will see increased problems associated with sewage and waste water during the tourist season.

Significant efforts have been made, particularly on the water bodies around Aberystwyth, to

tackle the presence of Invasive Non-native Species. The FUW trusts that the success and benefits of this work will not be lost in the second version of the Management Plan.

Severn River Basin District
Again it is difficult to propose which challenge or challenges are having the biggest impact on the waters in the Severn River Basin District due to its size and the different impacts each challenge has on the eleven catchments, four of which are in Wales, which make up the District. Based on the discussions in the consultation, Pollution from Waste Water appears to be having the most significant effects across the entire District.

Question 2
Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.
Pollution from Rural Areas – general comments
The Union welcomes the reference made by Natural Resources Wales in its consultations on the Dee and Western Wales River Basin Districts to their support for "*voluntary initiatives by the farming industry, the catchment based approach to planning and implementing solutions, and promote initiatives to help farmers benefit from relevant advice, capital grants and payments for improving the way they manage the land*" and that "*Farmers, […] are working with us to reduce the impact of agriculture on the water environment and improve farm profitability*".

The Union believes that this level of voluntary co-operation, education and advice should be continued as a means of developing and fostering a good working relationship between farmers and the regulator, particularly given that significant progress has been made locally. Regulatory sanctions should only be used as an absolute last resort.

Pollution from Rural Areas – Specific comments on the Dee River Basin District
The consultation on the Dee River Basin District states, on page 10, that 18 percent of the District is designated as a Nitrate Vulnerable Zone (NVZ). The Union is disappointed to note that there is no recognition in the consultation that the levels of nitrates from agricultural sources have been reducing across the whole of Wales.

Pollution from Rural Areas – Specific comments on the Severn River Basin District
The FUW has reservations that, in comparison with the more positive outlook of the Natural Resources Wales consultations on the Dee and Western Wales Districts, the Environment Agency's discussions on Pollution from Rural Areas in the Severn River Basin District are overly negative towards the agricultural sector. This is highlighted by the closing sentence in the consultation which states that "w*here appropriate, this will be underpinned by proportionate regulatory activity. It is important to tackle these issues now to reduce the risk of stricter controls and even new legislation.*"

Physical Modifications – general comments
Whilst it is noted that flood defences can have negative impacts on biodiversity, it is important that, where these defences continue to serve a vital purpose, they are adequately maintained not only to protect populated areas but to also minimise the flooding of agricultural land so that food production is not threatened.

During the Union's internal consultation, concerns were expressed over the lack of maintenance of the main rivers in Wales particularly the ongoing lack of dredging which has led to the build-up of silt and debris which can cause the over topping of flood defences during periods of high rainfall.

The Union believes that Wales has the potential to produce a significant amount of renewable energy via hydro-electric generation. However, current uptake of this technology

is restricted due to the overly cautious approach of Natural Resources Wales in granting the relevant licenses and permits. The Union believes that a more pro-active approach is needed to the granting of the necessary licenses and permits, at a reasonable cost with minimal restrictions, to increase the uptake of this technology.

Physical Modifications – Specific comments on the Severn River Basin District
The Union notes, in the consultation, that specific reference is made to the environmental benefits to society which can be gained from removing hard engineering structures and reconnecting rivers to the floodplain. It is concerned that the negative consequences this could have on agricultural land and food production, should there be any increase in the amount of land used to store tidal and river flood waters, is not referred to. As much of the land that could be initially flooded will be some of the most productive and fertile land areas in Wales, this should only be considered as a last resort and only after full consultation with the farmers and landowners that will be affected.

Changes to Natural Level and Flow of Water – Severn River Basin District
The FUW acknowledges that abstraction of water for agricultural uses tends to occur during the summer months when levels are also at their lowest within surface and ground water reserves. Farmers already undertake a range of techniques to reduce the amount of water that they need to abstract, such as irrigating a night when temperatures are lower and therefore less evaporation occurs. The alternatives to abstracting water from these sources, such as on-farm storage reservoirs, require considerable financial investment and, in the case of on-farm reservoirs with a capacity over 10,000m^3 and the proposed amendments to the Reservoirs Act to lower the threshold for the classification of these reservoirs as high risk, place additional regulatory burden on farmers.

Question 3
How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.
Whilst acknowledging that the current economic climate has led to a reduction in the amount of funding available, the Union believes that there needs to be a holistic approach to tackling all of the challenges facing the water environment within the Welsh River Basin Districts otherwise the impetus and work started under the first Management Plans could be lost. Whilst some of the issues affecting the River Basin Districts could be perceived as more important as they are having a greater impact and therefore should be tackled first, this should not be at the expense of tackling the other issues identified as affecting the water environment in the Districts.

Consideration should be given to the role that the Glastir agri-environment scheme plays in Wales, particularly how the options outlined as part of the water management aspects of the Advanced element and the water and slurry/manure management options under the Glastir Efficiency scheme, can be integrated into the River Basin Management Plans.

Dee River Basin District
The FUW welcomes the fact that Natural Resources Wales is already working with the agricultural sector on a number of voluntary initiatives to reduce its impact on the water environment.

As previously highlighted Pollution from Sewage and Waste Water and Invasive Non-native Species appear to be the biggest challenges facing the Dee River Basin District, the Union would suggest that Pollution from Sewage and Waste Water and Invasive Non-native Species should be prioritised.

Western Wales River Basin District
As the Western Wales District covers such a large area and the issues identified have a

diverse range of impacts depending on the geographical location and the area they affect, the Union believes that it would be inappropriate to propose that one particular issue should be tackled first.

Severn River Basin District
The FUW is aware that organisations operating in the Severn River Basin District, such as the Wye and Usk Foundation, are undertaking works to improve the District's water environment predominantly by removing or altering barriers which prevent fish from migrating upstream.

The Union is also a stakeholder on the newly established Catchment Partnership for the Wye set up to examine ways of improving the health of the River Wye by understanding the pressures that affect the catchment, the creation of an environmental infrastructure to deliver a range of ecosystem services and an understanding of what is currently being done and the additional actions which may be required in the future.

The FUW believes that these voluntary initiatives should be encouraged as a means of facilitating works and improvements to the water environment within the District.

As highlighted previously, with Pollution from Waste Water appearing to be the main issue affecting the District, there should be a focus on reducing the impact from this source.

Question 4
Who should we work with to achieve the environmental outcomes?
Whilst acknowledging that some local pro-active engagement has taken place, concerns remain over the low level of engagement with individual farmers and landowners to communicate the aims and aspirations of the River Basin Management Plans. The FUW believes that greater engagement with the farming community at a catchment level, through direct liaison with farmers and landowners and arranging local meetings, would improve the communication of the aims and aspirations of the Management Plans within the agricultural sector.

The FUW also believes that it is imperative that the local knowledge, expertise and experience held by stakeholders on the River Basin District Liaison Panels and local farmers and landowners is included in the revised Plans.

The Union is always willing to work with a range of organisations, bodies and individuals to facilitate joint working, promoting the objectives set in the Water Framework Directive, to disseminate advice and guidance to the agricultural sector and to offer a practical view on any issues and/or measures that are considered in the context of the Directive.

Severn River Basin District
The Union notes that, as part of the consultation on the Severn River Basin District, there is no opportunity to propose who the Environment Agency and Natural Resources Wales should work with to achieve the environmental outcomes.

On 12th November 2013, the Minister for Natural Resources and Food, Mr Alun Davies AM, issued a written statement on the outcome of the consultation on the future arrangements for the Internal Drainage Boards (IDBs) wholly or partly in Wales. This included the announcement that the functions, assets and staff of the Powysland, Lower Wye and Caldicolt and Wentlooge Levels IDBs would be transferred to Natural Resources Wales. As these IDBs now fall within the remit of Natural Resources Wales, the Union would query how their functions and activities will work alongside and, if relevant, be integrated into the Management Plan for the Severn River Basin District.

The catchments

Question 5

How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Dee River Basin District

The effects of the issues highlighted in the consultation on the water environment and the local community are dependent on the location and scale of these issues. For instance, a point source discharge from an individual private septic tank could be perceived as having little negative impact on the local community whereas a discharge from a large sewage works will have a much greater impact. Other issues identified, primarily those relating to physical modifications such as flood defences and land drainage, bring about positive benefits through the protection of local communities from flooding and the maintenance of agricultural land for food production.

Western Wales River Basin District

Based on the figures outlined earlier in the consultation, that 35 percent of the surface waters in the District have achieved a good status, improvements in the water environment in the Western Wales District seem to have been made. Given the prevalence of the tourism industry in this District and the economic and social benefits spending by tourists brings to the local communities, if the progress to improve water quality is not maintained, particularly in relation to the EU Bathing Water Designations, then the economies of local communities could be affected.

As previously highlighted the Union welcomes and supports the ongoing voluntary initiatives undertaken by Natural Resources Wales with farmers and landowners in the catchments that make up the Western Wales District to bring about improvements in land management practices which benefit the water environment.

Severn River Basin District

Please note these comments only relate to the catchments within Wales.

As outlined in the consultation, there are multiple issues affecting the various catchments that make up the Severn River Basin District which vary depending on whether the catchments are predominately rural or urban and current or previous land uses.

A large proportion of the Welsh catchments within the District (the Severn Uplands, Wye and Usk) are predominately rural in nature with their communities reliant on incomes from the agriculture and/or tourism sectors. As with the Western Wales District, any impact on the tourism sector could affect the economies of the local communities.

Question 6

How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

As highlighted in its response to Question 3, the Union believes that a holistic approach is needed to tackle the issues affecting the catchments within the River Basin Districts otherwise the work started under the first Management Plans may be lost if the focus is placed on responding to one issue at the expense of the others.

Dee River Basin District

The FUW welcomes the positive working relationship which the Environment Agency and Natural Resources Wales have developed with farmers in the District to tackle the issues which have been identified as part of the river walks and believes that this approach should be continued under the next version of the Management Plan. However, the Union again notes that there is no reference to the reduction in nitrate levels across Wales.

For additional comments, please see the response - specific to the Dee River Basin District - to Question 3.

Western Wales River Basin District
The main theme, apart from agriculture, from the discussions in the consultation is the dominance of tourism. Given the reliance on tourism and the economic benefits it brings to the local communities in the District, protection of the EU Designated Bathing Waters and inland waters is needed. Included in this should be the continuation of the work to reduce the impacts from the legacy of the past mining activities which have taken place in the various catchments.

The other positive actions outlined in the consultation, such as the work with Welsh Water and private households to ensure the proper treatment of wastewater and the ongoing work with the agricultural sector should also continue.

Severn River Basin District
Whilst the Union recognises that some of the phosphate load in the catchments which form the Severn River Basin District, could be attributed to the agricultural sector, it believes that more work should be undertaken with the water companies within the District to reduce the amount of phosphate which emanates from sewage treatment works.

Another of the overarching challenges raised in relation to the Severn Uplands, Wye, Usk and South East Valleys catchments is the impact physical modifications, especially barriers to fish movements, are having on the water environment. Whilst recognising that resolving these issues can be limited due to financial constraints, the Union believes that the work which has already taken place to remove or alter these structures to allow fish to migrate upstream should continue under the second version of the Severn River Basin Management Plan.

For additional comments, please see the response - specific to the Severn River Basin District - to Question 3.

Strategic Environmental Assessment Consultation Questions
Question 1
The SEA scoping document is used to identify environmental effects that are important at the river basin district level and will affect the plan to improve the water environment. Do you agree that we are focused on the key environmental effects?
Dee River Basin District
The FUW agrees that the key environmental effects have been focused on.

Western Wales River Basin District
The FUW agrees that the key environmental effects have been focused on.

Severn River Basin District
The FUW agrees that the key environmental effects have been focused on.

Question 2
Is there any other information that we should be taking into account as part of the assessment?
Dee River Basin District
The Union is not aware of any other information that should be taken into account.

Western Wales River Basin District
The Union is not aware of any other information that should be taken into account.

Severn River Basin District
The FUW would suggest that any pertinent information or actions that emanate from the recently established Catchment Partnership for the Wye should be considered for inclusion in the Assessment.

In conclusion, the Union supports the ongoing collaboration between Natural Resources Wales and farmers and landowners to manage the impacts of agriculture on the water environment while maintaining a profitable agricultural sector. The Union trusts that these positive actions will continue under the next version of the River Basin Management Plans to ensure that farmers and landowners continue to be engaged in caring for the watercourses that are vital to the industry and the wider environment.

I trust due regard will be given to the preceding comments.

Yours sincerely

ANDREW GURNEY
Policy Officer (Land Use)

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name James Byrne

Organisation and Sector Wildlife Trusts Wales

Contact Details jbyrne@wtwales.org

River Basin District Response for : Welsh River Basins

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do you consider to be the biggest challenges facing waters in your River Basin District?

In terms of on-the-ground issues which operate at a national scale, we feel that the main Significant Water Management Issues have been correctly identified. However, there are a number of issues I would like to highlight.

Direct Pollution
Industrial/urban pollution/waste water is still a major challenge on some catchments. These need to be addressed. eg. lower Severn Vale Catchment, Taff and Tawe.

Diffuse pollution
Diffuse pollution is a major threat to water quality and a significant reason why water bodies are not currently meeting European standards. DEFRA estimated the cost of water pollution in England and Wales to be up to £1.3 billion per annum (NAO 2010 - *Tackling diffuse water pollution in England*)[1].

Identifying which sources of diffuse pollution have the greatest impact on water quality can be difficult due to the variety of sources and the time-lag before issues are visible. Although each source of diffuse pollution may have relatively little impact individually, their cumulative effect can be highly damaging.

DEFRA considers agricultural activity as the major cause of diffuse pollution, with the application of fertilisers contributing 60 per cent of the nitrates found in water. They estimate that agricultural activity contributes approximately 25 per cent of phosphates and 70 per cent of sediments. In addition, with farms using 90 per cent of pesticides, they are likely to be the primary source of these chemicals found in water (NAO 2010). Challenges and Choices states that agricultural figure in Wales is approximately 14% - but, with a number of investigations still ongoing, this figure is likely to be an underestimate.

However, **how much progress has been made in persuading those causing most diffuse pollution to acknowledge their responsibility?** Despite efforts to persuade the farming sector to recognise their responsibilities for diffuse pollution, the National Audit Office (2010) states for England,

- "*the sector's awareness of the problem remains low:*
- ***Seventy two per cent of farmers we surveyed considered that agriculture contributed only a little or not at all to diffuse pollution…***
- ***85 per cent felt that diffuse pollution was not a significant problem…***
- *Even in areas where the use of nitrate fertiliser on farms is controlled by law, awareness amongst farmers of the rules governing these practices is not fully understood, with only 50 per cent of the farmers we surveyed in these areas recalling receiving any guidance from the Department on how these rules applied to their farm*" (NAO 2010).

These results are likely to be similar in Wales, across all sectors identified as sources of diffuse pollution. This disconnect between people and their environment is not just farmers, but is a symptomatic across society. Within the farming sector, this is likely to have significant ***cross-compliance*** issues relating to Pillar 1 funding.

[1] http://www.nao.org.uk/report/tackling-diffuse-water-pollution-in-england/

Whilst there are mandatory measures in place to help the Water Industry deliver improvements (e.g PR14) many of those for agriculture rely on voluntary farmer uptake (e.g. Glastir). Where there are mandatory measures in place, (such as Cross Compliance) **we are not confident that regulation is being enforced effectively in this sector**.

Catchment Management

Diffuse pollution needs addressing via management of the whole catchment NOT just the management of the river channel. For example, upland drainage needs to be addressed such as moorland grips require blocking in order to slow water down sediment as it flows down the catchment.

Erosion and sedimentation driven by grip drainage, over-grazing and burning are common problems in upland catchments. These are known to directly impact upon water body morphology, ecology, and/ or water quality, as well as secondary impacts through downstream flood risk and measures taken to control this. Together, they form one of the most damaging impacts on designated sites (e.g. Natura 2000), non-designated sites and drinking water protection areas, as well as a systemic problem for upland water bodies. Action to resolve these issues will provide opportunities to create more resilient natural features as well as reduce risks of flooding homes and businesses. E.g. Source to Sea Living Landscape project.[2]

Flooding

We are concerned that the transfer of flood drainage consents to Local Authorities from NRW will result in a lack of adequate development control.

More broadly, we are concerned that any relaxation of rules and deregulation will make the challenges of securing improvements in our water bodies even more difficult.

Planning / Green Infrastructure

Water Framework Directive targets some catchments will be significantly compromised if certain developments continue to be allowed e.g. development on floodplains. Cumulative effects do not seem to be able to be considered by the planning process as each development is considered separately.

Insufficient emphasis has been given to the role of green infrastructure in supporting water management. While sustainable urban drainage schemes (SUDs) and urban habitat restoration are mentioned in the plans, these should be seen as a significant part of a wider need to maintain and increase green infrastructure across urban areas. An example of the multiple benefits that can be achieved by successful SUDs can be seen at Montgomeryshire Wildlife Trust's Severn Farm Ponds nature reserve.

Invasive Species

Invasive Non Native Species (INNS), recognised as second only to habitat loss as the main causes of biodiversity loss, have gained a substantial foothold in many Welsh catchments**.** For example**,** Himalayan Balsam which can out-compete native plant species, greatly reducing biodiversity and negatively impacting on the native ecosystems. By exposing bare soil when it dies back in winter, it causes soil erosion leading to sediment entering the river that can silt up spawning grounds. Also, following rainfall, the bare soil allows pollutants to run into rivers and thus degrade the chemical status of the water.

[2] Wildlife Trusts Wales (2013) Source to Sea Living Landscape: Sustainable river management for people and wildlife. http://www.wtwales.org/sites/default/files/montgomeryshire_source_to_sea.pdf

Controlling **invasive species** will help to maintain ecological diversity and health throughout the river system. Initiatives to remove such species such as the North Wales Wildlife Trusts, Alun and Chwiler Living Landscape[3], should be supported.

Biodiversity /Protected Sites
As well as the above, there are other issues many catchments face include grazing pressures and significant gaps in riparian habitat connectivity. By working within the catchments to restore, recreate and reconnect important habitats, we will see improvements in:

- essential **ecosystem services** that these habitats provide such as flood alleviation
- water quality and therefore delivery of the **Water Framework Directive** objectives
- **river corridor habitats** for European, UK, and Welsh protected species

Another aspect which requires consideration is how SSSIs will be dealt with under RBMPs. Conservation objectives for Natura 2000 sites will be integrated into RBMPs due to the requirement within the Water Framework Directive to identify them as 'Protected Areas' (sites requiring protection under other European Directives, that will have their own objectives and standards under WFD). **Will this be the case for those SSSIs which are not part of the Natura 2000 network?** Will SSSI requirements be specifically be dealt with under WFD? If not, this could mean that a SSSI waterbody could potentially be classed as good under WFD whilst still failing to meet its conservation objectives as a SSSI, because the directive may not consider these – this is confusing for stakeholders and land managers.

Urgent action is needed to address water-related problems for protected areas. There are key systemic issues preventing site improvement, despite the firm requirement in the WFD for necessary measures to be in place by December 2012, and problems to be solved by December 2015. The WFD targets for Natura 2000 sites, drinking water sources, shellfisheries and designated bathing waters are the firmest in the Directive, and progress has been extremely disappointing in these areas.

Chemicals
Whilst a much larger number of waterbodies fail to achieve ecological standards than chemical standards, we must not be complacent, and this distinction to some extent masks the fact that ecological failures may in reality relate to specific pollutants or physico-chemical aspects, such as metals and nutrients, since chemical status focusses only on Priority Substances.

Phosphorus
In terms of the water industry, whilst major Sewage Treatment Works are subject to the Urban Wastewater Treatment Directive which requires that phosphorus stripping is undertaken to ensure effluent discharged from treatment works is low in nutrients, smaller treatment works, cesspits and septic tanks are not subject to the same controls.

Resource limitations
Pollution imposes not only environmental costs through its effect on aquatic life, but also financial costs from the treatment of water for drinking. The cumulative cost of water pollution in England and Wales has been estimated at up to £1.3 billion per annum.

This cost is transferred onto the general public for example, diffuse pollution has a direct financial cost for water companies, which are required by law to provide drinking water with strict limits on the levels of nitrates and pesticides. Between 2004-05 and 2008-09, water companies in England spent some £189 million

[3] http://www.wtwales.org/sites/default/files/north_wales_alun_and_wheeler.pdf

removing nitrates and £92 million removing pesticides from their water supplies. The figures in Wales will be less, but still significant.

Water companies also face unquantified costs relating to the removal of bacterial contamination from water supplies, as a result of diffuse pollutants. The costs of these measures are transferred to the public via water bills.

An Environment Agency study in 2009 estimated the total capital value of the inland recreational fisheries in England and Wales at over £3 billion (capital value is price at which fishing rights bought and sold). A further Environment Agency study indicated that annual expenditure by coarse anglers on fishing permits, tackle, travel, accommodation and other direct costs amounted to almost £2 billion a year, or around £850 per person per year. The same study estimated that the annual value of trout fishing in Wales amounted to £63 million a year, whilst the value of salmon fishing in Wales equalled £42 million a year.

The above does not include other significant economic drivers such as tourism. Therefore, there is a significant imperative to adequately funding riparian habitat management within Wales. However, it is currently unclear as how to decisions relating to affordability will be made, especially considering the complication that costs and benefits may be borne by different parties and over differing timescales.

The economic framework is very important and we think that

- measures should only be judged disproportionately costly when there is robust evidence that costs are appreciably greater than benefits as worded in EU CIS guidance;
- unaffordability should only be used to set lower objectives in very limited circumstances.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

In general, we agree that the description of how the significant issues are affecting the water environment. Wildlife Trusts Wale welcomes the establishment of the catchment based approach to River Basin Management Planning, enabling more effective engagement with local communities and consideration of local priorities.

It is important **the production of catchment plans and National Resource Management Plans are given sufficient time for them to feed in to RBMPs.**

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

When setting objectives for the second round of River Basin Management Plans, it will be important to bear in mind the feedback from the EU on the last round of plans. Whilst many aspects of the plans were well received, the UK was criticised for lack of engagement, and absence of methodologies for assessing Biological Quality Element but also the frequent use of derogations under Articles 4(4) – extended deadlines, and 4(5) – less stringent objectives, and the lack of measures, particularly mandatory measures, proposed to tackle pressures from agriculture, given the very high number of water bodies where issues such as Diffuse Water Pollution were identified as a reason for failure.

Resource limitations
Unless it can be demonstrated to the European Commission that the 2015 and 2027 deadlines are not technically feasible or are ***disproportionately*** expensive, there is a risk that the Commission could take legal action. If this action were successful and if the Government did not take action to comply with the judgement, there is a risk that the Government could face financial penalties up to £250 million a year.

While ensuring that the best use is made of available resources we must be cautious because **even where plans identify actions to tackle the various pressures affecting our waterbodies, the economic assessments applied may prevent their uptake**. We appreciate that some threshold must be employed to screen measures to ensure that action under WFD is making the best use of available funds, assessment on funding should look at various ecosystem services and multiple benefits. The assessment of overall cost benefit for 'bundles of measures' as opposed to individual measures would ensure that the overall benefits of a scheme are considered.

As with several other water management issues, the scope for catchment management schemes and the range of organisations who may be able to help fund them (e.g. Navigation, Port Authorities, the Shellfish Industry) should be further considered. This could be done through a **Payment for Ecosystem Service** approach and through using **polluter pays principle**.

Ecosystem Approach / Catchment Management

Taking an ecosystem approach to land management such as working with nature rather than against it. For example,

- A review of effectiveness of current mechanisms to address diffuse pollution, including voluntary and statutory - are they working? Are there better examples from elsewhere in Europe?
- Restoring floodplains rather than building on them.
- Restoring and managing blanket bogs for carbon sequestration, water retention and filtration
- Promoting and adequately funding **catchment management** throughout Wales including catchment sensitive farming.
- Sustainable abstraction regimes should be in place in all catchments so that there is no risk of environmental damage to protected sites
- Restore and cherish our protected sites. Protected sites are nature's cathedrals are fundamental to sustainable land management, providing the backbone of an ecosystem based approach. However, many are in unfavorable condition.
- Working with conservation organisations to deliver landscape scale projects that deliver sustainable land management such as the **Wildlife Trusts Living landscapes Schemes**
- Promote green infrastructure for the multiple benefits it provides such as Montgomeryshire Wildlife Trust, **Severn Farm Ponds**. This reserve, sited within an industrial estate, was originally created to drain the Welshpool bypass and industrial estate – but Montgomeryshire Wildlife Trust created a wetland nature reserve that is the centre point of their educational and special needs work. It is also a great place for the employees of the industrial estate to have their lunch and de-stress. Without this reserve, the industrial estate is not viable and likely to flood – therefore it is a catalysist for economic activity within an urban context.
- Catchments should be systematically surveyed to identify causes of WFD failures and to ensure appropriate remedial actions can be developed and implemented to solve problems.
- Stakeholders should be directly involved in preparing Water Body Action Plans to promote collaborative working to achieve compliance with WFD standards.

Agreements
NRW has a wide range of partners at a national level it must work with in order to raise awareness of diffuse pollution and reach particular target groups. These include organisations that directly advise farmers, such as

the National Farmers Union and Wildlife Trusts. We are not aware that NRW has formal agreements in place with these bodies which specifically cover tackling diffuse pollutions. As a result, roles and responsibilities are not clearly set out or understood, and coordination between NRW and these stakeholders could be improved in order to reaching farmers and encouraging changes in practices. This was a recommendation made by the National Audit Office when looking at diffuse pollution in 2010.

Well-resourced agricultural **advisory services** are a key tool to support farmers and land managers to adopt the most appropriate and beneficial land management options on their farm. This is not just Government officials but trained, and funded, Conservation Officers at organisations such as the Wildlife Trusts, RSPB and the Woodland Trust.

Therefore, NRW should consider developing more formalised agreements with stakeholders for tackling diffuse pollution at a River Basin Level.

Communications Plan
Awareness raising, whilst not an on-the-ground issue, it could be considered an over-arching issue which is significant at the national scale.

The awareness of the public in general, and of key sectors (e.g. Agriculture), about the state of our water environment, and the impact that their actions are having upon it, leaves much to be desired. Whilst local actions will aid in awareness raising, coordinated national activity will be important in underpinning this, particularly with regards to the Agriculture and land management sector given the high frequency with which the sector is identified as a contributor in failing waterbodies.

Many stakeholder including farmers and the public remain unconvinced of their contribution to the problem. NRW and Welsh Government should intensify its efforts to raise awareness and change behaviours amongst such communities by

- developing a greater understanding of how best to influence stakeholders such as farmers, including who is best placed to deliver the required messages; and
- providing a more compelling case for farmers by building on the evidence base linking farming to diffuse pollution and clearly demonstrating the benefits of mitigation measures.

There should be a **communications plan** specifically aimed at increasing awareness amongst farmers of the impact of diffuse pollution. To achieve behavioural change we need to ensure that messages are both clear and come from trusted sources and demonstrate that up-front investment will result in subsequent financial savings.

Action Plans and Opportunity Mapping
Action Plans and opportunity mapping should be undertaken with proper consultation and liaison with stakeholders such as landowners and Wildlife Trusts – detailing exact locations, options and costs. This would be a framework for local action, help set strategic objectives that will complement existing site-based conservation activities, supporting the delivery of statutory obligations in an ecologically robust, transparent and justifiable manner.

This should be an integral part to Natural Resource Management Plans looking at multiple benefits such as biodiversity, pollution and flooding.

Evidence base
Targeted local monitoring is required in order to improve the evidence base on the extent to which the different sources of diffuse pollution impact on water quality with information used to direct and support future interventions.

Forestry

We welcome the commitment to minimise negative impacts and maximise the benefits of woodland. As such, we would like to see the review of coniferous planting schemes. In order to achieve this,

- Forest Design Plans must take account of Water Framework Directive requirements.
- The practice of planting conifers in the upland slopes of river catchments should be reviewed. We believe that if these areas were planted with deciduous woodland (if appropriate) or managed as open space habitats such as blanket bog or heathland they would deliver multiple benefits through water quality, biodiversity and recreation.
- Forests within vulnerable areas should be managed to ensure that they do no lead to increased acidification[4] (e.g. clearfelling) or delay the recovery of waters to Good Ecological Status.
- The Forest and Water Guidelines should be reviewed and strengthened to protect and benefit the water environment, including discontinuing forestry pesticide (*cypermethrin)* spraying and large scale clear felling.
- Any scheme receiving grant funding from the Welsh Government should have to follow the strengthened Forest and Water Guidelines.
- Implement the recommendations of the report "*Woodland for Water*" to meet Water Framework Directive objectives
- Engagement between the forestry sector and NGOs should be promoted by Natural Resources Wales to assist collaborative working to improve the freshwater.

Agriculture

We need a greater understanding of the changes to farming practices that likely to have the greatest impact. Work is being undertaken by DEFRA into Catchment pilots in England that will aid this.

NAO (2010) stated that financial constraints remain the biggest barrier to changing farm practices. Therefore, it should be demonstrated to landowners that up-front investment will result in subsequent financial savings or ensure farmers have access to financial incentives to support and encourage change.

The impact of incentive schemes on diffuse pollution has been piecemeal given the scale of the problem. All CAP payments (Pillar I and Pillar II) schemes should increase their contribution towards reducing the impact of diffuse pollution. Pillar 1 should fund activities on individual farms that will prove to have the greatest impact on diffuse pollution, this may include reduced grazing densities in parts of Wales. There must be greater and more effective cross-compliance so agricultural grants and subsidies are targeted at delivering benefits to the water environment.

The National Audit Office (2010) in its review of diffuse pollution in England made a number of suggestions including (2010);

- limiting the amount of farm manure applied to land;

[4] See http://www.forestry.gov.uk/pdf/consultationacidificationpracticeguidedec12.pdf/$file/consultationacidificationpracticeguidedec12.pdf

- new periods prohibiting the application of high nitrogen organic manures and manufactured nitrogen fertilisers;
- the need for increased facilities to store manure on site;
- greater restrictions on spreading techniques and locations; and
- further record keeping requirements

Other activities that could reduce diffuse pollution include

- soil assessments/testing to advise farmers on the existing nutrient content of their land should be mandatory, to inform the amount of inputs are applied, or intended to apply. This will enable them to apply correct amounts of fertiliser, potentially achieving a reduction in potential nitrogen and phosphorous pollution and ultimately saving the farmer money
- Farms should have a proper assessment of fertiliser, livestock, soil, and agricultural waste
- Agricultural practice needs to be changed so that water courses are not adversely affected and are improved e.g. riparian habitat management, river corridor buffer zones, changing stocking rates, taking land out of production, installing buffer strips near water courses, hedgerow and woodland planting (e.g. **Prontbren project**).
- Restoring blanket bogs and upland habitats such as the **Pumlumon Living Landscape**

We recognise the need for farmer support to ensure compliance with those measures which are already required of farmers but that they feel unable or unequipped to comply with, and stress the need for well-resourced advice services to assist farmers in making the necessary improvements.

Overall, a considered combination of regulation and incentives will be important in tackling the contribution of agricultural sector, with enforcement being important in underpinning voluntary efforts to tackle issues, particularly in areas or situations where voluntary schemes are not available or are not taken up.

Enforcement

The nature of diffuse pollution makes it difficult for the NRW to gather evidence to prosecute individuals and businesses. However, this needs to be done in order to show that failure is not an option. While, failure to comply can result in farmers losing part, or all, of their single farm payment (cross compliance), this appears to only be used rarely or is not effective. Evidence from England has shown that, of the 69 Nitrate Directive failures, 47 had payments **only** reduced by between 1 and 3 per cent.

In England, seventy-four per cent of Environment Agency operational staff and 80 per cent of managerial staff we surveyed felt that the Agency ***should take more enforcement action*** against those causing diffuse pollution. However, agency staff considered that the

- complexity of the issuing process,
- the disproportionate level of evidence required to support the notice and
- a lack of management and legal support

is preventing them from using notices more widely. While, the Agency believes that the threat of issuing a works notice is a deterrent and facilitates behavioural change, there is a risk that the deterrent effect will diminish unless offenders see notices being issued more frequently.

Therefore, enforcement should be streamlined with simple but significantly increased checks, and breaches must also be treated seriously and proportionately. NRW must also;

- enforce the legal responsibilities of polluters,
- follow up on inspections,
- developing clear guidance, and
- providing staff with training and greater management support

Welsh Government should regularly report on the effectiveness of the current approach to tackling agricultural pollution (voluntary action and baseline regulation) and should set out clear guidance on when and how additional regulatory tools, such as Water Protection Zones, should be used if it is not delivering.

Re-Introductions

Beavers are described as a keystone riparian species (Collen and Gibson, 2001); a species whose presence increases biodiversity and modifies the surrounding ecosystem. Beavers alter their environment by building dams, lodges, food caches and bank-side burrows, and by felling trees. The EU Habitats Directive requires member states to consider the desirability of reintroducing certain species, among them the beaver, due to its great ecological importance. Beavers are believed to be an important component of healthy, functioning rivers, wetlands and riparian woodlands.

Beavers could provide potential ecosystem benefits via;

- Stabilise water flow - mitigate the negative effects of extreme flow conditions by
- storing water in the wetlands areas created, and reduce erosion in runoff events
- (Parker, 1986; Burns and McDonnel, 1998).
- Raise ground water levels, creating new valuable wetland habitat (Gurnell, 1998).
- Increase allochthonous (external carbon) sources entering the watercourse, thus
- increasing nutrient levels (France, 1997), which provides better feeding opportunities
- for birds, fish and mammals.
- Ameliorate stream acidity, improving water quality for fish (Cirmo and Driscoll, 1993).
- Reduce bank erosion and bed scouring (Parker *et al.,* 1985).
- Increase sediment removal from the water (Naiman *et al*., 1988).
- Increase pollutant and nutrient removal from the water (Cirmo and Driscoll, 1993).
- Encourage sorting of bed sediment (Gurnell, 1998)

Therefore, beavers should be reintroduced to suitable catchments in Wales with funding to enable management so that benefits are realised.

Invasive Species

Living Waters for Wales recognising INNS as a significant issue and states they will identify actions ‘to minimise the risk of deterioration’. However, we would like to see a coordinated programme of action per catchment to eradicate INNS.

Control of non-native species can have benefits for WFD, Flood Risk management, and biodiversity, and identifying where synergies lie should aid in targeting cost-effective action to tackle non-natives. Tackling at source should be a priority, for example, by preventing the sale of invasive aquatic plants by garden centres, through legislation and through voluntary codes in the interim. Education and awareness raising to prevent release by the general public is also required, to build upon the messages used in campaigns that target water body users, such as ‘Check, Clean, dry’.

More rapid communication over species of concern would be beneficial in enabling local communities to assist in preventing the spread of invasive species, for example, by reporting sightings to chart the spread of establishing species and to take action to control them when it is established that they require this.

Biodiversity / Protected Sites
Where a WFD waterbody is also a SSSI, consideration should be given to whether discretionary powers could be used to ensure that the more stringent of the targets applying to that waterbody (WFD status or SSSI conservation objectives) could become the default target under WFD, with discretionary powers used to implement this. Care would be needed to ensure no inadvertent consequences, but we would like to see this thoroughly discussed.

It is important to integrate SSSI considerations into emerging catchment and RBM plans more widely. The quality of many other SSSIs (e.g. adjacent wetland habitats) depends upon water bodies that fall under the WFD. We should ensure that action to improve the status of waters does not detrimentally impact upon, and wherever possible enhances, adjacent wetland SSSIs is important e.g. as NRWs is a Section 28G authority under the Wildlife and Countryside Act 1981 (as amended).

There is the risk that action under WFD can concentrate overly on the river corridor to the detriment of adjacent wetland habitats. We also see the potential to integrate action (and therefore available funding) which provides the scope to achieve the best outcomes for river and wetland habitats, in the most cost effective way.

SSSI objectives may provide a framework around which the restoration or creation of wetland habitats can be prioritised. There is good scope for such coordinated identification of actions to result in the adoption of schemes which have greater cost benefits overall.

We also recommend a decision based approach to addressing the critical factors responsible at the catchment level for either failures to meet salmon conservation targets or causing depletion in sea trout stocks, should be implemented to determine the priorities for action. These should include;

- regulation of abstraction at key times to allow salmon and sea trout to migrate from the sea and spawn.
- Improving degraded riverine habitats and the easement of barriers to enable the free passage of migrating fish
- Addressing polluting impacts such as sedimentation, acidification, pesticides and eutrophication. Reducing exploitation by a variety of means including increased catch and release, return of large sea trout, bag limits, carcass tagging schemes and limiting commercial catches through buy out or buy back schemes.

Chemicals
Pathway control options feature heavily as possible future options for control, and the scope to link these actions with delivery for biodiversity means that they could be particularly cost effective, e.g. rural SuDS, riparian buffers, and land use change. We believe that a **Payment for Ecosystem Services** approach can be applied here, meaning that downstream beneficiaries such as Harbour Authorities / users (who otherwise need to dredge and dispose of contaminated spoil) could follow the lead of water companies by funding **catchment management solutions**.

More action is also needed in the urban environment, and we are pleased to see a range of both source control and pathway control measures suggested to tackle this issue. Here, the planning process will be key in implementing many of these solutions, and **all new developments should include SuDS in their plans**, as this can help to reduce chemicals, nitrates, phosphates, fine sediment and faecal pollutants from entering our rivers.

Phosphorus
Normal discharges, or leaks from poorly-maintained systems, can deliver phosphorus straight into local waterways. Targeted works to improve Sewage Treatment Works effluent quality in key areas, and awareness

raising amongst communities where private domestic sewage systems are prominent (management and maintenance, promotion of no- or low-Phosphorus detergents, etc.) should all be considered.

Physical modification
Defra's Synergies Project suggested that often there will be commonalities in work for WFD and Biodiversity, but that flood risk management could be more problematic to align. Where historic modifications need to be retained, this will often still be the case, but elsewhere where there is the opportunity to work with natural processes, works may succeed in reducing the negative impacts upon ecology whilst also lessening flood risk, for example, by reconnecting rivers to their floodplains to enhance wildlife habitat and reduce peak river flows. **We want to see a new impetus developing via the catchment based approach to promoting natural processes approaches.**

It will be important to avoid the need for new damaging modifications in the future. Action to limit this need could include programmes to ensure that properties in areas of flood risk are made flood resistant (through careful design and retrofitting), reducing the need for new physical works to reduce flood risk.

The role of landowners in undertaking physical modification to rivers, often un-consented, should also be recognised. More should be done to raise awareness amongst riverside landowners of their rights and responsibilities as riparian landowners. NRW could development a guide to riparian landowners similar to EA's underused 'Living on the Edge'.

Fine sediment
Measures to tackle diffuse water pollution, particularly from agricultural land will of course decrease the input of fine sediment to our river systems, and those which deliver habitat improvements at the same time (river restoration, upland grip blocking) are particularly welcomed. There is a clear need for action around soil management, including best practice advice. In previous schemes, little attention has been given to **sub-surface drains,** which are an important nutrient and sediment pathway in some areas, and more action is needed on land drainage issues overall.

It is of course preferable to prevent sediment entering watercourses than to have to deal with it once it has done so through dredging or other potentially damaging means. Again PES models could see beneficiaries such as Navigation authorities and shipping industries funding activity to prevent siltation of waterways.

4 Who should we work with to achieve the environmental outcome?

The Wildlife Trusts have long been developing and delivering projects such as which seek to ensure improvements in our water environment, and we recognise the importance of our rivers and wetlands not just for biodiversity, but for water quality, flood risk management and a range of other benefits.

