

Application for Determination

Parish: Langley - w – Hardley

Reference: BA 2013/0035/FUL Target Date: 3 May 2013

Location: Compartment 19 Right Bank of The River Yare between Carleton Beck and Langley Dyke

Proposal: Flood defence works including strengthening / rollback of floodbanks, soke dyke excavation with a temporary site compound and associated engineering works

Applicant: Environment Agency

Reason for referral: Major application

Recommendation: Approve with conditions

1 Description of Site and Proposal

- 1.1 The application site extends along a 3.5 kilometre length of floodbank on the right bank of the River Yare from Carleton Beck to Langley Dyke. Attached as Appendix 1 is a plan showing the extent of the application site.
- 1.2 The application is accompanied by an Environmental Statement. The non technical summary, required to be attached to the Statement summarising the environmental impact of the proposal, is attached as Appendix 2.
- 1.3 The existing defences comprise mainly earth floodbanks (and concrete wall). In part of the compartment there is hard erosion protection in the form of steel and timber piling. The existing banks have a variable crest width and have been rated by BESL as less than 1% in good condition, 42% in average condition and over 57% in poor condition. Erosion protection is provided by a combination of measures with 55% rond and 45% piling. The piling is 51% timber (with an estimated residual life of 1 – 20 years), 45% steel (with an estimated residual life of 10 – 30 years) and 4% asbestos.
- 1.4 Compartment 19 defences protect some 270 hectares of mainly grassland area (much of which has been created by recent arable reversion). In the north western corner of the compartment is the Beauchamp Arms PH and Buckenham Sailing Club.
- 1.5 The application site does not include any Site of Special Scientific Interest (SSSI) or County Wildlife Site (CWS). However outside the compartment to

the north of the River Yare is part of the Yare Broads and Marshes SSSI and to the south of the compartment is a number of smaller areas of SSSI and CWS.

- 1.6 There are no Listed Buildings in the planning application site and the Environmental Statement identifies few archaeological features. However the south eastern portion of the compartment (and part of the application site) falls within the Langley Conservation Area. Within the compartment is Langley Abbey and associated building which are Grade I and II* Listed Buildings. Its grounds extend in to the application site, including a complex system of dykes, are designated as a Schedule Ancient Monument.
- 1.7 Following pre-application consultation undertaken by BESL with various stakeholders, the planning application has been formulated and the submission proposes the following works:

| Proposed Works | Length (m) |
|---------------------------|-------------------|
| <u>Floodbank</u> | |
| Rollback | 1792 |
| Strengthening | 1770 |
| <u>Piling</u> | |
| Removal | 722 |
| Installation | 106 |
| Maintenance | 9 |
| Retain | 341 |
| <u>Erosion Protection</u> | |
| Installation | 16 |
| Maintenance | 51 |
| Retain | 211 |

- 1.8 Material for new flood defences is to be mainly sourced from the excavation of new soke dykes and enlargement of some existing soke dykes. However for works in Langley Dyke importation of clay has been proposed in order to avoid the need to excavate new dykes in this part of the Conservation Area. This will result in 160 lorry movements in a four week period (8 movements in and 8 movements out on a daily weekday basis during this period). The route for lorries would be from the A146 via Chedgrave using Norwich Road, Rectory Lane and Langley Road before approaching the Langley Dyke using Staithe Road.
- 1.9 The application indicates pile removal in place and in other areas erosion protection will be retained or replaced. BESL have confirmed that in areas of roll back, pile removal would only be possible once new banks have satisfactorily established. Furthermore the Environmental Statement recognises that *'the removal of the piling will be subject to a separate planning application and is undertaken once the new bank has established satisfactorily'*.
- 1.10 The proposed works will result in modest change to habitat as outlined below:

| Habitat | Net Change (ha) |
|-----------------|------------------------|
| Rond | + 1.17 |
| Bank | + 0.15 |
| Folding | + 1.38 |
| Soke dyke | + 2.17 |
| Marsh dyke | - 0.01 |
| Grazing | - 3.26 |
| Arable | - 1.56 |
| Scrub and trees | - 0.11 |

- 1.11 Grazing marsh is identified as a BAP priority habitat. BESL have indicated that in this case most grazing marsh directly affected is relatively recently created and of limited biodiversity value. BESL do not consider this loss to be significant and therefore do not intend to create replacement habitat elsewhere to compensate for the loss as a result of the works.
- 1.12 The existing floodbank currently varies in width and does not form a public right of way (except for a very short section close to the Beauchamp Arms) with the long distance Wherrymans Way route following the road (Langley Green) rather than the river in this area.
- 1.13 A significant length of the floodbank is used for fishing by the Great Yarmouth and Norfolk County Angling Association. BESL indicate that whilst works will be programmed to seek to limit impact for anglers, there will be some closure linked to works and this will disrupt use by anglers and the Association.
- 1.14 The River Yare is well used for recreation purposes. The application site however includes very limited mooring, mainly concentrated in Langley Dyke with long term private mooring (with the Broads 24 hour mooring on the south side of Langley Dyke unaffected by the proposal) and close to Buckenham Sailing Club and adjacent to the Beauchamp Arms. This is all privately owned and the application shows much of the piling in these areas retained. As part of the application, improved defences are proposed close to the public house and sailing club and also an improvement in an existing slipway area. BESL have indicated that work in this area (and also at Langley Dyke) will be programmed outside the summer season to limit disruption, however as the Sailing Club operate up to November, there will be some disturbance and disruption.
- 1.15 The main site compound is proposed at Acle (utilising the compound that served other works including in Compartments 9 and 11). In addition offices, welfare facilities and material storage will be located on land off Langley Green. Should planning consent be granted, BESL propose to start works in Spring 2013.

2 Planning History

- 2.1 BA 2011/0405/FUL - Flood improvement works (Compartment 20). Approved March 2012.

3 Consultations

- 3.1 The views expressed below were received in response to the initial details submitted with the planning application. Since this date, BESL have provided additional information with regard to impact on bird populations, works close to Buckenham Sailing Club, public rights of way issues and removing material sourcing from in the Conservation Area.

- 3.2 Langley –w- Hardley Parish Council – Approve.

Carleton St Peter Parish Council – No response received.

Cantley Parish Council – No objection.

Strumpshaw Parish Council – No response received.

Broads Society – We wish to object to the proposals since there is no intention to create a right of way along the length of wall. A study of the map of *Wherryman's Way* footpath shows that it would be a great improvement if it were to be diverted along the riverwall. Bearing in mind that so much public money is being spent to the advantage of landowners, it is our view that they should be prepared to accept a right of way and, although the EA may not be able to insist, they could refuse to carry out the improvements if the landowners do not agree.

We note that BESL, in their reply to comments made at the consultation stage, seem to be trying to pass responsibility to others. We have no other objection but, if consent is given, suggest the following conditions:

- (a) No work to be carried out on Sundays or Public Holidays
- (b) After the work is completed, steps to be taken to prevent the growth of scrub and trees
- (c) On all piling, walings to be provided and maintained in future.

NCC Highways – No objection. The site is accessed from the main public highway, a private track and two Public Rights of Way, namely the Carleton St Peter Restricted Byway RB1 (Ferry Road) and Langley with Hardley Footpath 4.

In terms of the public highway access route, it is noted that there will be deliveries to and from the site and that this will involve the import of clay over a 4 week period, involving 8 lorry movements per day. I am satisfied that the access route is sufficient for this purpose and that in likelihood the meeting of two vehicles is likely to be rare. However, the access route does go through the residential area of Chedgrave and I would ask that if possible the timing of deliveries is duly considered so as to avoid peak hours and school times.

