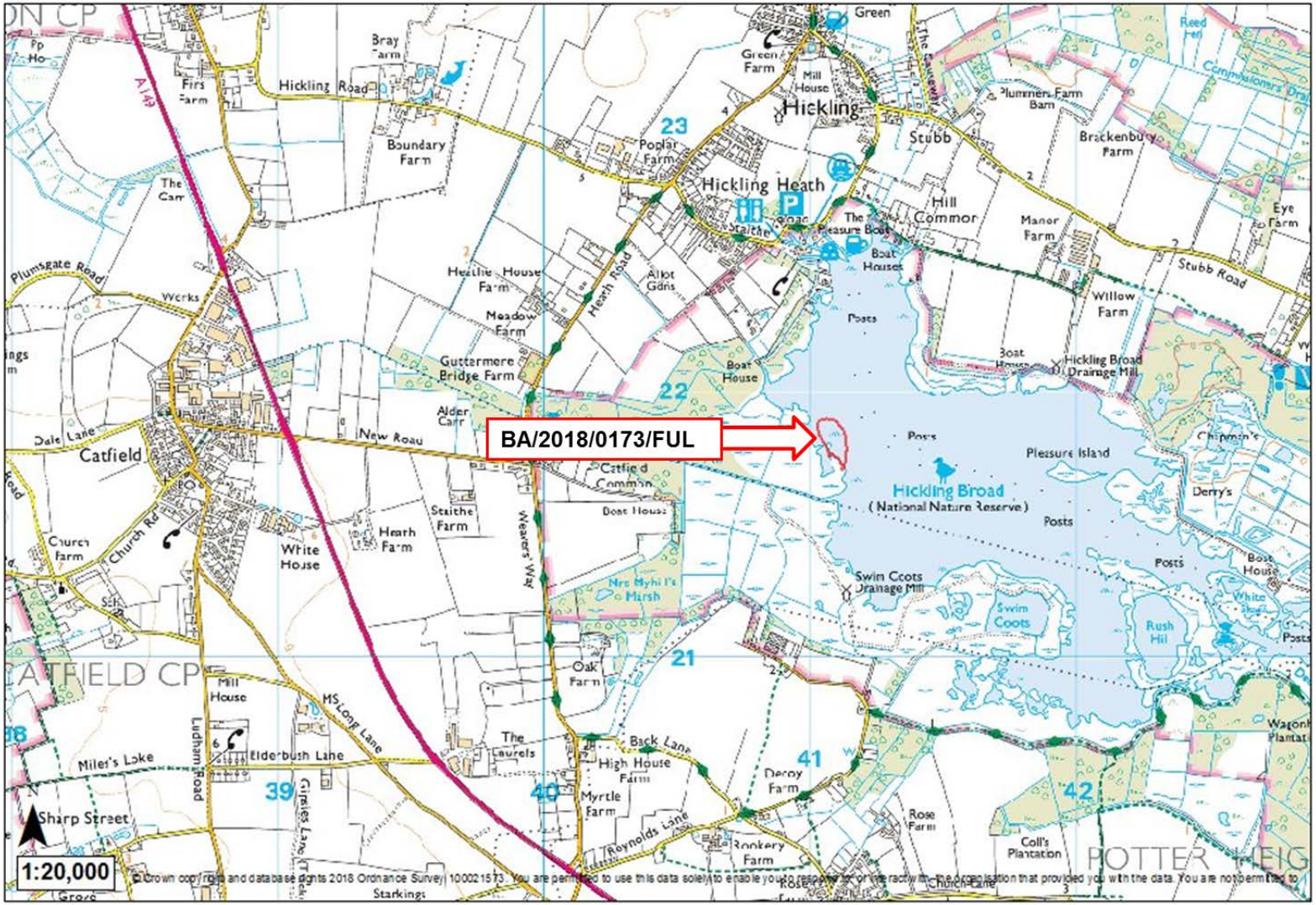
Reference: BA/2018/0173/FUL

Location Hickling Broad, Hickling

BA/2018/0173/FUL 20000



Broads Authority
Planning Committee
17 August 2018
Agenda Item No 10 (1)