Wildlife Trusts Wales (WTW) is the umbrella organisation for the six Wildlife Trusts in Wales – Brecknock, Gwent, Montgomeryshire, North Wales, Radnorshire and South and West Wales (hereafter referred to as the 'Wildlife Trusts') working together in partnership to achieve a common aims. **The Wildlife Trusts collectively speak on behalf of more than 24,000 members, over 2,000 active volunteers and manage over 216 nature reserves**, covering more than 8,000 hectares of prime wildlife habitat, from rugged coastline to urban wildlife havens. The Wildlife Trusts have a collective vision to create *A Living Landscape* and secure *Living Seas* for Wales.

A Living Landscape is a recovery plan for nature championed by The Wildlife Trusts since 2006 to help create a resilient and healthy environment rich in wildlife and to provide ecological security for people. Across Wales

there are now over 11 Living Landscape schemes[5]. Every Wildlife Trust has one or more 'Living Landscape Schemes' where habitats are restored and reconnected on a large scale with the local community closely engaged. Many of these schemes are based around river catchments.

Although, we also have a much longer history of protecting and improving Welsh waters, our Living Landscape vision, which has built on this, has a **high degree of synergy with the catchment based approach**. The schemes are being delivered in partnership with a huge number of individuals and organisations including farmers and landowners, water companies, land-based industries, local authorities, other NGOs, statutory agencies, local communities and volunteers. We are committed to continuing our work to deliver A Living Landscape, but we also look to NRW and Government- both centrally and locally-to support landscape scale conservation with appropriate policies and public funding support.

We have a long history of working closely with the NRWs legacy bodies and water companies to improve rivers and wetlands to benefit habitats and species such as water vole, brown trout, otter, damselflies and white-clawed crayfish. **One of our main strengths is making the link between policy and delivery** - with an 'army' of staff and volunteers deployed 'on the ground' who are in a position to translate complex legislation into positive action for people and wildlife.

Over a long period of time, we have developed our experience at delivering a wide range of projects aimed to improve the health of rivers, wetlands and catchments, for example river restoration, land management to reduce agricultural diffuse pollution, community engagement to tackle urban diffuse pollution, and wetland creation. The synergies between actions to deliver biodiversity improvements in liaison with local communities, and actions to deliver the requirements of the WFD, have facilitated our increased involvement with direct delivery of WFD and catchment planning.

The Wildlife Trusts are highly committed to delivering positive actions in the freshwater environment and are keen to see the catchment approach to WFD delivery succeed. We believe that the chances of success will increase where groups take a strategic approach to considering WFD and biodiversity outcomes together. This requires strong partnerships underpinned by sound ecological knowledge and supported by NRW and Water Companies. **We are well placed to provide the ecological expertise needed and to use our reach into local communities to ensure sustained buy-in from key stakeholders and communities**. Locally, Wildlife Trusts are active partners in a large number of catchment partnerships, and we will draw upon local experiences in order to feed back to national bodies, helping to shape and refine delivery of actions under the Water Framework Directive.

Nationally, we are promoting an integrated approach to freshwater issues and believe that the catchment geography provides the ideal unit for integrating approaches to WFD delivery, biodiversity outcomes and flood risk management.

We recognise the funding difficulties that NRW have and will urge Government to make a clear choice to invest in addressing the significant challenges facing the freshwater environment and the habitats and species it supports. **We perceive a real risk that funding cuts will constrain delivery of actions to improve water bodies especially the larger cost and larger scale projects such as the Pumlumon Project**. These are the very projects which support local businesses in their delivery and which can often deliver more than one benefit in a cost effective way. **The case must be made that investing in restoring natural processes and our freshwater ecosystems will, in the long term, save money**. We will continue to communicate this message to Government.

[5] http://www.wtwales.org/living-landscapes/living-landscape-schemes-wales

We believe that RBMPs must present a realistic picture of what needs doing, how much it will cost and what options are available for funding the actions needed. Government must show leadership in developing a strategic approach to allocating and securing funding support, whether via direct Government funds, Payment for Ecosystem Services Schemes or other means. We are not confident that the challenge posed by the dearth of funding for delivery of the much needed environmental outcomes is being properly considered.

In conclusion, we will continue to play our part, both through local engagement with the Catchment based approach, and through national engagement with Government and NRW, to ensure that action under the WFD achieves the best outcomes possible for our waters and their wildlife.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name ____Oliver Twydell Water Quality Manager

Organisation and Sector _Dee Valley Water (Water only company

Contact Details Oliver.Twydell@deevalleygroup.com

River Basin District Response for __Dee_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

Cyfoeth Naturiol Cymru
Natural Resources Wales

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

From a water company view, we consider the biggest challenges to be related to quality and quantity. In terms of the significant water issues contained in Section 7 we would add "Pollution from industrial processes" to the list.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

The means of dealing with herbicide and pesticide runoff from agriculture should not be limited to encouraging the reduction in usage but should also include measures to carry out best practice such as calibration of sprayers and use of biobeds.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

The diffuse rural pollution should be tackled by working with farmers, farm associations and agronomists to promote best practice and in form of grants and other measures that can be used to assist them.

4 Who should we work with to achieve the environmental outcome?

It would be appropriate to work with water companies, schools and local authorities to achieve the environmental outcomes and raise awareness. Education is important to inform local communities of the importance of the River Dee.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Dee Valley Water along with other water companies abstract water from the River Dee and in the process of doing this it can impact on aquatic life. We are undertaking investigations to determine the impact of our operations on the River Dee fish and eel populations. If the investigations reveal that the intakes are having a negative effect on the aquatic populations we will install appropriate screenings at the river intakes.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Cyfoeth Naturiol Cymru
Natural Resources Wales

The quality of water is important for the health and well-being of the local communities that depend on the River Dee for their drinking water. Whilst the quality of water is generally very good we would tackle pollution from rural areas first so that the quality remains of a high standard and does not lead to additional, expensive treatment processes being required at our water treatment works.
The non-native species of plant and animals in the River will continue to grow unless they are appropriately managed. This should be an ongoing programme with an overall strategy to allow no further growth/expansion of the non-native species beyond a set baseline.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Table 1 seems to cover the most important environmental effects. We think it would be appropriate to add under the "Water" heading that surface water quality could be affected by industrial pollution.

2 Is there any other information that we should be taking into account as part of the assessment?

On page 10 where the aspects that should be taken into account are listed, we would add to the list "Changes in water quality could affect water treatment processes, which could result in more energy being used. This could have a negative impact on the climate.

Ceri Jones
Western Wales RDPM
NRW
29 Newport Road
Cardiff
CF24 0TP
Ceri.jones@cyfoethnaturiolcymru.gov.uk

Your ref: WW
Our ref: DJ
Email: Dafydd.Jarrett@nfu.org.uk
Direct line: 01982554200
Date: 30 November 2013

Dear Ceri,

Water for Life and Livelihoods the Western Wales District: Challenges and Choices Consultation

Thank you for giving NFU Cymru the opportunity to comment on Water for Life and Livelihoods the Western Wales: Challenges and Choices Consultation NFU Cymru is a professional body which represents the interests of farmers across Wales. Our views are on behalf of the farming and land management sector in general.

UK and Welsh farmers have a major role to play in producing food for a population which has already grown to 63.7 million. Farmers are being increasingly tasked to improve our national food security. If they are to succeed they will need access to a secure supply of clean water.

Points of principle

- Robust, agriculture-related data to provide evidence for the development of informed, science-led policy is needed throughout the Water Framework Directive process. Local data is also key to enable farmers and advisers to understand the relevant issues and take "ownership" of them. We are pleased to see that NRW has arranged a series of catchment workshops in 2014. They will be key to capture more local issues and information that will not be covered in this more generic response.

- Climate change should be considered as a Significant Water Management Issue as it may have considerable impact on many of the parameters that combine to the classification of Good Ecological Status/Potential. Although it is difficult to account for the impact of climate change in planning cycles, better attempts to understand the changes to "baseline" data need to be made to understand how this impacts on the requirement for "no deterioration" and how GEP/GES is measured in future.

- The impact of extremes on the baseline assumptions underpinning WFD should be further considered. Extreme weather related incidents change what can reasonably be expected of farmers and advisers, and cannot be dealt with through standard good agricultural practice. How Natural resources Wales, or what NRW can expect from farmers and advisers during severe weather related events should be dealt with in guidance, rather than through regulation.

- An inability to produce food and fuel because of insecure access and/or an inadequate and costly allocation of water for farming represents a significant risk to our sector. The twin challenges of global climate change and meeting the needs of a growing population

are likely to develop into an issue of national importance – both for the possible impact on national food security and Wales' potential to make a greater contribution to global food production.

- Impacts of WFD related action on flooding of agricultural land needs to be adequately evaluated and accounted for in the RBMP process. There is a significant danger of unintended consequences e.g. removal of structures that provide benefits or functions e.g. during a drought or flood situation.

- Restrictions placed on plant protection products should be the very last resort. The Government should consider how best to reduce risk, taking into account the chemical properties of individual pesticides, available mitigation measures and the potential effect of weed, pest and disease resistance on Welsh production. We have significant concerns that measures introduced through the River Basin Planning will not consider the cumulative effects of new regulation on the availability of plant protection products. There could be a significant cost to the agricultural and horticultural industry if no, or severely limited, crop treatments are available as a result of restrictions on use being introduced.

- We are concerned that invasive species present a significant challenge under WFD as there will be several species that cannot be eradicated, regardless of the actions (new or existing) proposed.

- We would strongly question any proposals for more prescriptive regulation where impacts are spatially variable and a "one-size-fits all" complex regulatory approach cannot deliver improvements in all areas. The Welsh Government should fully utilise and explore industry-led partnerships and non-regulatory measures first, and be satisfied that existing regulation (including codes of practice) and enforcement is inadequate before considering new regulatory approaches. Industry-led approaches and Continuing Professional Development (CPD) have already demonstrated that they can deliver to improve environmental outcomes, without the need for further regulation.

- The industry can take the lead in a number of areas e.g. CPD and professional adviser training and scheme development, working in partnership through farmer-facing initiatives, devising operator training schemes, development of farm skills (with or without professional advice)and managing professional registers. By working together towards common goals we can achieve environmental and business outcomes for our industry. Farming Connect have a key role to play here.

- A holistic approach to soil and nutrient management rather than single-issue activity is required. Phosphorus issues can be combined with messaging on reducing soil erosion and runoff, the importance of good soil management, whole system nutrient planning/management (alongside nitrogen) and avoiding faecal contamination in watercourses. The Challenges and Choices consultation does not satisfactorily reflect the long-term trend of decreases in fertiliser use and manure production, and reductions of nitrogen and phosphorus in animal feeds.

Q1. What do you consider to be the biggest challenges facing waters in the Western Wales River Basin District?

We have identified a number of SWMIs not expressly identified by the Challenges and Choices consultation:

Evidence and appropriate data
Throughout the WFD process there is a need for robust agriculture-related data to enable the development of informed, science-led policy. Local data is also key to enable farmers to understand the relevant issues and take "ownership" of them.

The headline figures regarding the extent of diffuse pollution from agriculture present a confusing picture at odds with our experience of faming practice and steps taken within the industry (as well as regulation) to manage and mitigate agricultural impacts.

Diffuse pollution is difficult to attribute to a single source, and we do have concern that assessments do not discriminate between different sources of pollution in the rural environment but rather falsely attribute point and diffuse sources solely to agriculture. Local knowledge of the scale of the problem from specific sectors is needed to find appropriate solutions to achieve improvements in WFD classification. In addition to separating agriculture's contribution from other point sources, there is a real need to disaggregate "agriculture" and "rural land management" in datasets.

For example in England, Defra and the Environment Agency both make reference to "agriculture and rural land management" being responsible for about 30% of the UK's failures under the Water Framework Directive. This raises questions as to whether the data exists in order for an accurate distinction to be made between these two, very separate, sources. Not only is good robust data key to ensuring that there is a science-led approach to policy development, it is also key to giving re-assurance to those affected by policies that informed decisions are being taken.

All possible sources need to be thoroughly considered in assessments. Agriculture is not the sole contributor to diffuse pollution and concentration peaks from permitted sites, sewage discharges (diurnal variation and storm overflows) and pollution events all contribute to the concentration of a pollutant measured at any single point in time. Without thorough assessment of all available data from these point sources "diffuse agricultural pollution" is the simple conclusion being made. NRW needs to understand the variation in output from point sources (e.g. continuous data from sewage treatment works, data on industrial discharges, and mapping of pollution incidents) to understand the contribution of diffuse sources.

We do not believe the data supports the assessments and we believe that farming's contribution is being consistently overstated in some catchments.

Climate Change

Climate change is likely to have a significant impact on many of the parameters that together combine to the classification of Good Ecological Status/Potential. Although it is difficult to account for the impact of climate change in planning cycles, better attempts need to be made to understand the changes to "baseline" data, how this impacts on the requirement for "no deterioration" and how GEP/GES is measured in future.

We believe that there should be a greater emphasis on the impacts of climate change and that it should be considered as a significant water management issue. There is potential for all

elements in the definition of WFD qualitative and quantitative status of water to be sensitive to climate change.

There is very little mention of climate change within the document even though many water bodies could be vulnerable to climate change. We therefore question whether climate change is being effectively taken into account in this RBD.

The EU's Common Implementation Strategy guidance states that "although climate change is not explicitly included in the text of the WFD, the step-wise and cyclical approach of the river basin management planning process makes it well suited to adaptively manage climate change impacts". Whilst adaptation to a changing climate may be facilitated by the planning cycle, we strongly question whether there is recognition that the baseline against which progress is measured has changed, is changing and will continue to change as the climate changes. The impact of climate change on the RBMPs and WFD targets must be assessed.

The UK Climate Change Risk Assessment[2] (CCRA) appears to begin to tackle this issue. It states that "in the near term (2020s), a large proportion of rivers could fail existing environmental flow targets if we continue to use historic climate to guide our regulatory framework. This also appears to be the case in the longer term (2050s, 2080s)" and suggests that further work is needed to monitor and possibly re-evaluate these environmental flow targets in rivers under a changing climate.

The CCRA says that a "large number of national assessments and catchment studies indicate that winter river flows are likely to increase across the UK and summer flows are likely to decrease due to climate change". However, the CCRA is clearer about the possible future variability "there is a wide range of results and in the near term (2020s) and medium term (2050s) changes in average seasonal flows may be positive or negative" and especially "that it is difficult to project changes in precipitation".

In addition the CCRA notes that there is much less confidence in the consequences of changes in water quality than quantity and that this is attributed to the complex interactions between land use, climate change and aquatic ecosystems. This lack of confidence is not reflected in the consultation's sections on nutrients, sediments etc. and we would agree this is an area where further research is required.

The Common Implementation Strategy guidance suggests that RBM measures should be "mindful of the actions being taken by others to either mitigate or adapt to climate change". We are concerned that there is little evidence of consideration of potential synergies and trade-offs with non-WFD initiatives. The CCRA reinforces this view, that the "water sector cannot be considered in isolation and adaptation measures need to reflect the complex linkages between sectors".

Weather

Extreme weather related incidents change what can reasonably be expected of farmers and advisers, and cannot be dealt with through a regulatory approach.

Summer precipitation (June, July and August) has increased dramatically in the past decade. However, there have been more subtle changes in the winter (December, January and February), which have seen less prominent decreases in rainfall since the late 1970s. In the summer of 2012, rainfall in England and Wales was the highest for 100 years with a total of 375.0mm. This total represents the fourth wettest summer on a record dating back to 1766.

Since 2003 winters have seen less rain compared to the 1961-1990 average. In the winter of 2012, rainfall was 213.3mm, 8 per cent lower than the 1961-1990 average.

Variable or unpredictable weather can impact on farming in a number of ways, including:

- As well as causing leaching of nutrients, loss of soil and organic matter, unexpected soil erosion events caused by extreme weather can lead to a loss of crop protection products and reduced resilience in crop production.
- A regulatory approach lacks the flexibility to be able to deal with unusual conditions. For example in the extremely wet conditions of 2012 a great number of farmers around the country entered the autumn period with full slurry stores. Despite favourable conditions later in the year farmers were unable to spread because of NVZ closed periods.
- Unprecedented rainfall can bring flooding to tens of thousands of hectares of farmland, some for extended periods of time. In addition to the extent of the land affected, duration of flooding can leave land unworkable for extended periods due to the impacts of waterlogging and loss of condition.
- Farmers are faced with the requirement to irrigate during periods of water scarcity to avoid crop losses.

How NRW responds to, or what NRW can expect from farmers during severe weather related events should be dealt with in guidance, rather than through regulation. Standard good agricultural practice cannot deal with such extreme events. Keeping strictly within the regulatory constraints is difficult in these situations. Our ideal solution to this problem would be to devise a methodology that can offer adequate flexibility in situations where extreme weather events or late harvests arise. Flexibility could more easily be dealt with through guidance rather than a regulatory approach.

Water availability and the importance of water to agriculture

An inability to produce food and fuel because of insecure access and/or an inadequate and costly allocation of water for farming represents a significant risk to agriculture. The twin challenges of global climate change and meeting the needs of a growing population are likely to develop into an issue of national importance – both for the possible impact on national food security and the UK's potential to make a greater contribution to global food production.

Agricultural abstraction in parts of Western Wales makes an important contribution to the local rural economy, supporting food processing and packing businesses as well as farming. In the Western Wales RBD Water is primarily used for irrigating high-value ready-to-eat fruit and vegetables, and potatoes. For example in the East of England, irrigated crops support a food and farming sector that provides 50,000 jobs and contributes £3 billion to the annual economy. Nationally, irrigated crops account for only 4% of crop area but 20% of crop value.

Agriculture accounts for only 1% of total water abstracted nationally[5]. Farmers also tend to abstract water on a seasonal basis and so typically need water at times of higher demand and lower availability. Spray abstraction (irrigation) is considered to be a 'consumptive' use of water because it is mainly taken up by the crop with relatively little water returned to the environment.

Global climate change and population growth are making national food security an increasingly important issue for Government; meanwhile more and more consumers demand a consistent supply of high quality local food. If farmers are to succeed in growing this food they will need a secure supply of water. Yet, water for domestic use, industry and the environment generally take precedence during periods of scarcity.

Flooding

Impacts of WFD related action on flooding of agricultural land needs to be adequately evaluated and accounted for in the RBMP process. This is a particular issue for many farmers and landowners with low lying land towards the bottom but not exclusively of the catchment.

Flooding is a significant water management issue for farmers with 14% (1.5 million hectares) of the agricultural land in England and Wales at risk of flooding from rivers or the sea.

Unprecedented rainfall brought flooding to many parts of the country in 2012, with tens of thousands of hectares of farmland affected, some for extended periods of time. In addition to the extent of the land affected, duration of flooding can leave land unworkable for extended periods due to the impacts of waterlogging and loss of condition.

Flooding in 2012, whilst unavoidable given the unprecedented nature of the rainfall, was widely perceived to have been exacerbated by reducing rural watercourse maintenance and contributing to floods over a greater extent of agricultural land for an extended duration and hindering recovery.

We are concerned that attempting to move water bodies to a more “natural” state through the WFD process, e.g. by removing structures and creating meanders or simply reducing or ceasing maintenance operations, will create further risk of flooding to rural land. Protecting agricultural land use needs to be seen as an appropriate justification for retaining control structures, similar to protecting other land uses. Many measures are identified in Challenges and Choices for controlling and mitigating physical modifications, but there is an acknowledgement that more research on the links between physical modification, ecological response and effectiveness of measures needs to be carried out (including costs, benefits and technical feasibility). We consider that these evidence gaps are significant and options need to be thoroughly considered on a site-by-site basis to determine the potential consequences (for both ecological condition and physical functioning) of both action and inaction. There is a broad range of existing practices undertaken to help convey water and reduce flood risk to people, property and agriculture that are cited within the Technical Summary on Physical Modifications and Hydro morphology. The long term impacts of reducing or ceasing such activity on the status and condition of water bodies must be better understood, especially where such activities may have been fundamental to the resulting water level management regime and existing species assemblage.

Population pressure

In the longer term, the need to produce enough food for a growing population represents a significant challenge of both national and global importance.

The twin challenges of global climate change and meeting the needs of a growing population has potential to develop into an issue of national importance – both for the potential impact of national food security and the UK’s potential to make a greater contribution to global food security.

There is also a major opportunity for the UK food chain to respond to domestic and wider EU/world population growth. However with increased market there also comes increased need to manage our farming systems more carefully and we know that production increase cannot come at cost to the environment, especially water quality.

So, we need to produce more food, but impact less on the environment. ‘Produce more, impact less’ must entail a range of actions ensuring that farmers and growers can build their capacity to produce food whilst continuing to safeguard the environment.

This isn’t an entirely new concept to farmers; it is something that many farming businesses have been making strides towards for some time. They have maintained and in some cases increased production without increasing the overall volume of inputs through technologies such as GPS, variety selection and precision farming. As an example, the volume of nitrogen fertiliser used on farms in the UK has fallen by a third since the mid-1980s. But if more production is to be achieved, there will be a continued need for the development and implementation of new technologies, research and development and knowledge transfer.

There are also wider impacts of population growth that need to be considered e.g. more houses in lowland flood plains

The demands and impacts of a growing population should therefore be carefully considered through the RBMP process.

Q2. Do you agree with our description of the issues affecting the water environment and society? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Changes to the Natural Flow and Level of Water

We agree that future pressures relating to water scarcity present a real and increasing threat for all users – including the environment. But broad figures give no insight into the type and degree of local catchment issues. Indeed, focusing on these statistics can mask the considerable variation in catchment character and water balance across the country.

Farmers clearly contribute to abstraction and flow problems but collectively (and certainly individually) they are minor users of water compared to public supply and (especially in Wales) energy. Farmers' access to water is squeezed between, on the one hand, large volume (incorporating significant headroom) public supply licences historically granted on a permanent basis and so difficult to amend; and increasing legal protection for important habitats and species on the other hand. A reduction in water availability for agricultural production could adversely impact national food security and increase food price volatility.

Pollution from Rural Areas

As previously stated we believe that agricultural pollution must become a separate SWMI or at the very least more fairly and accurately apportioned.

Chemicals – Possible future options for source control

We are concerned by the future option of "EU restriction/authorisations based upon use" which we don't consider to be appropriate management of the source – a risk-based approach should be used which needs to consider the impact upon the industry should restrictions mean that there are no alternatives left. Restrictions should be the very last resort and the Government needs to consider how best to reduce risk by taking into account chemical properties of individual pesticides, mitigation measures available and the potential effect of wee, pest and disease resistance on UK production.

There are barriers to new innovation and limitations on efficacy that mean that "voluntary substitution of chemicals" with e.g. biological alternatives cannot fully substitute for existing products. In many situations alternative crop protection technologies such as biological controls do not represent a 'like for like' swap.

Chemicals – Possible future options for pathway control

There are many options suggested for pathway control from agriculture. However, we consider that there needs to be an evaluation of current pathways and the level of information that already exists on efficacy of controlling activities before implementing further controls.

We question the identification of agriculture as a sector that can deliver "sustainable drainage techniques to treat and reduce urban runoff". Some of these options need further research before they can be recommended e.g. "rural sustainable drainage options". We need research, knowledge transfer and a clear understanding of who should pay for the benefits.

One of our big questions is over the aim to “reduce pesticide peaks”. Best practice drives farmers towards a tendency to produce a large, short-lived spike because everyone in a catchment will spray when conditions are deemed appropriate. Our question is whether it is better to accept this certainty and deal with spikes in a risk-assessed, smarter way or whether to change practice to reduce the magnitude of spikes but increase the duration that the product is measurable in surface water, as a result of prolonged sub-optimal use.

The suggestion to “change crop rotations” is overly-simplistic. Even if farming systems are able to change there are implications for the farmer – equipment availability, suitability of land and reductions in yield – all of which need to be evaluated. The farming system is driven by profitability and if this were to be changed it would have significant economic implications. These would need to be taken into consideration but a national approach to evaluate the cost at farm level would not take into account the differences in farms regionally and locally. Proportionate cost implications would need to be fully investigated. There is potential to simply swap the problem e.g. to soil management, nutrient loss etc. or to move the problem to another location. Pollution swapping is a real possibility when options such as changing crop rotations could represent the worst possible outcome for all parties concerned because of cost, time to adapt practices and confidence to be able to make the changes.

Similarly, it is simplistic to suggest that “wider, well managed buffers” are the solution. Buffers certainly have a role to play but the factors that make a buffer appropriate will differ depending on the situation. Wider does not necessarily mean better.

The industry is already going beyond the regulatory minimum and using precision application methods such as low drift nozzles and crop mapping to reduce the risks from pesticides. However, regulation does not always facilitate the use of new technology readily, having taken a number of years to reach consultation stage on the inclusion of low drift nozzles in the risk assessment processes for registration of crop protection products.

NRW needs to recognise the rapid moves being made to precision farming techniques which are being readily taken up by the industry.

Faecal contamination and sanitary pollutants

Faecal indicator organisms (FIOs) are another area where we are concerned over some of the uncertainties and assumptions in the data. There are evidence gaps and gaps in the data, and it is likely that “agricultural” sources will include unmapped sewage and septic tanks discharges – this must be made clearer in RBMPs. Again, data to inform the source-pathway-receptor model is key, and actions shouldn’t be based on assumptions about the source of FIOs.

Fine Sediment

Fine sediment can increase flood risk.

It is important to assess the longer term (+10 year) impacts on WFD objectives of ceasing maintenance activity by NRW (e.g. the removal of silt), previously undertaken to facilitate the conveyance of water in order to reduce flood risk.

The methodology for identifying sediment pressures and attributing water body failures to sectors seems to be based on assumptions and perceptions rather than good quality data. While these assumptions may be founded in some cases, we need better information in order to target efforts in the right places both in field and in channel.

Without this unbiased information on the source-pathway-receptor linkages there is no clear understanding of “background” sedimentation, agriculture’s contribution to the problem, so no way to ensure that agriculture’s contribution to the solution is proportionate to achieve the results.

Nitrates

The consultation does not satisfactorily reflect the long-term trends in nitrogen fertiliser and feed use, manure production, and overall crop and livestock nitrogen use efficiency which will be contributing to reducing the nitrogen load at risk of loss as nitrate to rivers. Use of nitrogen in grassland has declined by 59% since 1990 and nitrogen from manures has reduced by 22% between 1990 and 2012 due to reductions in livestock numbers and lower nitrogen excretion rates (as a function of reductions in nitrogen content of feeds). Over this same period, the agriculture sector has made significant improvements and reduced the amount of nitrogen at risk of loss through leaching.

Groundwater trends may take much longer to show improvements in nitrate concentrations. The complexity around this issue, and the potential solutions (and time to reflect reductions in inputs) needs to be clearly communicated when explaining WFD groundwater failures.

Experience NFU Cymru has gained through the most recent review of the Nitrates Regulations and areas designated as Nitrate Vulnerable Zones leads us to question some of the statements in the Evidence Summary that states that “modelling has suggested that in rural areas in the UK more than 80% of nitrate in groundwater may come from agriculture”. We know that modelling used in NVZ methodology is based on assumptions, incorrect and limited datasets and methodological inconsistencies (e.g. not accounting for other rural sources such as rural sewage treatment works, overflows, and septic tanks in the dataset). Statements like this should be properly evidenced as the reality on the ground rarely reflects the modelling.

Phosphorus

The consultation paper also fails to satisfactorily reflect the long-term trends in phosphorus fertiliser and feed use and manure production. Use of phosphate has declined by 67% on grassland and 51% on tillage land since 1990, while phosphate from manures has reduced by 20% between 1990 and 2012

Similarly, overall phosphorus use in animal feeds has declined by over 20% since 1999 and loading of phosphorus on pig and poultry farms has been reduced as a result of widespread use of Phytase – an enzyme feed additive to improve nutrient utilisation. These trends are not reflected adequately in the consultation document or evidence summary.

Q3. How do you think these issues should be tackled? Please specify which issue(s) your response refers to and describe any consequences of taking particular actions or approaches.

Changes to the Natural Flow and Level of Water

Farmers need secure access to water to make long-term business investment in future food production. WFD measures aimed at addressing the impacts of abstraction and flows must have regard to the need to allocate a fair share of water to grow our food. The abstraction of water is already a heavily regulated activity. Meanwhile, reaching GES may become impossible/more difficult in some water bodies because of climate change. Standards and the practicability of measures must be reviewed in those circumstances.

We believe that the current system for managing water could be improved by:

- Ensuring that the abstraction licensing system is simple, flexible and cost effective to administer. This may be government's long term aim through its abstraction reform proposals but potential improvements should be identified and introduced now. For example, the ability of farmers to take 'high flow' surface water irrespective of the season to fill reservoirs is a sustainable water management option that should become a permanent measure.
- Basing the decision-making process, from the enforcement of abstraction licensing strategies to variations of individual licences on sound scientific evidence that is properly communicated to users, thereby building trust between user and regulator.
- Treating evidence of (lack of) groundwater availability with special care, based as it is as much on modelling as it is on monitoring which makes the link between groundwater abstraction and ecological harm difficult to prove.
- Ensuring that options to reduce abstraction and increase flows focus on the public water supply sector as the major water user (particularly in the dry south and east) and often bulk exporter of water from sensitive catchments.
- Adoption of more rigorous activity in the public supply sector such as compulsory domestic metering and improved leakage performance.
- Continued promotion of water efficiency measures by all users.

We believe there is some merit in exploring opportunities for greater collaboration and partnership working both within and between sectors. Also, we agree that there is value in increased promotion of water storage schemes at all levels – from identifying need at the water body, catchment and regional scale, to improving design and delivering schemes on the ground whether by individuals or multi-sectorial.

It is important for licence changes to proceed at a measured pace to allow businesses sufficient time to adjust and invest in water security and efficiency.

Removal of current licensing exemptions is included in the list of possible further options in the future. While we realise that government intends to use the provisions of the Water Act 2003, the removal of the existing exemption afforded to trickle irrigation needs to fully accommodate the water needs of the many trickle irrigators. Through their open and transparent use of water over many years, these irrigators have established what amounts to 'grandfather rights' to those abstracted volumes.

Pollution from Rural Areas

Chemicals - Possible future options for source control

It should be noted that farm assurance schemes already go beyond regulatory requirements. There may be more to do to help farmers understand the risky areas on farm e.g. by mapping that could be used in farm assurance or rewarded through earned recognition. These would have the additional benefit of helping farmers to manage risks without creating a burdensome process.

Similarly, there is no evidence that labelling is not being followed and therefore needs more stringent regulation and "improved enforcement of…regulations governing chemical use". WFD should not challenge legitimate practice in the use of plant protection products.

Low toxicity products (e.g. met aldehyde) need a risk-based approach and achievable standards. Managing the issue of pesticides in water bodies needs to follow a risk-based approach based on the risk to the receptor. Developing regulation on a hazard basis and using out-of-date standards is already having a detrimental impact on the industry. Standards need to be achievable and based on sound science.

We have significant concerns that measures introduced through the River Basin Planning process will not consider the effects of new legislation on the availability of plant protection products. There could be a significant cost to the agricultural industry if no treatments are available as a result of restrictions on use being introduced.

Faecal contamination and sanitary pollutants

We agree that the best options for working within catchments of bathing and shellfish waters needs to be tailored to the specific source of pollutant. Advice and guidance from voluntary schemes and incentives to implement measures that have been proven to reduce the problem should be the first option. Catchment Sensitive Farming should be the preferred route for advice in these protected areas.

In addition, the 'discounting' approach, which can be used to disregard samples during unusual events, should also be investigated for use in Wales. We understand that Scotland is already taking advantage of the 'discounting' approach (via the Short Term Pollution provision).

Nitrates

We would strongly question any proposals for more prescriptive regulation around nitrates, especially as this appears driven by the threat of European Commission infraction proceedings rather than any evidence for cost effective and targeted measures that deliver reductions in agricultural nitrate. At the national scale the impact of the NVZ action programme (NVZ AP) on nitrate reduction has been assessed as "modest" by ADAS. This shows that regulation alone isn't a solution to a problem, and even very prescriptive regulation such as nitrates can be limited in their impact. Impacts are spatially variable and a "one-size-fits all" complex regulatory approach cannot deliver improvements in all areas. The long term trends in reducing fertiliser inputs predates NVZ implementation and evidence has shown that most NVZ action programme measures only limit nitrate pollution by small percentages with the impact depending wholly on the local situation.

Assessment of the NVZ action programme has shown that compliance with some measures within the NVZ AP was already high before designation. Several measures within the NVZ AP reinforced good practice which was already widely adopted. For example, applications of manufactured nitrogen fertiliser in autumn had already fallen to low levels in Wales before

introduction of the NVZ AP in 2002. We would therefore strongly question the value for further NVZ measures enforcing good practice for which prior compliance is already high.

Phosphorus

We suggest a holistic approach to soil and nutrient management rather than single-issue activity. Phosphorus issues can be combined with messaging on reducing soil erosion and runoff, whole system nutrient planning/management (alongside nitrogen) and avoiding faecal contamination in watercourses. Therefore we do not believe that there is value in extra regulatory measures solely related to phosphorus. We are surprised by the suggestion to "maximise use of sewage sludge application to land within detailed nutrient management plans to reduce reliance on artificial fertilisers in agriculture". The water industry is already reliant on agriculture in the UK, which utilises 77% of sewage bio solids, a point which doesn't appear to have been taken into account.

Septic tanks do not appear to have been adequately taken into account as a source of nutrients in water bodies in this catchment. There is a need to provide transparent and verifiable evidence that disaggregates septic tanks from agricultural phosphorus in datasets. The Government needs to be able to target activities where they will result in improvements in water quality.

Invasive non-native species

We are concerned that invasive species present a significant challenge under WFD as there will be several species that we cannot eradicate, regardless of the actions (new or existing) proposed.

There is a danger of unintended consequences of action aimed at other SWMIs having a detrimental impact on the ability to control invasive species. As an example, we are aware of instances where fencing watercourses has affected access required to manage invasive species. Similarly, due to the limited suite of herbicides available for aquatic use, water and habitat quality will be reduced where certain plant or algal species predominate. A lack of herbicide availability also increases the need for more invasive management techniques. We would therefore be concerned, should some of the suggested actions on pesticides be implemented, that herbicides would not be available in future to manage invasive species.

We believe that Himalayan balsam has a highly significant impact on water quality of some of the water bodies within the RBD. The plant colonises the banks and smothers native species. It then dies off in winter exposing highly mobile soils to winter erosion. More research is required on the contribution of Himalayan balsam to sedimentation in water bodies.

Physical Modifications

We believe there are still many heavily modified water bodies classified as natural or vice-versa. There is a need to ensure that artificial and heavily modified water bodies are correctly identified and classified to ensure that assessments and targets are appropriate. The information used for classification on the basis of physical modification needs to be made accessible for external scrutiny and challenge.

The Challenges and Choices consultation notes that modifications will have been carried out in order to provide benefits such as drainage or flood risk management, and that those benefits are still required. We believe it is very important to acknowledge this. The aim seems to be to

have natural looking systems, but to have them functioning in a controlled manner. Again, there appears to be a significant danger of unintended consequences with the removal of structures in order to improve river connectivity seen as the aim, but this doesn't take into account the fact that control structures provide other benefits or functions both to agriculture and the water environment (e.g. during a drought situation). In situations where a watercourse management activity constitutes a physical modification there is a need to consider whether there is a need to classify the water body as heavily modified rather than simply acting as a trigger for labelling the watercourse as failing to meet good environmental status. More should be learnt from other European nations in this regard where watercourse maintenance is essential to life and livelihoods such as in the Netherlands.

NRW needs to be realistic in its assessments of what GEP entails for heavily modified water bodies. We would need evidence that a structure is the driving factor preventing a water body from meeting good ecological potential, and that its removal would not cause unintended consequences, including an increased risk of flooding or waterlogging to agricultural land.

Q4. How are the significant issues in a catchment affecting the water environment and society?

Q5. How do you think the challenges affecting each catchment should be tackled and what would you choose to do first.

Changes to the Natural Flow and Level of Water

Farmers can contribute to the improvement of abstraction and flow related issues by:

- Improving water security through the continued development of on-farm storage. Farmers will need fiscal and financial support and incentives to make this happen (grants, tax incentives, skills); and a reduction in red tape for reservoir applications (licensing, planning).
- Embracing water trading. Farmers will need help, support and guidance to engage with other users (especially water companies) on a catchment basis to more efficiently manage available resource and to share and trade water.
- Building on scientific and technological research and ensuring the transfer of knowledge to the farm level. Developing the knowledge base and improving knowledge transfer systems to deliver first class water management training in the agri-food sector.
- Embracing the 'catchment approach' and actively engage in the creation of new local water resources groups (abstractor groups) and the further development of existing groups.
- Exploring ways of encouraging water infiltration and conservation thereby reducing runoff for the benefit of both cropping and groundwater recharge. This is mainly applicable to rain-fed arable crop production.
- Engaging in the process of evidence collection. Farmers are ideally placed to collect local evidence to ground truth the models on which so many decisions are based.
- Exploring opportunities for using 'grey' (non-potable) water for crop production, depending on water quality issues that may arise.

Pollution from Rural Areas

Chemicals

The UK arable and horticultural industry is already ahead of the Sustainable Use Directive for sprayer testing and operator CPD – a fact that should not be overlooked in Challenges and

Choices. The introduction of legislation will not be necessary as industry-sponsored activity already addresses competence and application issues.

It is important to recognise the contribution that is made by voluntary measures compared to regulatory mechanisms. The industry already contributes a great deal to reducing the likelihood of pesticides causing pollution to surface and groundwater. Pesticide application is becoming a specialised, professional job on-farm. Farmers use BASIS qualified advisers and are increasingly becoming BASIS qualified themselves.

Integrated Pest Management is not a new idea and it should not be interpreted as meaning an organic system. Crop rotations and cultivation techniques are an integral part of farm assurance already – this should be recognised in Challenges and Choices. It must be recognised that some of the options that might be desirable in future such as bio beds and handling area improvements are expensive and will be difficult to implement without incentives.

Fine Sediment

The agriculture sector recognises the importance of soils and the need for “reliable, consistent and clear messages to farmers”. Industry initiatives can support messaging for relevant soil and water management issues in a local area, supporting existing Government initiatives such as Catchment Sensitive Farming and Farming Connect.

Best practice options for soil management are well-known and future activity should focus on working with the industry to provide advice and guidance to ensure that the right management is in the right place to minimise risk. We need to encourage best practice, and this will not be achievable through regulation. The Soil Protection Review (GAEC under cross compliance) is aimed at ensuring farmers protect their soils with appropriate management. It needs to be recognised that these types of regulatory process are blunt tools. Options for improving soil management must not be aimed at creating an inspection paper trail. Future options should deal with management that is causing an impact on water quality and may contribute to increasing flood risk, provide information advice, and incorporate knowledge transfer to encourage best practice. Government and industry initiatives can do this, regulation cannot.

Nitrates and Phosphorus

Fertiliser nutrients are expensive – based on a 2005 baseline nitrogenous fertiliser costs have increased by 2x, phosphate fertilisers by 2.5x and potassic fertilisers by 2.5x. It is not in farmers’ best interests to waste expensive inputs.

The industry is already working with farmers and their FACTS Qualified Advisers to ensure good nutrient and manure management are understood as key to both farm profitability and reducing environmental impacts. Practical tools and published guides are available to help farmers to make best use of inorganic fertilisers, manures and slurries, and home-grown and bought animal feeds.

As part of the industry commitment to Professional Nutrient Management, the Feed Advisers Register (FAR) has also been established and compliments farm CPD schemes such as Dairy Pro and the Pig Industry Professional Register.

