

Design Guide to Support

Water Table and Water Resource Management in the Broads National Park



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How to Use



This report has been designed with a navigation menu to ensure easy use.

The navigation menu is located along the left hand side of the page and show the five sections of the report.

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 - Licensing Scenario Examples

1. Introduction

1.1 The Broads National Park

The Broads National Park (**Figure 1.1**) is a distinctive area managed by the Broads Authority which covers an area of more than 300 square kilometres.

Lowland peatlands are distributed across much of the Broads National Park, creating a characteristic habitat rich in biodiversity. However, artificially draining the lowland peatland for agricultural production has exposed the peat which has resulted in the loss of peat soils, shrinkage, subsidence and loss of habitat quality. Healthy peatlands are a natural carbon store, however the degradation of peatlands can prevent carbon sequestration and cause the release of carbon thus contributing to climate change.

Peatland restoration to improve and restore the condition of degraded peatlands is an opportunity to strengthen carbon sequestration, improve biodiversity, support water quality improvements and natural flood management, amongst other benefits. Paludiculture, the profitable production of wetland crops in peatlands, is also an opportunity for farmers to adapt to climate change.



Figure 1.1: The Broads National Park Location

1.2 Purpose of the Design Guide

The Broads Authority, with support from stakeholders, have developed this design guide to help interested farmers and landowners on the typical policy, constraints, and opportunities for water supply, water level management and the permissions required for the restoration of degraded lowland peat within the boundary of the Broads National Park.

Healthy peatlands are created and accumulate through the build-up of partially decayed plant material under waterlogged and anoxic conditions. Degraded peatlands are often drained of water and dry, and the conditions created cause complete decay of plant material and release of large quantities of carbon. The study 'Estimated emissions from peat soils in the Broads' (Holman, Girkin and Truckell, 2023) discovered that the total carbon dioxide balance and methane flux from the peat soils of the Broads National Park were estimated at 17,866 and 693 tonne Carbon per year, respectively.

To restore a degraded lowland peat, raising the water table in the drained peat areas creates waterlogged conditions which reduce the oxygen availability, in turn this results in the partial decay of plant material and generates peat formation. A suitable water level management strategy to raise the water table close to the ground level surface, ideally within 10 centimetres to 30 centimetres, is important for peatland restoration. However, this should be achieved year-round, as fluctuations in the water table cause intermittent wetting of peat and can be damaging. Prolonged summer inundation and flooding on top of the peatland should also be avoided to limit increased methane and nutrient release.

Whilst the guidance provided in this document gives some insight into the typical works to support restoration of degraded lowland peat, each site will have specific constraints and opportunities, which will ultimately inform the necessary works.

The proposals should be designed so that any new hydrological regime does not adversely affect protected ecosystems or increase the risk of flooding to offsite areas. Consultation with the approving authorities is recommended during the design and prior to implementation of any works.

Input has been obtained from stakeholders during the production of this guide and useful case studies provided.

The Design Guide is based on current guidance and information available at the time of writing. Any changes in water availability and in Licensing process must be considered by users. Whilst it is hoped that the principles underlying the Design Guide will continue to be applicable, users of the Guide must check with the approving authorities prior to restoration design and licence applications.

Design Guide Structure

The guide is structured as follows:

- **Section 2** summarises the potential water availability within the Broads National Park, highlighting areas where challenges or potential opportunities maybe available to providing water supply for lowland peat restoration sites all year round.
- **Section 3** sets out the planning, licences, consents, and permits that could be required for lowland peat restoration sites and what works need to be considered to inform these applications.
- **Section 4** provides details on typical engineering solutions which could be employed on sites to help achieve water level management in sites for Lowland Peat Restoration.
- **Section 5** presents case studies
- **Section 6** summarises conclusions and recommendations.
- **Appendix A:** Baseline Data
- **Appendix B:** Summary Descriptions
- **Appendix C:** Licence Flow Charts

Due to the nature of the Licence Flow Charts, please contact the relevant authority for further information if required. All information shown in **Appendix C** has been incorporated into the main body of this Guide.

2. Water Availability

The Environment Agency (EA) is responsible for managing natural water resources in England, this includes controlling how much water is taken with a permitting system, regulating existing licences and granting new licences.

Licence applications are considered by the EA regarding environmental sustainability, justification of need, and efficient use of water. The EA must ensure that the licensing of abstraction is sustainable and will not cause deterioration in the ecology of rivers, wetlands and estuaries or deplete groundwater resources. The EA have duties regarding environmental sustainability including the responsibility to protect sites that are designated for nature conservation importance and to help restore these where damage might have occurred in the past due to abstraction activity.

To help the EA manage water availability and reduce the impacts to sensitive ecosystems, the EA use the Catchment Abstraction Management Strategy (CAMS) to inform the Abstraction Licensing Strategies (ALS). The strategies are grouped into areas. The Broads is in East Anglia (EA map area 10). The Broadland Abstraction Licensing Strategies (ALS) covers the Broadland catchment, linked below:

<https://www.gov.uk/government/publications/cams-broadland-abstraction-licensing-strategy>

The Broads National Park is located in the Broads Management Catchment and across three operational catchments; Bure, Waveney and Yare (Figure 2.1). Many of the catchments within the Broads National Park are coastal, with upper catchments that are river water body catchments (Figure 2.2).

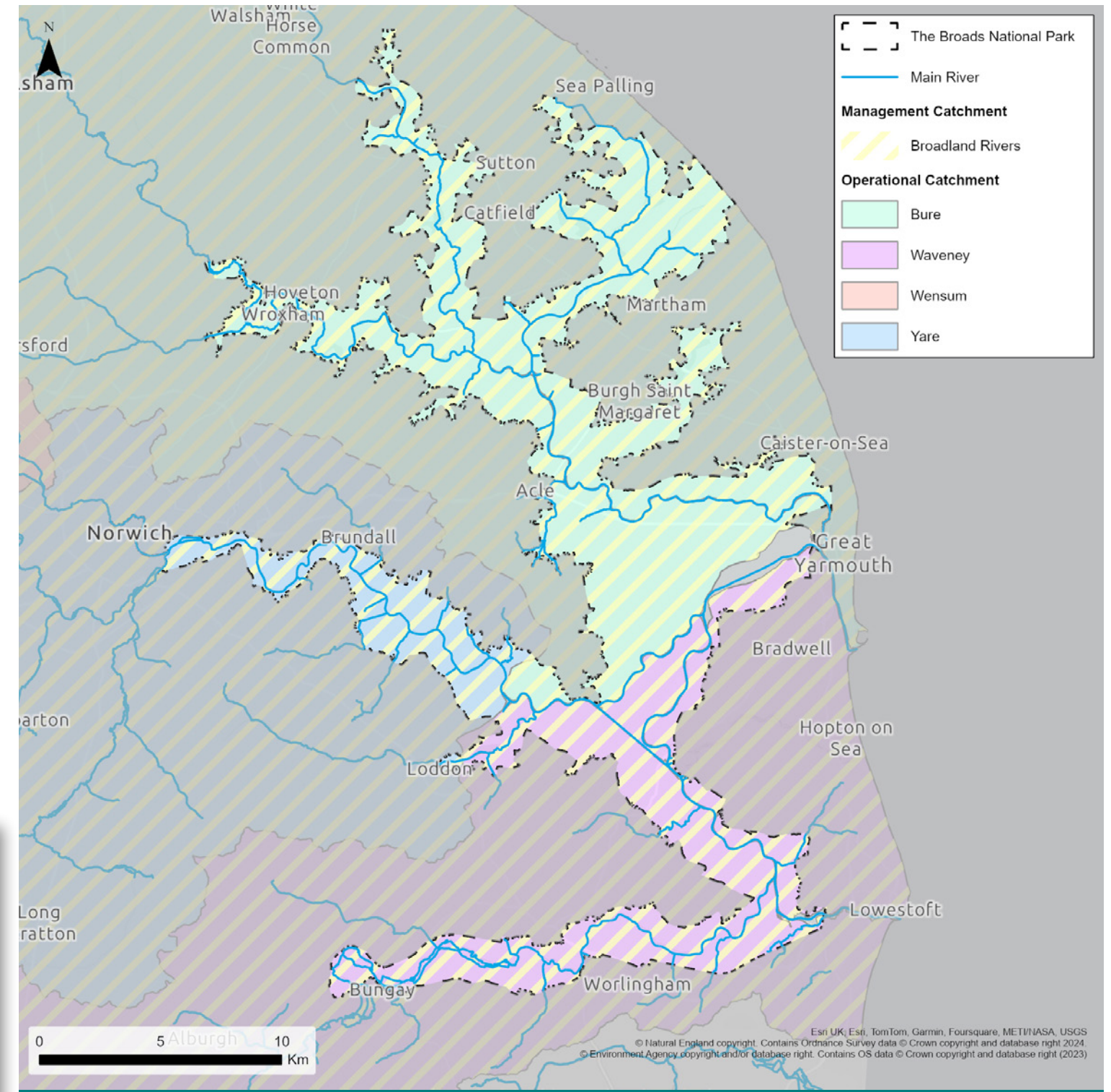
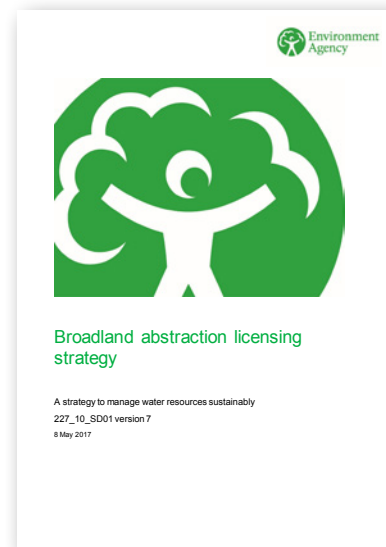


Figure 2.1: Water Framework Directive Management Catchment and Operational Catchments

The Broadland ALS includes groups of waterbodies and indicates the water availability across each group. The Broads National Park is located across three groups; the Broads Group, the Ant, Bure and Spixworth Group, and the Tas, Waveney and Chet Group (shown as linked: https://assets.publishing.service.gov.uk/media/5a821229ed915d74e3401912/ALS_2017_Broadland.pdf).

- **Broads Group:** The majority of the Broads National Park is located across the Broads Group (located across the Bure, Yare and Waveney catchments), as shown on page 6 of the ALS.
- **Ant, Bure and Spixworth Group:** There are two areas of the Broads National Park that are located within the Ant, Bure and Spixworth Group (located in the Bure catchment) as shown on page 5 of the ALS. The main extent of the Broads National Park in this group starts from near Irstead and extends northward up towards East Ruston, following the route of the River Ant. There is a minor extent from south west of Wroxham adjacent to the River Bure which extends westwards towards Crostwick.
- **Tas, Waveney and Chet Group:** There is a localised area of the Broads National Park that is located within the Tas, Waveney and Chet Group (located in the Waveney catchment), as shown on page 7 of the ALS. There is a small extent from north of Shipmeadow along the River Waveney which extends westwards towards Earsham.

It should be noted that the Broadland ALS is a snapshot in time of water availability, and therefore subject to change. If a revised ALS is produced, this Design Guide should be reviewed to align with the ALS. The EA determines the availability of licences on CAMS data which informs the ALS. Often, CAMS data can be more up to date than the data shown in the ALS. Hence, the EA should always be contacted to discuss water availability.

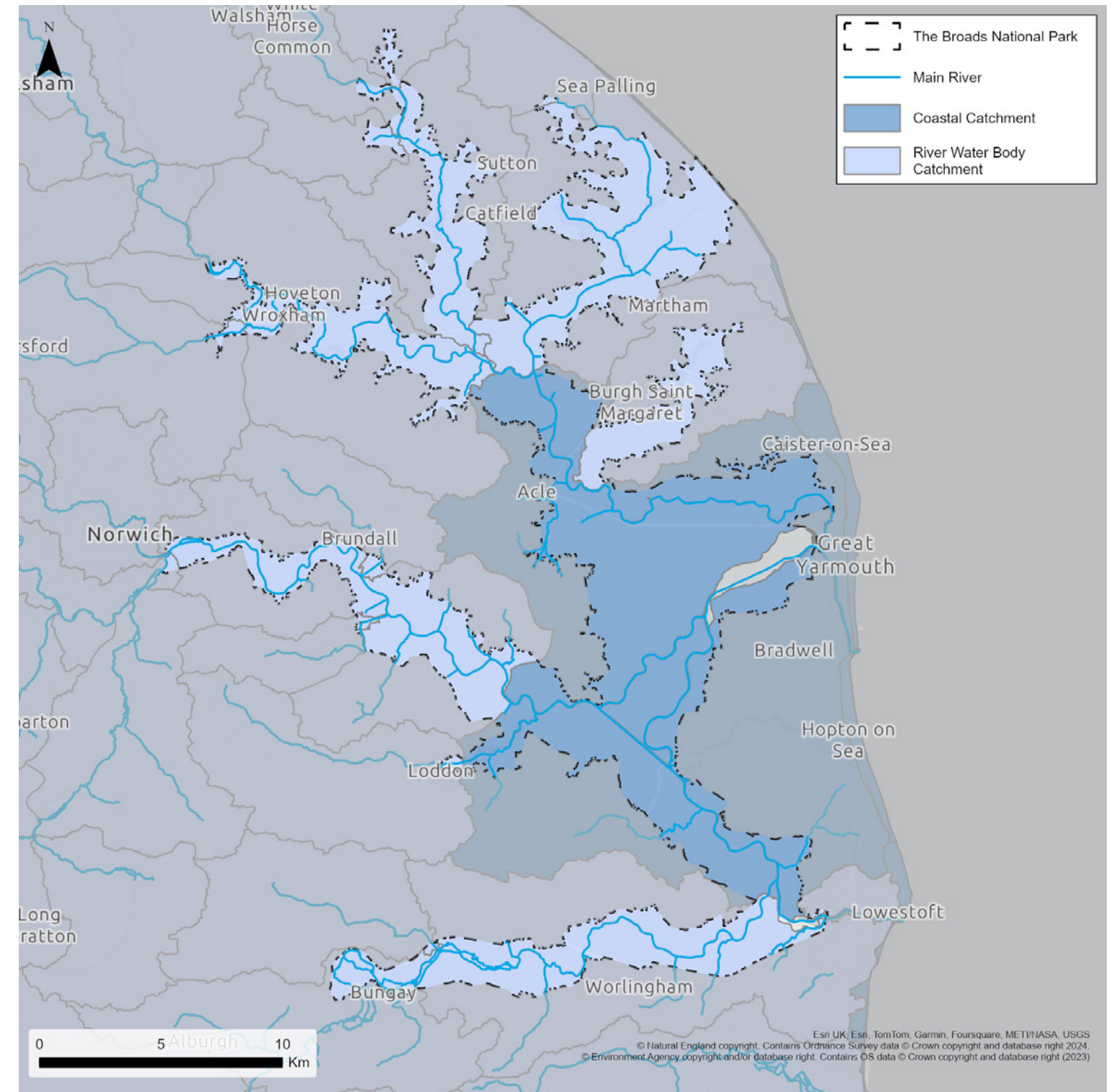


Figure 2.2: Water Framework Directive, Coastal and Water Body Catchments

2.1 Resource Availability

Broadland Surface Water Availability

Surface water flows are assessed at significant points called Assessment Points (APs) on a river, such as where two major rivers join. The water resource availability is calculated for four different flows, as listed:

- Q95 (very low flows - the amount of flow in a river that is exceeded 95% of the time)
- Q70 (low flows)
- Q50 (median flows)
- Q30 (high flows)

All abstraction licence applications are assessed by the EA to account for local or downstream issues and could be subject to further restrictions. The Environmental Flow Indicator (EFI) is used to calculate the amount of water required to support the river ecology.

For each of the four flows, each waterbody group is mapped with the colours corresponding with the surface water resource availability. The implications for Licensing are detailed in the ALS Table 1 (Water resource availability colours and their implications for licensing).

Surface water availability mapping is shown in **Figure 2.3**.

The EA dataset states as follows:

“This is a national picture of Surface water resource availability mapped to Integrated Water bodies for the purposes of Water Resource Charging only. Water Resource charges will depend on the water availability. Each water body is colour coded as follows: • Green - Water available • Yellow - Restricted water available • Red - Water not available • Grey - Heavily Modified Waterbodies (and /or discharge rich water bodies) The data covers Integrated waterbodies that are in England and cross border Wales. This data is not raw, factual or measured. It comprises of estimated or modelled results showing expected outcomes based on the data available to us.”

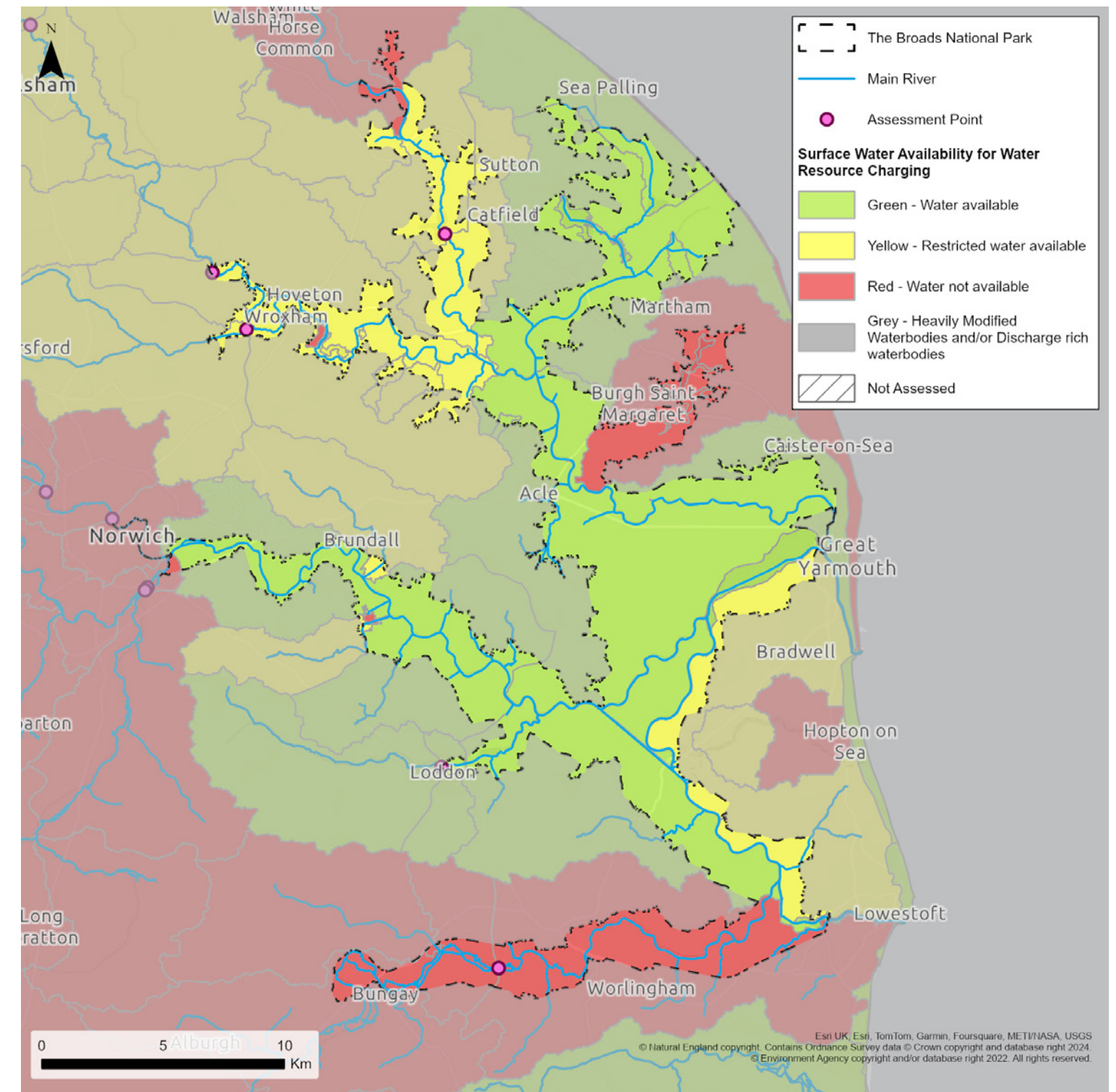


Figure 2.3: Surface Water Availability (Q95) for Water Resource Charging

A licence does not guarantee a supply of water, and constraints may be applied such as ‘Hands Off Flow’ (HoF) conditions. Each HoF is linked to an Assessment Point (AP), and is dependent on the resource availability at that AP. The conditions of the HoF specify if the flow in the river drops below what is required then abstraction must reduce or stop. A HoF therefore protects the low flows.