Application for Determination

Parishes:	Hickling
Reference:	BA/2018/0173/FUL **Target Date:** 21 August 2018
Location:	Hickling Broad, Hickling
Proposal:	Hickling Broad enhancement work with the installation of geotextile tubes that are filled with dredged sediment, pinned in place by wooden poles and covered with polyfelt curtain and additional sediment, and then once established, the void created to be filled with further dredged sediment to re-create an area of reed bed
Applicant:	Broads Authority
Recommendation:	Approve with conditions
Reason for Referral	Broads Authority application

1. Background

1.1. The Broads Authority has a strategic objective to develop a long-term approach for the management of Hickling Broad, building on scientific evidence from the Broads Lake Review. This has led to the development of a vision statement for the area.

1.2. The adopted vision for the enhancement in Hickling Broad proposes both ecological and marginal habitat works and identifies a number of focuses:

- Protection of refuge areas in quiet bays and sheltered areas which provide conditions for water plants to flourish and habitat for fish and birds;
- Maintenance of the marked channel to meet Waterway Specification;
- Beneficial re-use of dredged material, being used to restore eroded reed swamp, construct lake side bank protection and regularly topping up bank restoration and island areas, as well as being spread to local arable land; and
- Regular monitoring to continue, to build understanding of the lake and to help shape its future management.

1.3. To deliver the necessary practical work elements as part of the vision and as a result of limited funding availability, the applicant has identified the need for a phased approach to enhancement works. This will involve seeking individual

planning consents for specific works over a number of years. Initial works proposed to focus on addressing the significant reed swamp regression issue, to protect this important habitat with high bio-diversity value. This has started to take place in key locations following the grant of the planning permission in 2016 (under reference BA2016/0191/FUL) including works at Churchill Bay and adjacent to The Studio.

1.4. This is the second significant planning application to implement the vision. To accompany this planning application, an Environmental Statement and subsequent Addendum has been submitted detailing impacts (including ecology and habitat, water quality and flood risk) along with necessary drawings, plans and technical information.

2. Description of Site and Proposal

2.1. Hickling Broad is located in the northern part of the Broads and is important in terms of landscape, nature conservation and recreation interest. Hickling Broad itself falls within the very large Upper Thurne, Broads and Marshes SSSI, which encompasses an extensive area – some 1159 ha. Hickling Broad also forms part of the Broads Special Area of Conservation (SAC) and Broadland Special Protection Area (SPA), which are European sites. It is also listed as The Broadland Ramsar site.

2.2. Hickling Broad has been subject to various changes including the significant reed bed erosion. Furthermore, hydrographic survey work in the marked channels continues to identify significant sediment volumes that are not meeting waterway specifications and there is an on-going requirement for maintenance dredging work to ensure the Broad meets targets for water depths. Most notably, priority work is required in the central part of main marked channel and the approach to Catfield Dyke.

2.3. This planning application will support the next phase of sediment removal. This will focus upon re-using the sediment within the Broad, through the re-creation of an area of previously eroded reed bed. This approach also aims to deliver favourable conditions to create habitats for plants and wildlife.

2.4. The design has been devised following an assessment of context and has been proposed based on technical and affordable considerations, using an approach that are also relatively easy to install. In detail, the approach involves a number of stages.

- Excavation of a shallow trench to accommodate elliptical geotextile tubes which will form the outer edge of the area to be filled with dredged material;
- Following excavation, the geotextile tubes will initially be pinned in position with wooden poles driven into the sediment adjacent to the bags;
- The geotextile tubes will be filled with locally sourced dredged sediment to form a retaining boundary structure (and covered with a polyfelt layer) - the shape of the structure will connect to the existing reed bed to the south and form a hollow oval shape;

- The weight of the structure of the sediment filled geotextile tubes will fix the structure to the bed of the Broad;
- A soft vegetated edge will be created at the front face of the geotextile tubes;
- Goose guard will be attached to a floating silt curtain deployed in front of the front face of the structure to deter grazing on newly planted vegetation;
- The void on the inside of the filled geotextile tubes will be filled with dredged sediment in the following two autumn / winter dredging periods; and
- New planting will be undertaken to create an area of reed bed.

