



Habitats Directive

River Dee and Bala Lake

What's happening?

The Habitats Directive has introduced laws to safeguard Europe's most endangered plants, animals and habitats.

As part of this, the Environment Agency has to review all the existing consents that we regulate to ensure there are no adverse effects on the nature conservation interests of designated sites such as Special Areas of Conservation (SAC) and Special Protection Areas (SPA).

We are using a staged approach to do this:

- Stages One and Two – listed all consents and looked at those with the potential to have a significant effect.
- Stage Three – looked in detail at whether they have an adverse affect on special sites:
- Stage Four - those consents with no adverse affect will stand, those that do have been examined further to see what can be done about it.

Location



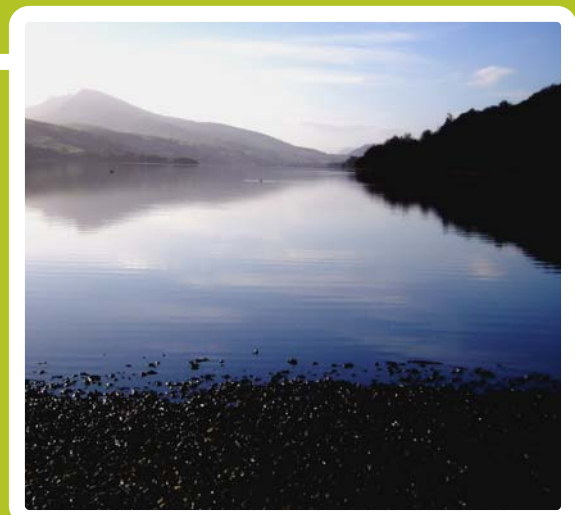
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About this site

River Dee and Bala Lake SAC extends from the western extremity of Llyn Tegid down into the tidally dominated reach west of Chester. The SAC comprises the main River Dee and the Tryweryn, Mynach, Meloch and Ceiriog tributaries.

Llyn Tegid is the largest natural lake in Wales. Noted for its otter population, it has been a SSSI since 1971 and is an internationally designated wetland site. Recently, reports of blue-green algal blooms in the lake have prompted investigations to ascertain the cause.

The River Dee is important for a range of fish species and habitats, including salmon, all 3 British lamprey species and the bullhead. The river supports a large otter population and communities of water crowfoot (*Ranunculus*) species and submerged and floating plants which support a range of fish and invertebrate communities in their own right.



Impacts

The main risk to this site is nutrient enrichment from phosphorus inputs to which all designated features are sensitive. Phosphorus enters the river via point sources such as consented discharges from sewage treatment works and domestic discharges, and from diffuse sources such as agricultural run-off. Exceedance of river phosphate targets can lead to increased algal growth and a decline in plant species.

For our assessment, water quality modelling was used to identify stretches of the river where P standards were being exceeded and to locate the source of the exceedance.

River flows were modelled and assessed to investigate the licensed water abstractions from the SAC. The assessment revealed potential risks from some abstractions which could legally take a lot of water over a short time thus significantly depleting river flows for short periods. Several water abstractions were also identified as posing a risk to the designated fish species. The way the water intakes are built means they could be sucking a large number of fish out of the river.

Guideline Phosphorus Standards

The Environment Agency, the Countryside Council for Wales and Natural England have developed guideline standards for the level of dissolved phosphorus that can be allowed to occur in SAC rivers. The standards are based on the geology of the catchment and the river flow characteristics. The guideline standards allow a reasonable concentration of phosphorus to be present due to human activities while also allowing the designated SAC features to be in a favourable condition. If the level of phosphorus in the river is above the guideline standard, the ecology of the river may be affected and will be targeted for further investigations.

Conclusions

- We assessed 103 water quality permissions in Stage 3. 49 discharges have been progressed to Stage 4 for Options Appraisal. Consent modifications have been proposed for 13 of these permissions.
- The modifications will apply limits to the concentration of phosphate allowed to be discharged from sewage treatment works. P removal at these works will ensure that nutrient loading into the River Dee is addressed and will contribute to the environmental protection of the SAC.
- The modifications alone will not wholly restore the SAC but will only remove the proportion of impact from the permitted activities. Other diffuse phosphate sources such as agricultural run-off from the surrounding land will also need to be addressed to restore the SAC to favourable condition.
- We assessed 61 abstraction licences in Stage 3. Following Stage 4, 7 of these require consent modification.
- Modifications to cover maximum sub-daily uptake rates, and intake structures in terms of fish screening protection will ensure that the impact on fish from water abstractions will be minimal.