NCC PROW – Awaited.

Environment Agency – We have no objection to the proposed flood defence works, for the following reasons:

Hydraulic modelling has been undertaken to examine the effects of the proposed defences on water levels elsewhere. The modelling shows that the water levels in the River Yare will increase by a maximum of 8mm adjacent to Compartment 19 in the 1 in 20 year tidal flood event which is considered to be insignificant and within model error tolerances of 10mm. As the proposed works will reduce the risk of flooding to the land within the compartment, and will not increase flood risk elsewhere, we have no objection to the planning application.

Under the terms of the Water Resources Act 1991, and the Anglian Region Land Drainage and Sea Defence Byelaws, prior written Flood Defence Consent from the Environment Agency is required for any proposed works or structures, in, under, over or within nine metres of the top of the bank of the River Yare, designated a 'main river' or within nine metres of the defences.

It is indicated in the Environmental Statement there is some ground contamination in sections of bank along Langley Dyke originating from waste material from the gas works in Norwich that was historically disposed of along the Yare.

However, as this material is buried and surrounded by clay it is not considered to pose a significant risk to the environment by leaching into controlled waters.

It is further indicated that the proposed working methods at these locations will be such that disturbance of the bank will be restricted to topsoil stripping to allow extra material to be placed on the crest and rear face.

Consequently, subject to the works being undertaken with minimal disturbance at depth as indicated it is considered that the contamination identified at the site will not pose an unacceptable risk to controlled waters. However, if, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the local planning authority) should be carried out until the developer has submitted and agreed a remediation strategy with the local planning authority. This should detail how this unsuspected contamination will be dealt with. The remediation strategy should be implemented as agreed.

Broads IDB – Awaited.

Natural England – The application site is within the Broadlands SPA and Ramsar site. Natural England advises your authority that the works may have a significant effect on the interest features for which Broadland Special Protection Area (SPA) has been classified. Therefore further information is required in order to establish whether wintering birds associated with the

SPA will be significantly affected by these works.

In the submitted documentation, wintering birds associated with the SPA have been scoped out due to the fact that all 'major earthworks' will be completed between April and October. Note that wintering birds begin to arrive as early as October, particularly in cold years, and therefore disturbance to wintering birds should be given consideration. In further sections of EIA 1 it is then stated that piling and erosion protection works will be carried out in autumn/winter and vegetation removal will take place outside the bird breeding season if possible.

Taking all this into account, it is our view that the applicant needs to scope wintering bird disturbance back in to their report as insufficient information has been submitted to draw conclusions as to whether wintering birds may be affected in October, and whether subsequent piling and erosion protection works will disturb birds associated with the SPA during autumn and winter.

Should this information not be submitted following this letter, under Regulation 61 of the *Conservation of Habitats and Species Regulations 2010* (as amended), Natural England would advise that your Authority undertakes an Appropriate Assessment to assess the implications of this proposal on the site's conservation objectives.

The application site is near Cantley Marshes SSSI, Ducan's Marsh SSSI, Yare Broads and Marshes SSSI and Poplar Farm Meadows SSSI. Our concerns relate to wintering birds at Yare Broads and Marshes SSSI and Cantley Marshes SSSI. Wintering wigeon, bean goose, white fronted goose and hen harrier are qualifying species of these sites and in our view, disturbance to these species has not been adequately accounted for in the submitted documentation. However, we consider that concerns relating to breeding birds associated with these sites have been addressed. We understand from the application that 3.26ha of grazing marsh and 1.56ha of arable will be permanently lost as a result of this application. While this is not a desirable outcome in terms of local and national BAP targets, we are reassured that the overall net biodiversity gain from the project as a whole will ensure no adverse residual impact on the Broads designated sites, and, coupled with the Environment Agency's scheme to create compensatory replacement BAP habitat in the Broads, we are satisfied that the proposed operations will be beneficial to the long-term integrity of the sites and the wider catchment.

In our view all the necessary protected species surveys have been completed and the Environmental Statement contains appropriate recommendations for mitigation where necessary. Providing all mitigation for water voles, reptiles and breeding birds is carried out in accordance with the details as submitted, we have no further concerns to raise regarding protected species.

RSPB – Awaited.

NCC Historic Environment Service – The western end of the proposed works is located at Buckenham Ferry; an historical crossing point of the River Yare, whilst the eastern end includes Langley Dyke; an artificial channel adjacent to the site of the medieval Premonstratensian Langley Abbey. A former drainage pump is also located within the area of the proposed works. There is also potential for previously unrecorded heritage assets with archaeological interest to be present within the area of the proposed works. Consequently there is potential that heritage assets with archaeological interest (buried archaeological remains) may be present at the site and that their significance will be affected by the proposed development.

If planning permission is granted, we ask that this be subject to a programme archaeological work in accordance with National Planning Policy Framework para. 135. We suggest that the following three conditions are imposed:

- (a) No groundworks shall take place until an archaeological written scheme of investigation has been submitted to and approved by the local planning authority in writing. The scheme shall include an assessment of significance and research questions; and 1) The programme and methodology of site investigation and recording, 2) The programme for post investigation assessment, 3) Provision to be made for analysis of the site investigation and recording, 4) Provision to be made for publication and dissemination of the analysis and records of the site investigation, 5) Provision to be made for archive deposition of the analysis and records of the site investigation and 6) Nomination of a competent person or persons/organization to undertake the works set out within the written scheme of investigation;

and

- (b) No development shall take place other than in accordance with the written scheme of investigation approved under condition (A);

and

- (c) The post investigation assessment should be completed in accordance with the programme set out in the archaeological written scheme of investigation approved under condition (A), and provision for the analysis, publication and dissemination of the results and archive deposition should be secured within six months of the completion of the fieldwork.

SNC Environmental Protection Officer – Awaited.

English Heritage – Awaited.

Norfolk and Suffolk Boating Association – The NSBA is supportive of the application with the following provisos. It is stated in the Environmental

Statement: Non-Technical Summary that: *“The working period will be limited to Monday to Friday (7.00 – 18.00) and Saturday mornings (7.00 – 13.00), with no Sunday or Bank Holiday working.”* In terms of Saturday mornings, such work would conflict with a number of events organised by Buckenham Sailing Club when full access to the river and clubhouse is required all day on a Saturday. These are events on Saturdays 8 June, 22 June and 28 September 2013. The latter event also requires full access to the clubhouse and slipway on the previous Friday (27 September). It must be emphasised that these Saturday events are in addition to weekly events every Sunday and are part of the published sailing programme at Buckenham Sailing Club, which operates from early April to late December. Another Saturday when work in the morning would prejudice an event would be Saturday 14 September when the down river race to Breydon, the Yare Navigation Race, organised by Coldham Hall Sailing Club, will pass through compartment 19. The NSBA requests that, in order to meet development plan policy DP 28, a condition is imposed that no working is permitted on the days described above.

Contrary to what is said in the Environment Statement, the slipway at Buckenham Sailing Club is regularly used by a range of boaters, as well as by club members. The NSBA requests that, in order to satisfy development plan policy 12, a condition is imposed to ensure that the denial of access to the water via the slipway while work is undertaken on it is kept to a minimum and is publicised in a timely and adequate fashion. It goes without saying that the condition must prohibit closure of access to the water via the slipway on any day when the sailing club has an event as part of its programme of events.

The NSBA requests that an appropriate condition is imposed requiring, in accordance with core strategy policy CS3, that construction work involving the river is adequately marked and buoyed so as not to be a hazard to navigation.