2.5. The geotextile tubes are designed to sit on the bed of the Broad, and will be filled to a height that allows for some water inundation over the reed bed during high water events.

2.6. The works will take place over a two and half year period commencing in October 2018 (subject to the grant of consent). The approach is to fill the tubes within the first dredging season; this will result in a temporary lagoon behind the retaining structure. Subsequent dredging seasons (commencing in autumn 2019 and 2020) will top-up the tubes if needed, provide a sediment layer to cover the surface of the tubes and provide the fill material for the lagoon or backfill area. Based on the design and volumes, the applicant estimates that this will take two autumn / winter dredging campaigns. The backfill area will be filled to a level 10-20cm above summer level to allow for good water flow, essential for the establishment of a healthy reed habitat. This fill level is also informed by and aims to match height of the existing reed swamp adjacent to the restoration area.

2.7. As outlined in the Environment Statement that accompanies this application, it is recognised that the works associated with the application have potential to impact on water chemistry / algal production (including Prymensium parvum) and impact on wildlife (including over-wintering birds). Therefore as part of the submission, the application outlines measures and working practices to limit risk of Prymnesium bloom and impact on bird population. This is informed by up to date water monitoring information and dredging experience in Hickling Broad. This includes implementing an updated water quality-monitoring plan to identify changes in water quality / cell density counts, limiting works to specific times (October to February / March) with temperature thresholds throughout the works. This precautionary approach broadly reflect the approach adopted in the recent works at Churchill Bay. As with previous applications, an environmental monitoring plan will be implemented

2.8. The Environment Statement considers that the impact on ecological interest and habitats. It is considered that no significant effect is likely on any of The Broads SAC qualifying habitats, species and Broadland RAMSAR. However, it does recognise that there is a degree of uncertainty over the impacts in the short and medium term, when considered in combination with climatic and external catchment influences on the lake ecosystem. These matters are considered in the Habitat Regulations Assessment (HRA) Screening and Stage 2 Appropriate Assessment (AA) accompanies the application.

2.9. The applicant has concluded that the proposal is not likely to have a significant effect 'alone or in combination' on a European Site. This is based on the dredging works being temporary with proven and robust environmental monitoring planned adopting precautionary environmental thresholds. Furthermore, the timing of the works avoids unacceptable risks to water chemistry and promotion of the algal community and disturbance of waterfowl will be localised and minimal with preferable habitat available in close proximity.

2.10. In relation to recreation interest of the area, as with the 2016 Churchill Bay application, the applicant has indicated that there is no land-based recreation (as anglers do not use the adjacent area). In relation to water based activities, the sediment from dredging will be removed from the navigable channel and used in a manner that will not interfere with (and should enhance) normal boat movements in the Broad and Catfield Dyke and the recreated reedbed area is away from the navigable channel. Unlike the Churchill Bay proposal, the application proposal will not close off any internal marsh dyke that interconnects with others through to the north of Catfield Dyke and will not affect access to any private boathouse close to the Broad.

2.11. In relation to flood risk, the application site falls within flood zone 3. The filled geotextile beds and new reed bed area will be created by use of dredged material taken from within the navigable channel of the main Broad. Therefore, the applicant considers any change in water height at Hickling would be so small as to be un-measureable on site in practice. Therefore, this project will have no significant impact on flood risk in this area.

2.12. The proposed works are planned to be undertaken over a two and a half year period (2018-21), subject to planning consent.