It is noted that the data is for the calculation of water resource charges only. It is the water availability calculated in the WRGIS version from February 2021. Any assessment of water availability for new abstraction licensing is subject to local assessment and will be dealt with on case-by-case basis by the EA.

Groundwater availability and Groundwater resource charges may be subject to additional information that is not included in this dataset.

Broadland Groundwater Availability

As detailed in the ALS, the water availability for unconfined groundwater is based on surface water availability at Q95. The ALS also details that there are areas in the Broads National Park where concerns over groundwater mean the standard water resource availability colours have been overridden.

Confined Chalk

The British Geological Survey describe that confined aquifers occur when a layer of impermeable rock or soil overlies an aquifer that is fully saturated, allowing the water within the aquifer to be pressurised.

The ALS Map 1g ‘Confined Chalk groundwater availability in Broadland – No Water Available’ shows an area mapped in red hatch where there is no water available for abstraction. This extends across the majority of the Broads National Park however there are upstream areas of the Waveney, Yare, Bure and Ant that are not located within this area. This confined chalk groundwater is described in the Broadland area ALS as being “fully committed and no further consumptive abstraction can be considered”.

This is shown in **Figure 2.4**.

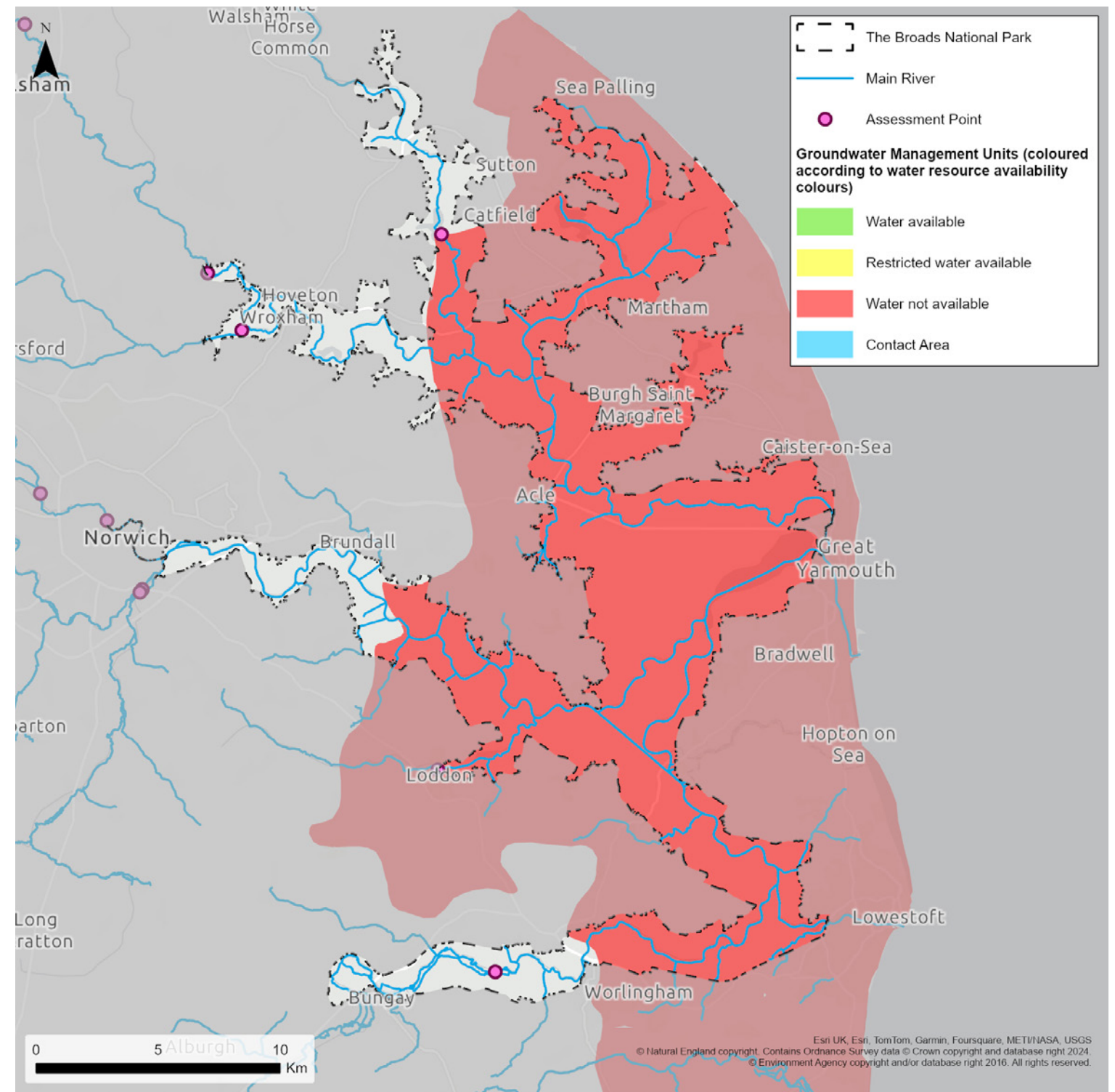


Figure 2.4: Groundwater Management Units and Water Resource Availability

Unconfined Chalk or Shallow Aquifers

An unconfined aquifer is where the aquifer is directly open at the surface of the ground and groundwater is directly recharged, for example by rainfall.

The ALS details that in areas where there is unconfined chalk, or other shallower aquifers in continuity with surface water, the groundwater status is linked to the surface water status. So, there are areas where the impact of a groundwater abstraction on the Q95 flow in the local river may be considered acceptable. These areas are shown as green on the ALS Map 1f.

The ALS Map 1f 'Shallow Groundwater availability in Broadland' shows an area mapped in green hatch where shallow groundwater may be available subject to local assessment. Within the Broads National Park this broadly extends southeast from Loddon to the area to the west of the River Waveney prior to Camps Heath.

Restrictions may be applied to licences, called Hands Off Level (HoL) conditions, where groundwater abstractions directly impact on surface water flows. The HoL is a groundwater level below which an abstractor is required to reduce or stop abstraction.

The EA data in [Figure 2.4](#) shows groundwater management units which are a breakdown of groundwater bodies used for local groundwater availability communication in the ALS. This corresponds with the extent of the confined chalk groundwater availability mapping in the Broads ALS. [Figure 2.4](#) shows a large extent of the Broads is classified as "water not available". This should be viewed with [Figure 2.3](#).

Generally, areas that are shown as "water not available" as illustrated in [Figure 2.4](#) are unlikely to have water available for abstraction during the summer months from either groundwater sources or surface water sources at low flows (such as Q95). As the surface water flow in these areas is supported by the groundwater flow, which is limited. Therefore, areas that are shown in green within [Figure 2.3](#) which overlap the areas that are shown as red in [Figure 2.4](#) should be considered as red and therefore water is not available during summer.

However, there could be water available from the surface water sources during summer months at higher flows (such as Q50 or Q30), despite the groundwater source not having water available. This is because this higher flow may not be dominated by groundwater flow, which is limited.

Water may become available for abstraction during winter months when the groundwater sources are recharged. During the winter months, groundwater from aquifers / other groundwater sources, and watercourses with interaction with the groundwater, may have water available. The EA prefer applicants to consider winter storage schemes due to the lack of water availability during summer months. Therefore, water abstraction and storage during winter, for use across the peatland restoration site during the summer months when there is likely to be less water available, may be the most viable option.

Coasts and Estuaries

Beyond the surface water APs (shown in [Figure 2.3](#) and [2.4](#)) much of the Broads National Park area has a complex tidal regime. The ALS details that abstractions from waterbodies with a complex tidal regime will likely be decided on case-by-case basis and specific needs of the local environment are prioritised above the indicative status shown in the ALS.

Protected Areas

Special Areas of Conservation (SAC) and Special Protection Area (SPA), Sites of Special Scientific Interest (SSSI) and Ramsar sites are environmentally important. [Figure 2.5](#) indicates the locations of the SAC, SPA, SSSI and Ramsar sites across the Broads National Park area.

Due to the tidal regime in the Broads, any restoration sites including those located near these designated sites, are likely to be dealt with on a case-by-case basis. The ALS states if the protected area requires a more stringent level of protection than the EFI suggests, the specific requirements of the protected site will over-ride the EFI.

The following conservation sites should also be considered (identify using Magic Map):

<https://magic.defra.gov.uk/magicmap.aspx>

- National Parks (The Broads National Park)
- National Nature Reserves
- Local Wildlife Sites
- Scheduled Ancient Monuments
- Protected species
- Protected habitats

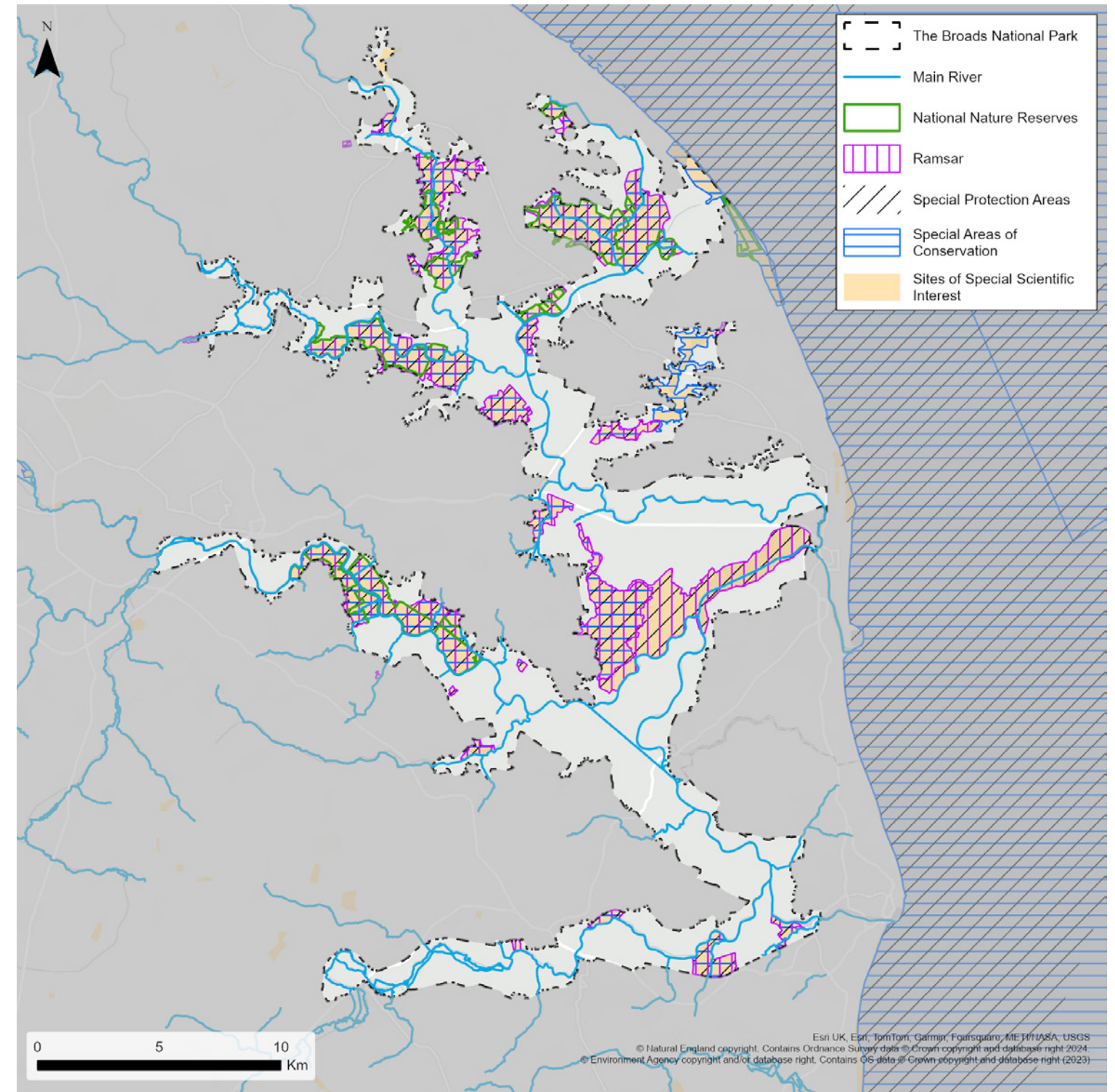


Figure 2.5: Overview of Environmental Designations

2.2 Risk Classification

The information provided in **Table 2.1** summarises the surface water and groundwater guidance and should be viewed with **Figure 2.3** and **Figure 2.4** above. The surface water guidance is from the EA Surface Water Availability for WR Charging document (March 2022), and the Broadland Abstraction Licensing Strategy (August 2017). The groundwater guidance is taken from the Broadland Abstraction Licensing Strategy.

2.3 Resource Reliability

The EA need to be contacted to discuss the reliability of an abstraction; this can be achieved through pre-application discussions as it is likely to be site-specific.

The ALS provides an indication of the reliability of consumptive abstraction. The ALS Map 2 'Water resource reliability expressed as percentage of time available' shows this appears to vary across the Broads National Park area, from consumptive abstraction available less than 30% of the time to consumptive abstraction available at least 95% of the time (adjacent to the main watercourses in the area). However, the ALS is a snapshot in time and represents the availability as calculated in 2017. It is likely that this could be out of date, and the EA should always be contacted to discuss water availability.

Table 2.1: Risk Classification for Surface Water and Groundwater

Classification	Surface Water Guidance	Groundwater Guidance
Low risk: Water available for Licensing	<ul style="list-style-type: none"> There is more water than required to meet the needs of the environment. A water availability charge is not applied. Depending on local and downstream impacts, new licences can be considered. 	<ul style="list-style-type: none"> Groundwater unit balance shows groundwater available for licensing. New licences can be considered depending on impacts on other abstractors and on surface water. Time limited licence renewals may require changes to reflect historic annual usage to manage the risk of deterioration to the environment.
Medium risk: Restricted water available for licensing	<ul style="list-style-type: none"> Full licenced flows fall below the Environmental Flow Indicators. No new consumptive licences would be granted. Abstractions for non-consumptive uses can still be permissible in catchments where there are sustainability issues. You will pay a higher charge. 	<ul style="list-style-type: none"> More water is licenced than the amount available, but recent actual abstractions are lower than the amount available OR there are known local impacts likely to occur on dependent wetlands, groundwater levels or cause saline intrusions, but with management options in place. In restricted groundwater units no new consumptive licences will be granted. It may also be appropriate to investigate the possibilities for reducing fully licenced risks. Water could be available if you can 'buy' (known as licence trading) the entitlement to abstract water from an existing licence holder. In other units there could be restrictions in some areas e.g. in relation to saline intrusion Time limited licence renewals may require changes to reflect historic annual usage to manage the risk of deterioration to the environment. Winter Storage may need to be considered in consultation with the EA.
High risk: Water not available for Licensing	<ul style="list-style-type: none"> Recent actual flows are below the EFI. No further consumptive licences will be granted. Abstractions for non-consumptive uses can still be permissible in catchments where there are sustainability issues. This scenario highlights waterbodies where flows are below the indicative flow requirement to help support Good Ecological Status (as required by the Water Framework Directive). You will pay a higher charge. 	<ul style="list-style-type: none"> Groundwater unit balance shows more water has been abstracted based on recent amounts than the amount available. No further consumptive licences will be granted. Time limited licence renewals may require changes to reflect historic annual usage to manage the risk of deterioration to the environment. Winter storage solutions could be considered in consultation with the EA.
HMWB (and/or discharge rich water bodies).	<p>There may be water available for abstraction.</p> <p>A water availability charge is not applied.</p>	Not applicable to the Broads

3. Planning, Licences, Consents and Permits

The following section provides context of the potential permissions, licences and permits which could be required for peatland restoration sites in the Broads National Park. This is for the hydrological aspects only. Further licences, consents and permits could be required for other disciplines such as ecology and have not formed part of this Guide. Each authorising body may have different requirements for the level of information and supporting documentation required.

The consenting process is a necessary part of the delivery of the restoration schemes. The correct due diligence will help prevent any challenges from other parties. It is highly recommended a pre-application process is started at the earliest opportunity, so engagement with the approving authorities is instigated at the feasibility stages of the works. This not only allows for more accurate programming of the works but also will help reduce the risk of objections late in the design process and can also help inform the end engineering solutions for the water management process.

The EA are currently investigating the effects of abstraction across the whole of The Broads SAC. The investigation includes assessing the impact of abstraction licences on 28 SSSIs that make up The Broads SAC. The EA are completing further modelling work to define any adverse effect from abstraction and to fully justify any changes to current licences or new licences. The EA will assess the further modelling work and communicate any licence changes that may be needed to current licence holders and be able to consider new licence applications within the catchment. There is more information available on The Broads SAC via the link below:

<https://consult.environment-agency.gov.uk/east-anglia-c-e/sustainable-abstraction-in-east-anglia/>

Figure 3.1 (interactive figure) can be used to help select the relevant permissions to provide further information.