4 Representations

- 4.1 The Navigation Committee considered this matter at their meeting on 28 February 2012. The Committee endorsed the officer conclusion which stated:

Provided that the appropriate conditions relating to erosion protection, piling removal, new piling, erosion protection, erosion monitoring, channel marking and timing of works, are attached to any planning permission granted for the proposed scheme, officers consider that the flood defence works proposed in the planning application will have a limited effect on the navigation.

There are also opportunities presented by BESL's proposals for the provision of access enhancements and officers will pursue these with the relevant landowners. Officers therefore support the works proposed in the planning application.

4.2 In addition, Buckenham Sailing Club have commented as follows:

Buckenham Sailing Club is in general agreement with the proposed works and aware of the benefits the Club will receive by the provision of improved defences and a better slipway. We have already negotiated alternative accommodation for boats in the dinghy park for the entire construction period.

Having studied the documents accompanying the above planning application submitted by BESL acting on behalf of the Environment Agency, there are two main issues we wish to comment on – timing and slipway access to the River Yare.

Please note that the BSC sailing season runs from early April to late December – not November as stated on page 8 of the Non-Technical Summary and page 16 of the Environmental Statement.

During the sailing season there is organised racing every Sunday. In addition, we do have weekend race events when full access is required to the river and Club house. BSC is holding its annual regatta on 8 and 9 June and a Steam Boat event over the weekend of 22 and 23 June. The Triple B down river race to Breydon and Back is being held on Saturday 28 September. As we have up to 100 dinghies from all over the country participating, it is essential we have full access to Club house and the slipway on Friday 27 in addition to Saturday 28 for our many visitors. While we appreciate there will be some disruption during the construction period, all of the above events are very important to BSC and advertised in the Green Book, which has already gone to print for this year. The date for the Triple B was fixed and publicised last autumn and would be impossible to reschedule, as would the Steam Boat weekend.

For information, Coldham Hall Sailing Club is holding their annual downriver race to Breydon, the Yare Navigation Race, on Saturday 14 September 2013. This means about fifty broads cruisers will be sailing downriver through Compartment 19 and returning later in the day. Slipway Access - The Environment Statement Section 1.2.5 (c) slipways states that 'the small slipway is occasionally used...'. This is misleading. The slipway is regularly used for boat launch and recovery by many fisherman, water skiers, motor boaters, canoeists and sailors as well as BSC members. Earliest possible notification of the proposed dates to rebuild the slipway would be appreciated by all users. Club sailors launch dinghies and safety boats every Sunday and if the rebuilding of the slipway has to span to a weekend, it is essential we are consulted before the dates for the work are confirmed.

In addition a Scout group keep their dinghies at BSC and sail on Monday evenings from mid April to early September. They are flexible, but again advance notification of when access to the river is not

possible would be appreciated.

5 Planning Policy

5.1 Broads Core Strategy [Core Strategy \(Adopted Sept 2007\).pdf](#)

Policy CS3 – Navigation
Policy CS4 – Creation of New Resources
Policy CS6 – Historic and Cultural Environment

5.2 Broads Authority Development Management Policies DPD [DMP DPD - Adoption version.pdf](#)

Policy DP1 – Natural environment
Policy DP5 – Historic Environment
Policy DP11 – Access on land
Policy DP13 – Bank protection
Policy DP28 – Amenity

5.3 The National Planning Policy Framework (NPPF) represents a material consideration in determining applications. It highlights a presumption in favour of sustainable development. In relation to this application, the provisions of the following paragraphs are relevant. <http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf>

Para 109 - highlights the planning system should protect and enhance valued landscape

Para 115 - recognises great weight should be given to conserving landscape and scenic beauty in the Broads

Para 118 - highlights local planning authorities should aim to conserve and enhance biodiversity interest, ensuring protection of SPA, SAC's and Ramsar sites

Para 120 – highlights the need to prevent unacceptable risks from pollution

Para 132 –recognises the care required associated with the impact of a proposed development on the significance of a designated heritage asset

6 Assessment

6. 1 Based on the application proposals, site specific considerations and planning policy principles (including in seeking to promote sustainable forms of flood defence), it is considered that the main issues relate to:

- Impact on water levels
- Impact on habitat and ecological interest
- Impact on recreation (especially sailing, angling and walking)

- Highway considerations
- Impact on heritage
- Amenity considerations
- Other factors

6.2 Impact on Water Levels

- 6.2.1 The works proposed in this compartment will complement other flood defence works undertaken nearby on the River Yare. The proposed scheme has been devised to link to other flood defence works to provide enhanced protection for the land, businesses (including the Beauchamp Arms PH), and heritage assts (including the Conservation Area and Langley Abbey at the southern end of the compartment). This approach seeks to protect the Broads landscape, ecological features, riverside business and heritage value.
- 6.2.2 Hydrological modelling has been undertaken and demonstrated that the works proposed in this compartment (and in combination with works already undertaken upstream and downstream) will not result in any significant or unacceptable increase in water levels. The scheme will raise defences where required and improve erosion protection which will reduce risk of flooding to people, their property and business interests, consistent with the aims of development plan policy and NPPF advice which seeks to protect and enhance the valued Broads landscape and character.

6.3 Impact on Habitat and Ecological Interest

- 6.3.1 The proposal excludes any development onto an area with nature conservation designation (SSSI or CWS). However north of the River Yare is the extensive area of the Yare Broads and Marshes SSSI (which forms a component of the Broadland SPA and Ramsar site). The submitted EIA recognises that this area is of importance for bird population including wintering birds.
- 6.3.2 In its initial response to the application, Natural England highlighted concern that the proposal may have a significant effect on the interest features for which Broadland SPA and further information is required in order to establish whether wintering birds associated with the SPA will be significantly affected by these works.
- 6.3.3 Following this initial comment, BESL have submitted more detailed information in the form of a 'Record of Assessment of Likely Significant effect on the Broads SAC, Broadland SPA and Broadland Ramsar site'. Natural England have now informally indicated that this additional information is sufficient to address the issues relating to wintering bird disturbance and they have no further concerns to raise associated with impact on the designated site (providing all mitigation is carried out in accordance with the submitted documentation). Whilst their formal written view is awaited, it is considered that on receipt of this view that the proposals will not have an adverse impact on wintering birds or the SPA /

Ramsar designated area.

- 6.3.4 The proposal to provide a more sustainable form of flood defence will result in a change in habitat in the compartment, notably the loss of a modest area of grazing marsh (some 3.26 ha) and a smaller area of arable land, to be mainly replaced by a combination of sokedyke, folding and floodbank. This will create new habitat of some bio-diversity interest (but not of the same high ecological value as long established grazing marsh).
- 6.3.5 The loss of grazing marsh is normally of concern given its bio-diversity value. However in this case the grazing marsh has been created as a result of arable reversion and therefore is of limited bio-diversity value. Therefore as the proposal will offer the benefit of enhanced defences for extensive grassland and the Langley Conservation Area, it is considered that the loss of this grazing marsh of limited bio-diversity value is of such limited significance as to not require replacement grazing marsh (as part of the regional target for mitigating provisions). This view is shared by Natural England.
- 6.3.6 In view of the above, it is considered that the scheme will accord with the conservation management and sustainable development aims of policies DP1 of the Development Management Policies DPD and Core Strategy policy CS4.