3. Site History

BA/2014/0411/FUL	Install erosion protection along 3 bayed areas at NE of Hickling Broad	Approved 6 Feb 2015
BA/2016/0191/FUL	Hickling Broad enhancement work with two areas of reed swamp restoration using dredged sediment retained by a series of textile membranes held in place by posts and three areas of protection of existing reed swamp vegetation with 750 metres of floating PVC curtains with integral goose guard mesh perpendicular to the existing vegetation margin to reduce erosive forces and allow vegetation restoration	Approved 2 Sept 2016

4. Consultations

The following comments have been received from consultees.

Hickling Parish Council – No objections

Broads Society – Awaited

NCC Highways – No objection.

Environment Agency – No objection. The information provided within the environmental statement provides sufficient confidence that the works will continue only if the required monitoring and environmental checks are in place. The Broads Authority is responsible for ensuring no deterioration to Hickling Broad or any associated water bodies as a result of the proposal. The applicant is prepared to monitor the environmental conditions and stop works should the risk to WFD status require. When completed the creation of reed bed habitat and sheltered bays should help to improve the condition of the water body, which is currently classed as poor. The request to bring the dredging activity forward to October assuming average temperatures remain below 15 degrees is justified with an analysis of the data collected from Hickling over the previous three years. Whilst this is not an extensive dataset, the analysis provided indicates that there has been no obvious link between the dredging operation and prymnesium density at these lower temperatures. Suitable dredging constraints have been agreed to prevent Prymnesium blooms and fish mortality. Due to the sensitivity of the site and its importance to fisheries, we advise constant monitoring. Measures need to be followed to ensure machinery used on site is not contaminated with invasive species from previous sites. As a minimum the Check, Clean and Dry campaign should be adhered to (by all site operatives prior to site visit and after leaving). Our maps show the site lies in the Flood Zone 3, which is the area of high flood probability, as defined in Table 1 of the Planning Practice Guidance (PPG). The proposal is for enhancement work to construct a new reedbed and our view is that the development should be viewed as water compatible under Table 2 of the PPG. We are confident that this development will not increase flooding to the area or elsewhere.

Broads Internal Drainage Board – Awaited.

Natural England – Supports this proposal.

RSPB – Awaited.

NCC Historic Environment Service – No objection. Do not wish to make any recommendations for archaeological work.

North Norfolk District Council Environmental Health Officer – Awaited.

NSBA – Support the proposal, based on the beneficial reuse of dredging from the navigational area of Hickling Broad. Boating on Hickling Broad is an important part of the valuable heritage of the Norfolk and Suffolk Broads. However due to slack gradients and low tidal velocity, the Broad is prone to siltation and requires periodic maintenance, presently undergoing some

measure of work to mitigate a major backlog of sediment removal. The detailed proposals establish how the sediment may be reused without adverse impact on the special qualities of the Broad and in a way that is, to our knowledge, acceptable to the Regulators. .

5. Representations

5.1. As the application could impact upon boat use and activity, the Chairman of the Broads Authority's Navigation Committee was asked for any views. The Chairman has advised that the Navigation Committee considers the application acceptable.

5.2. To date only one letter has been received from consultation on this planning application.

5.3. Occupier of The Smea

I am supportive of the application, but keen that the works are carried out in accordance with the detail supplied. In particular, I note that dredging of the open water area behind the newly created reedbed is proposed in the environmental report and I would suggest that this should be a condition of any permission to ensure that benefits are maximised.
Without some dredging there is a high risk of an area of protected open water habitat being lost.
It remains a concern that the previous permission adjacent to this area has not been completed in accordance with the pre-planning conditions and indeed the conditions were only partially implemented after the rest of the project was completed.