Further information can be found on our website
www.environment-agency.gov.uk

You can request guidance from enquiries@environment-agency.gov.uk



Dyfrdwy a Llyn Tegid

Beth sy'n digwydd?

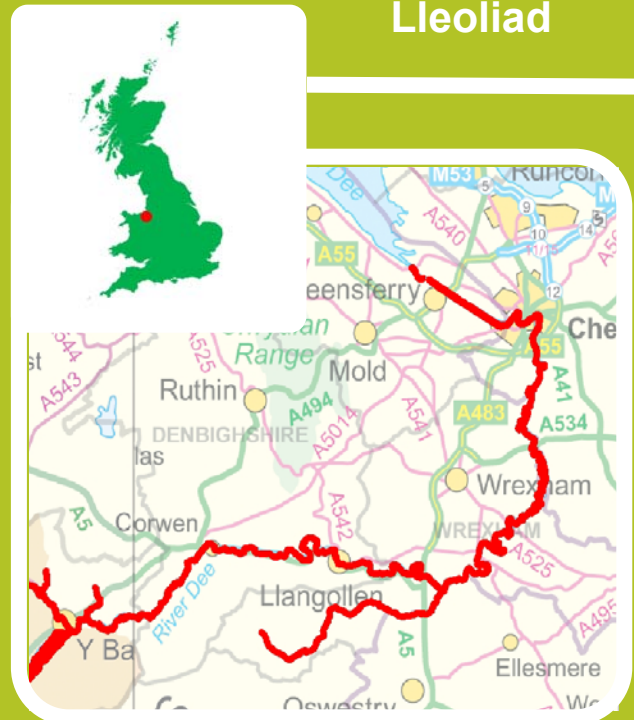
Mae'r Gyfarwyddeb Cynefinoedd wedi dwyn i fod gyfreithiau gwarchod y planhigion, yr anifeiliaid a'r cynefinoedd hynny yn Ewrop a fygythir fwyaf.

Yn rhan o hyn, rhaid i Asiantaeth yr Amgylchedd adolygu pob caniatâd presennol a reoleiddiwn, er mwyn sicrhau nad ydynt yn effeithio er gwaeth ar fuddiannau cadwraeth yr un Ardal Gadwraeth Arbennig (AGA), Ardal Warchodaeth Arbennig (AWA) nac unrhyw safleoedd dynodedig arall.

Mae sawl cam i hyn:

- Camau 1 a 2 - rhestru pob caniatâd, ac edrychar y rhai a ddichon fod ag effaith sylweddol;
- Cam 3 - edrych yn fanwl ar a ydynt yn effeithio er gwaeth ar safleoedd arbennig;
- Cam 4 - bydd y caniatadau nad ydynt yn effeithio er gwaeth yn sefyll; archwiliasom y gweddill er mwyn gweld beth arall ellid ei wneud ynglŷn â hynny.

Lleoliad



[H] Hawlfraint y Goron. Cedwir pob hawl. Asiantaeth yr Amgylchedd. 100026380. 2009

Ynglŷn â'r safle hwn

Mae AGA Dyfrdwy a Llyn Tegid yn ymestyn o ben gorllewinol y llyn i lawr at y rhan honno o'r afon sydd tan ddylanwad y llanw, i'r gorllewin o Gaer. Mae'r AGA'n cynnwys Dyfrdwy ei hun, a'i rhagnentydd sef Tryweryn, Mynach, Meloch a Cheiriog.

Llyn Tegid yw llyn naturiol mwyaf Cymru. Yn enwog oherwydd ei dyfrgwn, bu'n SoDdGA ers 1971, ac y mae'n safle gwlyptir dynodedig rhyngwladol. Yn ddwyddar mae adroddiadau ynghylch gordyfiant algâu glaswyrdd yn y llyn wedi sbarduno ymchwiliadau i achos hynny.

