Cyfoeth Naturiol Cymru
Natural Resources Wales

Dee River Basin Management Plan
4th Cycle
Strategic Environmental Assessment
Environmental Report

Environmental and Health Assessment Team

Rev No: 1 (For formal consultation)

Crynodeb annhechnegol

Beth yw'r ddogfen hon?

Dyma grynodeb annhechnegol o'r adroddiad amgylcheddol sy'n dogfennu Asesiad Amgylcheddol Strategol y ffurf ddrafft o Gynllun Rheoli Basn Afon Dyfrdwy. Mae'n llywio'r ymgynghoriad ar y ffurf ddrafft o Gynllun Rheoli Basn Afon Dyfrdwy, sy'n cael ei gynnal rhwng mis Tachwedd 2026 a mis Mai 2027.

Asesiad Amgylcheddol Strategol

Cynhaliwyd yr Asesiad Amgylcheddol Strategol i sicrhau bod effeithiau amgylcheddol yn cael eu hystyried wrth lunio Cynllun Rheoli Basn Afon Dyfrdwy ochr yn ochr ag ystyriaethau technegol ac economaidd ac ystyriaethau eraill.

Ymgymerwyd â'r gwaith cwmpasu i sicrhau bod yr asesiad yn canolbwyntio ar effeithiau arwyddocaol tebygol y cynllun. Ni chafodd unrhyw bynciau amgylcheddol eu hepgor o gwmpas y cynllun. O ystyried cymhlethdod y rhaglen o fesurau, gyda mesurau cyrff dŵr cenedlaethol a mesurau penodol i'r gofod, fe wnaethom ddatblygu methodoleg yr Asesiad Amgylcheddol Strategol i ganiatáu inni ganolbwyntio ar effeithiau arwyddocaol ac, yn benodol, ymchwilio i unrhyw effeithiau negyddol er mwyn osgoi neu leihau effeithiau o'r fath.

Yn ystod y gwaith cwmpasu, adolygwyd polisïau, cynlluniau, rhaglenni a deddfwriaethau perthnasol er mwyn pennu synergeddau ac achosion o wrthdaro posibl â'r cynllun. Cafodd crynodeb o'r wybodaeth sylfaenol sy'n berthnasol i'r cynllun ei ddogfennu a'i ddatblygu er mwyn pennu materion a thueddiadau allweddol. Llywiodd hyn ddatblygiad amcanion yr Asesiad Amgylcheddol Strategol a chwestiynau arweiniol i'w cymhwyso i'r mesurau hynny a gynhwysir yn yr asesiad.

Mae Cynlluniau Rheoli Basnau Afonydd wedi'u hanelu'n sylfaenol at wella'r amgylchedd dŵr. Rhaid i'r Asesiad Amgylcheddol Strategol sicrhau, wrth wneud hynny, ein bod yn nodi ac yna'n osgoi, yn lleihau neu'n lliniaru unrhyw effeithiau negyddol canlyniadol ac yn ceisio gwneud y mwyaf o effeithiau cadarnhaol. Mae hierarchaeth yr asesiad amgylcheddol yn caniatáu inni ystyried effeithiau amgylcheddol y Cynllun Rheoli Basn Afon ar lefel strategol ac i lywio'r rhaglenni, y cynlluniau, y strategaethau a'r prosiectau a gyflawnir o dan y rhaglen o fesurau.

Asesiad o'r Effaith ar Iechyd

Mae Asesiad o'r Effaith ar Iechyd wedi'i gynnal i benderfynu sut y gallai'r Cynllun Rheoli Basn Afon effeithio ar iechyd a llesiant corfforol a meddyliol pobl yng Nghymru, nodi effeithiau posibl ar anghydraddoldebau iechyd, ac argymell mesurau i wneud y mwyaf o fuddion i iechyd wrth leihau effeithiau negyddol posibl. Mae wedi cryfhau ystyriaeth o'r pwnc 'poblogaeth ac iechyd dynol' yn yr Asesiad Amgylcheddol Strategol.

Asesiad Rheoliadau Cynefinoedd

Mae Asesiad Rheoliadau Cynefinoedd yn cael ei ddatblygu'n ailadroddol gyda'r cynllun a'r Asesiad Amgylcheddol Strategol, a bydd yn cael ei gyhoeddi ar ffurf adroddiad drafft ar wahân ochr yn ochr â'r cynllun drafft. Mae casgliadau'r Asesiad Rheoliadau Cynefinoedd drafft wedi'u hystyried yn yr Asesiad Amgylcheddol Strategol.

Crynodeb o effeithiau amgylcheddol

Daeth yr Asesiad o'r Effaith ar Iechyd i'r casgliad bod gan y Cynllun Rheoli Basn Afon drafft y potensial i ddarparu buddion hirdymor sylweddol i iechyd a llesiant pobl ledled Cymru ac roedd hyn yn cefnogi'r asesiad o'r pwnc '**poblogaeth ac iechyd dynol**' yn yr Asesiad Amgylcheddol Strategol, **yr aseswyd ei fod yn gadarnhaol ar y cyfan.**

Disgwylir i welliannau o ran ansawdd dŵr, diogelwch dŵr yfed, ansawdd amgylcheddol, bioamrywiaeth, y gallu i wrthsefyll effeithiau newid yn yr hinsawdd, a mynediad at fannau glas a gwyrdd gefnogi deilliannau iechyd corfforol a meddyliol cadarnhaol wrth gyfrannu at lesiant cymdeithasol, amgylcheddol ac economaidd ehangach. Mae'r cynlluniau hefyd yn darparu cyfleoedd i gryfhau gwydnwch cymunedol, gwella mynediad at fyd natur, a gwella amodau amgylcheddol sy'n cefnogi cymunedau iachach.

Tynnodd yr asesiad o fioamrywiaeth, fflora a ffawna sylw at effeithiau cadarnhaol adfer cyrff dŵr a mawndiroedd a chymhwyso mesurau cynghori a rheoleiddiol yn helaeth i fynd i'r afael â llygredd mewn ardaloedd gwledig a llygredd dŵr gwastraff. Penderfynodd yr Asesiad Rheoliadau Cynefinoedd drafft fod potensial ar gyfer effeithiau niweidiol ar laswelltir metelaidd. Er bod graddfa'r effaith yn isel o ran yr ardal yr effeithir arni, mae'r effaith negyddol yn deillio o'r effaith bosibl ar laswelltir metelaidd – sy'n gynefin o dan adran 7 ac sydd, mewn rhai achosion, yn nodwedd o Safleoedd Ewropeaidd. Heb leihau pwysigrwydd y mater hwn, mae effaith gyffredinol y Cynllun Rheoli Basn Afon drafft ar **fioamrywiaeth, fflora a ffawna wedi'i hasesu fel un sy'n gadarnhaol ar y cyfan.**

Aseswyd effeithiau'r mesurau a gynhwyswyd yn y cwmpas ar ddefnydd tir, daeareg, pridd a thir halogedig fel cyfuniad o effeithiau cadarnhaol neu niwtral. O'r mesurau hyn, mae rhai o fudd uniongyrchol, e.e. adfer mawndir neu adfer tir halogedig, a bydd gan rai fudd anuniongyrchol, e.e. gall mesurau i fynd i'r afael â llygredd gwasgaredig fod o fudd i swyddogaeth ac iechyd pridd. Ystyriwyd bod mesurau i fynd i'r afael â tharddle penodol, neu'r amgylchedd dŵr yn benodol, yn niwtral o ran effaith. Mae rhaglen o fesurau'r Cynllun Rheoli Basn Afon drafft yn cynnwys mesurau cenedlaethol a mesurau yn ymwneud â chyrff dŵr sydd wedi'u hanelu at fecanweithiau cyflawni rheoleiddiol, cynghorol ac addysgol i ddylanwadu ar reolaeth tir. Mae'r rhain wedi cael eu cymhwyso'n eang ledled yr ardal basn afon ac felly ar y cyfan mae effaith gyffredinol y Cynllun Rheoli Basn Afon drafft ar **ddefnydd tir,**

daeareg, pridd a thir halogedig wedi'i hasesu i fod yn effaith gadarnhaol ar y cyfan.

Fel y byddai disgwyl o'r Cynllun Rheoli Basn Afon drafft, mae'r asesiad cyffredinol o **effeithiau ar ansawdd a maint dŵr yn gadarnhaol ar y cyfan**. Bydd arwyddocâd yr effaith yn dibynnu ar ddarparu adnoddau ar gyfer ymchwilio ymhellach i'r methiannau a'r dirywiadau, ac ar raddfa gweithredu mesurau i fynd i'r afael â hwy.

Nid yw llawer o fesurau'r Cynllun Rheoli Basn Afon drafft wedi'u bwriadu'n benodol i leihau allyriadau llygryddion aer na gwella ansawdd aer ac o ganlyniad mae'r effeithiau ar **aer wedi'u hasesu fel rhai niwtral ar y cyfan**. Fodd bynnag, mae cyfle i godi ymwybyddiaeth yn gyffredinol o effaith dyddodiad atmosfferig ar ein cyrff dŵr.

Mae seilwaith ffisegol ac asedau sy'n gysylltiedig â'r amgylchedd dŵr yn cynnwys asedau rheoli perygl llifogydd ac asedau cwmnïau dŵr, ac mae'r pwnc hwn hefyd yn ystyried defnydd deunyddiau a gwastraff a gynhyrchir. Mae'r Cynllun Rheoli Basn Afon drafft yn cefnogi rheolaeth a gwelliant parhaus asedau o'r fath, er mwyn sicrhau budd i'r amgylchedd dŵr ac addasu i'n hinsawdd sy'n newid. Gwnaed argymhellion y dylid defnyddio deunyddiau carbon isel, o ffynonellau lleol a chynaliadwy, pryd bynnag y bo modd. Mae effaith gyffredinol y Cynllun Rheoli Basn Afon drafft ar **seilwaith ac asedau ffisegol wedi'i hasesu fel effaith gadarnhaol ar y cyfan.**

Roedd effaith rhaglen o fesurau'r Cynllun Rheoli Basn Afon drafft ar dreftadaeth ddiwylliannol yn amrywiol. Aseswyd bod gwaith adfer mawndiroedd yn gadarnhaol gan fod ailwlychu ac adfer mawndiroedd yn cadw'r cofnodion treftadaeth unigryw sydd ynddynt. Ystyriwyd bod rhai mesurau'n niwtral pan nad oedd llwybrau ar gyfer effeithiau, ond roedd rhai'n negyddol. Roedd y mesurau a aseswyd fel rhai negyddol yn gysylltiedig â chael gwared ar rwystrau i allu pysgod i fudo, adfer addasiadau ffisegol, ac adfer safleoedd mwyngloddiau segur. Gall y safleoedd a'r adeileddau hyn fod yn dirweddau neu'n adeileddau treftadaeth sensitif, ac er y byddai ymchwiliad ac arfarniad ar lefel y prosiect yn debygol o liniaru'r effeithiau trwy arfarnu a dylunio opsiynau sensitif, daethpwyd i'r casgliad bod rhai mesurau yn cael effaith negyddol bosibl.

Mae cylchoedd blaenorol o Gynlluniau Rheoli Basnau Afonydd, a chyflawni'r mesurau hyn dros yr 20 mlynedd diwethaf, wedi dangos bod prosiectau o'r fath yn cael eu rheoli'n sensitif a gallant ddarparu buddion i'r amgylchedd hanesyddol. Gall prosiectau ddiogelu asedau treftadaeth yn eu lleoliad gwreiddiol yn yr hirdymor, e.e. mesurau sy'n lleihau'r tebygolrwydd y bydd y ddaear yn cael ei herydu a'i difrodi pan fydd y llif yn uchel. Gellir osgoi, lleihau a/neu liniaru effeithiau negyddol ar dreftadaeth ddiwylliannol sy'n deillio o adfer safleoedd; fodd bynnag, o ystyried sensitifrwydd y safleoedd, a'r ffaith bod prosiectau adfer yn anochel yn arwain at newidiadau i'r dirwedd hanesyddol a/neu leoliad asedau hanesyddol, mae'n bosibl y gallai'r mesurau hyn gael effeithiau negyddol. Aseswyd bod effaith gyffredinol y Cynllun Rheoli Basn Afon drafft ar **dreftadaeth ddiwylliannol yn ansicr ar y cyfan**. Gwnaed yr asesiad cyffredinol hwn ar ôl ystyried cylchoedd blaenorol Cynlluniau Rheoli Basnau Afonydd, polisïau a chanllawiau ar lefel y prosiect, a'r mesurau lliniaru sydd ar waith.

Roedd yr **effaith ar y dirwedd a'r morwedd yn niwtral ar y cyfan**. Mae mesurau penodol yn anelu at adfer neu warchod cyrff dŵr a dalgylchoedd ehangach (e.e. mawndir) a allai fod o fudd i'r dirwedd, ond mae'n ansicr i ba raddau y caiff yr ymyriadau hyn eu gweithredu. Gallai cyflawni prosiectau adfer mwyngloddiau arwain at effeithiau negyddol ar dirweddau hanesyddol. Fel sy'n wir am dreftadaeth ddiwylliannol, gall ystyriaeth gynnar wrth ddylunio'r cynlluniau hyn liniaru'r effeithiau hyn ac mae'n annhebygol y bydd effaith negyddol ar y dirwedd a'r morwedd ar lefel ardal basn afon.

Roedd ffactorau hinsoddol, a'r angen i liniaru ac addasu i newid hinsawdd, yn ystyriaeth ar draws pob pwnc. Dyma rywbeth sy'n peri pwysau allweddol ar draws pob agwedd ar yr amgylchedd. Roedd mesurau penodol yn arwyddocaol o gadarnhaol, gan alluogi'r perygl o lifogydd i gael ei reoli yn barhaus ar gyfer seilwaith ac cymunedau arfordirol; mae adfer afonydd a mawndiroedd hefyd yn chwarae rhan bwysig wrth liniaru effeithiau newid yn yr hinsawdd ac addasu iddynt. Aseswyd mesurau eraill fel rhai niwtral ac, yn gyffredinol, oherwydd yr ansicrwydd ynghylch graddau gweithredu'r mesurau, roedd yr **effaith gyffredinol ar ffactorau hinsoddol yn niwtral**. Fodd bynnag, trwy broses dda o arfarnu opsiynau a dylunio, mae cyfleoedd sy'n gysylltiedig â mesurau i sicrhau budd carbon net a dyluniadau (gan gynnwys dyluniadau tirwedd) sy'n wydn a/neu'n addasadwy i newid hinsawdd.

Bydd graddau arwyddocâd effeithiau cadarnhaol y rhaglen o fesurau yn y Cynllun Rheoli Basn Afon drafft yn dibynnu ar yr ymdrech ymchwiliol a lefel y ddarpariaeth.

Cyfleoedd i liniaru a gwella

Mae'r Cynllun Rheoli Basn Afon drafft yn darparu offeryn gwerthfawr i CNC, cwmnïau dŵr a phartneriaid er mwyn cyflawni rheolaeth integredig ar ddalgylchoedd, drwy gydweithio a chanolbwyntio adnoddau lle gallant gael y budd mwyaf. Bydd darpariaeth integredig o'r fath hefyd yn lleihau'r effeithiau negyddol lleol a'r tarfu sy'n gysylltiedig â gwaith adeiladu neu weithredu'r mesurau.

Bydd cymhwyso hierarchaeth asesiadau amgylcheddol ac iechyd yn sicrhau y gellir cyflawni cynlluniau a phrosiectau haen is mewn ffordd sy'n osgoi neu'n lleihau effeithiau negyddol ac yn cynyddu effeithiau cadarnhaol i'r eithaf.

Effeithiau cronnol y cynllun

Daeth ystyriaeth o ryngweithio'r cynllun â pholisïau, cynlluniau, rhaglenni a deddfwriaethau eraill yng Nghymru a Lloegr i'r casgliad bod aliniad a chyfraniad cryf mewn perthynas ag amcanion llesiant Cyfoeth Naturiol Cymru, Cynllun Gwella Amgylcheddol 2025, yr egwyddorion amgylcheddol, polisïau a fframweithiau cynllunio, a strategaethau a chynlluniau eraill sy'n benodol i swyddogaeth.

Asesiad o ddewisiadau amgen

Mae'r Rheoliadau Asesu Amgylcheddol Strategol yn ei gwneud yn ofynnol i adroddiad amgylcheddol gynnwys gwerthusiad o effeithiau arwyddocaol tebygol y cynllun ac opsiynau amgen rhesymol.

Dyma'r dewisiadau amgen a ystyriwyd ar gyfer afon Dyfrdwy yng Nghymru:

A. Gwneud dim

B. Adolygu a diweddaru'r rhaglen o fesurau ar gyfer Cynllun Rheoli Basn Afon 3 heb gynnwys mesurau sy'n berthnasol i gyrff dŵr

C. Cymryd camau i adolygu a diweddaru'r rhaglen o fesurau ar gyfer Cynllun Rheoli Basn Afon 3, gan gynnwys datblygu mesurau yn ymwneud â chyrff dŵr ar gyfer pob corff dŵr ledled Cymru, er mwyn cynnal neu gyflawni statws neu botensial ecolegol da

D. Cymryd camau i adolygu a diweddaru'r rhaglen o fesurau ar gyfer Cynllun Rheoli Basn Afon 3, gan gynnwys datblygu mesurau yn ymwneud â chyrff dŵr ar gyfer pob corff dŵr ledled Cymru nad ydynt yn cyflawni statws neu botensial ecolegol da

E. Cymryd camau i adolygu a diweddaru'r rhaglen o fesurau ar gyfer Cynllun Rheoli Basn Afon 3, gan gynnwys llunio mesurau yn ymwneud â chyrff dŵr ar gyfer "dalgylch prawf" yn unig

F. Opsiwn atodol – fel Opsiwn D, ond blaenoriaethu'r ddarpariaeth yn seiliedig ar y canlynol:

- cyfleoedd cydweithredol
- mesurau sy'n sbarduno'r gwelliant mwyaf / buddion lluosog
- budd cost cadarn

Ystyriwyd bod dewisiadau amgen C, D ac F yn rhesymol a chawsant eu datblygu er mwyn eu hasesu. Y dewis amgen sy'n cael ei ddatblygu ar gyfer y Cynllun Rheoli Basn Afon drafft yw Opsiwn D.

Y dewisiadau amgen a nodwyd ar gyfer afon Dyfrdwy yn Lloegr oedd y canlynol:

1. Gwneud dim
2. Dewisiadau amgen i'r cynllun strategol

    A. Adolygu a diweddaru Cynllun Rheoli Basn Afon 3 a'r rhaglen o fesurau bresennol heb gynnwys mesurau penodol i gyrff dŵr

    B. Adolygu a diweddaru'r rhaglen o fesurau yn unig heb gynhyrchu Cynllun Rheoli Basn Afon wedi'i ddiweddaru

    C. Adolygu a diweddaru Cynllun Rheoli Basn Afon 3 a'r rhaglen o fesurau i gynnwys mesurau penodol i gyrff dŵr

    D. Adolygu a diweddaru Cynllun Rheoli Basn Afon 3 a'r rhaglen o fesurau i gynnwys mesurau penodol i gyrff dŵr a datblygu'r rhain gyda mwy o gydweithrediad gan randdeiliaid

E. Adolygu a diweddaru Cynllun Rheoli Basn Afon 3 a'r rhaglen o fesurau i gynnwys mesurau penodol i gyrff dŵr (Opsiwn C) ynghyd â mwy o chydlyniant â chynlluniau eraill

F. Adolygu a diweddaru Cynllun Rheoli Basn Afon 3 a'r rhaglen o fesurau i gynnwys mesurau penodol i gyrff dŵr (Opsiwn C) ynghyd ag ymgorfforiad llawn o'r cynllun amgylchedd dŵr newydd a meddylfryd cynlluniwr systemau.

3. Dewisiadau amgen i'r rhaglen

A. Dull graddol ar gyfer rhaglen o fesurau a gynhyrchwyd yn genedlaethol ac yn yr ardal gydag ymgysylltiad allanol

B. Mae timau ardal yn datblygu rhaglen o fesurau heb fewnbwn cenedlaethol i lenwi rhestrau ymlaen llaw

C. Y tîm cenedlaethol i lenwi rhaglen o fesurau a cheisio ymgysylltiad allanol heb fewnbwn timau ardal

D. Fel Opsiwn A, ond dim ond cynnwys y mesurau hynny sy'n cael eu hariannu ac sydd â mecanwaith cyflawni

Yna datblygir dewisiadau amgen 2C, 2E a 3A i'w hasesu yn erbyn amcanion yr Asesiad Amgylcheddol Strategol.