6. Planning Policy

Broads Core Strategy
Core Strategy (Adopted_Sept_2007).pdf

Policy CS1 – Landscape protection and enhancement
Policy CS2 – Landscape protection and enhancement (European Sites)
Policy CS3 – Navigable water space
Policy CS4 – Creation of new resources
Policy CS15 – Use of dredging

Broads Development Management Policies DPD
DMP_DPD - Adoption_version.pdf

Policy DP1 – Natural environment
Policy DP3 – Water quality and resources
Policy DP4 - Design
Policy DP29 – Development on sites with a high probability of flooding

Broads Core Strategy

Policy CS20 – Flood risk

Broads Development Management Policies DPD

Policy DP28 – Amenity

Broads Development Management Policies DPD

Policy DP13 – Bank protection

6.1 The National Planning Policy Framework (NPPF)
Represents a material consideration in determining applications.

6.2 Whilst the new Broads Local Plan is advancing towards adoption (following the commencement of its Examination) the existing development plan documents have not been replaced so the provisions outlined in sections 6.1, 6.2 and 6.3 remain relevant.

6.3 The revised NPPF has recently been published and is a material consideration in the determination of this application.

7 Assessment

7.1 In view of site specific factors and planning policy, it is considered that the key issues relate to

- Design / visual impact
- Nature conservation
- Navigation and recreation
- Flood risk
- Other considerations (including amenity)

Design

7.2 The application proposes to use a technique that has been used previously in the Broads associated with restoration work in the north-western part of Salhouse Broad. These works were successful and are complete. Whilst the shape of this restoration differs to that at Salhouse Broad, there is no reason to suggest that in this location it will not prove to be successful. Given the history of algae bloom at Hickling Broad, great care is required to limit impact to the designated site. However, as discussed in section 2.7, at the forefront of scheme's evolution has been a precautionary approach to limit risk of algae bloom, in terms of timing of works, water temperature and on-going monitoring. Furthermore, statutory consultees (such as Natural England and the Environment Agency) have raised no objection regarding this proposed approach.

7.3 In terms of the visual impact on the extensive Broad, the main impact will be in relation to the construction period notably whilst reed establishes on the new edge. It is considered that the visual impact for most Broad users will be long

distance; but it is however considered that the competed works will provide a natural appearance that will complement the traditional appearance of the area preserving and enhancing the character of the area.

7.4 There will be some impact from the use of geo-textile features, silt curtain and goose guard arrangements. However, this will be short term and will not have a significant impact on the appearance after reed established (as demonstrated in Salhouse Broad).

7.5 Overall, it is considered the design is satisfactory and sustainable and meets the key tests of development plan policies CS4, DP1 and DP4.

Nature conservation considerations

7.6 The development proposed could impact on the Broads Special Area of Conservation (SAC) and Broadland Special Protection Area (SPA), which are European sites. It is also listed as the Broadland Ramsar site and that Hickling Broad falls within an SSSI designation (the Upper Thurne, Broads and Marshes SSSI) which extends to 1159 ha.

7.7 The application proposes creating new habitat using dredgings to create this reed swamp habitat.

7.8 Phase 1 of the works in this area at Churchill Bay raised concern regarding the loss (effectively stopping up) of an existing north - south (N-S) drainage dyke, which was considered by an objector to be important in draining this area. In contrast, in this case, there will be no change to the drainage ditches in this area and the proposed new reed swamp area will not prevent or impact on water movements associated with the existing reed swamp area.

7.9 In view of the nature conservation interest of the area, the applicant has sought to devise proposals using techniques, which will safeguard nature conservation interest and limit the risk of impact on the key features of the area. The approach adopted is welcomed, which is to concentrate works into the autumn and winter period. The timing of works is proposed based on up to date analysis and monitoring. This should allow works to commence earlier in October (based on day length rather than water temperature) but will still maintain the specific water temperatures threshold at the end of the winter season (cease works when temperatures rise above 8 degrees C). The works will be linked to water monitoring plan to identify changes in water quality / cell density counts to limit the risk of Prymnesium bloom as a result of the works (as detailed in section 2.7).