The fertiliser industry is also taking leadership in working with water companies and academia through the NERC programme (2013) to evaluate feasible options for the recovery of phosphorus from water and waste streams, so that material may be more easily distributed to

lower risk farming areas, e.g. soils with lower P concentrations and incorporated into fertiliser production

Invasive non-native species

Cross Compliance rules already requires farmers to take all reasonable steps to prevent the spread of specified invasive non-native weeds and injurious weeds; and to comply with any notice served under the Weeds Act 1959. This should be noted as a mechanism already being used to manage the issue.
We are concerned about the achievability of the "no deterioration" requirement under WFD with respect to invasive species and climate change impacts also need to be taken into account. More needs to be done to model the impacts of climate change on invasive species and to determine whether it is economic to continue to attempt to control the species. An important question is: at what point does an alien species become accepted as native? Ecosystems are continually adapting and changing to their environmental conditions and actions under WFD must be appropriate.

Himalayan balsam is a problem that cannot be tackled by farmers alone. Many built up areas and riverside gardens in the catchment are also colonised. Therefore a community wide approach to control must be urgently established.

Questions 5&6 – The catchments

We will not at this stage be commenting in detail on this section of the consultation suffice to say that it is clear that a great deal of actions are already on going in the 9 catchments mentioned many of whom actively involve landowners and occupiers.

We are extremely pleased to see that NRW are organising a series of meetings across Wales based on these catchments. This is the appropriate method of capturing local input and will be encouraging members to attend. After these meetings have been held will be the most appropriate time to comment in detail on this section of the consultation.

I hope that you find our contribution to the Western Wales River Basin District Challenges and Choices consultation helpful. If you require further information or clarification of any of the points raised in this response please do not hesitate to contact me or my policy colleagues at the NFU Cymru.

Yours sincerely

Dafydd Jarrett
Policy Adviser
NFU Cymru

Jill Brown
Natural Resources Wales
Ty Cambria
29 Newport Road
Cardiff
CF24 0TP

Your ref:
Our ref:
Email: kevin.owen@nfu.org.uk
Direct line: 01982 554200
Date: 20th December 2013

Dear Jill

Water for Life & Livelihoods – Dee River Basin District: Challenges & Choices Consultation

1. Thank you for giving NFU Cymru the opportunity to comment on "Water for Life & Livelihoods; the Dee River Basin District: Challenges & Choices Consultation". Our views are on behalf of the farming and land management sector in general.

2. The consultation document offers an easily readable summary of the significant water management issues (SWMI), which is to be welcomed and will hopefully encourage a wider interest in the work that is ongoing in the Dee River Basin District. However as with all summaries of this nature it cannot hope to cover the detail associated with each sector and each SWMI.

Farming within the Dee River Basin District

3. The Dee River Basin District is an extremely diverse area of mixed farming. Land use varies from upland livestock farming in the west then incorporating dairy farms as we move eastwards towards Chester with arable farming and some horticulture on the areas of highly fertile land in and around Chester.

4. The landscape is hugely varied as is the diversity of agricultural enterprises within the district. Farming has been and will continue to be a key shaping feature of the local environment.

Summary

5. UK farmers have a major role to play in producing food for a population which has already grown to 63.7 million. Farmers are being increasingly tasked to improve our national food security and if they are to succeed in this they will need access to a secure supply of water.

6. Clearly water is vital for any agricultural business. Consequently, we wish to improve the water environment but in a careful and sensitive way which does not rely on more regulation and is realistic about the costs to individual businesses.

7. Agriculture will never be a 'no-impact' activity and some impacts are inevitable.

8. Many of the easy 'wins' have already been achieved. It will become increasingly more costly to deliver further improvements, and the value of these improvements to society will progressively lessen as 'good status' waters become more prevalent.

9. Robust agriculture-related data to provide evidence for the development of informed, science-led policy is needed throughout the Water Framework Directive process. Local data is a key to enable farmers and advisers to understand the relevant issues and take "ownership".

10. Climate change should be considered as a Significant Water Management Issue as it may have considerable impact on many of the parameters that combine to the classification of Good Ecological Status/Potential. Although it is difficult to account for the impact of climate change in planning cycles, better attempts to understand the changes to "baseline" data need to be made to understand how this impacts on the requirement for "no deterioration" and how GEP/GES is measured in future.

11. The impact of extremes on the baseline assumptions underpinning WFD should be further considered. Extreme weather related incidents change what can reasonably be expected of farmers and advisers, and cannot be dealt with through standard good agricultural practice.

12. How NRW responds to, or what NRW can expect from farmers and advisers during severe weather related events should be dealt with in guidance, rather than through regulation.

13. An inability to produce food and fuel because of insecure access and/or an inadequate and costly allocation of water for farming represents a significant risk to our sector. The twin challenges of global climate change and meeting the needs of a growing population are likely to develop into an issue of national importance – both for the possible impact on national food security and the UK's potential to make a greater contribution to global food production.

14. Impacts of WFD related action on flooding of agricultural land needs to be adequately evaluated and accounted for in the RBMP process. There is a significant danger of unintended consequences e.g. removal of structures that provide benefits or functions during a drought or flood situation.

15. Restrictions placed on plant protection products should be the very last resort. The Government should consider how best to reduce risk, taking into account the chemical properties of individual pesticides, available mitigation measures and the potential effect of weed, pest and disease resistance on UK production.

16. We have significant concerns that measures introduced through River Basin Planning will not consider the cumulative effects of new regulation on the availability of plant protection products. There could be a significant cost to the agricultural and horticultural industry if no, or severely limited, crop treatments are available as a result of restrictions on use being introduced.

17. We are concerned that invasive species present a significant challenge under WFD as there will be several species that cannot be eradicated, regardless of the actions (new or existing) proposed.

18. We would strongly question any proposals for more prescriptive regulation where impacts are spatially variable and a " one-size-fits all" complex regulatory approach cannot deliver improvements in all areas. The Government should fully utilise and explore industry-led partnerships and non-regulatory measures first, and be satisfied that existing regulation (including codes of practice) and enforcement is inadequate before considering new regulatory approaches.

19. Industry-led approaches and Continuing Professional Development (CPD) have already demonstrated that they can deliver to improve environmental outcomes, without the need for further regulation.

20. The industry can and is taking the lead in a number of areas e.g. CPD and professional adviser training and scheme development, working in partnership through farmer-facing initiatives, devising operator training schemes, development of farm skills (with or without professional advice)and managing professional registers. By working together towards common goals we can achieve environmental and business outcomes for our industry.

21. A holistic approach to soil and nutrient management rather than single-issue activity is required. For instance, phosphorus issues can be combined with messaging on reducing soil erosion and runoff, the importance of good soil management, whole system nutrient planning/management (alongside nitrogen) and avoiding faecal contamination in watercourses.

22. We need to reflect on the long-term trend of decreases in fertiliser use and manure production, and reductions of nitrogen and phosphorus in animal feeds.

Q1. What do you consider to be the biggest challenges facing waters in the Dee River Basin District?

Evidence and Data

23. Throughout the WFD process there is a need for robust agriculture-related data to enable the development of informed, science-led policy. Local data is a key to enable farmers to understand the relevant issues and take "ownership".

24. Diffuse pollution is difficult to attribute to a single source, and we do have a concern that assessments do often falsely attribute point and diffuse sources solely to agriculture. Local knowledge of the scale of the problem from specific sectors is needed to find appropriate solutions to achieve improvements in WFD classification. In addition to separating agriculture's contribution from other point sources, there is a need to disaggregate "agriculture" and "rural land management" in datasets if at all possible.

25. All possible sources need to be thoroughly considered in assessments. Agriculture is not the sole contributor to diffuse pollution and concentration peaks from permitted sites, sewage discharges (diurnal variation and storm overflows) and pollution events all contribute to the concentration of a pollutant measured at any single point in time.

26. We would wish to highlight the danger therefore that farming's contribution is being consistently overstated.

Weather

27. Extreme weather related incidents change what can reasonably be expected of farmers and advisers, and cannot be dealt with through a regulatory approach.

28. Summer precipitation (June, July and August) has increased dramatically in the past decade. However, there have been more subtle changes in the winter (December, January and February), which have seen less prominent decreases in rainfall since the late 1970s. In the summer of 2012, rainfall in England and Wales was the highest for 100 years with a total of 375.0mm. This total represents the fourth wettest summer on a record dating back to 1766. Since 2003 winters have seen less rain compared to the 1961-1990 average. In the winter of 2012, rainfall was 213.3mm, 8% lower than the 1961-1990 average.

29. Variable or unpredictable weather can impact on farming in a number of ways, including:

    - As well as causing leaching of nutrients, loss of soil and organic matter, unexpected soil erosion events caused by extreme weather can lead to a loss of crop protection products and reduced resilience in crop production.

    - A regulatory approach lacks the flexibility to be able to deal with unusual conditions. For example in the extremely wet conditions of 2012 a great number of farmers around the country entered the autumn period with full slurry stores. Despite favourable conditions later in the year farmers were unable to spread because of NVZ closed periods. This was very relevant in the Dee catchment.

    - Unprecedented rainfall can bring flooding to tens of thousands of hectares of farmland, some for extended periods of time. In addition to the extent of the land affected, duration of flooding can leave land unworkable for extended periods due to the impacts of waterlogging and loss of condition.

    - Farmers are faced with the requirement to irrigate during periods of water scarcity to avoid crop losses.

30. How NRW responds to, or what NRW can expect from farmers during severe weather related events should be dealt with in guidance, rather than through regulation. Standard good agricultural practice cannot deal with such extreme events. Keeping strictly within the regulatory constraints is difficult in these situations.

31. Our ideal solution to this problem would be to devise a methodology that can offer adequate flexibility in situations where extreme weather events or late harvests arise. Flexibility could more easily be dealt with through guidance rather than a regulatory approach.

Diffuse Pollution

32. Diffuse pollution in rural areas does not automatically mean diffuse pollution from agriculture and forestry alone. Other sources would include:

    - Highway and road runoff and from verges. Increasing rural traffic on un-kerbed roads is leading to damage to verges and consequent sediment run off.

    - Highway gritting during the winter months.

    - Amenity use of pesticides, which was identified in the last Environment Agency Wales report as a significant issue.

    - Railway lines.

    - Amenity & recreation near and on rivers.

Importance of Water to Agriculture

33. An inability to produce food and fuel because of insecure access and/or an inadequate and costly allocation of water for farming represents a significant risk to agriculture. The twin challenges of global climate change and meeting the needs of a growing population are likely to develop into an issue of national importance – both for the possible impact on national food security and the UK's potential to make a greater contribution to global food production.

34. Agricultural abstraction makes an important contribution to local rural economies, supporting food processing and packing businesses as well as farming. Nationally, irrigated crops account for only 4% of crop area but 20% of crop value.

35. Agriculture accounts for only 1% of total water abstracted nationally. Farmers also tend to abstract water on a seasonal basis and so typically need water at times of higher demand and lower availability. Spray abstraction (irrigation) is considered to be a 'consumptive' use of water because it is mainly taken up by the crop with relatively little water returned to the environment.

36. Global climate change and population growth are making national food security an increasingly important issue for Government; meanwhile more and more consumers demand a consistent supply of high quality local food. If farmers are to succeed in growing this food they will need a secure supply of water.

37. Yet, water for domestic use, industry and the environment generally take precedence during periods of scarcity.

Flooding

38. Impacts of WFD related action on flooding of agricultural land needs to be adequately evaluated and accounted for in the RBMP process. This is a particular issue for many farmers and landowners in the Dee RBD.

39. Flooding is a significant water management issue for farmers with 14% (1.5 million hectares) of the agricultural land in England and Wales at risk of flooding from rivers or the sea.

40. Unprecedented rainfall brought flooding to many parts of the country in 2012, with tens of thousands of hectares of farmland affected, some for extended periods of time. The estimated extent of agricultural flooding over a two day period in November 2012 was 43,000 hectares. On its own this is already greater than the total extent of the flooding experienced during June and July 2007. In addition to the extent of the land affected, duration of flooding can leave land unworkable for extended periods due to the impacts of waterlogging and loss of condition.

41. Putting a price on the agricultural impact is challenging. Defra's latest farm income figures show a 14% decrease in the bottom line for UK agriculture, as the total income from farming (TIFF) decreased by £737 million in 2012 to £4.7 billion, in part as a result of the second wettest year since records began.

42. Flooding in 2012, whilst unavoidable given the unprecedented nature of the rainfall, was widely perceived to have been exacerbated by reducing rural watercourse maintenance and contributing to floods over a greater extent of agricultural land for an extended duration and hindering recovery.

43. Defra has estimated that some 35,000ha of high quality horticultural and arable land will be flooded at least once every three years by the 2020s, and that this could rise to around 130,000ha by the 2080s if there is no change to current flood defence provision.

44. We are concerned that attempting to move water bodies to a more "natural" state through the WFD process, e.g. by removing structures and creating meanders or simply reducing or ceasing maintenance operations, will create further risk of flooding to rural land.

45. Protecting agricultural land use needs to be seen as an appropriate justification for retaining control structures, similar to protecting other land uses.

Climate Change

46. Climate change is likely to have a significant impact on many of the parameters that together combine to the classification of Good Ecological Status/Potential. Although it is difficult to account for the impact of climate change in planning cycles, better attempts need to be made to understand the changes to "baseline" data, how this impacts on the requirement for "no deterioration" and how GEP/GES is measured in future.

47. We believe that there should be a greater emphasis on the impacts of climate change and that it should be considered as a significant water management issue. There is potential for all elements in the definition of WFD qualitative and quantitative status of water to be sensitive to climate change.

Population Pressure

48. In the longer term, the need to produce enough food for a growing population represents a significant challenge of both national and global importance.

49. The twin challenges of global climate change and meeting the needs of a growing population has potential to develop into an issue of national importance – both for the potential impact of national food security and the UK's potential to make a greater contribution to global food security.

50. There is also a major opportunity for the UK food chain to respond to domestic and wider EU/world population growth. However with increased market there also comes increased need to manage our farming systems more carefully and we know that production increase cannot come at cost to the environment, especially water quality.

51. So, we need to produce more food, but impact less on the environment. 'Produce more, impact less' must entail a range of actions ensuring that farmers and growers can build their capacity to produce food whilst continuing to safeguard the environment.

52. This isn't an entirely new concept to farmers; it is something that many farming businesses have been making strides towards for some time. They have maintained and in some cases increased production without increasing the overall volume of inputs through technologies such as GPS, variety selection and precision farming. As an example, the volume of nitrogen fertiliser used on farms in the UK has fallen by a third since the mid-1980s. But if more production is to be achieved, there will be a continued need for the development and implementation of new technologies, research and development and knowledge transfer.

Q2. Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Q3. How do you think these issues should be tackled and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

Q4. Who we should work with to achieve the environmental outcomes?

Q5. How are the significant issues in the Dee catchment affecting the water environment and the local community? Please provide relevant information to help explain your answer.

Q6. ***How do you think the challenges affecting the catchment should be tackled and what would you do first? Please consider any resource limitations.***

Pollution from Rural Areas

Nitrates, Phosphorous & Chemicals

53. Whilst nitrate loss from farming can be minimised it cannot be avoided completely. Relevance must be given to the fact that groundwater takes longer to respond to changes and in turn rivers that are fed by groundwater also have a delayed response.

54. The consultation does need to reflect the long-term trends in nitrogen fertiliser and feed use, manure production, and overall crop and livestock nitrogen use efficiency which will be contributing to reducing the nitrogen load at risk of loss as nitrate to rivers.

55. Use of nitrogen in grassland has declined by 59% since 1990 and nitrogen from manures has reduced by 22% between 1990 and 2012 due to reductions in livestock numbers and lower nitrogen excretion rates (as a function of reductions in nitrogen content of feeds). Over this same period, the agriculture sector has made significant improvements and reduced the amount of nitrogen at risk of loss through leaching.

56. Groundwater trends may take much longer to show improvements in nitrate concentrations. The complexity around this issue, and the potential solutions (and time to reflect reductions in inputs) need to be clearly communicated when explaining WFD groundwater failures.

57. The consultation should also reflect the long-term trends in phosphorus fertiliser and feed use and manure production. Use of phosphate has declined by 67% on grassland and 51% on tillage land since 1990, while phosphate from manures has reduced by 20% between 1990 and 2012.

58. Overall phosphorus use in animal feeds has declined by over 20% since 1999 and loading of phosphorus on pig and poultry farms has been reduced as a result of widespread use of Phytase – an enzyme feed additive to improve nutrient utilisation. These trends are not reflected adequately in the consultation document or evidence summary.

59. We suggest a holistic approach to soil and nutrient management rather than single-issue activity. Phosphorus issues can be combined with messaging on reducing soil erosion and runoff, whole system nutrient planning/management (alongside nitrogen) and avoiding faecal contamination in watercourses. Therefore we do not believe that there is value in extra regulatory measures solely related to phosphorus.

60. Septic tanks do not appear to have been adequately taken into account as a source of nutrients in water bodies in this catchment. There is a need to provide transparent and verifiable evidence that disaggregates septic tanks from agricultural phosphorus in datasets

61. Fertiliser nutrients are expensive – based on a 2005 baseline nitrogenous fertiliser costs have increased by 2x, phosphatic fertilisers by 2.5x and potassic fertilisers by 2.5x. It is not in a farmer's best interest to waste expensive inputs.

62. The industry is already working with farmers through Tried & Tested (T&T) to ensure good nutrient and manure management are understood as key to both farm profitability and reducing environmental impacts. Tried & Tested has a number of practical tools and published guides to help farmers to make best use of inorganic fertilisers, manures and slurries, and home-grown and bought animal feeds. Tried & Tested works with other campaigns to deliver messages tailored to local environmental priorities.

63. As part of the industry commitment to Professional Nutrient Management, the Feed Advisers Register (FAR) has also been established and compliments farm CPD schemes such as Dairy Pro and the Pig Industry Professional Register.

64. The fertiliser industry is also taking leadership in working with water companies and academia through the NERC programme (2013) to evaluate feasible options for the recovery of phosphorus from water and waste streams, so that material may be more easily distributed to lower risk farming areas, e.g. soils with lower P concentrations and incorporated into fertiliser production.

65. The agricultural industry has worked together on the Voluntary Initiative (VI) since 2001. The VI is an industry-led partnership that works with government, regulators and stakeholders to promote the responsible use of agricultural pesticides. Through its national groups, member organisations and, in England, collaboration with the Campaign for the Farmed Environment (CFE), the VI provides a UK-wide framework for promoting best practice at a local scale.

66. The UK arable and horticultural industry is already ahead of the Sustainable Use Directive for sprayer testing and operator CPD – a fact that should not be overlooked in Challenges and Choices. The introduction of legislation will not be necessary as industry-sponsored activity already addresses competence and application issues.

67. It is important to recognise the contribution that is made by voluntary measures compared to regulatory mechanisms. The industry already contributes a great deal to reducing the likelihood of pesticides causing pollution to surface and groundwater. This has been achieved in advance of measures outlined in the Sustainable Use Directive through the VI and other pesticide stewardship campaigns. Pesticide application has become a specialised, professional job on-farm. The NRoSO scheme ensures best practice during spraying through ongoing operator training. Some 20,000 sprayer operators have been trained to date as a result of the introduction of the scheme. BASIS qualifications have become “the norm” for professionals working in the area of crop protection advice – farmer’s use BASIS qualified advisers and are increasingly becoming BASIS qualified themselves.

68. Integrated Pest Management is not a new idea and it should not be interpreted as meaning an organic system. Crop rotations and cultivation techniques are an integral part of farm assurance already – this should be recognised.

69. We accept that permits are necessary for some activities, but work must continue to make them as low cost and low burden as possible – remembering that the aim should be to improve outcomes, not create a burdensome process. It must be recognised that some of the options that might be desirable in future such as bio-beds and handling area improvements are expensive and will be difficult to implement without incentives.

Faecal Contamination and Sanitary Pollutants

70. We agree that the best options for working within catchments of bathing and shellfish waters needs to be tailored to the specific source of pollutant. Advice and guidance from voluntary

schemes and incentives to implement measures that have been proven to reduce the problem should be the first option.

71. In addition, the 'discounting' approach, which can be used to disregard samples during unusual events, should also be investigated for use. We understand that Scotland is already taking advantage of the 'discounting' approach (via the Short Term Pollution provision).

Sheep Dip

72. One area where an industry led voluntary campaign has been successful is in respect to the responsible use of sheep dips and their disposal. Sheep dips are veterinary medicines used to control external parasites, including sheep scab. They are regulated by the Veterinary Medicines Agency. There is very limited choice in active ingredients effective for sheep scab, the most effective being cypermethrin, which is currently suspended from the market. Cypermethrin-based dips are potentially more environmentally toxic than the alternative products (organo-phosphate dips), which on the other hand could be hazardous to dip operators.

73. It should be recognized by all that the control of sheep scab is essential for the welfare of the animals and farmers have legal obligations for animal welfare, which is also enforced under cross compliance. Sheep scab is a notifiable disease and infection can mean restrictions on farmers being able to move, or market their livestock.

74. We do however recognize that sheep dip, if used and disposed of incorrectly, can be very toxic to aquatic invertebrates and believe that good practice on the part of farmers in their use and disposal of dip is essential. The industry has led and promoted, and will continue to promote, the "Stop every Drop" campaign launched in 2006, which provides sheep farmers and dipping contractors with best practice notes to minimise the risks of water pollution. This has been a successful campaign.

75. In respect to disposal, we believe that a regulatory regime which recognises the benefits of farmers detoxifying dip before disposal, and reflected in current groundwater charges, would contribute to the uptake of this detoxifying practice.

<u>Invasive Non-native Species</u>

76. We are concerned that invasive species present a significant challenge under WFD as there will be several species that we cannot eradicate, regardless of the actions (new or existing) proposed.

77. There is a danger of unintended consequences of action aimed at other SWMIs having a detrimental impact on the ability to control invasive species. As an example, we are aware of instances where fencing watercourses has affected access required to manage invasive species.

78. Similarly, due to the limited suite of herbicides available for aquatic use, water and habitat quality will be reduced where certain plant or algal species predominate. A lack of herbicide availability also increases the need for more invasive management techniques. We would therefore be concerned, should some of the suggested actions on pesticides be implemented, that herbicides would not be available in future to manage invasive species.

79. We believe that Himalayan balsam has a highly significant impact on water quality of some of the water bodies within the RBD. The plant colonises the banks and smothers native species. It then dies off in winter exposing highly mobile soils to winter erosion. More

research is required on the contribution of Himalayan balsam to sedimentation in water bodies.

80. Under Cross Compliance rules, GAEC already requires farmers to take all reasonable steps to prevent the spread of specified invasive non-native weeds and injurious weeds; and to comply with any notice served under the Weeds Act 1959. This should be noted as a mechanism already being used to manage the issue.

81. We are concerned about the achievability of the "no deterioration" requirement under WFD with respect to invasive species and climate change impacts also need to be taken into account. More needs to be done to model the impacts of climate change on invasive species and to determine whether it is economic to continue to attempt to control the species. An important question is: at what point does an alien species become accepted as native? Ecosystems are continually adapting and changing to their environmental conditions and actions under WFD must be appropriate.

82. Himalayan balsam is a problem that cannot be tackled by farmers alone. Many built up areas and riverside gardens in the catchment are also colonised. Therefore a community wide approach to control must be urgently established.

Physical Modifications

83. We believe there are still many heavily modified water bodies classified as natural or vice-versa.

84. There is a need to ensure that artificial and heavily modified water bodies are correctly identified and classified to ensure that assessments and targets are appropriate. The information used for classification on the basis of physical modification needs to be made accessible for external scrutiny and challenge.

85. It is important to acknowledge that modifications will have been carried out in order to provide benefits such as drainage or flood risk management, and that those benefits are still required.

86. The aim seems to be to have natural looking systems, but to have them functioning in a controlled manner. Again, there appears to be a significant danger of unintended consequences with the removal of structures in order to improve river connectivity seen as the aim, but this doesn't take into account the fact that control structures provide other benefits or functions both to agriculture and the water environment (e.g. during a drought situation).

87. In situations where a watercourse management activity constitutes a physical modification there is a need to consider whether there is a need to classify the water body as heavily modified rather than simply acting as a trigger for labelling the watercourse as failing to meet good environmental status.

88. More should be learnt from other European nations in this regard where watercourse maintenance is essential to life and livelihoods such as in the Netherlands.

89. We do need evidence that a structure is the driving factor preventing a water body from meeting good ecological potential, and that its removal would not cause unintended consequences, including an increased risk of flooding or waterlogging to agricultural land.

Fine Sediment

90. The agriculture sector recognises the importance of soils and the need for "reliable, consistent and clear messages to farmers". One of the five themes of the Campaign for the Farmed Environment (CFE) is "Soil Management" and CFE will be producing new advice on soil management for arable and livestock farms in the autumn of 2013.

91. Industry initiatives in Wales via Farming Connect also support messaging for relevant soil and water management issues in a local area.

92. Best practice options for soil management are well-known and future activity should focus on working with the industry to provide advice and guidance to ensure that the right management is in the right place to minimise risk. We need to encourage best practice, and this will not be achievable through regulation.

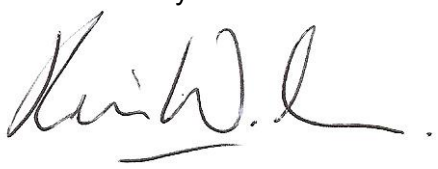
93. The Soil Protection Review (GAEC under cross compliance) is aimed at ensuring farmers protect their soils with appropriate management. It is currently under review because it does not deliver improvements in soil management, but creates an onerous process for farmers to follow. It needs to be recognised that these types of regulatory process are blunt tools.

94. Options for improving soil management must not be aimed at creating an inspection paper trail. Future options should deal with management that is causing an impact on water quality and may contribute to increasing flood risk, provide information advice, and incorporate knowledge transfer to encourage best practice. Government and industry initiatives can do this, regulation cannot.

I hope that you find our contribution to the Dee River Basin District Challenges and Choices consultation helpful.

If you require further information or clarification of any of the points raised in this response please do not hesitate to contact me.

Yours sincerely



Kevin Owen
Farm Policy Adviser
NFU Cymru

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name	Alan Thorniley – Town Clerk
Organisation and Sector	Saltney Town Council
Contact Details	saltneytowncouncil@btconnect.com
River Basin District Response for	Dee River Basin

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?
The River Dee forms the northern boundary of the Town of Saltney. The town is built on drained salt marshes. The River is 'canalised' from about 1 mile downstream of the weir in Chester down as far as Shotton. Much of the town lies at risk from flooding and is only protected by a bank formed from the spoil deposited when the River was dredged in the 18 century. Rising water levels and the lack of dredging in the 'canalised' river mean that parts of the Town of Saltney and its surrounding farm land are under constant threat of flooding. Indeed in the recent high tides the water level was within 1 metre of the top of the bank as can be seen from the flotsam left when the water receded.
The Balderton Brook (which has red river status as a high priority watercourse) rises to the north-east of Pulford and flows generally in a northerly direction. It meanders its way through the countryside picking up drainage water from many sources and has a total catchment area of some 22.3sq.km. The large urban area of Saltney is located in the lower part of the catchment. During the past few years a number of planning approvals by the Chester City Council and its successor body have meant that acres of agricultural land has been covered in concrete; the Chester Business Park, Grosvenor Garden Centre and its car parks, Chester Wrexham Road Park and Ride and the Chester Southerly by pass. All the rain that previously landed on those fields and slowly soaked into the soils now lands on concrete and within minutes is in the open water courses. The Brook flows through the centre of the town and has received little maintenance. The lower reaches of the Brook flow through the car park to a new Morrisons Store who, because of a planning restriction, inserted at the request of the Environment Agency, are forbidden from maintaining the bed of the brook because it 'forms a highway for birds and mammals'! Because the level of the Brook is below the level of the river at high tides it drains into the River Dee by way of a lagoon where two water pumps endeavour to clear the water over the bank and into the river. Because of the lack of clearing weed and silt etc. the water moves very slowly and some time lapses before the pumps 'kick in'. This allows even more silt to settle out of the water and therefore compounds the problem of the brook and its drainage ditches silting up. It is of little use the local farmers putting time and money into clearing their ditches when the water cannot get away.

Therefore the biggest challengs facing waters in our area is flooding because of the silting up of the river beds due to a lack of maintenance. See pictures 2030; 2032; 2035

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.
In the main yes but there are two items missing from your 'significant issues'. The first is the prevention of flooding. That is the first priority in any local community and particularly in the Town of Saltney and its environs.

The second gets a mention at page 10 'Protected Areas'. The introduction of the designation of many parts of the Dee waters under the EU Habitats and Birds Directives, fails to take account of the conditions imposed by of article 6, paragraph 4 of that Directive that decrees 'human health or public safety has precedence over SSSI habitat.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

There should be a radical review of the policy of 'non-dredging' bearing in mind the condition imposed by article 6 that decrees that 'human health or public safety has precedence'.

Under 'Physical Modifications – there should be a published 5 year maintenance programme of all water-courses with a bi-annual review carried out in conjunction with local 'shareholders'. This would show that the new Authority is accountable.

Pollution – the transition from regulation based on catchment boundaries to political boundaries removes from Natural Resources Wales the power over the Chester treatment plant which discharges its final sewage effluent into the River Dee just yards from the border. Pressure must be maintained on the relevant Water Company to keep the discharge within acceptable limits.

Pollution from rural areas – the continued flooding of the pasture land around the Town reduces its value for grazing and for hay. It is also lost as a 'sponge' to soak up excess water at times of heavy rain.

Invasive non-native species – the lack of a programme of weed cutting and bank clearance increases the chances of Japanese knotweed and Himalayan balsam taking hold.

4 Who should we work with to achieve the environmental outcome?

Local Drainage Groups should be set up in each local catchment area consisting of the representatives of elected Members at both Local and County level; farmers; environmental groups; business interests and the Flood Prevention Society.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

The Balderton Brook Catchment Area and the River Dee adjacent to the Town Boundary

The threat of flooding affects all the householders in the Town. Apart from the inconvenience and risk to possessions, higher insurance premiums reflect the risk of flooding.

The flooding of the pasture land reduces farmer's income and increases their costs due to the death of animals from drowning and the loss of lambs due to the ewes being cut off and forced to swim to safety. It is impossible at times to make hay or to cut silage because of the boggy state of the ground. Please see photographs attached as

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

The whole length of the bed of the Brook desperately needs dredging and the banks need cutting and maintaining. Please see photograph attached as 2029

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes but they should have some order of priority and in our opinion the needs of the population should come before birds, animals and flora and fauna. Ever remembering that the EU Directive decrees 'human health or public safety has precedence over SSSI habitat.

2 Is there any other information that we should be taking into account as part of the assessment?

The Town Council would like you to take into account the views of the Flood Prevention Society which can be found on their website www.thefloodpreventionsociety.org.uk

Energy UK response to the Natural Resources Wales Challenges & Choices consultation

22 December

Introduction

Energy UK is the Trade Association for the energy industry. Energy UK has over 80 companies as members that together cover the broad range of energy providers and suppliers and include companies of all sizes working in all forms of gas and electricity supply and energy networks. Energy UK members generate more than 90% of UK electricity, and provide light and heat to some 26 million homes.

We welcome the opportunity to comment on Natural Resources Wales Challenges and Choices consultation.

Energy UK response

Q1. What do you consider to be the biggest challenges facing waters in your River Basin District?

Energy UK is concerned with the positioning of the role of the River Basin Management Plans (RBMP) in section 4 of the consultation as showing 'businesses … what they need to do'. Whilst certainly the Programme of Measures would be expected to include measures with implications for all users, the text significantly underplays the importance of involving businesses in the process by which the key Water Framework Directive (WrFD) choices relating to establishment of target status for water bodies should be made. This should have full regard not only to the potential societal benefits to be obtained from improvements to water bodies but also the costs to existing water users of so doing along with the foregone opportunity cost from prospective water users (including businesses).

We are also concerned with the role of Catchment Planning and Catchment Groups within the development of RBMP2 since such groups have been intentionally set up with a remit beyond WrFD alone. We therefore anticipate some difficulty in managing the interface between the River Basin Districts (RBD) and Catchment planning level, therefore, we welcome the Challenges & Choices consultation as a way of identifying and resolving such issues prior to the dRBMP2 process. It is particularly pertinent to strategic infrastructure installations such as thermal power plant which deliver benefit at national level yet whose residual impacts on the aquatic environment consistent with permitted operation are localised.

A significant issue related to choice that does not emerge clearly from the format of the England Challenges and Choices consultation (which we also consider relevant to our response to the Regional Challenges and Choices consultation) is the continuing uncertainty over the medium to long time frames which resulted from the first round of River Basin Management Plans (RBMP1). Section 5 paragraph 1 of the England Challenges and Choices consultation positions the revised RBMPs as setting long-term objectives. However, this is not the case. The objective setting/economics methodology that the Environment Agency (EA) presented in its pre-consultation Significant Water Management Issues (SWMI) workshops and outline in Sections 5 and 6 of the of the England Challenges and Choices consultation document looks set to perpetuate this uncertainty by not allowing the 'choice' of setting an objective for RBMP2 and beyond of less than 'Good' status. Thus, it appears that RBMP2 will state the objective for virtually all water bodies for 2027 to be 'Good' status or potential – even though there may already be strong evidence of technical infeasibility or disproportionate cost associated with achieving 'Good' status for a given water body. Thus RBMP2 cannot necessarily be seen as setting realistic long-term objectives, noting that 2027 would be relatively early in the life of a new power station, for which investment is being considered now.

In Section 2 of the England Challenges and Choices consultation, it is correctly asserted that RBMP2 will direct many hundreds of millions of pounds of investment. This probably substantially underestimates the value of the decision-making that will be informed by the plans. RBMP2 will set the strategic context for the water environment against which investors will make decisions on possible water-dependent investments. For example, a single modern Combined Cycle Gas Turbine (CCGT) power station of 2000MWe capacity would have a capital cost of around £1billion and an expected lifetime of around 30 years. Companies in the power sector will be faced with many such investment decisions over the next decade or two, both for possible new plant and also for possible upgrades or re-planting of existing water-dependent plant.

Power station operators contemplating such projects must compete for scarce capital and can only succeed if the returns linked to development of such assets can be predicted with sufficient confidence. In some cases, continuing uncertainty regarding the compliant operation of water-dependent plant in the future may be a significant barrier to investment. This is particularly so for the abstraction of freshwaters, which falls within the scope of Defra's abstraction reform initiative, but may also apply in other waters and for issues associated with emissions.

We do not agree with the EA's incomplete presentation of 'the aim' on page 7 of the England Challenges and Choices consultation that sets the backdrop against which all issues must be considered. The statement omits any recognition of the 'choices' that Article 4 of the Water Framework Directive (WFD) makes available to society in setting its own aims, which may include a status less stringent than 'Good' when certain conditions are met. The importance of this choice was recognised in Defra's RBMP1 statutory guidance Volume 1 Chapter 9 paragraph 9.9. This is also important in the statement in Section 5 paragraph 1 of the England Challenges and Choices consultation document that the benefits of achieving the objective should outweigh the costs. This outcome can only be expected if full use is made of the alternative objectives in order to avoid the imposition of objectives that lead to disproportionately costly sets of measures.

We do not support the EA's introduction of the term 'healthy' in the SWMI consultation. We find it both confusing and potentially misleading. It is not immediately clear from the main consultation document how 'healthy' translates into

WFD's status classification (is it 'Good, is it 'Moderate' or is it 'the validly set objective'?)The main text associates 'healthy' with intuitively desirable properties of the environment and makes links to benefits resulting to society. However, in the background document on abstraction and flow (EA, June 2013, 'Abstraction and Flow Problem') it is stated …

> *"The Water Framework Directive (WFD) defines a healthy ecology as reaching 'Good Ecological Status' (GES). The UK has a commitment to ensure that water bodies reach good ecological status by 2027 …".*

There is no such definition in WFD. The text in the consultation appears to state that 'healthy' is to be read always to imply 'at least Good'. Similarly, we consider that the simplification of the requirements of WFD Article 4 expressed as the UK commitment in the above is an incorrect statement of the legal requirements which does not acknowledge the freedom for society to make choices regarding whether or not it is appropriate to achieve 'Good' status, taking into account the feasibility, costs and benefits of so doing.

The incorrect statement of 'the aim' and 'the commitment', and the introduction of the term 'healthy' act in no small way to undermine some important aspects of the 'Challenges and Choices' consultation by playing down society's freedom to choose. An issue could be regarded as a 'real' issue only if it is judged by society as possible to, and worth taking measures to, address. In our view, Section 1 paragraph 3 of the England Challenges and Choices consultation sets an appropriate basis for the consultation by seeking views on the 'challenges', which are defined there as the issues which limit the benefits obtained from the water environment. However, thereafter, the thrust of the consultation transmutes into barriers to achieving 'Good' status (or possibly 'healthy' waters), suppressing the importance of benefit and choice.

Q2. Do you agree with our description of how the significant issues are affecting the water environment and the local community?

We note that the EA regards 'abstraction and flow' and 'chemicals' as the most relevant issues for the 'energy production' sector. It is not entirely clear which installations may fall within 'energy production'. In some inventories, 'energy production' would also include oil and gas platforms, refineries etc. Care should be taken to ensure that 'expectations' formed on the basis of one class of installation are not assumed to apply to all installations within 'energy production'.

Abstraction and flow

We agree that power plant, both thermal and hydro, are significant abstractors. We confirm the importance of the benefit to power plant operators and wider society of the sector's use of water. Restrictions on abstraction for existing or new plant would be of profound importance to operators or potential developers of such plant. Whilst operators will be aware of the Catchment Abstraction Management Strategy (CAMS) status and 'reasons for failure' in WFD planning documents, we are unaware to date of thermal plant having been singled out as significant contributors to abstraction related 'issues'. We expand on these headline points in the following paragraphs. We remain concerned regarding the representation of over-abstraction in the abstraction reform process currently underway in cases where the legislation responsible for defining the flow standard is WFD (as opposed to Natura 2000 or

other protected area legislation). Every indication is being given by Defra and the EA that the environmental allocation of water corresponding to 'Good' is to be made regardless of the RBMP target status/potential. This constitutes a choice made by the Government/Regulator which could and should be made by society. In some cases, having regard to the costs and benefits of achieving good status/potential in the WFD objective-setting framework, society may choose to set a less stringent target which would result in more water being made available for societal use and less allocated to the environment than had the choice been to set flow allocation corresponding to 'Good' status.

We note that there remains considerable scientific uncertainty regarding the links between flow and ecology. There is also considerable uncertainty around how target flow should be defined even in principle for Heavily Modified Water Bodies, some aspects of which have been the subject of a recent consultation. Given the considerable deviation from natural conditions of flow in lowland rivers that has developed over centuries of human activity, we find it difficult at this stage to judge what the appropriately set flow requirements might be for those river water bodies on which current power plant operate and those that future power plant may seek to use.

Further, there are some important points of WFD principle to consider here. River flow is a hydromorphological element supporting biological elements. Given the acknowledged scientific uncertainty in the relationship between biology and flow, we consider that it is not appropriate to seek to require water use to be managed so as to achieve a proposed Environmental Flow Indicator (EFI) value if the present biology is found to be consistent with the target status or potential of a given water body. We are aware that the UK Technical Advisory Group (UKTAG) made proposals in February 2013 to increase the permitted abstraction consistent with moderate, poor and bad status compared with that previously in force. We are also aware from our participation in the Defra abstraction reform process that there is continuing work on EFIs. The European Commission also announced that, as a result of its Blueprint Review, there would be further work on EFIs at the European level.

The combination of all these initiatives leads to significant uncertainty around the future availability of water and to the potential for inappropriate and economically inefficient future allocation of available water resource between the environment and users. This is a matter of national significance.