Monitro effeithiau arwyddocaol y cynllun

Unwaith y bydd y cynllun drafft wedi'i gwblhau a'i fabwysiadu, mae'r Rheoliadau Asesu Amgylcheddol Strategol yn ei gwneud yn ofynnol i'w effeithiau amgylcheddol arwyddocaol gael eu monitro. Mae'r adroddiad hwn yn amlinellu'r camau gweithredu yr ydym yn disgwyl eu cymryd mewn perthynas â monitro effeithiau amgylcheddol arwyddocaol y cynllun. Bydd hyn yn cael ei ddatblygu a'i gyhoeddi ochr yn ochr â'r cynllun mabwysiedig yn y datganiad o fanylion.

Non-technical summary

What is this document?

This is the non-technical summary of the environmental report that documents the Strategic Environmental Assessment (SEA) of the draft Dee RBBMP. It informs the draft Dee RBMP consultation which runs from November 2026 to May 2027.

Strategic Environmental Assessment

The SEA has been undertaken to ensure that environmental effects are considered during the development of the Dee RBMP alongside technical, economic and other considerations.

Scoping was undertaken to focus the assessment on the likely significant effects of the Plan. No environmental topics were scoped out of the plan. Given the complexity of the Programme of Measures (PoM), with national and spatially specific Water body measures we developed the methodology of the SEA to allow us to focus on significant effects and in particular drill down to any negative effects in order to avoid or reduce such impacts.

During scoping, relevant policies, plans, programmes and legislation were reviewed to determine potential synergies and conflicts with the Plan. A summary of baseline information relevant to the Plan was documented and developed to determine key issues and trends. This informed the development of SEA objectives and guide questions to be applied to those measures scoped into the assessment.

RBMPs are fundamentally aimed at improving the water environment. The SEA must ensure that in doing so, we identify then avoid, reduce or mitigate any consequential negative effects and seek to maximise positive effects. The hierarchy of environmental assessment allows us to consider the environmental effects of the RBMP at a strategic level and to inform the programmes, plans, strategies and projects delivered under the PoM.

Health Impact Assessment

A Health Impact Assessment (HIA) has been undertaken to determine how the RBMP may affect the physical and mental health and wellbeing of people in Wales, identify potential impacts on health inequalities, and recommend measures to maximise health benefits while reducing potential negative effects. It has strengthened consideration of the population and human health topic in the SEA.

Habitats Regulations Assessment

A Habitats Regulations Assessment (HRA) is being developed iteratively with the Plan and the SEA and will be published in a separate draft report alongside the draft Plan. The conclusions of the draft HRA have been considered within the SEA.

Summary of Environmental Effects

The HIA concluded that the draft RBMP has the potential to deliver significant long-term benefits for the health and wellbeing of people across Wales and this supported the SEA topic **population and human health being assessed as overall positive**.

Improvements in water quality, drinking water safety, environmental quality, biodiversity, climate resilience and access to blue-green spaces are expected to support positive physical and mental health outcomes whilst contributing to wider social, environmental and economic wellbeing. The plans also provide opportunities to strengthen community resilience, enhance access to nature and improve environmental conditions that support healthier communities.

The biodiversity, flora and fauna assessment highlighted positive effects from restoration of water bodies and peatlands and extensive application of advisory and regulatory measures to address pollution in rural areas and waste water pollution. The draft HRA determined there to be potential for adverse effects on Calaminarian Grassland. Whilst the scale of impact is low in terms of area affected, the negative impact is due to the potential effect on Calaminarian Grassland which is a Section 7 habitat and in some cases is a feature of European Sites. Without diminishing this issue, the overall effect of the draft RBMP on **biodiversity, flora and fauna has been assessed as overall positive.**

The assessment of effects of the scoped in measures on land use, geology, soil and contaminated land were assessed as a combination of positive or neutral. Of these measures, some directly benefit, eg. peatland restoration or remediation of contaminated land and some will have indirect benefit, eg. measures to address diffuse pollution can benefit soil function and health. Measures to address point source or specifically the water environment were considered to be neutral in effect. The draft RBMP PoM includes national and water body measures aimed at regulatory, advisory and educational delivery mechanisms to influence land management. These have been widely applied throughout the RBD and so on balance the overall effect on the draft RBMP on **land use, geology, soil and contaminated land has been assessed as overall positive.**

As would be expected from the draft RBMP, the overall assessment of **effects on water quality and quantity is overall positive**. The significance of effect will be dependent upon resourcing further investigation into the failures and deteriorations and the scale of delivery of measures that address them.

Many draft RBMP measures are not specifically intended to reduce air pollutant emissions or improve air quality, consequently the effects on **Air have been assessed as overall neutral**. However, there is an opportunity to generally raise awareness of the effect of atmospheric deposition on our water bodies.

Material Infrastructure and assets associated with the water environment include FRM assets, water company assets and this topic also considers material useage and waste production. The draft RBMP supports the continuing management and improvement of such assets, to benefit the water environment and adapt to our changing climate. Recommendations have been made that low carbon, locally sourced and sustainable materials should be used wherever possible. The overall effect on the draft RBMP on **material infrastructure and assets has been assessed as overall positive.**

The effect of the draft RBMP PoM on cultural heritage was varied. Peatland restoration was assessed as positive as rewetting and restoring peatlands preserves

the unique heritage records that they hold. Some measures were deemed neutral where there were no pathways for effects, yet some were negative. The measures assessed as negative were associated with removal of barriers to fish passage, remediation of physical modifications and remediation of abandoned mine sites. These sites and structures can be sensitive heritage landscapes or structures and whilst project level investigation and appraisal would likely mitigate the impacts through sensitive options appraisal and design, a potential negative effect was concluded for some measures.

Previous cycles of RBMP and delivery of these measures over the past 20 years has demonstrated that such projects are managed sensitively and can deliver benefits to the historic environment. Projects can protect in-situ heritage assets in the long-term e.g. measures that reduce likelihood of ground scouring and damage during high flow events. Negative effects on cultural heritage as a result of remediation of the sites can be avoided, reduced and/or mitigated; however, given the sensitivity of sites and that remediation projects inevitably result in changes to the historic landscape and/or setting of historic assets, it is possible that these measures could have negative effects. The overall effect on the draft RBMP on **cultural heritage has been assessed as overall uncertain.** This overall assessment has been made following consideration of previous RBMP cycles, project level policy and guidance, and the mitigation measures in place.

The **effect on landscape and seascape was overall neutral**. Certain measures aim to restore or preserve waterbodies and wider catchments (eg peatland) which could be beneficial to landscape but the scale of delivery of interventions is uncertain. Delivery of mine remediation projects could result in negative effects on historic landscapes. As with cultural heritage, early consideration in the design of these schemes can mitigate these effects and a negative effect on landscape and seascape at a RBD level is unlikely.

Climatic factors, the need to mitigate and adapt to climate change, was a consideration across all topics. It is a key pressure across all aspects of the environment. Certain measures were significant positive as measures to allow the continued management of flood risk to coastal infrastructure and communities, river and peatland restoration all play a significant role in mitigating and adapting to climate change. Other measures were assessed as neutral and generally the uncertainty of the scale of delivery resulted in the **overall effect on climatic factors being neutral.** There are, however, opportunities through good options appraisal and design associated with measures to ensure net carbon benefit and design, including landscape design, that is resilient and/or adaptable to climate change.

The degree of significance of the positive impacts of the draft RBMP PoM will depend upon the investigative effort and the level of delivery.

Mitigation and Enhancement Opportunities

The draft RBMP provides a valuable tool for NRW, water companies and partners to deliver integrated catchment management by working collaboratively and focussing resources where they can deliver the most benefit. Such integrated delivery will also reduce the local negative impacts and disruption associated with construction or delivery of the measures.

Application of the hierarchy of environmental and health assessment will ensure the delivery of lower tier plans and projects can be delivered in such a way as to avoid or reduce negative impacts and maximise positive impacts.

Cumulative effects of the Plan

Consideration of the plan interaction with other policies, plans, programmes and legislation in England and Wales concluded that there is strong alignment and contribution to NRW well-being objectives, the Environmental Improvement Plan 2025, the Environmental Principles, planning policy and frameworks and other functionally specific strategies and plans.

Assessment of alternatives

The SEA Regulations require that an environmental report includes an evaluation of the likely significant effects of the Plan and reasonable alternatives.

The alternatives considered for the Welsh Dee were:

A. Do nothing
B. Review and update the RBMP3 programme of measures without including Water body measures
C. Action taken to review and update RBMP3 programme of measures, including the development of Water body measures for all water bodies across Wales, to maintain or achieve good ecological status or potential.
D. Action taken to review and update RBMP3 programme of measures, including the development of Water body measures for all waterbodies across Wales that are not achieving good ecological status or potential.
E. Action taken to review and update RBMP3 programme of measures, including the development of Water body measures for a “test catchment” only.
F. Supplementary Option- As option D but prioritise delivery based on:
    - collaborative opportunities,
    - measures that drive the most improvement / multiple benefits,
    - a robust cost benefit.

Alternatives C, D and F were considered reasonable and progressed to assessment. The alternative being progressed for the draft RBMP is D.

The alternatives identified for the English Dee were:

1. Do Nothing
2. Strategic Plan Alternatives
    A. Review and update RBMP3 and the existing PoM without including Water body specific measures
    B. Review and update PoM only without producing an updated RBMP
    C. Review and update RBMP3 and PoM to include water body specific measures
    D. Review and update RBMP3 and PoM to include water body specific measures and develop these with increased stakeholder collaboration
    E. Review and update RBMP3 and PoM to include water body specific measures (option C) plus greater streamlining with other plans
    F. Review and update RBMP3 and PoM to include water body specific measures (option C) plus full embodiment of the new water environment plan and systems planner thinking.

3. Programme Alternatives
    A. Phased approach to national and area produced PoM with external engagement
    B. Area teams develop PoM without national input to pre-populate lists
    C. National team to populate PoM and seek external engagement without area team input
    D. As option A but only include those measures which are funded and have a delivery mechanism.

Alternatives 2C, 2E and 3A were then taken forward for assessment against the SEA objectives.

Monitoring the significant effects of the Plan

Once the draft Plan is finalised and adopted, the SEA Regulations require its significant environmental effects to be monitored. This report outlines the actions we expect to undertake in relation to monitoring the significant environmental effects of the Plan. This will be developed and published alongside the adopted plan in the Statement of Particulars.

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Acronyms

Acronym	Meaning
AMP	Asset Management Plan
CSO	Combined Sewer Overflow
DCWW	Dwr Cymru Welsh Water
DrWPA	Drinking Water Protection Area
DWMP	Drainage and Waste Water Management Plan
FCERM	Flood and Coastal Erosion Risk Management
FRMP	Flood Risk Management Plan
GES	Good Ecological Status
HRA	Habitats Regulation Assessment
INNS	Invasive Non-Native Species
LSE	Likely Significant Effect
MPA	Marine Protected Area
MRA	Mining Remediation Authority
NEP	National Environment Programme
NFM	Natural Flood Management
NRP	Natural Resources Policy
NRW	Natural Resources Wales
NSFCERMW	National Strategy for Flood and Coastal Erosion Risk Management in Wales
PoM	Programme of Measures
RBD	River Basin District
RBMP	River Basin Management Plan
RNAG	Reasons for Not Achieving Good
SAC	Special Area of Conservation
SAT	Strategic Assessment Team
SEA	Strategic Environmental Assessment
SFS	Sustainable Farming Scheme
SMP	Shoreline Management Plan
SMNR	Sustainable Management of Natural Resources
SPA	Special Protection Area
SuDS	Sustainable (urban) Drainage System
SWMI	Significant Water Management Issue
SWPA	Shellfish Water Protected Area
UK	United Kingdom
WFD	Water Framework Directive
WGWE	Welsh Government Woodland Estate
WMMRP	Wales Metal Mine Remediation Programme
WNMP	Welsh National Marine Plan
WRMP	Water Resources Management Plan

1. Introduction

This Environmental Report presents the findings of the strategic environmental assessment (SEA) carried out as part of the preparation of the fourth cycle Dee River Basin Management Plan (RBMP). The SEA, incorporating the results of the Health Impact Assessment (HIA) and Draft Habitats Regulation Assessment (HRA), assesses the likely effects of the plan on the wider environment and identifies mitigation and enhancement opportunities. It accompanies the draft Fourth Cycle Dee RBMP to inform the consultation.

Some waters in the Dee River Basin District (RBD) form the boundary between Wales and England, or cross from Wales into England or England into Wales and some are wholly in England. Joint working on the cross-border waters is therefore essential to ensure the water environment is protected and improved. Natural Resources Wales (NRW) is leading the SEA of the Dee RBMP and is working closely with the Environment Agency (EA).

1.1 Introduction to the Fourth Cycle Dee River Basin Management Plan

RBMPs take a holistic approach to managing our waters, looking at the water within the wider ecosystem and taking into account the movement of water through the hydrological cycle from source to sea. The purpose of the RBMPs is to protect and improve the water environment for the wider benefits to people and wildlife.

The first RBMPs were published in 2009 and set the framework for protecting and enhancing the water environment from 2009 to 2015. Some commitments extended to 2021 and /or 2027 and these were reviewed and updated in the second cycle RBMP, published in 2015. The third cycle again, reviewed progress against the objectives and where necessary revised objectives and the associated Programme of Measures (PoM) for delivery between 2021 and 2027. For the fourth cycle NRW and the EA have reviewed again progress and the PoM and included measures required at a water body scale to meet good status/potential by 2027. There are some waterbodies where the objective of good status/potential has been extended beyond 2027.

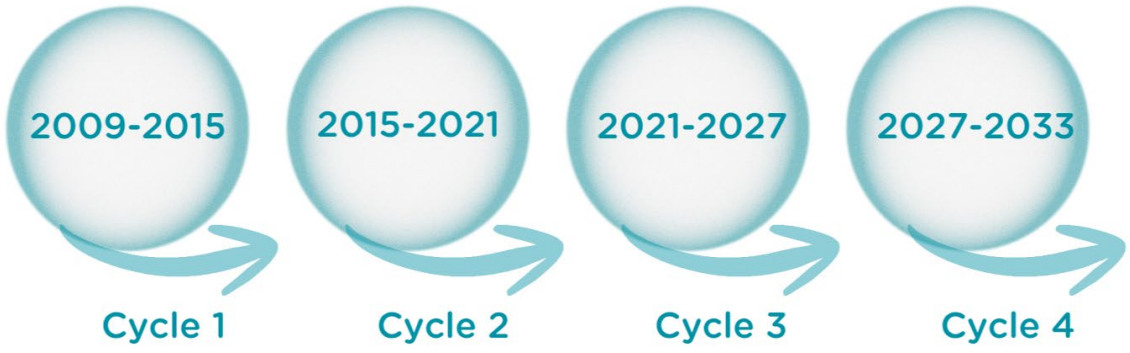


Figure 1. Schematic demonstrating the periods of time covered by each RBMP cycle.

Since publishing the third cycle RBMPs, the UK and Welsh governments launched an independent commission in 2024, led by Sir Jon Cunliffe and supported by expert advisors, to recommend reforms to the water sector regulatory system. The review aimed to build consensus for a resilient and innovative water sector and a robust wider regulatory framework that:

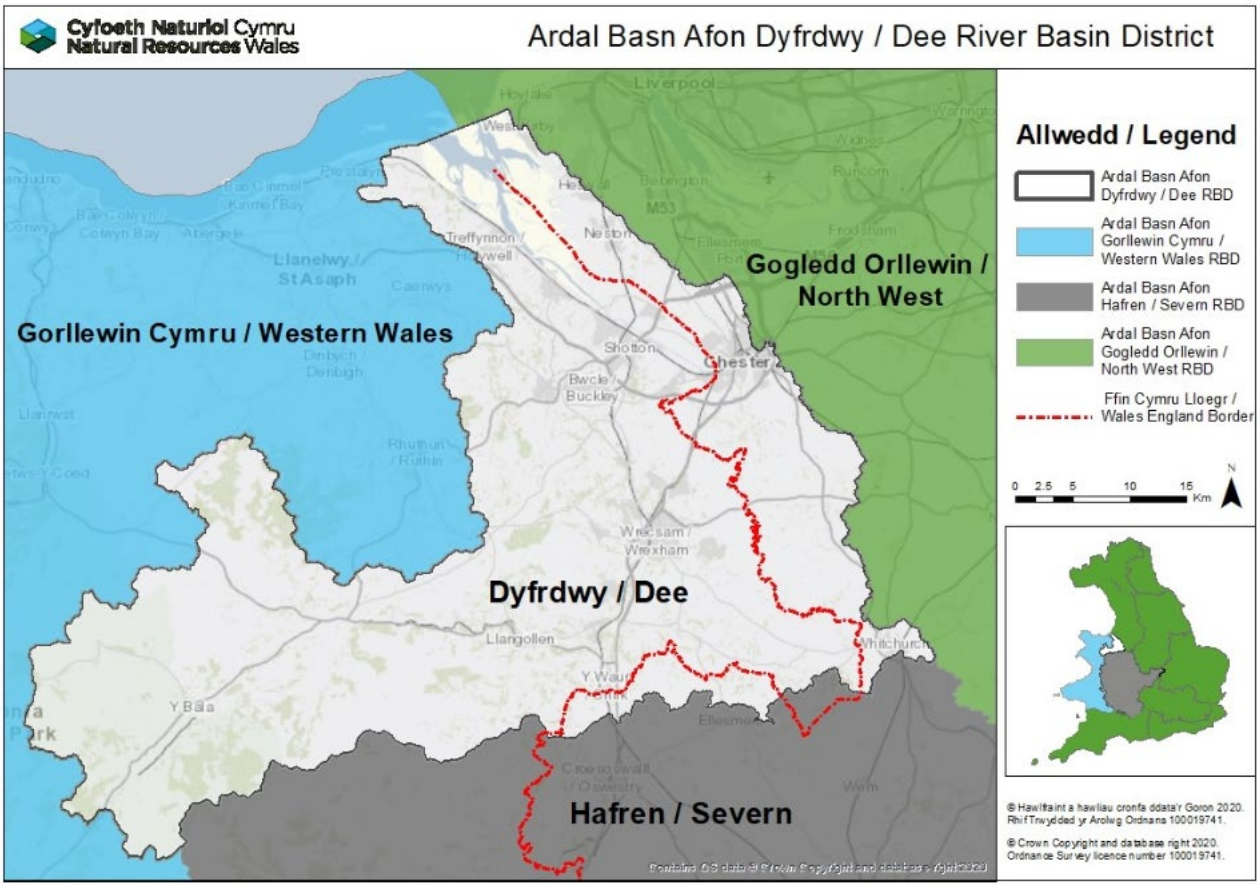
- delivers long-term benefits
- restores rivers, lakes, and seas to good health
- provides a reliable and efficient water supply in a changing climate
- ultimately serves both customers and the environment

In addition to the above, the High Court ruling on the Pickering Fishery Association), R (On the Application Of) v Environment Agency [2023] is also now available and has influence the development of the fourth cycle RBMPs.

We follow the steps set out below to update the plans every six years, as required under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (WFD Regulations):

1. Working Together Consultation (May-Dec 2024) set out how we should work together to update the RBMPs and included our commitment to undertake SEA and HRA.
2. Challenges and Choices Consultation (October 2025 – April 2026) considered what are the significant water management issues and what can be done about them. It was accompanied by the SEA Scoping Report.
3. Draft RBMP consultation (November 2026 – May 2027). The draft plans will set objectives for water body status and set out measures to address the significant water management issues and the mechanisms for how these measures could be delivered, including at a water body scale. It will be accompanied by the SEA Environmental Report, HIA and a draft HRA.
4. Final RBMP adoption (Dec 2027) will be accompanied by the Final HRA and the Statement of Environmental Particulars.