Figure 3.1: Potential permissions, licences and permits for hydrological aspects

Please use this icon on the following pages to navigate back to this page (Figure 3.1).



3.1 Authorising Bodies

The national and local authorising bodies who are responsible for the environmental permits, consents and licences in England, for The Broads National Park area are summarised in **Table 3.1**.

Table 3.1: Authorising Bodies for the Broads National Park

Authorising Body	Website	Contact	Role	Relevant Licence Type	Anticipated Timeframes
Environment Agency	https://www.gov.uk/government/organisations/environment-agency	enquiries@environment-agency.gov.uk	Responsibility is to protect and improve the environment in England and Wales.	Environmental Permits. (Flood Risk Activities, Waste, Water Discharge Activity). Water Resources Licence.	4 months. 2 months if flood risk activity permit only but 4 months if combined activity. 6 months to review (subject to EA resourcing), with 3 to 4 months determination.
Natural England	https://www.gov.uk/government/organisations/natural-england	wildlife@naturalengland.org.uk	Government advisor for the natural environment for England, with a responsibility to protect and restore.	Wildlife Licences.	30 working days to get an individual licence.
Broads Authority	https://www.broads-authority.gov.uk/	planning@broads-authority.gov.uk	Responsible for managing the Broads as a local planning authority, and a harbour and navigation authority.	Planning Permission.	Allow 4 to 6 months.
County Council As Lead local flood authority (Figure 3.7)	Norfolk: https://www.norfolk.gov.uk/ Suffolk: https://www.suffolk.gov.uk/	Norfolk: water.management@norfolk.gov.uk Suffolk: floods@suffolk.gov.uk	Responsible for managing the risk of flooding from surface water, groundwater and ordinary watercourses and lead on community recovery.	Ordinary Watercourse Consent.	2 months from validated application.
Internal Drainage Boards (Figure 3.8)	https://www.wlma.org.uk/	WLMA: planning@wlma.org.uk	Responsible for managing water levels in drainage districts where there is a special need for drainage.	Land Drainage Consent and IDB Byelaws.	2 months from validated application.

3.2 Flow Chart

To further help facilitate the application of this guidance document, flow charts have been produced to help further summarise the water Licensing decision making process for applicants. The flow charts are enclosed in **Appendix C**.

The flow charts cover water resources Licensing (abstraction and impoundment), environmental permits for flood risk activities, and ordinary watercourse consent / land drainage consent. The flow charts can be used to inform potential Licensing requirements for peatland restoration. For each licence, it is recommended to discuss the proposals with the authorising body in the first instance (**Table 3.1**), and pre-application advice is recommended at an early stage.

Planning

Sites located within the Broads Authority National Park are within the planning jurisdiction of the Broads Authority, as the Local Planning Authority.

Planning permission could be required, depending on the types of works proposed.

If the proposal is not classed as development, it will not need planning permission. Some works may not be classed as development but may require a separate consent if the work is in a conservation area.

It is therefore recommended to discuss planning permission requirements with the Broads Authority as the Local Planning Authority.

There are case studies included in Section 5 where planning permission was required, and the reasoning is provided.

The Broads Authority provide pre-application advice to discuss proposals at an early stage. The Broads Authority can offer advice on the principle and design of the scheme and advise if planning permission is required.

Further information is provided here:

<https://www.broads-authority.gov.uk/planning/planning-permission/getting-advice-before-you-apply>

The pre-application form is available here:

https://www.broads-authority.gov.uk/_data/assets/word_doc/0022/182146/Do_I_need_Planning_Permission_form.doc

If planning is required, a series of technical documents are likely to be needed in support of the application. The technical information is very much subject the site setting and will need to be scoped with the planning authority.

Authorising Body: Broads Authority

Timescales: Pre-app advice: 21 days
 For planning allow 4 to 6 months

Contact: Email: planning@broads-authority.gov.uk
 Telephone: 01603 610734

Town and Country Planning Act 1990

Possible supporting documents, from a recent case study, are as follows:

- Planning Statement
- Flood Risk Assessment
- Landscape Impact Assessment
- Heritage Statement
- Environmental Impact Assessment Screening Opinion
- Construction Environmental Management Plan
- Habitats Regulations Assessment
- Location Plans
- Engineering drawings of proposed structures
- Restoration Plans

“Pre-application advice can:

- *Help identify issues any developer should consider, including flood risk , landscape character and Biodiversity Net Gain*
- *Help identify the level of supporting information and detail that should accompany the formal application*
- *Avoid expensive mistakes being made at application stage*
- *Speed up processing of the application by ensuring you provide the right information*
- *Make sure groups or individuals you must consult by law are engaged as early as possible*
- *Identify schemes which are unlikely to win support*
- *Avoid time spent on making an application if permission is not needed.”*

Environmental Permit – Flood Risk Activities

The EA guidance confirms that environmental permitting rules must be followed for work on or near a main river, on or near a flood defence structure, in a flood plain, and on or near a sea defence.

EA guidance on environmental permits is provided online:

<https://www.gov.uk/guidance/flood-risk-activities-environmental-permits>

There are seven prominent rivers across the Broads; the Ant, Bure, Chet, Thurne, Waveney, Wensum and Yare. The main rivers can be viewed in Figure 3.2 and also online using the ArcGIS Web AppBuilder here: [Statutory Main River Map](#).

The EA guidance clarifies that flood risk permits are not required for work on ordinary watercourses (non-main rivers); however, the local council or IDB should be contacted to check if an Ordinary Watercourse Consent / Land Drainage Consent is required.

Check the location of flood defences with the EA as these may not be adjacent to a river or clearly visible.

Consideration must also be given to activities which interfere with the regulator’s access to or along a river or structure, as this can require a permit. For example, if the works will convert a dry field into peatland with a high-water table, and the regulator can no longer access to maintain a defence, then that will be an issue and needs to be thought through in the planning of works.

Separate to a flood risk activity permit, a waste licence or exemption may be required if material is excavated that then has to be disposed of: <https://www.gov.uk/guidance/d1-waste-exemption-depositing-waste-from-dredging-inland-waters>

From summer 2024, the National Permitting Service (NPS) will manage Flood Risk Activity Permit (FRAP) applications.

There are three ways to get permission: register for an ‘exemption’, a ‘standard rules permit’ or a ‘bespoke permit’. You do not need permission for one of the excluded activities:

<https://www.gov.uk/government/publications/excluded-flood-risk-activities-environmental-permits>

The EA pre-application advice service is delivered by local teams and provides free advice and information on whether the activity may impact on heritage and nature conservation sites or protected species and habitats. Further information is found here:

<https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>

Authorising Body: Environment Agency

Timescales: 2 months if flood risk activity only.
 4 months if combined activity.

Contact: (if you are unsure if you need a permit, send details to the EA and you will receive a response within 10 days)

Email: enquiries@environment-agency.gov.uk

Telephone: 03708 506 506

Environmental Permitting (England & Wales) Regulations 2016

Exemptions

If the activity is an [exempt flood risk activity](#) the exemption must be registered with the EA before any work begins.

This can be completed online:

<https://register-flood-risk-exemption.service.gov.uk/>

Standard rules permit

If the activity fits fully in one of the [standard rules](#) this permit is required. The EA provide detailed guidance documents online for each form required:

- Form: [Part A: about you](#)
- Form: [Part B11: standard rules permit application](#)
- Form: [Part F3: charging for flood risk activities and declarations](#)

Bespoke rules permit

A bespoke permit will be required if the activity does not fit within any of the standard rules, exemptions or exclusions.

The following is required:

- Form: [Part A: about you](#)
- Form: [Part B10: bespoke permit application](#)
- Form: [Part F3: charging for flood risk activities and declarations](#)
- Method of work (includes developing a [management system](#))
- [Risk Assessment](#)
- Supporting documents
 - Site plan showing the whole works area
 - Technical drawings including down view and cross sections with specific dimensions
 - WFD consideration
- [Fee details](#)
- Send completed forms and include ‘Peatlands Restoration’ in the subject line to: Flood.permitting@environment-agency.gov.uk

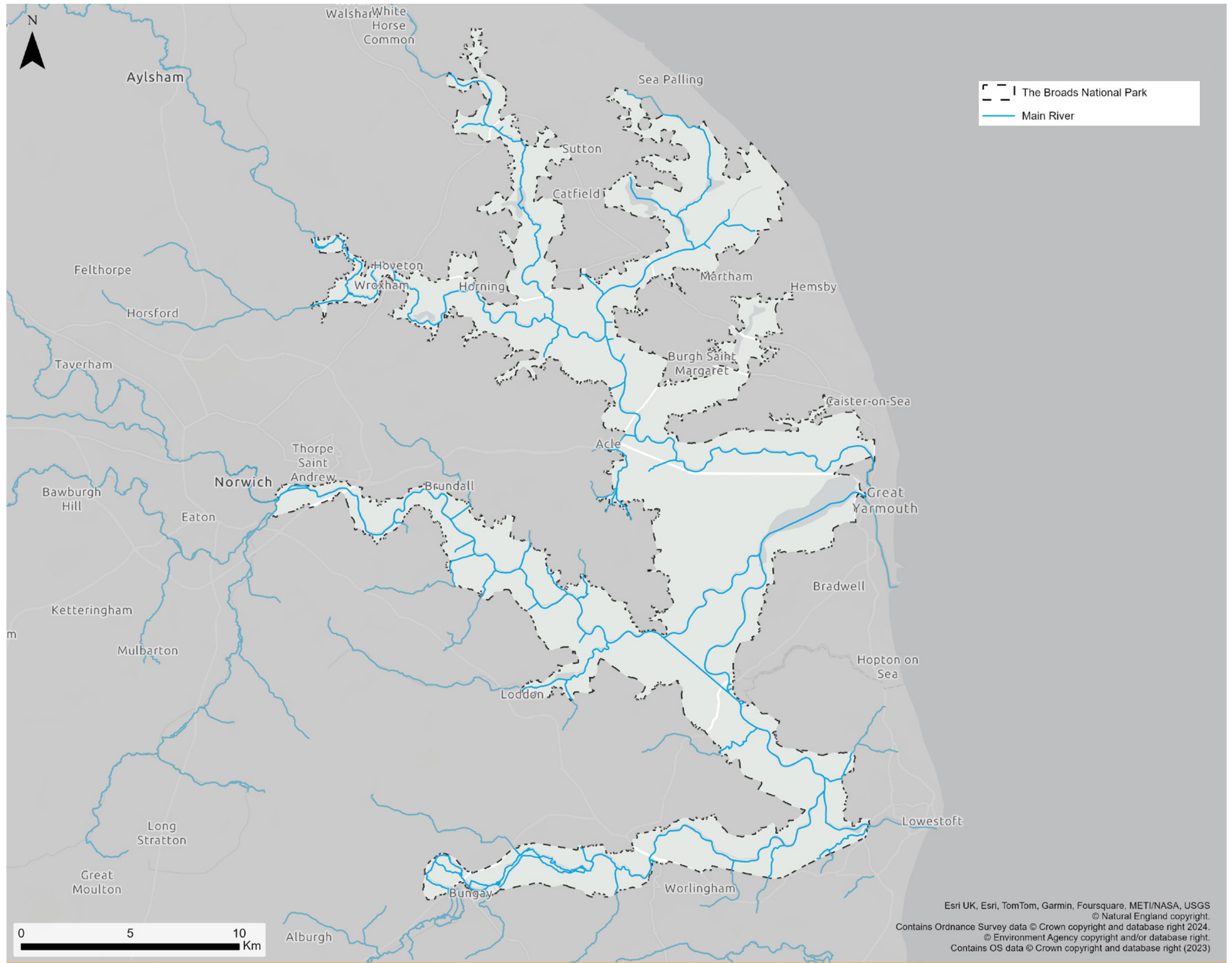


Figure 3.2: Main River Locations

3.3 Managed Wetland Systems

Peatland restoration work is likely to fall under the definition of a “Managed Wetland System” (MWS). Section 2 of The Water Abstraction and Impounding (Exemptions) Regulations 2017 defines an MWS as follows,

“managed wetland system” means—

(a) an area of land that is periodically inundated or saturated by abstracted water in order to provide ecological benefits to flora and fauna, or

(b) an area of land through which abstracted water flows, through a system of channels, sluices, carriers or other apparatus in order to provide ecological benefits to flora and fauna;

The EA do not have further guidance which can be directly used to expand on how to interpret the definition of an MWS. However, the EA have provided some basic principles to help identify the extent of the area defined as a MWS, as follows:

- Does the MWS constitute the same area as an existing designation? e.g. SSSI, SAC, SPA, Ramsar, National Nature Reserve (NNS), Local Nature Reserve (LNR), Local Wildlife Sites (LWS) etc. This will help inform the extent of the area defined as a MWS.

- Is the wetland managed as one or several units? Hydrologically separated units may be considered as separate MWS.
- Which watercourses form part of the wetland area? If there are rivers or higher-level carriers which flow through the wetland rather than directly into it, then arguably they are not part of the wetland and any abstraction from those watercourses into the adjacent wetland would be considered the ‘primary intake’.

The EA advise that the focus from a water resources management perspective is to regulate the primary abstraction into a managed wetland system via a licence. This is the point at which water is taken from an inland water into the wetland.

Secondary abstractions/impoundments within wetlands are exempt provided they are for the sole purpose of the management, operation or maintenance of water levels or flows in the managed wetland system. For internal abstractions/impoundments, an exemption consent is required when the internal abstractions/impoundments are within or could affect a Habitats Regulations site (SAC/SPA/Ramsar site).

3.4 Environmentally Beneficial Activity

An “environmentally beneficial activity” is defined by the EA as a water resources activity which the Agency is satisfied is to be carried out on a non-commercial basis, solely for the benefit of the environment and not because of any statutory or regulator-imposed requirement. Where the EA agree that the licence is required for an environmentally beneficial activity, then the cost of the permits is reduced. If the application is for a research project, then the environmentally beneficial fee will not apply.

At the time of writing this Guide, for environmentally beneficial activities, the fee for the application will be £1,500 for impounding or transfer abstraction licences or £135 for full abstraction licences. If the environmentally beneficial free does not apply, the appropriate charging table can be used to calculate the fee (Table 3.1 or 3.2 for full abstraction licences, Table 3.9 or 3.10 for transfer abstraction licences or Table 3.11 for an impounding licence).

This is then included in the application form Part E. The charging tables are found via the link:

[Environmental permits and abstraction licences: tables of charges - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/environmental-permits-and-abstraction-licences-tables-of-charges)

Water Resources Licence – Abstraction Licence

The EA define abstraction as taking water from a surface source (e.g. river, stream, drain, pond) or from an underground source. This includes watercourses defined as ‘inland waters’.

The EA guidance states that should more than 20 cubic metres a day of water be abstracted, then an abstraction licence may be required. EA guidance is available here:

<https://www.gov.uk/guidance/check-if-you-need-a-licence-to-abstract-water>

If the peatland restoration site is an MWS, the primary abstraction point into the MWS requires a licence. If there are secondary abstraction locations used to move water internally around the MWS these are exempt from requiring an abstraction licence, if the primary abstraction is licenced. However, an Exemption Consent could be required when the internal abstractions are within or could affect a Habitats Regulations site.

A transfer licence is likely to be suitable for MWS schemes, as water is being moved from the donor source of supply into a channel/waterbody within the MWS which would generally also meet the definition of a source of supply. A full abstraction licence is required when it is for an intervening use or where water is moved onto land, or into a discrete reservoir. Licensing scenario examples are provided in [Section 3.6](#).

Land Drainage Exemption (Flood Alleviation) could be applicable if the supply of water into the restoration site only is only abstracting high flood flows.

The EA should be contacted to discuss the proposals at the earliest opportunity. This could inform engineering solutions. Check if safe passage for eels or approval for a fish pass is required, contact the EA Fisheries team at FISHERIES@environment-agency.gov.uk

Review the [Broadland ALS \(Section 2\)](#) to find out if water could be available, and if an application is likely to be successful. Then use the EA [pre-application service](#) to understand if there is water available, restrictions, and confirm the licence type.

If you are abstracting from groundwater, contact the local EA groundwater team, guidance available here: <https://www.gov.uk/government/publications/apply-for-consent-to-investigate-a-groundwater-source/apply-for-consent-to-investigate-a-groundwater-source>

Where protected sites are involved, Natural England are likely to be consulted by the EA. Natural England can be informed of the plans prior to being consulted by the EA.

The type of data required for the application is detailed here: <https://www.gov.uk/government/publications/abstract-or-impound-water-hydrological-information/abstract-or-impound-water-hydrological-information>

Authorising Body: Environment Agency

Timescales: 6 months to review, with 3-4 months determination

Contact: (to discuss if an abstraction licence is required)

Email: enquiries@environment-agency.gov.uk

Telephone: 03708 506 506

The Water Abstraction and Impounding (Exemptions) Regulations 2017
Water Resources Act 1991 (Section 25) Water Act 2003

Transfer abstraction licence

To move over 20 cubic metres of water a day from one source to another source without intervening use. e.g. if all abstracted water is being moved from one drain (source of supply) outside of the MWS, into a series of connected drains (source of supply) within the MWS.

Full abstraction licence

For most types of water abstraction over 20 cubic metres a day. e.g. the abstracted water is being moved from one drain (source of supply) outside of the MWS, onto the land in the MWS.

Temporary licence

To abstract more than 20 cubic metres of water a day over a period of less than 28 days.

Application

To apply for a new full, transfer or temporary licence, four forms are required.

- **Part A:** Application for a water resources licence
- **Part B:** Application for a water resources abstraction licence
- **Part C:** Application for a water resources abstraction licence
- **Part E:** Charging for a water resources application

NB. Part E is not required if the works are an ‘environmentally beneficial activity’ (no commercial benefit) and the application fee is reduced.

The EA provide detailed guidance documents online for each form required:

<https://www.gov.uk/government/publications/water-abstraction-application-for-a-water-resources-licence>

Send completed forms and include ‘Peatlands Restoration’ in the subject line to: psc-waterresources@environment-agency.gov.uk

Water Resources Licence – Impoundment Licence

An impoundment is defined by the EA as follows, 'An impoundment is a structure within inland waters that can permanently or temporarily change the water level or flow'. For peatland restoration, this is likely to be a structure that is holding back, obstructing or impeding inland water.

Guidance is provided on the EA website for if impounding water is proposed:

<https://www.gov.uk/guidance/check-if-you-need-a-licence-to-impound-water>

Impoundments located within an MWS are exempt from an impoundment licence if the impoundments are for the sole purpose of the management/operation/maintenance of water levels or flows of the MWS and were created post-1st January 2018 (after the enactment of the Water Abstraction and Impounding Regulations 2017). An Exemption Consent could be required when the internal impoundments are within or could affect a Habitats Regulations site.