7.10 Natural England have raised no objection and have accepted the applicant's approach which suggests that the proposed works are necessary for the management of the European site interest features for nature conservation purposes and this will enable the maintenance / restoration of features to contribute to meeting site Conservation Objectives. Notwithstanding this, based on advice provided on previous habitat enhancement applications on Hickling Broad, the imposition of the following planning conditions are

considered justified (to safeguard the special features for which the SAC, SPA and Ramsar sites and SSSI):

- post-work monitoring;
- a ‘cold weather ban’ should be adopted to help alleviate stress on the birds during any difficult freezing conditions; and
- Prymnesium cell counts to at least twice weekly if numbers approach the warning level of 10,000; (to allow the Broads Authority to react faster to any further elevation in cell counts)

7.11 In view of the above, it is considered that the proposals will safeguard the nature conservation and water quality interests of the area and will increase reed swamp habitat, which will add to the interest of the area and is consistent with development plan policies CS1, CS2 and DP3.

Navigation and recreation

7.12 The area of works is proposed at the edge of Hickling Broad, outside the main navigable area and away from areas where angling takes place or any public right of way exists. The development proposed and the proposed alignment of the new edge seeks to reflect broadly the 1946 position.

7.13 Previous works close by at Churchills Bay raised issues regarding access to private boathouses and access to existing marsh dykes, from drainage and informal recreational use. In this case, the proposal does not impact on either consideration. The proposed shape of the enhancement will not affect water movements in the marsh dykes and is away from any private boathouse. Furthermore, the area of sheltered water formed is likely to create an area of interest in habitat terms without impacting on recreational activities.

7.14 In response to the consultation, the NSBA support the application. The works will have no impact on established navigation rights and it is considered that the benefit of creating new habitat and creating areas for beneficial sediment disposal provide a stronger navigation benefit than any access to this corner of the Broad.

7.15 In view of the above, it is considered that the impact on recreation will be limited and the proposal will safeguard navigation interests, subject to the imposition of suitable planning conditions and will accord with the provisions of development plan policy CS3.

Flood Risk

7.16 The application proposes recreating habitat that would reduce the area of open water in the Broad. However, in creating the area, this will be created by use of dredged material from the navigable channels in the Broad. Therefore, the applicant considers that the proposal will not materially change water levels either in the Broad or elsewhere as a result of the works.

7.17 Development Plan policy DC 29 seeks to resist proposals which would increase flood risk. In this case as the proposal will effectively use dredged material in the Broad to create new habitat, there will be no unacceptable impact on water levels. Furthermore, it should be noted that the Environment Agency is raising no objection. Therefore, it is considered the proposal will not conflict with the aims of development plan policy.

Other considerations

7.18 It is recognised that the areas within the application site are quiet and tranquil areas where little activity or disturbance takes place. As part of the reed swamp creation work, the applicant has identified the need for plant and machinery to be used to create this new area. In relation to residential amenity, there are no properties in close proximity, which could be impacted by noise and distance during construction period.

7.19 Whilst in such a quiet location there is likely to be noise and disturbance, this should be short term and concentrated into the autumn and winter months and it is considered that such short-term disturbance will not unacceptably harm residential amenity especially when judged against the benefit of creating new habitat and creating areas for beneficial sediment disposal.

8 Conclusion

8.1 The application proposes the next stage of the Hickling Broad enhancement work following the initial consent granted in 2016. Consultees and local stakeholders have generally supported the proposal. It is considered that the application proposals will deliver an acceptable design of enhancement works that will protect and enhance the nature conservation value of the area subject to the imposition of the planning conditions outlined below and will therefore meet the key tests of development plan policies.