Figure 2: The Dee River Basin District



1.2 Introduction to the Dee River Basin District

The Dee RBD is home to approximately 485 000 people and covers an area of 2251 square kilometres of North East Wales, Cheshire, Shropshire and the Wirral. The RBD consists of a single river basin; the River Dee, its tributaries and estuary and is characterised by a varied landscape. It ranges from the mountains and lakes of the Snowdonia National Park in the upper part of the basin, through the Vale of Llangollen in the middle reaches, to the open plains of Cheshire and the mudflats of the Dee Estuary in the lower basin. The Dee and its tributaries are renowned for their excellent fishing and there is an important cockle fishery in the estuary. The River Dee is popular for canoeing and the National Whitewater Centre is located on the Afon Tryweryn near Bala.

The River Dee and Bala Lake/Llyn Tegid is designated as a Special Area of Conservation

(SAC) and Ramsar. The Dee Estuary is a Special Protection Area (SPA), SAC and Ramsar. Chester and Wrexham are the two major urban centres, but the dominant land uses are agriculture and forestry, particularly in the upper part of the basin. Key economic sectors in the region include manufacturing, business services, retailing, health, banking and insurance. Bala Lake/Llyn Tegid, Celyn and Brenig reservoirs in the upper catchment are used for water storage to regulate river flows in the Dee to sustain abstractions for public drinking water supply, and industry all year round. The

reservoirs also modify flood response and reduce the flooding frequency in the Dee between Bala and Chester.

Since 1st April 2013 NRW and the EA are jointly responsible for managing the Dee

Regulation System under the Dee and Clwyd River Authority Act 1973. The strategic importance of the Dee as a source of potable water and the risk posed to it from pollution have led to the Dee becoming one of the most protected rivers in the UK. In 1999, the lower part of the Dee was designated as the UK's first Water Protection Zone.

1.3 Content of the Plan

The fourth cycle RBMPs are produced by NRW and the Environment Agency under the Water Environment (Water Framework Directive) England and Wales Regulations 2017. The plans include a summary of:

- Classification of water bodies: The baseline status in each water body. This enables us to understand the current condition of the water bodies including all the quality elements. The draft RBMP (Nov 26) is based on the interim cycle 3 classification and the final plan (Dec 27) will include an updated cycle 4 classification. Preventing deterioration from this baseline is a key objective of this plan, and also one of our greatest challenges in protecting the water environment.

- Summary of Programme of Measures to achieve statutory objectives (National and Water body measures). The PoM is all the measures required to restore waterbodies to good status/potential based on the Reasons for Not Achieving Good (RNAG) dataset. It also includes the local actions identified in cycle 3 for the Opportunity Catchments, focussing on collaborative working and the delivery of multiple benefits for people and wildlife.

- Statutory objectives for water bodies: Objectives have been set for each quality element in all water bodies, including an objective for the water body as a whole. The default objective is to aim to achieve good status or potential by 2027. However, in some circumstances, we have extended the deadline or set an objective of less than good where this is justified on the basis of natural conditions, ecological recovery time, technical feasibility or disproportionate cost.

The PoM is aligned with the list of the Significant Water Management issues (SWMI) that NRW and the Environment Agency believe threaten the current and potential future uses of the water environment

Between the October 2025 and April 2026 NRW undertook a public consultation to share an overview of the significant water management issues identified across Wales' RBD's. The EA undertook this consultation for the English RBD's between

November 2025 and May 2026. The consultation responses have informed the respective reviews of the program of measures.

The SWMI in the fourth cycle of the RBMP remain consistent with the third cycle RBMPs:

- **Physical modifications** Changes made to natural forms and processes of rivers, lakes, estuaries and coastal waters.
- **Pollution from rural areas** Poor agricultural practice and forestry management can result in nutrients, sediment and bacteria affecting the water environment.
- **Pollution from wastewater** Wastewater can contain large amounts of nutrients (such as phosphorus and nitrates), ammonia, harmful bacteria and other contaminants. This includes treated water from wastewater treatment works, untreated intermittent discharges from storm overflows, private wastewater treatment and misconnected household appliances.
- **Pollution from towns, cities and transport** Atmospheric deposition and runoff from man-made surfaces carries pollutants into waters. Some of these contaminants adhere to sediment in our lakes, rivers, estuaries and coastal water bodies. These contaminates are either gradually released or released in larger quantities when there is a disturbance such as high flows or dredging.
- **Pollution from abandoned mines** Contaminated water draining from historic mines.
- **Changes to natural flow and levels of water** Taking too much water from rivers, lakes and underground, causes problems for wildlife, ecosystems and impacts recreational use of water
- **Non-native invasive species** Presence of invasive non-native plants and animals in our watercourses poses a threat to biodiversity, increases flood risk, affects the state of our water environment and costs the economy billions per annum.

These issues can act as sources of many of the wide-ranging pressures impacting many of our waters, such as chemicals, nutrients, bacteria and invasive non-native species. The nature and climate emergencies are cross-cutting issues which are also impacting water, habitats and species across Wales.

1.4 Embedding Sustainable Management of Natural Resources (SMNR), Sustainable Development (SD) and the Environmental Principles into the Plan

The Plan has been developed within the context of the Wellbeing of Future Generations Act, Environment (Wales) Act and the Environment (Principles, Governance and Biodiversity Targets) (Wales) Act 2026 which apply in Wales and the Environment Act 2021 in England. Sustainable development is a key principle

that has underpinned the Plan development, and this SEA has aimed to influence its development to maximise opportunities and minimise negative effects.

The Plan must maximise delivery under NRW's Well-being Objectives, to contribute to the seven well-being Goals as outlined in the Wellbeing of Future Generations Act 2015 and embedded in the Environment (Wales) Act 2016. By doing this, it will set the framework for NRW to continue this approach and work in a collaborative and cohesive way to deliver our well-being objectives and improve the social, economic, environmental and cultural well-being of communities.

The Environment Act 2021 introduced principles, targets and protection aimed at protecting and enhancing the environment for future generations in England. It includes the Environmental Principals and Policy Statement that needs due regard in policy making. The RBMP must demonstrate how the five principles have been applied (integration, prevention, rectification at source, polluter pays, and precautionary principle). The Environment Act required the refresh of the 25 Year Environment Plan, which was published in 2023. This set out the progress and commitments towards delivering the targets and the overarching goals. The SEA topics align well with the goals.

The Environment (Wales) Act 2016 established the objective of sustainable management of natural resources (SMNR): "...using natural resources in a way and at a rate that maintains and enhances the resilience of ecosystems and the benefits they provide. In doing so, meeting the needs of current generations without compromising the ability of future generations to meet their needs, and contributing to the achievement of the well-being goals set out in the Well-being of Future Generations (Wales) Act 2015".

The nine principles for the sustainable management of natural resources are closely aligned to the Sustainable Development Principles. The application of these principles to the Plan encourages long-term thinking, a preventative approach, and working collaboratively with others to sustainably manage natural resources in Wales with the objective of maintaining and enhancing the resilience of ecosystems. Welsh Government developed the Natural Resources Policy (NRP) as required by the Environment (Wales) Act 2016. The policy sets out the national priorities for the sustainable management of natural resources and are the key ways in which natural resources contribute across all well-being goals. There are 3 national priorities for taking action to both tackle the challenges and realise the opportunities. These are:

- Delivering nature-based solutions. With a particular focus on:

1.4.1 Developing Resilient Ecological Networks (RENs)

  - Increasing Green Infrastructure in and around urban areas
  - Coastal zone management and adaptation
  - Increased canopy cover and well-located woodland
  - Maintaining, enhancing and restoring floodplains and hydrogeological systems to reduce flood risk and improve water quality and quantity
  - Restoration of uplands and managing them for biodiversity, carbon, water, flood risk, energy and recreational benefits.

- Increasing resource efficiency and renewable energy
- Taking a place-based approach

These priorities cut across all of the SEA receptors both directly and indirectly and so the SEA will demonstrate how the Plan can maximise delivery against the NRP.

Environment (Wales) Act also recognises the essential contribution biodiversity makes to SMNR and our well-being, by putting in place the section 6 - Biodiversity and ecosystem resilience duty. This duty requires public authorities to seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in doing so promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.

The Environment (Principles, Governance and Biodiversity Targets) (Wales) Act 2026 requires NRW to have special regard to the environmental principles and integrate environmental protection into the RBMP and demonstrate compliance through the SEA. In England these requirements are built into the Environment Act 2021.

The four principles are prevention, precaution, rectification of environmental damage at source and polluter pays. Integration requires environmental protection to be considered from an early stage and throughout plan development, including opportunities to maintain, restore or improve the environment. The RBMP itself aligns well with the principles and the SEA has considered the positive and negative environmental effects and been integrated with the plan development, as evidenced in this report.

A Health Impact Assessment (HIA) has been undertaken alongside the SEA to strengthen the consideration of population and human health within the River Basin Management Plan (RBMP). HIA will become statutory in Wales when regulations under the Public Health (Wales) Act 2017 come into force on 6 April 2027. The HIA has been prepared and will be published as a separate report accompanying the RBMP. The SEA identifies the likely environmental effects of the RBMP and their significance, while the HIA provides a complementary, population-focused assessment of who is affected, how health effects occur, how impacts are distributed across communities, and the magnitude and duration of potential outcomes. Together, they offer a proportionate and evidence-based understanding of how the RBMP's in Wales may influence both environmental quality and community health.

A Habitats Regulations Assessment (HRA) is being developed iteratively with the Plan and the SEA and will be published in a separate draft report alongside the draft Plan. The draft HRA will also feed into the SEA, under the biodiversity, flora and fauna topic. Natural Resources Wales and Natural England, as appropriate nature conservation bodies, will continue to be engaged in the development of the HRA.

1.5 Purpose and structure of this SEA Environmental Report

A Strategic Environmental Assessment (SEA) is a legal requirement under the Environmental Assessment of Plans and Programmes Regulations 2004. NRW has determined that the Fourth Cycle RBMP requires SEA.

The purpose of SEA is:
1. To integrate environmental considerations and high-level protection of the environment into strategic decision-making.
2. To ensure the integration of environmental considerations into the preparation and adoption of plans and programmes, and to contribute to the promotion of sustainable development and environmental protection.

The SEA process is structured into five well-defined stages and involves predicting, evaluating and mitigating the environmental effects of the Plan.

Stage A, setting the context and objectives, establishing the baseline and deciding on the scope, were reported in the Scoping Report that preceded this Environmental Report. The environmental baseline was considered in the context of current status and trends to allow identification of key issues relevant to the Plan. As part of this process, relevant policies, plans, programmes and legislation were reviewed to determine potential synergies and conflicts with the Plan.

The Scoping Report was subject to public and statutory consultation from October 2025 to April 2026. Appendix 1 of this report summarises the Scoping Report consultation responses and how they have been actioned.

The Scoping Report has been revised following the consultation, taking into account views of consultees and updating it in light of recent publications, e.g. SoNaRR 2025. The baseline is not repeated in this document, but a summary is presented in Section 3.2 of this report.

The scope of the SEA is set out in Section 2.3 below.

This report documents Stages B and C in the SEA process and specifically:

- Identifies, describes and evaluates the significant environmental effects of implementing the Plan and any alternatives
- Identifies actions to prevent, reduce or as fully as possible offset any negative effects
- Provides an early and effective opportunity to engage through consultation in preparation of the Plan
- Proposes measures to monitor the environmental effects of Plan implementation

Stage D will involve consultation on the draft Plan & Environmental Report.

Implementation and Monitoring (Stage E) will be an ongoing process for the duration of the Plan to ensure adaptation and continual improvement.

2. Assessment method

2.1 Approach to assessing the draft Dee RBMP

The SEA Regulations require that the assessment process identifies, describes and evaluates the likely significant effects on the environment of implementing the RBMP4 and reasonable alternatives with respect to the objective and the geographical scope. The Environment Agency have developed the English Dee measures and NRW have developed the Welsh measures. The two organisations have worked closely together but have taken slightly different approaches to the development of measures and consequently the assessment methods differ.

The Environment Agency developed a Measures Data Standard which consisted of tiers of measures. These were Action Categories that were each broken down into Detailed Actions. These Detailed Actions were applied at a Water body level. The English Dee assessment consisted of:

- An assessment of the effects of the Measures Data Standard.
- An assessment of the Detailed Actions applied in the English Dee Management Catchment and the English Dee Groundwater Management Catchment.

NRW developed national measures that apply across Wales and Water body measures that are applied at a water body level. The Welsh Dee assessment consisted of:

- Assessment of Welsh national measures
- Assessment of Welsh Dee Water body measures

Both the Environment Agency and NRW undertook:

- Assessment of reasonable alternatives
- Assessment of Cumulative effects

The Environment Agency undertook the assessment of the English Dee measures and NRW undertook the assessment of the Welsh Dee measures. NRW have drawn together these assessments in this report and summarised the effects on each topic in Section 4 of this report at the RBD scale.

2.2 Reasonable alternatives considered

The SEA Regulations require that we identify, describe and evaluate the environmental effects of reasonable alternatives, taking into account the objectives and the geographical scope of the plan.

The WFD Regulations provide a statutory requirement to update the RBMPs as directed by Welsh Government and DEFRA. The regulations guide the approach and content. So, whilst alternatives must be considered, the regulations are important drivers for the content and direction of the RBMP4. As this is the 4th cycle of RBMP,

previous cycles, consultations and case law have also influenced our approach. As the draft plan was developed many alternative approaches were considered and the SEA influenced this iteratively. The strategic plan alternatives that were identified for the Welsh Dee were:

A: Do nothing

B: Review and update the RBMP3 programme of measures without including Water body measures

C: Action taken to review and update RBMP3 programme of measures, including the development of Water body measures for all waterbodies across Wales, to maintain or achieve good ecological status or potential.

D: Action taken to review and update RBMP3 programme of measures, including the development of Water body measures for all waterbodies across Wales that are not achieving good ecological status or potential.

E: Action taken to review and update RBMP3 programme of measures, including the development of Water body measures for a “test catchment” only.

F: Supplementary Option- As option D but prioritise delivery based on:

- collaborative opportunities,
- measures that drive the most improvement / multiple benefits,
- a robust cost benefit.

Appendix 2 describes the strategic alternatives identified, and whether they are considered reasonable. Alternatives C, D and F were then taken forward for assessment against the SEA objectives. The alternative being progressed for the draft RBMP is D.

The alternatives identified for the English Dee were:

1.Do Nothing

2.Strategic Plan Alternatives

A. A Review and update RBMP3 and the existing PoM without including water body specific measures
B. Review and update PoM only without producing an updated RBMP
C. Review and update RBMP3 and PoM to include water body specific measures
D. Review and update RBMP3 and PoM to include water body specific measures and develop these with increased stakeholder collaboration
E. Review and update RBMP3 and PoM to include water body specific measures (option C) plus greater streamlining with other plans
F. Review and update RBMP3 and PoM to include water body specific measures (option C) plus full embodiment of the new water environment plan and systems planner thinking.

3. Programme Alternatives

A. Phased approach to national and area produced PoM with external engagement
B. Area teams develop PoM without national input to pre-populate lists
C. National team to populate PoM and seek external engagement without area team input
D. As option A but only include those measures which are funded and have a delivery mechanism.

Appendix 2.1 describes the strategic alternatives identified, and whether they are considered reasonable. Alternatives 2C, 2E and 3A were then taken forward for assessment against the SEA objectives.

The PoM for the Dee RBMP have been selected after considering:

- Review of the third cycle RBMP national measures. Are the measures complete, ongoing, etc?
- The reasons for the water body not achieving good ecological status or potential.
- Legislative and policy changes and caselaw since the RBMP3
- Engagement with specialists across the water management sector (eg. NRW, WG, EA, DEFRA, Water Industry)
- Wider public engagement through the Challenges and Choices (Wales) and SWMI Consultation (England) and associated SEA Scoping Report consultations

The measures were selected after considering all these factors. At a project delivery scale the technical feasibility, the cost, predicted environmental effects and engagement with stakeholders, including local communities will inform options identification, appraisal and selection.

2.3 Scope of the assessment

2.3.1 Scoping the environmental topics

Scoping the assessment took into account the key environmental issues and trends across all SEA topics and determined which were relevant to the RBMP4 (summarised in Section 3). It also reviewed policies, plans, programmes and legislation relevant to the plan. This information was used to develop SEA objectives and associated guide questions, which are typically used in SEA to systematically identify the positive and negative effects of a plan on environmental topics.

NRW proposed a series of SEA objectives and guide questions in the Dee scoping report, against each of the environmental topics. The Environment Agency also proposed SEA questions and criteria for each environmental topic. These were reviewed in light of scoping consultation responses and are presented in Table 2 below. No environmental topics were scoped out of the SEA.

Table 1: SEA Objectives and guide questions used in the assessment of the draft Plan

NRW SEA Objective	NRW Guide Questions Will the Draft Dee RBMP measure(s) …	Environment Agency SEA Question	EA Assessment Criteria Does the plan:
To promote health, wellbeing and equity (*Relevant Topics: Population & Human Health, Water, Biodiversity, Cultural Heritage, Landscape)*	• Help improve environmental conditions and quality of life for the most deprived communities? • Support the needs of vulnerable population groups in society? • Maintain and where possible improve access to clean and safe green and blue spaces for mental and physical wellbeing? • Promote and support access for all and active travel health benefits? • Empower communities and stakeholders through coproduction, collaborative working and inclusive approaches? • Protect and enhance Welsh language and cultural identity in Wales? • Reduce the impacts on communities from extreme weather conditions brought about by climate change (flood, drought, extremes in temperatures)? • Are there opportunities to create local jobs and skills development?	**Population & human health:** • **Does the plan help to improve environmental conditions that contribute towards improved health, wellbeing and social equity?**	• Improve the health and wellbeing of communities? • Improve access to water environments, green/blue infrastructure & promote recreational use? • Improve access to water environments, green/blue infrastructure & promote recreational use? • Promote sustainable growth, regeneration and tourism? • Seek opportunities to reduce social deprivation and inequality?

NRW SEA Objective	NRW Guide Questions Will the Draft Dee RBMP measure(s) …	Environment Agency SEA Question	EA Assessment Criteria Does the plan:
To halt and reverse biodiversity loss and contribute to the protection and effective management of 30% of our land, freshwater and sea for nature by 2030 *(Relevant Topics: Biodiversity, Water, Land Use, Geology and Soil, Population & Human Health)*	• Protect and restore internationally and nationally designated nature conservation site? • Increase green infrastructure provision and Resilient Ecological Networks, improving connectivity of ecosystems? • Restore uplands and manage for multiple benefits? • Improve the Diversity, Extent, Condition and Connectivity of ecosystems, delivering a Net Benefit for Biodiversity? • Protect and restore natural riverine (hydromorphological) processes, that create and sustain physical habitat, and species supported by these habitats? • Protect and restore coastal physical processes and habitats with a view to adaptation to climate change and sea level rise? • Continue to monitor INNS distribution in the RBD, and prevent the spread of INNS and address the issues caused by these species. Raising awareness and promoting good biosecurity practices?	**Biodiversity:** • **Does the plan protect and restore areas protected for their nature conservation value and will it contribute to wider nature recovery?**	• Conserve and protect species and habitats and contribute to nature recovery? • Support protection and management of 30% of land, freshwater and sea by 2030? • Support opportunities for natural flood management? • Improve the control and minimise the spread of invasive non-native species?

NRW SEA Objective	NRW Guide Questions Will the Draft Dee RBMP measure(s) …	Environment Agency SEA Question	EA Assessment Criteria Does the plan:
To protect geology and soil and promote the sustainable use and management of land *(Relevant Topics: Land Use, Geology and Soil, water, Population & Human Health)*	• Promote the sustainable use and management of land? • Protect and enhance high quality agricultural soils and recognise them as a finite resource? • Increase canopy cover and well located woodland? • Restore peatlands? • Reduce land contamination? • Conserve and enhance soil health and function? • Protect and avoid damage to geologically important sites?	**Soil:** • **Does the plan improve and sustain soil resources?**	• Protect and enhance soils by sustainable management to improve resilience to degradation and erosion? • Protect high quality agricultural soils? • Protect and restore peatlands? • Conserve and enhance protected geological features/sites? • Promote sustainable agricultural and forestry practices, use and management of land?