Impoundments without a licence constructed pre-1st April 2006 would also remain exempt provided it is not being altered, or the alteration is very minor and falls within the EA Low Risk impoundment policy. An Exemption Consent could be required.

If the impoundment is located outside of the MWS, to move water from the donor waterbody into the MWS, then this would not be exempt.

Low Risk Impoundments

Impoundment works outside an MWS classified as 'Low Risk' by the EA may not require an impoundment licence. The EA provide clear guidance online on how to assess if your proposed impoundment is likely to be a 'Low Risk' impoundment. Ecological considerations such as the presence of fish including elver and eels must inform whether the impoundment can be classified as Low Risk. Further EA guidance is available online. Contact the EA Fisheries team at FISHERIES@environment-agency.gov.uk

If you can clearly demonstrate the impoundment is to be of 'Low Risk', then you are not likely to need an impounding licence.

It is recommended to keep a copy of evidence to prove the impoundment is low risk for your own records. The EA may ask to see supporting evidence which shows how the impoundment was assessed that a licence was not needed.

Authorising Body: Environment Agency

Timescales: 6 months to review (subject to EA resourcing), with 3-4 months determination

Contact: (to discuss if an impoundment licence is required)

Email: enquiries@environment-agency.gov.uk

Telephone: 03708 506 506

The Water Abstraction and Impounding (Exemptions) Regulations 2017
Water Resources Act 1991 (Section 25) Water Act 2003

Application

To apply for a new impoundment licence, three forms are required.

- **Part A:** Application for a water resources licence
- **Part D:** Application for a water resources impoundment licence
- **Part E:** Charging for a water resources application

NB. Part E is not required if the works are an 'environmentally beneficial activity' (no commercial benefit), and the application fee is significantly reduced.

The EA provide detailed guidance documents online for each form required:

<https://www.gov.uk/government/publications/water-abstraction-application-for-a-water-resources-licence>

The type of data required for the application is detailed here: <https://www.gov.uk/government/publications/abstract-or-impound-water-hydrological-information/abstract-or-impound-water-hydrological-information>

Send completed forms and include 'Peatlands Restoration' in the subject line to: psc-waterresources@environment-agency.gov.uk

Pre-Application

If you are unsure if the structure is Low Risk, complete a pre-application and the EA will provide advice.

NB. If an existing structure does not currently have an impoundment licence, you must get one before you start work to alter or remove the structure.

3.5 EA Pre-Application and Application Process

The following **Figure 3.3** and **Figure 3.4** from the EA show the water resources licensing process.

For the visually impaired please contact Broads Authority for more information on the processes shown in the flow charts for Figure 3.3 and 3.4.

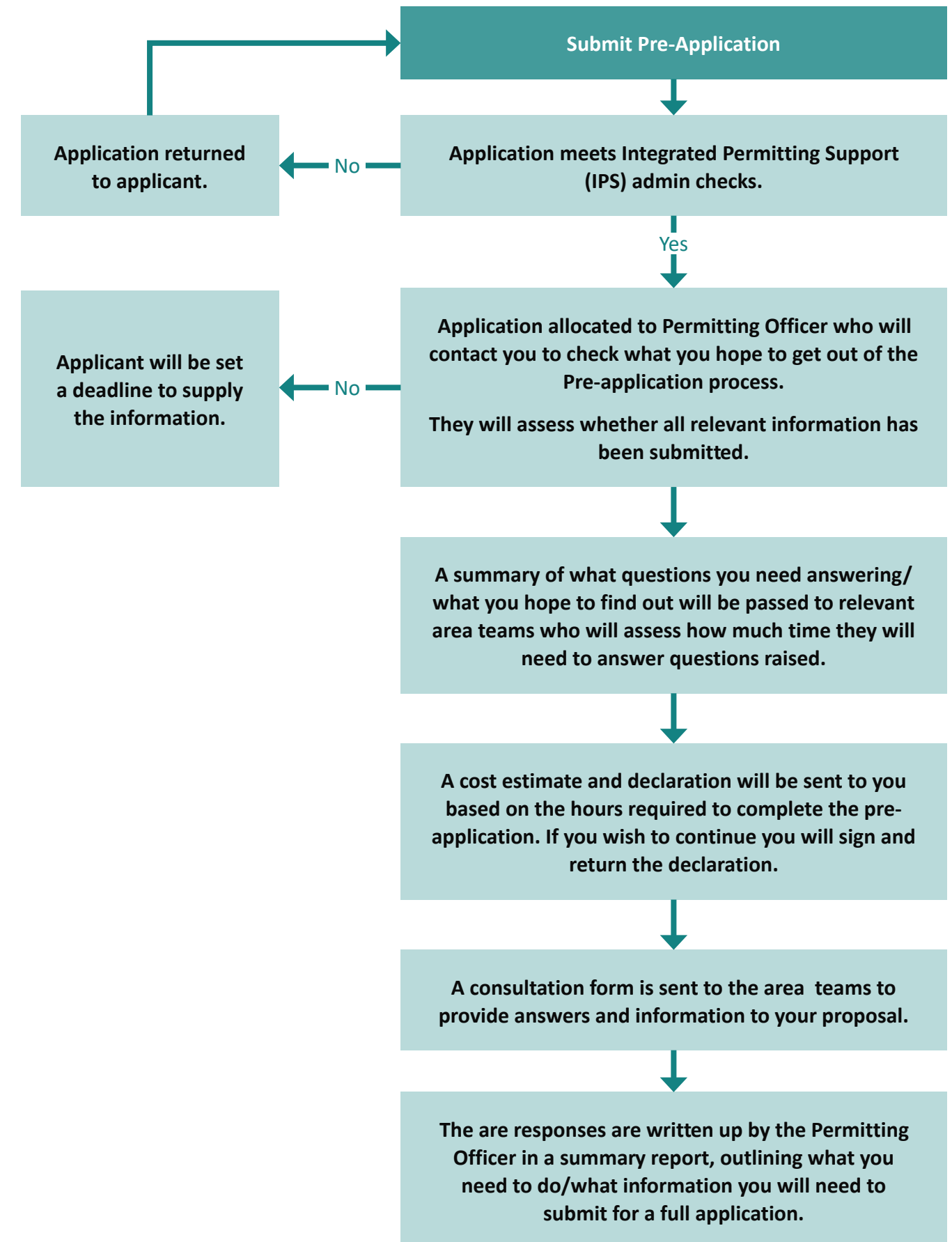


Figure 3.3: EA Water Resources Licences Pre-Application Process

(Peatland Water Resources Application checklist, Environment Agency 22/11/24)

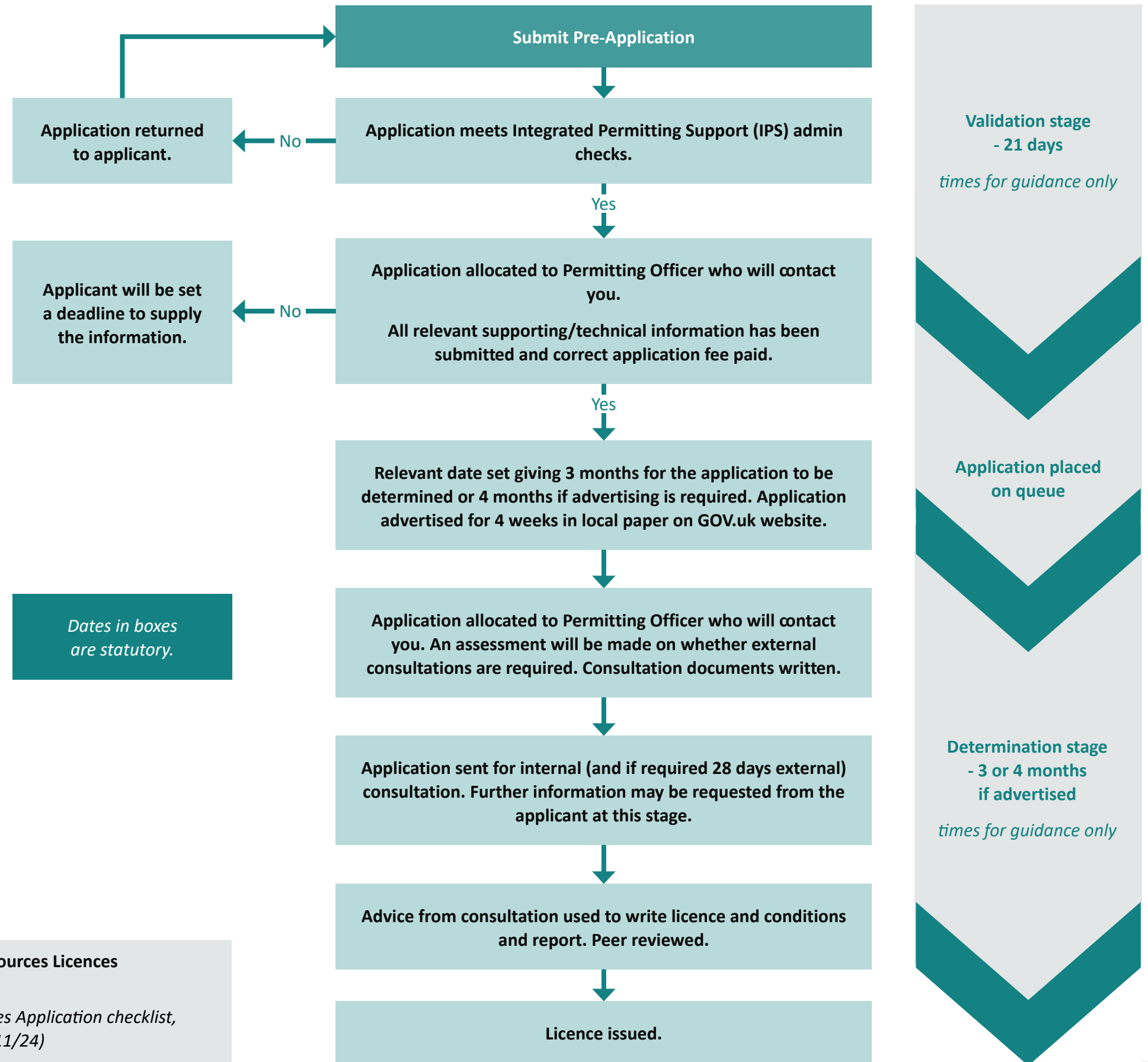
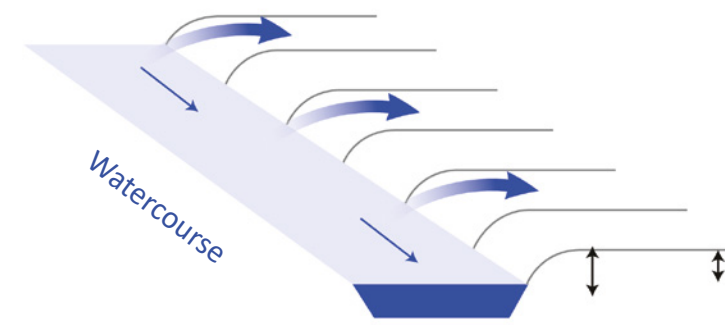


Figure 3.4: EA Water Resources Licences Full Application Process
(Peatland Water Resources Application checklist, Environment Agency 22/11/24)

3.6 Licensing Scenario Examples

The following Figure 3.5 from the EA contain examples for various water resources Licensing scenarios.

Example 1: Natural flood irrigation



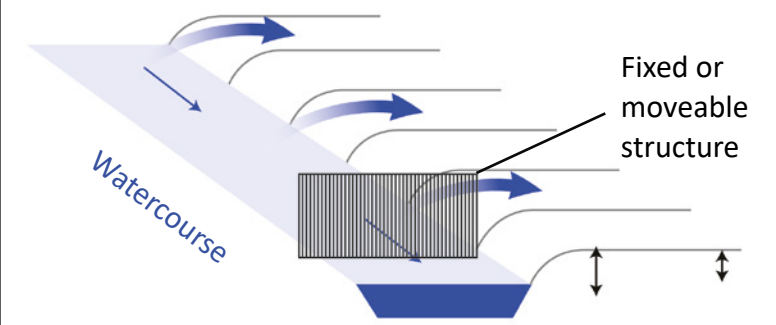
Description:

Water levels rise in the river due to increases in flow and the natural hydraulic characteristics of the river. Water then spills onto the land (which could be an area of grassland acting as the natural floodplain).

Licence requirements:

None - no abstraction has taken place as water naturally floods onto the fields/land.

Example 2: Engineered flood irrigation



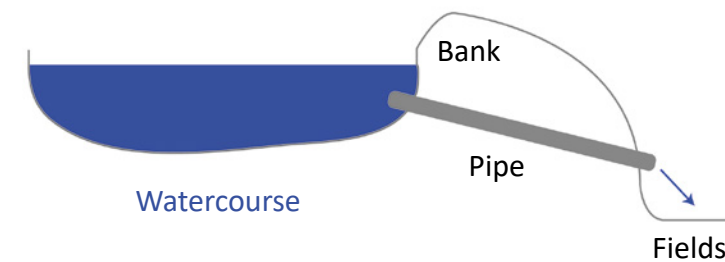
Description:

A structure is positioned in the water which could either be fixed or movable. The structure causes the water level behind it to rise and flood the land.

Licence requirements:

Yes - Full abstraction licence - The structure acts as the means of abstraction from the water course. Water is moved onto land (which is not classed as a source of supply), therefore a transfer licence is not appropriate.

Example 3: Flood irrigation via pipe



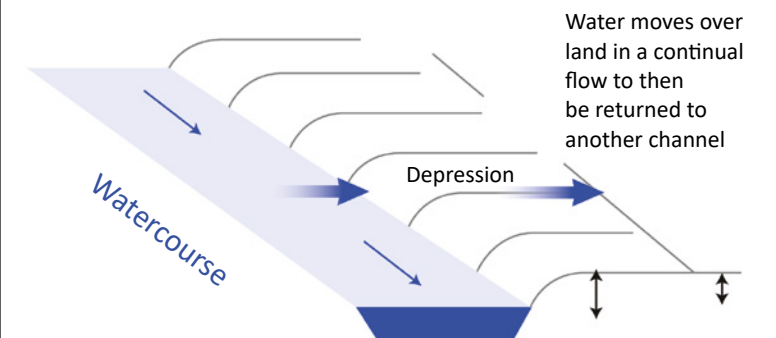
Description:

A pipe has been installed in the bank of a watercourse which allows water to be abstracted onto land for the use of flood irrigation.

Licence requirements:

Yes - Full abstraction licence - Similar to example 2, the pipe is acting as means of abstraction onto land. If the pipe fed into a ditch or channel which could be considered a source of supply (e.g. as part of a wet fencing or water meadow system), then a transfer licence would be appropriate.

Example 4: Engineered depression into wetland



Description:

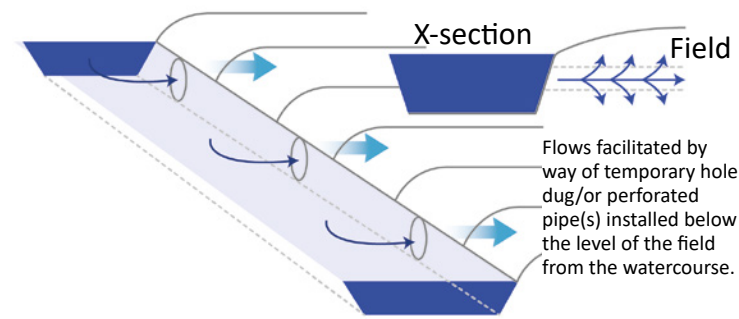
An engineered depression has been created in the bank of river to flow into another channel which is part of managed wetland system.

Licence requirements:

Yes - Transfer licence - The engineered depression is considered an abstraction as it is the 'means of doing anything whereby water is removed from a source of supply'. In this example, as the engineered depression is acting as a means of abstraction into another channel which is part of a managed wetland system, then a transfer licence is appropriate.

Figure 3.5: EA Licensing Scenarios for Water Resources Licences

Example 5: Sub irrigation



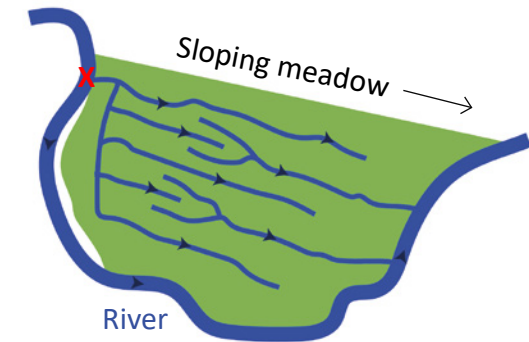
Description:

A series of mole drains have been created to abstract water beneath the fields to help create high soil water levels for crops.

Licence requirements:

Yes - Full abstraction - The mole drains are acting as the means of abstraction from the watercourse. For sub-irrigation there needs to be a deliberate action - i.e. the insertion of a pipe/drain etc. Water just soaking through the bank into the sub-soil may still be regarded as sub-irrigation but we would not class this as an abstraction.

Example 6: Traditional water meadow



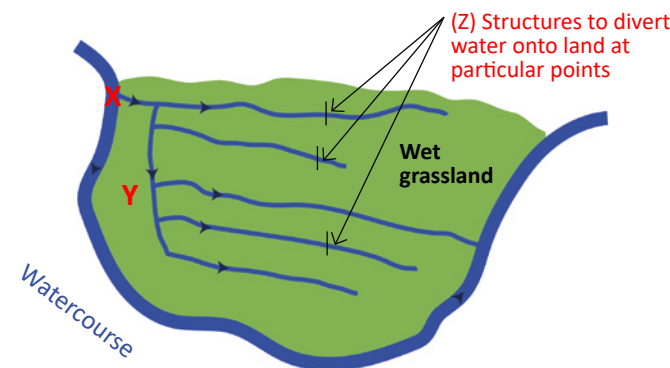
Description:

A structure is located at X abstracting water into the MWS (the boundary of which is shown in green). Water moves into the meadow through a series of channels. As the meadow is sloping, it then flows overland via gravity from channel to channel.

Licence requirements:

Yes - Transfer licence - A transfer licence is located at point X for the initial abstraction into the MWS boundary.

Example 7: Wet grassland scheme



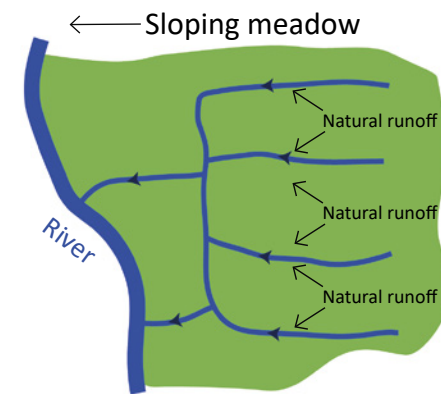
Description:

Similar to example 6, a structure is located at X abstracting water into the MWS. Water moves onto the meadow through a series of channels. Structures at Y and Z allow for secondary control of water movement and abstraction within the system.