6.4 Impact on Recreation

- 6.4.1 The River Yare is important for sailing and within Compartment 19 there is Buckenham Sailing Club (close to the Beauchamp Arms PH) which is a well established local sailing club with slipway access to the river. The proposals in the compartment seek to retain piling for long term private mooring in Langley Dyke and in front of the Beauchamp Arms, which will continue to offer short stay mooring. Elsewhere in the compartment where the condition of piling is deteriorating, no longer required for flood defence purposes and where the owner has not offered to take on maintenance responsibility, piling is proposed to be removed (subject to a future planning permission) following the roll back floodbanks - to offer a more sustainable form of erosion protection.
- 6.4.2 Whilst in total some 722 metres of existing piling is to be removed (following rollback), new piling is to be installed in two locations, firstly fronting the River Yare (close to the corner into Langley Dyke) and secondly at Buckenham Sailing Club (associated with the proposal to improve slipway provision adjacent to the Club). These elements are welcomed, especially the enhancement of the slipway provision.
- 6.4.3 The initial submission broadly recognised the need to restrict the timing of works to limit impact on sailing interests in the River Yare for the Sailing Club. Following concerns from Buckenham Sailing Club and the NSBA, BESL have recognised the need for the timing of working to be very tightly controlled to avoid scheduled events. This is welcomed. To ensure no

conflict between sailing events and flood defence works, it is considered reasonable to impose a planning condition to specify when working will be restricted, (beyond the normal hours restriction suggested in planning conditions). It is considered that this will strike the right balance between flood defence works and recreational interests.

- 6.4.4 In addition, the Sailing Club have highlighted the extensive use of the slipway and the need for access to be maintained for as long as practical and that prior notice of its short term closure is needed. In response BESL have confirmed that slip access restriction shall be limited to the 'quiet' period of the year (January to April 2014). It is understood detailed discussion will take place between BESL and the Club on this matter
- 6.4.5 The Navigation Committee considered that conditions detailing timing of pile removal, pile removal technique and the post piling removal erosion monitoring / remediation requirements are required to limit impact on navigation interests. This view is shared by Planning Officers and therefore in a similar manner to previous flood defence planning applications in the Broads, should approval be forthcoming it is considered that the following conditions are justified and necessary to be imposed:
- Detail of new piling / waling maintenance / pile removal technique to be agreed
 - Navigation / channel markers to be installed, including linked to roll back, etc
 - Erosion protection details to be agreed prior to works being undertaken
 - Phasing/timing of works to be agreed
 - Erosion monitoring to accord with the agreed specification
- 6.4.6 The current floodbank is used for angling by a local angling club. The temporary closure of the floodbank whilst flood defence works are undertaken will limit access for some anglers to use these banks. However this will only be for a limited period and once re-opened will allow angling to continue in the compartment.
- 6.4.7 Parts of the floodbank of the River Yare form sections of the Wherryman's Way public footpath. However in Compartment 19, the floodbank is privately owned and the Wherryman's Way route does not follow the river (but passes along the Langley Green). The Broads Society has raised concerns regarding the improved floodbanks not being required to be used as part of the Wherryman's Way PROW. It is considered that the improved floodbank is capable of use by walkers and that the flood defence works will offer an opportunity to use them to extend the rights of way network close to the river. BESL have indicated that they would be happy to assist the Broads Authority in negotiation and practical completion of any improvements but these cannot be provided without co-operation from third party landowners. The design of floodbank improvements and their crest width should offer wider and more consistent level surface. Should future negotiations with landowners achieve greater public access on to floodbanks, these will offer a suitable surface for use. Therefore it is not reasonable to require BESL to

secure new footpath routes as part of this application, but it is welcomed that this BESL work may facilitate improvements should these be negotiated with the relevant landowners to enhance access in the Broads.

6.4.8 The comments of the Broads Society in respect of the use of public monies to benefit landowners is noted, however it should be recognised that improved flood protection in the Compartment will be of benefit to the whole community and visitors, as well as specific landowners.

6.4.9 In view of the above, it is considered that the proposal will not unacceptably impact on navigation or other recreational interests or access to water and linked to the suggested conditions will provide the necessary control to meet the aims of policy DP13 of the Development Management Policies DPD and policy CS3 of the Core Strategy DPD.

6.5 Highway Considerations

6.5.1 Most flood defence applications do not require the importation of clay or other material to provide reinforced and strengthened floodbanks (with most material sourcing provided from adjacent new or widened soke dykes). However in this case the design seeks to limit new soke dykes in the Conservation Area. Therefore to provide material for strengthening on Langley Dyke, clay material is proposed to be imported from a site at Beccles. This will involve 160 lorry movements in a four week period (8 movements in and 8 movements out on a weekday basis during this period). The application shows access from the A146 using Norwich Road, Rectory Lane and Langley Road in Chedgrave prior to approaching the works corridor at Langley Dyke. Whilst the importation of material is considered reasonable in this case, the number of lorry movements for a four week period on part of the route, Rectory Lane in Chedgrave, is a concern. The Highway Authority however, whilst having some concern, consider that Rectory Lane is acceptable, but recommend lorry movements avoid peak periods and times at the beginning and ends of the school day (to avoid unacceptable harm to highway safety and limit impact on local residents)

6.5.2 The application shows a number of access routes to be used by construction traffic from Staithe Road / Langley Green to the works corridor. BESL have confirmed that the condition of all routes to be used (from the A146) will be recorded before works commence and any damage which takes place during use by construction traffic will be made good at the end of the construction period. Following the approach adopted in other compartment, it is considered justified to impose a planning condition to address any damage.

6.5.3 Based on the above and subject to the suggested conditions, the proposal will meet the highway safety aims of policy DP11 of the Development Management Policies DPD.

6.6 Impact on Heritage Matters

- 6.6.1 The compartment itself contains heritage interest with Langley Abbey set in its south western corner and the southern portion of the site forming part of the Langley Conservation Area. As a result of this, the works associated with this application in this area are limited to portions close to the river and Langley Dyke (including some tree removal).
- 6.6.2 To limit change, the initial design showed material sourcing is very limited in the Conservation Area (with only a short section of sokedyke widening between the existing dyke and bank fronting the River Yare). The scheme has been devised to limit impact on the Conservation Area (and its setting); away from Langley Abbey and therefore seeking to protect this heritage asset in line with development plan policy CS6 and NPPF policy. In this case it is considered that works will generally have a minor visual impact on the setting of the Abbey but a more significant impact on its context and that of the wider Conservation Area and the complex dyke system to the west.
- 6.4.3 Following concerns expressed on the impact on the Conservation Area, BESL have reviewed proposals and have indicated that the area of soke dyke initially shown to be created in the Conservation Area can be omitted from the scheme (with additional material sourced from modest changes to other soke dykes outside the Conservation Area). Amended plans are awaited showing this change.
- 6.5.4 Given the Schedule Ancient Monument designation, English Heritage has been consulted on the scheme. Subject to no adverse views from English Heritage (based on the amended plans), it is considered that this revision will safeguard the heritage interest of the site.
- 6.5.5 Outside the Conservation Area in the works corridor, there are only two points of any heritage value and archaeological interest as identified in the Environmental Statement. NCC Historic Environment Service consider archaeological / heritage interest can be safeguarded with the imposition of a planning condition to protect and record archaeological interest.
- 6.5.6 Based on amended plans and no adverse comment from English Heritage, it is considered that the aims of policy DP5 of the Development Management Policies DPD and Core Strategy policy CS6 would be met.

6.6 Residential amenity considerations

- 6.6.1 The application site has only a limited number of properties close by. However given the quiet nature of the area, it is still appropriate to seek to impose a restriction on hours of working to limit impact on the amenities of local residents and visitors. This also extends to the timing of clay importation lorry movements which should also be restricted to specific times weekday only (to limit impact on amenity of properties in Chedgrave).
- 6.6.2 To limit disturbance to residential amenity from works within the corridor,

hours of working between 7-00 and 18-00 Monday to Friday and 7-00 to 13-00 on Saturdays are considered acceptable. In addition, no working will be permitted on specific dates linked to the sailing calendar. It is noted that the Broads Society recommend no working on Sundays and Bank Holidays and a planning condition is appropriate to impose. This approach will be consistent with the aims of policy DP28 of the Development Management Policies DPD and policy CS3 of the Core Strategy.