NRW SEA Objective	NRW Guide Questions Will the Draft Dee RBMP measure(s) …	Environment Agency SEA Question	EA Assessment Criteria Does the plan:
To protect and improve water quality and quantity *(Relevant Topics: Water, Population & Human Health, Biodiversity, Material Assets & Infrastructure, land use, geology and soil)*	• Improve the ecological and chemical status of waterbodies? • Reduce point source and diffuse pollution? • Promote water efficiency? • Sustainable management of water resources for ecosystems, abstraction and recreation? • Protect and restore groundwater resources? • Support the timely delivery of new water infrastructure? • Maintain, enhance and restore floodplains and hydrogeological systems to reduce flood risk and improve water quality and quantity? • Promote the use of nature based solutions?	**Water:** • **Does the plan protect and improve the water environment?**	• Support delivery of water framework directive water quality objectives? • Contribute to addressing adverse impacts from physical modifications by reinstating natural processes? • Protect nitrate vulnerable zones? • Protect water bodies from over abstraction? • Protect the quality of coastal waters, including bathing waters? • Contribute to reducing water use to manage security of water supply? • Contribute to the sustainable management of water resources?

NRW SEA Objective	NRW Guide Questions Will the Draft Dee RBMP measure(s) …	Environment Agency SEA Question	EA Assessment Criteria Does the plan:
To sustainably construct, maintain/operate and dispose of material assets and infrastructure *(Relevant Topics: Material Infrastructure & Assets, Population & Human health, Water)*	• Protect and maintain important material assets and infrastructure? • Increase the resilience of important material assets and infrastructure to climate change and sea level rise? • Consider the whole lifecycle of construction materials from purchase (sustainable procurement) to disposal? • Increase resource efficiency and renewable energy? • Reduce and remediate physical modifications from historic infrastructure and asset construction?	**Infrastructure & material assets:** • **Does the plan support sustainable communities and a prosperous economy?**	• Protect and improve the resilience of communities and the economy? • Protect, maintain and improve the resilience of water related infrastructure? • Provide opportunities for increased sustainable urban drainage? • Reduce waste and promote the recovery, reuse and recycling of materials?
To protect and sustainably manage the historic environment including cultural heritage resources and landscapes, historic buildings and archaeological features. *(Relevant Topics: Cultural Heritage, Material infrastructure and assets, Water, Population & Human Health)*	• Conserve and where possible enhance, protected and important cultural heritage assets and landscapes? • Reduce the impact of drought or flooding on heritage assets?	**Cultural heritage:** • **Does the plan conserve and enhance the historic environment?**	• Consider the contribution of historic places to urban and rural landscape character? • Maximise opportunities to enhance the historic environment? • Consider climate change impacts on heritage assets?

NRW SEA Objective	NRW Guide Questions Will the Draft Dee RBMP measure(s) …	Environment Agency SEA Question	EA Assessment Criteria Does the plan:
To maintain and enhance landscape and seascape character *(Relevant Topics: Landscape & Seascape, Population & Human Health, Water, Biodiversity, Cultural Heritage)*	• Maintain and where possible enhance the condition, character and special qualities of any protected or designated landscape and their setting? • Restore and protect landscape and seascape character and increase climate change resilience?	**Landscape:** • **Does the plan conserve and enhance landscape and seascape character?**	• Conserve existing landscape and seascape character? • Maximise opportunities to enhance the quality of landscapes and their settings?
To protect and improve air quality *(Relevant topics: Population & Human health, Biodiversity, Flora and Fauna and Water*	• Promote a reduction in the sources of air pollutants with pathways for effects on waterbodies?	**Air:** • **Does the plan protect and improve air quality?**	• Support the Air Quality Standards Regulations objectives? • Seek opportunities to improve air quality? • Promote reduction of air pollutants with pathways for effects on waterbodies?
To limit the causes and effects of climate change and ensure resilience and adaptation to any consequences of climate change. *(Relevant Topics: All)*	• Promote a reduction directly or indirectly, in greenhouse gas emissions as a contribution to climate change? • Contribute to our ability to adapt to climate change? • Support ecosystems to adapt to climate change?	**Climatic factors?** • **Does the plan help to mitigate, adapt and improve resilience to climate change?**	• Support adaptation to the wider effects of climate change e.g. drought and flood? • Contribute to mitigating climate change by providing a carbon benefit e.g. carbon sequestration? • Support community resilience to the effects of climate change?

2.3.2 Scoping the draft RBMP National Measures and Water body Measures

Welsh National Measures
There are a total of 54 Welsh national measures, consisting of those carried forward from earlier cycles of the RBMP, modified measures and new measures. All were considered in the SEA, but they were scoped down to ensure that the SEA focussed on those where there is potential for significant effects.

As the national measures apply to all of Wales the assessment was undertaken once for Wales.

The national measures are split into delivery mechanisms:

- General education or advice campaign or scheme
- Financial incentives
- Strategic Plans
- Investigations
- Regulation
- Partnerships
- Water Company Investment
- Research or demonstration projects or pilots

All measures are aimed at improving the water environment and the focus of the SEA is to ensure we maximise that benefit but have no unintended consequences as a result of measure implementation. We therefore scoped out those national measures where their delivery mechanisms had no pathways for negative effects. Full consideration and justification of our scoping methodology was documented and the outcome is summarised in Appendix 3. This resulted in 21 national measures being scoped into the assessment.

For those national measures scoped into the assessment. We applied the NRW SEA objectives and guide questions to qualitatively assess the national measures. The SEA objectives and guide questions were consulted upon in winter / spring 2026 and they have been amended in light of comments received.

The assessment (Appendix 5) was grouped by delivery mechanism and then by SWMI:
1. Strategic Plans – Physical modifications
2. Strategic Plans - Changes to natural flow & levels of water
3. Strategic Plans - Pollution from rural areas
4. Strategic Plans - Pollution from abandoned mines
5. Strategic Plans - All
6. Partnerships - All
7. Water Company Investment (AMP) - Physical modifications
8. Water Company Investment (AMP) - Pollution from rural areas
9. Water Company Investment (AMP) - Pollution from wastewater

We prioritised these assessments so that they could then inform our approach to the assessment of Water body measures, as set out below.

Welsh Water body measures
There are 81 types of Water body measures in the draft RBMP, grouped by Significant Water Management Issue. Relevant types of Water body measures have been applied to specific waterbodies that are not achieving their WFD Regulations objective of good status/potential. They will therefore have the potential for locally specific effects. The SEA must consider potential effects at an RBD scale but also identify potential effects of Water body measures to ensure negative effects are identified such that the delivery of the measures can be influenced. We have applied the same rationale to scoping the types of Water body measures as national measures. This has resulted in 52 types of Water body measures being scoped out of the assessment as they were related to regulatory compliance, good practice or further investigations. A further 14 Water body measures have been scoped out as they have not been applied to any Welsh Dee water bodies in this draft. Appendix 4 documents the Water body measure scoping and justification.

Of the 16 Water body measures scoped into the assessment, we considered the relevant national measure assessment to determine the potential for significant positive / negative effects. Where the national measure assessment predicted possible significant negative or negative effects, we considered the spatial application of the Water body measures across the RBD, focussing on the environmental topics that could be affected.

This approach allowed us to focus on potential negative effects such that influence and guidance can be applied to avoid or reduce effects. It also allowed spatial consideration and consequently extent of potential impact which then fed back up into the national measures assessment (Appendix 5).

The national measures scoping and the Water body measures scoping was undertaken separately. In one circumstance the Water body measure did not align with a national measure. These water bodies were assessed separately in Appendix 5, Section 10.

English Dee Measures
The Environment Agency Measures Data Standard have a total of 36 Action Categories which are broken down into a total of 154 Detailed Actions. The EA also scoped down their assessment to include only those measures with a pathway for effects. This process scoped in 128 Detailed Actions to the assessment which can be provided upon request.

In the English Dee waterbodies there were 10 types of Action Categories applied and 22 types of Detailed actions in the draft plan. These are presented in Appendix 4.

The draft RBMP and PoM were developed with the aim of improving the water environment, we therefore expect that most measures will result in positive effects. The SEA can help to identify where any negative effects might occur through focussing on these at the more detailed scale within the RBD.

Measures scoped in were assessed and allocated a significance rating of significant positive, positive, neutral, negative, significant negative or uncertain at a national level. Positive effects will have opportunities for maximising and enhancing these documented within the assessment. Only those measures that
are ‘negative’ or ‘significant negative’ or ‘uncertain’ were taken forward into the next stage of RBD assessment and were assessed at the management catchment level, of which there were 2 for the English Dee (English Dee and English Dee Groundwater). This approach allows the SEA to focus on where the negative effects may occur and the development of avoidance or mitigation actions to eliminate or reduce any potential negative effects.

3 The environmental context

3.1 Policy, plan and legal context

The SEA Regulations require that consideration is given to the relationship with other policies, plans, programmes and environmental objectives set at an international, (European) community or national level. The Scoping Report documented the key themes arising from the policy review. The purpose of the review is to align the plan to compliment and work with other environmental policies and legislation rather than against them. The plans and programmes most relevant to the development and implementation of the Plan were summarised in the Scoping Report and consulted upon. Responses have been taken into account in revising the review. We have not repeated the review here, a copy of the finalised scoping report, incorporating the review can be provided.

3.2 Summary of environmental baseline

This section of the report presents an overview of the existing state of the environment, particularly aspects of relevance to the draft plan. The information presented in this section is a summary of that documented in the scoping report, amended following consultation. It is at a strategic level, appropriate to the scale of the plan and is broadly set out according to the environmental topics, as set out in the SEA Regulations. A copy of the final scoping report, incorporating the full baseline can be provided.

3.2.1 Population and human health

Overview & trends

- Population approximately 485,000 across a largely rural catchment, with growth and ageing increasing demand for housing, services and infrastructure.
- Significant variations in deprivation and health outcomes, with inequalities reflected in life expectancy and health gaps.
- Increasing prevalence of chronic illness, obesity, and mental health issues with around 40-45% of adults living with long term conditions.
- Natural environment delivers major physical and mental health benefits, but access is unequal.
- Water environment supplies drinking water to over 2.5m people, and supports recreation, tourism, and fisheries.
- Water quality pressures (nutrients, pollutants, emerging contaminants) affect health and ecosystems.
- Designated bathing waters and shellfish waters support economic activity but and infrastructure pressures.

Key issues

- Population growth, aging and urbanisation increasing pressure on water supply and infrastructure
- Aging and deprived communities are more vulnerable to environmental risks, including flooding and heat.
- Pollution from agriculture, urban and industrial sources continue to affect water quality and human health.
- Climate change risks (flooding, heat, drought) affecting communities and ecosystems.
- Need for safe, clean water and equitable access to blue/green spaces
- Importance of community engagement to improve resilience and outcomes
- Inequalities influence both exposure to environmental risks and access to natural resources.

3.2.2 Biodiversity, flora and fauna

- Biodiversity is declining; ecosystems under pressure and less resilient.
- Significant network of protected sites (SACs, SPAs, Ramsar, SSSIs).
- Promote the value of healthy wetlands in protecting biodiversity, mitigating climate change, storing carbon, reducing flooding and pollution.
- Key pressures:
    - Nutrient pollution (notably phosphorus exceedances)
    - Habitat fragmentation
    - Hydromorphological changes
    - Invasive species and pests
- Important species (e.g. salmon) are at risk.

Key issues

- Need to halt biodiversity loss and restore ecosystems
- Improve connectivity (resilient ecological networks)
- Manage nutrients, invasive species, and habitat pressures
- Address climate change impacts (sea level rise, temperature, extremes)

3.2.3 Land use, geology, soil & contaminated land

- Land dominated by agriculture (~80%) and forestry (~15%).
- Soil degradation from unsustainable practices and pollution.
- Peatlands in poor condition but important for carbon and water regulation.
- Presence of contaminated land (historic industry/mining).
- Climate change threatens soil health and productivity.

Key issues

- Promote sustainable land management and farming practices
- Protect high-quality soils and geodiversity
- Restore peatlands

- Restore woodland networks
- Address contaminated land including erosion risks

3.2.4 Water quality and resources

- Only 44.6% of water bodies within the Dee RBD achieved good status/potential in 2024 cycle 3 interim WFD classification data.
- Main pressures on the water environment are:
    - Pollution (agriculture, wastewater, urban runoff, historic industry)
    - Physical modification of rivers, lakes and transitional water bodies (35 Dee water bodies are classified as Heavily Modified)
- River Dee is heavily regulated for water supply (serving 2.5m people) and is a Welsh Opportunity Catchment for delivering WFD and sustainable land management objectives.
- Issues with nutrient pollution (excess phosphorus) and aging sewer systems.
- Climate change affecting water availability and flood/drought risk.

Key issues

- Address climate change impacts (sea level rise, temperature, extremes)
- Impacts from pollution and excess nutrients.
- Need for improvements to water infrastructure and Combined Sewer Overflows (CSOs) and the incorporation of SuDS or other nature based solutions.
- Flooding, drought impacts and diffuse pollution are tied with land management practices, requiring an integrated catchment management approach.
- Manging balance for abstraction, flood risk, and ecosystem needs.

3.2.5 Air

- Overall improving, but:
    - Ammonia (largely from agriculture) and ozone increasing, with ozone affecting rural areas
    - Urban air pollution including particulate matter and nitrogen dioxide remains a concern
- Air pollutants can impact water bodies via atmospheric deposition, contributing to diffuse pollution and chemical failures.
- One AQMA is designated in the Dee RBD (Chester City Centre) for nitrogen dioxide exceedances

Key issues

- Air quality impacts are indirect but relevant to water and ecosystems and human health
- Emissions from transport, agriculture, domestic combustion and long range deposition from industrial sources continue to influence pollutant levels.

- Limited direct RBMP impact, but potential for co-benefits through pollutant pathways and supporting integrated management.

3.2.6 Materials, infrastructure & assets

- Materials, infrastructure and assets include natural resources, critical services and facilities (e.g. water, wastewater, waste, emergency services and transport infrastructure), and water management assets such as flood defences and water control structures, including reservoirs, within the Dee RBD.
- The Dee RBD contains extensive infrastructure including transport, energy, industrial and water infrastructure, including roads, railways, ports and flood management assets The River Dee relies on extensive water supply regulation, wastewater treatment and flood risk management infrastructure, however aging sewer infrastructure require investment.
- Climate change poses significant risks to infrastructure and assets through flooding, coastal erosion, sea-level rise and extreme weather events.
- Legacy impacts from industrial/mining activities.

Key issues

- Infrastructure resilience and sustainability require improvements and investment.
- Climate change increases risk to assets (flooding, erosion, extreme weather) and increases risk to the sustainable supply of drinking water.
- Historic industry has resulted in river and coastal modifications and legacy pollution issues.
- A need for sustainable resource use and waste reduction.

3.2.7 Cultural heritage

- Rich resource of archaeological, historic and cultural assets.
- Includes Pontcysyllte Aqueduct World Heritage Site, seven Registered Landscape of Outstanding or Special Interest in Wales and one Area of Archaeological Importance.
- Assets vulnerable to:
    - Development and land management
    - Climate change (erosion, flooding)

Key issues

- Some RBMP measures (e.g. weir removal and altering hydrological systems) may conflict with heritage assets.
- Need for sensitive design and mitigation.
- Balance between environmental restoration and heritage protection.

3.2.8 Landscape and seascape

- Highly valued landscapes including Clwydian Range & Dee Valley National Landscape.
- Strong recreational, cultural, and wellbeing value.
- Declining tranquillity in some areas (urbanisation, infrastructure).
- Climate change expected to significantly affect landscape character (flooding, erosion, wildfire, habitat shifts).

Key issues

- Manage landscape change and visual impacts
- Enhance resilience through nature-based solutions
- Protect designated landscapes and local character

4 Significant effects of the Plan

4.1 Actions proposed within the Plan

Appendix 3 lists all the national measures that are to be applied across Wales in the 4th cycle RBMP and states which of these measures have been scoped into the SEA. For ease of assessment, these 21 scoped in measures have been grouped according to the SWMI they are addressing and the delivery mechanism. Sections 1-9 in Appendix 5 document the assessment of significant effects of these measures.

Appendix 4 lists all the Water body measures that are to be applied in the Dee RBD and states which measures have been scoped into the SEA. This scoping was done independently of the national measure scoping in Wales. Following scoping, the scoped in measures were aligned with their relevant national measure, where possible. The national measure assessment was then used to inform the spatial assessment of the Water body measures.

For example, national measure “CYM49 Mining Remediation Authority work through the Wales Metal Mine Programme to deliver abandoned metal mine remediation” was scoped into the assessment and was assessed as having potentially negative effects on biodiversity, flora and fauna, cultural heritage and landscape and seascape. The Water body measure “AM1.0 Control and remediate point and/or diffuse discharges from abandoned metal mines” aligns with national measure CYM49 and so the spatial assessment of the AM1.0 water bodies focussed on spatial baseline information for biodiversity, flora and fauna, cultural heritage and landscape and seascape. The findings of the Water body measure assessments have informed the assessment in Appendix 5.

The assessment of scoped in English Dee measures was undertaken by the Environment Agency. A total of 116 Detailed actions are proposed for the English Dee water bodies. Of these measures 65 were scoped out as they were assessed as having positive effects. 51 were considered further in the assessment as there was potential for negative or uncertain effects. The result of this assessment is documented in Appendix 6. This has been incorporated into the overall Assessment of significant environmental effects of the draft Dee RBMP in section 4.2 below.

The methodology has been developed to ensure scrutiny of potential negative and significant negative effects with the aim of influencing the plan and measure delivery to avoid, reduce or mitigate such impacts.

4.2 Assessment of significant environmental effects of the Plan

This Section draws together a summary of the assessments (Appendix 5 & 6) under each environmental topic to determine the overall significance of effects of the draft Plan.

Assessment of significant environmental effects of the draft Plan are presented in a comprehensive assessment in Appendix 5 for Wales: Sections 1 to 10, one section each for specific groups of measures that were scoped into the assessment. These sections also identify opportunities to mitigate any negative effects, and potential enhancement opportunities that can contribute to maximising positive effects.

Appendix 6 presents a summary of the assessment of measures scoped in in the English Dee and recommends mitigation and enhancement.

