

Stage 1 Habitats Regulations Assessment

Environment Agency record of screening for likely significant effects

This is a record of the screening for likely significant effects required by Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended), undertaken by the Environment Agency in respect of the permission, plan or project (PPP) detailed in Section 1, for the following relevant site(s):

- The Broads SAC (UK0013577).
- Broadland SPA (UK9009253).
- Broadland Ramsar (UK11010).

Version: Final 1 30/04/2021

This record was sent to Natural England for consultation.

For EPR permits only (excluding Flood Risk Activity Permits): Was an additional component charge for habitats assessment levied for this application? Not applicable

1. Permission, plan or project details

Type of PPP: Habitat Improvement Works

Environment Agency reference: EPR/RB3557SW

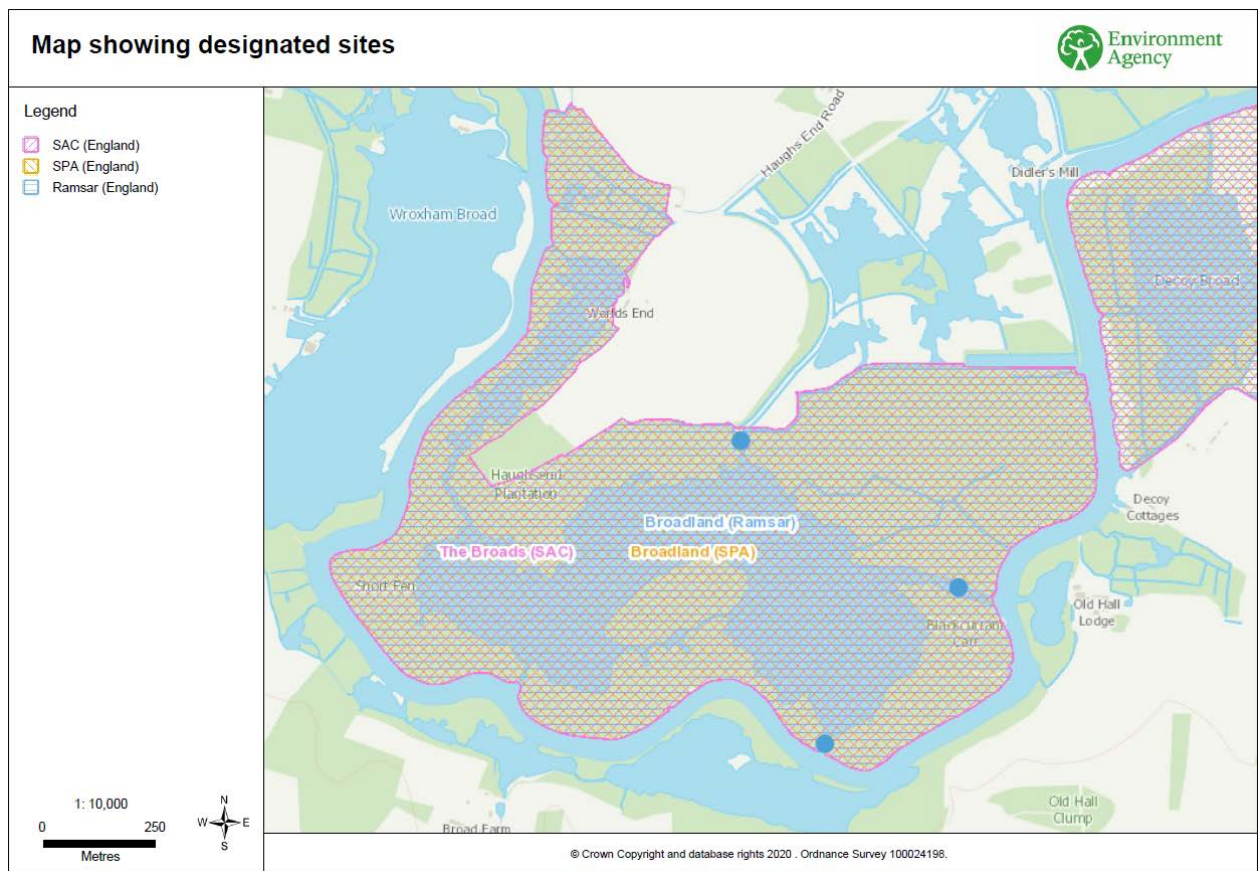
National grid reference: TG3167116208

Site/project name or reference: Barriers will be installed on Hoveton Great Broad at Foxborrow dyke (TG32071581), the Dam (TG32421614), Hoveton marshes (TG31891651). The Dam and Foxborrow dyke are the locations where Hoveton Great Broad connects to the River Bure.

2. Description of proposal

Installation of three fish barriers at Hoveton Great Broad. Barriers will be installed on Hoveton Great Broad. The barriers are to be constructed by piling wood supports into the river bed and attaching the barriers to them. The barriers will be in place for up to 10 years.

3. Map(s) showing PPP location and European site(s)



- PPP location

4. European sites requiring assessment¹

European site	Complete list of qualifying features
The Broads SAC (UK0013577)^	Alkaline fens
	Alluvial woods with <i>A. glutinosa</i> , <i>F. excelsior</i> *
	Calcareous fens with <i>C. mariscus</i> and species of <i>C. davalliana</i> *
	Desmoulin's whorl snail
	Fen orchid
	Hard oligo-mesotrophic waters with benthic veg of <i>Chara</i> spp.