6.7 Other Considerations

- 6.7.1 The proposed works will have an impact on the landscape as a result of the construction activities and the appearance of bare floodbanks. However it is considered that this will only be short term and experience has demonstrated that banks re-vegetate during the first growing season after BESL complete works and there will be no long term unacceptable impact on the landscape appearance of the area as a result of completed works.
- 6.7.2 The Environmental Statement identifies that some ground contamination may exist in sections of bank along Langley Dyke (originating from waste material from the gas works in Norwich that was historically disposed of along the Yare). This material is buried and surrounded by clay and should not pose a significant risk to the environment subject to suitable working methods to limit disturbance of the bank. To address this risk, it is considered appropriate to impose a planning condition to specify working methods and requiring a mitigation strategy be agreed should contamination not previously identified be found. This precautionary approach is consistent with the thrust of Central Government advice including within the NPPF.

7 Conclusion

- 7.1 Based on revision to the initial scheme, the application will provide enhanced flood defence protecting land and businesses; nature conservation management interest; preserving recreational opportunities and safeguarding heritage interests. It is considered that subject to the receipt of amended plans, the conditions outlined below and outstanding comment from Natural England and English Heritage, the scheme is acceptable and meets the key tests of 'saved' policies in the Broads Core Strategy and the Development Management Policies DPD.

8 Recommendation

- 8.1 Subject to no substantive representation/comment being raised from any outstanding consultees, this planning application be approved subject to the following conditions:
1. Standard time limit condition.
 2. Amended plan / details.
 3. Landscape/planting.
 4. PD rights removed (pile removal).

5. Erosion monitoring / remediation.
6. Archaeological investigation.
7. Temporary footpath closure/signage.
8. Site access / delivery route / timing of importation.
9. Navigation / channel hazard markers.
10. Hours of working.
11. Calendar of working.
12. Contamination strategy.
13. Phasing of works to flood banks.
14. Detail of works to piling.
15. Erosion protection details to be agreed with Broads Authority.

8.2 The following informative be specified on the decision notice of the planning application:

- The permission shall be granted in the context of the Memorandum of Understanding between the Broads Authority and the Environment Agency on 25 April 2003.
- Works may need separate consents under the Water Resources Act and Land Drainage by-Laws for flood defence consent.

9 Reasons for Approval

- 9.1 The proposal is accompanied by an Environmental Statement which outlines the proposal and the impacts on the area.
- 9.2 The application is accompanied by evidence that demonstrates that the proposal will not have a significant impact on water levels and will protect people, property, land / business interests.
- 9.3 The ecological interest of the area will be safeguarded by the proposal and it will not have an unacceptable impact on the Broadland SPA / Ramsar site. Furthermore it is considered that the loss of grazing marsh of limited bio-diversity interest is acceptable and outweighed by the benefit of greater protection to a wide area of grazing marsh, meeting the tests of DP1 of the Development Management Policies DPD and Core Strategy Policy CS4.
- 9.4 Whilst there will be some limited short term disruption to sailing and angling interests, this short term impact is outweighed by the longer term benefits of flood defence improvements. The recreational interest of the area will be safeguarded by proposals; protecting navigation / sailing interests as a result of the design (including slipway improvements). The design would also allow improvement to public footpath access (subject to landowner agreement) after construction. Subject to planning conditions, the land and water based recreational interest will be protected as require by policies DP11 and DP13 of the Development Management Policies DPD or Core Strategy policy CS3.
- 9.5 Heritage interests will be safeguarded by the revised design that proposes limited impact on the Conservation Area and Langley Abbey and its

grounds. Subject to the suggested conditions, the scheme and monitoring of works addresses the aims of development plan policy including Core Strategy CS6 and Policy DP5 of the Development Management Policies DPD.

- 9.6 Visual and residential amenity, highway impact and potential for contamination will be safeguarded as a result of sympathetic design, re-vegetation, working hours, control of lorry movements as required by planning condition.
- 9.7 Therefore the application is considered to meet the requirements of the Broads Core Strategy DPD and Development Management Policies DPD policies, and would not materially conflict with other policies in the Development Plan Documents. The proposal is considered to represent an appropriate design of development associated with flood defence work in this location.