Licence requirements:

Yes - Transfer licence - A licence is required for the initial abstraction into the MWS marked X. Provided the boundary of the system shown in green meets the legal definition of a MWS, then all abstraction via Y and Z meet the exemption for abstractions within a MWS (Note: an exemption consent may be required for the secondary abstractions if they are within or could affect a Habitats Directive site).

Example 8: Natural sloping meadow



Description:

A wet fencing or water meadow system is fed through the natural runoff of the surrounding land. The channels within the sloping meadow then flow into a nearby river.

Licence requirements:

None - no abstraction has taken place as water enters the channel as part of the natural gradient and physical characteristics of the surrounding land. There are no structures abstracting water into the system from the river. (Note: provided the boundary of the MWS shown in green meets the legal definition of a MWS, then any abstractions within the boundary used to maintain the MWS would be exempt. If they are within a Habitats Directive site, you will need to contact us to obtain an exemption consent).

Exemption Consent

An exemption consent is required for secondary abstractions and/or impoundments which are in a MWS and located within / could affect, a Habitats Directive site.

Secondary abstractions and/or impoundments must be for the sole purpose of the management/ operation/ maintenance of water levels or flows of the MWS.

The EA are still required to issue an exemption consent for the secondary abstractions / impoundments even though these are exempt from needing a licence.

Authorising Body: Environment Agency

Timescales:

Contact: (to discuss if an exemption consent is required)

Email: enquiries@environment-agency.gov.uk

Telephone: 03708 506 506

Water Abstraction and Impounding (Exemptions) Regulations 2017

Not required: Application forms are not required and there are no application or subsistence charges.

Required: Written statement and supporting map showing each activity is required to apply for an exemption consent. This could usually be added as supporting information for the application to licence the primary abstraction into the wetland.

Where there is no primary abstraction, apply by emailing the information to:

PSCWaterResources@environment-agency.gov.uk

Land Drainage Exemption – Flood Alleviation

There is a remaining land drainage exemption to requiring an abstraction licence if the supply of water into the restoration site is only abstracting high flood flows. In the context of MWS's, there may be scenarios in which the wetland areas are acting as a form of natural flood management and the water is only being abstracted into the wetland during high flood flows, therefore meeting the land drainage exemption.

Figure 3.6 shows the basic principles, if there is a means of abstraction which takes water above the natural level of the surrounding land for multiple benefits such as reconnection to floodplain for both natural flood alleviation and environmental benefit, then this abstraction would be exempt. This would only arise where the banks of a watercourse have been artificially raised using a linear flood defence, and the means of abstraction is set above the natural level of the land within this linear flood defence then it would be exempt from needing an abstraction licence.

However, where water is removed from a watercourse into a wetland area through a means of abstraction that lies below the natural level of the land, or where the level of the land has been artificially lowered below the natural level of the surrounding land, to encourage a flow of water onto land, then this would be considered an abstraction.

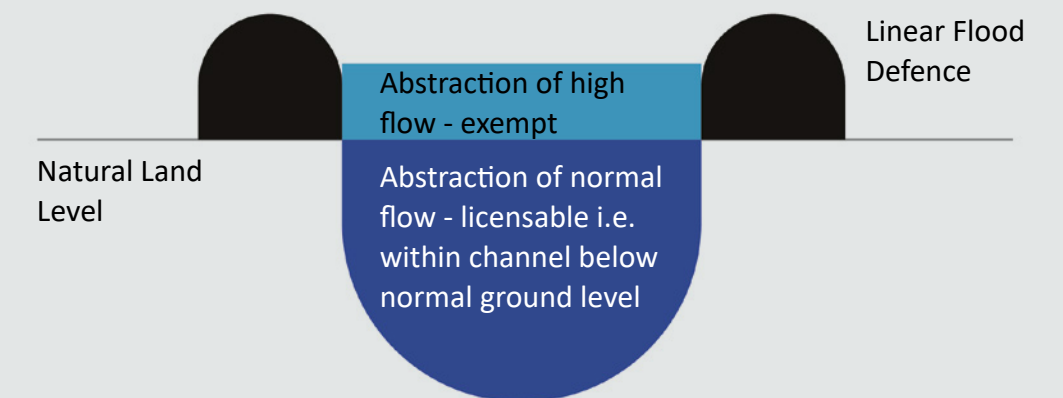


Figure 3.6: Flood Alleviation Principles for Land Drainage Exemptions

Land Drainage Consent (Ordinary Watercourse Consent)

Either the County Council (Lead Local Flood Authority, LLFA) or Internal Drainage Board (IDB) are responsible for consenting on works that affect or obstruct the flow of ordinary watercourses. An ordinary watercourse refers to all channels conveying water which are not designated ‘main rivers’.

Outside of an Internal Drainage District the County Council (the LLFA) are the relevant regulator. Within an Internal Drainage District, the relevant IDB are the relevant regulator.

The Broads National Park spans two counties, Norfolk and Suffolk County Council (**Figure 3.7**). The Gov. uk website gives the local county council for specific postcode: <https://www.gov.uk/find-local-council>. Guidance from [Norfolk County Council](#), and [Suffolk County Council](#) is available online.

The Broads National Park spans several IDBs (**Figure 3.8**) all of which are administered by the Water Management Alliance (WMA). Guidance from the WMA is available online: https://www.wlma.org.uk/uploads/WMA_Planning_and_Byelaw_Policy.pdf.

If the works were all to fall within or as part of a Main River extent, consultation with the EA is required, and Ordinary Watercourse Consent is not needed.

If the watercourse falls within an Internal Drainage District (IDD), then consultation with the IDB is required, and Ordinary Watercourse Consent is not needed.

The relevant regulator will determine the application, inform the applicant of approval or rejection, and provide a copy of the consent, along with any appropriate conditions and information. It is recommended that initial advice is sought from the relevant regulator before making an application.

Any consent is independent of the need for planning permission and the granting of planning permission does not necessarily imply that land drainage consent will be granted by the relevant authority.

Authorising Body:	Relevant LLFA or IDB
Timescales:	2 months from validated application
Contact:	
Norfolk CC email:	water.management@norfolk.gov.uk
Telephone:	0344 800 8020
Suffolk CC email:	floods@suffolk.gov.uk
Telephone:	0345 606 60674
WMA email:	planning@wlma.org.uk
Telephone:	01553 819 630

Flood and Water Management Act 2010

Land Drainage Act 1991

Water Resources Act 1991

The following works require consent from the relevant drainage authority under Section 23 of the Land Drainage Act 1991: to;

- a)** erect any mill dam, weir or other like obstruction to the flow of any ordinary watercourse or raise or otherwise alter any such obstruction; or
- b)** erect a culvert in an ordinary watercourse, or
- c)** alter a culvert in a manner that would be likely to affect the flow of an ordinary watercourse.

Useful Links

It is recommended to review the guidance provided online for [Norfolk County Council](#), and [Suffolk County Council](#) or the [Water Management Alliance](#) in the first instance if the below links may become superseded.

Norfolk CC:

- [Ordinary Watercourse Consent Protocol](#)
- [Guidance](#)
- [Application Form](#)

Suffolk CC:

- [Guidance Diagram](#)
- [Application Form](#)

WMA (IDBs):

- [Guidance Document](#)
- [Application Form](#)

Application

It is recommended to contact Norfolk County Council or Suffolk County Council for advice on the proposals.

The required application information may include, but is not limited to, applicant details, locations, descriptions and purpose of works, construction details, EA interests, planning approvals and maintenance responsibilities. Copies of plans and drawings may also be required.

Under the Land Drainage Act 1991, there is a non-refundable charge per application.

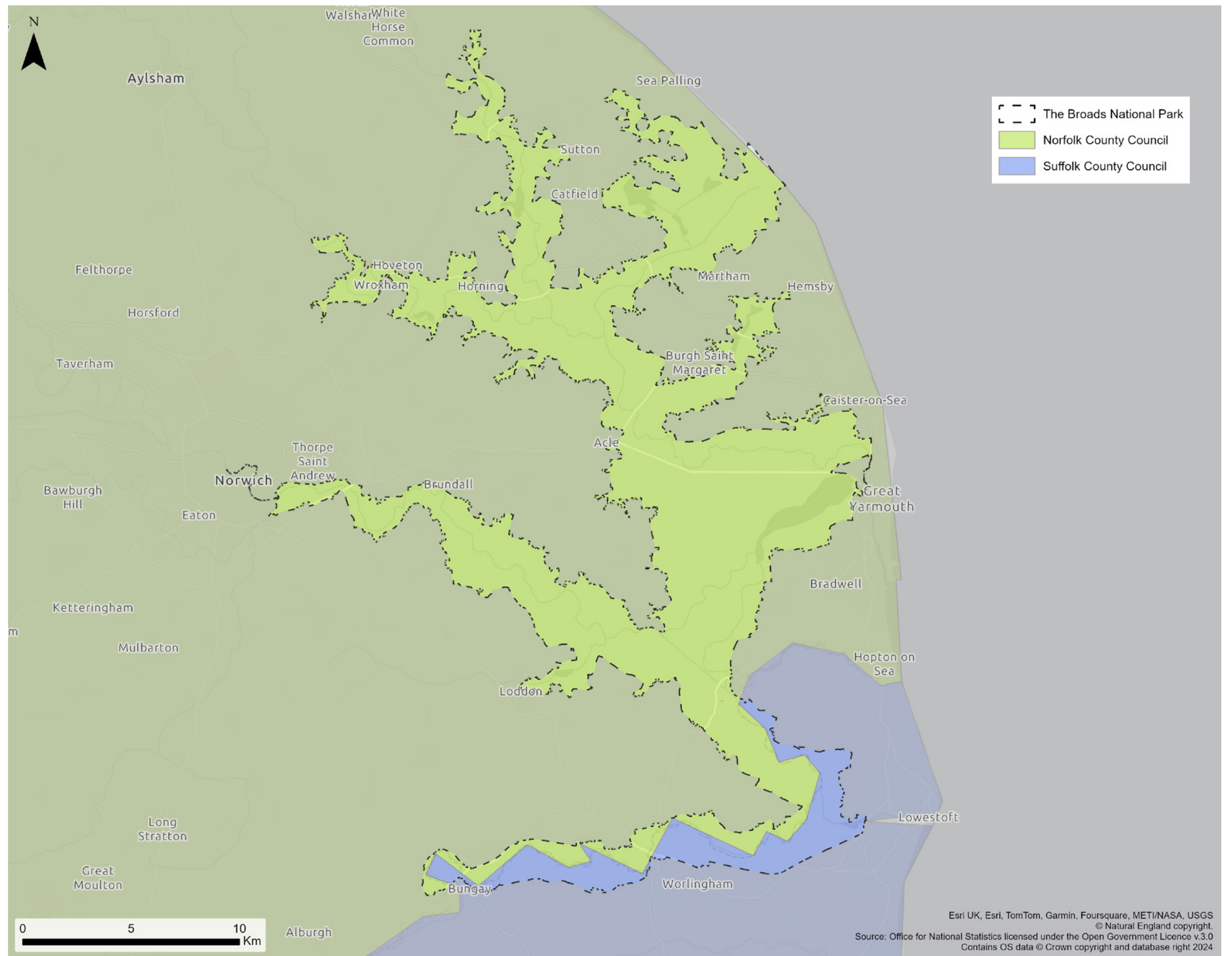


Figure 3.7: Norfolk County Council and Suffolk County Council

Land Drainage Consent (IDB Byelaws)

In addition to Ordinary Watercourse Consents (Section 23 of the Land Drainage Act 1991) outlined in the previous section, any works which may impact a watercourse within an Internal Drainage District may require additional consents in accordance with the Internal Drainage Board's Byelaws.

The Broads National Park spans several IDBs (**Figure 3.8**) all of which are administered by the Water Management Alliance (WMA). The WMA is a group of seven IDBs who share vision, values and standards and have chosen to jointly administer their affairs.

Maps of the relevant IDBs are available online:

- Broads IDB: <https://www.wlma.org.uk/broads-idb/boards-area/>
- Norfolk Rivers IDB: <https://www.wlma.org.uk/norfolk-idb/boards-area/>
- Waveney, Lower Yare and Lothingland IDB: <https://www.wlma.org.uk/waveney-idb/boards-area-and-maps/>

The above linked maps also show which watercourses are designated as 'Arterial Watercourses' by the Board. The designation is an acknowledgement by the Board that the watercourse is of arterial importance to the Internal Drainage District.

Guidance from the WMA is available online: https://www.wlma.org.uk/uploads/WMA_Planning_and_Byelaw_Policy.pdf.

Applicants for consent are required to comply with the IDBs Byelaws which protect water corridors to ensure watercourses remain accessible for inspection and maintenance.

IDBs exercise a general power of supervision over all matters relating to water level management in their district. This is undertaken through the use of permissive powers that enable IDBs to regulate works on, or affecting, the watercourses within their area. IDBs conduct their work in accordance with a number of general environmental duties and promote the ecological wellbeing of their districts.

Any consent is independent of the need for planning permission and the granting of planning permission does not necessarily imply that land drainage consent will be granted by the relevant authority.

Authorising Body: Internal Drainage Board
Timescales: 2 months from validated application
Contact:
 Email: planning@wlma.org.uk
 Telephone: 01553 819600

Byelaws of Relevant IDB
 Land Drainage Act 1991

Each Board has created Land Drainage Byelaws which may require the Board's prior written consent to be sought before undertaking certain activities within a Board's Drainage District.

Examples where Land Drainage Consent may be required:

Byelaw 10:

- Consent is required for any works within 9m (7m for the Waveney, Lower Yare & Lothingland IDB) of Board 'arterial watercourses' and other infrastructure. This is primarily to ensure these watercourses can be maintained effectively.

Byelaw 3:

- Consent is required to introduce water to the IDD of the WMA Member Boards (e.g. surface water from a new development or discharge of pumped ground water).

Byelaws 4, 6 and 15:

- Consent is required for a wider variety of watercourse works within an Internal Drainage District, in addition to the works already regulated by Section 23 of the Land Drainage Act 1991.

Application

Where land drainage consent is required from a WMA Member, review the policy held within Section 5: Planning and Byelaw Strategy.

The WMA Land Drainage Consent - Guidance for Applicants contains useful information: https://www.wlma.org.uk/uploads/01_LDC_Guidance-v8.pdf

FAQs which may assist the application are provided online: https://www.wlma.org.uk/uploads/WMA_Development_Control_and_Regulation_FAQ_V5.pdf

The application consists of an Application Form which is available on the WMA website. The required information may include, but is not limited to: applicant details, locations, description of works, environmental considerations, other permissions required and conditions.

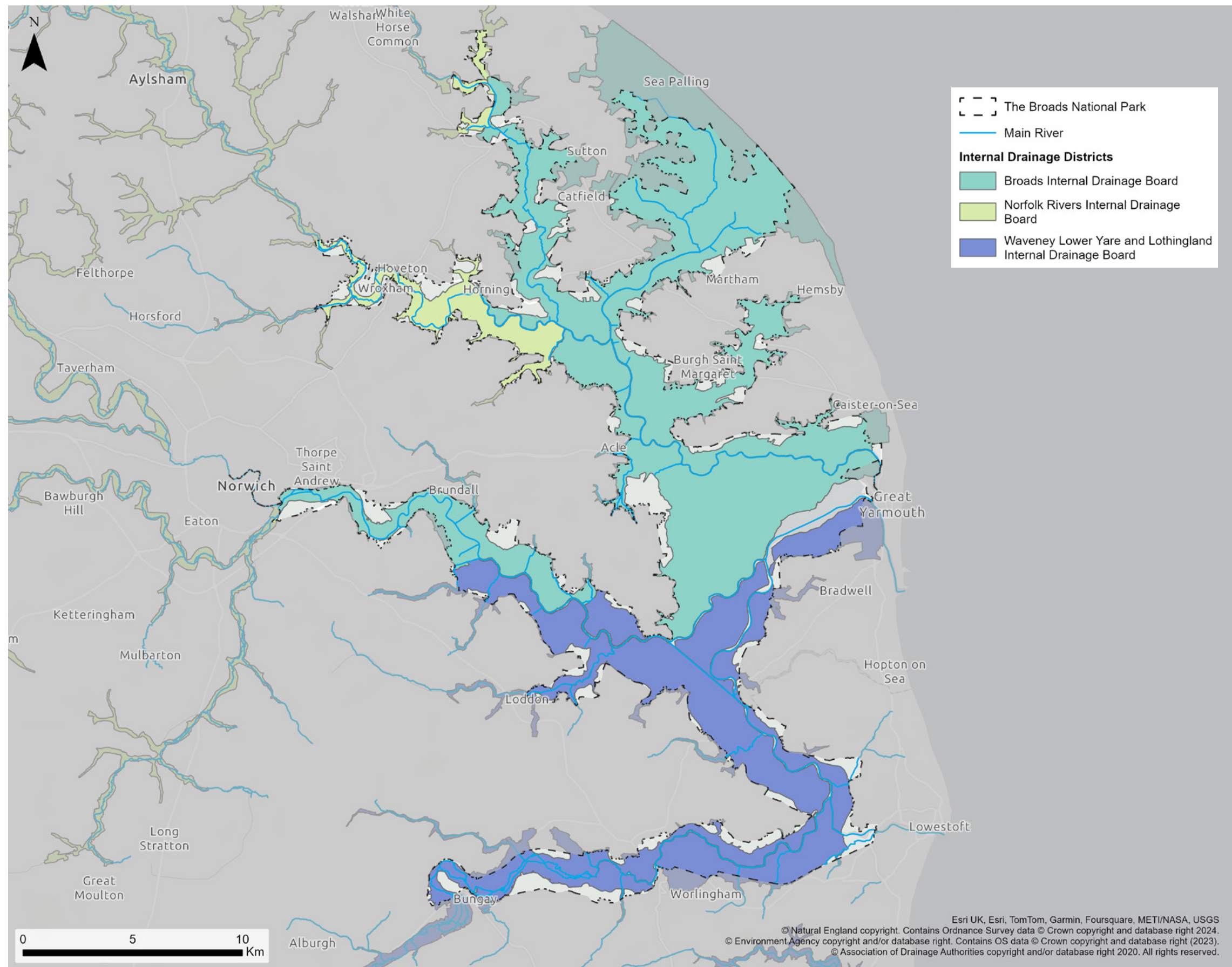


Figure 3.8: Internal Drainage Districts

4. Potential Engineering Solutions

A suitable water level management strategy to raise the water table close to the ground level surface year-round, ideally within 10cm to 30cm, is important for peatland restoration.