We welcome the recognition that the public benefits from abstraction by industry (and electricity producers in particular). The increased thermal efficiency resulting from the use of water for cooling allows production of more electricity per unit of fuel and reduced emissions to air and land per unit of electricity produced. It contributes to keeping energy affordable and it contributes to sector resilience.

We do not fully understand the logic behind the table on 'England' consultation page 15. The ability to abstract sufficient quantities of water with sufficient reliability is a vital consideration for existing thermal power plant and an important one for potential new plant. This is certainly significant at the sector scale and potentially so at the national scale. If sector abstraction were to be curtailed, there would certainly be significant loss of benefit. We therefore do not understand why there is no impact symbol for 'abstraction and flow' for industry in the table on 'England' consultation page 15. We question whether 'small impact at large scale' is the correct classification on 'England' consultation page 16 given the importance of cooling water to electricity producers.

Overall, we agree that for thermal power plant operators, 'abstraction and flow' is a very significant matter. The ability of the sector to be able to access sufficient water, sufficiently reliably, is also significant for society at large. Any curtailment of the ability of the sector to access water in this way may have significant loss of benefit not only to the operators of thermal power plant but also to consumers of electricity and ultimately society at large. We are not able to judge whether or not the sector is a significant contributor to over-abstraction 'problems' – we do not necessarily agree that not achieving EFIs corresponding to 'Good' should be regarded as a 'problem'.

We note that the EA technical support document (EA June 2013 page 5) supports this view in that it notes …

"Flow in non-compliant water bodies needs to be improved between now and 2021 and beyond to 2027 to move to good ecological status or potential. It is likely that flows will not need to recover back to the EFI in all cases, as measures to resolve other pressures will help to deliver the required ecological improvements. Wider benefits on the catchment scale will take time to realise and assess but, if effective combinations of measures can be introduced (subject to economic appraisal), then the number of water bodies supporting a healthy ecology by 2021 can be expected to increase."

… that if the ecology reaches the target status, it is not necessary to achieve the corresponding EFI.

Given the economic importance of the availability of water to the sector, we take the view that any proposal to curtail it should be carefully considered, taking full account of the costs and benefits of so doing.

Chemicals

We do not agree with some important aspects of the general description of chemicals as a significant water management issue. The technical summary to which the National SWMI links describes the way in which Environmental Quality Standards (EQSs) are defined through the WFD processes. The EQSs are described as 'acceptable limits'. This is a misleading simplification. The most relevant EQSs [1] set under the modern protocols are derived typically to be such that there will be no observed effect on 95% of potentially affected species and are established without regard for the feasibility or societal consequences of achieving the EQS. In some cases, EQSs are deliberately set with high 'assessment factors', where there is insufficient high quality toxicity data, leading to precautionary values sometimes at concentrations so low that compliance cannot be established. These cannot be regarded as setting the socially 'acceptable' standard, since issues of acceptability have been explicitly excluded from the protocol by which they have been derived.

Once the EQSs are set, for WFD water bodies it is society's choice, through the mechanism of establishing the appropriate water body objective, as to what level of chemicals to deem acceptable in a given water body, having regard to the costs and benefits associated with achieving that concentration, if chemical quality is a limiting factor on benefit. Moreover, the Directive on Environmental Quality Standards (2008/105/EC) established the mixing zone principle in Europe, in line with UK practice, that exceedence of the EQS in a case-specific approved extent can be regarded as acceptable, and need not lead to the water body as a whole being

regarded as not having achieved the target chemical status or physio-chemical supporting status. For some substances EQS-MAC are defined, which are maximum acceptable concentrations designed to protect against short-term effects that may not be sufficiently protected against through the use of EQS-AA (annual average). However, the Mixing Zone Guidance makes clear that at some locations it is consistent with water body compliance that concentrations in the environment can even exceed EQS-MAC.

We find it difficult to assess the scale of significance for thermal power plant of 'chemicals' as an issue. Combustion of fossil fuels inevitably leads to the formation of detectable concentrations of some Priority Substances (PS) and Priority Hazardous Substances (PHS). Power stations use chemicals for a variety of purposes and their use, consistent with Best Available Techniques (BAT), can lead to the occurrence of 'chemicals' in water bodies. The site-specific controls and monitoring of such emissions are set out in individual permits. Whilst there may be 'issues' associated with specific individual plant and the water bodies with which they interact, we are not aware of any such circumstances with regard to the sector in general.

The application of more stringent EQSs, or the introduction of EQSs for substances not previously controlled in this way, could cause reviews of individual plant permitting and, in some cases, re-appraisal of site-specific BAT. Changes in abatement of emissions to water, with increased operating costs, is one possible outcome (as suggested in the table on page 19 of the England Challenges and Choices consultation). Were this to occur, we would like the regulatory approach to be such that individual operators are given sufficient assessment time to derive their case-specific, optimised response to the changed circumstances rather than having an end-of-pipe measure prescribed through the RBMP process. We welcome continuing sector-level engagement with the EA on such matters. Such an approach has long been the custom and practice in the regulation of power plant through the permitting process and we see no reason for WFD-RBMP to change this.

The regulatory approach to using EQSs primarily set in biota appears to be poorly defined. For example, we note that for mercury the latest EQS (2013/39/EU) is set explicitly in fish, although Member State regulators have the freedom to apply an EQS in another biota or phase if they choose to demonstrate that it is equivalently protective. We are unaware of the position to be adopted in the UK, although we note in the EA June 2013 Chemicals Evidence - Technical Summary that the Transitional and Coastal (TrAC) waters position is indicated using mussel concentration. The status of rivers appears to be assessed using a water column (dissolved) mercury concentration with no presentation of freshwater biota data. Thus, whilst we are aware of the ubiquitous and persistent nature of mercury in the aquatic environment, we are not able to assess the significance of the regulatory position on concentrations of mercury in specific water bodies for thermal power plant operating on those water bodies.

We note that the fuel/power sector is indicated as a sub-sector for which improved air emissions control to further reduce chemical deposition from atmospheric sources is a relevant future measure. Clearly, emissions to the atmosphere from power stations have been closely controlled for many years primarily under the Integrated Pollution Prevention and Control Directive and the Large Combustion Plant Directive, that legislation being a regulatory response at the European level to a variety of international agreements. Where the RBMP-related interest is regarding chemical concentrations in a water body, before setting targets and requiring emission reductions, it is important to take account of the costs and consequences of seeking atmospheric emission reductions below BAT levels and their likely effectiveness,

considering the pathways between atmospheric emissions at a point source and the specific water body(ies) of interest.

Whilst we are aware of the processes at water body level that may together lead to possible requirements for measures to address concentrations of chemicals judged to be excessive, we are unable to judge the significance at the sector level of the provisions of WFD Article 16 regarding progressive reduction of emissions of PS and cessation of emissions of PHS. These have had little profile in the SWMI2 preparatory workshops and in the national SWMI2. Requirements to achieve reduction or cessation of certain chemical emissions at some thermal power plant could have significant implications (including loss of societal benefit if such existing plant close prematurely or are required to take measures resulting in a significant increase in operating costs). If such requirements occurred at a sufficient number of plants, this could have implications at the sector or national scale. In the England Challenges and Choices consultation, none of this is evident in the table on page 15, though we note the entry in the table on page 19. Depending on the significance of any measures under Article 16, the scale indication of 'small impact at large scale' may be understated.

Invasive non-native species

We note that the issue description makes reference to energy producers being affected by zebra mussels. Whilst we are aware that zebra mussel infestation causes difficulties for some water companies in England, and causes difficulty for thermal power plant operators elsewhere in the world, to date this appears not to have been the case in England, even though the recorded geographical range of zebra mussels includes water bodies on which power plant operate. As the reasons for this are not well-understood, we support the inclusion within this SWMI of the management of zebra mussels and other species that present similar risks to power plant operation such as Asiatic clams.

Physical modification

The EA notes that hydropower is a sector contributing to physical modification but, given the recent consultation on river flow and hydropower plant, no detailed discussion is given. We welcome the high level of engagement with industry in this area.

Q3. How do you think these issues should be tackled, and what would you choose to do first?

We consider that part of the choice of how to tackle any issue should be to choose whether or not it is appropriate to tackle that issue at all and, if so, to what extent. We support the introduction to the national challenges and choices consultation which implies that issues are significant if they lead to loss of benefit. We do not consider that an issue is necessarily significant simply by virtue of resulting in a status or potential for a water body of less than 'Good'.

We do not consider the EA methodology based on the National Water Environment Benefit Survey (NWEBS), which is based on a transition between status affecting all elements as indicated in the 'expert pictures' underlying the study, necessarily reflects this. We therefore urge the greater and more sophisticated use of suitable tools to isolate which issues are worth tackling, and to what degree, in order to obtain

societal benefit whilst not incurring disproportionate cost. Whilst we accept that some of this aspect of choice is to be explored in the draft RBMP process, given the limited time available between completion of the SWMI and completion of the draft RBMP, we urge the EA to look carefully at the SWMI responses for evidence of the degree, if at all, to which respondents feel an issue is worth addressing in WFD economics terms, rather than for non-WFD reasons.

Should action by thermal power plant operators be contemplated to contribute to meeting appropriately defined WFD objectives, we would support it being established through regulatory dialogue, either with Energy UK (for sector-wide measures) or with individual operators (for site-specifics), so that the resulting action is optimised and takes into account the wider range of regulatory constraints within which the sector and individual plant operate, not just WFD. It is not appropriate that RBMPs set out prescriptive measures at the sector or individual plant level without such detailed dialogue.

Q4. Who we should work with to achieve the environmental outcomes?

No comment

Andy Limbrick
Environment Consultant
Energy UK
Charles House
5-11 Regent Street
London SW1Y 4LR

Tel: 020 7747 2924
Andy.limbrick@energy-uk.org.uk
www.energy-uk.org.uk

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name Bleddyn Lloyd

Organisation and Sector Save the Conwy campaign group

Contact Details bledd@ukrafting.co.uk

River Basin District Response for Western Wales River Basin District

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Many small scale private hydro power schemes operate within the area, providing power for farms, small businesses and local communities. They are mostly low impact and in-keeping with the historical use of water as a source of power within Snowdonia. We believe recent interest in large scale hydro power by foreign or multi-national companies on major rivers rather than small tributaries will be detrimental to both the environment and local communities. Avoiding the industrialisation of currently free flowing river systems and destruction of habitats in the name of renewable energy is a major challenge.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

We agree with the descriptions given in the supporting literature. Our response is in regards to “Physical modifications” of river systems.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

We believe that NRW should be robust is refusing abstraction licences to hydro power projects that fall within certain criteria. These are schemes which:

-Affect a major river (rather than small high gradient tributaries).
-Create reduced reach on rivers important for migratory fish.
-Affect habitats protected by a SSSI designation (including areas indirectly affected by changes in natural flow patterns).
-Prevent or reduce existing recreational activity (such as angling, kayaking/canoeing and rambling).
- Affect a river with a high level of importance to the tourism industry of local communities.
-Result in the status of a major free following river being changed to “Highly Modified”
-Affect the hydromorphology of a river system particularly in reference to sediment transfer.
-Lie within areas classified as “Areas of Outstanding Natural Beauty”

4 Who should we work with to achieve the environmental outcome?

Local communities, recreational users including anglers, canoeists and wild swimmers, local businesses reliant on the river for their livelihood (outdoor centres, accommodation providers etc)

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Our response is relevant to the whole basin area but as a group we are concerned with the Conwy catchment. This catchment is currently subject to a proposal for a run of river scheme stretching from above Conwy falls to the confluence with the river Lledr. Our meeting with the developers has led us to believe this is only the first of many schemes planned in the West Wales Basin.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

We believe our issue of concern regarding use of the Conwy river catchment, and other catchments in the basin can be tackled by NRW being robust in granting abstraction licenses as detailed above. NRW already has the resources and ability to do this.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

On the whole yes. We believe the use of rivers as a recreational resource and the ability of people to access a “wild place” through their use should be an important factor in any decision.

2 Is there any other information that we should be taking into account as part of the assessment?

The history of run of river hydro power projects and their negative impacts on both the environment and local communities in British Columbia is relevant to proposed schemes here.

Western Wales River Basin District: Challenges and Choices

A response from the Wildfowl & Wetlands Trust (WWT)
December 2013

The Wildfowl & Wetlands Trust Slimbridge, Gloucestershire, GL2 7BT
Tel: 01453 891900
Email: conservationpolicy@wwt.org.uk

The Wildfowl & Wetlands Trust (WWT) is a leading wetland conservation charity which works to protect wetland habitats in the UK and globally, and the services and value that wetlands give to wildlife and people.

Despite only covering a tiny fraction of the earth's surface, wetlands are home to a disproportionately large amount of world's species. They also help to clean and supply our fresh water, provide us with food and raw materials and help protect us from pollution, flooding and drought. We manage nine Wetland Centres across the UK (six in England), including wetlands of national and international importance. More than one million people visit our Centres each year to learn about the practical benefits of wetlands as well as to experience the enjoyment of being among wetlands and their wildlife. We provide formal learning about wetland wildlife and the water cycle to more than 60,000 school pupils each year.

Our response

We welcome the opportunity to respond to the regional Western Wales Challenges and Choices consultation. Our Llanelli Wetland Centre is based within the Western Wales River Basin District (RBD), within the Carmarthen Bay and Gower Catchment. The Dafen Pill runs through the reserve. Our reserve is impacted by the quality and quantity of the water flowing through the catchment. A large part of the Llanelli reserve is designated as a SSSI, SPA, SAC and Ramsar site. Llanelli provides an over-wintering home for flocks of up to 50,000 wildfowl; contains extensive areas of important inter-tidal salt marsh habitat and is a key site for water vole and waders. Llanelli Wetland Centre received over 49,800 visitors during 2012-13 enjoying access to and engaging with the natural world.

Our response concentrates on our experiences at Llanelli Wetland Centre, our concerns and the incidents that occur there, although we also offer general comments. We also propose views and evidence in relation to a number of management tools, with which we have experience, which can be used to tackle more than one significant issue. An example is the use of wetland treatment systems and appropriately designed Sustainable Drainage Systems (SuDS) to tackle chemicals, phosphorous, nitrates, fine sediment and faecal contaminants in both urban and rural environments. Wetland treatment systems and SuDS can be designed in such a way that, in addition to tackling the above issues, there are tangible benefits for wildlife and other benefits such as amenity, education, well-being and recreation. These can help to deliver on numerous government targets, including, amongst others, the Birds and Habitats Directives, Urban Waste Water Directive, and Floods Directive. WWT has 17 wetland treatment systems spread across our nine wetland centres, some of which have been treating effluent for over 20 years. WWT facilitates an ongoing programme of research and development to assess and improve the continuing effectiveness of these wetland treatment systems.

We are demonstrating the role of wetlands in delivering benefits at a catchment scale through working with the Environment Agency and other partners to develop plans to improve the ecological value of the River Swilgate in Gloucestershire. The overall aim of this work is to improve the ecological status of the Swilgate water body through improvements to the quality and timing of surface water runoff and the physical form and function of the channel, riparian zone, floodplain and catchment. The project involves creating detailed designs and management proposals for farm wetlands and constructing examples to act as demonstration sites. We are also working in the lower catchment, creating detailed designs and management proposals for a local nature reserve that will itself benefit from the improved water quality from the upstream catchment and improved management of surface water from surrounding urban areas using SuDS. We would be keen to explore opportunities to develop additional demonstration sites.

We specifically recommend options to explore further and seek alternative sources of funding to enable the delivery of new SuDS and wetland treatment systems as solutions to deliver WFD objectives and multiple additional benefits.

General comments

We would be keen to see an improvement in the status of water bodies over the last River Basin Management Plan (RBMP) period. We would like the draft RBMP when it comes out for consultation to include ambitious targets relating to the planned percentage of water bodies achieving Good Ecological Status (GES) by the end of the plan period. We are also keen that the next RBMP does not disregard details captured in the previous plan, but picks out, builds on and enhances improvements that have already been made and those that are in chain.

We believe that the consultation details all of the major issues affecting waters in the Western Wales RBD. However, there are overarching barriers to achieving the ecological objectives of the Water Framework

Directive (WFD) which are just as significant, and which although alluded to throughout parts of the consultation, are interlinked, merit special scrutiny as solo issues, and therefore need highlighting. These fall into two categories:

1) The valuation of natural assets, and specifically the price of water. General society, business interests and individuals have become more disconnected from the natural world and an understanding of how it functions. This means that the majority of society has little knowledge of the benefits that healthy and more natural systems deliver to them on an individual or societal basis. The ramifications of this permeate every decision that is made about land management, business investment, and what to - or not to - put down the sink. Solutions to help reverse this trend include promoting different business and economic models that internalise the costs of actions and choices that affect the environment - costs that are currently and often unwittingly picked up by others. Solutions also include strategic awareness-raising campaigns that are sustained until they have demonstrably delivered. Small fixes which could contribute significantly also include the universal roll out of water meters.

2) Cultural attitudes and increasingly narrow perspectives. Ecosystem deterioration has occurred over many decades, and often resulted from the interplay of numerous factors. Consequently it can be difficult for some to unravel and explain their individual contributions in specific situations. Also, baselines have shifted, and land managers and others have no recollection of just how spectacular our wetlands once were and the wellbeing and benefits that could be derived from them. This can result in a lack of ambition in creating wetland landscapes, and in engaging people in the need to do this, and benefits that they could derive from it. Fixes to these issues are harder to address, but include initiatives to bring families in close contact with wetlands, and awareness raising and support within the land owning community. There is a need for a positive and proactive approach to barriers such as health and safety, seeking and finding solutions to enable safe enjoyment of such valuable natural assets.

It is important that the next round of river basin planning puts in place a robust and ambitious approach to improving the water quality and water resources of the district. It is disappointing not to see a list of possible actions within the consultation, however there are a number of areas for action which we feel are particularly important and which are laid out in more detail below. We understand that there are general financial constraints that can affect the delivery of measures. However, we do not believe that the cost of implementing these should be affected by cost alone, but rather by which combination of measures would achieve the greatest gains in water quality and water resources across the district The additional benefits that natural solutions can provide should also be taken into consideration in decision making and could also be a tool to leverage additional financial and in-kind contributions, particularly to ongoing management and maintenance.

Significant water management issues – concerns and solutions

WWT nationally spend thousands of pounds managing **invasive non-native species** (INNS) on our reserves. Invasive non-native species negatively impact our business, visitor experience and our wetlands and wildlife. We have particular challenges managing invasive non-native species on the reserve at our Llanelli Wetland Centre. Surveys have recently been carried out and a five year control programme for New Zealand pygmy weed (*Crassula helmsii*) is estimated to cost £197,205.34 (excl. VAT), control of water fern (*Azolla filiculoides*) using the Azolla weevil is predicted to cost over £12,000 and control of parrot's feather (*Myriophyllum aquaticum*) has been costed at £10,561.40 (excl. VAT). We have also recently eradicated Japanese knotweed (*Fallopia japonica)*. However, regardless of management at the reserve there is a constant risk of being re-infested by aquatic species from elsewhere in the catchment. This is why co-ordinated catchment level action for INNS is so vitally important. INNS are already causing significant damage to our natural ecosystems, costing the British economy at least £1.7 billion a year[1] and negatively affecting human health and wellbeing. We therefore need to take a precautionary and preventative approach and tackle INNS now before damage and costs escalate further.

WWT believe that it is important to tackle **agriculture and rural pollution** through improvements to agricultural practice and management. We believe that deploying strategically placed wetland treatment systems, together with further improving agriculture management practices, would positively impact the water quality in the catchment. We believe that there needs to be a more targeted approach to changing agricultural practice where this affects water quality and water resources. The Welsh Catchment Initiative has provided us with a good starting point, but needs to achieve more. We need to build on its successes and learn from any challenges and difficulties. For a systematic change in behaviour to occur any such

[1] Williams, F. *et al*. (2010) The Economic Cost of Invasive Non-Native Species on Great Britain, CABI

approach needs to do more than inform farmers about best practice, but detail the impacts and consequences of their current actions, not only on the wider countryside but with respect to their own land and the economic benefits of change, potentially through demonstration sites and case studies. For example, by reducing the production of sediment transfer through ploughing horizontally across a field instead of down the hill farmers can maintain fertility longer. This will ultimately lead to a reduced need for fertiliser and in addition reducing runoff will, where additional chemicals are applied, reduce the quantities required as it is more likely to be retained. We understand that the best way of communicating this information to farmers is through respected local intermediaries or the farmers themselves. It is important not to over rely on agri-environment schemes to address the problem of rural pollution.

Wetland treatment systems can be used to treat phosphorus and nitrogen pollution, faecal contaminants and sedimentation as part of treatment. They need to be strategically placed within a farm to intercept runoff. The wetland treatment systems, if designed and managed appropriately can also provide important habitat themselves. WWT have been working with Catchment Sensitive Farming in England to produce a guidance document on where and how to use treatment wetland systems to treat diffuse water pollution from agriculture, break pollutant pathways and benefit biodiversity on farm and in water. The guidance document can be downloaded from http://publications.naturalengland.org.uk/publication/5756729350422528.

- Wetland treatment systems can improve the quality of pesticide-contaminated water. Treatment efficiencies reach up to 67% for some pesticides[2] and up to 90% for others[3] depending on how readily they are broken down by the various wetland processes.
- Horizontal surface flow wetland treatment systems can remove between 30 and 94% of phosphorus from agricultural wastewater, depending on the form of the phosphorus in the influent[4].
- In 2005 a study was undertaken on the Millennium reedbed at WWT Slimbridge to ascertain the ability of constructed wetlands to reduce faecal coliforms from sewage effluent. The system was found to remove 99.9% of faecal coliforms[5].
- Horizontal-flow wetlands can remove between 50 and 99% of nitrogen, depending on its form and effluent loading.
- Vegetated wetland treatment systems can reduce total suspended solids in between 48 and 95% in agricultural wastewater.

The consultation indicates that four water bodies are failing due to the pollution of water from abandoned mines. We would recommend using wetland treatment systems to clean surface water flow from mines. The Pelenna wetlands were constructed between 1995 and 1999 with an aim of treating the most contaminated minewater discharges affecting the Pelenna valley. Once constructed, the wetland treatment systems were removing between 82 to 96 % of the incoming iron loading and the water quality at all sample points in the receiving watercourses quickly improved with dissolved iron dropping below the Environmental Quality Standard (EQS) limit of 1 mg/l EQS limit[6]. Wetland treatment systems have also been shown to significantly reduce levels of Aluminium, Cadmium, Copper and Zinc[7]. Also, in a study examining metal retention by a wetland treatment system treating wastewater from a metallurgic plant, reductions of 98% (Iron), 90% (Chromium), 59% (Nickel) and 57% (Zinc) were observed[8]. WWT and WWT Consulting have also designed systems to treat landfill leachate which was mentioned as a reason for failure of water quality in the Clyne.

The quality of water from **wastewater discharge** can also be treated/polished through the use of wetland treatment systems. We would like to see greater use of wetland treatment systems by water companies to treat waste water and which are also designed and managed for additional wildlife benefit. Wetland treatment systems have been shown to remove around 51% of phosphorus from domestic wastewater[9]. This figure ties in with the research undertaken at WWT Slimbridge where there were average phosphorus

[2] Braskerud, B.C., Haarstad, K. (2003) Screening the retention of thirteen pesticides in a small constructed wetland. *Water Science and Technology* 48(5):267-74.

[3] Gregoire, C., et al. (2009). Mitigation of Agricultural Nonpoint-Source Pesticide Pollution in Artificial Wetland Ecosystems–A Review. *Climate Change, Intercropping, Pest Control and Beneficial Microorganisms*, 293-338.

[4] Dunne, E. J., Culleton, N., O'Donovan, G., Harrington, R., & Olsen, A. E. (2005). An integrated constructed wetland to treat contaminants and nutrients from dairy farmyard dirty water. *Ecological Engineering*, *24*(3), 219-232.

[5] Mackenzie, S. & McIlwraith, C. 2012. *WWT Slimbridge, Wetland Treatment Systems and SuDS.* Unpublished WWT Report.

[6] Wiseman, I (2002) Constructed Wetlands for Minewater Treatment, R&D Technical Report P2-181/TR, Environment Agency

[7] Cheng, S. *et al*. (2002) Efficiency of constructed wetlands in decontamination of water polluted by heavy metals, Ecological Engineering, 18(3), 317-325

[8] Di Luca, G. A., Maine, M. A., Mufarrege, M. M., Hadad, H. R., Sánchez, G. C., & Bonetto, C. A. (2011). Metal retention and distribution in the sediment of a constructed wetland for industrial wastewater treatment. *Ecological Engineering*, *37*(9), 1267-1275.

[9] Vymazal, J. (2002). The use of sub-surface constructed wetlands for wastewater treatment in the Czech Republic: 10 years experience. *Ecological Engineering*, *18*(5), 633-646.

reductions of 42% within one of our constructed wetlands. Removal rates of phosphorus by constructed wetlands can be enhanced through the use of special substrates including recycled products such as ochre[10] and oyster shells[11] or dedicated phosphate-removal media. As previously mentioned wetland treatment systems can also be used to remove nitrogen from wastewater.

Rural and urban sustainable drainage systems (SuDS) are a low impact, natural way of reducing surface water run-off. They also can provide a wealth of additional benefits, such as silting out fine sediment and treating low levels of pollution. SuDS can therefore be used to help reduce levels of chemicals, faecal pollutants, phosphorus, nitrates and fine sediments in a similar way to wetland treatment systems. WWT uses SuDS to some degree at all its centres, including SuDS car parks, green roofs, rainwater harvesting and rain gardens. SuDS can also be used in farmyards to reduce surface water mobilisation, and therefore decrease the amount of effluent runoff into water courses. In addition SuDS can prevent enable a disconnect of surface water flows from sewerage systems, decreasing the probability of storm overflows causing untreated sewage to enter directly into waterways. SuDS, if designed appropriately, can also benefit wildlife and people in a number of ways. WWT (together with the RSPB) have produced a guidance document that helps those designing and implementing SuDS to make small changes that provide benefits for wildlife and people (Graham, A., Day, J., Bray, B., & MacKenzie, S. (2013) Sustainable Drainage Systems, Maximising the potential for people and wildlife, A guide for local authorities and developers, RSPB, WWT). We would like to see such Sustainable Drainage Schemes implemented in all new developments and in particular a commitment to retrofitting SuDS where they are the right tool. With ever increasing development and associated impermeable surfaces we look towards Natural Resources Wales to make sure that the catchment wide and cumulative impact of all developments is taken into account. SuDS should also play an important part in reducing pollution and runoff from roads, and they therefore need to be incorporated within highways plans. WWT believe that SuDS need to be designed with the community in mind to ensure longevity. Experience shows that communities are more likely to buy-in to a project in which they are involved from the very beginning, in all aspects of design and implementation and ensuring straightforward, surface level, management measures. We would therefore like to see the development and management of SuDS become an integral part of catchment management. WWT, in collaboration with Thames Water and the Environment Agency, manage a project working in a catchment in London retrofitting 10 schools with SuDS. The project includes valuable engagement with the local community and early indications are that the SuDS are already reducing flooding events in the local area and improving habitat for local wildlife.

There are also a couple of rivers in the catchment failing because of **physical modifications for flood protection purposes**. We believe that there is wide merit re-connecting rivers to their floodplains and would like to see RBMPs look into the feasibility of relevant managed realignment proposals as flood management options consequently allowing the removal of allied hard standing flood defences. WWT are working together with the Environment Agency on a large coastal realignment project in the South West of England on the Steart Peninsula in Somerset and would be happy to provide further insight into this.

RBMPs are a massive opportunity to improve the health of our rivers and wetlands. A good RBMP will result in improved prospects for wildlife across the whole catchment as well as support the plethora of ecosystem services they provide, and so we cannot let this opportunity pass us by. Please do let us know if we can assist with providing any further detail on the subjects we have covered.

[10] Heal, K. V., et al. (2005). Enhancing phosphorus removal in constructed wetlands with ochre from mine drainage treatment. *Water Science and Technology*, *51*(9), 275-282.

[11] Park, W. H., & Polprasert, C. (2008). Roles of oyster shells in an integrated constructed wetland system designed for P removal. *Ecological Engineering*,*34*(1), 50-56

Severn, Dee, and West Wales River Basin Management Plans

E.U. Water Framework Directive

Thank you for the opportunity to comment on the consultation. Our comments and response follow this introduction.

Confor: promoting forestry and wood is a membership organisation that promotes sustainable forestry and low-carbon businesses. Confor represents and supports members by helping build the market for wood and forest products, creating a supportive policy environment, and helping members to become more competitive and successful.

1.Question –Severn (1); Dee (1); West Wales (1) "What do you consider to be the biggest challenges facing waters in the ……River Basin District?"

Response. Climate change and consequently either too much or too little water leading to either floods or droughts. Either way will not be helpful to forestry, farming or the rivers.
The morale of those living and having their businesses in the uplands of Wales and headwaters of Welsh rivers is under severe pressure and any undermining by governments and/or their agencies of the important motives of making a reasonably profitable and independent living whilst raising a family and contributing to the community should not be undertaken lightly.
There will also be a challenge to preserve the sense of isolation and peace that the predominantly passive tourists come to Wales to find and to avoid the development of widespread water-based activities at the expense of existing income-producing activities.
Diffuse pollution from agriculture and forestry should continue to be on the agenda taking into account the needs of modern agriculture and forestry and consistent with advances (if any) in effects of herbicides and pesticides in water. With the spread of small industrial estates into rural areas and little control over future occupancy of units and the toxicity of their products or effluent, point pollution is an increasing problem in rural areas.
Continued efforts should be made to build on the progress already made in reducing atmospheric pollution to eradicate at source the process of acidification, which affects many upland waters in Wales.
Small scale hydro-electric schemes are not seen as a threat provided they (and possibly reintroduced beavers) do not interfere with land drainage. The removal of obstructions to the passage of migratory fish is not seen as a challenge.

2.Question- Severn (2); Dee (2); West Wales (2). " Do you agree with our description of how the significant issues are affecting the water environment and "society" (Severn) and "the local community" (Dee; West Wales)?"

Response. Because Confor is an organisation which covers the whole of Wales and because there are 7 Significant Issues listed in the three RBDPs covering Wales, of which 4 are common to all three RBDPs –Physical Modification; Waste Water; Invasive Species; and Rural Pollution; 2 –Towns, Cities and Transport and Mines Pollution are common to two (Severn and West Wales); and 1 to one Changes to Natural Flow (Severn), we will answer them in all three responses.

All of the draft plans refer to forestry. The Severn draft is least specific on forestry but informative and helpful on agriculture and thus, we hope, by extension to forestry. The Severn draft deals realistically with applied nutrients and pesticides and sedimentation problems in an agricultural setting. It confirms continued support for voluntary initiatives by "the industry" and which we believe are the only reliable way forward as education, training and supervision (if necessary) of the end-user improve.

The other two draft plans (Dee; West Wales) are more forthcoming specifically on forestry and are differently drafted from each other. However they both have the same final paragraph under "Pollution from Rural Areas)". This paragraph lists the water benefits to be derived from forestry and is comprehensive apart from not mentioning the effects of a closing broadleaved canopy on invasive weeds which can eradicate them over years and if fenced against stock wherever necessary.

Both these draft plans (Dee; West Wales) refer at paragraph 3 (Dee) and 2 (West Wales) of the Rural Pollution page to the Welsh Government's Rural Development Plan but the Dee draft envisages that the Welsh Government's RDP aims "to support sustainable rural economies that provide valuable ecosystems services such as food and timber production, recreation opportunities and drinking water" whilst the West Wales draft omits the words "food and timber production". We think this is probably a mistake and that it is unlikely that the RDP will fail to support sustainable rural economies in all areas of Wales to an extent but this is a matter for Welsh Government.

3.Question – Severn (3); Dee (3); West Wales (3). "How do you think these issues should be tackled and what would you do first?"

Response. There are a number of the Issues which do not affect forestry collectively namely Waste Water and Sewage; Towns, Cities and Transport (except airborne pollution); and Pollution from Mines all of which are dealt with from a water pollution standpoint. On all these issues we are happy with the outlines in the Plans and have no comment.
On Physical Modifications (Issue 1 in all drafts) and Changes to Natural Flow (Issue 4 in the Severn plan) we would hope that there would be consideration of land drainage, the maintenance and hopefully improvement of flow rates for the quick dilution and dispersal of diffuse pollution and sedimentation. Room can also be found

for water retention and flood alleviation schemes in the uplands provided there are also policies in place which can also free up the market in land for suitable well and naturally drained land for replacement land for afforestation. This would require amendment of the woodland creation ”traffic light map”.

4.Question –Dee (4); West Wales (4). “Who should we work with to achieve the environmental outcomes?”

Response. The response to this must be that all those affected by the environmental outcomes should be “worked with” as otherwise those outcomes will be hard to come by. This group is often referred to as stakeholders but it depends on the width of interpretation of the word how equitable such outcomes are seen to be. Generally the closer the consultee is in pocket or in person to the outcome the greater his or her ”stake” will seem to him or her to be.

5. Question – Severn (4); Dee (5); West Wales (5). “How are the Significant Issues in” a” (Severn and West Wales); “the Dee”(Dee), catchment affecting the water environment and “society” (Severn), “the local community” (Dee and West Wales).

Response. Drawing on our better experience of the effect on our local communities rather than of society at large, we would say that pollution used to be the most obvious factor affecting the local community. With the active assistance of local communities in, say, the South Wales Valleys old-fashioned point pollution is seen as largely beaten though it does still bite back on occasion. Diffuse pollution and attendant algae blooms combined with an apparent reduction in flow of rivers and even a reduction in width of rivers historically, combined with an apparently contradictory effect of fiercer and more damaging winter floods is probably nearest the front of the local communities’ minds. That, and worries of small settlements without public sewers or treatment works, that their septic tanks are under threat in some way, heralded by the rather badly organised recent “registration” exercise; in some cases these would be extremely difficult to replace.

From a forestry point of view there is a worry that coniferous forestry is grossly underappreciated for its contribution to the rural and not so rural economy and that water issues will be used as a stalking horse against it. It seems that with the amelioration of the threat from airborne pollution the forestry link in the acid rain chain may be less significant than it was but we welcome the statement in the Severn draft plan which acknowledges the importance of chemicals in modern agriculture and we would hope, by extension, to modern forestry. Most of these problems arise not from the proper use and application of the substances but to the poor training and supervision of the person actually applying them or, in the case of possible sedimentation, driving of the machine. Forestry is a much longer cycle than the annual farming cycle and the events giving rise to such issues are usually one or two occasions in a minimum growing cycle of at least 35 years.

6.Question – Severn (5); Dee (6); West Wales (6). " How do you think the challenges affecting each catchment should be tackled and what would you choose to do first?"

Response. With impending climate change and a rapidly increasing population in the U.K. at large it is inevitable that Changes to Natural Flow and Physical Modification will move up the agenda though they have never been far from the top as Wales is a drinking water provider anyway and has been for a long time. In the three RBD draft plans affecting Wales only one (Severn) mentions Changes to Flow as a Significant Issue. This is probably because Welsh rainfall is seen in Dee and West Wales as sufficient to provide supplies but if it is an issue in Severn RBD, which covers a significant part of Wales, it must surely be an issue in the rest of Wales. Quite a lot of progress has already been made in getting away from the prodigal use of cheap water so that abstraction can be reduced but more can always be done. Ever lower flows will harm the ability of rivers to dilute and disperse diffuse rural pollution and point pollution from Waste Water. These matters are already being addressed but in the meantime boreholes are still being sunk at a high rate.

It is inevitable that diffuse pollution from rural sources will continue to be high on the agenda. On the whole, forestry is not the source of enrichment of water from nutrients and is a natural consumer of nutrients but there are concerns expressed about herbicides and pesticides particularly those used in establishing or replanting woodland. There are already national schemes dealing with control of these substances and their application, which all concerned have learned to live with and, no doubt, the industry is always working on new and more efficient and species-specific substances. The application of these chemicals is a rare event in the 35 year minimum life cycle of a tree. and nowhere near as frequent as those employed in agriculture.

Sedimentation of rivers can be reduced by careful patterns of ploughing of arable agricultural land and, in forestry, by the careful design and implementation of forestry tracks. There is little or no evidence that the felling of trees by itself and whether in a Continuous Cover or Clearfell regime causes or exacerbates erosion and hence sedimentation, except through the use of forest tracks by machines and this is something that can be cured by good design and better execution, signs of which are undoubtedly emerging in the forest industry.

The above three points seem to us to be the order of priority and the improvement of them by themselves alone will keep "the local community" and "society" at large busy enough until 2027 and well beyond.

David Jones Powell (Water Portfolio)
Kath McNulty (National Manager Wales)
December 2013

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name _ Jeanie Gray
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Organisation and Sector _____Keep Wales Tidy Third Sector
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Contact Details
____jeanie.gray@keepWalestidy.org_____
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River Basin District Response for ___Western Wales
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Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

Cyfoeth Naturiol Cymru
Natural Resources Wales

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Keep Wales Tidy (KWT) agree with the challenges identified in the Supporting Living Water for Wales document, and in the River Basin Management Plan, as all of these can affect not only river quality, but also our coastal waters and beaches.

We are particularly interested in how theses can affect the beaches around our coast and the achievement of Blue Flag status by these beaches. As reported in our Water Quality Pilot in March 2013 "Although the Awards focus on the best, overall management of a beach, the press have tended to associate them solely with water quality, and not all of the required criteria. "Blue Flag" is an important marker for the provision of quality facilities along beaches, and according to the Visit Wales Visitor survey 2011, it is recognised by 86% of those visitors engaged in activity along the coast. Indeed seaside tourism is particularly important for North and South West Wales, where it accounts for half of all activity (57% and 48% of tourism spend respectively)[1]. It is therefore important we do everything possible to improve water quality.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Generally yes, but please see detailed comments with regard to the issues below:

Physical modifications

KWT agree, but would add that these modifications can also trap litter and other items fly tipped on banks, which make problems worse. We would be happy to provide examples of projects where we have worked to help resolve issues.

Some fly tipping on its own can create a barrier. For example, research undertaken into shopping trolleys dumped into rivers has shown that around £5m is spent annually on a UK basis on removing shopping trolleys dumped in rivers and ponds. The fly-tipping of trolleys can cause a number of environmental problems some of which are listed below:
a) Loss of visual amenity and reduction of local environmental quality; shopping trolleys in rivers and canals are unsightly and can trap floating debris such as branches, leaves and litter.
b) Damage infrastructure

[1] Coastal Tourism Strategy 2008.

c) In canals and larger rivers, fully or partially submerged trolleys present a hidden danger to boats as they can damage propellers and hulls
d) Danger to the health and safety of the public
e) Prevention of fish migration
f) Damage to fishing lines that become tangles in dumped trolleys[2]

Pollution from sewerage and waste water

Intermittent discharges from combined sewer overflows and storm overflows that operate during heavy rain, and are designed to protect sewage works from being overloaded and domestic properties from sewer flooding can mean that litter from streets ends up in rivers and other water courses. Indeed, research has shown that 80% of Marine litter is from the land …..

> "The EU Green paper on a "European Strategy on Plastic Waste in the Environment" brings into sharp focus the potential impact of littering and the thoughtless disposal of waste. The report highlights that "Experts judge that around 80% of marine plastic waste is coming from land[1] and that "the main land based sources of plastic marine litter appear to be: storm water discharges, sewer overflows, tourism-related litter, illegal dumping[2], industrial activities, improper transport, consumer cosmetic products, synthetic sandblasting media or polyester and acrylic fibres from washing clothes[3]".