The “Groups of measures” referred to in the tables below, are as follows:

Table	National measures
1	**CYM2** Deliver our statutory duties to maintain, improve and develop salmon, trout, freshwater and eel fisheries **CYM4** Deliver the strategic outcomes of the Climate Resilient Fisheries Strategy for the sustainable management of migratory and freshwater fisheries of Wales. **CYM50** In waterbodies designated as heavily modified due to flood and coastal protection, mitigation for NRW owned assets and activities will be reviewed and delivered on a prioritised basis. **WAL02** A programme to develop, support, promote and deliver appropriate river restoration options to deliver multiple benefits at a number of high-priority river catchments identified under the integrated River Restoration Programme for Wales **WAL17** Support Wales to have a coastline that is sustainable and resilient to climate change. Plan for coastal adaptation in line with Shoreline Management Plan policy for coastal defence management. Enable the National Habitat Creation Programme to deliver compensatory intertidal habitat where required. Integrate, where appropriate, nature-based solutions into the delivery of coastal defence schemes. **Water body Measures**: PM6, 7, 8.1, 8.2, 9, 10
2	**CYM 73** Support the delivery of the Welsh Government National Peatland Restoration Programme
3	**CYM41** NRW delivers a prioritised programme of measures on the Welsh Government Woodland Estate to support delivery of WFD Regulations 2017 and Protected Area objectives
4	**CYM49** Mining Remediation Authority work through the Wales Metal Mine Programme to deliver abandoned metal mine remediation **DE0014** Mine Remediation Authority minewater preventative and remediation programme **WW0031** NRW work through the Wales Metal Mine programme to investigate the impacts of abandoned metal mines **Water body Measures**: AM1.0, AM1.1

Table	National measures
5	**WAL20** Deliver actions within the annual Marine Protected Area Network Management Action Plan linked to the MPA Network Management Frameworks for Wales. These actions include reviewing impacts of unregulated activities, improving biosecurity for marine invasive species and improving condition of features within European Marine sites. **NEW04** Marine Nature Networks Programme delivering investigations and management actions within the MPA network.
6	**WAL03** NRW and its partners deliver improvements for water in 'Opportunity Catchments' using the Sustainable Management of Natural Resources (SMNR) principles
7	**CYM31** National Environment Programme schemes to investigate and implement measures to resolve impacts caused by water storage reservoirs **WAL19** Water Companies will address the impacts of water company assets on fish passage causing failure of WFD Regulations 2017 objectives in accordance with objectives in AMP7. This will address structures that act as barriers to fish migration which are associated with other aspects of water company operations, such as trunk sewers and mains pipes located in river channels, and associated concrete sills and structures. In some cases, there may be uncertainty over asset ownership which will need to be resolved. Solutions may often be implemented through working in partnership with other sectors. **Water body measures**: PM2, 3
8	**WAL05** At risk DrWPAs (and all upstream water bodies) have been taken forward as Safeguard Zones for funded Asset Management Plan (AMP) Investigations to assess the sources of the raw water failure and to identify viable catchment solutions. Where catchment solutions are found to be possible, and stakeholder agreement can be assured, improvement measures will be delivered through the AMP.
9	**CYM18** Water companies develop and deliver catchment management options that improve water quality and deliver additional ecosystem services **WAL06** Deliver measures in AMP8 (Menai Strait and Bury Inlet SWPA's) to endeavour to achieve the Shellfish Water Protected Area objective. Plans are also in place to continue to gain a better understanding of improvements required to achieve Shellfish Water Protected Area objective in the wider hydrological catchments. **WAL10** The Water Industry will deliver a programme of investigations and improvements to sewage discharges (both continuous and intermittent) in order to support delivery of WFD Regulations 2017 and Protected Area objectives through AMP. **WAL23** Water Companies will deliver a programme of investigations and improvements to deal with chemicals to support delivery of WFD Regulations 2017 and Protected Area objectives through AMP **NEW01** Investigate, identify and deliver a range of catchment measures to achieve and maintain the bathing water standard in all designated bathing waters. **Water body measures**: WW1.4, 1.5, 2.0

Table	National measures
11	**Water body measures**: **TC1.6** Maintain and improve sewerage drainage system to rectify misconnections and leaks

The scoping has focussed on ensuring the assessment places adequate scrutiny, influence and mitigation on potential negative and significant negative effects. The RBMPs deliver a wide range of measures from advice, education and guidance, to regulatory measures and on the ground restoration and improvements. Overall, the draft RBMP aims to benefit the water environment and whilst negative effects are highlighted in the following sections, it should be set in the context of the overall benefit of the draft plan to the environment.

The grouped national measures were first assessed as to whether they are likely to lead to significant environmental effects, positive or negative, and then this was reviewed following the assessment of Water body measures (Wales) and Detailed actions (England) across the RBD. The level of significance, with associated colour-coded classification, was as follows:

Assessment categories
Significant positive effect – the proposed measure contributes significantly to the achievement of the SEA objective.
Positive effect - the proposed measures contribute to the achievement of the SEA objective.
Neutral (no effect) - there is no clear relationship between the proposed measure and the achievement of the SEA objective or the relationship is negligible.
Negative effect - the proposed measures detract from the achievement of the SEA objective.
Significant negative effect - the proposed measures detract significantly from the achievement of the SEA objective.
Uncertain - where we are unsure of the impact and cannot confidently assign an effect rating. Concluded as an assumption to the plan, e.g. climate change impacts

4.2.1 Population & human health

Welsh Dee Groups of Measures (83 waterbodies)	**To promote health, wellbeing and equity**
1	Positive
2	Positive
3	Neutral
4	Significant positive
5	Positive
6	Positive

Welsh Dee Groups of Measures (83 waterbodies)	**To promote health, wellbeing and equity**
7	Positive
8	Positive
9	Significant positive
10	Positive

English Dee (11 waterbodies) Does the plan help to improve environmental conditions that contribute towards improved health, wellbeing & social equity?	Population & human health - significant positive for 4 measures (3%) Positive for 99 no. measures (83%) Neutral for 0 no. measures Negative for 17 no. measures (14%) Uncertain for 0 no. measures **Conclusion of assessment: overall positive**

The Draft RBMP Programme of Measures is expected to contribute positively to the SEA objective of promoting health, wellbeing and equity across the Dee River Basin District. The Programme of Measures will improve water and environmental quality, reduce exposure to pollution, enhance climate resilience and support access to high-quality blue and green environments. These findings are consistent with both the accompanying Health Impact Assessment (HIA) and the Environment Agency SEA, which concluded that the Dee RBMP would have an overall positive effect on population and human health.

The most significant positive effects are expected to arise from measures that improve water quality and reduce pollution, particularly WAL05, CYM18, WAL06, WAL10, WAL23 and NEW01 (Groups 8 and 9). These measures will help protect drinking water sources, improve bathing and shellfish water quality, reduce sewage and chemical pollution and lower risks associated with microbial and chemical contaminants. Benefits include improved physical health, safer recreational use of water environments and increased public confidence in water quality. These findings are supported by the Environment Agency SEA, which identified positive effects associated with reducing sewage pollution, improving water quality and rectifying sewer misconnections (WCQ19).

Further positive effects are anticipated from CYM49, DE0014, WW0031 and associated abandoned mine remediation Water body measures (Group 4), which will reduce contaminant exposure, improve environmental quality and support opportunities for recreation, education and community engagement. The long-term environmental improvements delivered through remediation are also expected to contribute positively to community confidence and wellbeing.

CYM41 has potential to benefit health and wellbeing through improved access to green and blue space, recreation and physical activity, and nature-based solutions that may increase resilience to flood risk (Group 3). However, these opportunities are

currently aspirational and insufficiently defined for positive effects to be assumed. CYM41 has therefore been assessed as neutral (0), with potential benefits to be determined at project level.

Measures addressing physical modifications, including CYM2, CYM4, CYM50, WAL02, CYM31and WAL19 (Groups 1 and 7), are expected to improve fisheries, river habitats and ecosystem function, whilst also enhancing recreation opportunities, blue and green spaces and community connections with the water environment.

Additional positive effects are expected from CYM73, WAL17 and WAL03 (Groups 2 and 6), which support peatland restoration, coastal adaptation, nature-based solutions and partnership-led catchment initiatives. These measures can enhance climate resilience, reduce flood risk, improve access to nature and contribute to wider physical and mental wellbeing. Similar benefits relating to improved environmental quality and recreation were identified in the Environment Agency SEA through catchment management and abstraction measures (WCQ25).

Measures associated with the protection and enhancement of marine and coastal environments, including WAL20 and NEW04 (Group 5), are also expected to support health and wellbeing through improvements to environmental quality, recreation, volunteering, education and community engagement opportunities.

The Environment Agency SEA identified some minor negative effects associated with wastewater infrastructure measures (WCQ05), relating primarily to temporary construction disruption and localised impacts on tourism. However, these effects were assessed as temporary, localised and not significant. Similar temporary negative effects were identified through the assessment of the Welsh National Measures, including river restoration, mine remediation and water infrastructure improvement schemes. These effects are expected to be localised, short term and capable of being minimised through project appraisal and design and stakeholder engagement.

Overall, the Programme of Measures supports a range of wider determinants of health, including improved water quality, climate resilience, recreation, access to nature, community cohesion and the reduction of environmental inequalities.

Mitigation and opportunities/enhancement

- Project-level environmental assessment, undertaken in line with relevant regulatory and organisational guidance and including consideration of population and human health, should be used to understand community characteristics and vulnerabilities, assess potential impacts and identify opportunities to maximise health and wellbeing benefits.
- Delivery should draw upon the accompanying HIA, local Well-being Plans, public health evidence and community needs to maximise benefits and reduce health inequalities.
- Community socio-economic circumstances, deprivation and barriers to accessing environmental benefits should be considered throughout scheme design and implementation.

- Inclusive stakeholder engagement and consultation will be undertaken with communities, landowners, appropriate bodies and statutory consultees throughout design and delivery to ensure measures respond to local priorities and maximise community benefits.
- Opportunities should be sought to improve equitable access to high-quality blue and green spaces, recreation, active travel and the wider natural environment, particularly for vulnerable or underrepresented groups.
- Nature-based solutions should be promoted where appropriate to improve climate resilience and reduce the impacts of flooding, drought and extreme weather on communities.
- Opportunities for volunteering, education, skills development, local employment and community stewardship should be explored where appropriate.
- Welsh language, cultural heritage and local identity should be incorporated into project design and engagement activities where appropriate to strengthen sense of place and participation.
- Clear, accessible and bilingual communication regarding water quality improvements, environmental restoration works and their associated benefits should be provided where appropriate to support public confidence and informed use of the water environment.
- Temporary disruption associated with construction, remediation or infrastructure works should be minimised through early planning, sensitive engagement and appropriate mitigation measures.

4.2.2 Biodiversity, flora and fauna

Welsh Dee Groups of Measures (83 waterbodies)	**To halt and reverse biodiversity loss and contribute to the protection and effective management of 30% of our land, freshwater and sea for nature by 2030**
1	Positive
2	Significant Positive
3	Positive
4	Negative
5	Positive
6	Neutral
7	Positive
8	Neutral
9	Positive
10	Neutral

English Dee (11 waterbodies) Does the plan: protect & restore areas protected for their nature conservation value & will it contribute to wider nature recovery?	Biodiversity - significant positive for 53 no. measures (44%) Positive for 50 no. measures (42%) Neutral for 17 no. measures (14%) Negative 0 no. measures Uncertain 0 no. measures **Conclusion of assessment: Overall significant positive**

The measures to address physical modifications (Groups 1 and 7) show a potential positive contribution to this objective. For example, CYM2, CYM4 and WAL 19 aim to sustainably manage and improve fisheries in the RBD with PM7 (NRW) and WCQ27 (EA) applied to waterbodies in the RBD with the aim of resolving barriers to fish migration and improving natural continuity in river and tidal channels. Restoration of physically modified waterbodies through the river restoration programme (WAL02), FRM capital programme (CYM50) and AMP measures (CYM31 and WAL19) will also aim to improve the hydromorphological process to benefit physical habitat and associated species. The positive effect at the Dee RBD scale associated with this work is not considered to be significant due to small number of water body measures included in the PoM.

CYM73 (Group 2) supporting the delivery of the WG National Peatland Restoration Programme was assessed as a significant positive contribution to this objective. The overall aim of the programme is to co-ordinate peatland restoration in Wales (including sustainable management of blanket and lowland peats) as well as safeguarding peatlands that are in good and recovering condition. The restoration programme exceeded targets in its first five years, and the 2025-2030 plan has been upscaled, targeting 12% of Welsh peatlands by 2031. This will have overall significant positive effect for biodiversity, halting and reversing loss of this valuable habitat and the rare species that it supports and promoting effective management of peatland going forward.

CYM49 and AM1.0 are the national and Water body measures delivering the remediation of metal mines, assessed in Group 4. AM1.0 has been applied to 7.2% of the waterbodies in the Welsh Dee RBD (NB. there are no measures related to mine remediation in the English Dee). Whilst this is low in terms of area affected, the negative impact is due to the potential effect on Calaminarian Grassland which is a Section 7 habitat and in some cases is a feature of European Sites.

Following spatial analysis, the Calaminarian Grassland, as a designated site feature, does not occur downstream of a water body where AM1.0 is to be applied. It may be present either upstream or at the location of the likely works where there will be more flexibility for project design to avoid, reduce or mitigate impact. These measures are aimed at improving the chemical and ecological status of waterbodies that drain from/through areas of historic metal mining. In delivering these improvements the sensitive habitats that have developed as a result of this contamination, might be impacted. The impact in terms of positive impact on water quality and potential negative impacts on Calaminarian Grassland can extend downstream of the affected areas.

Measures WAL20 and NEW04 (Group 5) deliver actions associated with the Marine Protected Area and Marine Nature Networks Programmes. These measures will have positive effects through improvements to biosecurity for marine invasive species and improvements to the condition of features within European Marine sites which in turn should have positive effects for the overall ecosystem resilience of these areas. This will support the protection, restoration and effective management of internationally designated nature conservation sites and promote good practice which should contribute to achievement of this SEA objective. The significance of the positive effect will be dependent upon the scale of delivery.

Group 9 assessed the Water Company Investment (AMP) measures aiming to address the pollution from wastewater SWMI. These measures could involve interventions to address diffuse pollution as well as point source. Environment Agency actions to improve sewage treatment works and rectify sewer misconnections are also proposed in the English Dee. Interventions to improve water quality are likely to have indirect positive effects on biodiversity, flora and fauna, thereby improving ecological status and potential. The measures have the potential to restore condition of waterbodies and therefore benefit their role in connectivity and the restoration of ecosystem resilience. The significance of the positive effect will depend upon the scale of delivery.

The draft RBMP PoM is aimed at contributing to the achievement of this SEA objective. The significance of the positive effects will be dependent upon the scale of delivery of the PoM. There is potential for temporary negative effects to arise as a result of any construction activities. With delivery of the proposed mitigation, it is anticipated that these temporary and local, negative effects can be avoided or minimised resulting in these measures having a positive effect at a RBD scale.

Mitigation and opportunities

- Projects associated with AM1.0 will require lower plant surveys and on site mitigation and development of strategic monitoring and adaptive management of these habitats as recommended through the HRA.
- The National Habitat Creation Programme (NHCP) (WAL17) is closely managed and reported through FRM Section 18 report, as required under Section 18 of the Flood and Water Management Act 2010. It is recommended that delivery of benefits under CYM50 is also captured and reported.
- Project level screening and delivery of environmental assessment in line with NRW and EA organisational guidance to ensure any temporary negative effects as a result of construction or remediation activities are avoided, reduced or mitigated.
- The Wales Water Industry Strategic Environmental Requirements (WWISER) and England WISER sets out NRW's and EA's expectations of water companies. The guidance sets out the requirements each company should address when meeting their environmental obligations.
- All projects delivering work on the ground will undergo HRA, where there are pathways for effects on European sites.

- Best practice is applied in the delivery of measures to secure wider benefits including delivery of Net Benefit for Biodiversity (using the DECCA framework) or Biodiversity Net Gain and treatment of INNs.
- Delivery at scale by adopting an integrated catchment approach from source to sea will maximise benefits and contribute towards meeting 30 by 30 commitments
- Opportunity to work with and restore natural processes to enhance biodiversity and ecosystem resilience using Resilient Ecological Networks where possible to inform habitat creation and restoration, green engineering and natural management techniques.
- Where multiple benefits are being delivered through a project (e.g. measures to increase recreational use) design should be sensitive to biodiversity to minimise conflict and avoid long-term habitat degradation, disturbance or loss and negative impacts to sensitive species present (e.g. consideration of appropriate lighting, minimising habitat fragmentation, retaining buffers where appropriate etc.).
- An opportunity to work collaboratively with others (e.g. conservation bodies, wildlife trusts / organisations) when developing the programme of measures, to deliver sympathetic solutions with wider biodiversity benefits.

4.2.3 Land use, geology, soil & contaminated land

Welsh Dee Groups of Measures (83 waterbodies)	**To protect geology and soil and promote the sustainable use and management of land**
1	Neutral
2	Significant Positive
3	Positive
4	Positive
5	Neutral
6	Neutral
7	Neutral
8	Neutral
9	Neutral
10	Neutral

English Dee (11 waterbodies) Does the plan improve & sustain soil resources?	Soil - significant positive for 30 measures (25%) Positive for 63 no. measures (53%) Neutral for 28 no. measures (23%) Negative for 0 no. measures Uncertain for 0 no. measures **Conclusion of assessment: overall positive**

Measures to address diffuse pollution (eg CYM41, WAL03, WAL05) have potential benefits for geology, soil and the sustainable management of land. This may include for example introduction of actions to increase canopy woodland cover, reduce run-off, protect soil from erosion and enhance soil health and function. The opportunities for this and scale of benefit would be dependent on type of measure and its location.

CYM 73 (Group 2) which supports the delivery of the Welsh Government National Peatland Restoration Programme aligns directly with the aims of this SEA objective; both through direct restoration of peatlands and the stakeholder engagement promoting sustainable management of peatland areas.

Mine remediation projects (CYM49, DE0014, WW031, AM1.0 and AM1.1) (Group 4) offer potential for capping / management of land contamination with the potential for multiple user benefits (e.g. back into 'use' or opportunities for recreational use). However, land contamination remediation at mine sites needs to be carefully managed taking into account geologically important sites which are often present at historic mine sites, due to the prior human disturbance uncovering unique geological landscapes of value for educational purposes. Investigative and remediation schemes therefore have the potential to have negative effects on these sites, but with mitigation applied at a project level, geologically important sites can be avoided or protected.

TC1.2 and TC1.11 are Water body measures (Group 10) aimed at remediating contaminated land and landfill and their associated leachates. Remediation of contaminated land and landfill sites will treat or prevent leachate reaching surrounding soils, thereby enhancing soil health and function. This will have benefits for surrounding land quality and will directly contribute to this SEA objective by reducing/managing land contamination. The measures are applied in just over 1% of waterbodies in the RBD and so whilst the effects are positive, it will not be significant at an RBD scale.

Draft RBMP measures have been found to have a neutral or positive effect on land use, soil and contaminated land. Some measures directly benefit, eg. peatland restoration or remediation of contaminated land and some will have indirect benefit, eg. measures to address diffuse pollution can benefit soil function and health. If changes to land use and land management arise as a result of projects this may have a negative effect. For example, land use or high value agricultural land could be affected by Coastal Adaptation (WAL17) and Action WQA28.06 in the English Dee aims to improve floodplain connectivity in 10 waterbodies with potential effects on land use. Environmental assessment and stakeholder engagement at a project level will mitigate this risk.

As stated previously the scope of the SEA has focussed on those measures where there are pathways for effects on the ground. This has meant that regulatory, advisory and educational measures have been scoped out. National measures WAL30-34 set out how WG and NRW will work with the agricultural sector to deliver a programme of voluntary measures, advice and guidance and regulation to drive improvements to diffuse pollution through the Sustainable Farming Scheme. These

measures are aimed at supporting delivery of WFD Regulations and protected Area Objectives and will overall be beneficial and support the SEA objective of sustainable land management.

Mitigation and opportunities

- Project level environmental assessment in line with NRW and EA organisational guidance will ensure any negative effects are avoided, reduced or mitigated.
- Geologically important sites should be protected during works and increased opportunities for education considered.
- Potential opportunities to increase woodland canopy cover and connectivity by tying in with the woodland habitat network (in particular taking into account the presence of ancient woodland and Welsh Atlantic rainforests to tie in with the country-wide Resilient Ecological Network for woodland).
- Opportunities to reduce run-off and soil degradation/diffuse pollution (e.g. riparian habitat planting and natural flood management techniques) should be explored through wider project / measure delivery. Integrated catchment management could promote such approaches.
- Opportunity to prioritise delivery of Water body measures such as RA1.3 “Ensure that soil is managed appropriately preventing and reducing compaction and subsequent erosion caused by vehicle movements and/or livestock poaching/overgrazing”. This measure is recommended for 20 of the 83 water bodies in the RBD. Delivery at this scale through the SFS would result in significant positive effects.
- Liaison with local stakeholders could offer opportunity to link land management solutions to other catchment management schemes which could promote measures to deliver wider flood risk (and other) management benefits through improvements to soil functions and reductions in diffuse pollution.
- To prevent a net reduction in the tree canopy as a result of taking peatland areas out of forestry, there are funding schemes such as the Woodland Creation Grant to plant new, diverse woodlands on marginal agricultural land, improving overall soil health and sediment control.

4.2.4 Water quality & quantity

Welsh Dee Groups of Measures (83 waterbodies)	**To protect and improve water quality and quantity**
1	Significant Positive
2	Significant Positive
3	Positive
4	Positive
5	Positive
6	Positive
7	Positive

Welsh Dee Groups of Measures (83 waterbodies)	**To protect and improve water quality and quantity**
8	Positive
9	Significant positive
10	Positive

English Dee (11 waterbodies) Does the plan protect & improve the water environment?	Water - significant positive for 67 measures (56%) Positive for 53 no. measures (44%) Neutral for 0 no. Negative for 0 no. Uncertain for 0 no. **Conclusion of assessment: overall significant positive**

As would be expected from the draft RBMP, all the national measures and Water body measures allocated to the Dee have been assessed as positive or significant positive to protect and improve water quality and quantity across the RBD.