	Little ram's-horn whirlpool snail
	Molinia meadows on calcareous, peat or clay-silt soil
	Natural eutrophic lakes with Magnopotamion or Hydrocharition
	Otter
Broadland SPA (UK9009253)^	Transition mires and quaking bogs
	Bewick's swan (non-breeding)
	Bittern (breeding)
	Gadwall (non-breeding)
	Hen harrier (non-breeding)
	Marsh Harrier (breeding)
	Ruff (non-breeding)
Shoveler (non-breeding)	

¹ This is based on screening criteria the Environment Agency consider appropriate to identify possible significant risk.

European site	Complete list of qualifying features
	Whooper swan (non-breeding)
	Wigeon (non-breeding)
Broadland Ramsar (UK11010)	Alkaline fens
	Alluvial woods with <i>A. glutinosa</i> , <i>F. excelsior</i> *
	Bewick's swan (wintering)
	Calcareous fens with <i>C. mariscus</i> and species of <i>C. davalliana</i> *
	Gadwall (wintering)
	Molinia meadows on calcareous, peat or clay-silt soil
	Shoveler (wintering)
	Wetland invertebrate assemblage
	Wetland plant assemblage
	Wigeon (wintering)

^ Protected area under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

* Priority natural habitat/priority species

Feature information sourced from Natural England

5. Conservation objectives

The screening for likely significant effects (and appropriate assessment, if required) will consider the implications of the proposal in view of the site's conservation objectives.

The Broads SAC (UK0013577)^	Version:	Date:
http://publications.naturalengland.org.uk/publication/6190476679970816?category=6581547796791296		
Broadland SPA (UK9009253)^	Version:	Date:

<http://publications.naturalengland.org.uk/publication/5310905998901248?category=6581547796791296>

Broadland Ramsar (UK11010) Version: Date:

There are currently no conservation objectives for Ramsar sites. The SAC/SPA conservation objectives will be used when the qualifying features are the same, and advice sought from Natural England in other cases if necessary.