We would also cross reference here the issues raised in the Environment Bill White Paper on the disposal of waste food to sewer. KWT agrees with the prohibition of food waste to sewers for the reasons given in the White Paper, and that ideally it should apply to both businesses and householders. We have expressed an interest in the awareness campaigns that may be run to other producers of food waste, such as householders, which although not be part of the Bill, could provide the opportunity to remind householders of other items/ products that damage sewers and our water courses. This could also be linked to work being undertaken with regard proposed Water Strategy and the area based work with communities, suggested in the White Paper.

Pollution from towns, cities and transport

KWT are pleased to see the reference to our work with regard to the "Yellow fish campaign" in the document. We would however suggest that the issue rose about the litter on streets and its effects on our water bodies could also apply under this heading. As outlined above it is estimated that land-based activities are the largest source of marine/ water borne litter. This litter/ waste is dropped on streets, and in parks and car parks around the world, and is then washed, blown or discharged into nearby waterways. Sources include: general littering;

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[2] I. D. Williams and N. Deakin MSc (2007) Littering of a watercourse in north-west England -Proceedings of the Institution of Civil Engineers Municipal Engineer 160 December Pages 201–207.

[1] UNEP (2005). Marine litter, an analytical overview: http://www.unep.org/regionalseas/marinelitter/publications/docs/anl_oview.pdf.

[2] Browne, M.A., Crump, P., Niven, S.J., Teuten, E., Tonkin, A., Galloway, T., Thompson, R. (2011). Accumulation of microplastics on shorelines worldwide: sources and sinks. Environ Sci Technol, 45(21), 9175-9179.

[3] Derraik J.G.B (2002) "The pollution of the marine environment by plastic debris: a review" in Marine Pollution Bulletin 44:842-852

inadequately covered waste containers and waste container vehicles; poorly managed manufacturing sites, shore-based solid waste disposal and processing facilities; sewage treatment and combined sewer overflows.[3]

We also support the use of SUDs, but for example windblown litter could also create problems with these, and we understand that more advice is required for e.g. for housing developers to ensure that they use the best and most cost effective systems for themselves, the residents and for the local authorities, who will be required to take on the after care and management of these facilities. This is an issue which could be raised with Developers and Local Planning Authorities to find the best solution.

Pollution from rural areas

KWT would the put forward the issue of helping farmers to deal with illegal fly-tipping on their land, and would suggest cross referencing with the work being undertaken with regard to the Fly tipping Strategy.

It is also interesting to note that an exercise carried out by the Wye and Usk Foundation to determine the sources of litter along the rivers Usk and Wye, showed that after analysing the rubbish collected a high percentage (up to 76%) of the litter originated from the agriculture sector, mostly being made up of silage wrap, feed bags and barbed wires[4] .

Also, although we agree with the suggestion that forestry and woodland can reduce flood risk by increasing water retention in catchments; reduce erosion by improving bank stability; provide a natural filtering mechanism for rain and surface water abstracted for drinking supplies; provide habitat for fish and wildlife; and reduce water temperature by providing shade to streams. KWT would like suggest that many of the benefits listed above can also be attributed to hedgerows and hedgerow restoration, and would highlight the work we are doing with regard to our "Long Forest Project" in relation to hedgerows in the Brecon Beacons National Park, and for which we are currently applying for funding to extend to other areas in Wales.

KWT also undertook Water Quality Pilot for Visit Wales this year. There are lots of good examples of ways to improve water quality, e.g. setting up schemes for farmers, from this project, which we could provide if requested.

Pollution from Mines

No comment.

Invasive – non-native species

KWT can provide training to help individuals and community groups to identify and record the location of these species and treat them through methods such as stem-injection.

[3] Keep Wales Tidy's Policy Paper on Marine Litter

[4] http://www.wyeuskfoundation.org/problems/litter.php (07.08.09)

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

Where possible the issues need to be tackled in an integrated way. For example, it may be possible to link issues that require behavioural change by the public or business, or where the activity in one area/ topic will have beneficial outcomes with regard to another issue.

The issues with regard to litter and fly tipping should be linked with the other work already being undertaken by the Welsh Government, NRW and organisations like Keep Wales Tidy. Whilst with regard to coastal aspects work consideration should be given to eco – system issues raised by, for example Marine Conservation Zones.

With regard to resource limitations, a lot of the work in removing physical barriers, for example, is undertaken by organisations, such as KWT, using volunteers. These volunteers should not be regarded as a free resource, as there are costs involved in managing, training and resourcing volunteers to do the work.

4 Who should we work with to achieve the environmental outcome?

KWT would be happy to work with NRW to help achieve positive outcomes. For example, as outlined in the document, we are already working with NRW and Dwr Cymru on the Yellow Fish project, and our Tidy Town volunteers are involved in river clean-ups and other improvement projects. An example of a project report is attached and other examples can be provided if required.

Working with volunteers via organisations like KWT can help to reduce costs, although as already outlined in response to Question 3 this should not be seen as a free option, as there are costs involved in managing, training and resourcing volunteers to do the work.

KWT also has the appropriate networks through our volunteers and Eco –Schools to raise awareness about how public behaviour can create or worsen the problems identified, as is already demonstrated through our work on the Yellow Fish Campaign.

With regard to invasive – non-native species, KWT can provide training to help individuals and community groups to identify and record the location of these species. KWT can also help to train and equip volunteers with the necessary skills and materials to successfully treat “invasives” in selected areas. Indeed, KWT could run a ‘Himalayan Balsam Bash’ across Wales, if funding could be made available. For example, KWT could run a co-ordinated campaign for a 2 month period each summer, which would have a significant impact on the plant. The costs should be limited as schools and groups could be engage with to help with the practical work.

KWT has also undertaken work with regard to the removal of shopping trolleys from rivers For example, we have one case study in which trolleys pulled out of the river in Merthyr Tydfil were sold back to the supermarket chain. This raised £16,000 for Merthyr Tydfil’s Tidy Towns scheme, by selling the trolleys for £25 each. This process was beneficial to Merthyr Tydfil’s TidyTowns scheme and to the supermarket, as paying £25, instead of the £80-£250 that it would cost to procure a new trolley, saved the supermarket money in placement costs.

Although, this is a good example of how to fund the clean-up of rivers, the aim should be to reduce the amount of trolleys that end up fly-tipped in the rivers and watercourses of Wales.

Welsh Government has just awarded KWT funding, for next financial year, to run a Coast Care Project. To undertake the following:

- To investigate new innovative solutions for addressing coastal littering and evaluate them to inform future initiatives.
- Work with key stakeholders to identify key areas for action based on evidence to achieve maximum benefit.
- Strengthen the Coast Care initiative by re-branding and publicising
- Link into Tidy Towns scheme to scope projects for tackling litter on the coast for 2014-15.
- Explore how this pilot could assist in helping beaches achieve more Blue Flag, Green Coast and Seaside Awards.
- Help promote good practice in beach management in Wales.
- Link into and support the Programme for the Coast being developed by Welsh Government.
- Collect data on the pilot.

We will be using the experience and knowledge gained from our original Coast Care project, which began in 1999, and by 2001, had become: Coastcare, Port Waste, Green Coast Awards and the Tidy Tackle Campaign. Coast Care focused on the establishment of local and voluntary groups, who adopt and managed stretches of coastline. Port waste was established in response to the need for ports to comply with new legislation to provide waste reception facilities and the need to produce Port Waste Management Plans.

The original Clean Coast Pilot project finished operating in 2008, although some of the work has continued under the Tidy Towns banner. For example, most of the Coastal care groups still operate under Tidy Towns and some still use the name Clean Coast or Coastal Care Group.

We are also keen to exploring ways of re instating and improving upon our previously successful Clean Rivers project, which we ran for 15 years.

Please contact us if you would like more information on the above projects.

The Catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

KWT could map the information we collect from our Local Environment Audit and Management System LEAMS Surveys to show where the worst concentrations of litter are across Wales. This would affect all the river basin catchments in Wales.

Similarly the information in “Fly capture” may assist with fly tipping, but as incidents of fly tipping on private land are not recorded, so this would not provide a complete picture.

However, cross working in NRW using in-house expertise and the assistance of community and local authority staff may be able to help identify black spots.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

KWT does not have the information to answer this question, but would be happy to be involved as outlined in response to Question 4.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes

2 Is there any other information that we should be taking into account as part of the assessment?

Please see responses to the questions above with regard to the effects of litter and fly-tipping on water quality.

Example of KWT Project

Bradley Fishing Club River Bank Clearance

Project Officer	Shane Hughes
Community group & other Partners	Bradley Fishing Club, Keep Wales Tidy, Wrexham CBC (Countryside Service)
Location (with OS Grid Reference)	River Alyn, Bradley, Wrexham - Grid Ref - SJ 321 547 (centre of map)
Project Summary	The work undertaken for this particular project forms part of a wider works programme by Bradley Fishing Club (supported by **Keep Wales Tidy**) which aims to improve access to and from the river for both the visiting public and members of Bradley Fishing Club. Besides access improvement work, volunteers removed several fallen trees which were diverting river flow and subsequently exacerbating riverbank erosion. Work also involved the removal of fly tipped material and some trees to create woodland glades (an invaluable tool in the management of deciduous woodland as increased

light levels equate to increased plant / insect diversity and consequently increased bird and mammal diversity). Fly tipped material removed included an old motorbike, a fridge and large amounts of leylandii clippings / waste.

Main aim of the Project

The removal of fly-tipped material, fallen trees (and other green waste), flood debris and litter from a 150 metre section of the River Alyn, near Bradley, Wrexham.

Resources

Project Officer – 6 Hours
Bradley Fishing Club – 12 Hours (8 volunteers over two days)
Wrexham CBC (waste removal)

Activities

☐ **9th November** – Assisted Bradley Fishing Club with the removal of fly tipped material, fallen trees (and other green waste), flood debris and litter – Informal training and safety talk given on the dangers of working near water, local conditions and tool safety

☐ **10th November** – Assisted Bradley Fishing Club on the removal of fly tipped material, fallen trees (and other green waste), flood debris and litter.

Outputs

Over two days (over a combined 48 hours) 8 volunteers from Bradley Fishing Club spent 48 hours clearing 1 tonne of fly tipped material, flood debris and litter, effectively opening up 50 metres of footpath.
In addition to this several woodland glades were created and several habitat piles constructed with the cleared vegetation. Fly tipped material removed included an old motorbike, a fridge and large amounts of leylandii clippings.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name _____Eric Williams_____

Organisation and Sector _____Pembrokeshire Anglers Association - Angling_____

Contact Details

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River Basin District Response for ___West Wales_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

1) Pollution in its various forms, particularly from agriculture and blue green algae on the Eastern Cleddau, and outdated sewage treatment works.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

My response relates specifically to Pollution from Rural Areas and in particular farming practices. The problems in this area stem mainly from the dairy sector and there is little evidence that farming practises have improved. Indeed the opposite seems to be the case with dairy herds getting ever larger, farmland getting swamped with ever larger volumes of chemical laden evil smelling slurry (particularly when rain is in the offing) and infrastructure struggling to keep up with the pace of expansion. So “where does the working with us” come from?

Fencing riverside zones has proved a disaster. All that has happened is that inner fencing areas have become overgrown to all and sundry and has contributed to the spread of invasives, in particular himalayan balsam. In future, all riverside fencing must include passage for occasional grazing.

There has been much focus on the main rivers, at the expense of the small tributaries that are the main spawnng areas for our trout and sewin population. The need to protect these essential waterways is not rocket science – so why has it not been done to any great extent?

Finally, I presume that commercial pressures will ensure that the use of cypermethrin will continue in forestry usage?. What price protecting the environment?

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

- Again my response relates to 2 above, and in particular agriculture. With respect, NRW and the various agencies should have the answers as relevant information has been before you for many years. Also, management of resources is not something that I can influence – that's down to the management of NRW!.

- With regard to dairy farming –what can be done to reduce the volume of slurry?. Change diary herd housing/management to provide a greater volume of hard matter.

- Impose greater contral through extending NVZ's

- Monitor chemical constituents of slurry in the large units

- Insist on a larger area between riverside fencing and the river bank to allow for occasional grazing and to provide a larger buffer strip – maintenance of which by the farmer is mandatory.

- ban use of cypermethrin

- Let's have some joined up thinking within the Welsh Assembly – it does seem that some M Ministers have their own Agenda and to hell with the consequences!

4 Who should we work with to achieve the environmental outcome?

- farmers, farming agencies, forestry owners, landowners, Rivers Trusts, angling clubs and fisheries.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Reference Western & Eastern Cleddau's – both rivers suffer from agricultural pollution and there is little evidence that habitual trangressors receive nothing more than a minor rebuke. Result of this pollution is dead fish and siltation of the minor streams that can devastate spawning areas

With regard to the Eastern Cleddau, blue green algae is a major concern and fish stocks continue to decline. Given that the Eastern is a major source of the County's domestic water supply, there is little evidence that much has been done to improve matters in recent years and the long term impact on health should be a major concern.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Reference Cleddau rivers – my responses to previous questions (reference agriculture and forestry) apply

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes. However actions speak louder than words.

2 Is there any other information that we should be taking into account as part of the assessment?

Nothing that springs to mind.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name _____Heather Galliford_____

Organisation and Sector ___Wales Environment Link, environmental NGO sector
The following WEL members support this document:

- Afonydd Cymru
- Amphibian & Reptile Conservation (ARC) Trust
- Bat Conservation Trust
- Butterfly Conservation Wales
- Coed Cadw / Woodland Trust
- Marine Conservation Society
- Salmon & Trout Association
- Llais y Goedwig
- RSPB Cymru
- Wildlife Trusts Wales

Contact Details ___heather@waleslink.org / 02920 497509_____

River Basin District Response for __Wales: Dee, Severn & Western Wales __

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

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Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do you consider to be the biggest challenges facing waters in your River Basin District?

Wales Environment Link (WEL) is a network of environmental and countryside Non-Governmental Organisations in Wales, most of whom have an all-Wales remit. WEL is officially designated the intermediary body between the government and the environmental NGO sector in Wales. This response addresses the three River Basin Districts that cover Wales – Western Wales, Dee and Severn.

Land use practices associated with agriculture and development are well recognised issues in the degradation of freshwater ecosystems, and lead to failure of water bodies to meet good ecological status under the Water Framework Directive (WFD)[1]. Such practices continue to have negative impacts on the waters of Wales.

- Diffuse pollution needs to be addressed at whole catchment level and not only by management of the river channel. A shift in current agricultural practice to more sustainable land management practices is necessary, so that watercourses are not adversely affected and quality is improved.[1]
- Industrial, urban pollution and wastewater discharges are all still major challenges on specific catchments in Wales. These point sources of pollution need to be addressed. E.g. Lower Severn Vale Catchment, Taff and Tawe.
- The continuation of unsustainable development practices means that reaching the targets set in the WFD will not be possible on some catchments. In addition, the cumulative effects of development do not appear to be adequately considered in the planning process. If decisions continue to be taken in isolation and the interconnectedness of the environment within catchments ignored, then recovery will not be possible.
- Where physical modification has taken place canalisation and modification should not be automatically considered to be disproportionately expensive. The economic framework is very important and we think:
  - measures should only be judged disproportionately costly when there is robust evidence that costs are appreciably greater than benefits as worded in EU CIS guidance;
  - unaffordability should only be used to set lower objectives in very limited circumstances.
- Erosion and sedimentation driven by grip drainage, over-grazing and burning are common problems in upland catchments. These are known to directly impact upon water body morphology, ecology, and/ or water quality, as well as secondary impacts through downstream flood risk and measures taken to control this. Together, they form one of the most damaging impacts on designated sites (e.g. Natura 2000), non-designated sites and drinking water protection areas, as well as a systemic problem for

[1] Wales Environment Link (2012) Valuing our Freshwaters. The importance of our rivers, lakes and wetlands. http://www.waleslink.org/sites/default/files/Valuing_our_Freshwaters_English_0.pdf

upland water bodies. Action to resolve these issues will provide opportunities to create more resilient natural features as well as reduce risks of flooding homes and businesses. E.g. Source to Sea Living Landscape project.[2]

- Urgent action is needed to address water-related problems for protected areas. There are key systemic issues preventing site improvement, despite the firm requirement in the WFD for necessary measures to be in place by December 2012, and problems to be solved by December 2015. The WFD targets for Natura 2000 sites, drinking water sources, shellfisheries and designated bathing waters are the firmest in the Directive, and progress has been extremely disappointing in these areas.
- Coastal waters and estuaries are another area where urgent effort is needed as improvements to these water bodies are lagging behind those for freshwaters. The protection and restoration of estuarine habitats is particular critical important, as these are vital to migratory fish species and therefore will strongly affect upstream water bodies.

Management processes are also failing:

- There is a lack of progress on delivering improvements to catchment management via existing organisations and stakeholder forums including RBLPs. There are little, if any details of exactly how improvements will be undertaken.
- There appears to be no clear plan of action for catchments, e.g. the Dee Restoration Plan was produced without adequate consultation and liaison. Detailed and truly consultative River Basin Management Plans (RBMPs) are required that specify exactly what actions will be undertaken and where.
- The transfer of flood drainage consents to Local Authorities means they are no longer within the remit of NRW. This has resulted in a lack of adequate development control.

Wider social issues are also a major challenge that all sectors have an obligation to address. There are missed opportunities within RBMPs to help overcome the disconnection between people and their environment.

Tackling these challenges at pollution source seems the best approach. This requires an understanding of the drivers behind land use practices, and then identification of effective mechanisms that will incentivise a positive change. Benefits would extend beyond water management, resulting in wider environmental gains (ecosystem function and resilience, biodiversity, landscape character, etc), enhancement of people's connection with nature and improved sustainability of social and economic conditions.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Although many issues are dealt with, there are gaps in the assessment of significant issues. We would recommend that the following points are also included.

Pollution from rural areas

- The diffuse pollution associated with industrial forestry practices (e.g. acidification/ increased sediment runoff/ pollution from forest spraying pesticide use) must be

[2] Wildlife Trusts Wales (2013) Source to Sea Living Landscape: Sustainable river management for people and wildlife. http://www.wtwales.org/sites/default/files/montgomeryshire_source_to_sea.pdf

addressed. However, it is important to separate these negatives from the positive effects which can be achieved by targeted woodland creation (e.g. shelter belts on agricultural land) as a means of tackling diffuse pollution arising from agriculture, e.g. the Pontbren project[3].

Pollution arising from towns, cities and transport

- Insufficient emphasis has been given to the role of green infrastructure in supporting water management. While sustainable urban drainage schemes (SUDs) and urban habitat restoration are mentioned in the plans, these should be seen as a significant part of a wider need to maintain and increase green infrastructure across urban areas. An example of the multiple benefits that can be achieved by successful SUDs can be seen at Montgomeryshire Wildlife Trust's Severn Farm Ponds nature reserve.

Other issues that need to be addressed:

- Biological modification in the form of impacts from invasive non-native species. Good ecological status should take account of INNS impacts (e.g. mitten crabs in the Dee). INNS are a significant water management issue (SWMI) on all three River Basin Districts in Wales.
- The SWMIs identified are all water based, however it is the surrounding land/ floodplains that often requires much of the action. This imbalance must be addressed.
- Low fish numbers is the most common cause of failure to achieve Good Ecological Status. Addressing the various issues outlined in this document will help to restore stocks but we would also encourage fishery management tools to be taken into account to assist recovery.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

We make the following recommendations for action and/ or promotion by NRW to mitigate pollution and flood risk and to improve water quality:

Rural diffuse pollution from land management practices – agriculture and forestry

- In order to reduce WFD issues, such as acidification and promote a wider range of ecosystem services including clean water, we would like to see the following:
  - improvements in forest design plans and working practises so that the establishment/ replanting and ongoing management including felling of conifers does not lead to environmental damage, including diffuse pollution;
  - establishment of coniferous plantations in upland slopes of catchments should be avoided;
  - where inappropriately placed conifers exist, these should be replaced with broadleaves species and/ or restored to open habitat, especially if on deep peat.
- Cross compliance measures and 'greening' under CAP Pillar I and agri-environment measures under Pillar II need to deliver for water management issues. Better enforcement and tighter regulation are both needed. Details include:
  - WFD obligations to be delivered via a combination of measures and requirements within Pillar I Cross Compliance and greening, which could include clear instruction

[3] Woodland Trust (2013) The Pontbren project: A farmer-led approach to sustainable land management in the uplands. http://www.woodlandtrust.org.uk/mediafile/100084045/Pontbren-project.pdf

on what not to do, good practise and buffer strips, with additional beneficial management being delivered via Pillar 2 schemes designed to secure integrated environmental benefits, e.g. appropriate grazing levels that maintain habitats important for wildlife and which in turn store/ manage water (blanket bogs).
  - Where responsibility/ origin is established, the costs of addressing diffuse pollution are internalised within the responsible sector rather than through the use of limited public funds, i.e. application of the polluter pays principle to farming and forestry industries.
  - Buffer strip creation (delivering for water quality and wildlife), riparian habitat creation/ restoration, reduction in stocking levels under Glastir and reduction in grazing adjacent to water courses and on wetlands should be promoted throughout many catchments in Wales.
- We believe that current enforcement is not sufficient to act as a deterrent to polluters, nor to follow the polluter pays principle. We consider it vital that existing regulations to protect our freshwaters and coasts, and the conditions for government grants, are robustly enforced.

Pollution from towns, cities and transport

- In addition to sustainable urban drainage, green infrastructure should form a critical part of both new developments and retrofitting existing developments, and be planned strategically across urban areas to maximise benefits to water management and other aspects of a healthy urban environment. The green infrastructure opportunity mapping designed in Bridgend provides an example of how this could be achieved.
- In addition to key water quality benefits, green infrastructure can deliver wider environmental and social benefits – improved air quality, reduction in urban heat island effect, safe travel and biodiversity networks.

Management processes

- Specific, prioritised, mapped and costed plans are required to identify precise action – what, how, where and when.

Resources

We are not able to comment specifically on any resource limitations that NRW may be subject to, however, we would like to acknowledge that the ultimate responsibility to deliver on WFD commitments lies at Government level, and as such we would urge NRW to look beyond any immediate budget constraints and work with Government to ensure that all available opportunities are explored.

It is essential that all available mechanisms and stakeholders and integrated in delivery, i.e.

- Flood risk management
- CAP Pillar I and II
- WFD
- development of PES markets with Government and private sector, and
- adequate support for delivery from eNGO sector

This approach will lead to wider ecosystem service benefits and much greater value to society vs. the costs of implementation. It should also be noted that the cost of inaction or inadequate action, will not only be felt as a deterioration in the quality of ecosystem services,

but also in the possibility of significant fines due to infraction proceedings in failing to hit WFD targets (up to £250m).

4 Who should we work with to achieve the environmental outcome?

A primary recommendation would be for NRW to look internally and explore the potential strengths that could be gained by the new remit of the body taking forward the roles of the legacy bodies CCW, FCW and EAW.

A range of external stakeholders should be empowered to work with NRW to help deliver successful results.

- Collaborations at a catchment scale will enable synergies between organisations and strengths of individual parties to be better identified. This will result in a more coordinated approach and make better use of resources.
- Environmental NGO (eNGO) sector organisations can play a major role in meeting WFD targets.
    - Funding from NRW can enable innovative ways of working together to be explored. Such partnerships have the unique ability to deliver on different levels and enable resources to go even further achieving multiple benefits to environment, society and economy. Advantages of working in partnership with eNGOs include closer engagement with local communities and landowners, utilisation and development of a skilled volunteer workforce/ local contractors, and reduced overheads compared to Government agencies.
    - eNGO sector organisations also have an important role to play in bringing the views of the sector together to positively influence environmental policy. For example, WEL's publication *Valuing our Freshwaters* identifies environmental priorities for improving aquatic ecosystems in Wales. The network has promoted these priorities in stakeholder consultation meetings concerning the Water Strategy, Rural Development Plan and other European funded programmes.
- NRW and Welsh Government can also engage more effectively with the relevant water companies across Wales (e.g. Dwr Cymru Welsh Water, Severn Trent, Dee Valley Water, United Utilities) and to maximise match funding potential and collaboration on the priorities for remedial work.
- We would recommend that the 'glue' for partnerships is not just funding, but instead a willingness to work together.

An evidence-based approach is also essential. We would recommend developing partnerships to gather robust evidence of poor practice within catchments so that subsequent action can be delivered with confidence. It is also important to invest in and learn from continued scientific research to review and validate methods and practices that will lead to successful delivery.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

The relative effects of each issue vary within the different catchments and further work in each of the catchments will be required to put each issue into perspective and determine the priorities for investment. A risk based, cost benefit approach should be undertaken for each catchment. Some examples of specific catchment issues include:

- Diffuse pollution continues to cause poor/ moderate status, e.g. Lugg.
- The western valley catchments of the Tawe, Neath, Afan and Ogmore are affected by physical modifications and structures that affect fish movement, impacts from sewerage systems and litter that degrades the environment and affects a community's perception of the quality of their environment thereby encouraging negative behaviours.
- Over abstraction and poor river management affecting fishing/ angling and flow on the Dee.
- Over engineered utilitarian flood defences excluding local communities, encouraging the accumulation of litter and aiding the success of non-native species. Poorly designed flood engineering has also exacerbated the perception of the river as a threat by communities and its downgrading to little more than drain status, e.g. Bridgend, Swansea and Port Talbot town centres.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

It is critical that a well coordinated and integrated approach between local initiatives and national policy for improving the water environment is developed and taken forward. Proposals outlined in the Welsh Government's Environment Bill White Paper may present an opportunity to do this. NRW needs to ensure that clear policies/ strategies are in place to guide local decisions and initiatives.

An important step in developing a cohesive, joined up approach that could address specific issues at local level would be to establish **catchment groups** whose membership represents local community interests and works in true partnership with NRW. This group would be tasked with identifying the issues impacting its catchment, establishing the priorities based on a cost benefit approach and implementing a programme of remedial work. NRW would provide the expertise for provision and analysis of monitoring data and ensure that monitoring and enforcement programmes compliment local efforts of environmental improvement.

Progress is being made in England with the Catchment Based approach (CaBA) initiative. Defra is providing funding for the establishment of catchment groups charged with identifying issues and securing funding for implementing improvement schemes. Currently we are in a situation where there are part-catchment CaBA initiatives funded by Defra on the English parts of the Dee and Wye systems. A similar initiative would therefore be welcome in Wales or there is a danger we will fall behind England in the progress being made to achieve WFD targets. However, there are currently concerns over the adequacy of mechanisms for CaBA groups to feed into RBMPs and other government processes, so we would urge NRW and Welsh Government to ensure a similar style of initiative in Wales is better designed and integrated than the scheme being developed in England.

Major mechanisms also exist that to address diffuse pollution by unsustainable land use practices and the significant impacts that it causes. Reforms to unsustainable forestry practices (particularly associated with coniferous forestry plantations) are necessary and will have a major effect. As will ensuring that both Pillars of the Common Agricultural Policy are working together to ensure that agricultural land in Wales delivers public goods for public money, especially with respect to freshwater issues.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

NRW should consider the following points with regard to focus on environmental effects:

- The WFD statistics on the reasons for failure for water bodies need to be given greater regard to guide the full analysis of the SEA.
- Key issues in rural areas are those of unsustainable land use related to agriculture and forestry. These need to be given prominence.
- Impacts on fisheries does not receive much attention despite low fish numbering being the most common reason for failures to achieve Good Ecological Status.
- The impact and expansion of INNS on the ecology of freshwater ecosystems should be recognised as a major environmental effect.
- The full SEA needs to have an appropriate depth and proportionate analysis of issues specific to the area.

WEL would like to reemphasize that the promotion of green infrastructure and a shift towards more sustainable land use practices have crucial roles to play in addressing the key environmental effects and meeting WFD objectives. Such changes would also have a strong positive influence on other key environmental factors, including biodiversity, geology, soils and biogeochemical cycling, water relationship to flood risk management, climate mitigation and adaptation and landscape character and quality.

To maximise impact it is crucial that plans such as the River Basin Management Plans (RBMPs) contribute to a range of targets, for example, habitat creation targets, Aichi targets, Nitrates Directive, Urban Waste Water Treatment Directive. We would ask that NRW considers this important factor in its development of the RBMPs.

2 Is there any other information that we should be taking into account as part of the assessment?

Fisheries should be properly taken into account. More detailed consideration of the primary issues affecting WFD compliance regarding agriculture and forestry practices is necessary.

Canal & River Trust

Keeping people, nature & history connected

WATER FRAMEWORK DIRECTIVE (WFD): CHALLENGES & CHOICES CONSULTATION RESPONSE (NATIONAL)

18th September 2013

Introduction to the Canal & River Trust and WFD

The Canal & River Trust is the newly formed charitable trust that looks after some 3,000 km of inland waterway in England and Wales. We manage navigable rivers, canals, docks, reservoirs and feeder streams totalling over 200 WFD water bodies, generally classified as Artificial or Heavily Modified; but also have an interaction with/influence some 120 other water bodies, e.g. streams and rivers that we abstract water from.

Our waterways provide a publicly accessible green-blue corridor of open space with boating, angling, leisure, water supply, drainage, heritage and wildlife benefits (Ecosystem Services) valued at greater than £500m per annum delivered to over 10.5 million people who visit and accessible to many more (50% of the population live within 5 miles of one of our waterways).

Our vision is for a sustainable and evolving canal and river network that is a national treasure – accessible to and cherished by all.

This vision interacts with the aims of the Water Framework Directive in two ways – first, in common with many other operators such as water companies, it challenges us to ensure that the impacts of our operations on the wider water environment are sustainable, but perhaps uniquely for us, given the wide range of public benefits to which we put the water in our care, it also highlights how the environmental, social and economic values of our waterways are being damaged by the activities of others and presents an opportunity to work with local communities and other stakeholders to improve the *overall* balance.

This illustrated by the differences between the status of our waterbodies and the failures identified in table 1. EA figures show that 53% of our inland waterways (over 100 water bodies) do not reach required standards, yet Navigation as a sector overall (not all of it the Trust's responsibility) is responsible for only 46 individual failures according to the table (and not all of these will be on navigable waterways themselves).

This unique position – of being a water user who may be causing impacts but also a significant provider of a wide range of the very benefits that WFD strives to deliver and improve on across all waterbodies and so on the receiving end of others' impacts – is reflected in our approach to the challenges and choices facing us all; we are not a single-issue organisation, we have daily experience of delivering the kind of balance between costs to and benefits for the water environment that is necessary to deliver a sustainable outcome.

The consultation questions:

Q1. What do you consider to be the significant issues facing waters in England?

The most significant issues facing our waterways relate to appropriate quality and quantity of water to deliver a wide range of functions and to be resilient to typical natural variations in environmental conditions.

These come under five key headings:

a) **Point source pollution.** Despite huge changes in overall regulation of point source discharges in the past 30+ years there remain a significant number of polluting outfalls affecting our waterways. The biggest issue in this category in our experience is Combined Sewer Overflows which discharge untreated sewage and urban surface drainage into our waterways at times of heavy rainfall. *The principal behind these discharges is that they are dilute and the problem will be dispersed. This might be true where they discharge to natural watercourses, but in heavily modified rivers or artificial waterbodies they regularly create problems of dissolved oxygen crashes and accumulation of nutrients and other pollutants*.

b) **Diffuse pollution.** Despite the improvements in point source discharge noted above, our waterways are still suffering poor water quality because of a range of diffuse sources from urban drainage (oil, sediment, nutrients, chemicals and heavy metals from road run off, misconnections and multiple small scale point discharges which only have a significant effect in combination) and rural runoff (nutrients, sediment and persistent chemicals such as pesticides). *As a consequence, 53% of the waterways under our control fail water quality standards* and we still have significant algal blooms in many waterways during the summer months. This is a common issue for many waterbodies across the UK, but is magnified in our inland waterways because of their artificial or heavily modified natures leading to long retention times, relative low dilution flows and significant accumulation in fine sediments.

c) **Invasive species**. Our inland waterways form an interconnected network across the country. This has many advantages both for public use and wildlife benefits but also makes them vulnerable to the spread of invasive species. The Trust spends c £700k per annum on managing invasive weeds with most of our waterways being affected to a greater or lesser degree. In the case of aquatic weeds, the issue is aggravated by eutrophication from pollution.

d) **Water resources**. The Trust recognises that many water bodies are stressed by abstraction and supports efforts to ensure that use of water from these water bodies has less of an impact on the natural environment from which it is taken. We have a unique position in this regard as our water use abstraction is primarily to enable us to meet our statutory duty to maintain navigation not just for domestic, agricultural or industrial consumption but for maintenance of on our waterways which themselves are WFD water bodies in their own right and deliver as wide and valuable a range of benefits as natural

water bodies do, and should not be allowed to deteriorate.

e) **Barriers to natural passage (fish and eels).** Just about every river in the UK has been subject to modification for use (drainage, industrial power, water supply, flood defence, etc.) at some point in the past and the Trust recognises this as a significant issue and agrees with the aim of restoring connectivity and naturalising function as far as reasonably practical. . However, the very scale of past modification means this is a substantial task to achieve while protecting the uses for which those modifications were implemented (where still required such as to allow abstraction for maintaining water levels for navigation), even if the original modification was made hundreds of years ago.

Q2. Do you agree with our description of the issues affecting the water environment and society? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

General: It is important to get this section right at this stage because of the influence it will have on the approach taken at River basin and catchment level.

Broadly these are the correct issues to be addressing although the justification for Invasive Non-Native Species is in our opinion *not* made clearly enough in the consultation document itself (it has the least supporting text of all the issues) and this leads to a lack of clarity (at this level) over what the issue is about and the solutions required.

More reference should be made to connections between issues, this is referenced in one or two cases, but nothing is done to draw out the actions that would help multiple issues – these are surely the key things to be taking forward? Actions which would help more than one issue should be highlighted and prioritised.

In some cases the impacts tables are hard to understand – to say that abstraction and flow impacts on abstractors is not well explained in this format. It is therefore difficult to comment on whether you have the significance right or not.

Abstraction and flow – we acknowledge this is a significant issue, but as per our general comment above, it is not clear from the description what the problem actually is – is it current levels of abstraction or future growth / climate change? Do we use too much water, waste too much or not collect enough for our use or all of the above? What is the scale of the challenge? Therefore it is difficult to see if the proposed actions are suitable. These questions are not necessarily addressed in the technical summary either, but a few key bullet points from the technical detail are needed to clarify the issues and align actions to the concerns / responsible parties.

Chemicals – this is a wide ranging issue but the proposed actions show a good diversity of approaches, something for everyone to do. This is a much better piece than the abstraction section.

Faecal Contamination & sanitary pollutants: The impression given is that this issue is well understood and measures are available and have been used, we just need to do more of the same.

Fine sediments: As with faecal and sanitary above.

Invasive non-native species: As previously noted, this section particularly would benefit from some key bullets form the technical summary to help demonstrate why it is an issue and what the concerns are.

Nitrates: As with some other categories, key control measures are already in place and need to be maintained. Given the successes in reducing Nitrates so far, parallels should be drawn with the general "Chemicals" category – whatever worked for Nitrates should be applied to other chemicals of concern?

Phosphorus: As with Nitrates, there are many parallels between this and "Chemicals", especially in respect of reducing at source.

Physical Modification:
A clear distinction should be made here between ensuring that future development does not implement unacceptable modifications and the desire to undo some of the impacts of past modification because the Directive is very clear that existing uses are to be protected. *For that reason it is disappointing that proper reference is not made here to Good Ecological Potential mitigation measures* and the significant habitat values that even Heavily Modified and Artificial water bodies can provide (which are often dependant on the modifications). This continues an alarming trend in WFD documentation to ignore the practical limits placed on targets for HM and Artificial water bodies within the Directive (for instance in the last UKTAG consultations on phosphorus and biological indices).

This section raises expectations that all modifications will/can/should be overcome and all fish will have free passage everywhere. We would suggest *that this needs to be tempered by some pragmatism in terms of the existing uses for structures, what modifications are practical and especially in setting achievable standards for connectivity that have regard to habitat availability upstream,* bearing in mind particularly for Artificial and Heavily Modified water bodies, if the mitigations will have a severe adverse impact on the use, then that is a reason not to make the intervention.

Given comments made in the National Liaison Panel about how estuary and coastal issues are not addressed by current arrangements it is disappointing that this is continued in this section by discounting ports and harbours as only local issues. All these SWMI are of local scale, but are significant because they occur across a wide area. Ports and harbour activities take place in many transitional water bodies and most catchments including a section of coast, so to say they create significant issues but then ignore them is not acceptable – what are the significant issues? Are they a separate category / a sub set of physical modification or a contributor to all the other issues in the document?

For the same reason, avoiding the Hydro-Electric Power (HEP) issue is also not acceptable. The current consultation is only about Flow, it does not touch on the very real policy vacuum around HEP given the recent refusal of the EA Board to approve the changes to the good practice guide. As with ports and harbours, this document should set out the issues with HEP by either linking them to the other categories or including it as a separate category of its own.

Q3. How do you think these issues should be tackled? Please specify which issue(s) your response refers to and describe any consequences of taking particular actions or approaches.

a) **Point discharges (chemicals; faecal contamination; phosphorus)**.The worst discharges are being tackled by water companies under THEIR Asset Management Programmes but more remains to be done. (*support existing actions under Faecal contamination and sanitary pollutants*).

We don't believe that the current application of the Permitting regulations is adequately protecting waterbodies (especially Heavily Modified and Artificial) from multiple small but cumulative Phosphorus discharges. We are seeing approvals given for new or extended sewage treatment plants discharging to HMWB/AWB which already suffer high nutrient inputs and low DO.

We believe that more consideration should be given to the cost effectiveness of engineering the discharge impact down or increasing the capability of the waterbody to cope rather than simply diverting flows to new and bigger treatment works (education of dischargers; end of pipe solutions and in channel management) and that these can be incentivised and funded through the Permitting system.

b) **Diffuse pollution (chemicals; faecal contamination; fine sediment; nitrates; phosphorus).** The Trust believes that the broad solutions for these problems are already understood but need greater effort and greater / more consistent resourcing. *We would support many of the additional pathway control measures identified for Chemicals.*

For urban diffuse pollution we commented extensively on the recent Defra consultation – *we believe there is regulatory failure in this area which needs to be addressed by treating all urban discharges as potentially polluted*. We also believe this is an area for local community action and are committed to continuing / expanding the success of groups such as Waterside Care which we have been involved with in the west midlands. Wider application of SUDS, for which legislative powers are already available but not being implemented is essential and these systems must be properly adopted and managed.

We are also concerned that despite a range of improvement measures for agricultural run off through NVZs, CSF initiatives etc. and the scale of payments to farmers we are not seeing the benefits – efforts here need to be maintained or scaled up. We also believe there is greater scope for improving the resilience of waterbodies through managing the interfaces of field runoff and minor drainage with designated waterbodies. *Support on-going measures for control of Nitrates*

c) **Invasive species.** There needs to be greater clarity on the two-pronged nature of the approach of stopping new species coming in to any given waterbody and coordinating an appropriate response to those that are present. The GB Secretariat does a good job on this and so it should be easy for the actions under WFD to be simple, concise and aligned with the existing strategy.

Aquatic plant species should be a clear and significant area of concern. As noted above, *measures to continue to reduce eutrophication from pollution will help halt the dominance and spread of invasive aquatic plants* such as Azolla, duckweed, and floating pennywort, although physical intervention will also be required resulting in the same issues as noted below for bankside plants (for instance on the R.Soar we have been very effective in dealing with floating pennywort through partnering with the EA and others but on other rivers where such coordination is not happening currently pennywort remains an on-going issue despite our efforts).

For bankside plants control measures are well understood *and resourcing / coordination is the issue*. Landowners working in isolation is not sufficient or effective. The focus for WFD should be on providing that coordination and prioritisation of effort (i.e. which part of the catchment is worst and work from the top of catchment down.