Water body measures overall include a high number (89) of investigatory measures to identify the cause of failure or deterioration. The other most commonly applied measures are pollution from waste water measures (WW1.0 (42) and WW1.1 (28)), pollution from rural areas measures (RA1.0, 1.1, 1.2, 1.3, 1.5 (each applied 37 times)). This demonstrates the potential for improvement of the water environment through regulatory, educational and advisory measures. The significance of effect will be dependent upon resourcing further investigation into the failures and deteriorations and the scale of delivery of measures that address them.

Measures addressing physical modifications offer substantial opportunity for habitat creation and restoration of coastal, fluvial and ecosystem process resulting in multiple benefits to water quality and quantity such as possible reduction of surface run off and diffuse pollution, increased flood resilience and adaptability of ecosystems and catchments to climate change.

Restoration and re-wetting of peatlands will, through the ecosystem function they provide, improve water quality, and regulate water flow into rivers and streams, helping to reduce flood risk.

Measures addressing diffuse (WAL05) and point source pollution such as minewater remediation projects, water company improvements in England and Wales and transport/urban/sewerage drainage outfalls aim to contribute to improvement of chemical and ecological status of waterbodies. Where these measures reduce or slow down run-off through nature-based solutions such as SuDs there are indirect benefits for flood risk, although the scale of the application of the measures is such that this is unlikely to be significant.

Working collaboratively can increase the scale of delivery and benefits, the Dee is one of the opportunity catchments under WAL03.

Delivery of actions and projects within water bodies and their catchments, or along the coast, has the potential for temporary, minor effects on water quality during construction but with standard practices and mitigation, the risk and scale of such an impact is considered to be low.

Mitigation and opportunities

- Project level environmental assessment in line with NRW and EA organisational guidance to ensure any temporary negative effects as a result of construction or remediation activities are avoided, reduced or mitigated.
- The draft RBMP, at a strategic scale provides an opportunity to those responsible for delivery of the national measures (NRW, water companies, land managers etc) to identify opportunities to work in partnership / collaboratively to deliver integrated catchment management to ensure water is sustainably managed as a valuable resource for people and the environment.
- The draft RBMP, in particular, the spatial allocation of Water body measures and Direct actions provides an opportunity to those responsible for delivery of the measures (NRW, EA, water companies, land managers etc) to identify opportunities to work in partnership / collaboratively to deliver the measures. This would minimise disruption to the water environment and allow cost effective delivery, such that more measures can be delivered.
- Potential opportunity to incorporate measures to reduce run-off and to restore natural ecological and fluvial processes to reduce flood risk.
- Seek to maximise opportunities for delivery of multiple benefits by working with natural catchment and coastal processes for projects by implementation of innovative alternatives to traditional grey engineered solutions, including nature-based solutions.
- The Wales WISER and England WISER sets out NRW's and EA's expectations of water companies. The guidance sets out the requirements each company should address when meeting their environmental obligations.
- Early design input to minimise use of hard engineering in favour of nature-based solutions and where possible to avoid modification to river channels – in particular those that may have a detrimental effect on river processes and ecosystem functioning.

4.2.5 Air

Welsh Dee Groups of Measures (83 waterbodies)	**To protect and improve air quality**
1	Neutral
2	Positive
3	Neutral

Welsh Dee Groups of Measures (83 waterbodies)	To protect and improve air quality
4	Neutral
5	Neutral
6	Neutral
7	Neutral
8	Neutral
9	Neutral
10	Neutral

English Dee (11 waterbodies) Does the plan protect and improve air quality?	Air - significant positive for 16 measures (13%) Positive for 38 no. measures (32%) Neutral for 66 no. measures (55%) Negative for 0 no. measures Uncertain for 0 no. measures **Conclusion of assessment: overall neutral**

Many RBMP measures are not specifically intended to reduce air pollutant emissions or improve air quality, consequently the effects on this SEA objective are largely neutral.

Measure CYM 73 which supports the delivery of the Welsh Government National Peatland Restoration Programme has the potential to mitigate impacts of air quality impacts, promoting a reduction in air pollutants and their pathways for effects on waterbodies. Restoration and appropriate management should build habitat resilience, with peatlands able to function as a more robust greenhouse gas and pollutant sink/filter with rewetted peatlands under sustainable grazing management less likely to burn and be more resistant to wildfire. In turn, these measures would prevent the air quality impacts and deposition of pollutants caused by wildfires. The measure is therefore considered likely to contribute to this SEA Objective; however, it is not considered likely to have significant effects on air quality at a strategic level, although some indirect benefits may arise in areas where waterbodies are affected by combustion-related air pollution pressures.

During construction or remediation work associated with certain measures it is possible that localised temporary air quality issues could arise (through dust generation, machinery use etc.), these would be mitigated through standard environment management practice on-site.

Mitigation and opportunities

- Project level environmental assessment in line with NRW and EA organisational guidance to ensure any temporary negative effects as a result of construction or remediation activities are avoided, reduced or mitigated.

- National measure CYM82 “Control the release of chemicals, to the environment, at source i.e. production and use, through the implementation of domestic Legislation and International agreements” was scoped out of the SEA as it is a regulatory measure. There is an opportunity to raise public perception of the impact of domestic and wildfires which have direct impacts on air quality and are indirectly impacting some water bodies (river/estuary/coastal) and Marine SAC’s which are failing for chemicals such as PAH, deposited aerially from domestic/wildfires.
- In a similar vein, TC1.0 and TC1.1 are Water body measures relating to securing compliance through regulatory controls on emissions to address atmospheric deposition affecting water bodies. There is an opportunity to raise awareness of this issue in towns and cities to bring about behavioural change and support the Regulation.

4.2.6 Material infrastructure & assets

Welsh Dee Groups of Measures (83 waterbodies)	**To sustainably construct, maintain/operate and dispose of material assets and infrastructure**
1	Positive
2	Neutral
3	Neutral
4	Neutral
5	Neutral
6	Neutral
7	Positive
8	Positive
9	Positive
10	Positive

English Dee (11 waterbodies) Does the plan support sustainable communities & a prosperous economy?	Infrastructure and material assets - significant positive for 15 measures (13%) Positive for 71 no. measures (59%) Neutral for 34 no. measures (28%) Negative for 0 no. measures Uncertain for 0 no. measures **Conclusion of assessment: Overall positive**

CYM50 and WAL17 looks to identify appropriate mitigation associated with FRM assets (and activities) in heavily modified waterbodies and support coastal adaptation respectively. These measures will allow the continued management of flood risk to the local community and assets (eg water treatment works, power

stations, rail & road). The continuing management of flood risk to existing material assets and infrastructure has the potential to significantly benefit local communities. There are also additional potential opportunities for assets to deliver multiple benefits (e.g. increased access for local communities to green and blue corridors).

Water Company Investment measures are aimed at ensuring water company assets do not cause impacts through physical modification and there is investment through AMP to improve assets and infrastructure to provide drinking water and to effectively treat wastewater. The measures will have benefit for these existing important material assets as measures look to mitigate their effects, protecting and maintaining them for the future. Depending on impacts being addressed there may be some benefit for other material assets and infrastructure in the area; however, benefit may be localised.

Construction work for measures requiring on the ground delivery would require material usage and produce waste. It is anticipated this would be managed efficiently through design and options appraisal by use of carbon calculator and consideration of low carbon alternatives. Locally sourced and sustainable materials should be used wherever possible.

There may also be disruption to material assets during construction periods (e.g. local businesses and infrastructure such as highways) that would need to be managed appropriately at a project level.

Mitigation and opportunities

- Projects should consider sustainable procurement of materials and appropriate construction and waste management practices. Options appraisals and project design should take into account the whole lifecycle of products from purchase to disposal to help promote efficient use of resources and to reduce waste.
- Projects should engage with local stakeholders early in scheme development to minimise disruption to existing assets, businesses and infrastructure through appropriate design and programming. This engagement should also explore opportunities to enhance assets to provide multiuser access and educational potential.
- Project level assessment in line with NRW and EA organisational guidance and the Terms of Reference between the Mine Remediation Authority and NRW, to ensure any negative effects are avoided, reduced or mitigated and opportunities are maximised.

4.2.7 Cultural heritage

Welsh Dee Groups of Measures (83 waterbodies)	**To protect and sustainably manage the historic environment including cultural heritage resources and landscapes, historic buildings and archaeological features.**
1	Negative
2	Positive

Welsh Dee Groups of Measures (83 waterbodies)	**To protect and sustainably manage the historic environment including cultural heritage resources and landscapes, historic buildings and archaeological features.**
3	Neutral
4	Negative
5	Neutral
6	Uncertain
7	Negative
8	Neutral
9	Neutral
10	Neutral

English Dee (11 waterbodies) Does the plan conserve & enhance the historic environment?	Cultural heritage - significant positive for 0 measures Positive for 71 no. measures (59%) Neutral for 32 no. measures (27%) Negative for 0 no. measures Uncertain for 17 no. measures (14%) **Conclusion of assessment: overall positive**

National measures CYM2, CYM4 and CYM50 and Water body measures PM6, PM7, PM8.1, PM8.2, PM9 and PM10 relate to resolving impacts caused by hard engineering, modified channels, barriers to fish, and operational water level management for drainage and flood protection. These Water body measures apply to 19 water bodies (17 rivers, 2 lakes - Celyn and Tegid). There is a cluster of water bodies in the upper reaches of the Dee around Celyn, Tryweryn and Bala area. As well as a more dispersed group of water bodies around the Chirk, Wrexham and Chester areas including Clywedog, Sandycroft, Pullford, Alyn and middle reaches of the Dee.

The water bodies include a high number of Heritage features including a number of Scheduled Monument bridges (Pont Fawr, Pont Dyfrdwy, Bangor Bridge and Holt Bridge) on the Dee which could be impacted by channel modifications/ improvements; as well as areas of significant mining heritage features on the Clywedog and a number of historic landscape areas and other scheduled monuments, conservation areas and listed buildings. The re-naturalisation of channels and removal of hard engineering and artificial modification of the watercourses under these measures would be likely to have a positive impact overall on the setting of these heritage features but could also have a short term, local impact during construction.

WAL19 and 38 also seek to address physical modifications brought about by water company assets and could have the same effects as above. However, by their nature, water company assets are likely to be less sensitive historically. Waterbodies where measures PM2 and PM3 apply, cluster around the Alwen and Brenig in the Denbigh Moors and around Llyn Celyn and Tryweryn in the Arenig/Bala area.

Heritage features of medium to high value (SMs and RHLs) occur within 6 out of 8 affected waterbodies, with the other 2 waterbodies (which are lakes) having fewer heritage features present. Water body measures PM2 and PM3 (*Improving flow regimes and sediment supplies downstream of water storage impoundments*) are unlikely to have a direct impact on these features but may trigger project level assessment due to proximity to designated features.

The review of the English Dee RBMP measures identified a number 'physical modifications' measures where effects were considered to be 'uncertain' with regard to the historic environment. The justification for this 'uncertain' status' is as follows:

- The RBMP is a strategic document, detailed activities have yet to be defined and so it is not clear which activities will or will not have an effect on heritage assets. Therefore, the full effects of this suite of measures on the historic environment are not known at this stage and hence the 'uncertain' status has been ascribed;

- SEA baselines rely on recorded data held by Historic Environment Records (HERs) and national heritage lists. Beyond these known assets, the nature and significance of the archaeological and paleoenvironmental record in and around watercourses often remains deeply buried and/or unknown. Equally, evidence for earlier structures may survive encased within or beneath later structures (e.g. weirs, mill races). The 'uncertain' status then reflects the dynamic and often unknown nature of the archaeological record;

- There may be mixed effects to heritage assets where physical modifications are concerned. Physical modifications to a notional heritage asset have the potential to improve its long-term stability and/or to have a positive effect on other aspects of the RBD's natural and cultural heritage downstream; those physical modifications may also impact on aspects of the asset's historic character/significance. At this stage then it is unclear what the effect of any given measure will be and so they are considered to be 'uncertain'.

As stated previously, NRW and the EA have undertaken the assessment of Welsh and English measures respectively, as these organisations will be responsible for their delivery and/or monitoring their delivery. It is evident that there are differences in the outcomes of the assessment. The NRW assessment has been undertaken by SEA practitioners, while the EA assessment has been carried out by heritage specialists. Where certain measures (and their effects on the historic environment) are concerned, both organisations have taken a precautionary approach. NRW have embedded an explicit negative assumption of 'harm to heritage assets' for certain measures while the EA has assumed a lack of information, flagging the need for future investigation at the project stage.

Planning for coastal adaptation and resilience as part of WAL17 is beneficial for heritage receptors that could be vulnerable to land loss and flooding in the future. Where there is still a requirement for hard-engineered defences to be introduced, this could have direct temporary and/or long-term physical and visual impact on archaeological features, and heritage assets and their setting. However, there is also

potential for new interventions to restore and/or enhance heritage assets and their setting if sensitively designed.

Nature-based solutions to river restoration associated with WAL02 may have benefits for the historic environment by, for example, restoring paleo channels and the natural course of a water body. As with CYM2 and CYM4, however, there is potential for river restoration projects to negatively impact heritage assets where those assets may be a physical modification to the river that the project seeks to remove.

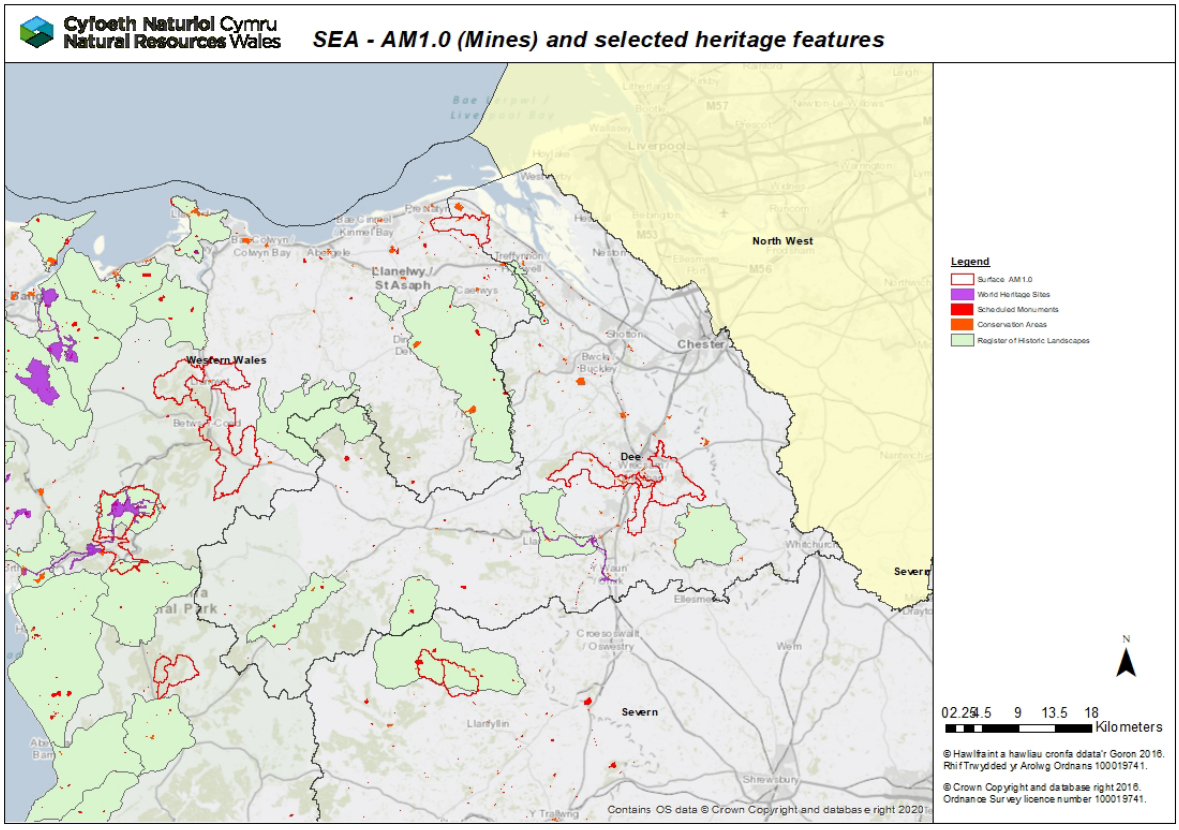
Peatlands are historic living landscapes that often preserve unique heritage records (at the surface, within and below the peat layer) and the deposits themselves offer research potential and information regarding historic increase resilience to drought events environmental conditions and changes. As such CYM73 (Group 2), supporting delivery of the Welsh Government National Peatland Restoration Programme, can contribute to achieving this SEA objective, conserving an important cultural heritage asset and landscape. The restoration of peatland following felling of coniferous forestry can reinstate and/or enhance historic landscapes and the setting of heritage assets. Changes to drainage and hydrology can negatively impact heritage assets, but generally this measure involves the storage of water which would preserve archaeology.

WAL03 is NRW and partners delivering improvements for water in Opportunity Catchments using the SMNR principles. The measure is aimed at collaborative working within these catchments which can range from education, awareness raising through to habitat improvements such as weir removal. The measure is very broad, hence the uncertainty of effects. However, the application of the SMNR principles and appropriate engagement with Heneb and/or Cadw should aim to avoid or reduce any impacts.

National and Water body measures associated with mine remediation involve on-site investigation and delivery of varying scale at historic mines. The majority of waterbodies associated with these measures are concentrated to the east of the RBD between Prestatyn and Chirk. Two waterbodies where these measures apply are within the Pontcysyllte Aqueduct and Canal World Heritage Site (WHS). There are Scheduled Monuments and Conservation Areas associated the Minera lead mine and the Bersham Ironworks, both of which have measures applied to the Clywedog waterbodies. Throughout the RBD there is a strong relationship between listed buildings and transport corridors and they are also denser in the catchments to which the Water body measures apply. Listed buildings include bridges, mills and weirs, with clusters at Erddig, Bersham, Minera and the WHS.

Historic mines are an important historic landscape feature and contain numerous known and unknown heritage assets including above ground infrastructure and buried archaeology. Scheduled Monuments are also often present, either associated with the industrial heritage site or the numerous camps, forts and barrows etc associated with the topography. There is therefore potential risk to cultural heritage assets as a result of these measures (Note: There are no mine remediation actions in the English Dee).

Figure 3: Water bodies where Metal Mine Remediation Welsh Water body measures are proposed and Welsh heritage designations



Previous cycles of RBMP and delivery of the metal mine remediation programme over the past 20 years has demonstrated that metal mine remediation projects are managed sensitively and deliver benefits to the historic environment. Projects can protect in-situ heritage assets in the long-term e.g. measures that reduce likelihood of ground scouring and damage during high flow events. Negative effects on cultural heritage as a result of remediation of the sites can be avoided, reduced and/or mitigated; however, given the sensitivity of sites and that remediation projects inevitably result in changes to the historic landscape and/or setting of historic assets, it is possible that these measures could have negative effects.

Mitigation and opportunities

- Project level environmental assessment in line with NRW and EA organisational guidance and good design will ensure any negative impacts are avoided, reduced or mitigated.
- Early engagement with Heneb &/or Cadw in Wales and Local Planning Authorities Archaeological and Conservation Advisors (LPAACA) &/or Historic England in England regarding project proposals and options appraisal. Where heritage assets or archaeological sensitivity are present, a Desk Based Assessment, agreement of a Written Scheme of Investigation and suitable archaeological watching brief could be required, in line with the relevant consents and planning permission.
- Scheduled Monument consenting process to be adhered to.
- Opportunities for recording heritage assets and sharing information should be explored. Investigation and remediation projects may provide opportunity for recording of previously unknown heritage assets.
- There is also potential for larger scale remediation projects to incorporate cultural heritage improvements, for example provision of heritage trails, exploring historic links with local communities or use of sites for educational purposes.
- An opportunity to work collaboratively with others (e.g. Cadw, Historic England, Heneb, local heritage groups, local community) when developing projects, to deliver cultural heritage benefits that are meaningful for local stakeholders and residents.