6. Risks (pressures) relevant to the type of PPP being assessed

Change in flow or velocity regime

Changes in surface water flooding

Changes in water levels or table

Disturbance

Habitat loss

Physical damage

Siltation

Turbidity

7. HRA Stage 1 screening table²

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
The Broads SAC (UK0013577) [^]					
Alkaline fens	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alkaline fens will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alkaline fens will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

² Only features the Environment Agency consider likely to be sensitive to the type of PPP being assessed are included, see [‘Habitats Regulations Assessment: Risk definitions and matrices’](#)

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bure, as such the Alkaline fens will not be impacted.		Main River Bure, as such the Alkaline fens will not be impacted.	
Alluvial woods with <i>A. glutinosa</i> , <i>F. excelsior</i> *	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No
Calcareous fens with <i>C. mariscus</i>	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
and species of <i>C. davallianae</i> *					
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No
Desmoulin's whorl snail	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the fen vegetation habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the fen vegetation habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		curtains will be used to mitigate the risk of pollution.		stop and silt curtains will be used to mitigate the risk of pollution.	
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No
Fen orchid	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Fen orchid not present on the site.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Fen orchid not present on the site.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Fen orchid not present on the site.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Fen orchid not present on the site.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats	No	These works may create a short term localised turbidity from boats movements on the broads, but the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>/ barges will have to move slowly due to plant and materials being carried to site.</p> <p>Fen orchid not present on the site.</p>		<p>boats / barges will have to move slowly due to plant and materials being carried to site.</p> <p>Fen orchid not present on the site.</p>	
Hard oligo-mesotrophic waters with benthic veg of Chara spp.	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Hard oligo-mesotrophic waters with benthic veg of Chara spp. are not present on the site.</p>	No	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Hard oligo-mesotrophic waters with benthic veg of Chara spp. are not present on the site.</p>	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>Bure, as such the habitat on the broad will not be impacted.</p> <p>Hard oligo-mesotrophic waters with benthic veg of Chara spp. are not present on the site.</p>		<p>Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Hard oligo-mesotrophic waters with benthic veg of Chara spp. are not present on the site.</p>	
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	<p>These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.</p> <p>Hard oligo-mesotrophic waters with benthic veg of Chara spp. are not present on the site.</p>	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
				Hard oligo-mesotrophic waters with benthic veg of Chara spp. are not present on the site.	
Little ram's-horn whirlpool snail	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Little ram's-horn whirlpool snail not present on the site.		Little ram's-horn whirlpool snail not present on the site.	
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Little ram's-horn whirlpool snail not present on the site.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Little ram's-horn whirlpool snail not present on the site.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Little ram's-horn whirlpool snail not present on the site.		slowly due to plant and materials being carried to site. Little ram's-horn whirlpool snail not present on the site.	
Molinia meadows on calcareous, peat or clay-silt soil	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No
Natural eutrophic lakes with Magnopotamion or Hydrocharition	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>Creation of the fish barriers will cause disturbance of the sediment, resulting in an increase in turbidity and decrease in water quality (release of nutrients, reduced DO). Works are also likely to damage macrophytes (if present).</p> <p>However, impacts on water quality/macrophytes are likely to be localised and temporary and will have no impact on the overall condition of the feature.</p>		<p>Creation of the fish barriers will cause disturbance of the sediment, resulting in an increase in turbidity and decrease in water quality (release of nutrients, reduced DO). Works are also likely to damage macrophytes (if present).</p> <p>However, impacts on water quality/macrophytes are likely to be localised and temporary and will have no impact on the overall condition of the feature.</p>	
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats	No	These works may create a short term localised turbidity from boats	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.</p> <p>Creation of the fish barriers will cause disturbance of the sediment, resulting in an increase in turbidity and decrease in water quality (release of nutrients, reduced DO). Works are also likely to damage macrophytes (if present).</p> <p>However, impacts on water quality/macrophytes are likely to be localised and temporary and will have no impact on the overall condition of the feature.</p>		<p>movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.</p> <p>Creation of the fish barriers will cause disturbance of the sediment, resulting in an increase in turbidity and decrease in water quality (release of nutrients, reduced DO). Works are also likely to damage macrophytes (if present).</p> <p>However, impacts on water quality/macrophytes are likely to be localised and temporary and will have no impact on the overall condition of the feature.</p>	