Each site will have specific constraints and opportunities, which will ultimately inform the necessary surveys, information requirements and engineering works.

Survey results undertaken to inform a restoration plan, (for examples see below) for a site will inform the most suitable engineering solutions. Consultation with the approving authorities is recommended during the design and prior to implementation of any works.

Typical surveys and information that could be required to inform the restoration plan are as follows:

- Peat coring data to understand the extent, depth and type of peat. Peat sampling could also be undertaken to understand any pollutants present in the sediment. Ground investigation data could be required to inform the design of engineering solutions such as foundation type and depth.
- Water depth and flow data across the seasons to understand the variation in water levels, calculate the required water volume and impact, and inform the design of engineering solutions. This information could also inform the licences like the water resources licence. Advanced preparation and data gathering is important as can be used to inform the design and licence, this would ideally be collected over the course of a year in advance of the licence or restoration proposals.
- Ground level data, ideally a topographical survey to understand how the land falls across the restoration site. This helps to understand the location of any raised embankments or low points which will be used to inform the design of engineering solutions.
- Ecological surveys to understand the ecology at the site to help identify if mitigation measures should be required. For example, this could include, but is not limited to, eels, fish, reptiles, and water voles. This will be used to inform the licences and permissions required.
- Access needs to be considered for example if the restoration works may permanently or temporarily change access to a structure, Public Right of Way, road, property etc. If temporary diversions are required, permits may be needed and must be considered.

The Conserving Bogs: The Management Handbook (2019) is a practical manual of methods and techniques to help effective management and conservation of bogs. It includes practical information about engineering techniques such as dams, sluices, and bunds.

[Conserving Bogs the management handbook.pdf](#)

It should be noted that suitable mitigation may be required for priority species such as, eels, fish, reptiles, and water voles. This should be identified early on and discussed with the relevant authorities.

CONSERVING BOGS THE MANAGEMENT HANDBOOK



Tim Thom, Astrid Hanlon, Richard Lindsay,
Joanna Richards, Rob Stoneman & Stuart Brooks

Typical engineered solutions that could be required to inform the restoration plan are as follows:

Drain Blocks

could be used to raise and maintain the water table, also allowing water to pool behind to spread around the fen. Peat dams and plastic piling dams could be used to block ditches.

Peat dams

could be created by using existing peat on the peatland restoration site to block small ditches, allowing the water table to rise. Dried desiccated peat should not be used to create peat dams. This may not be suitable on sloped land, or where there is a large volume of water flowing through the ditches.

Foot drains

are shallow channels that can be excavated to maintain water levels and distribute water across a restoration site.

Trench bunding/bank raising

can reduce water loss to surrounding areas by creating a boundary which restricts surface and sub-surface flow. This uses compacted peat internally within the peat to stop internal flow through the peat, in addition to on top of the peat to stop the surface flow of water. Cracked peat should be avoided for use, to prevent sub-surface flow.

Plastic piling dams

could be used to raise the water table by blocking drains to prevent water from flowing out of the peatland restoration site. Plastic piling can also be used to hold a sluice structure. The plastic piling should be driven down to reach suitable strata. The plastic piling should also extend into each bank on either side of the drain to prevent overturning of the structure from the pressure buildup as the water is held back. It should not be used to hold back large volumes of water but rather to spread water around the fen. There are types of plastic piling that can be reinforced, for example with timber piles, to provide greater stability. The plastic piling should be installed to prevent water from escaping along the arms of the plastic piling, to avoid erosion of the ditch banks, for example this can be achieved by having a lower section of piling in the centre of the ditch channel so water can overtop during peak flows.

Sluices

can be designed to raise, retain and redirect water. A typical solution may include a drop board sluice which comprises a sheet piled wall with frame to install and remove timber piles can be an effective way to control water. Consideration should be given to any geological constraints at the location of the structure, and the depth of the walls and length of the “wings” that extend into the banks of the watercourse should take this into account.

Storage reservoirs

could be required to store abstracted winter water for release to peatland restoration areas during summer months to maintain high water levels. This will require detailed design and consideration should be given to the Reservoir Act 1975.

Pipe dams

with an upstand that sets the target water level on the upstream side can also be an effective solution for controlling water levels.

Wind pumps

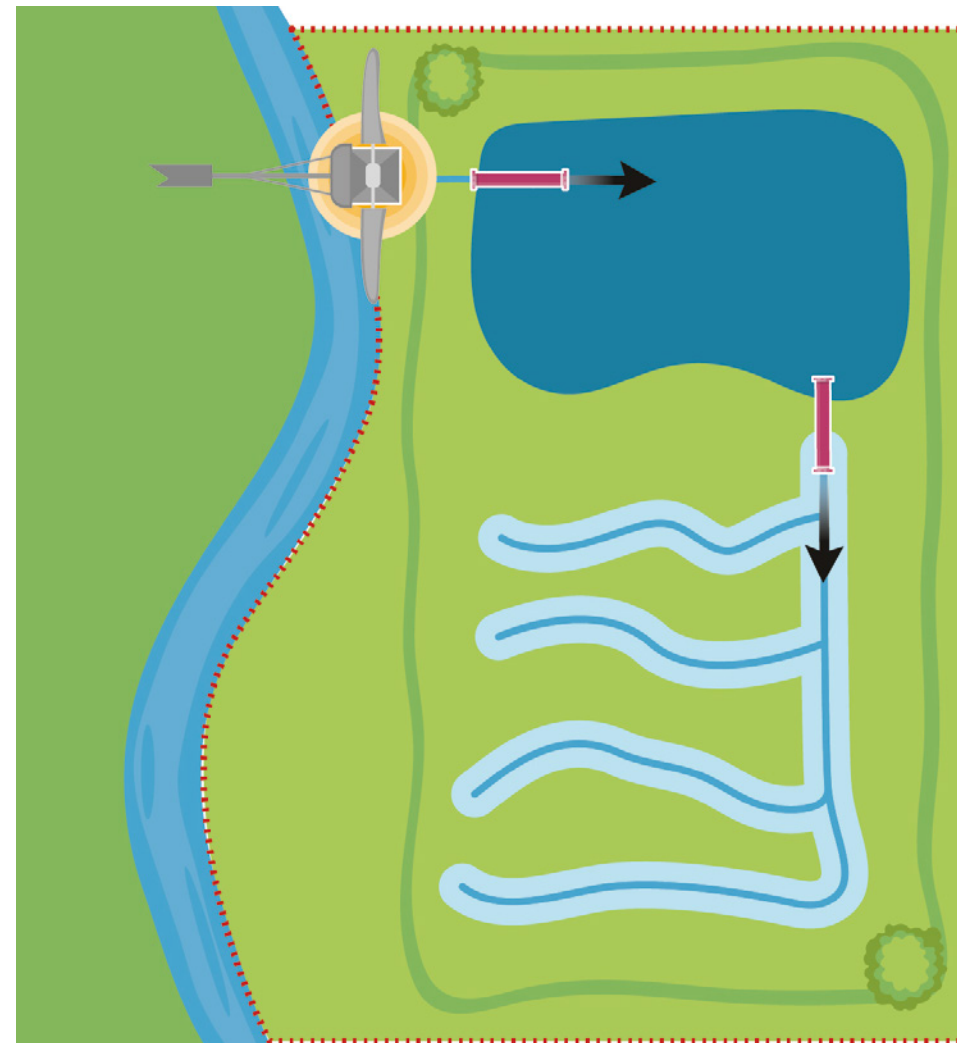
could be installed to move water from a lower-level area into a higher area. Wind pumps are typically used across the Broads to reduce water in winter months and can often not be in use over summer months. However, for peatland restoration, the opposite may be required as a peatland may require more water during drier months to retain the water table close to the ground surface. The volume of water required is likely to be calculated to inform the licences needed, and the viability of the scheme to deliver the water during months where wind speed is low. Ground stability should also be considered, and a ground investigation to understand the geology may be required to inform the foundation design. Solar powered pumps may be a viable alternative and should be explored for smaller-scale restoration schemes.

5. Case Studies

The case studies illustrated in this section are high-level and indicative of the solutions that could be installed on site. The Licensing and permits required would be subject to consultation. Each site and its hydrological regime are unique, and the licences required could vary from those listed. This section has been produced in consultation with the EA .

1	Winter Storage Reservoir System
2	Simple Piped Water Transfer System
3	Compartmentalised Pump System
4	Sluice To Retain Water
5	Bunding

1 Winter Storage Reservoir System



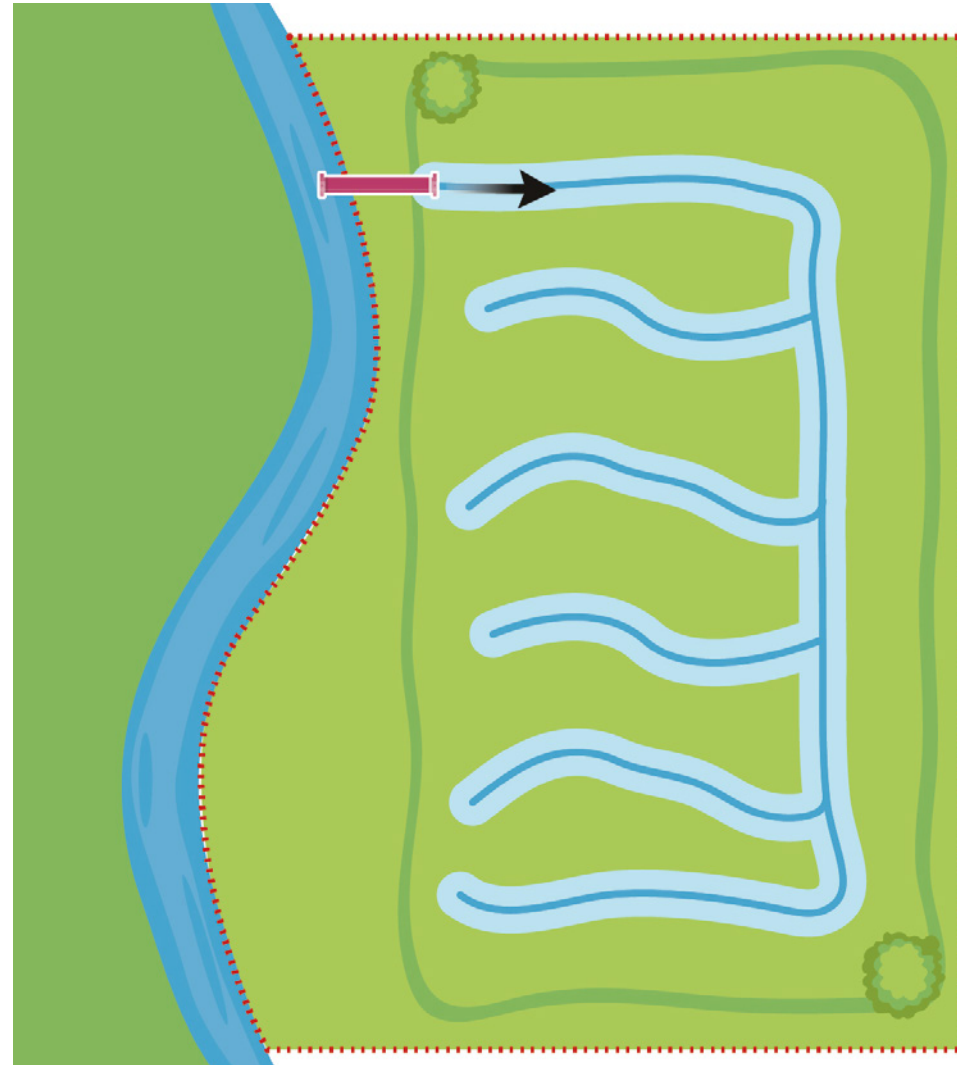
- ⋯⋯⋯ Site Boundary
- Watercourse (Source)
- Watercourse
- Pipe
- Reservoir
- Pump

Other:

- The Reservoir Act 1975 to be considered, for any large (>10,000m³), impounded or raised reservoir.
- Ecological constraints (such as eels, water voles and other protected species).
- Planning application, liaise with local planning authority who may require additional assessments. Refer to **Section 3** for the potential requirements.
- Access needs to be considered for example if the restoration works may permanently or temporarily change access to a structure, Public Right of Way, road, property etc.

TYPE	ITEM	DETAIL
Environmental Permit	All works.	<ul style="list-style-type: none"> • FRAP required from the EA (if works on or near main river, flood defences or the floodplain).
Water Resources Licences	Pump	<ul style="list-style-type: none"> • A transfer licence from the EA to move water from the source watercourse to the watercourse in the site, provided the reservoir is then passively discharging into the wetland (making the reservoir a source of supply). • However, if it was a lined / sealed reservoir which isn't directly connected to another inland water (i.e. would have to pump water out of the reservoir to move it into the wetland) then that would make the reservoir a discrete source and a full licence would be needed for the initial abstraction from the source watercourse into the reservoir. This is because the reservoir is not a source of supply so cannot be regulated via a transfer licence.
	Pipe	<ul style="list-style-type: none"> • A water resources licence is not required as this would be part of the means of abstraction i.e. pumping water into the reservoir via a pipe. Hence, no exemption consent is required as its regulated via the transfer licence.
	Small reservoir	<ul style="list-style-type: none"> • A water resources licence is not required as the reservoir is not itself an abstraction and it is not impounding an existing inland water, as created in land next to the watercourse.
Ordinary Watercourse Consent / Land Drainage Consent	Pump	<ul style="list-style-type: none"> • Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) • Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) • Check IDB Byelaws.
	Pipe	<ul style="list-style-type: none"> • Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) • Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) • Check IDB Byelaws.
	Small reservoir	<ul style="list-style-type: none"> • Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) • Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) • Check IDB Byelaws.

2 Simple Piped Water Transfer System



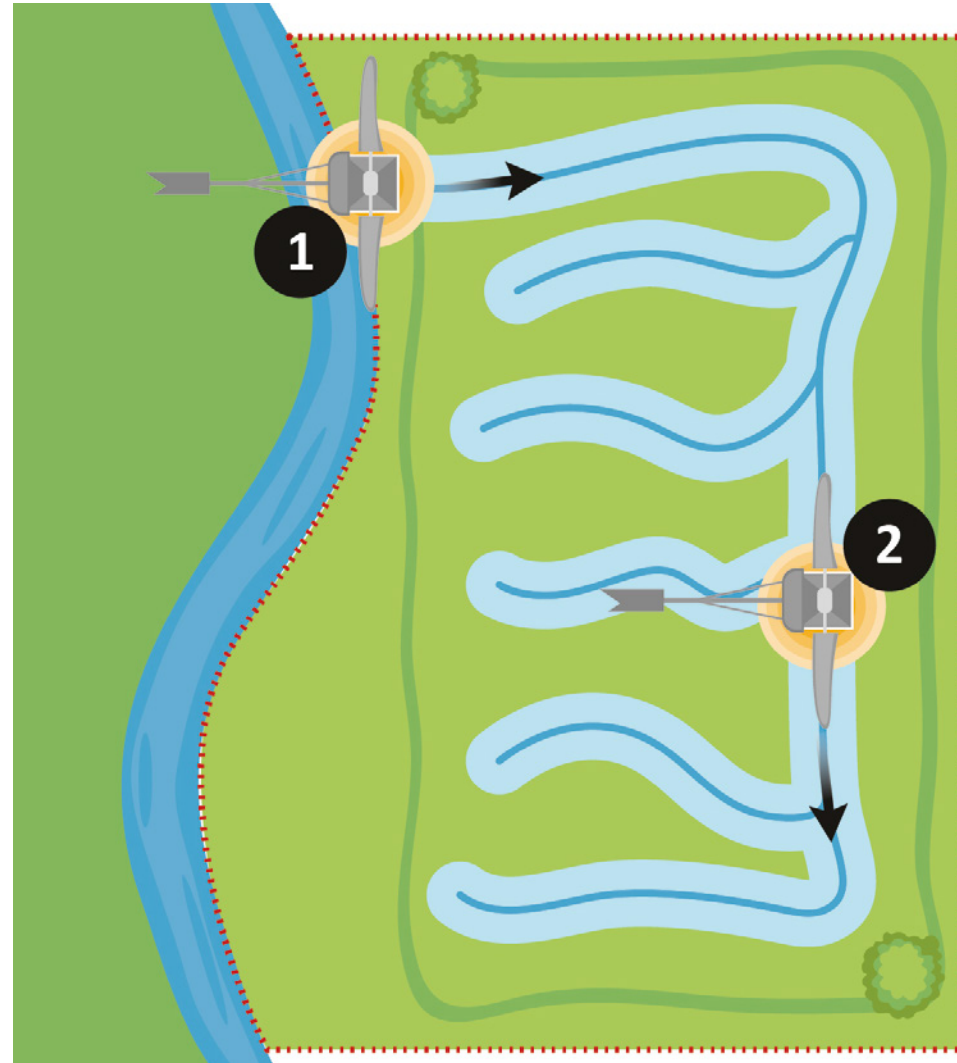
- ⋯⋯⋯ Site Boundary
- Watercourse (Source)
- Watercourse
- Pipe

TYPE	ITEM	DETAIL
Environmental Permit	All works.	<ul style="list-style-type: none"> FRAP required from the EA (if works on or near main river, flood defences or the floodplain).
Water Resources Licences	Pipe	<ul style="list-style-type: none"> Transfer licence from the EA to move water from the donor watercourse to the watercourse within the MWS via the pipe (provided water discharged into a watercourse, not the land surface). An exemption consent is not required as the pipe would be part of the means of abstraction and not impounding water. Hence, it is regulated via the transfer licence.
Ordinary Watercourse Consent / Land Drainage Consent	Pipe	<ul style="list-style-type: none"> Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) Check IDB Byelaws.

Other:

- Ecological constraints (such as eels, water voles and other protected species).
- Planning application, liaise with local planning authority who may require additional assessments. Refer to [Section 3](#) for the potential requirements.
- Access needs to be considered for example if the restoration works may permanently or temporarily change access to a structure, Public Right of Way, road, property etc.