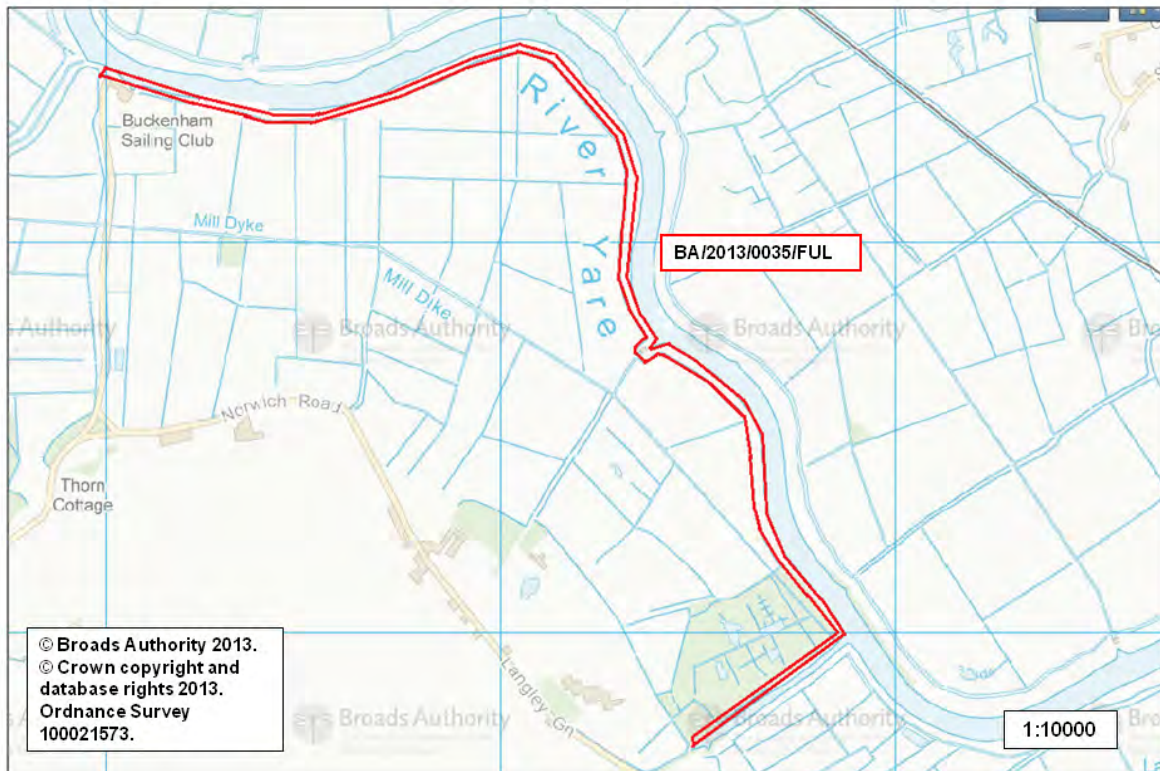
Background Papers: BA 2013/0035/FUL

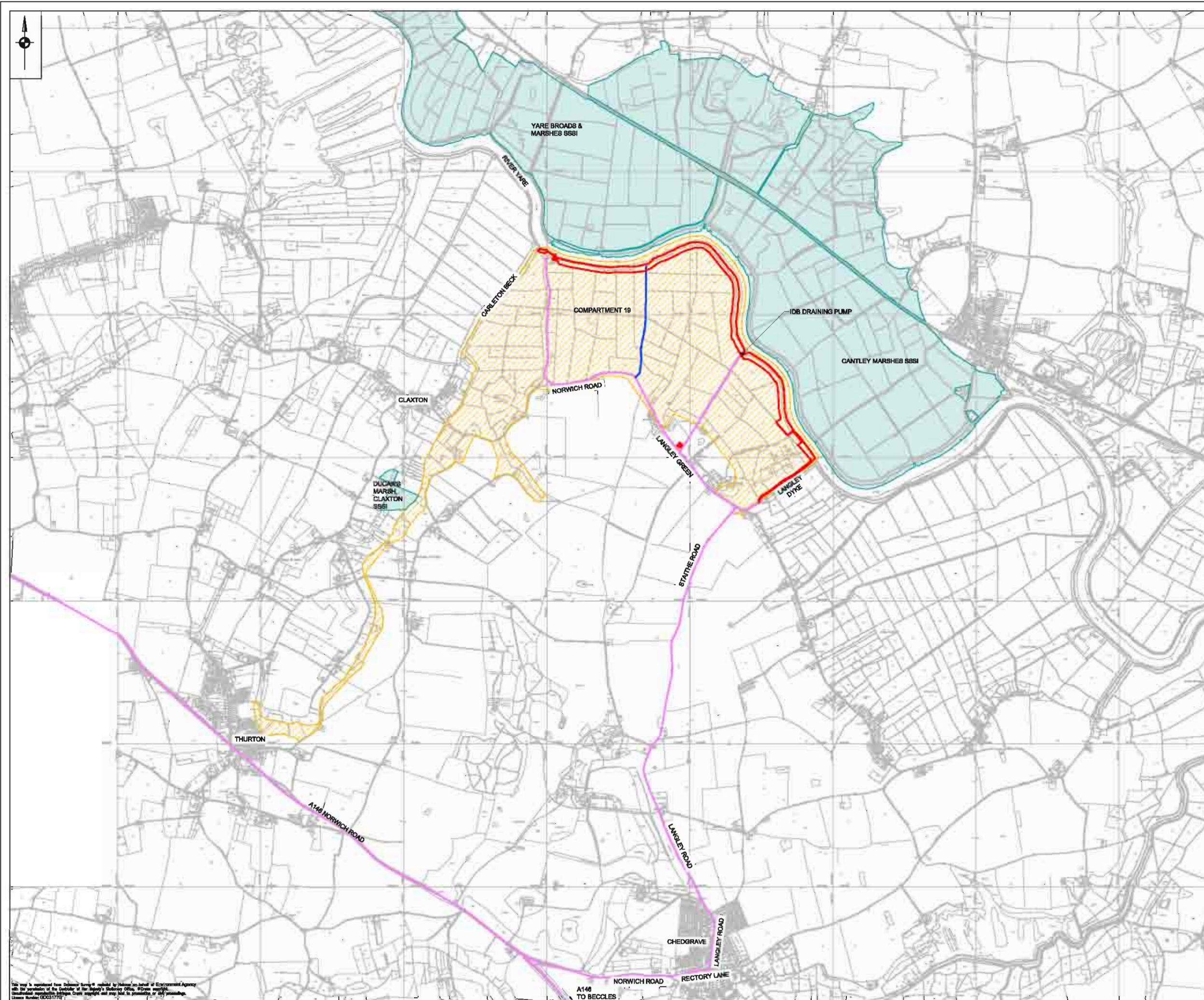
Author: Andy Scales
Date of report: 12 March 2013

Appendices: APPRNDIX 1 - Location Plan
APPENDIX 2 - Environmental Statement – Non technical summary

APPENDIX 1

BA/2013/0035/FUL - Compartment 19, Right Bank Of The River Yare Between, Carleton Beck And Langley Dyke
Flood defence works including strengthening/rollback of floodbanks, soke dyke excavation with a temporary site compound and associated engineering works.





- Key:
- COMPARTMENT EXTENT
 - SITE COMPOUND
 - SSSIs
 - PLANNING APPLICATION BOUNDARY
 - MAIN ACCESS ROUTES
 - PRIVATE ACCESS ROUTE ONLY

- Drawing List:
- 001 - COMPARTMENT BOUNDARY
 - 002 - KEY PLAN
 - 003 - DETAILED PLAN & SECTIONS 1 OF 2
 - 004 - DETAILED PLAN & SECTIONS 2 OF 2
 - 005 - DETAILED PLAN BUCKENHAM SAILING CLUB & BEAUCHAMP ARMS

FOR
PLANNING
PURPOSES
ONLY

| Rev | By | Chd | Appr | Date | Description |
|-----|----|-----|------|------|-------------|
|-----|----|-----|------|------|-------------|

Client
Broadland Environmental Services Limited
Broadland Environmental Services Limited
1st Floor Grosvenor House, 112-114 Prince of Wales Road, Norwich, NR1 1NS
Tel 01603 228181

Halcrow Group Limited
Third Floor, Grosvenor House, 112-114 Prince of Wales Road, Norwich, Norfolk, NR1 1NS
Tel: 44 (0)1603 228181
halcrow@broadland.co.uk
www.halcrow.com



Project

BROADLAND FLOOD ALLEVIATION PROJECT

Drawing

COMPARTMENT 19
RIVER YARE
LOCATION PLAN

Drawn by: L MERSEY Date: 23/01/12

Checked by: A RICHARDSON Date: 23/01/12

Approved by: K MARSH Date: 23/01/12

Drawing No. Revision

WNCCLX/400/001

0

Drawing Scale: 1:12500 AT A1



Broadland Flood Alleviation Project Compartment 19 (River Yare)

Flood alleviation improvements for Claxton Marshes

Environmental Statement Non-Technical Summary

January 2013



Broadland Environmental Services Ltd
Compartment 19

Flood alleviation improvements for
Claxton Marshes between Langley Dyke
and Carleton Beck

River Yare

Environmental Statement
Non-Technical Summary

January 2013

Halcrow Group Ltd

Halcrow Group Ltd

3rd Floor Grosvenor House, 112-114 Prince of Wales Road,
Norwich. NR1 1NS
Tel +44 (0)1603 226161 Fax +44 (0)1603 631505
www.halcrow.com

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Contents Amendment Record

Report Number: WNCCLX/ NTS/001/

This report has been issued and amended as follows:

| Issue | Revision | Description | Date | Signed |
|-------|----------|-------------|----------|-----------|
| 1 | 0 | Final | 26/01/13 | J M Halls |

Introduction

Broadland Environmental Services Limited (BESL) is working on behalf of the Environment Agency to carry out a programme of improvement and maintenance works to the flood defences in Broadland. This work forms part of the Broadland Flood Alleviation Project (BFAP), a long-term 20-year programme of sustainable flood defence improvements in the area.

As part of this project BESL has prepared a scheme for flood defence improvements to a 3.5km stretch of floodbank along the right bank of the River Yare between Langley Dyke and Carleton Beck. This area represents “Compartment 19” of the BFAP. The flood defences protect approximately 270ha of low-lying land, the majority of which is agricultural marshes. There are a small number of residential properties that fall within the compartment, notably several that fall within the Langley Conservation Area. The Beauchamp Arms public house is located at the upstream end of the compartment with Buckenham Sailing Club nearby. Although there is no public footpath along the majority of the compartment it is an important fishing venue as most of it is leased by Great Yarmouth and Norfolk County Angling Association.