Otter	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	<p>The works may create a short term localised disturbance on otters, but this is only likely to be over a few days. The works will be timed to ensure minimal impact.</p> <p>Note that works will not be carried out or will need to be significantly modified if they risk damage to an otter holt.</p> <p>The Barriers will reduce the availability of fish in the broads but there will still be some fish present and other hunting opportunities will be still be locally available (e.g. Hoveton Marshes dykes, the adjacent river Bure).</p>	No	<p>The works may create a short term localised disturbance on otters, but this is only likely to be over a few days. The works will be timed to ensure minimal impact.</p> <p>Note that works will not be carried out or will need to be significantly modified if they risk damage to an otter holt.</p> <p>The Barriers will reduce the availability of fish in the broads but there will still be some fish present and other hunting opportunities will be still be locally available (e.g.</p>	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
				Hoveton Marshes dykes, the adjacent river Bure).	
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Note that works will not be carried out or will need to be significantly modified if they risk damage to an otter holt.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Note that works will not be carried out or will need to be significantly modified if they risk damage to an otter holt.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Note that works will not be carried out or will need to be significantly modified if they risk damage to an otter holt.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Note that works will not be carried out or will need to be significantly modified if they risk damage to an otter holt.	No
	Siltation	The works may create a short term localised siltation in the water channels	No	The works may create a short term localised siltation in the water	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.		channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No
Transition mires and quaking bogs	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure.	No	Barrier location is in the water channels connecting the broad to the Main River Bure.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Transition mires and quaking bogs not present on the site, as such they will not be impacted.		Transition mires and quaking bogs not present on the site, as such they will not be impacted.	
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure. Transition mires and quaking bogs not present on the site, as such they will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure. Transition mires and quaking bogs not present on the site, as such they will not be impacted.	No
Broadland SPA (UK9009253)^					
Bewick's swan (non-breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term noise disturbance on Bewick's swan, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Bewick's swan has not been recorded on the site within the last 10 years.	No	The works may create a short term noise disturbance on Bewick's swan, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Bewick's swan has not been recorded on the site within the last 10 years.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Bewick's swan has not been recorded on the site within the last 10 years.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Bewick's swan has not been recorded on the site within the last 10 years.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>Bure, as such the habitat on the broad will not be impacted.</p> <p>Bewick's swan has not been recorded on the site within the last 10 years.</p>		<p>Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Bewick's swan has not been recorded on the site within the last 10 years.</p>	
	Siltation	<p>The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.</p>	No	<p>The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.</p>	No
	Turbidity	<p>These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.</p> <p>Bewick's swan has not been recorded on the site within the last 10 years.</p>	No	<p>These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.</p> <p>Bewick's swan has not been recorded on the site within the last 10 years.</p>	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
Bittern (breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	<p>The works may create a short term localised disturbance on Bittern.</p> <p>Works will only take place during the winter (September to February inclusive), therefore there will be no impact on this feature.</p> <p>Removal of fish may have a negative impact on feeding opportunism for bittern. However, not all fish species will</p>	No	<p>The works may create a short term localised disturbance on Bittern.</p> <p>Works will only take place during the winter (September to February inclusive), therefore there will be no impact on this feature.</p> <p>Removal of fish may have a negative impact on feeding opportunism for bittern. However, not all fish species</p>	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		be removed and other prey taxa (such as amphibians) will be unaffected by the works.		will be removed and other prey taxa (such as amphibians) will be unaffected by the works.	
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats	No	These works may create a short term localised turbidity from boats movements on the broads, but the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		/ barges will have to move slowly due to plant and materials being carried to site.		boats / barges will have to move slowly due to plant and materials being carried to site.	
Gadwall (non-breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term localised disturbance on Gadwall's, birds will be able to relocate to other parts of the two broads.	No	The works may create a short term localised disturbance on Gadwall's, birds will be able to relocate to other parts of the two broads.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bure, as such the habitat on the broad will not be impacted.		Main River Bure, as such the habitat on the broad will not be impacted.	
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