4.2.8 Landscape and seascape

Welsh Dee Groups of Measures (83 waterbodies)	**To maintain and enhance landscape and seascape character**
1	Positive
2	Positive
3	Neutral
4	Negative
5	Neutral
6	Uncertain
7	Neutral
8	Neutral
9	Neutral
10	Neutral

English Dee (11 waterbodies) Does the plan conserve & enhance landscape & seascape character?	Landscape - significant positive for 10 measures (8%) Positive for 26 no. measures (22%) Neutral for 68 no. measures (57%) Negative for 0 no. measures Uncertain for 17 no. measure (14%) **Conclusion of assessment: overall neutral**

Measures addressing physical modifications (Group 1) can contribute to achievement of this SEA objective due to the nature of the potential river catchment restoration and coastal adaptation actions. Where it is possible for hard engineering solutions to be removed or adapted in favour of more nature-based solutions, restoring landscape character and potentially increasing climate change resilience, could have significant localised benefit.

River restoration (WAL02) and improving flood plain connectivity (WCQ28) provide opportunity for delivery of NBS and naturalisation of waterbodies which will contribute to achievement of this SEA objective. Where waterbodies become more 'natural' there are benefits not just to the aesthetic of the visual landscape but also allowing fluvial processes and floodplain reconnection to naturally shape local ecosystems and increase resilience to climate change. Where these projects are in designated landscapes there could be significant localised benefit.

WAL 17 supports coastal adaptation in line with Shoreline Management Plan policy and the NHCP enables delivery of compensatory intertidal habitat to allow the continued flood risk management of coastal communities. This measure could include the introduction and modification of coastal assets. This will contribute to achievement of this SEA objective through supporting the long-term protection and restoration of coastal and estuarine landscapes with a view to adaptation to climate change and sea level rise. Hard-engineered defences with potential for visual impact to landscape and seascape can be addressed through design and NBS may be appropriate for existing and proposed defences.

Peatlands across Wales offer unique visual landscapes. 68% of the Visual & Sensory outstanding landscapes are upland and the majority of peatland landscapes have a high or outstanding LANDMAP visual and sensory evaluation. Ongoing support for delivery of the National Peatland Restoration Programme through CYM73 aligns with and contributes to achieving this SEA Objective as it aims to restore and protect this unique landscape of value across Wales, which also increases wider landscape climate change resilience.

AM1 and AM1.1 (remediation of abandoned metal mine and coal mines respectively) are applied to waterbodies that are concentrated to the east of the RBD and run north/south between Prestatyn and Chirk.

WAL03 is NRW and partners delivering improvements for water in Opportunity Catchments using the SMNR principles (Group 6). The measure is aimed at collaborative working within these catchments which can range from education, awareness raising through to influencing land management. The measure is very

broad, hence the uncertainty of effects. However, the application of the SMNR principles and appropriate engagement should aim to avoid or reduce any impacts.

Only one surface water body (Clywedog – above Black Brook) lies within the Clwydian Hills National Landscape (NL) however this area is also of high heritage sensitivity and includes industrial Scheduled Monuments so there is increased likelihood of impacts on the NL.

Approximately two thirds of Groundwater water body (Dee Carboniferous limestone) is within the NL and the boundary of Groundwater water body (Dee Carboniferous Coal measures) also slightly overlaps the NL.

Delivery of remediation projects could result in negative effects on mining landscapes (e.g. if hard engineering solutions are necessary or construction of new infrastructure is required). This could detract from achieving this SEA objective.

Projects must be designed and managed sensitively and effectively to ensure negative impacts are avoided or reduced. The constraints of the locations, necessary engineering solutions and preventing heritage and biodiversity impacts can make this challenging, however, projects can contribute to the long-term protection and enhancement of these culturally important landscapes.

Any measures requiring delivery on the ground have potential for localised, temporary, negative effects on landscape during construction, remediation or removal of infrastructure, and the introduction of new infrastructure such as fish passes; however, it is anticipated this would be managed appropriately through the environmental assessment process and scheme design.

Mitigation and opportunities

- Project level environmental assessment in line with NRW and EA organisational guidance and good design will ensure any negative effects are avoided, reduced or mitigated.
- Promoting solutions that work with natural processes, avoiding and minimising environmental impact and seeking to provide environmental benefits are all consistent with minimising negative effects on the landscape.
- Opportunities for restoration of Resilient Ecological Networks should be explored to strengthen landscape resilience to climate change.
- The promotion of NBS would have the potential to deliver positive effects on landscape and seascape, such as restoring waterbodies and their floodplains back to their natural states, and enabling fluvial and coastal processes to naturally shape features and ecosystems.
- Where the use of hard engineering is unavoidable, innovative solutions and sympathetic design should be used to deliver designs that are sensitive to landscape character.
- Where new natural habitats can be created through project design, there are opportunities to target habitat creation to link into Priority Ecological Networks and buffer protected sites.

- Avoidance of new lighting or use of appropriate lighting if essential (e.g. for recreational access or Health and Safety reasons), in particular with reference to tranquillity and dark skies. This applies for any project but would be of increased importance where schemes are within designated landscapes.
- Delivery of multiple benefits through the projects (e.g. increased recreational access) would need to be sensitively approached to ensure new infrastructure (e.g. footpaths/signage) do not detract from landscape benefits.
- An opportunity to work collaboratively with others when developing projects (e.g. local stakeholders), to deliver landscape benefits valued by local communities.

4.2.9 Climatic factors

Welsh Dee Groups of Measures (83 waterbodies)	**To limit the causes and effects of climate change and ensure resilience and adaptation to any consequences of climate change.**
1	Significant Positive
2	Significant Positive
3	Neutral
4	Neutral
5	Neutral
6	Neutral
7	Neutral
8	Neutral
9	Neutral
10	Neutral

English Dee (11 waterbodies) Does the plan help to mitigate, adapt & improve resilience to climate change?	Climatic factors - significant positive for 39 no. measures (33%) Positive for 53 no. measures (44%) Neutral for 9 no. measures (8%) Negative for 19 no. measures (16%) Uncertain for 0 no. measures **Conclusion of assessment: overall positive**

CYM4 and WAL17 have aims directly linked to adaptation to climate change. CYM4 will work towards supporting aquatic ecosystems to adapt to climate change and WAL17 aims to support Wales to have a coastline that is sustainable and adaptable/resilient to climate change and will put in place actions that support coastal ecosystems to adapt to climate change.

River restoration (WAL02) and improving flood plain connectivity (WCQ28) provide opportunity for delivery of NBS and naturalisation of waterbodies. Habitat creation or restoration associated with other measures will also restore natural fluvial processes and ecosystems such that they can adapt to climate change. NBS will protect and

enhance existing ecosystems building natural resilience high temperatures, flood events, droughts etc. Creation or restoration of habitats (e.g. woodlands, saltmarsh restoration, wetlands and riparian habitats) have the potential for carbon sequestration.

Healthy peatlands act as a sink for greenhouse gas emissions. When degraded they can release stored greenhouse gases. Measure CYM 73 which supports the delivery of the Welsh Government National Peatland Restoration Programme will increase their function for carbon sequestration, promoting a reduction in greenhouse gas emissions, mitigating climate change. Rewetting peatlands will also build resilience to wildfires which are likely to become more prevalent as a result of climate change, therefore supporting this valuable ecosystem to adapt to climate change. Reduction in fires will also reduce the release of smoke and pollutants. The measure is considered to align with and to contribute significantly to achieving this SEA objective.

In delivering the measures on the ground, design must take into account the changing climate and ensure they are adaptable to climate change. Indirectly, delivery of these measures should enable adaptation to climate change pressures.

Carbon footprint of any solutions/projects may cause some negative effects but there may also be some opportunity for nature-based solutions that promote carbon sequestration at a localised scale.

Mitigation and opportunities

- Design and delivery of measures must consider climate change scenarios associated with increased annual average temps. Warmer wetter winters and drier summers.
- Measures requiring construction activities must consider the carbon footprint associated with activities, designs and materials early in project development, seeking innovative solutions to reduce carbon through options appraisal and design.
- Projects should be designed to have net carbon benefit by developing habitat that sequesters carbon and minimising use of materials that use carbon in their manufacture.
- Where possible, design of projects should look to incorporate NBS that minimise risk and restore ecosystem resilience to climate change events (e.g. flooding) and allow habitats to adapt to climate change.
- Adopt solutions that work with natural processes such as wetland creation and woodland planting that can provide carbon sequestration, hence contributing to mitigating climate change whilst also benefitting natural systems in adapting to effects of climate change.
- WISER sets out NRW’s and EA’s expectations of water companies. It sets out the requirements each company should address when meeting their environmental obligations.

4.3 Cumulative effects of the Plan with other policies, plans and programmes

4.3.1 Welsh policies, plans and programmes

This Section considers the cumulative and synergistic effects of the draft Plan, considering its interaction with other policies, plans, programmes and legislation, and demonstrating performance under NRW well-being objectives and Natural Resources Policy. The relationship of the draft plan to some of these is discussed in the assessment above (e.g. WFD and Habitats Regulations) and therefore this section only identifies additional cumulative effects:

- The RBMP4 aligns with and contributes to **NRW's wellbeing objectives** and **corporate plan** and consequently aligns with the Environment (Wales) Act and the Wellbeing of Future Generations Act.
    - **Well-being Objective 1**: Nature is recovering. The RBMP fundamentally aims to protect and restore nature by seeking to improve the condition of land, freshwater and sea. It is a key mechanism that encourages integrated catchment management setting a strategic framework for many NRW programmes and plans that sit within it.
    - **Well-being Objective 2**: Communities are resilient to climate change. The HIA has demonstrated the clear benefits that a high-quality water environment can have on communities and visitors to Wales. The implementation of the RBMP will maximise these benefits and ensure that the water environment is more resilient to the effects of climate change.
    - **Well-being Objective 3**: Pollution is minimised. Again, the RBMP fundamentally aims to minimise pollutants that harm the water environment and consequently human health and biodiversity. The RBMP identifies where regulatory mechanisms can be improved and works with water companies to promote improvements in the water environment.
    - **Well-being Objective 4**: How we work for nature and people. The RBMP sets measures for NRW and partners and encourages collaborative approaches, such as opportunity catchments, to maximise delivery of outcomes.

  Throughout this Environmental Report the potential positive and negative effects have been identified and there is a clear positive contribution to NRW's well-being objectives through the RBMP process. The assessment has clearly shown that the extent of the contribution will be dependent upon the level of delivery.

- The **Environment (Principles, Governance and Biodiversity Targets) (Wales) Act 2026** requires NRW to have special regard to the environmental principles and integrate environmental protection into the RBMP. This Environmental report demonstrates compliance. The national measures and the operational work of NRW aims to prevent deterioration of waterbodies. The RBMP and the associated HRA embody the precautionary principle, the

measures are a combination of actions on the ground, advice, regulation and investigations. Where scientific uncertainty exists, further investigation might be recommended. The strategic nature of the RBMP promotes the rectification at source and polluter pays principle. The reasons waterbodies are not achieving good, identifies the SWMI and business categories responsible. Therefore, the RBMP itself aligns well with the principles and the SEA has considered the positive and negative environmental effects and been integrated with the plan development, as evidenced in this report.

- The RBMP complements the **Natural Resources Policy (NRP)** and **Area Statements**. The RBMP has been developed to support and deliver these priorities, where relevant. For example, river restoration and peatland restoration are nature-based solutions that not only benefit the ecology of those habitats but will provide multiple benefits such as water quality improvements and run-off reduction to benefit flood risk management. The measure delivery at a water body scale reflect the place-based approach and will promote collaborative working. This will be developed over the RBMP4 cycle to work towards delivery of the NRP priorities. Area Statement themes and priorities include sustainable management of the water environment which complements the RBMPs. The synergies are drawn out in the sector specific information on Area Statements and Water. The delivery of nature-based solutions and collaborative and place-based approach promoted through area statements will benefit RBMP delivery of measures.

- **Wales FRMP / SMP / National Strategy for FCERM in Wales**– The aim of the NSFCERMW is to reduce the risks to people and communities from flooding and coastal erosion. The strategy sets out the national approach to flood and coastal erosion risk in Wales, describing the long-term goals for managing flooding from surface water, rivers and the sea, as well as coastal erosion, and how these will be achieved. It promotes nature-based solutions which has synergies with the RBMP measures. This encourages interventions that will slow the flow of water and utilise natural flood plains with the indirect benefits this provides in reducing diffuse pollution. The strategy seeks to prevent inappropriate development on the floodplain and develop approaches to coastal adaptation which will have indirect benefits for the RBMP in maintaining and restoring coastal and fluvial habitats.

  However, potential conflicts with the RBMP arise where hard engineering in fluvial and coastal environments are required to protect existing communities that are at flood risk. The HRA of the strategy concluded that its implementation could affect the integrity of European sites as a result of interventions required to protect communities. The HRA documented the alternatives considered, the imperative reasons of overriding public interest and the measures proposed to compensate for the loss of any features of European Sites. The measures proposed by the plan to improve fish passage,

habitat and river restoration aim to restore a legacy of hard engineering, some of which was associated with FRM activities.

The strategy requires that NFM is included in the options appraisal for all projects, this coupled with the need for project level WFD Regulations 2017 Compliance Assessment will mitigate the risk on waterbodies.

- The **Welsh National Marine Plan** was published in November 2019. The plan provides policy guidance and spatial planning for the inshore and offshore marine areas. The WNMP explicitly supports the achievement of Good Environmental Status (GES) under the UK Marine Strategy. Its goal is to achieve or maintain GES in coastal and marine waters, which is defined through 11 “Descriptors” covering the whole marine environment. The policies set out in the WNMP play a key role in supporting the achievement of GES. The RBMP measures, in particular WAL06 and measures that will reduce diffuse pollution, will complement the WNMP.
- The **Sustainable Farming Scheme** is designed to support land managers in Wales in the sustainable production of high-quality food, help improve productivity, and adapt to the impacts of climate change. The SFS consists of Universal, Optional and Collaborative layers to achieve these aims. Land managers will receive a Universal payment for completing a set of Universal Actions. Examples of Universal Actions include: Soil health, Integrated Pest Management, Habitat Maintenance, Tree and Hedgerow maintenance and planting etc. The draft RBMP contains measures aligned with the SFS aimed at driving improvements to diffuse pollution through education, advice and regulatory mechanisms. The RBMP and SFS are complementary with each other, the SFS being a key delivery mechanism for water body measures RA1-RA2.

- **Welsh Governments Future Wales: the national plan 2040** sets the long-term spatial direction for Government policy, action and investment and for others who the Government work with. The vision is to help deliver sustainable places by supporting positive placemaking and ensuring that our spatial choices direct development to the right places, make the best use of resources, create and sustain accessible, healthy communities, protect our environment and support prosperity for all. Future Wales was adopted in Spring 2021. The national plan sets out 11 outcomes that the Government aim to achieve in its 20-year life. This includes “the environmental, social and cultural value of our natural resources will be managed, maintained and enhanced, while economic benefits will be utilised sustainably and appropriately by promoting nature-based solutions and a circular economy. Across Wales better resource choices will be reflected in more sustainable places, which benefit from reductions in levels of pollution, and be healthier

and more liveable." Development will inevitably require infrastructure associated with water resources and wastewater treatment, but the WFD Regulations 2017 itself requires that such development will be undertaken in a manner that does not result in detriment to the ecological potential or status of waterbodies.

- **Water Resources Management Plans (WRMPs)**: In Wales the most recent WRMP were published (as Final) in 2024 or 2025. They provide details of how Water Companies will ensure that adequate water is available to meet the planned growth in population, housing and economic activity in its supply area, while taking account of climate change and minimising impacts on customers' bills and the environment.

  Options to address a deficit in water supply include:
  - encouraging water efficiency,
  - reducing leakages and
  - seeking water resource through new or existing sources.

  There are links with the RBMPs as certain infrastructure such as reservoirs have a shared function of providing water resource but also allowing control of releases during periods of high flows. However, the main potential for cumulative effects will come from project delivery arising from the two plans, particularly if location and timing are close.

- **Drainage and Wastewater Management Plans:** These plans are produced by each of the water companies and are assessments of risk, opportunities and options to manage sewage and rainfall over a minimum of 25years. They were published, with accompanying SEA's and HRA's in 2024 and will be reassessed every 5 years. They set out how the water companies intend to extend, improve and maintain a robust and resilient drainage and wastewater system. DCWW plan sets objectives to reduce the risk of flooding to communities, manage water quality, services and the environment and adapt to change while maintaining critical services and protecting the environment. National measure WAL24 supports the delivery of DWMPs.

- **Woodlands for Wales Strategy**: The strategy (last updated in 2018) sets out Welsh Government's approach to sustainably manage woodlands across Wales. Forestry operations have the potential to affect water quality and the hydromorphology of watercourses. However, the Woodlands for Wales Strategy requires that "all woodlands and trees are managed sustainably to high standards of environmental stewardship, safeguarding and enhancing the full range of ecosystem services through more widespread and effective application of the United Kingdom Forestry Standard and greater uptake of

auditable standards such as UK Woodland Assurance Standard". The Woodlands for Wales Strategy has synergies with the RBMPs as it:

- promotes woodland creation as integral elements of land management,
- promotes urban woodlands and trees as making a contribution to water management and
- recognises the carbon storage capacity of woodlands

Measures for habitat restoration and peatland restoration are likely to be undertaken within areas of forestry and so there could be potential for cumulative effects. However, there is insufficient detail on the location, timing and design of these projects and so project level consideration will be required.

CYM41 and CYM44 national measures are aimed specifically at forestry practice, with CYM41 specifically committing to deliver a prioritised PoM to support delivery of the WFD regulations and protected area objectives.

4.3.2 English policies, plans and programmes

An assessment of the key potential cumulative effects of the interactions between the draft RBMP for the Dee RBD and other relevant PPPs for England has been undertaken for the SEA. Possible interactions are outlined below.

- **Environmental Improvement Plan**

The Environmental Improvement Plan 2025 (EIP25) sets out the UK Government's framework for delivering the legally binding environmental targets established under the Environment Act 2021, building on the 25 Year Environment Plan. It focuses on improving air and water quality, enhancing biodiversity, reducing waste, and mitigating climate impacts through cross-sector action, regulatory reform, and investment in nature-based solutions.

The EIP promotes integrated environmental management and explicitly recognises the need to address pressures arising from multiple activities and sectors. It emphasises coordinated delivery across land use planning, agriculture, infrastructure, and resource management policies, which can lead to both synergistic positive effects (such as habitat restoration and climate mitigation reinforcing each other) and potential tensions (such as development pressures versus biodiversity recovery).

The Plan's targets and interventions such as species abundance recovery, nutrient pollution reduction, and improved ecosystem resilience are likely to enhance the overall effectiveness of the draft RBMP where aligned, contributing to positive cumulative effects. However, achieving these outcomes depends on consistent implementation alongside other policies and programmes, particularly those relating to housing growth, transport, and economic development, where

competing land use demands could otherwise result in cumulative adverse impacts if not effectively managed.

- **Agricultural Transition Plan**

The Agricultural Transition Plan 2024 sets out a plan to support sustainable agriculture, by introducing payments linked to improving the environment, improving animal health and welfare, and reducing carbon emissions. These new payment schemes can make a significant positive impact on the water quality and resources of a catchment.

There is potential for positive cumulative effects arising from the combination of the RBMP and the measures within the Agricultural Transition Plan.

- **Land Use Framework**

The Land Use Framework 2026 is a national strategic policy designed to optimise how land is utilised across the country. It balances competing demands such as housing delivery, renewable energy, nature recovery, and agricultural production to ensure multiple benefits from limited land resources.

There is potential for positive cumulative effects arising from the promotion of resilience and multi-functional landscapes, better collaboration between organisations, and the promotion of nature-based solutions are all likely to enhance and promote delivery of RBMP objectives.

- **Planning and Infrastructure Act**

The Planning and Infrastructure Act 2025 is a landmark piece of UK legislation enacted to accelerate house building and fast track Nationally Significant Infrastructure Projects. It aims to support economic growth and clean energy by streamlining consenting processes. It introduces: the Nature Restoration Fund which enables developers to pay into a central fund to deliver nature restoration and habitat improvements at scale; environmental delivery plans; and reintroduces spatial development strategies.