The proposed improvement works need planning permission from the Broads Authority. To comply with planning legislation BESL has prepared an Environmental Statement in order to inform the public and decision-makers of the likely environmental effects of this scheme. This shorter report has been prepared as part of the Environmental Statement as a non-technical summary.

Need for the scheme

The standard of protection provided by floodbanks along the Broadland rivers is continually reducing because of settlement, deterioration over time, insufficient maintenance in the past and sea level rise. This makes the banks more vulnerable to erosion and at risk of breaching at times of high level flood events. Such breaches can cause widespread uncontrolled flooding which can have serious implications for the agricultural and wildlife value of the marshes.

The site is located wholly within the Broads Authority Executive Area, part of a nationally important landscape that is valuable for wildlife, agriculture, cultural heritage, the local economy and people’s recreational enjoyment of the area.

Public consultation

As part of the planning and design process for these proposed works, BESL carried out a pre-application consultation exercise with key stakeholders, local interest groups and landowners. A consultation document describing the proposals and a questionnaire for gathering responses were distributed in May 2012.

During the consultation a number of issues were raised in relation to the proposed scheme. Most of the responses were supportive of the proposals; concerns related mainly to the potential for disruption to access for angling and sailing. Full details of the issues raised by the consultation exercise are reported in the Environmental Statement that has been submitted with the planning application. All consultees have been sent a copy of the BESL response together with notification that the planning application has been submitted.

The proposed scheme

The proposals comprise:

- 1,770m of floodbank strengthening;
- 1,792m of floodbank rollback;
- 722m of piling removal;
- 341m of retain piling;
- 106m of piling installation
- 58m repairs and raising floodwall in front of the Beauchamp Arms

Most of the piling installation will be around Buckenham Sailing Club which, together with an elevated slipway, will provide an appropriate level of defence to the buildings.

There will be a temporary site compound to provide site offices, welfare facilities and materials storage. This will be located just off the Langley Green road in a field beside a track that goes down to the river and IDB pump

Floodbank **strengthening** is proposed where there is already a reasonable width of rond (reeded margin) between the river and the floodbank. It involves strengthening the floodbanks along their existing alignment by placing material on the rear or front slope. It also usually involves raising the level of the crest to allow for settlement and future sea level rise. Strengthening creates a wider crest and broader profile, which reduces the likelihood of the banks breaching when high level flood events overtop them.

Rollback involves moving the crest of the floodbank away from the river's edge but without constructing a distinct new bank.

Piling removal will be undertaken in areas where the bank has been rolled back and the landowners do not want to take on responsibility for its maintenance. The removal of the piling will be subject to a separate planning application and is undertaken once the new bank has established satisfactorily. In areas where piling is required as ongoing erosion protection it will be maintained and/or replaced by BESL as required.

Material for the improvement works will be sourced by excavating new dykes in the marshes. The exception is for the works along Langley Dyke where it is not possible to source material without affecting some of the historical features associated with Langley Abbey. For this location it will be necessary to import approximately 2,000m³ (160 lorry loads) of clay from a site near Beccles.

Programme

The improvement works are planned to commence in spring 2013 and be completed before the end of the year. Piling and erosion protection, together with repairs to the floodwall that protects the Beauchamp Arms, will be undertaken in the autumn and winter in order to minimise disruption and disturbance.

Land use and local community

The proposed works will maintain protection of the agricultural land that lies within the compartment. There will be a permanent loss of approximately 3ha of grazing marsh and 1.5ha of arable land due to the need to excavate material and construct rollback banks. The loss of productive agricultural land is regrettable but is small compared to the extent of land that will be afforded greater protection from the impacts of flooding were there to be a major breach. Furthermore, the works are only cost effective if the material is sourced locally from the adjoining marshes.

There will be some disruption to farming close to the works corridor during construction. BESL will provide landowners with appropriate compensation for both temporary and permanent effects. Any land, including access tracks and roads damaged by the construction process, will be returned to their original state upon completion of the works.

During construction there will be some noise disturbance and visual impact to nearby residents and visitors (see below for impacts on informal recreation). The contractor will operate a Project Management Plan that contains provisions for minimising disturbance to neighbours and the public through ensuring routes are adequately signed, speed limits are adhered to and public information boards are provided at access routes. The working period will be limited to Monday to Friday (07.00-18.00) and Saturday mornings (07.00-13.00) with no Sunday or Bank Holiday working. There will be no weekend working along Langley Dyke or at the pub and Sailing Club.

The volume of daily construction traffic on the local road network will be relatively small and mainly comprise vans and 4x4 vehicles. However, there will be a need for lorries and low loaders to deliver machinery and material, particularly at the beginning of the project. The clay that is required for Langley Dyke will be delivered over a 4-week period, which will mean approximately 8 lorries per day. They will come through Chedgrave and along the Langley Road.

Following completion of the scheme there will be long-term benefits for land use and the local community through the reduced risk of widespread, uncontrolled flooding that would occur if the banks were not maintained.

Ecology and nature conservation

The Broadland river corridors and marshes support a large variety of species, some of which are nationally rare. Consequently surveys have been undertaken to identify any important habitats and species that need to be considered as part of both the scheme design and the construction methods. Signs of **water voles** and **otters** were noted while the range of habitats provides suitable nesting conditions for many species of **birds** including lapwing on the marshes and sedge warblers in the reedy margins either side of the bank. A small number of **grass snakes** were recorded whilst the only notable **plants** found within the works corridor were marsh sow-thistle and marsh mallow. The dykes within the proposed working corridor generally do not support interesting plant communities though elsewhere in the wider compartment, where water quality is better, there are valued plant communities and a number of rare **invertebrate** species.

The main potential impacts of the construction works on habitats and species are:

- risk of killing or injuring protected species including water vole and grass snake;
- disturbance to breeding birds or destruction of active nests; and
- loss of vegetation, including notable species, on the floodbank, folding, and within dykes

These impacts will be avoided or reduced through scheme design and adoption of mitigation measures that have been successfully used on previous schemes e.g. discouraging nesting birds within the working corridor by cutting vegetation before the bird breeding season begins; vegetation cutting and sustained water-drawn down to displace water voles.

The net changes in habitats that will result from implementation of the scheme are listed in the table below.

Net Habitat Change

| Habitat | Net change (ha) |
|----------------|----------------------------|
| Rond | +1.17 |
| Bank | +0.15 |
| Folding | +1.38 |

| | |
|------------------------|--------------|
| Soke dyke | +2.17 |
| Marsh Dyke | -0.01 |
| Grazing | -3.26 |
| Arable | -1.56 |
| Scrub and trees | -0.11 |

Grazing marsh is a national and local Biodiversity Action Plan priority habitat. However, most of the grazing marsh that will be directly affected by the proposals is of relatively recent origin as it was formerly arable fields. This is reflected in the results of ecological surveys that were undertaken, which show that the dykes closest to the river corridor have low biodiversity value. The loss of grazing marsh habitat in this case is not therefore considered significant. The excavation of material will create larger dykes that are good for wildlife and the overall improvements will provide ongoing protection to some of the valuable freshwater habitats in the wider compartment.

The potential for the improvement works to alter flooding patterns elsewhere in the valley during high level events¹, including upstream designated sites that do not have flood defences, has been investigated using the Broadland hydraulic model. This tool guides the design process to ensure that bank levels are not raised to a height where they would alter historical flooding patterns or adversely affect undefended designated sites and communities. Modelling for previous schemes has investigated whether the impact of flooding on undefended areas could be reduced by creating storage reservoirs or 'washlands' in one or more compartments. The results showed that some reduction may be possible but that would involve whole compartments being flooded on a regular basis as sections of bank would have to be removed completely.