Hen harrier (non-breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term noise disturbance on Hen harrier, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Hen harrier not present on the site.	No	The works may create a short term noise disturbance on Hen harrier, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Hen harrier not present on the site.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bure, as such the habitat on the broad will not be impacted. Hen harrier not present on the site.		Main River Bure, as such the habitat on the broad will not be impacted. Hen harrier not present on the site.	
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Hen harrier not present on the site.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Hen harrier not present on the site.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		/ barges will have to move slowly due to plant and materials being carried to site. Hen harrier not present on the site.		slowly due to plant and materials being carried to site. Hen harrier not present on the site.	
Marsh Harrier (breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term localised disturbance on Marsh Harrier. Works will only take place during the winter (September to February)	No	The works may create a short term localised disturbance on Marsh Harrier. Works will only take place during the winter (September to February)	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>inclusive), therefore there will be no impact on this feature.</p> <p>Removal of fish may have a negative impact on feeding opportunism for bittern. However, not all fish species will be removed and other prey taxa (such as amphibians) will be unaffected by the works.</p>		<p>inclusive), therefore there will be no impact on this feature.</p> <p>Removal of fish may have a negative impact on feeding opportunism for bittern. However, not all fish species will be removed and other prey taxa (such as amphibians) will be unaffected by the works.</p>	
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		curtains will be used to mitigate the risk of pollution.		stop and silt curtains will be used to mitigate the risk of pollution.	
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No
Ruff (non-breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Disturbance	The works may create a short term noise disturbance on Ruff, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Ruff not present on the site.	No	The works may create a short term noise disturbance on Ruff, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Ruff not present on the site.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Ruff not present on the site.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Ruff not present on the site.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Ruff not present on the site.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Ruff not present on the site.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River	No	The works may create a short term localised siltation in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.		Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site. Ruff not present on the site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site. Ruff not present on the site.	No
Shoveler (non-breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term localised disturbance on Shoveler, birds will be able to relocate to other parts of the two broads.	No	The works may create a short term localised disturbance on Shoveler, birds will be able to relocate to other parts of the two broads.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		curtains will be used to mitigate the risk of pollution.		stop and silt curtains will be used to mitigate the risk of pollution.	
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No
Whooper swan (non-breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Disturbance	<p>The works may create a short term noise disturbance on Whooper swan, but this is only likely to be over a few days. The works will be timed to ensure minimal impact.</p> <p>Whooper swan has not been recorded on the site within the last 10 years.</p>	No	<p>The works may create a short term noise disturbance on Whooper swan, but this is only likely to be over a few days. The works will be timed to ensure minimal impact.</p> <p>Whooper swan has not been recorded on the site within the last 10 years.</p>	No
	Habitat loss	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Whooper swan has not been recorded on the site within the last 10 years.</p>	No	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Whooper swan has not been recorded on the site within the last 10 years.</p>	No
	Physical damage	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p>	No	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p>	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Whooper swan has not been recorded on the site within the last 10 years.		Whooper swan has not been recorded on the site within the last 10 years.	
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site. Whooper swan has not been recorded on the site within the last 10 years.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site. Whooper swan has not been recorded on the site within the last 10 years.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
Wigeon (non-breeding)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term noise disturbance on Wigeon, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Wigeon has not been recorded on the site within the last 10 years.	No	The works may create a short term noise disturbance on Wigeon, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Wigeon has not been recorded on the site within the last 10 years.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>		<p>Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>	
	Physical damage	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>	No	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>	No
	Siltation	<p>The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.</p>	No	<p>The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.</p>	No
	Turbidity	<p>These works may create a short term localised turbidity from boats movements on the broads, but the boats</p>	No	<p>These works may create a short term localised turbidity from boats movements on the broads, but the</p>	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>/ barges will have to move slowly due to plant and materials being carried to site.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>		<p>boats / barges will have to move slowly due to plant and materials being carried to site.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>	