Mae Dyfrdwy'n bwysig ar gyfer amryw rywogaethau a chynefinoedd pysgod, gan gynnwys yr eog, pob un o dair rhywogaeth llysywod pendoll Prydain, a'r grothell. Mae nifer helaeth o ddyfrgwn yn yr afon, ynghyd â rhywogaethau egyptl y dŵr (*Ranunculus*), a phlanhigion tanddwr a nofiol sydd eu hunain yn cynnal amryw gymunedau pysgod a thrychfilod.



Effeithiau

Y prif fygythiad i'r safle hwn yw cynnydd maetholion yn sgil mewnlifiadau ffosfforws y mae'r holl nodweddion dynodedig yn ymateb iddo. Daw i'r afon o ffynonellau penodol megis gollyngiadau caniadedig o weithfeydd trin carthion a gollyngiadau domestig, a ffynonellau gwasgaredig megis goferiadau amaethyddol. Gall gormod o ffosffadau gynyddu twf algâu ac achosi dirywiad ymysg planhigion eraill.

Ar gyfer ein hasesiad ni, defnyddiwyd modelu ansawdd dŵr i ganfod rhannau o'r afon lle'r oedd y ffosfforws yn uwch na'r safonau, a chanfod ffynonellau'r gormodedd.

Modelwyd ac aseswyd llifau afon er mwyn ymchwilio i dyniadau dŵr trwyddedig yr AGA.

Datgelodd yr asesiad berygl dichonol rhai

tyniadau a allent godi llawer o ddŵr mewn ychydig amser, a hynny'n gyfreithlon, gan leihau llif yr afon yn sylweddol am gyfnodau byrion. Canfuwyd sawl tyniad dŵr oedd hefyd yn fygythiad i rywogaethau pysgod dynodedig, oherwydd fod natur yr offer tynnu'n golygu y gallant sugno nifer helaeth o bysgod allan o'r afon.

Casgliadau

- Darfu inni asesu 103 caniatâd ansawdd dŵr yng Ngham 3. Aed â 49 gollyngiad ymlaen i Gam 4 ar gyfer Asesu Dewisiadau. Argymhellwyd newid amodau 13 o'r caniatadau hyn.
- Bydd y newidiadau'n cyfyngu ar grynodiad y ffosffad y caniateir ei ollwng o weithfeydd trin carthion. Bydd didoli'r ffosfforws yn y gweithfeydd hyn yn sicrhau newid faint o faetholion sy'n mynd i Ddyfrdwy, ac yn cyfrannu at warchod amgylchedd yr AGA
- Ni fydd y newidiadau hyn ar eu pennau'u hunain yn llwyr adfer yr AGA. Ni fyddant ond yn dileu cyfran effaith gweithgareddau caniadedig. Bydd angen mynd i'r afael â ffynonellau ffosffad gwasgaredig eraill (megis goferiad dŵr o dir amaeth), hefyd, i adfer yr AGA i gyflwr ffafriol.
- Darfu inni asesu 61 trwydded dynnu yng Ngham 3. Yn dilyn Cam 4, bydd angen newid amodau caniatâd 7 ohonynt.
- Bydd addasu uchafswm tynnu is-ddyddiol a gosod sgriniau atal sugno pysgod yn sicrhau gostwng effaith tyniadau dŵr ar bysgod i'r eithaf.

Safonau Ffosfforws Canllawiol

Mae Asiantaeth yr Amgylchedd, Cyngor Cefn Gwlad Cymru a Natural England wedi datblygu safonau canllawiol ar gyfer lefel y ffosfforws tawdd y gellir ei chaniatáu mewn afonydd AGA. Seilir y safonau ar ddaeareg y dalgylch a nodweddion llif yr afon. Caniatânt grynodiad rhesymol o ffosfforws yn y dŵr oherwydd gweithgareddau dynol, tra hefyd yn caniatáu i'r nodweddion AGA dynodedig fod mewn cyflwr ffafriol. Os yw lefel y ffosfforws mewn afon yn uwch na'r safon canllawiol, efallai yr effeithir ar ecoleg yr afon, a bydd yn destun rhagor o ymchwiliadau.

Cewch ragor o wybodaeth ar ein gwefan

www.asiantaeth-amgylchedd.cymru.gov.uk

Gallwch ofyn i enquiries@environment-agency.gov.uk am arweiniad.