There is potential for both positive and negative cumulative effects with the RBMP as developers will likely fund catchment scale water and habitat restoration projects in line with RBMP objectives, but there may also be localised negative cumulative effects where large developments proceed with nature restoration delivered elsewhere in the RBD.

- **National Planning Policy Framework (NPPF)**

The draft RBMP aims to improve water body status, reduce pollution (including nutrients and chemicals), enhance aquatic ecosystems, and promote sustainable water use. In parallel, the NPPF facilitates homes, commercial development, and supporting infrastructure, while requiring sustainable development and spatial development strategies. Together, these frameworks can generate positive cumulative effects, particularly where development is aligned with RBMP objectives. For example, NPPF policies on sustainable drainage systems (SuDS), water efficiency, and biodiversity net gain can support RBMP goals by reducing surface water runoff, improving water quality, and enhancing ecological networks.

Similarly, the promotion of green infrastructure and nature-based solutions under both frameworks can reinforce ecosystem resilience and deliver multiple benefits.

However, there is also potential for negative cumulative effects arising from the scale and distribution of development promoted through the NPPF. Increased urbanisation, infrastructure expansion, and agricultural change associated with growth can lead to greater water demand, increased wastewater discharges, diffuse pollution, and physical modification of water bodies. Where these pressures coincide spatially or temporally, they may undermine RBMP objectives, particularly in already stressed or sensitive catchments.

- **National Flood and Coastal Erosion Risk Management Strategy**

The FCERM Strategy sets out a long-term framework for managing flood and coastal erosion risks, promoting the use of natural flood management, resilience measures, and adaptive planning in response to climate change. RBMPs, in parallel, focus on achieving good ecological and chemical status of water bodies, including improving water quality, restoring habitats, and supporting sustainable hydrological regimes. Both frameworks therefore emphasise integrated catchment management and the restoration of natural processes, creating strong alignment in objectives and delivery mechanisms.

This alignment is likely to generate positive cumulative effects, particularly where interventions deliver multiple environmental benefits. For example, measures such as floodplain reconnection, wetland creation, river restoration, and sustainable land management can simultaneously reduce flood risk (FCERM objectives) and enhance water quality, biodiversity, and ecological status (RBMP objectives). The shared focus on nature-based solutions and climate adaptation also supports increased ecosystem resilience, carbon sequestration, and wider environmental enhancement at a landscape scale.

However, there is potential for localised negative cumulative effects or trade-offs, depending on how specific measures are implemented. For instance, certain engineered flood and coastal defence schemes may result in hydromorphological changes, habitat loss, or coastal squeeze, which could conflict with RBMP objectives if not carefully designed and mitigated. Similarly, sediment management or coastal realignment measures may alter physical and ecological conditions in ways that require careful balancing with water body status goals.

- **Water Resources Management Plans**

WRMPs set out how water companies will balance water supply and demand, including measures such as abstraction management, leakage reduction, water efficiency, and the development of new supply infrastructure. RBMPs, in parallel, aim to achieve good ecological and chemical status of water bodies, including controls on abstraction pressures, protection of environmental flows, and improvements to aquatic ecosystems. There is therefore a strong functional overlap between the two, particularly in relation to abstraction, flow regimes, and ecological health.

This alignment presents significant potential for positive cumulative effects, especially where WRMP measures support RBMP objectives. For example,

demand management, leakage reduction, and water reuse can reduce abstraction pressures, helping to maintain environmental flows and improve water body status. Similarly, catchment-based approaches promoted in both plans—such as nature-based solutions and integrated water management—can enhance ecosystem resilience, water quality, and biodiversity while supporting long-term water resource security.

However, potential negative cumulative effects and trade-offs may arise, particularly where new water resource infrastructure is required to meet future demand. Schemes such as reservoirs, water transfers, desalination plants, or increased groundwater abstraction could result in changes to flow regimes, habitat loss, or disturbance to sensitive environments, which may conflict with RBMP objectives if not carefully managed. In addition, increased demand associated with population growth and climate change pressures may intensify existing stresses on water bodies if mitigation measures are insufficient.

Overall, the cumulative interaction between WRMPs and RBMPs is expected to be complementary, with strong potential for mutually reinforcing benefits where abstraction is sustainably managed and demand is reduced.

- **Water Company Drainage and Wastewater Management Plans**

DWMPs set out long-term strategies for managing wastewater capacity, sewer flooding, storm overflows, and environmental discharges, including planned investment in infrastructure and nature-based solutions. RBMPs, in parallel, aim to achieve good ecological and chemical status of water bodies, including reducing pollution from point and diffuse sources, addressing nutrient enrichment, and improving aquatic habitats. As wastewater discharges and sewer systems are a key pressure on the water environment, there is a strong functional linkage between the two frameworks.

This alignment creates significant potential for positive cumulative effects, particularly where DWMP investment and management measures support RBMP objectives. For example, improvements to wastewater treatment works, reductions in storm overflow frequency, and measures to separate surface water from foul systems can reduce pollutant loads, improve water quality, and enhance ecological status. Similarly, the increasing emphasis on catchment-based approaches and nature-based solutions—such as wetlands for water treatment or sustainable drainage systems—can deliver wider benefits for biodiversity, flood risk management, and climate resilience, reinforcing RBMP outcomes.

However, there is also potential for negative cumulative effects or constraints, particularly where existing infrastructure capacity is insufficient to accommodate future growth or climate pressures. Increased wastewater generation from population growth, urbanisation, and extreme rainfall events may lead to more frequent or higher volume discharges, including storm overflow events, which could undermine RBMP objectives if not effectively mitigated. In addition, the construction and expansion of wastewater infrastructure may have localised

environmental impacts, such as land take, disturbance, or changes in hydrological regimes.

Overall, the cumulative interaction between DWMPs and RBMPs is expected to be complementary, with strong potential for mutually reinforcing improvements to water quality and ecosystem health.

- **Water Company Drought Plans**

Drought Plans set out the operational and emergency measures water companies will implement during periods of prolonged dry weather, including temporary demand restrictions, drought permits and orders (such as increased abstraction), and supply-side interventions. RBMPs, in parallel, seek to achieve good ecological and chemical status of water bodies, including maintaining environmental flows, protecting habitats, and limiting abstraction pressures. As a result, there is a clear interaction between short-term drought management actions and longer-term environmental objectives.

This relationship can generate positive cumulative effects, particularly where proactive drought planning aligns with RBMP objectives. Measures such as demand management, improved water efficiency, leakage reduction, and public awareness campaigns can reduce pressure on water resources during drought conditions, helping to protect environmental flows and minimise ecological stress. In addition, the increasing integration of adaptive and catchment-based approaches in both frameworks can support more resilient water systems and reduce the frequency and severity of environmental impacts over time.

However, there is also potential for negative cumulative effects, particularly during severe drought events when emergency measures are required. Actions such as increased abstraction under drought permits, altered flow regimes, or reduced dilution of pollutants can have adverse impacts on water quality, aquatic habitats, and species, potentially conflicting with RBMP objectives. These effects may be exacerbated where drought conditions coincide with existing environmental pressures, such as nutrient enrichment or low baseline flows, leading to heightened cumulative stress on sensitive water bodies.

Overall, the interaction between Drought Plans and RBMPs presents a balanced but potentially sensitive relationship. While there is clear potential for complementarity through demand reduction and long-term resilience planning, short-term operational responses to drought may introduce temporary environmental risks. The cumulative outcome will therefore depend on effective environmental safeguards, monitoring, and alignment between drought management measures and RBMP objectives.

4.4 Overall conclusions

The HIA concluded that the draft RBMP has the potential to deliver significant long-term benefits for the health and wellbeing of people across Wales and this supported the SEA topic **population and human health being assessed as overall positive**.

Improvements in water quality, drinking water safety, environmental quality, biodiversity, climate resilience and access to blue-green spaces are expected to support positive physical and mental health outcomes whilst contributing to wider social, environmental and economic wellbeing. The plans also provide opportunities to strengthen community resilience, enhance access to nature and improve environmental conditions that support healthier communities.

The biodiversity, flora and fauna assessment highlighted positive effects from restoration of water bodies and peatlands and extensive application of advisory and regulatory measures to address pollution in rural areas and waste water pollution. The draft HRA determined there to be potential for adverse effects on Calaminarian Grassland. Whilst the scale of impact is low in terms of area affected, the negative impact is due to the potential effect on Calaminarian Grassland which is a Section 7 habitat and in some cases is a feature of European Sites. Without diminishing this issue, the overall effect of the draft RBMP on **biodiversity, flora and fauna has been assessed as overall positive.**

The assessment of effects of the scoped in measures on land use, geology, soil and contaminated land were assessed as a combination of positive or neutral. Of these measures, some directly benefit, eg. peatland restoration or remediation of contaminated land and some will have indirect benefit, eg. measures to address diffuse pollution can benefit soil function and health. Measures to address point source or specifically the water environment were considered to be neutral in effect. The draft RBMP PoM includes national and water body measures aimed at regulatory, advisory and educational delivery mechanisms to influence land management. These have been widely applied throughout the RBD and so on balance the overall effect on the draft RBMP on **land use, geology, soil and contaminated land has been assessed as overall positive.**

As would be expected from the draft RBMP, the overall assessment of **effects on water quality and quantity is overall positive**. The significance of effect will be dependent upon resourcing further investigation into the failures and deteriorations and the scale of delivery of measures that address them.

Many draft RBMP measures are not specifically intended to reduce air pollutant emissions or improve air quality, consequently the effects on **Air have been assessed as overall neutral**. However, there is an opportunity to generally raise awareness of the effect of atmospheric deposition on our water bodies.

Material Infrastructure and assets associated with the water environment include FRM assets, water company assets and this topic also considers material useage and waste production. The draft RBMP supports the continuing management and improvement of such assets, to benefit the water environment and adapt to our changing climate. Recommendations have been made that low carbon, locally

sourced and sustainable materials should be used wherever possible. The overall effect on the draft RBMP on **material infrastructure and assets has been assessed as overall positive.**

The effect of the draft RBMP PoM on cultural heritage was varied. Peatland restoration was assessed as positive as rewetting and restoring peatlands preserves the unique heritage records that they hold. Some measures were deemed neutral where there were no pathways for effects, yet some were negative. The measures assessed as negative were associated with removal of barriers to fish passage, remediation of physical modifications and remediation of abandoned mine sites. These sites and structures can be sensitive heritage landscapes or structures and whilst project level investigation and appraisal would likely mitigate the impacts through sensitive options appraisal and design, a potential negative effect was concluded for some measures.

Previous cycles of RBMP and delivery of these measures over the past 20 years has demonstrated that such projects are managed sensitively and can deliver benefits to the historic environment. Projects can protect in-situ heritage assets in the long-term e.g. measures that reduce likelihood of ground scouring and damage during high flow events. Negative effects on cultural heritage as a result of remediation of the sites can be avoided, reduced and/or mitigated; however, given the sensitivity of sites and that remediation projects inevitably result in changes to the historic landscape and/or setting of historic assets, it is possible that these measures could have negative effects. The overall effect on the draft RBMP on **cultural heritage has been assessed as overall uncertain.** This overall assessment has been made following consideration of previous RBMP cycles, project level policy and guidance, and the mitigation measures in place.

The **effect on landscape and seascape was overall neutral**. Certain measures aim to restore or preserve waterbodies and wider catchments (eg peatland) which could be beneficial to landscape but the scale of delivery of interventions is uncertain. Delivery of mine remediation projects could result in negative effects on historic landscapes. As with cultural heritage, early consideration in the design of these schemes can mitigate these effects and a negative effect on landscape and seascape at a RBD level is unlikely.

Climatic factors, the need to mitigate and adapt to climate change, was a consideration across all topics. It is a key pressure across all aspects of the environment. Certain measures were significant positive as measures to allow the continued management of flood risk to coastal infrastructure and communities, river and peatland restoration all play a significant role in mitigating and adapting to climate change. Other measures were assessed as neutral and generally the uncertainty of the scale of delivery resulted in the **overall effect on climatic factors being neutral.** There are, however, opportunities through good options appraisal and design associated with measures to ensure net carbon benefit and design, including landscape design, that is resilient and/or adaptable to climate change.

The degree of significance of the positive impacts of the draft RBMP PoM will depend upon the investigative effort and the level of delivery.

4.5 Environmental mitigation and opportunities / enhancement

This assessment has identified the significant effects on the wider environment likely to occur as a result of implementation of the draft Dee RBMP4. The assessment process also identified opportunities to enhance the beneficial effects and mitigate any adverse significant environmental effects of actions proposed in the draft RBMP.

The draft RBMP provides a valuable tool for NRW, EA, water companies and partners to deliver integrated catchment management by working collaboratively and focussing resources where they can deliver the most benefit. Such integrated delivery will also reduce the local negative impacts and disruption associated with construction or delivery of the measures.

A number of enhancement opportunities are incorporated directly within the proposed actions within the RBMP. For example, the national measure WAL22: "Deliver biodiversity net benefit and restore ecosystem resilience at a catchment scale by creating, restoring and connecting semi-natural habitats, freshwater and marine systems, achieving bigger, better and more connected ecosystems. Supporting the recovery of species and habitats, improve ecological connectivity, and strengthen catchment resilience to climate change, pollution and hydrological extremes, contributing to the objectives of Sustainable Management of Natural Resources (SMNR), the Environment (Principles, Governance and Biodiversity Targets) (Wales) Act, and the Wales Nature Recovery Action Plan".

Additional safeguards exist to ensure that the environmental implications are addressed in related decision-making processes:

- Project level environmental assessment is undertaken on all NRW and EA projects relating to on the ground activities under our respective organisational policy and guidance. This will involve:
    - Site selection screening informed by desk-based assessments and site surveys will be undertaken to inform sympathetic design and construction programming.
    - Stakeholder engagement
    - Potential construction stage short-term effects such as sediment mobilisation, noise, visual disturbance and temporary access restrictions will be mitigated (refer to relevant organisational guidance)
    - Timing of works to avoid disturbance to wildlife and habitats
    - Restoration of construction / compound area eg decompaction following construction
    - Standard best practice construction methods eg CIRIA Guidance C811 Environmental Good Practice on Site, Pollution Prevention Guidance etc.
- Low carbon construction materials and methods will be implemented where possible to reduce carbon emissions associated with construction

- Circular economy principles and waste hierarchy will be implemented where possible to reduce resource use
- As competent authorities under the Habitats Regulations, NRW, EA, MRA and Water Companies must undertake Habitats Regulations Assessments to determine whether a proposed, plan, strategy or project is likely to adversely affect the integrity of a European site.
- The Wales Water Industry Strategic Environmental Requirements (WWISER) and England WISER sets out NRW's and EA's expectations of water companies. The guidance sets out the requirements each company should address when meeting their environmental obligations.
- Water Framework Directive Regulations compliance assessments are undertaken to ensure compliance with WFD objectives.
- SEA will be undertaken for other strategic water sector plans to embed the environmental outcomes into the catchment planning process

5 Monitoring the effects of the Plan

5.1 Outline of proposed monitoring for significant environmental effects

Once the draft Plan is finalised and adopted, the SEA Regulations require its significant environmental effects to be monitored. This section presents an outline of the actions we expect to undertake in relation to monitoring the significant environmental effects of the Plan.

As set out in the SEA conclusions, the degree of significance of the positive impacts of the draft RBMP PoM will depend upon the investigative effort and the scale of delivery. Monitoring of the PoM should be designed to capture any unforeseen impacts and any multiple benefits delivered. This will allow adaptive management and also inform future cycles of RBMP.

The Health Impact Assessment also makes recommendations to monitor the effects of the plan on health and wellbeing. These are included below.

Table 6: Proposed monitoring of the effects of the Plan

Environmental receptors	**Proposed monitoring**
Population and human health	In Wales, relevant Welsh Government Well-being Indicator, including 02 (healthy life expectancy and the deprivation gap), 23 (influence over local decisions), 26 (satisfaction with local area), 27 (community belonging/cohesion) and 29 (mental wellbeing) will provide contextual monitoring of population health, wellbeing and inequalities. These will be considered alongside relevant local Well-being Plans in Wales and associated evidence, together with relevant Public Health Wales, National Survey for Wales, ONS and Welsh Index of Multiple Deprivation data, including available geographical and population-group breakdowns, to identify trends and differences in health, wellbeing and environmental disadvantage. Monitoring in Wales will also consider available evidence relating to access to blue-green space, recreation and physical activity, community resilience, water-related health risks and affordability, reflecting the pathways identified through the HIA.

Environmental receptors	Proposed monitoring
Biodiversity, flora and fauna	Currently the monitoring in Wales is reported through State of Natural Resources Report (SoNaRR) and Welsh Government Well-being indicators 43 (Area of healthy ecosystems in Wales) and 44 (Status of biological diversity in Wales). Under the Environment (Principles, Governance and Biodiversity Targets) (Wales) Act 2026, WG are developing long and short-term biodiversity targets for species, ecosystems, pollution and evidence which will be introduced in 2028. In England, EA existing monitoring of water bodies includes benthic invertebrates, fish, phytoplankton and macrophytes. Annual monitoring is undertaken to determine the length of rivers improved as an indicator to show progress towards meeting WFD objectives. Existing Biodiversity Net Gain monitoring arrangements for projects is also recommended as an indicator for biodiversity, in the EA this is monitored through Building Research Establishment Environmental Assessment Method (BREEAM) reporting.
Water	In Wales, monitoring is undertaken as part of the RBMP cycles to determine progress towards meeting WFD objectives for water body status. This is reported as interim (3years after adoption of RBMP) and final (at the end of each RBMP cycle) classification. This is reported through SoNaRR and Welsh Government Well-being Indicator 45 (Percentage of surface water bodies and groundwater bodies achieving good or high overall status). In Wales, monitoring will be developed for the Programme of Measures delivery (eg Reporting of environmental outcomes from FRM activities, delivery of river restoration outcomes, peatland restoration etc). Under the Environment (Principles, Governance and Biodiversity Targets) (Wales) Act 2026, WG are developing a biodiversity target for reducing pollution including from excess nutrients. In England, to assess the current condition of the water environment the EA has monitoring in place to assess protected areas that are Bathing Waters and Drinking Waters; water body status monitoring for ecology, chemistry, hydromorphology and groundwater level; classification assessments for water bodies relating to biology and chemical quality of surface waters and quantitative and chemical quality of groundwater. The approach to chemical status has changed since 2015 and is now more advanced to take account of some of the more persistent substances such as PFAS, which are sometimes called ‘forever chemicals’. The EA has also developed eutrophication assessments for water bodies at risk from nutrients in rivers, lakes, estuaries and coastal waters.

Environmental receptors	Proposed monitoring
Cultural heritage	Welsh Government Well-being Indicator 40 (Percentage of designated historic environment assets that in stable or improved conditions (reported annually)). In Wales there is regular review and sharing of lessons learnt through the Memorandum of Understanding between NRW, Cadw and Heneb. In Wales, project level reporting / lessons learnt is undertaken under the Metal Mine Remediation Programme.

The proposals for monitoring the effects of the Plan will be developed further in the preparation of the final Plan and will be published in the Statement of Environmental Particulars, alongside the adopted Plan.

5.2 Future strategic environmental assessment activities

This environmental report concludes the main stage of the SEA process for the draft Dee RBMP4. A SEA 'Statement of Particulars' will be published alongside the adopted RBMP, explaining how consultation responses and the findings of this environmental report have influenced the plan-making process and how monitoring requirements have been finalised.

Appendices

Appendix 1: Scoping Consultation Responses Summary

Appendix 2: Wales Strategic Alternatives - Identification & Assessment
Appendix 2a: Identification of Alternatives (Wales)
Appendix 2b: Assessment of Alternatives (Wales)
Appendix 2.1: England Strategic Alternatives - Identification & Assessment
Appendix 2.1a: Identification of Alternatives (England)
Appendix 2.1b: Summary of Assessment of Alternatives (England)

Appendix 3: National Measures (Wales) Scoping

Appendix 4: Draft Dee RBMP Waterbody Measures (Wales) and Actions (England) Scoping
Appendix 4.1: Waterbody Measures Welsh Dee
Appendix 4.2: Waterbody Actions Environment Agency English Dee

Appendix 5: Assessment of significant environmental effects of the Draft Welsh Dee Programme of Measures

Appendix 6: Summary of SEA Assessment of Detailed Actions in the English Dee