For invasive animals such as mink, non-native crayfish and shrimp etc. *the difficulty is in having an effective control* (for instance there is no consensus yet on an effective control for non-native crayfish) and in resourcing (e.g. mink trapping is extremely intensive and needs to be continual).

Overall the key is for better catchment-level or even sub-catchment coordination of efforts on these issues so that all affected landowners are working together to target the most important issues.

d) **Water resources (abstraction and flow).** We do not believe that current regulation of abstraction, which focuses on total licensed amounts rather than actual patterns of abstraction and does not cover all abstractors equitably, is effective in delivering the improvements that are required. We understand that new regulations are imminent to ensure that all abstractors are included in the regulatory regime and this is welcomed in principle provided these abstractions are not penalised for being “late comers” to the system.

We believe that there is more that could be done by the Environment Agency and others within the existing regulations to scale back unused licensed amounts and deal with the “in-combination” effects of multiple small abstractions to deliver more sustainable abstraction. without having to wait for the more long term abstraction reforms being considered by the government at present *(support first bullet under “further options”)*. The reform of the abstraction licensing regime is not intended as a mechanism for tackling existing unsustainable abstraction (the Water White Paper made this clear) and instead it is

focussed on delivering a new regulatory system that is more flexible and responsive to future changes in water availability (e.g. due to climate change) and changing demands for abstraction (e.g. from changing population), whilst giving a degree of certainty and confidence to licence holders about the way in which their allocations may be changed in the future and what the triggers or thresholds for the changes might be expected to be. We do believe the evidence base for making changes to the existing abstraction allocations needs to be improved, and are concerned that national indicators (such as EFI) are being used as rigid flow standards to be adhered to in all cases.

Water resources will always be a question of supply and demand. Where supply is not able to meet demand sustainably it is right that the first focus should be in reducing the demand and this has been effective in terms of industrial use and water company losses but more can be done to reduce demands for water across all sectors through improving efficiency / reducing losses and improving recycling. At present, supporting mechanisms such as building regulations and the cost of water do not encourage this sufficiently. The installation of water efficiency systems should be incentivised by the government (just as alternative power generation is) to encourage uptake (*partially support third and sixth bullet points but they do not go far enough*).

Equally, more focus needs to be given to improving supplies as a way of reducing demands on the natural environment when water is simply not naturally available (i.e. in times of low flow). This means more focus on water users storing water when it is plentiful (new reservoirs, bankside storage, farm storage, rainwater harvesting in urban areas). Again this needs to be incentivised either through the price of water, direct support, or adoption by water companies in their investment plans.

e) **Barriers to fish and eel passage (physical modification).**
Our main concerns here relate to proportionality and prioritisation.

In the first instance, targets for improving fish passage must be proportional to the benefit to be gained i.e. that there is no point restoring passage where upstream waters are unable to sustain fish populations or where the measure would have a disproportionate dis-benefit to existing use.

Secondly, given the significant costs of the measures required national prioritisation of requirements is essential, with *a consistent justification of need*. This is not in place at present and it is disappointing that this is not recognised when we are currently working with the EA and Rivers Trusts to this end for the water bodies under our control. We find the approach adopted for eels to be better than that for fish so far because the Sustainable Eel Group have mapped the best opportunities and this helps to focus efforts. We have faced demands for improvements in fish passage that appear to us, at a national level, to be very low priority compared to others but are being pursued vigorously at a local level.

We also feel that more can be done on the standards that are being applied. We find the demanded standards for fish passes to be generally excessive and believe a better approach would be to focus on cheaper alternatives that would improve the situation quickly at many sites rather than specifying massively expensive solutions designed to work in all conditions which tie substantial resources to a single location.

Common standards and working together (for instance, the Trust and the EA both have lots of assets to deal with, and Rivers Trusts can help with prioritisation and delivery) will produce efficiency savings on delivery and enable “UK plc” to achieve more with the available resources..

Q4. What could you, or the organisation you represent, do to better protect and improve England's waters? Please specify which issue(s) your response refers to

The Canal & River Trust will direct its limited resources towards priorities through a national action plan to help illustrate the scale of actions required; what can be achieved with existing resources and what we believe to be disproportionately costly.

This plan will also help us identify areas for collaboration with other stakeholders and requests for additional resources and inform our input to the River Basin Management Plans at catchment level.

A brief summary of our existing and planned continuing efforts.

a) Work with dischargers and local communities to improve quality and resilience of waterbodies affected by **point discharges**.
b) Work with agencies and local communities to control inputs and improve resilience of waterbodies affected by **diffuse pollution**. We will contribute to programmes to raise awareness of the issues and publicise good practice.
c) **Non-native invasive species** – continue our investment in control on our estate (currently valued at c £700k p.a.), plus continued efforts on management with other stakeholders; the Trust will join in with coordination of efforts at local levels and are working with the Rivers Trusts on a bid for European funding to help with this..
d) Our **Water Resources Strategy** will identify areas where we need to improve our resilience / level of service to maintain navigation. We spend significant sums per annum on water supply projects and investment will continue. We will liaise with local EA on issues of concern, within a nationally agreed set of priorities and a clear framework for addressing those abstractions that are having the greatest impact on meeting WFD requirements but supply to our waterways must not be overlooked, given the substantial benefits they themselves deliver and our statutory duty to maintain navigation.
e) **Fish and eel passes**. We have committed to an investment of £250k per annum from our limited major works budget to spend on priorities for improving fish and eel passage. Initially our focus will be on eels, because we believe we can quickly achieve significant improvements here by working with the Environment Agency and Rivers Trusts.

THE FLOOD PREVENTION SOCIETY

A voluntary society set up in 2000 to pursue all avenues with the object of preventing avoidable flooding

Website: www.floodpreventionsociety.org.uk

Chairman:
Tel: 01244 660284
Mobile: 07709926939

Email: john@floodpreventionsociety.org.uk

Pioneer Lodge
57 Penfold Way
Dodleston
CHESTER
CH4 9NL

A MAJOR STAKEHOLDER'S RESPONSE TO THE

FLINTSHIRE LOCAL FLOOD RISK MANAGEMENT STRATEGY

DRAFT COPY DOCUMENT 2013-2017

From: Chairman and Committee on behalf of our many members in Flintshire.

April 2013

1. Introduction:

We, The Flood Prevention Society (FPS), are major stakeholders in the Draft copy of Flintshire Local Flood Risk Management Strategy (FFRM). Who we are and what we represent and the damage to infrastructure caused by neglect of river maintenance since the Government put rivers under the control of the EA in 1996, is more fully explained in our website www.thefloodpreventionsociety.org.uk. Many of our members are Flintshire residents. We formed after the floods of 2000 for the Dee and Clwyd area, including the River Alyn, and have since had input from all over England and Wales – see Appendix 2.

All the references in the Strategy Draft Document to various Flood Water Management acts, are out of date because they were influenced by the Environment Agency. Wales was one of the nine EA regions in England and Wales dictated by the dogma of the Chief Executive in London (this harmful dogma is explained later).

From the 1st April Flintshire rivers and flooding comes under the control of Natural Resources Wales (NRW). After the WA cabinet reshuffle in March the Minister of NRW is now Minister of NRW and Food – the importance of this is explained later.

2. Executive Summary

One of the greatest traumas and tragedies in life is to have one's home flooded and a member of one's family drowned. The crucial cause of all the increased flooding over the UK is the Government taking river management off the river boards with their Civil Engineers and conscientious productive workers in 1996, and putting rivers under the control of the EA; giving them absolute power with no accountability or responsibility. The EA senior officials come from NE and RSPB with not one a river civil engineer. 90% of floods are avoidable with good river maintenance. Rivers are as important a part of national infrastructure as roads and railways are especially at times of high rainfall. A sensible Government would not put professional bird watchers in charge of roads or railways.

The EA stopped rivers being dredged. They pursue a stated policy of slowing rivers down, and planted willow trees along and in them. The floods are now backing up into urban areas, the EA are creating more and more designated flood plain areas, causing vast increases in the cost of insurance, often unaffordable after a home or business has been flooded.

A well maintained and dredged river has a quicker flow and a greater capacity, both of which are needed at times of high rainfall. EA, NE and CCW have put most of our rivers under the EU habitat directive 'Site of Special Scientific Interest', but they disregard and act in contravention of the Directive on Habitat which decrees in Article 6 paragraph 4 that Human Health and Public Safety has precedence over SSSI Habitat. There is no political pressure to put the flawed habitat policy before the health and safety of people, the few voters that do are likely to vote for the Green Party, and in the last General Election they had less than 1% of the vote.

Flintshire FFRM should be mindful that its residents need feeding and should also be mindful that a Government's first priority is to feed the population. The WA is entrusted with this responsibility. The WA have now made Alun Davies AM Minister of NRW and Food.

Because of EA policy aided and abetted by NE and CCW, approximately 3 million acres of good fertile agricultural land is now getting flooded with crops ruined. The Daily Post has published pictures of thousands of acres flooded ruined in Flintshire.

Britain, with its large population increasing at the rate of 4 million in the last ten years, predicted to be 70 million by 2030, and world population forecast to increase by 50% in the next 20 years, indicates that we need all the flood that we can produce in the UK. Food production is not now keeping pace with demand – the longer term scenario of this situation is terrifying. Even if food was available to import, the UK already has one of the most adverse balance of payments deficits. Waitrose's Managing Director says (Jan 2013) that the increase of food prices by 5% in the last couple of months is the 'tip of the iceberg' as food gets scarcer.

Back in the mid-1990's the UK's annual food trade gap – that is the amount by which food imports exceeded exports – hovered around £6bn. By 2005 it had more than doubled to £12.5bn and last year it reached £22bn. In other words, the size of the trade gap is being allowed to accelerate at a time when the UK population is heading towards 70 million and world population and demand for food is rocketing, It would surely be logical to apply policies that reversed the trend and provided us with better food secutiy.

An example of CCW causing thousands of acres of good agricultural land and residences being flooded is the confluence of the River Alyn (which drains much of Flintshire including Hendre, Rhydymwyn, Afonwen, Mold, Padeswood, Pontblyddyn, Caegwrle, Pontybodkin, then Rossett). At the confluence the River Alyn deposits tons of sand and gravel silt into the River Dee blocking its outfall; before the EA had control it was dredged out every 5 years, then with EA control it stopped. We, the FPS, persuaded the Local Flood Defence Committee to get it dredged and they agreed subject ot CCW's approval. CCW declined approval because they said there **may** be some Elvers in the deposited silt and it would disturb the biodiversity!! Also many properties get flooded three times in a two year period.

River Alyn Flood - A rabbit clinging to life - Taken in the floods of Feb 2004 by a Daily Post photographer – his boat only went this far. There were 14 more rabbits on the hedge further on. There was 7' depth of flood water here for 3 weeks over a mile from where the river overflood its banks because of neglected maintenance. All the wildlife perished that could not fly!

3. Climate Change

Flooding already poses a serious risk to the people, economy, environment, biodiversity and food production of Flintshire. Flooding is on the increase because of EA flawed policy of not dredging debris and silt out of rivers. There has been no increase in rainfall because of climate change. This is EA's untruthful spin. Our rivers are now 60% full of silt. When the River Alyn flooded places in 2000, including Mold 360 feet above sea level, the rainfall after several wet days was 1.7" on two consecutive days over its 50 square mile catchment area – yet this is nothing compared to some areas of England and Wales.

Rainfall in Britain is totally unpredictable as to when, where, in what volume, and for how long of a period it is going to fall. The annual average rainfall has not altered for the last 100 years. Within that average some years can vary from 30% below to 30% above average. 2012 was 27% above average.

The Pitt Review agrees that no single flood can be attributed to climate change. The Review says "it is virtually impossible to assign a meaningful probability on the whole sequence of flooding. The EA's indicative flood maps have a 0.1% chance of accuracy".

4. Flood Warnings

After the floods of 2000 John Prescott instructed the EA to give high priority to 'Flood Forecasting and Warning'. In practice it cost many millions of £'s, but no extra money was allocated, so the cost was taken out of the river maintenance budget. In practice more residences get flooded, but they are now told that they are being flooded!

Flood forecasting and warnings are not an exact science and our members give it the 'thumbs down' qualification. One housewife summed it up "we often were woken up in the middle of the night with false alarms, then one afternoon I range up our flood warning centre and asked why I had not been warned, they said that I was panicking unnecessarily as no floods were expected in my area, I then told the centre that at that moment flood water was entering my house through the back and front doors!.

In the 2012 floods when hundreds of homes flooded in Ruthin and St Asaph – and hundreds of families are still homeless, no flood warnings were given, they were woken by the postman.

5. History of Flood Risk Management

The FFRM section 3 is like a bikini, it reveals a great deal but covers the essentials. Prior to the National River Authorities Flintshire's rivers and tributaries were maintained and improved by the Dee and Clwyd River Board paid for by riparian owners – then because the water off all the houses caused the flooding, the payment was changed to County Councils and came from the Council Tax. Wales had five Local Flood Defence Committees (LFDC) with independent Chairmen. North Wales had two and Flintshire was in the Dee and Clwyd area funded as the following table for its last 3 years in existence.

Council	Budget Scenario D 2004/05 £000	Projection Scenario D 2005/06 £000	Projection Scenario D 2006/07 £000
Shropshire County Council	130	140	139
Gwynedd County Council	36	41	40
Cheshire County Council	1,017	1,094	1,106
Conwy County Borough Council	215	231	232
Wirral M Borough Council	160	172	173
Denbighshire County Council	778	837	846
Flintshire County Council	1,253	1,348	1,363
Wrexham County Borough Council	1,009	1,067	1,099
Total Levy	**4,600**	**4,950**	**5,000**

Prior to the EA being given control in 1996, all the rivers and main tributaries were weed cut every year and dredged every five years. The EA stopped dredging and have virtually stopped weed cutting, by 2005 (above table) the EA were only spending one third of the above on river maintenance that it was collected for – they were misappropriating the two thirds on to other projects.

In 2006 the EA abandoned all the LFDCs with their local knowledge and independent Chairman. All the nine regions, Wales being one, had centralised funding from the tax payer. The Government funded it by paying less to County Councils to reduce Council Tax bills.

6. **The Tidal Dee Flood Risk Management Strategy**

The EA had stakeholders' meetings on the subject, we said the River Dee is getting silted up and has lost much of its capacity. We told them that 50 years ago, in the days of the Dee and Clwyd River Board, they had a Dutch dredger to dredge the River Dee and top up the banks with the silt. The highest tides are around the Spring and Autumn equinoxes – there has been no change in the height of the highest tide over 50 years and none forecast for the next 10 years. The EA said at the meeting that dredging is not an option that they would consider, they preferred to flood more land!!

Saltney town is dependant on the maintenance of the River Dee and Balderton Brook, a designated main river, whose confluence is into the River Dee, both are silted up. The Council have met their AM, MP, County Councillors and senior EA officials to no avail, see section 3.12 in appendix no. 2. In 2000 (when the River Alyn flooded) the flood water was up to the doorstep of the front house on Victoria Road, if that had flooded 200 other houses and businesses would have flooded.

6. **The FFRM refers in several sections to Economic, environmental and Social Benefits**

(a) **The Environment** – "Some salmon and trout 'experts' say 'leave rivers undredged – it is better for the fish' ". This totally incorrect view is confounded by figures published by the EA in the 2009 salmon count which said the count was the lowest on record. So whilst rivers are left neglected for 20 years fish are on the decline, likewise water voles are now only found in 6% of their former range according to the EA. All the increasing flooded

and waterlogged land is destroying ground nesting birds such as Lapwings and Skylarks, and is a breeding ground for mosquitoes and midges, both carriers of disease.

(b) **The Economy** – Sir Michael Pitt's Report on the 2007 floods said that if we do not act the Country will lose 5% of its GDP to flood damage i.e. £78 billions each year. He said none of the floods could be attributed to climate change. The EA have spent £millions on flood defences instead of £thousands on river maintenance i.e. flood prevention. See Appendix 1.

In 2012 when hundreds of homes were flooded in Ruthin and St Asaph because the Rivers Clwyd and Elwy had not been dredged, Meic Davies, the EA' Noth Wales Head of Flood Management said that they would get a computer model to help with flood protection. He did not say that computer modellers are told that dredging is not an option. 90% of flooding is avoidable and is cost effective.

(c) **The Society** – Because of the EA's policy of not dredging, they have in effect created a new flood plain map of England and Wales. They now tell us that approximately 4.75 million residences and hundreds of thousands of business premises have suddenly found themselves at risk of flooding. A situation in which most of them have never been in before. See Appendix 2 with comments to us from around England and Wales.

In 2007 when thousands of people were homeless, Chief Constable Tim Brain said "in terms of scale, complexity and duration this is simply the largest peace time emergency we have seen".

Insurance companies are not charitable institutions. Thousands of premises at risk of flooding could be left without insurance, making them not mortgageable nor saleable, after the Government ruled out contributing to their cover when its deal to cover insurers runs out in June 2013. Otto Thoresen of the Association of British Insurers, said many households and businesses would no longer have the same level of cover, or would have to go without. "No country has a free market for flood insurance that provides affordable cover for high risk premises without some form of Government involvement".

The Late Brynlie Williams, an AM, had an article in the Daily Post saying that some Mold residents could not afford to insure their homes after the 2000 floods.

8. Conclusion

It is to be hoped that NRW with its new Minister, Alun Davies AM, Minister of NR and Food from 1st April are free of the flawed dogma control of not dredging rivers dictated by Whitehall, whose policy spending £millions instead of £thousands has resulted in more and more flooding in England and Wales with no increase in rainfall through climate change. FCC can play its part in achieving this.

60% of Holland is below see level but they have less floods than we do. Their rivers are managed by River Civil Engineers and not bird watchers – they are under the same EU Habitat Directive as we are, they take account of the Environment, but the Health and Safety of the population comes first.

Flood prevention instead of flood defence is a good example of where Government can perform change to prevent 90% of inland floods yet spend less money and help to balance the budget. There could not be a better way to action Government Policy "to deliver more for less cost"

FCC should be aware of Urban Myths – see Appendix 3 which refers to moorland, the source of the River Alyn is Llandegla Moors.

APPENDIX 1

EXAMPLES OF THE EA SPENDING MILLIONS OF £s ON LOCAL FLOOD DEFENCES, WHEN A FEW THOUSAND £s SPENT ON DREDGING I.E. FLOOD PREVENTION WOULD BE MORE SUCCESSFUL – AT MUCH LESS COST AND MUCH QUICKER.

These examples are from our own region but our observations and contacts tell us it is EA policy over England and Wales.

Picture no. 6 shows the RNLI team posing in 2000 as they take a break from the work rescuing people from the Bridge Inn public house and the surrounding area in Mold, the capital town of Flintshire, 360 feet above sea level. The River Alyn has a relatively short run to the sea. The EA now have designated several flood plain areas around Mold with development restrictions.

***Picture No. 6** – Mold November 2006 – The RNLI team pose as they take a break from the work rescuing people from the Bridge Inn and surrounding area (360 feet above sea level). Courtesy of the Flintshire Leader.*

The EA have spent £2 million on a flood catchment area and dredged approximately only 200 yards of the river Alyn - £10,000 spent on further dredging of the Alyn would not only save money but be a better prevention. The EA have now planted 1100 willow trees along and in the River Alyn in the Mold area. Some drain pipes from the town still have their outlets under the silt in the undredged river.

Over 100 houses were getting flooded in Ruthin, a major market town in Denbighshire, from the year 2000 on. The River Clwyd was and is in an extreme state of neglected maintenance with deep accumulated silt and trees and shrubs growing inwards from both banks and touching in the middle. A major Victorian culvert about 5' in diameter was in need of repair and its discharge point into the Clwyd was obstructed by silt build up. The EA spent over £3.5 million making a channel for one of the tributaries to bypass the town. Ruthin is 242' above sea level with a short straightish run to the sea. Again £20,000 spent on river dredging, weed and tree clearance and repairing the Victorian culvert would have resulted in better flood prevention at much less cost.

We showed the independent Chairman of our Regional EA Flood Protection section the state of the river, he walked it with us and was appalled – we offered to walk the river with the Regional EA Head of Flood Defence when he was actually in Ruthin – he declined, we think because of restricted EA policy, he could not have done anything about it anyway.

The large village of Bangor on Dee had a flood evacuation warning in 2000 when the River Dee nearly flowed over its banks. The EA then spent £1 million in strengthening and lifting the banks. The river has lots of obvious silt and trees growing in it which still have never been touched, and badgers are burrowing in the banks.

The large village of Rossett in the township of Wrexham had 26 properties flooded in 2000 including the Spar shop and a pub-restaurant, and residents could not get to the doctors' surgery. See picture no. 7.

Picture no. 7 – Station Road, Rossett in 2000. Courtesy of the Flintshire Leader.


Village street or river?

LEADER

The village of Rossett was one of the worst affected by the torrents this week. Above – Station Road is turned into a water world by the normally placid River

The EA had a public meeting in Rossett in January 2001 where they were told that if the one metre of silt accumulated under the road bridge (under which the River Alyn flowed) was removed, that part of Rossett would not flood. The EA ignored that advice – it has never been dredged out, which would have cost approximately £4,000. Instead in 2007 a flood protection scheme involving building up the banks along the flooded properties was completed at a cost of £2 million. Not only was this a waste of money but the residents had been at risk for 6 years longer than if the silt had been dredged out. They are still at risk because the residents are getting flood warnings from the EA as waters may overtop the £2 million banks.

Picture no. 8 – *Our 'hands on Chairman at a time of low rainfall at Rossett, upstream of the River Alyn road bridge, indicating the depth of water that is obstructed from flowing by the accumulated silt under the bridge.*

Picture No. 9 – The same River Alyn bridge at Rossett looking upstream showing the 42" of silt which has not been removed.

It does not make economic or flood prevention common sense to have a policy of spending millions of £s instead of thousands of £s, and leave a community still at risk of flooding.

APPENDIX 2

SOME COMMENTS TO US FROM OTHER REGIONS

1. "Every year I row a skiff up the River Thames from Hampden Court to Gloucestershire – it is getting increasingly difficult because of the obstruction of trees and shrubs growing across the river from both banks".

2. A phone in on a radio chat show after the Midlands floods of 2007 – "I have a long boat and I enjoy boating on the Rivers Avon and Severn. I am increasingly getting stuck on banks of accumulating silt on both the rivers, this never used to happen".

3. "There is a silt bank on the bend in the river on my farm, at times of heavy rain it causes the river to overflow and ruin crops. I asked the EA to dredge it, they ignored me. I joined the fishing club, told the EA the silt bank was obstructing the fish, they dredged it the next day".

4. An example of a no dredging EA policy being harmful to wildlife – there has been a 90% drop in the number of water voles since 1990 – "I live near a river tributary designated main river, when it was dredged regularly there was a large vole population, since the EA neglected to maintain it they have virtually disappeared".

5. "In the York area where I live the River Ouse always used to get dredged before the EA took control, we never used to flood, now the EA have stopped dredging and flooding is a regular occurrence; the EA say that dredging has no benefit. I wonder which planet they live on!"

6. (a) After the floods in the east Midlands, July 2007, many calls from the Toll Bar, Doncaster, Sheffield areas.

   (b) "The EA have planted a half mile stretch of the River Don with trees and shrubs, the flow is restricted by silt and willows".

   (c) "The pumping stations pumping into the Ouse were not fully operational because with the restrictions on river flow the flood water was not reaching them."

   (d) "We fished from sand banks under an Ouse Bridge, eventually along would come the dredger and remove these sand barriers, months or years later the sand would pile up again, then along came the dredger removing the offending sand, today the same sand bar practically touches the bridge's first arch, this can't be right leaving such areas to be left to build up with sediment".

   (e) "I reported dead trees obstructing the river flow to our local EA office – it was ignored. I complained to my MP, I had a letter from higher up the EA, which said in a polite way 'go to hell little people, we don't give a damn what you think'".

(f) The Ea Beck River should drain the Toll Bar village flooded in 2007, it discharges into the River Don. "The Ea Beck was dredged every year by the local river board, then the EA took control promising to continue the dredging. It has never been dredged since then and trees are growing in it!"

7. After the 2007 flooding in the Midlands where thousands of homes were flooded, I flew over the Rivers Avon and Severn and could see banks of accumulated silt protruding above the rivers. No wonder the rivers overflowed when it rained heavily.

8. Our family has lived in the same house for over 200 years and it has only been prone to flooding, and designated a flood plain in this decade.

9. I have researched all the submissions to Sir Michael Pitt, yours was the best, his report shows great naivety and is a whitewash.

10. At a recent EA Stakeholders meeting to give and get favoured public options to control river flooding, dredging was put forward like it used to be – the meeting was told dredging was not an option that can be considered.

11. A tributary brook designated main river catchment area for rural and urban drainage used to be in River Board days weed cleaned annually, and dredged approximately every 5 years. In those days there were fish in the brook, and otters, which were a pleasure to see. Now because of EA neglect silt banks have built up to near the top – weeds fill it from bank to bank, both the fish and the otters have gone. In heavy rainfall periods the surplus water can only flood the urban and rural areas that it used to adequately drain, and I cannot teach my grand children how to make plaster casts of otters footprints, as I taught my children to do.

12. I am a member of the Environment and Regeneration Committee of Saltney Town Council (5000 inhabitants). We have a tributary called Balderton Brook, designated main river status because of its catchment area, which includes Chester Business Park and drainage water off the A55 Expressway and the A483 Trunk Road. The confluence of the brook is into the River Dee in our township. They both used to be dredged – Balderton Brook approximately every 5 years, with weed removal every year. When the EA took control of rivers in 1996, they stopped dredging it. Now they have also ceased weed cutting – see Picture 10 below. The silt level in the brook is above all the land drain outsets. Subsequently thousands of acres of good agricultural land are permanently water logged with no sponge affect left to absorb water at high rainfall periods. The result is that all the area can now flood over a 24 hour period of rain – the flood water reaching the house steps in our township, with less than half the rainfall that some parts of the country experience. As a result of EA neglect we could have a flood disaster in homes and businesses at any time. When the brook was regularly maintained it was home to a good variety of habitat – now they have virtually disappeared.

Picture No. 10 – Balderton Brook (designated main river)

13. I just can't understand why politicians still go on about FLOOD DEFENCES!! When as we know they should be DREDGING all rivers, ditches and dykes, are they all mentally retarded can't they see that millions spent on FLOOD DEFENCES will not work and isn't the answer.

The built miles of flood defences in York and all they do is push the water into another area!! These areas then ask for flood defences. Are they trying to make flooding look worse that it is,,, is it another way to make the public believe flooding is due to CARBON FOOTPRINT so that they can tax us some more, is it all one HUGE con?

This email was also sent to the Pitt Review, and is I their record library.

Title: REINSTATE DREDGING AND RIVER MAINTENANCE NOW

Comments: U ntil the Government instigate a complete programme for dredging and river maintenance of the rivers in this country the situation will only get worse. The River Thames was dredged for 50 years after the 1947 floods and then when the rivers were taken over by the Environment Agency the regular dredging and maintenance programme ceased. Since that time the silting if the river has got to an impossible level in places. We are constant river users and have been for over 30 years and have seen the decline in maintenance and the results of that decline. Money must be spent NOW on preventative measures not trying to manage floods with policies such as flood warning measures.

14. **River Policy is a Disaster**: Meetings with Natural England and the Environment. Agency have dominated the past two weeks. We are one of many farms bordering the Wiltshire/Hampshire River Avon. Much of the river and meadowland are SSSI, but due to a change in policy the Avon Valley is now in a crisis situation.

River policy for the Avon has meant that weed cutting has ceased and Natural England and the Environment Agency want the river to return to its natural state. The legacy of this summer is flooding providing economic and environmental disaster for farmers.

The Environment Agency are now suggesting to farmers that if they want a weed cut they must do it at their own expense. At present that's not an acceptable situation, because farmers have never been consulted, and what business would invest in something that it cannot influence?

A radical rethink is needed, and it won't be just farmers wanting this. Villages on the Avon are starting to get flooded, and with that mosquito problems, making their policy and environment health issue as well.

If ever there was false economy, then this is surely it, because lack of maintenance on the rivers will lead to massive costs in flood defence.

APPENDIX 3

URBAN MYTHS

Comments by some people who like to be heard, but have not the wisdom to know the subject on how and why flooding is on the increase, and how it can be prevented, often also advocated by the EA and Natural England as excuses.

- *"Increased flooding is because of more land drainage".*

The opposite is true. During the last Great War and for years after to produce more food and later help the balance of payments, farmers were given a 50% capital grant by Governments to clean ditches, brooks and land drainage. This grant ceased over 30 years ago – so while flooding is on the increase, land drainage is on the decrease.

- *"Modern farming with heavy tractors and machinery causes a plough pan seal (compaction) in the land preventing it soaking up rain, so the rain runs straight into rivers".*

Modern farmers also use subsoilers that break up any plough plan letting air and moisture penetrate up and down – so no change.

- "*Rainfall running off moorland causes urban flooding".*

If it did, as the annual rainfall has not increased, so why are thousands more homes and businesses getting flooded. Moorland has natural boggy areas where the water table can be kept low by drainage channels maintained in good condition. Now with Natural England and CCW imposing SSSI control on many moors they have closed the drainage channels, so the water table has lifted leaving no sponge rainwater absorbing affect, therefore the rain now runs off the moors far more quickly. We have the wisdom of 'hands on experience' on this subject.

- "*Non porous paving on forecourts, house drives and paths causes rainwater to fill the rivers more quickly".*

Compared to current EA policy of not dredging rivers, the affect of non porous surfaces is negligible – if it has any affect at all, it would be equivalent to shuffling the deck chairs on the Titanic.

- "*Some salmon and trout 'experts' say "leave rivers undredged – it is better for the fish".*

This totally incorrect view is confounded in figures published by the EA in the 2009 salmon count which said that the count was the lowest on record. So while rivers are left neglected for 15 years fish are on the decline, likewise water voles are now only found in 6% of their former range say the EA.

- 5.6 Another comment by the EA is "*If we dredged there is nowhere to put the spoil dredged out*".

The river boards, before EA control, managed to do it – it is very fertile material, most farms have hollows in fields and farmers would be glad of it. It is also good to build up river banks, but it cannot be done by sitting in an office playing with computers creating more flood plains. The Manchester Ship Canal was built in 13 months for Ocean going ships with a minimum water depth of 28' and bottom width of 120'. The spoil dug out was moved with wheelbarrows and horses and carts – where there is a will there is a way. It was built by private enterprise.

- Another comment by the EA "*We can't use the spoil dredged out to top up river banks because it is porous".*

We know of river banks built up over 100 years ago by dredged silt with a sandy nature and they have been perfect. A Dutch dredger came up the River Dee 50 years ago depositing the silt by building up its banks. These banks still contain the highest tides of the year despite the river bed now badly being silted up.

- "*Floods caused by farmers not cleaning silt and debris out of ditches*".

It is correct that roadside drains discharge into farm ditches. Most farmers know the importance of ditch dredging but many are frustrated by the fact that where they discharge into a tributary designated main river – under the control of the EA – their policy of not dredging has caused the silt to build up higher than the discharge points of the farm ditches and land drains.

The worst case of road flooding in our area at times of high rainfall is caused by the EA not dredging a main river tributary. The rain water runs backwards up a farm ditch, runs backwards out of the road drainage grid – floods the road – and then often freezes leaving a sheet of ice on a T junction where cars spin off the road.

- "*Should local councils advise the EA of the need to dredge main rivers in their area".*

They often do, but they get the reply back by word or letter saying that there is no benefit in dredging.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name **Graham Devenish**

Organisation and Sector **Chair, Canoe Camping Club, Recreational Canoeing**

Contact Details

River Basin District Response for **Dee**

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

All the issues identified in this consultation are considered relevant for the well being of the water environment and society as a whole. The management of abstraction and pollution are primary factors for the quality and quantity of water as a raw material and key for all sectors. For the sport and recreation of canoeing it is paramount to the amenity value of the water environment.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

We can relate to the descriptions for each of the significant issues, particularly;

- changes to natural level and flow of water
- Pollution from any source is an issue for water contact sports and recreation. Combined Sewer Overflows and EA consent levels for STW's are a health hazard. There is a need for the water industry to complete the upgrade of infrastructure and the EA to raise standards for consent.
- Invasive non-native plant growth species impact on habitat, watercourses and impairs navigation. – we promote bio-security.

NB. Not all physical modifications are a significant issue for canoeing - weirs and river channels, Changing the character of features can be an adverse impact and cause a loss of amenity as discussed in Item 3 that follows.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

A cost benefit analysis for all the significant issues should be the driver to deliver outcomes to an affordable timetable.

Identifying changes to natural level and flow of water would be a first choice combined with the socio-economic aspect. We understand the second cycle of WFD will take socio-economics more fully into account to incorporate betterment for the amenity of access with benefits for health.

In supporting environmental improvements we believe schemes should be designed to not compromise an existing use or users. For canoeing this particularly applies to physical changes to the watercourse from river restoration projects or the modification of structures to improve river connectivity.

The removal or lowering of a structure and raising the river bed (riffle) can reduce water levels; and the introduction of woody debris also has the potential to adversely impact on the physical usability of a water course for canoeing.

We also believe where works are planned there is a need for due diligence to ensure rights of way, historic navigation rights and Navigation Acts including those on non-maintained navigations that remain on statute are not compromised.

The substantial funding for WFD environmental improvement, river restoration projects etc is a discussion point as it is largely sourced from public monies i.e. general taxation, Government & EU grants, Lottery, Heritage Lottery, and the water industry (customers) etc.

The benefits from this expenditure bringing environmental improvements can also enhance the material (market) values of land and fisheries assets in both public and private ownership. We believe these improvements and benefits should not be exclusive and have in some instances perpetuated or created questionable perceptions and restrictions for sustainable canoe access.

Benefits from public investment should be inclusive and scoped to include community betterments i.e. recreational gains from flood management schemes; shared access and use of waterways; river connectivity improvements fish passes incorporating a canoe pass either as a separate channel or a combined (conjunctive) arrangement.

4 Who should we work with to achieve the environmental outcome?
Canoe Wales, River Trusts, Water Industry, Local communities

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Dee

Pollution in all the catchment is an issue for everyone. Recreational users are probably more aware of the potential risks than the wider public. This applies to the R Dee and the Llangollen Canal

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Please refer to Q 3.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes. As a sport and recreation organisation dependent on the use of water we are pleased to see the range of environmental topics and points identified particularly:

- Improving access to water environments and the associated health benefits - canoeing promotes physical exercise
- Effects of polluted land on the water environment – canoeing is a water contact activity

Some measures that change the character of water bodies could adversely impact on canoeing:

- Effects on the shape and flow of water bodies – reduced physical usability of all water bodies by the lowering of water levels, raising river beds (riffles), placing of woody debris
- Effects on the wider historic environment associated with waterways – impact on navigation for all rivers where there is the custom and practice of recreational canoeing/boating

2 Is there any other information that we should be taking into account as part of the assessment?

Nil

CWAC response 20/12/13

Natural Resources Wales and the Environment Agency: Dee River Basin District: Challenges and Choices Consultation – December 2013

Thank you for the opportunity to comment on your Dee River Basin District: Challenges and Choices consultation document. Spatial Planning at Cheshire West and Chester (CWaC) welcome the catchment based approach and continued liaison with Natural Resources Wales and the Environment Agency as the CWaC Local Plan is progressed.

The Cheshire West and Chester Publication Draft Local Plan was approved for submission for examination at a Council meeting on 19th December 2013. The Submission Local Plan is the spatial expression of the borough's priorities and development needs going forward. It provides the planning framework to support the priorities identified in other Council plans and programmes including the Council's Corporate Plan 'Altogether Better Council Plan 2012-2015', the Sustainable Community Strategy 2010-2026' and other Council strategies covering regeneration, housing, climate change, environment and waste.

The purpose of this Plan is to provide the overall vision, strategic objectives, spatial strategy and strategic planning policies for the borough to 2030. It is considered that the Strategic Objectives and policies within the Submission Local Plan - Part One support and complement the proposals within the Dee River Basin District: Challenges and Choices consultation document including issues on water management and quality, protection of the environment and climate change.

Strategic Objectives of the Submission Local Plan for Cheshire West and Chester relevant to the Dee River Basin District: Challenges and Choices document include:

- Mitigate and adapt to the effects of climate change by addressing flood risk and water management and support the development of new buildings and infrastructure that are resilient, resistant and adapted to the effects of climate change.

- Achieve sustainable waste management, using sustainable modes of transport and travel and the prudent use of our natural resources including water and mineral reserves.

- Manage, expand and improve green infrastructure and waterways networks, recognising their importance in delivering local environmental, social, economic and health benefits.

- Ensure new development does not create an unacceptable impact, either individually or cumulatively, on the amenity and health of residents.

- Take action on climate change by promoting energy efficiency and energy generation from low carbon and renewable resources.

- Ensure all development is supported by the necessary provision of, or improvements to infrastructure, services and facilities in an effective and timely manner to make development sustainable and minimise its effect upon existing communities.

Charlotte Aspinall
Senior Planning Officer - LDF Team
Growth and Prosperity
Cheshire West and Chester Council

Tel: 01244 973183
Email: charlotte.aspinall@cheshirewestandchester.gov.uk
Location: Spatial Planning, 2nd Floor, The Forum Offices, Chester, CH1 2HS
Visit: cheshirewestandchester.gov.uk

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name _Luke Pearson_____

Organisation and Sector _United Utilities – Water Industry_____

Contact Details Luke.pearson@uuplc.co.uk_____

River Basin District Response for River Dee_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

The consultation document captures many of the significant issues facing the water environment. However, we feel that more emphasis should be placed upon pesticide pollution from rural areas, especially that from metaldehyde. UU has seen a steady increase in pesticide levels in the River Dee over the past few years. Unexpectedly high levels of metaldehyde, the active ingredient of slug pellets, were detected in the river since summer/autumn 2011. High levels of pesticides are also detected in the Llangollen canal which is fed by the Dee as well as having a small discrete direct catchment. A significant amount of this catchment is within the River Dee River Basin Management Plan and should be included as challenge.

The River Dee is a Statutory Water Protection Zone (The Water Protection Zone (River Dee Catchment) Designation Order 1999 No 195) for industrial and commercial pollutants thus highlighting the issue of solvent pollution.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

We believe that you have described most of the relevant water management issues appropriately. However, it is lacking emphasis on rural pollution by pesticides and a reminder of the industrial/commercial pollution risk that is the reason for the Dee Water Protection Zone. There is a lack of information included of the impact these pollutants have on drinking water treatment, the true societal impact is through increased bills and therefore the public should be listed under who is affected.

The existing River Dee RBMP has pesticides and urban and transport pollution listed as significant water management issues. The number of detections and quantity of pesticides detected in the river basin has increased since the first RBMP was published. The continuation of the Dee Steering Committee highlights the importance that industrial and commercial pollution has in this catchment.

The significance of pesticide pollution is highlighted by the designation of the English part of the Llangollen canal as a Safeguard Zone for pesticides. The Llangollen Canal feeds UU's Hurleston WTW. Although the DWPA of this catchment is in the North West RBMP the catchment falls within the Dee River Basin District and the canal is fed from the Dee at Horseshoe Falls and Froncysyllte. This Safeguard Zone should be referred to in the River Dee RBMP.

UU is currently in discussion with the EA about designating the English section of the Dee catchment above our abstraction at Huntington as a Safeguard Zone for pesticides and in particular metaldehyde. UU is waiting to hear from the Welsh Government whether it has decided to adopt the use of Safeguard Zone designations under Article 7 of the Water Framework Directive. We will then apply to Natural Resources Wales to designate the Welsh portion of the Dee Catchment as a Safeguard Zone for pesticides and specifically metaldehyde. We will also apply for an extension of the existing English Safeguard Zone along the Llangollen Canal to cover the area of the catchment in Wales.