3 Compartmentalised Pump System



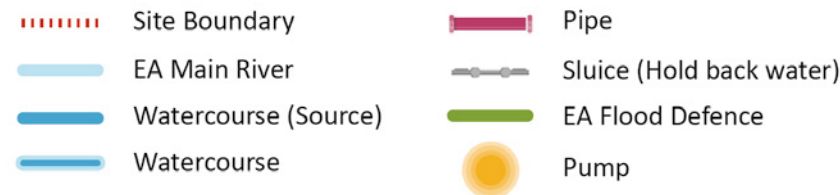
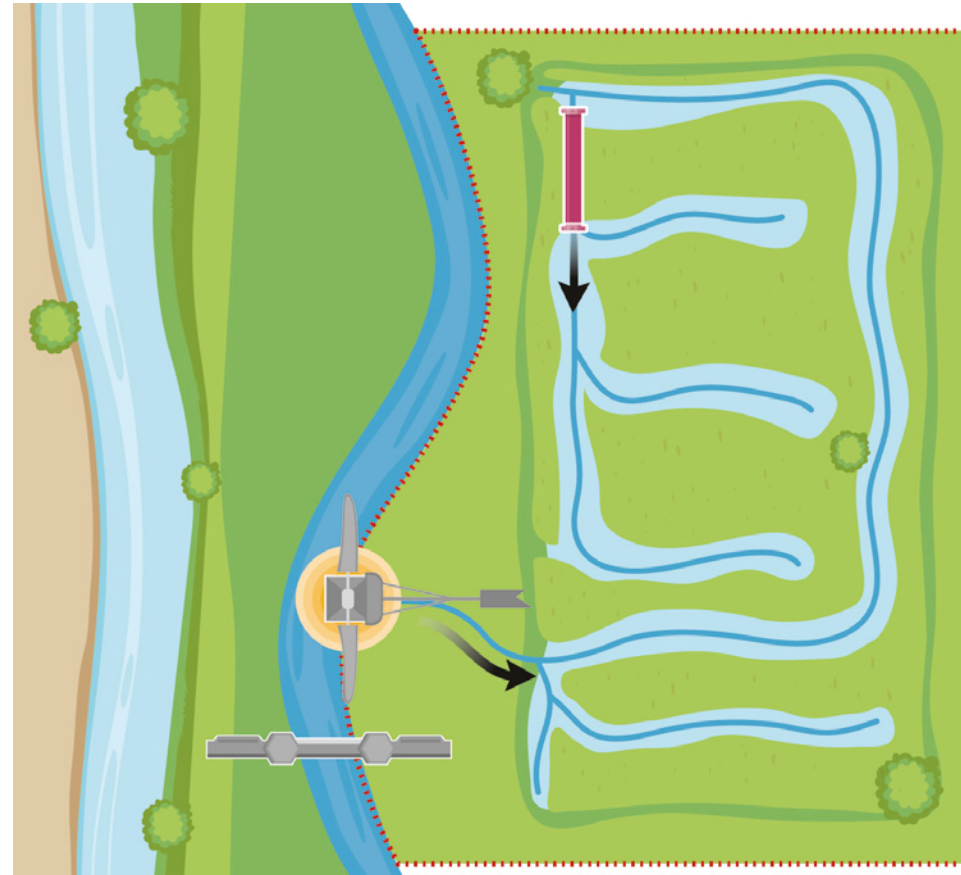
- ⋯⋯⋯ Site Boundary
- Watercourse (Source)
- Watercourse
- Pump

TYPE	ITEM	DETAIL
Environmental Permit	All works.	<ul style="list-style-type: none"> FRAP required from the EA (if works on or near main river, flood defences or the floodplain).
Water Resources Licences	Pump on the site boundary	<ul style="list-style-type: none"> A transfer licence is required from the EA to move water from the donor watercourse to a watercourse within the MWS. An exemption consent is not required as the pump would be part of the means of abstraction and not impounding water. Hence, it is regulated via the transfer licence.
	Pump within the site	<ul style="list-style-type: none"> Exemption consent from the EA for the secondary abstraction within the MWS if pump 1 is licenced as the primary abstraction point (if within or could affect a Habitats Directive site). Exemption consent for the impoundment if this is restricting or holding back water compared to the pre-restoration setting (if within or could affect a Habitats Directive site). NB. If in theory multiple exemption consents were needed, these would be grouped under a single consent.
Ordinary Watercourse Consent / Land Drainage Consent	Pump on the site boundary	<ul style="list-style-type: none"> Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) Check IDB Byelaws.
	Pump within the site	<ul style="list-style-type: none"> Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) Check IDB Byelaws.

Other:

- Ecological constraints (such as eels, water voles and other protected species).
- Planning application, liaise with local planning authority who may require additional assessments. Refer to **Section 3** for the potential requirements.
- Access needs to be considered for example if the restoration works may permanently or temporarily change access to a structure, Public Right of Way, road, property etc.

4 Sluice To Retain Water

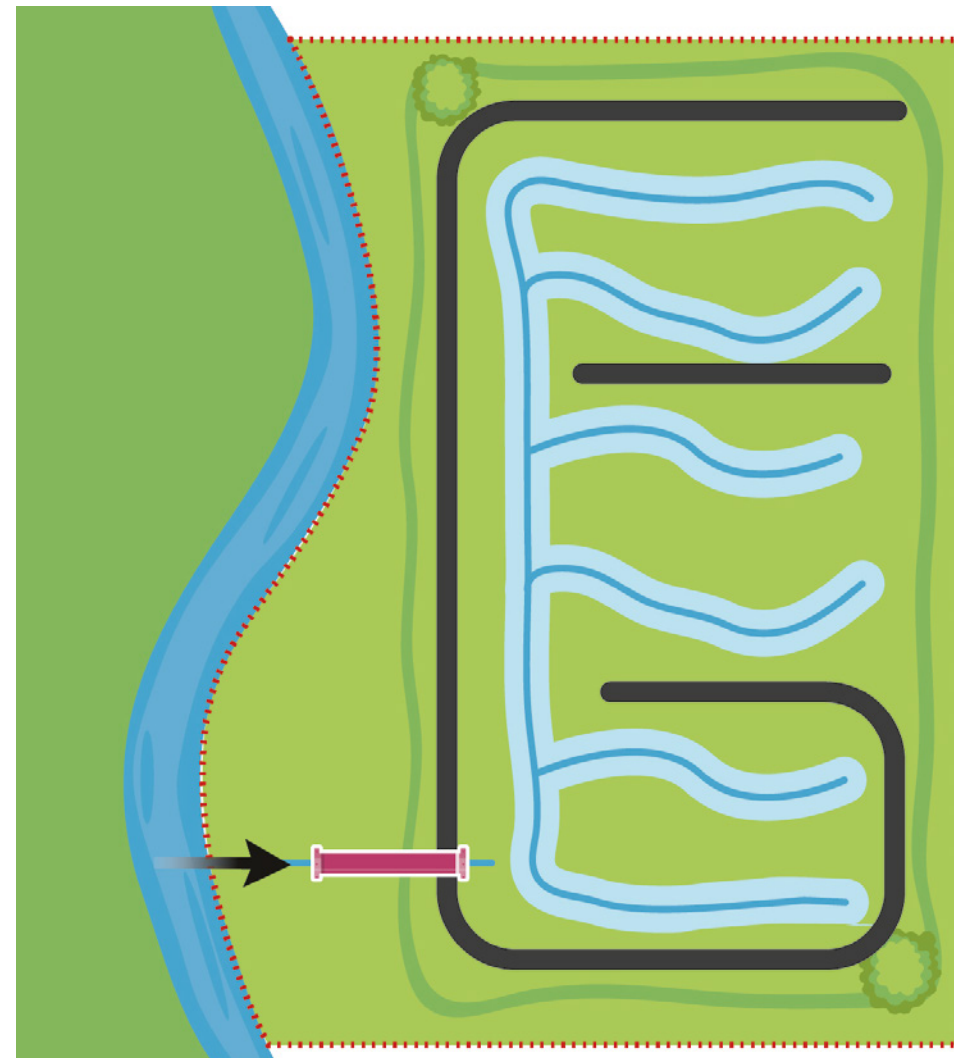


Other:

- Ecological constraints (such as eels, water voles and other protected species).
- Planning application, liaise with local planning authority who may require additional assessments. Refer to Planning [Section 3](#) for the potential requirements.
- Access needs to be considered for example if the restoration works may permanently or temporarily change access to a structure, Public Right of Way, road, property etc.
-

TYPE	ITEM	DETAIL
Environmental Permit	All works.	<ul style="list-style-type: none"> • FRAP required from the EA (if works on or near main river, flood defences or the floodplain).
Water Resources Licences	Sluice (retaining water)	<ul style="list-style-type: none"> • If located outside of the MWS and not Low Risk, an impoundment licence is required as restricting and holding back water. • If located outside of the MWS and Low Risk, an exemption consent is not required. As it is located outside of the MWS, therefore the sluice isn't meeting the exemption criteria for internal abstractions/impoundments within an MWS.
	Pump	<ul style="list-style-type: none"> • Transfer licence from the EA to move water from the donor watercourse to watercourse within the MWS • No exemption consent required as the pump would be part of the means of abstraction and not impounding water. Hence, it is regulated via the transfer licence.
	Pipe	<ul style="list-style-type: none"> • Exemption consent from the EA for the secondary abstraction within the MWS, provided that the primary abstraction is licenced (if within or could affect a Habitats Directive site). • Exemption consent for the impoundment if this is restricting or holding back water compared to the pre-restoration setting (if within or could affect a Habitats Directive site). • NB. If in theory multiple exemption consents were needed, these would be grouped under a single consent.
Ordinary Watercourse Consent / Land Drainage Consent	Sluice (retaining water)	<ul style="list-style-type: none"> • Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) • Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) • Check IDB Byelaws.
	Pump	<ul style="list-style-type: none"> • Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) • Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) • Check IDB Byelaws
	Pipe	<ul style="list-style-type: none"> • Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) • Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) • Check IDB Byelaws.

5 Bunding



- ⋯⋯⋯ Site Boundary
- Watercourse (Source)
- Watercourse
- Pipe
- Bunding

TYPE	ITEM	DETAIL
Environmental Permit	All works.	<ul style="list-style-type: none"> FRAP required from the EA (if works on or near main river, flood defences or the floodplain).
Water Resources Licences	New watercourse taking water from donor watercourse	<ul style="list-style-type: none"> Provided that there is an action to remove the water i.e. creating a new watercourse and lowering the banks to allow water to flow into the MWS via the new watercourse, a transfer licence is required from the EA. However, if this was a completely natural, existing connection from the source watercourse to the MWS then a transfer licence would not be required.
	Pipe	<ul style="list-style-type: none"> Exemption consent is not required as this would be part of the means of abstraction i.e. moving water from the source watercourse to the watercourses in the MWS. Hence, no exemption consent is required as its regulated via the transfer licence.
	Pipe & Bunds	<ul style="list-style-type: none"> If these are restricting or holding back (impounding) water compared to the pre-restoration setting an exemption consent could be required for the impoundment (if within or could affect a Habitats Directive site).
Ordinary Watercourse Consent / Land Drainage Consent	New watercourse taking water from donor watercourse	<ul style="list-style-type: none"> Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) Check IDB Byelaws.
	Pipe	<ul style="list-style-type: none"> Land Drainage Consent from the LLFA (if ordinary watercourse, not in IDB district) Land Drainage Consent from the IDB (if ordinary watercourse, in IDB district) Check IDB Byelaws.

Other:

- Ecological constraints (such as eels, water voles and other protected species).
- Planning application, liaise with local planning authority who may require additional assessments. Refer to Planning [Section 4](#) for the potential requirements
- Access needs to be considered for example if the restoration works may permanently or temporarily change access to a structure, Public Right of Way, road, property etc.

6. Conclusion

The Broads Authority, with support from stakeholders, have developed this design guide to help interested farmers and landowners on the typical policy, constraints, and opportunities for water supply, water level management and the permissions required for the restoration of degraded lowland peat within the Broads National Park.

Providing the necessary water supply for lowland peat restoration sites within the Broads National Park all year round could be challenging due to water supply demands as summarised in Section 3 of this Guide. Opportunities for peatland restoration could be available with careful consideration and consultation with the EA is recommended at the early design stage.

For lowland peat restoration an array of licences, consents, and permits may be required from a range of authorising bodies, and the works to put together these applications can be significant. The timeframes of the applications need to be carefully considered alongside any funding cycles.

The typical engineering solutions which could be employed to help achieve water level management for lowland peat restoration and five case studies providing indicative solutions are for guidance only. The engineering solutions will also inform the potential consents, licences and permits required, along with the locality and site setting.

Whilst the guidance provided in this document gives some insight into the typical works to support restoration of degraded lowland peat, each site will have specific constraints and opportunities, which will ultimately inform the necessary works. The proposals must be designed so that any new hydrological regime does not adversely affect protected ecosystems or increase the risk of flooding to offsite areas. It should be noted, the consents, Licensing and permits required are all subject to consultation and could vary from those listed due to unique hydrological regimes.

Therefore, consultation with the approving authorities is recommended during the design process and prior to implementation of any works.

It is hoped this Guide serves as a helpful starting point to inform those who are interested. As knowledge is shared and progress is made, it is anticipated that this Guide will be adapted.

Through successful restoration, there is an opportunity to restore areas of degraded lowland peatland which can create a legacy of enhanced biodiversity, improved water quality, sustainable farming, climate resilience and natural flood management across the Broads National Park.

We would like to thank those that inputted into this Design Guide.

Appendix A: Baseline Data

The following documents have been reviewed to inform this design guide:

- Abstract or impound water: hydrological information needed for your application, EA guidance updated in December 2023.
- Broadland Abstraction Licensing Strategy, EA first published in February 2013 and updated in August 2017;
- Catchment Data Explorer, EA;
- Check if you need a licence to abstract water, EA guidance updated in July 2023;
- Check if you need a licence to impound water, EA guidance updated in July 2023;
- Flood risk activities: environmental permits, EA guidance updated in April 2024;
- Get advice before you apply for an environmental permit, EA guidance updated in February 2024;
- Groundwater Management Units, EA dataset updated in January 2024;
- Norfolk County Council Ordinary Watercourse Consent Application Form Guidance Notes, no date;
- Norfolk County Council Ordinary Watercourse Consent Protocol, first edition dated November 2013;
- Policy for working on Watercourses in Suffolk Policy, Suffolk Flood Risk Management Partnership dated March 2018.
- Surface Water Availability for Water Resource Charging, EA dataset updated in January 2024;
- The Environment Agency (Environmental Permitting and Abstraction Licensing) (England) Charging Scheme 2022, EA report version 1.2 published in April 2022;



Appendix B: Summary Descriptions

Heavily Modified Waterbodies

The Water Framework Directive (WFD) classification for Heavily Modified Waterbodies are “bodies of water which, because of physical alterations by human activity, are substantially changed in character and cannot, therefore, meet “good ecological status”. The mapping shown in the ALS does not show classify any waterbodies within the Broads as Heavily Modified Water Bodies (and/or discharge rich water bodies). Therefore, this has not been considered further within the Design Guide.

Managed Wetland Systems

Section 2 of The Water Abstraction and Impounding (Exemptions) Regulations 2017 define a managed wetland system as “(a) an area of land that is periodically inundated or saturated by abstracted water in order to provide ecological benefits to flora and fauna, or (b) an area of land through which abstracted water flows, through a system of channels, sluices, carriers or other apparatus in order to provide ecological benefits to flora and fauna”.

Source of Supply

The definition of a source of supply is:

- a) any inland waters except any of which are discrete waters; or
- b) underground strata in which water is or at anytime may be contained.

Discrete Source

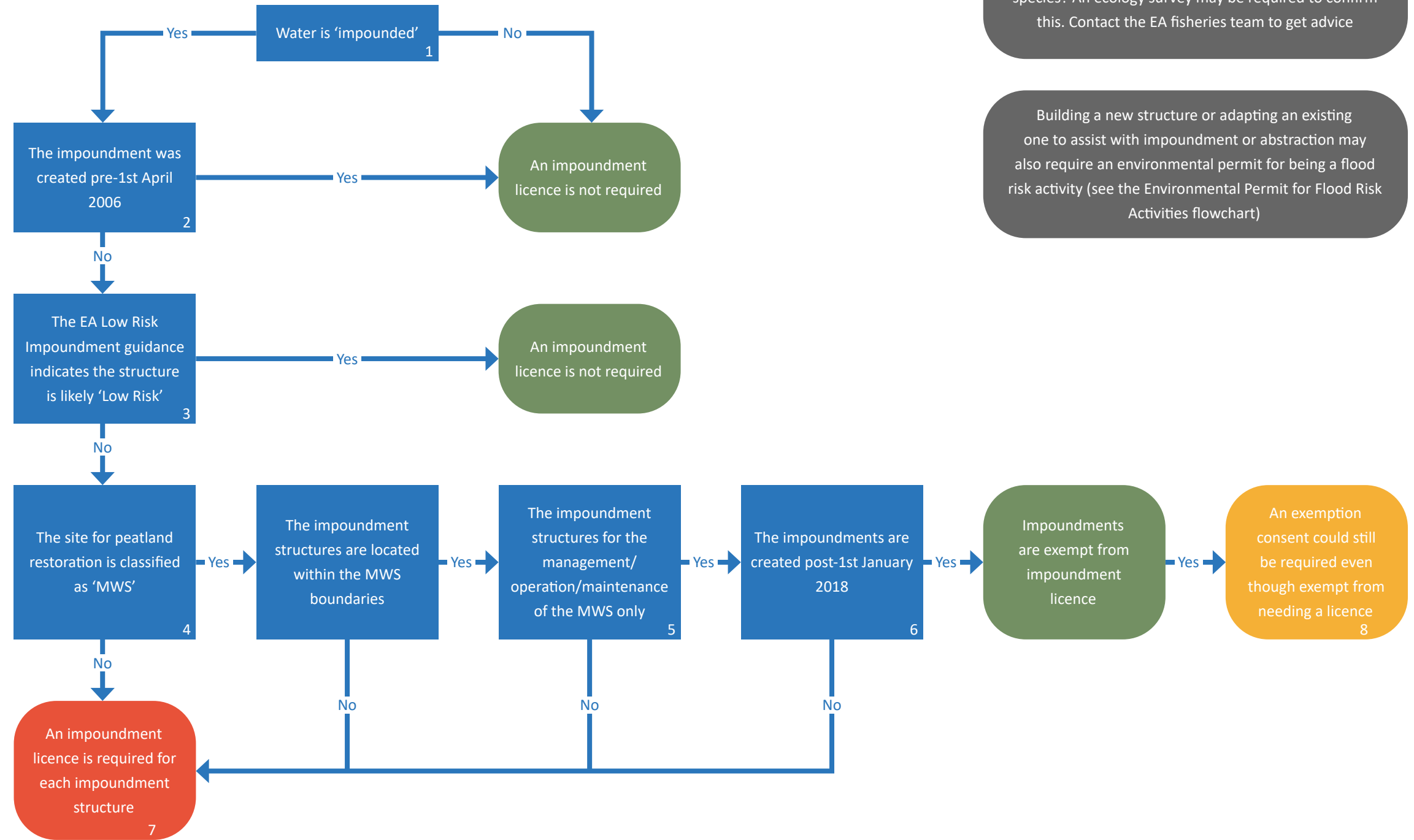
The definition of a discrete source is inland waters so far as they comprise:

- a) a lake, pond or reservoir which does not discharge to any other inland waters; or
- b) one of a group of two or more lakes, ponds or reservoirs (whether near to or distant from each other) and of watercourses or mains connecting them, where none of the inland waters in the group discharges to any inland waters outside the group.