Following completion of the scheme BESL will evaluate the success of the ecological mitigation measures by undertaking monitoring over a 3-year period.

Landscape and visual effects

There will be no significant long-term changes in local views or on the overall landscape character. The proposals will result in an increase in the extent of water as a result of the much wider soke dykes. However, open dykes are a feature of this landscape and the colonisation by reed and aquatic plants will soon soften the

¹ Events that have a probability of occurring once every seven years and once every 20 years.

appearance of them. A wide ledge or 'berm' will be constructed to encourage reed growth, thereby limiting the extent of open water. Piling removal and re-grading of the old bank will create a natural edge to the river. The ongoing protection of a nationally valued and sensitive landscape from the effects of flooding, were the defences not to be maintained, is considered to be a major beneficial impact.

The most significant visual intrusion will be during the construction stage when there will be large areas of bare ground and working machinery next to the river. This will be most apparent close to the Beauchamp Arms, Buckenham Sailing Club and along Langley Dyke i.e. locations where there is high public access. There may be some distant views of working machinery from properties along the edge of the marshes but these are not considered significant.

In order to do the work there is a need to clear some willow scrub and mature poplars that have established close to the floodbank along Langley Dyke and the frontage of the River Yare adjacent to Abbey Carr (part of the Langley Conservation Area). The improvement works have been designed to minimise the amount of tree removal and encroachment and this is one reason why clay is being imported rather than sourced locally for the strengthening along Langley Dyke. A detailed survey of the condition and value of the trees has been undertaken by a specialist. All of the large mature trees that are proposed to be removed have been assessed as currently having a very short natural residual life irrespective of whether or not the works are taking place.

On immediate completion of the works there will still be some visual impact due to the bare soil on the floodbanks and the widened soke dykes. However, grass will generally establish within one growing season and reeds will also have grown in the soke dykes, helping to blend the affected area back into the landscape, which will ultimately benefit from improved long-term protection.

Water environment

A key requirement of the Project is that the pattern of over-topping of floodbanks in the whole system should remain the same as that which existed in 1995 (i.e. the relative height of banks between different compartments should remain the same). A hydraulic model has been developed to examine the effects on flooding patterns and river flows as a result of undertaking improvements so that design levels can be modified as required. It has been used to examine the effects of this scheme together with others already completed in other parts of the Yare valley. The model has looked at scenarios involving major flood events i.e. those with a 1 in 20 year probability of occurring. The results show that there will be no significant changes to water levels in the River Yare (changes less than 10mm).

Standard pollution prevention methods will be used to minimise the risk of an incident occurring that could affect the water environment. If an incident does occur (e.g. fuel

spillage) then emergency procedures are in place to deal with and report it. Soke dykes and marsh dykes will have clay bunds constructed at appropriate locations to keep the working area completely separate from the majority of the marsh network and avoid impacts on water quality and/or levels.

There is some ground contamination in sections of bank along Langley Dyke. This originates from waste material from gas works in Norwich that was historically disposed of along the Yare. Tests have been undertaken to locate the material and examine what exactly is present. This includes cyanide spent oxide which, if it were to leach into watercourse could kill fish and invertebrates. However, the material is buried and surrounded by clay. The working methods at these locations will restrict disturbance of the bank to topsoil stripping to allow extra material to be placed on the crest and rear face.

Archaeology and cultural heritage

The only known features identified from Norfolk County Council's Historic Environment Record as being within the working corridor are the site of a former mill and the old ferry crossing to Buckenham.

In addition to the known features there is the potential for previously unrecorded remains to be uncovered during material sourcing works. An archaeological watching brief, to be agreed with Norfolk Landscape Archaeology, will be implemented to record any features uncovered during the proposed works and minimise the effect of disturbance.

An archaeologist will be employed to undertake an inspection of all areas of material sourcing once topsoil stripping has been completed so that any uncovered remains can be assessed. No excavation works will take place until the archaeologist has signed-off a particular area. Plant operators will be briefed about the need to stop work and report any remains or artefacts that are uncovered in the vicinity of the mills and elsewhere.

Recreation and navigation

Broadland provides valuable opportunities for recreation and it is estimated that the area attracts more than 7 million visitors each year (Broads Plan 2011). Many of the recreational opportunities are water-based such as sailing and boating but land-based activities, including angling, walking and cycling, are also popular.

The River Yare is regularly used by both powered and non-powered craft for pleasure boating and sailing, especially during the summer months. Buckenham Sailing Club is located at the upstream end of the compartment and there are short-term visitor moorings at the Beauchamp Arms. The Sailing Club will benefit from the provision of improved defences including a better slipway. The works here will be

programmed outside of the main summer season but given that the Club operate through to November there will be some disruption and disturbance. Similarly, work at the Beauchamp Arms and along Langley Dyke will be programmed to minimise disruption to mooring users. At Langley there will be a need to temporarily move boats onto the other side of the dyke whilst works are underway. This approach has been successfully used elsewhere.

The only right of way along the floodbank is a short section immediately upstream of the Beauchamp Arms. This footpath forms part of the Wherryman's Way. Whilst working on that section of bank, the footpath will be fenced off to maintain access for as long as possible. However, it may be necessary to close the footpath over this section to complete the works and undertake a small amount of piling on the river's edge. If the footpath does have to be closed, it will be timed to avoid the main summer holiday period, July to August inclusive. The only viable alternative route is along Carleton Beck to the main road and then along Ferry Road to the Beauchamp Arms. However, this would involve people in walking an additional 3km including 1km on the road. Footpath closure and diversion signs will be provided on the ground and publicised via the BFAP, BA and Norfolk County Council websites.

Angling occurs along most stretches of the river bank in the compartment with the exception of 600m at the downstream end to the entrance with Langley Dyke. The site is leased by Great Yarmouth and Norfolk County Angling Association and is one of the most important locations for match and pleasure angling in the Broads. Where possible the works will be programmed so that works adjacent to key areas (i.e. closest to access points) will be undertaken outside of the fishing season and these reopened at the earliest opportunity. This has already been discussed with representatives from the Association. However, this will not be possible for some bank strengthening sections and some areas may need to be closed to anglers. This is likely to reduce the number of anglers and number of matches on the site in 2013, which will also affect the income of the Association.

Conclusions

Flood defence improvement works comprising a combination of bank strengthening, rollback and installation of erosion protection have been identified as the most appropriate solutions to provide ongoing protection to the low-lying marshes between Langley Dyke and the Carleton Beck outfall.

Without these works the banks will continue to deteriorate making regular, widespread flooding of the marshes more likely and also threatening residential properties, businesses, the Langley Conservation Area, Buckenham Sailing Club and one of the most important lengths of bank for fishing along the Broadland rivers.

The impacts on people and the environment will be confined to the construction period and can be successfully mitigated at the time so that there will be no

significant long-term effects. The implementation of recommended mitigation and monitoring measures, directed by an Environmental Action Plan, will minimise any adverse effects and ensure that environmental benefits are delivered.

Further information

The Environmental Statement and associated planning drawings will be available to view, by prior arrangement, at the Broads Authority Offices, Yare House, 62-64 Thorpe Road, Norwich. Tel. 01603 610734.

Alternatively, for those with access to the Internet, visit the Broads Authority's planning web pages <http://www.broads-authority.gov.uk/planning/public-access.html> from where a link can be selected to the "Application Search" page. Select the "Advanced" tab and enter PP-02327479 under Planning Portal reference. All of the documentation including consultation responses will be available under the "Documents" tab.