There are three proposed United Utilities actions in Phase 4 of the NEP (December 2013) relevant to the River Dee catchment –

Hurleston - Pesticide - implement relevant measures identified in safeguard zone action plan to reverse deteriorating trend of pesticides in raw water.

Huntington & Sutton Hall - Pesticide - implement relevant measures to reverse deteriorating trend of pesticides in raw water.

Huntington, Heronbridge, Hurleston and Llangollen – Eel – eel monitoring and feasibility study to assess risk to eels at water abstraction sites.

There is a mismatch between RBMP timescales and the funding cycles for water companies. This needs to be taken into account when considering any measures to be implemented by water companies.

In the current AMP5 period (2010-2015) we are working to improve our abstraction intakes at Huntington and Heronbridge to reduce fish entrainment under a Habitats Directive driver. The new fish screens at Huntington were completed in summer 2013 and we expect the work at Heronbridge to be completed in early 2014. We intend to cease abstraction from our Deeside intake in 2015 and so will not be implementing improved fish screening at this site. We are also considering the future of our Froncysyllte intake and the need to implement fish screening at this site.

Following the issue of UKTAG's final recommendations for river flow for good ecological potential in December 2013, the prescribed flow limit set at Chester weir for the River Dee regulation scheme should be reviewed as it may be resulting in an artificially high and constant river flow.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

The impacts discussed in the consultation are generated from a number of sources and different parties. Key to delivering appropriate environmental outcomes is partnership working and a catchment based approach where appropriate.

The entire Dee drinking water catchment, both in England and Wales, should be designated as a Safeguard Zone. The portion of the Llangollen canal catchment in Wales should be designated as a Safeguard Zone. We believe there should be a consistent approach to Safeguard Zones in England and Wales.

A Safeguard Zone Action Plan would involve all of those on the drinking water catchment related to the pesticide pollutant to establish potential sources and deliver solutions. A Safeguard Zone designation would attract potential funding and interest, from water companies and other bodies, to support both capital and revenue actions to reduce pesticide pollution such as catchment sensitive farming grants, training, farm visits and advice, capital works and equipment.

4 Who should we work with to achieve the environmental outcome?

The Dee Steering Committee has effectively reduced the number of pollution events in the Dee from industrial and commercial sources.

The EA Catchment Based Approach for the middle and tidal Dee is in its infancy and may help address some of the significant issues. However there is currently no group set up to cover the upper Dee catchment; also the priorities of these groups may not address all of the issues.

The majority of pesticides and a significant amount of nutrients emanate from farmed land and farmers and spraying contractors should be targeted for education and support in changing working practices to reduce the amount of pesticides and nutrients entering the water environment. However pesticide pollution can also arise from other land uses including highways, recreational facilities, domestic properties and small holdings on catchment. Where appropriate these too should be engaged through education. Manufacturers, pesticide retailers and DIY stores all have a part to play in the education of safe use of pesticides.

We have worked with the Environment Agency and Natural Resources Wales and are currently developing an appropriate Business Plan for the next 5 year period (2015 - 2020), balancing the needs of the environment and the views and wishes of our customers and stakeholders.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Increased levels of pollutants in the raw water result in increased costs of treatment which ultimately result in increased bills for our customers. Raised levels of ammonia in the raw waters results in a corresponding increase in the amount of chlorine required to treat the water leading in increased chemical costs.

The proportion of farmed arable land within the Dee catchment has increased over time which has led to an increased usage of fertilisers and pesticides. Inappropriate application of these can lead to pollution of the water environment. Increased levels of ammonia both within the Hurleston catchment, along the Llangollen Canal, reacted with treatment chemical and resulted in some taste and odour issues for our customers. Huntington WTW chemical demand also increases with raised levels of nitrates and ammonia.

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UU is committed to working in partnership on catchment to reduce pollutants, especially pesticides, nutrients and solvents. We have already started working with farmers to produce nutrient and pesticide plans utilising Livestock North West grants topped up with match funding from UU.

Through the actions of the Dee Steering Committee members, EA and NRW, gross pollution events from commercial and industrial sources are being controlled.

A Safeguard Zone action plan would publicly document the pesticide issues on catchment and collective solutions aiding buy-in from NGO's, regulators, water companies (three operate within the River Dee catchment) and landowner/managers amongst others.

The EA Catchment Based Approach Tidal and Middle Dee groups have only been recently formed. It is hoped that this group will assist catchment management activities to address pesticide pollution although pesticides are not considered one of their major issues.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

2 Is there any other information that we should be taking into account as part of the assessment?

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name _Luke Pearson_____

Organisation and Sector _United Utilities – Water Industry_____

Contact Details Luke.pearson@uuplc.co.uk_____

River Basin District Response for River Dee_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

The consultation document captures many of the significant issues facing the water environment. However, we feel that more emphasis should be placed upon pesticide pollution from rural areas, especially that from metaldehyde. UU has seen a steady increase in pesticide levels in the River Dee over the past few years. Unexpectedly high levels of metaldehyde, the active ingredient of slug pellets, were detected in the river since summer/autumn 2011. High levels of pesticides are also detected in the Llangollen canal which is fed by the Dee as well as having a small discrete direct catchment. A significant amount of this catchment is within the River Dee River Basin Management Plan and should be included as challenge.

The River Dee is a Statutory Water Protection Zone (The Water Protection Zone (River Dee Catchment) Designation Order 1999 No 195) for industrial and commercial pollutants thus highlighting the issue of solvent pollution.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

We believe that you have described most of the relevant water management issues appropriately. However, it is lacking emphasis on rural pollution by pesticides and a reminder of the industrial/commercial pollution risk that is the reason for the Dee Water Protection Zone. There is a lack of information included of the impact these pollutants have on drinking water treatment, the true societal impact is through increased bills and therefore the public should be listed under who is affected.

The existing River Dee RBMP has pesticides and urban and transport pollution listed as significant water management issues. The number of detections and quantity of pesticides detected in the river basin has increased since the first RBMP was published. The continuation of the Dee Steering Committee highlights the importance that industrial and commercial pollution has in this catchment.

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The catchments

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Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

2 Is there any other information that we should be taking into account as part of the assessment?

South East Wales Rivers Trust
13 Alexandra Avenue
Merthyr Tydfil
CF47 9AE

01/12/13 15:40

Comments

Water for life and livelihoods: Challenges and choices (21/06/13 to 22/12/13)

Comment by	South East Wales Rivers Trust (Mr Anthony Rees)
Comment ID	C&C2013_
Response Date	26/11/13 17:20
Consultation Point	Views on the Severn River Basin District (View)
Status	Draft
Submission Type	Web
Version	0.1

The significant issues

1. What do you consider to be the biggest challenges facing waters in the Severn River Basin District?

I am responding on behalf of the Rivers Trust whoes area covers the former industrial valleys from Brynmawr Ebbw Fach to the River Ely. **Physical modification** . Physical modification is a one of the main problems for fish pasage. Where weirs have been constructed these can with care be passed or removed however culverts running alonside houses or under main roads are a very difficult problem particularly where houses or main roads could flood if the were made passible with the use of baffles or other such methods that could hold debris **Pollution from waste water** Major problems from sewerage over flows are still a problem with reports of toilet waste and factory discharges particularly from industrial estates high up at the top of the river catchments. Many streams of these have no benefit as far as Fishing is concerned and tend to end up as dumping grounds. They are however or could be valuable nursery places for fish to breed. Any pollution is not picked up unless it is seen by someone who has concern for the environment. Some areas have local groups who monitor them and these should be encouraged. This type of unseen pollution reflect on the water quality downstream but as indicated is unseen. **Pollution from rural areas** A major concern as far as our rural areas are concerned is the river Ely where the narrow lanes not built for large lorries or tractors become churend up with the resulting sediment finding its way into the main river causing a tremendous silt load. There are also many streams on the Ely that need cleaning out and with the use of low profile weirs can be useful spawning areas. Some of the lower streams have large watersheds and may need close surveying. Local people with knowledge of land ownership are best placed to do this. Fencing the river off to contain stock would also improve runoff. **Changes to the natural flow and level of water** The valley rivers particularly those with Water supply as opposed to water regualating Reservoirs at the head waters will never be able to be returned to their former natural state. We experience due to water abstraction only compensation flows, with dry summers only making the problem worse. Also we do not get freshets as the reservoirs prevent this happening. On some lower ends of the valley rivers where natural streams join them there is extra flow. This flow however particularly in the first

few hours can be extremely dirty from the resultant sewerage over flows. Urban runoff is therefore a major problem particularly in dry weather.

Pollution from towns etc. AS above after a dry spell all the accumulated detritus enters the river systems. Any pollution causing the death of inverebrates as well as fish would go unnoticed in these circumstances

2. Do you agree with our description of how the significant issues are affecting the water environment and society? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

I think you have the Answers in detail above

3. How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource implications.

Physical modification - better management of watercourses with help from local inhabitants who are interested in the local area and are prepared to look after their own Patch. In the rivers Ebbw Fawr/Fach/Sirhowy this is already happening and could be used as a template. What must be remembered is that where necessary the local Council/s must come on board to attend, if the local people find blockages or other problems they cannot cope with. The scale of sewerage discharges and the fact that in many cases major works are involved can only be tackled by the Water Companies. There are areas of the valleys that can be improved to help fish spawn. This can be achieved by working locally with Residents/Rangers/River Trusts on small scale habitat improvments at a local scale they are low cost and with the introduction of gravels and following ready tried methods used by Wild Trout Trust and others, could greatly improve fish carrying capacity as well as benefit the eco system. Doing this first would alleviate some of the problems from possibly hard to change Physical Modification. Pollution from waste water - The water companies must be held responsible. There are some problems such as phosphate where due to general use we must all look to help reduce, but discharges are the sole responsibilty of the water companies and they are the only ones who can solve this problem. Some problems however are so historical like the main sewers running down the valleys being located alongside or in the river, that the only way a discharge can go at times of heavy rain or blockage is directly into the river. Stopping this will require a vast amount of money to be spent. The scale of the issues and the fact that in many cases major works are involved can only be tackled by the Water Companies. Pollution from rural areas - Currently NRW is working with farmers to help them reduce run off and the use of fertiliser. This together with education is the best way forward. Incentives can be used and the promotion with monetory help to introduce buffer zones would make a big impact. My previous comments on the Ely regarding road runoff is a major problem that needs dealing with. The only way to tackle many of the problems is the Education of the farmers by making them realise they are loosing top soil and wating money by using to much fertiliser Changes to the natural flow and level of water - The building of reservoirs at the headwaters of the valleys in years gone by has probably stopped any natural flow in the valley rivers. This combined with water abstraction and the continual demand for increased water supply means we will never be able to completely reverse what has been done. As above the introduction at low cost of schemes such as low profile weir that would give a small increase in the depth of water will provide more cover for fish and invertebrates. Much of this can be achieved locally. Pollution from towns etc - The Trust currently runs a programme in schools on the Taff River System. Expanding this to educate the next generation on what not to tip down drains and giving them an insight into how to dispose of unwanted materials would go a long way. Currently schools are asking for help in running courses on how a river system works. We must try to accomodate this demand and in doing so will hopefully help them to educate their parents etc on the need to keep our rivers clean and free from rubbish. Working on this at a catchment basis will I feel generate the best results.

The catchments

4. How are the significant issues in a catchment affecting the water environment and society? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

The River Taff catchment although cleaner now than at any time in the last 100 years, for some reason, probably because of it's urban course, still seems to have the stigma of a river not being clean. This is probably because of a variety of reasons; Rubbish, Sewerage, Road Runoff, and Japanese Knotweed that smothers all the native plants. This can have a downside for tourism and the view of how important the river is to scociety with it's rich heritage and increasing fish populations. This can be said about all the valley rivers in the Trust area such as the Rhumney, Ebbw, Ebbw Fawr, Ebbw Fach, Sirhowy, Rhondda, Cynon. All former industrial valley rivers. I feel that at times there is to much duplication in tackling the problems. The river Ely is mainly rural and whereas the above rivers suffered from industrial pollution and to a degree have seen a reduction of the problems from Industry due to its demise, the Ely suffers from gross Agricultural pollution this will be harder to elliminate. It has high badly eroding banks and will need substantial funding to carry out the work that is required. This is effecting its value as a fishery and an emenity. It is not as effected by the bulding of reservoirs and for this reason enjoys a more natural flow. It is however bady silted with few spawing areas and most of it's main feeder streams in need of cleraing due to stock poaching and the beds of the streams now being reduced to ditches.

5. How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource implications.

My comments are for all the catchments in the South East Rivers Trust Area as above. It appears we will be working in Wales on a catchment approach. Rightly or wrongly this should have been done from day one as this would have brought in local people who are passionate about thier river. The best way to probably tackle the problems would be to identify the main pollution/ points that are causing the failure of the body. Where this, either due to finance or other difficulty can not be done, we still need to work with a top down approach to clean up our rivers. Many problems in the upper reaches can be carried out at minimal cost working through the third sector and local volunteers. This will need financing but at a scale where value for money will be seen. The larger things such as sewer overflows and land management, the treatment and elimination of non native weeds may cost more and take longer due to resource. However most of the valley rivers are slowly recovering and a small sum spent on habitat will give a corresponding large return.

Strategic Environmental Assessment (SEA) scoping document

6. The SEA scoping document is used to identify the likely effects on the wider environment that could result from the plan to improve the water environment and are important at the river basin district level. Do you agree we are focussing on the key environmental effects?

The SEA and the areas covered is important. In the area commented on we see the work necessary to bring about the water quality standards under WFD will be actually increasing Biodiversity. Very few of the sites we will work on have any special designations on some rivers there are very small areas for a particular species where a designation as an SSSI has been made. In all these cases when work is carried out consultation takes place with the relevant authority.

The effects on the population will be to increase their well being improve access, more opportunity to enjoy the outdoors, and a possible increase in tourism. The downside will always be that the demand for water will take priority as far as the Water companies are concerned.

We have very few problems with land issues other than erosion and habitat improvements will help to nulify this. There are some contaminated land sites but these are recognised and being dealt with.

Work carried out will need to be sensitive to flood risk and to how we mange future flows.

We do not see as you indicate Air quality as part of our remit.

On Climate change we see instream habitat and low profile weirs to increase slightly the depth of water as being important for fish and inverebrates as well as all the birds and animals that feed in the water.

Many of the sites we work on that can be classed as historical will have a desigation as an ancient Monument placed on them if they are of any value. Most are not as the works or mines that installed weirs etc are now long gone.

We see the work we would carry out as offering a better visual landscape than that that is currently there.

7. Is there any other information that we should be taking into account as part of this strategic environmental assessment?

Many of the fundamental problems are historical in the valleys and will need substansial funds to over come. It is satifying to see that NRW are now talking about catchments as this will bring the greatest benefit quicker. This will I feel be true for the increase in fish populations that can be achieved. Any inriver work will also have benefits for invertebrates thus giving a major increase to bio diversity.

If you would like your response to apply to either the Dee or Western Wales River Basin District, please visit the Natural Resources Wales website.

If you would like your response to apply to one or more of the other river basin districts, please select all that apply from the list below.

About you

When we come to analyse the results of this consultation, it would help us to know if you are responding as an individual or on behalf of an organisation or group.

Please select from the following options: Responding on behalf of an organisation or group

Please specify which organisation(s) or group(s) you are responding on behalf of and include what type it is e.g. local authority, trade association, a river's trust, academia, water company.

Responding as Chairman of the South East Wales Rivers Trust but also Chairman of Angling Cymru whoes membership cover both Game Sea and Coarse.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name: Sinead Chamberlain

Organisation and Sector: The Coal Authority – Environment Department

Contact Details: SineadChamberlain@coal.gov.uk

River Basin District Response for: Western Wales

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

The Coal Authority considers one of the biggest challenges facing waters in the Western Wales River Basin District is the pollution from abandoned mine workings. We agree that 74 water bodies are failing to achieve a good status due to pollution from abandoned mines although the actual number could be greater than this depending on the location of the monitoring within each water body. This is due to two main sources, contaminated water from the underground mine workings and the waste material spread upon the surface. Ground water failures are also associated with these sources. The Coal Authority agrees that pollution from mine water discharge from both coal and metal mining is a significant issue in this district. The contamination of mine waters with iron, lead, copper, zinc and cadmium, and which can also be quite acidic, are geographically extensive with contamination from the dissolved metals causing pollution many kilometres downstream from the initial discharge. Work is continuing on a rolling basis to manage pollution from abandoned coal mines, currently the Coal Authority have built and are operating 8 mine water treatment schemes in the District with a major scheme planned during 2014. There are a further 3 schemes in the Wales area of the neighbouring Severn District.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Yes the Coal Authority agrees, as outlined in Q1 above. The contaminated mine water discharges from the coal mining legacy has a major effect in the areas of the South Wales Coalfield, whereas contamination from the non-coal mining emanates from the Mid Wales lead and zinc orefield and the Parys Mountain Copper Mine on Anglesey. Coal mine waters typically contain iron which whilst not toxic causes deposition of ochre on the stream beds, smothering any life. Metal mine waters typically contain heavy metals, and these can have an eco-toxic effect often stretching long distances from the mine source area.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

It is agreed that the main priority to tackle is that there is no deterioration in the water environment in the future as a result of mine water. This will be enabled via the continuation of the coal programme, which is informed by an extensive monitoring network, and by commencing a non-coal programme for remediating Welsh metal mine water issues. Whilst historically, the coal programme has been funded by DECC, it has not been confirmed for the next WFD cycle. At present there is very little funding for metal mine remediation; which is surprising given that it is such a significant issue.
The Metal Mine Strategy for Wales, run by NRW with support from the Coal Authority, is investigating the impacts from metal mine pollution, and has successfully completed Phase

1 of remediation at Frongoch, despite very limited funding. Focus has been directed on investigating the abandoned mines that are causing the greatest impact on the environment, this includes Parys Mountain copper mine and several gold, lead and zinc mines in Mid and North Wales. To enable progress to be made to address the Water Framework Directive issue of pollution from non-coal mines in Wales, a programme delivery mechanism, with dedicated funding, is required similar to the one established in England.
With regard to the remediation programme which focuses on existing long standing mine waters, this programme should be recognised as worthy of receiving significant funding in order to provide benefits to the water environment in Wales. New mine water remediation schemes are only being progressed if they have a favourable cost benefit analysis.

4 Who should we work with to achieve the environmental outcome?

A close partnership between National Resources Wales and the Coal Authority should be continued, and re-inforced. This should be supported by collaboration with academic partners to find new and sustainable solutions to tackle mine water treatment. Commitment will be needed to fund sustainable and cost effective long-term treatment for the most polluting mine waters.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Whilst there are many pressures affecting the water environment, as outlined in the consultation document, the impact of abandoned mines in the district remains a severe and long standing issue, and there is a continued need to address the widespread impacts of our region's historical mining legacy.

Pollution from mine waters affect the following catchments in the Western Wales River Basin District: Conwy (9 water bodies affected), Ynys Môn, Lleyn nad Eryri (11 water bodies affected), Meirionydd (19 water bodies affected), Teifi and North Ceridigion (16 water bodies affected and a further 10 very likely to be affected), Camarthen Bay and the Gower (4 water bodies affected) and the Tawe to Cadoxton. The discharge of mine waters in the catchments are having a negative effect on the water quality, this is significant as many of the water bodies are designated as EU designated bathing waters and/or Special Areas of Conservation (SAC).

The Coal Authority are currently operating mine water treatment schemes in the western part of the South Wales Coalfield in the Teifi and North Ceridigion, Carmarthen Bay and the Gower and the Tawe to Cadoxton, research is ongoing in other catchments to determine feasible options for treating the mine waters that have the greatest affect.

The following discharges are having severe affects on the water environment: the Pool adit at Parc Mine contributes 20% of the dissolved zinc to the Conwy estuary, which contains two commercial shellfish beds. There are ongoing investigations into the sources and solutions including detailed catchment studies, flow reduction measures at Parc Mine and flow monitoring at Pandora Mine. Parys Mountain Mine on Anglesey is discharging acidic, metal

rich mine water into the Afon Goch Amlwch, a solution has been investigated but, as far as we are aware, further progress is being frustrated from lack of funding Abandoned metal and slate mines have had an adverse affect on the Llyfni and Glaslyn, which are exhibiting elevated levels of copper and zinc. Discharges from the Dylife lead mine and the Gwynfynnydd gold mine are having an adverse affect on the Dyfi and Mawddach, monitoring at these sites is ongoing and work on feasible measures to address the issue is being continued. Discharges to the Teifi are significant as this river has been designated as a Special Area of Conservation (SAC), mine water treatment schemes are and will be key in this catchment to stop the water environment degrading and status being lost. Metal mine water discharges are playing a key contributor to the acidification of waters, which can lead to the leaching of toxic metals from soils into the water bodies.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

With regards to the pollution from mine waters the protection of SAC's and EU designated bathing waters are essential as the districts economy relies heavily on tourism. It is essential to secure funding for the next WFD cycle from DECC as this has not yet been confirmed.

It is particularly important to identify and secure the funding for the non-coal program in Wales. To enable progress to be made to address the Water Framework Directive issue of pollution from non-coal mines in Wales, a programme delivery mechanism, with dedicated funding, is required similar to the one established in England.

WaterForLife@environment-agency.gov.uk

Response form

Water for life and livelihoods: Challenges and choices

Your details

Name:	**Louise Rae**
Email address:	**louise.rae@cefas.co.uk**
***Optional* Postal address (including postcode):**	

When we come to analyse the results of this consultation, it would help us to know if you are responding as an individual or on behalf of an organisation or group. Please select from the following options:

☐ Responding as an individual

☑ Responding on behalf of an organisation *(Please specify which organisation or group you are responding on behalf of and include what type it is e.g. business, environmental group)* _____*Cefas – Food Safety Group, Water Quality Team*_____

☐ Other (*please specify*) _____

Put a cross in this box if you are requesting non-disclosure of your response. ☐
Please provide an explanation to support your request.

How the Environment Agency will use your information

The Environment Agency will look to make all responses publicly available during and after the consultation, unless you have specifically requested that we keep your response confidential.

We will also publish a summary of responses on our website in which we will publish the name of the organisation for those responses made on behalf of organisations.

We will not publish names of individuals who respond.

In accordance with the Freedom of Information Act 2000, we may be required to publish your response to this consultation, but we will not include any personal information. If you have requested your response to be kept confidential, we may still be required to provide a summary of it.

We welcome your views on the Anglian River Basin District

The significant issues

1) What do you consider to be the biggest challenges facing waters in the Anglian River Basin District?

The main challenge facing waters at both river basin district level, and on a national scale, is the high degree of anthropogenic pressures causing chronic problems of deteriorated water quality in many surface waterbodies. Microbial pollution from faecal contaminants issuing from continuous, intermittent, urban and agricultural runoff sources and their resulting effect on shellfisheries is of particular concern to us in terms of food safety.

Cefas consider that there are significant challenges in respect of microbial pollution in River Basin Districts which need action both in terms of policy and regulation by the Environment Agency (EA) both at the national and district level.

1. In the wider policy context we consider that a longer term planning and investment horizon than currently exists, is required, in order to secure maximum benefits for catchment water quality and society. The time scale for this is likely to be approaching, or at, the inter-generational scale.
2. Challenges associated with increasing population and shifts in the geographical distribution of populations putting greater demands on existing sewer network and sewage treatment plants. This includes 'urban creep' and its' attendant surface water drainage problems.
3. Manageing impacts of surface water management arising from climate change. Of particular concern for water quality and shellfisheries are the impacts associated with increased rainfall or increased severity of rainfall events. In particular, where combined foul and surface water sewers exist, increased 'wet weather events' will result in more overflows from the sewerage network and storm storage capacity, and in reduced efficacy of treatment systems. Overflows of raw or partially treated sewage affecting shellfish protected areas may increase the risk to public health and compromise the economy of the shellfish industry.
4. Challenges related to the impact of agriculture on river basins include funding an evidence base for effective regulation and changing land use profiles linked to food policy and markets. We believe there is work to be done to effectively identify agricultural impacts and regulate them at the farm level, in order to adhere to and fairly implement the polluter pays principle.

The challenges mentioned above require a longer term vision and strategy to be developed coupled with further targetted evidence gathering, and a long term management and regulatory action plan. This will be necessary to both maintain good quality quality for some shellfish waters and to improve and facilitate better utilisation of fisheries in those which are currently prohibited or otherwise adversely affected due to poor water quality.

2) Do you agree with our description of how the significant issues are affecting the water environment and society? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Cefas agrees that significant pressures on water management are adequately identified and grouped into issues headings.

However, the plan does not contain sufficient information characterising the magnitude of anthropogenic pressures as required by article 1.4 of Annex II of the directive. Programmes of Measures is perhaps one of the most relevant elements of the plan and justifies a specific section in the plan.

We agree with the EA's identification and description of the significant issues of diffuse pollution from agricultural and urban run-off sources in the consultation documents. It is critical to address these issues, as well as water company asset faecal contaminant input issues, due to:

1) Many waters containing shellfisheries are predicted to be at risk of failing good ecological status by 2015 and/or at risk of deterioration.
2) A large number of shellfish waters in each EA region in 2012 were failing to be compliant with Shellfish Water Directive Guideline standards for faecal coliforms present in shellfish flesh samples. Several shellfish waters in each EA region have consistently failed to reach Guideline standards for a number of years.
3) Many EA regions have Class C shellfish beds as classified by the FSA, based on evidence from hygiene monitoring programme sample results of *E.coli* levels present in shellfish flesh. Several shellfish beds which have been classified long term B have borderline results and are at risk of being downgraded to Class C. We recognise that a Class C shellfish bed or downgrade from Class A or B negatively affects shellfish businesses.
4) Poor water quality will also represent a public health risk.

3) How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource implications.

1) Firstly we strongly encourage the prioritisation of the development of much longer term strategies (looking ahead 25 -100 years, and bey ond) to inform water company asset management plans (AMP) and investment in inter-generational assets for the future. We identify that this long term forward thinking will include planning and i mplementing full separation of existing foul and s urface water sewers to reduce CSO operation and pressures on sewage treatment works. We recognise that this will be a lengthy, expensive and complicated process, however planning to invest in separation of foul and rainwater sewers over the next century and beyond, will save and reduce costs inflating disproportionately in the future.

2) Cefas supports the EA's further development of catchment-based integrated approaches. Cefas recommend consultation and management at river catchment level within the districts, to ensure that relevant stakeholders are involved in the process, and that implemented measures will deliver the expected water quality outcomes.

3) Cefas supports the EA's requirements for water companies to fit event duration monitoring (EDM) to a larger number of intermittent discharges. This will evidence their operation and ena ble identification of poor performing assets and better inform post investment appraisals. Cefas advocate tying mandatory requirements for reporting the data directly into the discharge permits and developing clear penalties/enforcement actions where asset design standards are not being met.

4) Cefas recommend that robust post-scheme investment, evaluation and appraisal work is built into future National Environment Programme requirements. Evidence needs to be collected and assessed for effectivity following investment and implementation of microbial pollution reduction strategies, to ensure money is invested wisely in schemes that deliver measurable improvements.

5) Improved evidence gathering and regulatory actions for agricultural impacts under the polluter pays principle.

6) Cefas encourage the EA to prioritise the protection of human health by increasing funding of research into public health risks of microbial pollution, particularly concerning contamination of shellfish produced for human consumption.

Cefas comments on the consultation documents in particular are that:

- It is not clear how the assessment of susceptibility of surface water status is carried out on the basis of the pressures identified. It would be useful to specify if and where expert judgement and modelling techniques have been used to assist with such an assessment.
- Pressures maps are large scale and do not provide risk of failure for individual waterbodies. Therefore, it is difficult to relate specific measures to specific river catchments.
- There is little information on t he monitoring strategies used to achieve EQOs, particularly for waterbodies at risk of failing these as required by article 1.5 of Annex II of the directive.

The catchments

4) How are the significant issues in a catchment affecting the water environment and society? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

For all catchments potentially affecting bivalve mollusc shellfisheries:

1) Many waters containing shellfisheries are predicted to be at risk of failing good ecological status by 2015 or are a risk of deterioration due to the below standard water quality.
2) A large number of shellfish waters in each EA region in 2012 were failing to be compliant with Shellfish Water Directive Guideline standards for faecal coliforms present in shellfish flesh samples. Several shellfish waters in each EA region have consistently failed to reach Guideline standards for a number of years which is a potential public health risk, negatively affects local shellfisheries business as well as indicating that the water quality is below standard.
3) Most EA regions have Class C shellfish beds as assessed by Cefas from European Commission hygiene regulation sampling results of E.coli levels present in shellfish flesh. Many long term classified B shellfish beds have borderline E.coli results and are at risk of being downgraded to Class C. Cefas understands that a Class C shellfish bed or potential downgrade from Class A or B both negatively affects local shellfish business.
4) Poor water quality will also represent a public health risk.

5) How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource implications.

In relation to all catchments affecting Shellfish Protected Areas

1. Develop much longer term strategies to inform water company asset management plans (AMP) and investment in inter-generational assets for the future.
2. Conduct a comprehensive review of the impact of human activity on surface waters to identify the contribution of individual pressures at catchment level and complemented with case studies where previous work successfully delivered improved water quality. This review should include appraisals of the effectiveness of sewage improvement and agricultural grant schemes on the improvement of ecological status of waterbodies
3. Develop and consult on a programme of both long term and short measures and the level of investment required to achieve the objectives.
4. Develop clarity on penalties and enforcements actions on where asset design standards and or permit conditions are not being met.
5. Clearly state situations where improvements are not taken forward on a cost-benefit basis.
6. Include a requirement for robust post-scheme evaluation and appraisal work is built into future National Environment Programme requirements to be funded by water companies in the forthcoming AMP6 programme.

Strategic Environmental Assessment (SEA) scoping document

6) The SEA scoping document is used to identify environmental effects that are important at the river basin district level and will affect the plan to improve the water environment. Do you agree we are focussing on the key environmental effects?

Cefas broadly agree with the EA's identification and description of the environmental effects at river basin district level, however Cefas are very concerned that these SEA scoping documents do not specifically mention:

- shellfish beds in an environmental context,
-or the human aspect of employment in shellfisheries with their associated employees/secondary businesses e.g. processing plants,
-or the public health risk for shellfish consumers.

7) Is there any other information that we should be taking into account as part of this strategic environmental assessment?

Cefas wishes to confirm with the EA that shellfisheries will be considered as a priority from an environmental and human employment and public health aspect, when the EA are identifying water bodies in all river basin districts that will benefit from investment and water quality improvements.

If you would like your response to apply to one or more of the other river basin districts, please select all that apply from the list below.

- ☑ **Humber**
- ☑ **Northumbria**
- ☑ **North West**
- ☐ **Severn**
- ☑ **South West**
- ☑ **South East**
- ☑ **Thames**

Please tell us how you found out about the Challenges and choices consultation:

- ☐ **From the Environment Agency**
- ☑ **From another organisation**
- ☐ **Through an organisation you're a member of**
- ☐ **Advert**
- ☐ **Press article**
- ☐ **Social media e.g. Facebook, Twitter**
- ☐ **Through a meeting you attended**
- ☐ **Other (please specify)**

Returning your response

Your response to this consultation needs to be returned by **22 December 2013**.

We would like you to use this form if you are not submitting your response online. You can return it by email to anglianRBD@environment-agency.gov.uk. Please use this email address if you have any questions regarding this consultation.

Or you can return it by post to:

Anglian River Basin Programme Manager
Environment Agency
Kingfisher House
Goldhay Way
Orton Goldhay
Peterborough
PE2 5ZR

Other comments

This form is to be used when responding to the **Water for life and livelihoods: Challenges and choices consultation**. If you have any queries or comments in relation to other issues you would like to raise with us, please contact our National Customer Contact Centre:

Tel: 03708 506 506 (Mon-Fri, 8am - 6pm)

Email: enquiries@environment-agency.gov.uk

Post: National Customer Contact Centre
Environment Agency
Bowbridge Close
Bradmarsh Business Park
Templeborough
Rotherham
S60 1BY

Gogledd Cymru/North Wales:
1highplains@gmail.com

De Cymru/South Wales:
secretary@ogmoreanglingassociation.com

www.cpwf.co.uk

25 Ceg y Ffordd
Prestatyn
Denbighshire
LL19 7YD

Mobile: 07527402291

23rd December 2013

Dear Sir,

Re: Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name Allan Cuthbert

Organisation and Sector: Campaign for the Protection of Welsh Fisheries

Contact Details: 1highplains@gmail.com

River Basin District Response for: Western Wales

Challenges and Choices Consultation Questions

1 *What do **you** consider to be the biggest challenges facing waters in your River Basin District?*

I think the biggest single issue is lack of appropriate funding, NRW is attempting to address issues on a no cot or low cost basis first rather than prioritising on the basis of established need. This is evidenced by the minimal increases in water quality targeted in the Water Framework Directive. Wales and Welsh fisheries provide a massive revenue stream to the country. Wales as a region, has one of the lowest GDP's in the UK and drastic improvements to our fisheries has every chance of generating an increased revenue stream that would justify the expenditure. "Spend to save" is a current political initiative that could well be applied to Welsh fisheries.

River channels have historically been modified to facilitate land drainage, as a consequence rivers now flood quickly to allow rapid run off, this increases flood risk and reduces the ability of the land to "top up" its aquifer.

Water flow is inhibited by the presence of in river plant life, notably Ranunculus a plant susceptible to the effects of pollutants, much of which can be traced back to under capacity sewage treatment plants and agricultural runoff. Following water quality analysis more enforcement action is required to address the source of pollution and to have it stemmed.

The is an apparent conflict between the governments targets for green energy and the welfare of our fisheries, with a growing number of in river hydro power schemes being proposed and approved, when there us at least anecdotal evidence that these schemes when introduced to watercourses that support migratory fish populations damage the inhibit and potential "mince" migratory fish. Given the current status of salmonids populations in Wales, the introduction of hydro schemes to such waterways is unacceptable on simple conservation grounds. These schemes are often provided with capital grants to companies with no proven financial stability or proven capital to ensure funding of future maintenance costs or the costs of remediation when required in the future. These schemes when approved should require the provision of financial bonds, at the cost of the developer, to guarantee available finance in the event of the developers future financial failure.

It should be noted that local authority's often stock pile road salt adjacent to water courses, the runoff from these salt piles naturally finds its way into the watercourses with the subsequent pollution risk.

2 *Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.*

I broadly agree with the description of the issues and refer you to my response to question 1 above.

I do however feel that a major issue has not been mentioned or addressed thus far: simple environmental improvements.

Water quality is evidenced by the aquatic life it supports or fails to support. Watercourses are naturally self sustaining and pollution free, it is the interference with nature by man that is, in the main, causing the deterioration of our waterways. There is no reference to environmental aquatic protection. Streams that are left neglected to become overgrown or blocked inhibit the development of aquatic species necessary to the health of the whole river basin. If spawning tributaries are overgrown and deprived of light there will be little or no in stream invertebrate life and so little food for newly hatched fish. There needs to be regulation of river maintenance, particularly smaller watercourses with appropriate enforcement.

3 *How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.*

I think it is necessary to produce a more river system based analysis. They can then be quantified, prioritised and estimates prepared to show the appropriate capital and revenue costs. These cost will vastly exceed current available finance, but they will more accurately establish the actual extent of the work required. Once the cost of addressing the issues is established, more accurately programming remediation will be possible. Currently the overviews supplied are too general and far too broad to be meaningful to other that academics or specialists. It is important that NRW take their responsibility for the well being of our natural resources, accurately and as simply as possible represent the facts to the Welsh Government and make the business case for improving our aquatic environment by indicating the increased revenue improved fisheries will generate.3

I am concerned that you are asking responders to "consider the resource limitations". This implies that the object of the exercise is to work within existing budgets rather than to establish the case for an increase in budgets. The\ NRW has a responsibility to the environment and the people of Wales, not to work within the constraints of current inadequate funding. I think you have a duty to make a public as well as a private case to the Welsh Government, whilst at the same time pointing out to them the consequences: long medium and short term, of their budget constraints

4 Who should we work with to achieve the environmental outcome?

I think you should work with the Welsh Government to make a case for better funding.

The major bodies such as Dwr Cymru, Local Authority's have a statutory duty to work with you, which I should like to see more as partnership working rather than simple compliance as and when necessary: a sort of low cost no cost arrangement.

The Rivers Trusts have a working knowledge of the catchments, a number of willing volunteers who, am sure, would be pleased to be asked to participate.

Many other organisations such as The Campaign for the Protection of Welsh Fisheries, The Wild Trout Trust and any number of voluntary organisations who have a genuine interest in the well being of our environment and those species, apart from ourselves, that depend upon it.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

I am concerned that the information you prove in the documentation issued as part of this consultation is in many places far too technical and almost meaningless to the average member of the public with who you claim to be consulting and that the catchment specific details are about as broad brush and non specific as it is possible to be, that supplied in relation to the Clwyd in particular you state the following

1. That you are "Addressing land management issues to improve overall fish habitat, for example improving migration in the Clywedog and Gallen."

I am aware of the highly beneficial work fisheries staff are carrying out in this catchment and on these streams as well as others, but there is far more to be done to make a lasting impact on the environment and to ensure the future maintenance of capital works either completed or in the pipeline. There has been partnership working in this area which, it is hoped, will continue to work well, but the extent of further works is such that more funding is required.

2. That "Denbighshire County Council is identifying environmental issues and ways to maintain and enhance the environment in the short and long term." What are they doing and how are they doing it? The recent flooding on the Clwyd at Ruthin appears to testify to a lack of planned or preventative maintenance of the "over spill " and flood prevention system, which also seems to have had design faults. Denbighshire staff are capable, willing and able to identify such issues, however they are under staffed and again lack funding. It would be helpful for potential volunteers to know who to contact and how. Co-ordination meeting should be held with all willing and interested parties . This is of increasing importance when finances are so limited.

3. You state that "Land owners and farmers are ensuring best practice to minimise the impact of farming and forestry activities on rivers, includes fencing schemes to create river corridors, soil testing and nutrient management plans" I think it a shame that you have failed to mention the work the Rivers Trust have put into the fencing work, which s having a positive impact on the in river environment in some of the smaller tributaries of the Clwyd. The old Environment Agency did not have a good working relationship with the land owners generally, this a matter the NRW would do well to address and rectify.

4. You state that " Private dischargers and Welsh Water are ensuring appropriate treatment of sewage effluent, to minimise solids and nutrients entering the river system." A matter of concern is the growing number of telephone numbers available to report pollution. The current 0800 80 70 60 number has become the butt of many jokes and in my view rightly so, a mobile phone caller is more likely to be connected to Newcastle, yes Newcastle, England rather than Cardiff. It is time to develop a single point of contact for reporting environment issues in Wales, regardless of which of the "quango's" is responsible. I think the office taking these reports should be separate and distinct so that statistical analysis of reports can be carried out independently and free from the potential of "doctoring" which has historically been the case.