9 Recommendation

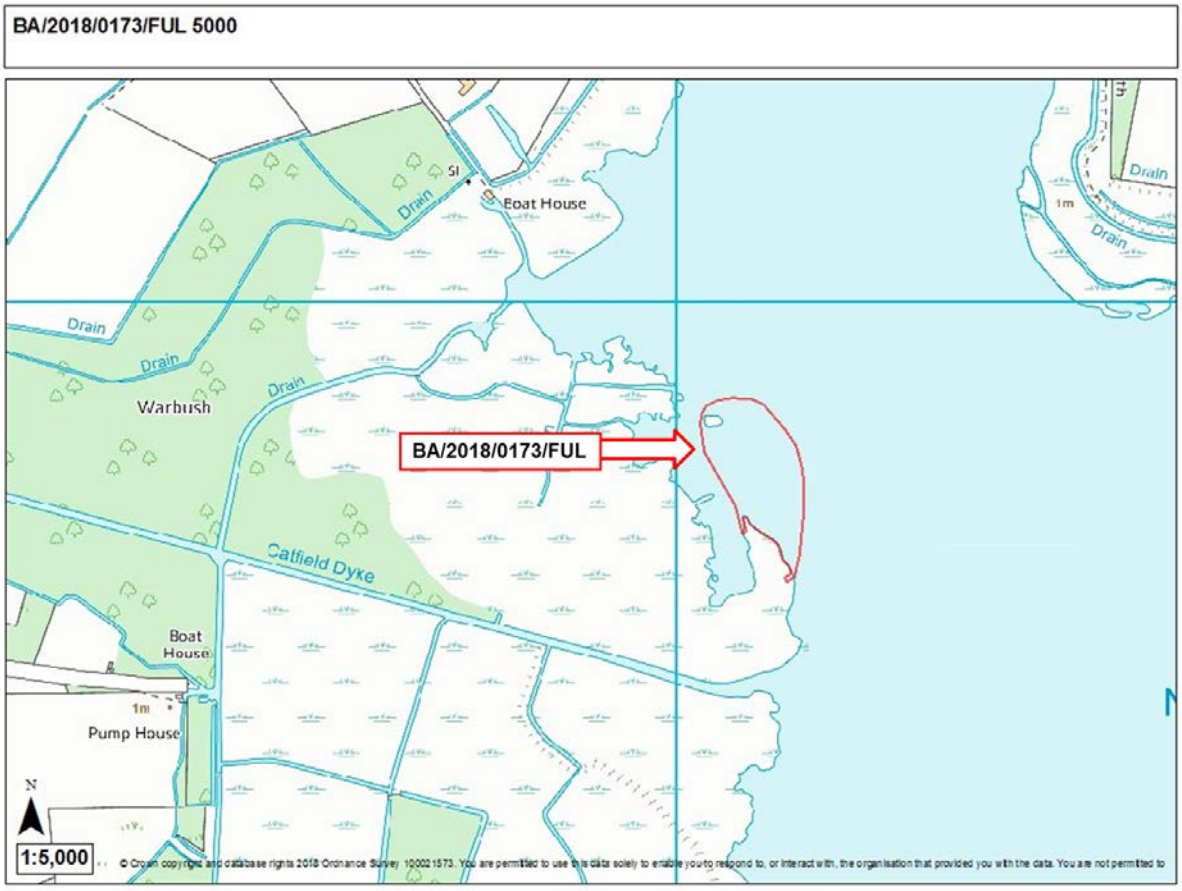
9.1 Subject to any additional representation / comment being raised, planning permission be approved subject to the following conditions:

- Standard time limit condition
- All works to accord with approved plans / submitted details
- Water Monitoring Plan
- Post-work monitoring extended to at least six weeks;
- A ‘cold weather ban’
- Twice weekly Prymnesium cell counts if numbers approach the warning level

Background Papers:

Author: Andy Scales
Date: 8 August 2018
Appendices: Appendix A – Location Plan

APPENDIX A


BA/2018/0173/FUL 5000
Drain
Sl
Boat House
Drain
Drain
Drain
Warbush
BA/2018/0173/FUL
Catfield Dyke
Boat House
1m
Pump House
N
1:5,000
Drain
1m
Drain
© Crown copyright and database rights 2018 Ordnance Survey 100021573. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to