Appendix C: Licence Flow Charts

Water Resources Licence Impoundment

For the visually impaired please contact Broads Authority for more information on these flow charts.



EA pre-application is recommended at an early stage

Are there eels / fish / water voles or other protected species? An ecology survey may be required to confirm this. Contact the EA fisheries team to get advice

Building a new structure or adapting an existing one to assist with impoundment or abstraction may also require an environmental permit for being a flood risk activity (see the Environmental Permit for Flood Risk Activities flowchart)



1. An impoundment is defined by the EA as a structure within inland waters that can permanently and or temporarily change the water level or flow. For peatland restoration, this is likely to be a structure that is holding back water or restricting the flow of water. Check the EA website for the typical structures that impound water: <https://www.gov.uk/guidance/check-if-you-need-a-licence-to-impound-water>
 2. Any impoundments constructed pre-1st April 2006 do not require a licence, provided it is not being altered, or the alteration is very minor and falls within the EA low risk impoundment policy. Refer to: <https://www.gov.uk/guidance/check-if-you-need-a-licence-to-impound-water#when-you-do-not-need-a-licence>
 3. Check if the impoundment is Low Risk, and keep a record of evidence. Discuss with the EA if you are uncertain.
The EA low risk impoundment guidance can be found here: <https://www.gov.uk/guidance/check-if-you-need-a-licence-to-impound-water>
Follow this link to get pre-application advice from the EA: <https://www.gov.uk/guidance/get-advice-before-you-apply-for-a-water-abstraction-or-impounding-licence>
or contact the EA via Email: enquiries@environment-agency.gov.uk or Tel: 03708 506 506
 4. A Managed Wetland System (MWS) means:
 - a) an area of land that is periodically inundated or saturated by abstracted water in order to provide ecological benefits to flora and fauna, or
 - b) an area of land through which abstracted water flows, through a system of channels, sluices, carriers or other apparatus in order to provide ecological benefits to flora and fauna
 Refer to the **Design Guide** on how to define the MWS boundaries for a site.
 5. The impoundment structure must be required only for the management / operation / maintenance of the MWS.
For example, an impoundment on a donor inland waterbody outside of the MWS that acts to enable water to be moved into the MWS would require an impoundment licence.
 6. If any impoundment structures in the MWS has been created post-1st April 2006 and pre-1st January 2018 it will require an impoundment licence. Any impoundments constructed pre-1st April 2006 would remain exempt provided it is not being altered, or the alteration is very minor and falls within the EA low risk impoundment policy. Refer to: <https://www.gov.uk/guidance/check-if-you-need-a-licence-to-impound-water#when-you-do-not-need-a-licence>
 7. The impoundment licence can be applied for by filling in three forms and emailed to the EA.
The forms are located on the EA website, following this link: <https://www.gov.uk/government/publications/water-abstraction-application-for-a-water-resources-licence>
The following parts are required:
 - Part A application for a water resources licence – about you
 - Part D application for a water resources impoundment licence – about your impounding proposal
 - Part E application charge for water resources licence – your application charge
 8. An exemption consent is required when there are secondary impoundments within the MWS which are exempt from requiring a licence (provided they are for the sole purpose of managing levels within that MWS), but are still within or could affect a Habitats Directive site. The EA are still required to issue an exemption consent for these secondary movements even though they are exempt from needing a licence.
 9. There are no application forms or application fee, only a written statement and supporting map are required to apply. This could usually be added as supporting information for your application to licence the primary abstraction into the wetland. However, where there is no primary abstraction, you can apply by emailing the information to PSCWaterResources@environment-agency.gov.uk
- NB. An “impoundment licence” is part of a “water resources licence”

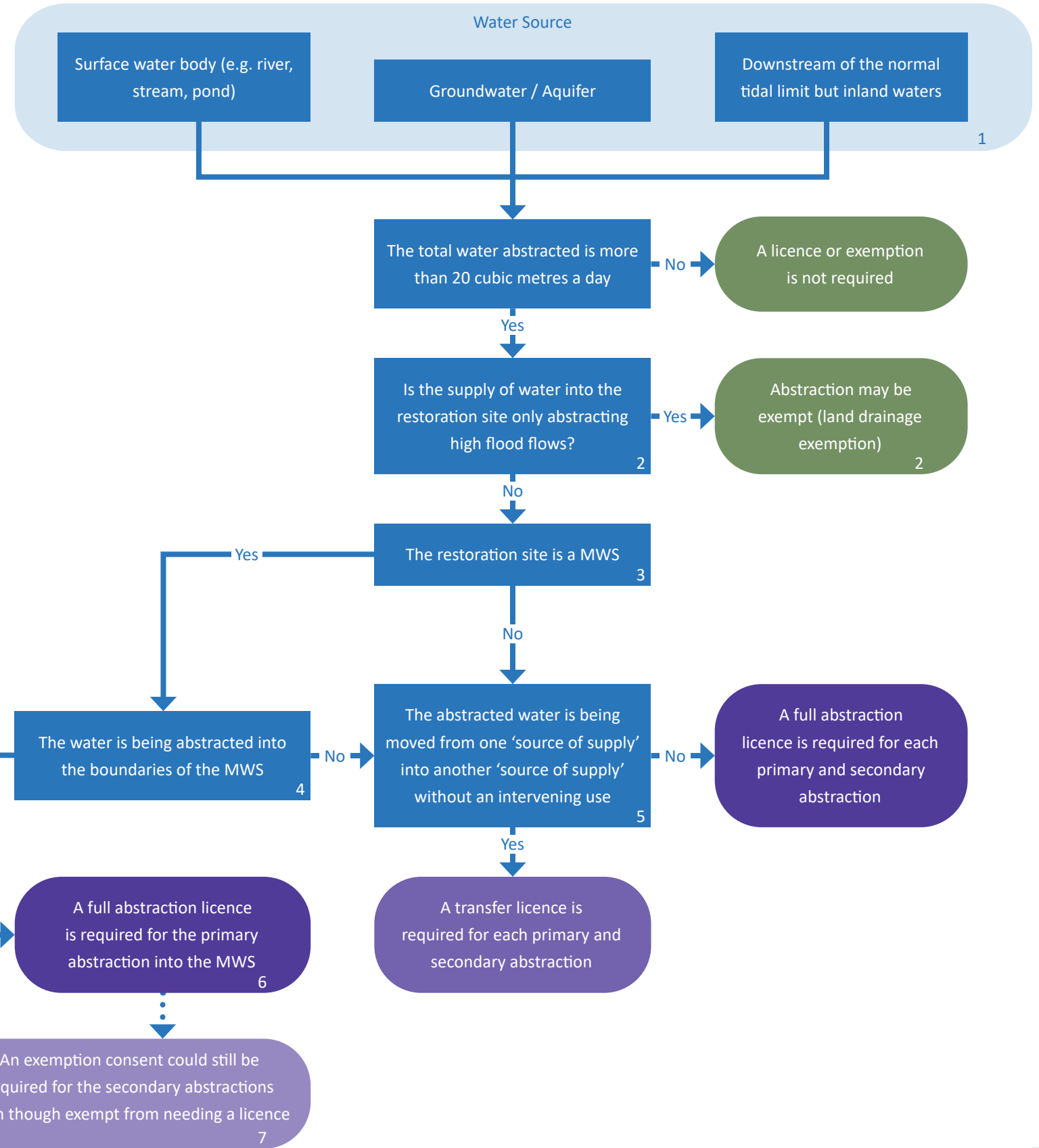
Water Resources Licence Abstraction

EA pre-application is recommended at an early stage

Contact the EA to discuss transferring water through “put and take” by putting water into a river from a reservoir, groundwater storage or re-use scheme for downstream abstraction.

Are there eels / fish / water voles or other protected species? An ecology survey may be required to confirm this. Contact the EA fisheries team to get advice.

Building a new structure or adapting an existing one to assist with impoundment or abstraction may also require an environmental permit for being a flood risk activity (see the Environmental Permit for Flood Risk Activities flowchart)





1. Review the list of sources on the EA website, following the link: <https://www.gov.uk/guidance/check-if-you-need-a-licence-to-abstract-water>
Any abstraction from a watercourse defined as 'inland waters' would still be licensable. This includes 'any channel, creek, bay, estuary or arm of the sea' as defined in the 'interpretation' section of the Water Resources Act 1991.
If your site is located within a "supported sources" catchment Review the EA Water Resources Charging Mapping Tool 'Supported Sources' to identify this, linked: <https://environment.maps.arcgis.com/apps/webappviewer/index.html?id=1911fe5855aa475583af9c298a319b22>
2. There is a land drainage exemption to requiring an abstraction licence if the water is taken for the 'protection of land against erosion or encroachment of water, whether from inland waters or from the sea'. In the context of MWS's, there may be scenarios in which the wetland areas are acting as a form of natural flood management and the water is only being abstracted into the wetland during high flood flows, therefore meeting the land drainage exemption. If the watercourse has been artificially raised using a linear flood defence, and the means of abstraction is set above the natural level of the land within this linear flood defence, then you would be exempt from needing an abstraction licence. However, where water is removed from a watercourse into a wetland area through a means of abstraction that lies below the natural level of the land, or where the level of the land has been artificially lowered below the natural level of the surrounding land, to encourage a flow of water onto land, then this would be considered an abstraction. In this scenario, you must continue to follow the flowchart to determine what licence may be required.
3. A Managed Wetland System (MWS) is defined in Section 2 of The Water Abstraction and Impounding (Exemptions) Regulations 2017 as follows:
 - a) an area of land that is periodically inundated or saturated by abstracted water in order to provide ecological benefits to flora and fauna, or
 - b) an area of land through which abstracted water flows, through a system of channels, sluices, carriers or other apparatus in order to provide ecological benefits to flora and fauna
 Refer to the **Design Guide** on how to define the MWS boundaries for a site.
4. The abstracted water is being moved into the MWS and is required only for the management / operation / maintenance of water levels or flows in the MWS.
5. A transfer licence is likely to be more suitable for most wetland schemes, as water is being moved from the donor source of supply into a channel/waterbody within the wetland which would generally also meet the definition of a source of supply. However, a full licence may be appropriate if the water is being moved from the donor source directly onto land.

The definition of a source of supply is:

- a) any inland waters except any of which are discrete waters; or
- b) underground strata in which water is or at anytime may be contained.

The definition of a discrete source is inland waters so far as they comprise:

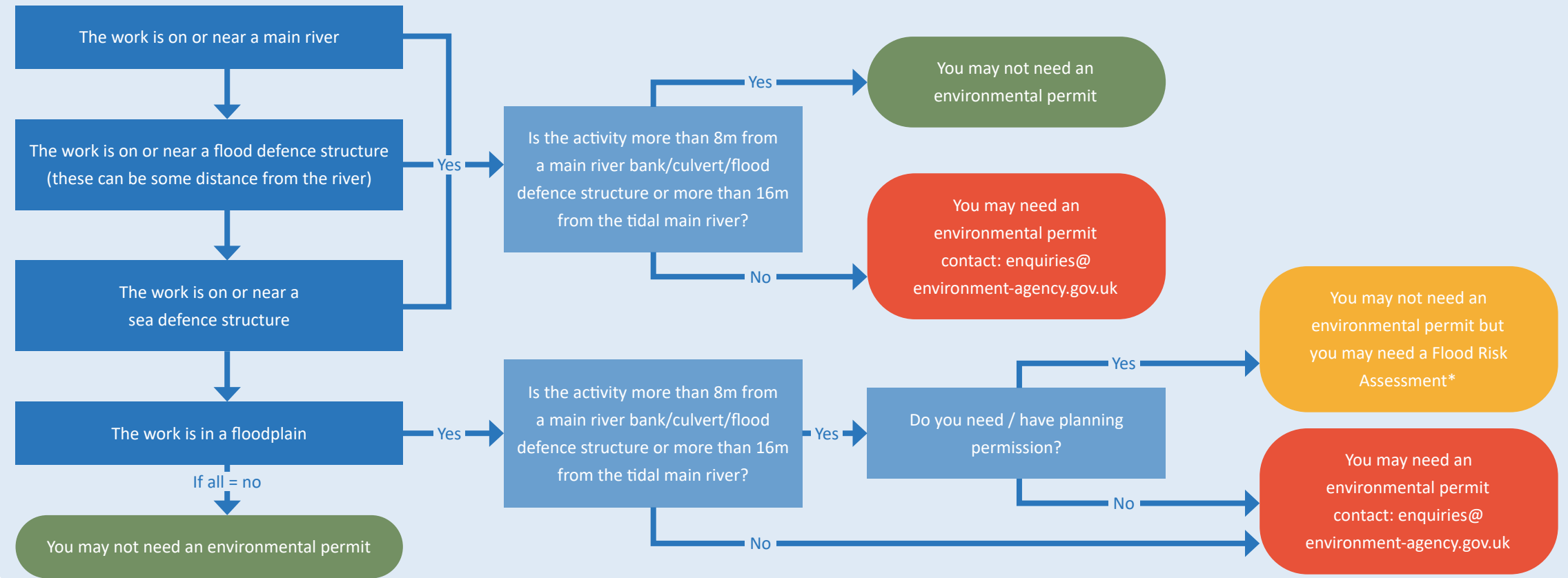
- a) a lake, pond or reservoir which does not discharge to any other inland waters; or
- b) one of a group of two or more lakes, ponds or reservoirs (whether near to or distant from each other) and of watercourses or mains connecting them, where none of the inland waters in the group discharges to any inland waters outside the group.

For example, if all abstracted water is being moved from a source of supply outside of the MWS (e.g. a river) into the MWS's series of connected drains and pools across the site then a transfer licence is required.

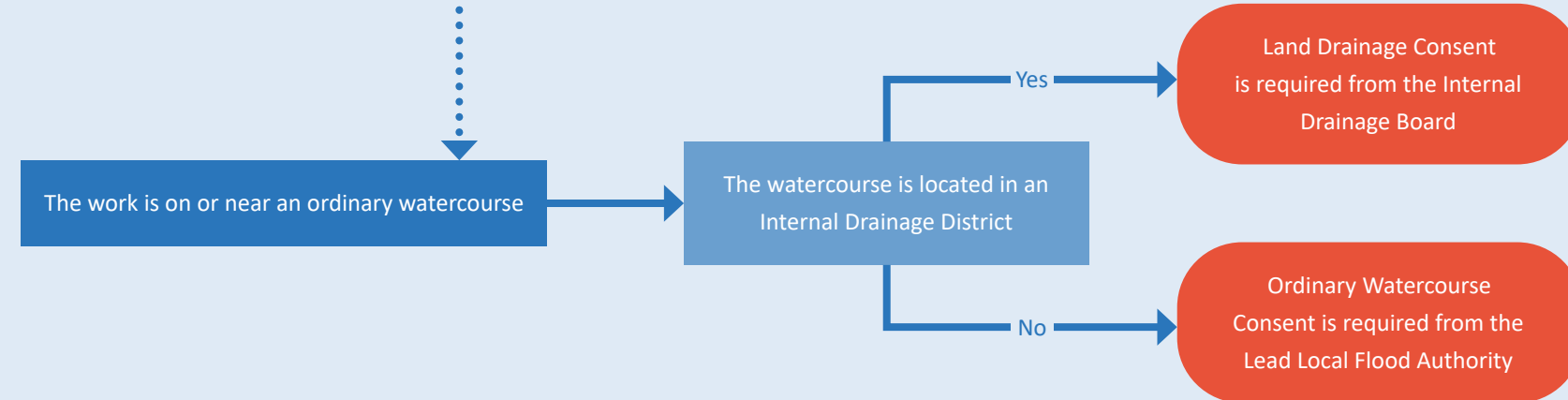
If all abstracted water is being moved from a source of supply outside of the MWS (e.g. a river) and discharged directly onto the MWS's land then a full licence is required.

6. The primary abstraction point into the MWS must be licenced, but subsequent secondary abstractions within the MWS required only for the management / operation / maintenance of water levels or flows in the MWS do not require a licence.
7. An exemption consent is required when there are secondary abstractions within the MWS which are exempt from requiring a licence (provided they are for the sole purpose of managing levels within that MWS), but are still within or could affect a Habitats Directive site. The EA are still required to issue an exemption consent for these secondary movements even though they are exempt from needing a licence. There are no application forms or application fee, only a written statement and supporting map are required to apply. This could usually be added as supporting information for your application to licence the primary abstraction into the wetland. However, where there is no primary abstraction, you can apply by emailing the information to PSC-WaterResources@environment-agency.gov.uk

Environmental Permit for Flood Risk Activities (formerly known as a flood defence consent)



Land Drainage Consent



*A Flood Risk Assessment (FRA) could be required, follow this link for more information: <https://www.gov.uk/guidance/flood-risk-assessment-for-planningapplications>



Environmental Permit for Flood Risk Activities (formerly known as a flood defense consent)

You may still need a permit...

- If the activity is for a permanent or temporary structure in/under/over a main river
- If you are altering, repairing or maintaining an existing structure in/under/over a main river (where work could affect the flow of water or any drainage work)
- If you are building / altering a structure designed to contain / divert flood water from a main river (even if it's temporary)
- If you are dredging, raising or removing material from a main river
- If you are diverting / impounding the flow of water or changing the level of water in a main river
- If you are quarrying or excavating within 16m of any main river, flood defence or culvert

To find out exclusions, exemptions, standard rules and bespoke rules, follow the link:

<https://www.gov.uk/guidance/flood-risk-activities-environmental-permits>

Land Drainage Consent

If the watercourse is located in an Internal Drainage District, the Internal Drainage Board (IDB) is the consenting body and therefore the Lead Local Flood Authority should not require an Ordinary Watercourse Consent. Find out if the site is located in an Internal Drainage District: <https://www.ada.org.uk/idb-map/>

The Broads IDB, Norfolk Rivers IDB or Waveney, Lower Yare & Lothingland IDB cover most of the Broads National Park. These are administered by the Water Management Alliance.

Water Management Alliance contact: planning@wlma.org.uk

Application form online: https://www.wlma.org.uk/uploads/WMA_LDC_Application_Form-v15.pdf

The site will be in Norfolk or Suffolk, find the Local Authority here: <https://www.gov.uk/find-local-council>

- Norfolk County Council (contact at: water.management@norfolk.gov.uk)
Online guidance and forms: <https://www.norfolk.gov.uk/38654#:~:text=Norfolk%20County%20Council%20is%20responsible,and%20Water%20Resources%20Act%201991>
- Suffolk County Council (contact at: floods@suffolk.gov.uk)
Online guidance and forms:
<https://www.suffolk.gov.uk/roads-and-transport/flooding-and-drainage/working-on-a-watercourse/apply-forconsent-for-works-affecting-ordinary-watercourses>