•5. You say "We are providing pollution prevention advice in several tributaries including the Bach, and Glanfyddion Cut" What is being done about monitoring responses and policing. Farmers and land owners will generally be doing much as the NRW is: looking for low cost or no cost solutions. Advice is fine, but without enforcement, policing and monitoring it is potentially all but useless. We need to see more staff on the ground.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

I am familiar with the Clwyd catchment and many of the challenges being faced to make meaningful improvements to the water quality and aquatic environment, however from my own knowledge and that provided by the NRW I am unable to make any meaningful comment. It is essential that all the issues be identified river basin by river basin, the solutions identified and then costed. It will then be possible to prioritise them and programme them in accordance with available finance. However the full extent of the issues and the overall cost should be presented to the Welsh Government in simple easy to understand terminology so that they are aware of the extent of the problems, the overall cost and the time it will take to address the issues in total. NRW's failure to be able to address environmental issues is not NRW's fault, it is the fault of the Welsh Government. If they are ignorant of the facts they cannot be held accountable: and they are.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

It is not possible to say. The approach is too "broad brush", relying on to much technical information which fails to make other that the briefest of references to the real issues relating to each river basin. I am of the impression that the "consultation" process is simply "window dressing", available finance and politics will determine what actually happens, and that has all ready been decided.

We need a river basin specific approach, with river basin by river basin management put in place and adequately funded. The voluntary sector is more than willing to participate and assist in any way it can. We need an honest approach driven by need not political and financial expediency.

Having said that the Campaign is willing to work in every way it can to help.

2 Is there any other information that we should be taking into account as part of the assessment?

Yes, I think a top down imposed management of our aquatic environment is flawed, what is need is a bottom up approach, based upon detailed river by river knowledge gathered from those that know their rivers and their problems. An expertise that many current NRW possess, but appears to be being wasted.

Performance indicators are only relevant when based upon detailed understanding. The NRW must regain its sense of reality, cease to manage from ivory towers and start to listen to and respect those at the "bottom of the pile".
Please.

Allan Cuthbert
Chairman

Only when the last tree has died and the last river been poisoned and the last fish been caught will we realise that we cannot eat money (Cree Indian saying)

Water for life and livelihoods: Challenges and choices

Event Name	Water for life and livelihoods: Challenges and choices
Comment ID	C&C2013_687
Response Date	02/01/14 14:53
Consultation Point	Views on the Severn River Basin District (View)
Status	Processed
Submission Type	Web
Version	0.5

The significant issues

1. What do you consider to be the biggest challenges facing waters in the Severn River Basin District?

1.Converting all this heavily process laden thinking into actual delivery and positive outcomes for our rivers

2. Addressing the fundamental disconnect between planning, regulation and outcome: eg Wye known to be suffering from excessive phosphates sedimentation etc. yet planners are allowing unlimited development of the poultry industry, one of the heaviest contributors of P to watercourses and other damaging processes.

3. Kick starting the process of appropriate regulation eg Top soil is being lost at 4-10 the natural rate in our catchments. However, soil protection reviews are not being enforced. This is one of many examples. We urgently need a cull of regulatory loopholes

2. Do you agree with our description of how the significant issues are affecting the water environment and society? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Broadly, yes (NB All our comments in respect of Usk and Wye)

3. How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource implications.

1. Firstly, there needs to be clearly defined roles: who are the regulators; who are the deliverers; who are the polluters and who are the beneficiaries.

Anyone who has tried to bail out a fast leaking boat will appreciate why this is the first step

2. Similarly, who has what statutory obligations to either prevent or regulate pollution?.. or obligations to provide / deliver (eg water quantity/ quality, FCS in SACs)?

3. Thirdly who else can deliver and what, in the most effective and at least costly way?

4. Can the Caba approach in the Wye make these discoveries and act on them?

5. We hope this process pulls his information together enables a start to be made on the Wye at least.

The catchments

4. How are the significant issues in a catchment affecting the water environment and society? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Adversely in Wye and Usk??. (they wouldn?t be called significant otherwise)

5. How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource implications.

First, select the cheap and easy tasks that deliver WB upgrades eg rectifying barriers to fish migration can remedy ?Failure for Fish? quite quickly and for relatively little cost (depending who does it) This has largely been completed on Wye and Usk

Do them first and get some success ?under our belts?

At the opposite end of the scale are the difficult actions: reducing Phosphate and sediment levels?..(see earlier)

There are all point in between in respect of difficulty and cost, of course ? acidification and abstraction seem as though they can be delivered in the immediate short term also

Again we hope CaBa will determine the answers to how progress can be planned.

Strategic Environmental Assessment (SEA) scoping document

6. The SEA scoping document is used to identify the likely effects on the wider environment that could result from the plan to improve the water environment and are important at the river basin district level. Do you agree we are focussing on the key environmental effects?

Yes, in the main

7. Is there any other information that we should be taking into account as part of this strategic environmental assessment?

Yes:??..2015: The date on which the Wye and Usk SACs should be in Favourable Conservation Status

If you would like your response to apply to either the Dee or Western Wales River Basin District, please visit the Natural Resources Wales website.

If you would like your response to apply to one or more of the other river basin districts, please select all that apply from the list below.

About you

When we come to analyse the results of this consultation, it would help us to know if you are responding as an individual or on behalf of an organisation or group.

Please select from the following options: Responding on behalf of an organisation or group

Please specify which organisation(s) or group(s) you are responding on behalf of and include what type it is e.g. local authority, trade association, a river's trust, academia, water company.

Wye and Usk Foundation Environmental Charity (delivery group)

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name: Angharad Evans

Organisation and Sector: Coed Cadw - Conservation

Contact Details: Angharadevans@woodlandtrust.org.uk

River Basin District Response for: The response from Coed Cadw/Woodland Trust is in relation to the specific issues of diffuse rural pollution and towns, cities and transport from an all Wales perspective.

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

The Woodland Trust welcomes the fact that Natural Resources Wales (NRW) is to take the ecosystem approach to deliver the requirements of Water Framework Directive (WFD) and restore catchments and the related water environment, as stated in Living Waters for Wales, and the broader challenge is to transfer this intention across in to individual River Basin Management Plans. Agriculture and urban transport might be said to have the most significant effect on land use, and whilst integrating WFD objectives with the planning and delivery of Protected Areas is highlighted, we believe these are also where real progress can be made through wider land use management and land use change, both through an increase in tree cover and other elements of the natural environment e.g. wetlands. This approach is based on tackling the issues at source through understanding the drivers for land use change and influencing these. Tackling the issue of landscape change can also have positive benefits beyond water management, which in the balance of societal cost/benefit and could have a significant impact on the viability of measures.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Regarding the description of the issue of *pollution from rural areas*, forestry practice is described as a negative activity, it being a source of diffuse pollution (acidification/sediment runoff) and is to be improved to minimise these negative effects. It is very important to separate industrial forestry practice from the positive effects which can be achieved by targeted tree planting, in the form of shelterbelts etc. on agricultural land. The role of tree planting as an approach for tackling diffuse pollution arising from agriculture (surface water runoff carrying sediments and phosphate pollution faecal indicator organisms) needs to be included.

Regarding the description of the issue of *pollution arising from towns cities and transport* we agree with the issues which have been identified in relation to urban areas, but feel insufficient emphasis has been given to the role of green infrastructure in supporting water management. While sustainable urban drainage schemes and urban habitat restoration are mentioned in plans, these should be seen as part of a wider need to maintain and increase green infrastructure across urban areas.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

Rural diffuse pollution agricultural

Agriculture is rightly identified as having a significant impact on water quality and flood risk. Changes in the farming landscape, agricultural practice and cropping over the last 50 years have exacerbated many of the issues affecting water, and projections of both climate change and future pressure on land use may well make this worse. In particular agricultural improvements, increase in field sizes, removal or neglect of hedgerows, loss of woodland cover, and so on, have increased the likelihood of surface runoff, and with it increases in soil erosion, phosphate and nitrogen pollution, contamination by faecal organisms and an increase in flood risk. The cost of tacking these issues is likely to be the lowest where it is possible to find solutions and interventions which match several of these issues simultaneously. Any effective strategy needs to start with a consideration of agricultural land use. Improved modelling and a growing body of evidence should help to identify where interventions using increased tree and woodland cover and other elements of the natural environment can have the greatest impact.

There is a need for more research to assist in the targeting of resources and it was disappointing that a research project submitted to the *Resilient Ecosystems Fund* earlier this year by Cardiff University and supported by the Coed Cadw/Woodland Trust, was rejected. This project was to provide evidence of the ecosystem services delivered by riparian trees, valuing and mapping multiple ecosystem functions provided by riparian woodlands across Wales to enhance freshwater ecosystem resilience and reduce multiple stressors. The resulting evidence from this research project would enable the better targeting of resources, prioritising catchments in order to maximize the multiple benefits through new woodland creation (riparian and wider small scale planting across the farmed landscape). It would hopefully act as a catalyst for wider partnership working in priority catchments identified involving a range of stakeholder organisations and land owners/managers.

We strongly believe that targeted tree/woodland related interventions should be promoted through cross compliance measure under the CAP and through both agri-environment support and forestry grant schemes.

An increase in targeted tree cover can also be achieved by promoting the benefits of tree cover to farm productivity and resilience – for instance the use of trees for shelter and shade, for livestock and crop protection, as well as a measure to mitigate pollution risk and improve water quality [*Reports attached to email in separate document*]. With a focus on increasing agricultural production, and the narrative of food security, we believe it is

important that wherever possible measures are not seen as working counter to agricultural production.

Greater consideration needs to be given for generating income for tree/woodland interventions through water charges or other water market related mechanisms (forms of payment for ecosystem services).

Tree based interventions should include:

- Riparian planting – to intercept nutrients and sediment and lower water temperatures
- Tree planting on erosion vulnerable slopes – preventing sedimentation of water courses
- Woodland creation on floodplains – 'slowing the flow' and mitigating downstream flood risk
- Hedgerow restoration and planting – to reduce surface water runoff
- Tree planting around point source pollution – intercepting pollution run off e.g. around slurry pits and livestock yards, and aerial pollution especially ammonia from livestock units.

Many of these interventions have wider ecosystem services benefits including:

- Biodiversity and support for habitat networks Carbon sequestration and storage
- Support for pollinating insects
- Animal welfare gains and increased pasture productivity through increased shade and shelter
- Possible source of timber and wood fuel

These supplementary benefits need to be factored in when considering the total value of benefits to society against the costs of implementation.

Despite strong evidence in support of tree related interventions to tackle water quality and flood risk issues at source, there has been very little positive action to promote targeted woodland creation through Glastir, and national woodland creation figures despite an improvement in the last few years, are woefully low.

Pollution from towns, cities and transport

In urban areas an increase in the proportion of green infrastructure could have a significant impact on the water environment through reducing surface water runoff and absorbing pollutants. Research by Manchester University [*Report attached to email in separate document*] shows that tree cover can increase the amount of water which infiltrates in to

urban soils and reducing overall pollution load. **Green infrastructure, in addition to sustainable urban drainage, should form a critical part of any new development and be planned strategically across urban areas to maximise benefits to water management and other aspects of a healthy urban environment**. Tree base interventions should include;

- Street trees – in town centres, paved streets and squares
- Highway trees – alongside public highways
- Trees in public open spaces – parks, playing fields and other public open green space to reduce through fall and increase water infiltration
- Trees in private open spaces – in particular retail park car parks, office and industrial unit car parks and hard standing, to reduce through fall and surface water

In addition green infrastructure has wider social benefits in terms of air quality, reducing urban heat island effect, safe travel and biodiversity networks which increase the overall social benefit when compared to the costs.

In summary we would like to see:

- NRW to identify opportunities for using tree and woodland to manage water resources including improving water quality and flood risk management
- Trees and woods featuring in more measures to improve the water environment in River basin Management Plans
- Field-scale mapping of where trees are likely to benefit WFD and flood risk available for the whole country and in the hands of NRW staff responsible for coordinating catchment management plans - better integration of flood risk and WFD delivery as trees/woods can bring benefits to both
- NRW doing more to both promote green infrastructure in its role as a statutory consultee on planning applications and through its work to influence developers, use NRW's survey of urban tree cover in Wales as a catalyst to encourage more towns and cities to achieve woodland town status and initiate projects which provide evidence e.g. I tree hydro when it becomes available in the UK. http://www.itreetools.org/hydro/

4 Who should we work with to achieve the environmental outcome?

Large collaborations working at a catchment scale will enable synergies between organisations and strengths of individual organisations to be to be identified, resulting in a more coordinated approach which will make better use of resources. It is important that the 'glue' for these partnerships is not the funding but a willingness to work together. Funding

from NRW for third sector organisations would enable innovative ways of working to be explored for projects within these partnerships and enable resources to go further.

With regard to diffuse pollution arising from agriculture, we would like to feel confident that

i) all land management advisors, especially those who are influencing farming practice and particularly important those working with individual farmers at a catchment level, are working in partnership, and,

ii) more is done to understand and deliver on the opportunities for trees to contribute to water environment improvements. **Crucially, we would like to see trees and woodland incorporated in NRW/Glastir advisors recommendations to farmers in areas where they are likely to contribute**.

Particularly in urban areas there are opportunities for working with organisations whose own outcomes are not related to WFD objectives, but can help bring about behavioural change at an individual/community level that will help meet those objectives.

The Trust is working with other third sector organisations in Wales e.g. Rivers Trusts in relation to projects with WFD objectives throughout Wales, but to date not in a particularly strategic way. **We are keen to become a partner within priority catchments to promote sustainable water management through the development of robust evidence, the development of mechanisms for funding and targeted tree planting and other measures.**

We take a sectorial approach to identifying actions and have looked at farming and the water quality and urban areas and water quality. We also campaign to promote urban tree cover and green infrastructure for a range of benefits, including water management. These activities will continue. Tree planting is also a great way of engaging people in the environment and in Wales 736 packs and 135,480 trees have been planted through our Free Community/Schools Tree Packs Scheme, the majority in urban areas. We have supported the development of communications materials on water management with the support of funding from the Royal Bank of Canada. We commissioned a report on the evidence from the Pontbren project, which has subsequently been widely promoted through conferences throughout the UK and articles to both the farming audience and water managers. We have also produced two evidence reports on rural and urban water management.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

To date the Trust has not had a particular in depth focus on any individual catchment and is therefore not able to comment.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

No comment.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

We believe that the key environmental effects identified are those of greatest significance. The planting of native trees, in the right place, collectively across Wales will help meet WFD objectives and have a significant positive influence on the following in particular:

- Biodiversity: Effects on the wider protection and enhancement of biodiversity
- Geology and soils: Influences on how land is managed
- Water Relationship to flood risk management
- Climate Mitigation and adaptation for a changing climate
- Landscape: Effects on wider landscape character and quality

2 Is there any other information that we should be taking into account as part of the assessment?

No comment.

Challenges and Choices Consultation

Event feedback

Event: Water Health Partnership Conference

Date: 24 July 2013

Who Attended: Ceri Jones

Total Number attendees : 70. This included DCWW, Las (pollution control), DWI and Public Health Wales. 15 copies of the C&C main doc handed out.

Summary of key points to support Challenges and Choices:

Prof. Stephen Palmer, through his opening address, set out the links between public health in Wales and our water and the real challenge we have to improve the public health across Wales. WG have just released the 'Future Generations' report which sets an agenda for this.

The event focused on source to tap for drinking water. Inparticlar the public health issues and the work of the LA Public Health teams for the private drinking water programme.

Points raised;

- Risk assessment and monitoring of private water supply is the responsibility of the LAs. Representatives at the event were primarily from the LA pollution control teams.
- Private water supply generally relies on groundwater and as an emerging source rainwater harvesting. Public supply is generally surface water.
- E-coli is a big issue. Some chemical issues. This information is collated and reported to EU through the DWI.
- Why do these water supplies have reduced quality? Often it's the result of poor maintenance of the supply (eg lid of well allowing open access), DIY piping over dirty ground (often found at farms!), open access so wildlife, animal stock or field spraying (pesticides etc) can enter the source supply.

- Sectors include: agriculture, caravans parks, B&Bs, rural communities etc. Often associated with tourism and hence the need to promote good clean drinking water.
- Work LAs are doing links to the work of DCWW. DCWW produce the catchment manuals.
- LAs need to complete a programme of site risk assessments. This often involves looking at the catchment and geology etc ~ this links with NRWs catchment work and information can be shared to support both work areas of WFD and private drinking water supply.
- Emerging issues: slug pellets (metaldehyde) in the Dee catchment, new lead standard (iisue with plumbing soldering work etc), pharmaceuticals and endocrine disruptors, disinfection by products, DOC (temp increase also affects this), larch disease (stem injection by NRW), use of grey water systems, fracking, INNS such as sudden ash death and deer, changing vegetation within the catchment.

Follow up

1. Send further information to Monmouthshire CBC, Anthony Davies
2. Arrange catch up with DCWW
3. Use information on emerging issues to help develop the dRBMPs

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name: Sinead Chamberlain

Organisation and Sector: The Coal Authority – Environment Department

Contact Details: SineadChamberlain@coal.gov.uk

River Basin District Response for: Dee

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

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Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

The Coal Authority considers one of the biggest challenges facing waters in the Dee River Basin District is the pollution from abandoned mine workings. We agree that 4 water bodies are affected by pollution from mines in the Dee River Basin District although there could be more depending on the location of the monitoring point within the water body. This is due to two main sources, the contaminated water from the underground workings and the waste material spread upon the surface. There is contamination of mine waters with iron, lead, copper, zinc and cadmium, they can also be quite acidic and are geographically extensive with contamination from dissolved metals causing pollution many kilometres downstream from the initial discharge. The Metal Mine Strategy for wales has identified Focus has been directed on the abandoned mines that are causing the greatest impact on the environment, this includes discharge from a coal mine near Hawarden and the Minera lead mine.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Yes the Coal Authority agrees, as outlined in Q1 above. The contaminated mine water discharges have an effect in the Dee River Basin District. Coal mine waters typically contain iron which whilst not toxic causes deposition of ochre on the stream beds, smothering any life. Metal mine waters typically contain heavy metals, and these can have an eco-toxic effect often stretching long distances from the mine source area.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

It is agreed that the main priority to tackle is that there is no deterioration in the water environment in the future as a result of mine water. This will be enabled via the continuation of the coal programme and by commencing a non-coal programme for remediating Welsh metal mine water issues. Whilst historically, the coal programme has been funded by DECC, it has not been confirmed for the next WFD cycle. At present there is very little funding for metal mine remediation.
The Metal Mine Strategy for Wales, run by NRW with support from the Coal Authority, is investigating the impacts from metal mine pollution eg the Minera lead mine.
To enable progress to be made to address the Water Framework Directive issue of pollution from non-coal mines in Wales, a programme delivery mechanism, with dedicated funding, is required similar to the one established in England.
The coal remediation programme focuses on existing long standing mine waters eg Hawarden, and monitoring networks to identify and intercept potential future discharges. This programme should be recognised as worthy of continued funding in order to provide

benefits to the water environment in Wales. New mine water remediation schemes are only being progressed if they have a favourable cost benefit analysis.

4 Who should we work with to achieve the environmental outcome?

A close partnership between National Resources Wales and the Coal Authority should be continued. This should be supported by collaboration with academic partners to find new and sustainable solutions to tackle mine water treatment. Commitment will be needed to fund sustainable and cost effective long-term treatment for the most polluting mine waters.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Whilst there are many pressures affecting the water environment, as outlined in the consultation document, the impact of abandoned mines in the district remains a severe and long standing issue, and there is a continued need to address the widespread impacts of our region's historical mining legacy.

4 water bodies are being affected by pollution from abandoned mines; this includes ground water failures that are associated with surface conditions. The Coal Authority are investigating the feasibility of treating an abandoned coal mine water discharge located near Hawarden, which would clear up 2km of the Broughton Brook. Through the Metal Mines Strategy for Wales the Minera lead mine near Wrexham has been investigated to understand its impact and to recommend solutions.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

It is a main priority is the preservation of SSSI sites to ensure targets are met. In this instance the priority discharges to be treated are those that have a direct impact on a SSSI. It is essential to secure funding for the next WFD cycle from DECC for the coal mine water programme. It is particularly important to secure the funding for a new Welsh non-coal program, in order to begin work on new metal mine remediation schemes.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name:	**Norman Humphreys.**
Organisation and Sector:	**Afan Valley Angling Club.**
Contact Details:	**avangling@ntlworld.com**
River Basin District Response for:	**Western Wales.**

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

a) A major issue which has the potential to affect rivers across the Western Wales R.B.D., is illegal and unrestricted canoeing. This practice will disrupt and deter returning salmon from spawning as well as destroying spawning redds. Responsible, sustainable access for canoeing is welcomed on rivers where voluntary access agreements can be introduced so that spawning salmon and spawning redds are protected at times when they are vulnerable. Proposed legislation to give unfettered and continuous access would only serve to put added pressure on the already endangered salmon and other migratory fish.

b) The current spate of applications for hydro electric schemes in the R.B.D., are a cause for concern. Schemes have the potential to impede the migration of returning salmon and diminish access to spawning habitat in streams and tributaries where these schemes are introduced. Whilst it is recognised that the NRW is working with HP developers to minimise the impacts of schemes on fish migration and that Local Authorities ensure such applications take into account requirements of the WFD, concerns remain about the the ability of agencies to effectively ensure that the levels of water being abstracted comply with those established during the approval process. It is documented that there are some sixty six thousand potential sites across the UK where such schemes could be sited but that they would generate a total of less than one percent of the UK energy needs. They would do enormous environmental damage and primarily benefit only those with a financial interest in the schemes.

c) In your consultation document, “Water for life and livelihoods” your comments in Section 7 – Physical modifications, do not appear to adequately address a significant conflict that results from the interests of flood defence and those of improving riverine habitat. Angling Clubs are constantly striving to introduce habitat improvements, but anecdotal evidence suggests that where it is perceived these improvements adversely impact on flood defences they are deemed impractical. The claim that the NRW aims to develop “..an holistic, ecosystem approach to flood risk management and want to reduce flood risk using interventions that benefit habitat…”, is welcomed; however, current experience suggest that this approach would require a major cultural change within the organisation rather than a systemic review.

d) Salmon and seatrout are under intensive and growing pressures from predatory fish eating birds (Goosanders and Cormorants). The population of these birds has increased dramatically over recent years to such an extent that many rivers in the R.B.D., are experiencing dramatic losses of parr and smolt, consequently diminishing the potential numbers of returning spawning fish. Scaring tactics have consistently failed to control the rising population and the difficulty in obtaining a culling licence to even attempt some measure of control is seen as a deterrent in itself.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

a) The problems associated with canoeing and predatory birds do not appear to be considered as a significant issue within the Western Wales R.B.D. The Angling Club strongly disagrees with this view. Clubs throughout the R.B.D. area are experiencing substantial difficulties as a consequence of these two matters.

b) Except for the comments relating to Physical modifications (see 1c above), the Angling Club has no other concerns with your description of how significant issues are affecting the water environment and local community.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

a) Predatory birds – the current licencing requirements are far too demanding to provide a satisfactory outcome. Whilst it is understood that resources are an issue in respect of this matter, the whole process needs to be streamlined – perhaps following the English model?
b) Hydroelectric Schemes – as described above, in addition to issues relating to their impact on spawning, an important concern here is perceived to be one of monitoring and control of water usage. The resources required to achieve effective control has to be carefully considered before schemes are given approval.
c) The conflict between Flood defence and Habitat improvement – comments are as above at 1c.
d) Canoeing – this is currently the subject of a Green Paper which will be subjected to consultation in the next few months. Consequently, it would be premature to comment at this stage.

4 Who should we work with to achieve the environmental outcome?

The Angling Club has no comments to make on this particular issue.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

The following comments relate specifically to the River Afan, which lies within the Tawe to Cadoxton Catchment Area,

a) The issues described above for the River Basin District are equally significant on the Afan i.e., predatory birds, hydropower schemes, flood defence / habitat restoration conflicts and canoeing. These issues can be described in more detail as follows:

1. Predatory birds – increasingly, Goosanders are seen on the river (during 2012 there were 133 sightings recorded on or near the river). As a consequence, the Angling Club believes this has resulted in the collapse in the river's brown trout population. This view was supported when, during August 2012, a detailed survey of the main river found only four adult trout (all seatrout).
2. Hydropower schemes – currently there is only one scheme being assessed; however a desktop survey indicates a possible 40 sites as suitable for the generation of hydro power in the Afan catchment. Of these, seven offer significant opportunities.
3. Flood defence – in a variety of attempts to reduce flood risk, the River Afan has seen a number of initiatives which the Angling Club believes are not in the interest of riverine habitat. For example, blockstone channels which increase flows and displaces gravel; the reduction of in-river habitat by the removal of large stones and wooden debris; the loss of riparian cover due to blockstone bank support, tree cutting etc. Additionally, gravel loss has taken place continuously for a number of years – in the name of flood defence, thousands of tonnes have been removed from the Port Talbot town centre area.
4. Canoeing – in common with many rivers within the Catchtment area, the River Afan is plagued by illegal canoeing with its associated fishery management consequences.

In addition to the above, certain tributaries of the River Afan, particularly the Rivers Pelenna and Corrwg are at risk from mine water discharges (for particular reference to the Pelenna see "Western Wales R.B.D.: Challenges and choices" – page 30). Whilst there are remedial initiatives in place, the overriding concern is that these facilities are maintained at a level which will ensure that they function effectively in the future.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Please see the response provided in Section 3 of this document which is believed to be relevant both at River Basin and Catchment levels.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

a) The Angling Club strongly believes that more emphasis should be placed on the damage caused by predatory birds, the conflict between Flood Defence and riverine habitat improvement and the need for strict control over hydropower schemes. In addition, it is considered that the impact of canoeing on riverine habitat is worthy of more detailed focus – although at this point it is recognised that this is a highly politicised issue.

2 Is there any other information that we should be taking into account as part of the assessment?
The Angling Club has nothing further to add to the comments already made above.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name _____Andy Rowland_____

Organisation and Sector __ecodyfi, third_____

Contact Details _andy.rowland@ecodyfi.org.uk 01654 703965_____

River Basin District Response for _Western Wales_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Flooding
Quality
Conflict over use and over flood defence

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

4 Who should we work with to achieve the environmental outcome?

Involve the Dyfi Biosphere Partnership

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

2 Is there any other information that we should be taking into account as part of the assessment?

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name __Andrew Arnott_____

Organisation and Sector: Green Energy Partners – Environmental Consultancy

Contact Details _andrewa@greenenergypartners.co.uk_____

River Basin District Response for _Istern Wales River Basin District

Background

River Basin Management is the process I use to make improvements to the water environment. The River Basin Management Plans will be revieId and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Many small scale private hydro poIr schemes operate within the area, providing poIr for farms, small businesses and local communities. They are mostly low impact and in-keeping with the historical use of water as a source of poIr within Snowdonia. I believe recent interest in large scale hydro poIr by foreign or multi-national companies on major rivers rather than small tributaries will be detrimental to both the environment and local communities. Avoiding the industrialisation of currently free flowing river systems and destruction of habitats in the name of renewable energy is a major challenge.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your ansIr.

I agree with the descriptions given in the supporting literature. Our response is in regards to “Physical modifications” of river systems.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

I believe that NRW should be robust is refusing abstraction licences to hydro poIr projects that fall within certain criteria. These are schemes which:

-Affect a major river (rather than small high gradient tributaries).
-Create reduced reach on rivers important for migratory fish.
-Affect habitats protected by a SSSI designation (including areas indirectly affected by changes in natural flow patterns).
-Prevent or reduce existing recreational activity (such as angling, kayaking/canoeing and rambling).
- Affect a river with a high level of importance to the tourism industry of local communities.
-Result in the status of a major free following river being changed to “Highly Modified”
-Affect the hydromorphology of a river system particularly in reference to sediment transfer.
-Lie within areas classified as “Areas of Outstanding Natural Beauty”

4 Who should I work with to achieve the environmental outcome?

Local communities, recreational users including anglers, canoeists and wild swimmers, local businesses reliant on the river for their livelihood (outdoor centres, accommodation providers etc)

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your anslr.

Our response is relevant to the whole basin area but as a group I are concerned with the Conwy catchment. This catchment is currently subject to a proposal for a run of river scheme

stretching from above Conwy falls to the confluence with the river Lledr. Our meeting with the developers has led us to believe this is only the first of many schemes planned in the Ist Wales Basin.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

I believe our issue of concern regarding use of the Conwy river catchment, and other catchments in the basin can be tackled by NRW being robust in granting abstraction licenses as detailed above. NRW already has the resources and ability to do this.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that I are focused on the key environmental effects?

On the whole yes. I believe the use of rivers as a recreational resource and the ability of people to access a “wild place” through their use should be an important factor in any decision.

2 Is there any other information that I should be taking into account as part of the assessment?

The history of run of river hydro power projects and their negative impacts on both the environment and local communities in British Columbia is relevant to proposed schemes here.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name: David Woolsey

Organisation and Sector: North Avon Canoe Club, Avon Outdoor Activities Club & 1st Chipping Sodbury Scout Group.

Contact Details: david.woolsey@chippingsodburyscouts.org.uk

River Basin District Response for: Western Wales River Basin District

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Many small scale private hydro power schemes operate within the area, providing power for farms, small businesses and local communities. They are mostly low impact and in-keeping with the historical use of water as a source of power within Snowdonia. We believe recent interest in large scale hydro power by foreign or multi-national companies on major rivers rather than small tributaries will be detrimental to both the environment and local communities. Avoiding the industrialisation of currently free flowing river systems and destruction of habitats in the name of renewable energy is a major challenge.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

We agree with the descriptions given in the supporting literature. Our response is in regards to “Physical modifications” of river systems.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

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-Affect the hydromorphology of a river system particularly in reference to sediment transfer.
-Lie within areas classified as “Areas of Outstanding Natural Beauty

4 Who should we work with to achieve the environmental outcome?

Local communities, recreational users including anglers, canoeists and wild swimmers, local businesses reliant on the river for their livelihood (outdoor centres, accommodation providers etc) and national organisations which use the environments (eg. The Scout Association, Canoe Wales (BCU) etc)

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Our response is relevant to the whole basin area but we are especially concerned with the Conwy catchment. This catchment is currently subject to a proposal for a run of river scheme

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

We believe our issue of concern regarding use of the Conwy river catchment, and other catchments in the basin can be tackled by NRW being robust in granting abstraction licenses as detailed above. NRW already has the resources and ability to do this.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

On the whole yes. We believe the use of rivers as a recreational resource and the ability of people to access a “wild place” through their use should be an important factor in any decision.

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The history of run of river hydro power projects and their negative impacts on both the environment and local communities in British Columbia is relevant to proposed schemes here.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name Jaimin Patel

Organisation and Sector Aston University Canoe Club (Chairman)

Contact Details patelj47@aston.ac.uk

River Basin District Response for Western Wales River Basin District

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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Challenges and Choices Consultation Questions

The significant issues

1 What do you consider to be the biggest challenges facing waters in your River Basin District?

Many small scale private hydro power schemes operate within the area, providing power for farms, small businesses and local communities. They are mostly low impact and in-keeping with the historical use of water as a source of power within Snowdonia. I believe recent interest in large scale hydro power by foreign or multi-national companies on major rivers rather than small tributaries will be detrimental to both the environment and local communities. Avoiding the industrialisation of currently free flowing river systems and destruction of habitats in the name of renewable energy is a major challenge.

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4 Who should we work with to achieve the environmental outcome?

Local communities, recreational users including anglers, canoeists and wild swimmers, local businesses reliant on the river for their livelihood (outdoor centres, accommodation providers etc)

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

My response is relevant to the whole basin area but I am concerned with the Conwy catchment. This catchment is currently subject to a proposal for a run of river scheme stretching from above Conwy falls to the confluence with the river Lledr

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

I believe our issue of concern regarding use of the Conwy river catchment, and other catchments in the basin can be tackled by NRW being robust in granting abstraction licenses as detailed above. NRW already has the resources and ability to do this.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

On the whole yes. I believe the use of rivers as a recreational resource and the ability of people to access a “wild place” through their use should be an important factor in any decision.

2 Is there any other information that we should be taking into account as part of the assessment?

The history of run of river hydro power projects and their negative impacts on both the environment and local communities in British Columbia is relevant to proposed schemes here.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name Joe Callard

Organisation and Sector Aberystwyth University Canoe Club

Contact Details Joc39@aber.ac.uk

River Basin District Response for Western Wales River Basin District

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

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This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

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Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Many small scale private hydro power schemes operate within the area, providing power for farms, small businesses and local communities. They are mostly low impact and in-keeping with the historical use of water as a source of power within Snowdonia. I believe recent interest in large scale hydro power by foreign or multi-national companies on major rivers rather than small tributaries will be detrimental to both the environment and local communities. Avoiding the industrialisation of currently free flowing river systems and destruction of habitats in the name of renewable energy is a major challenge.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

We agree with the descriptions given in the supporting literature. My response is in regards to “Physical modifications” of river systems.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

I believe that NRW should be robust is refusing abstraction licences to hydro power projects that fall within certain criteria. These are schemes which:

-Affect a major river (rather than small high gradient tributaries).
-Create reduced reach on rivers important for migratory fish.
-Affect habitats protected by a SSSI designation (including areas indirectly affected by changes in natural flow patterns).
-Prevent or reduce existing recreational activity (such as angling, kayaking/canoeing and rambling).
- Affect a river with a high level of importance to the tourism industry of local communities.
-Result in the status of a major free following river being changed to “Highly Modified”
-Affect the hydromorphology of a river system particularly in reference to sediment transfer.
-Lie within areas classified as “Areas of Outstanding Natural Beauty”

4 Who should we work with to achieve the environmental outcome?
Local communities, recreational users including anglers, canoeists and wild swimmers, local businesses reliant on the river for their livelihood (outdoor centres, accommodation providers etc)

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.
My response is relevant to the whole basin area but as a group I am concerned with the Conwy catchment. This catchment is currently subject to a proposal for a run of river scheme stretching from above Conwy falls to the confluence with the river Lledr. Meetings with the developers has led me to believe this is only the first of many schemes planned in the West Wales Basin.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.
I believe the issue of concern regarding use of the Conwy river catchment, and other catchments in the basin can be tackled by NRW being robust in granting abstraction licenses as detailed above. NRW already has the resources and ability to do this.

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?
On the whole yes. I believe the use of rivers as a recreational resource and the ability of people to access a “wild place” through their use should be an important factor in any decision.

2 Is there any other information that we should be taking into account as part of the assessment*?*
The history of run of river hydro power projects and their negative impacts on both the environment and local communities in British Columbia is relevant to proposed schemes here.

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name _____Matt Blue_____

Organisation and Sector _____Blue Paddle_____

Contact Details

_____

River Basin District Response for ___Conway_____

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

The destruction of one of the country's most beautiful and wild rivers and all the wild life that lives there.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community ? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

Yes, and the loss of the river sections

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

Find another area that isn't so diverse or popular

4 Who should we work with to achieve the environmental outcome?

All user groups

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community ? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

Conway, All the user groups that will effect the tourism in the area dramatically

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

Conway, Find another valley that isn't so popular or diverse

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

yes

2 Is there any other information that we should be taking into account as part of the assessment?

no

Challenges and Choices and Strategic Environmental Assessment (SEA)

Written Consultation Response

Name

Organisation and Sector Private environmental consultant and recreational user

Contact Details

River Basin District Response for Western Wales River Basin District

Background

River Basin Management is the process we use to make improvements to the water environment. The River Basin Management Plans will be reviewed and revised plans will be published in December 2015. Natural Resources Wales is asking what you think the significant issues are for the water environment, the best ways to tackle them and what the priorities should be.

No one organisation can do it alone. Working across sectors and co-delivering in partnership are essential if we are to improve and maintain the water environment in Wales.

This consultation starts on 22 June 2013 and ends on 22 December 2013 and seeks your views on:

- **The biggest challenges facing the water environment in Wales**
- **The best way to tackle these issues and what should be done first**
- **Who we should work with to achieve the environmental outcome**

How can I find out more?

Further information on all of the River Basin Planning consultations is available through the Natural Resources Wales[1] or the Environment Agency's websites.

You can also contact the River Basin Programme Managers for your River Basin District.

Ceri Jones for the Dee and Western Wales. Chris Tidridge for the Severn.

[1]As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol

Cyfoeth Naturiol Cymru
Natural Resources Wales

Challenges and Choices Consultation Questions

The significant issues

1 What do **you** consider to be the biggest challenges facing waters in your River Basin District?

Recent interest in large and medium scale hydro power by foreign or multi-national companies on major rivers rather than small tributaries will be detrimental to both the environment and local communities. Avoiding development of currently free flowing river systems and destruction of habitats for minimal return renewable energy is a major challenge. Additionally disruption of natural water flows in the upper reaches of catchments by building windfarms and their associated infrastructure on moorland is destructive and not actually very “green”.

Diffuse pollution from farming practices.

2 Do you agree with our description of how the significant issues are affecting the water environment and the local community? Please specify which issue(s) your response refers to and provide relevant information to help explain your answer.

The descriptions given in the supporting literature are sensible and accessible. My response concerns *Physical modifications* and *Pollution from rural areas*.

3 How do you think these issues should be tackled, and what would you choose to do first? Please specify which issue(s) your response refers to. Please consider any resource limitations.

Physical Modifications
NRW should enforce the refusal of abstraction licences to hydro power projects which:

- Affect a major river (rather than small high gradient tributaries).
- Create reduced reach on rivers important for migratory fish.
- Affect habitats protected by any national or international designation i.e. SSSI, SAC, SPA, AONB, (including areas indirectly affected by changes in natural flow patterns).
- Prevent or reduce existing recreational activity (such as angling, kayaking/canoeing and rambling).
- Affect a river with a high level of importance to the tourism industry of local communities.
- Result in the status of a major free following river being changed to “Highly Modified”
- Significantly affects the hydromorphology of a river system particularly in reference to sediment transfer.

Rural Pollution
Re-vegetating of river banks and sympathetic stocking levels have been shown to make dramatic impact as well as parallel hedge planting on slopes, and minimal use of additives to the land near watercourses, with limited use further upslope. Importantly also is creating a shift in farmer perceptions of working with the land rather than post war thinking of maximum

production and reliance on subsidies as a right. There should be adequate provision of coherent ecosystem thinking in agri-environment advice to farmers.

4 Who should we work with to achieve the environmental outcome?

Local communities, recreational users including anglers, canoeists and wild swimmers, local businesses reliant on the river recreation for their livelihood (outdoor centres, accommodation providers etc), farmers and land owners as well.

The catchments

5 How are the significant issues in a catchment affecting the water environment and the local community? Please specify which catchment(s) your response refers to and provide relevant information to help explain your answer.

My response is relevant to the whole basin area.

Of particular concern is the proposal for a hydro development scheme stretching from above Conwy falls to the confluence with the river Lledr the Conwy catchment. This is a stunning relatively wild stretch of river which is of great value to the biodiversity of North Wales and recreation. This is likely to be the first of many schemes planned in the West Wales Basin.

6 How do you think the challenges affecting each catchment should be tackled and what would you choose to do first? Please specify which catchment(s) your response refers to. Please consider any resource limitations.

NRW should enforce the refusal of abstraction licences as detailed above, especially in areas of importance for biodiversity. NRW already has the resources and ability to do this.

Helping to supporting and develop a network of robust and environmentally sensitive advice for farmers and landowners which could be provided by FWAG Cymru.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Strategic Environmental Assessment Consultation Questions

1 Do you agree that we are focused on the key environmental effects?

Yes although the cultural and recreational value provided by rivers should be an important factor in any decision.

2 Is there any other information that we should be taking into account as part of the assessment?

The history of run of river hydro power projects and their negative impacts on both the environment and local communities in British Columbia is relevant to proposed schemes here.

Cyhoeddwyd gan:
Cyfoeth Naturiol Cymru
Tŷ Cambria
29 Heol Casnewydd
Caerdydd
CF24 0TP

0300 065 3000 (Llun-Gwenwr, 8am - 6pm)

ymholiadau@cyfoethnaturiolcymru.gov.uk
www.cyfoethnaturiolcymru.gov.uk

[H] Cyfoeth Naturiol Cymru