Broadland Ramsar (UK11010)					
Alkaline fens	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alkaline fens will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alkaline fens will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bure, as such the Alkaline fens will not be impacted.		Main River Bure, as such the Alkaline fens will not be impacted.	
Alluvial woods with <i>A. glutinosa</i> , <i>F. excelsior</i> *	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Alluvial woods will not be impacted.	No
Bewick's swan (wintering)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		flowing and so there will be a negligible change in flow or velocity.		slow flowing and so there will be a negligible change in flow or velocity.	
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term noise disturbance on Bewick's swan, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Bewick's swan has not been recorded on the site within the last 10 years.	No	The works may create a short term noise disturbance on Bewick's swan, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Bewick's swan has not been recorded on the site within the last 10 years.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bewick's swan has not been recorded on the site within the last 10 years.		Bewick's swan has not been recorded on the site within the last 10 years.	
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Bewick's swan has not been recorded on the site within the last 10 years.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted. Bewick's swan has not been recorded on the site within the last 10 years.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bewick's swan has not been recorded on the site within the last 10 years.		slowly due to plant and materials being carried to site. Bewick's swan has not been recorded on the site within the last 10 years.	
Calcareous fens with <i>C. mariscus</i> and species of <i>C. davallianae</i> *	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the Calcareous fens will not be impacted.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
Gadwall (wintering)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term localised disturbance on Gadwell's, birds will be able to relocate to other parts of the two broads.	No	The works may create a short term localised disturbance on Gadwell's, birds will be able to relocate to other parts of the two broads.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No
Molinia meadows on calcareous, peat or clay-silt soil	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure. Molinia meadows not present on the site, as such they will not be impacted.	No
Shoveler (wintering)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		flowing and so there will be a negligible change in flow or velocity.		slow flowing and so there will be a negligible change in flow or velocity.	
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term localised disturbance on Shoveler, birds will be able to relocate to other parts of the two broads.	No	The works may create a short term localised disturbance on Shoveler, birds will be able to relocate to other parts of the two broads.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		Bure, as such the habitat on the broad will not be impacted.		Main River Bure, as such the habitat on the broad will not be impacted.	
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No
Wetland invertebrate assemblage	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		curtains will be used to mitigate the risk of pollution.		stop and silt curtains will be used to mitigate the risk of pollution.	
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No
Wetland plant assemblage	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Physical damage	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No	Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.	No
	Siltation	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No	The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.	No
	Turbidity	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No	These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site.	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
Wigeon (wintering)	Change in flow or velocity regime	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No	Barrier design includes a mesh to allow water into and out of the Broad. The Broads and Main River Bure are slow flowing and so there will be a negligible change in flow or velocity.	No
	Changes in surface water flooding	Barrier design and overtopping of existing banks will result in no change to flooding.	No	Barrier design and overtopping of existing banks will result in no change to flooding.	No
	Changes in water levels or table	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No	Barrier design and overtopping of existing banks will result in no change to water levels or table.	No
	Disturbance	The works may create a short term noise disturbance on Wigeon, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Wigeon has not been recorded on the site within the last 10 years.	No	The works may create a short term noise disturbance on Wigeon, but this is only likely to be over a few days. The works will be timed to ensure minimal impact. Wigeon has not been recorded on the site within the last 10 years.	No
	Habitat loss	Barrier location is in the water channels connecting the broad to the Main River	No	Barrier location is in the water channels connecting the broad to the	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		<p>Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>		<p>Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>	
	Physical damage	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>	No	<p>Barrier location is in the water channels connecting the broad to the Main River Bure, as such the habitat on the broad will not be impacted.</p> <p>Wigeon has not been recorded on the site within the last 10 years.</p>	No
	Siltation	<p>The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.</p>	No	<p>The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution.</p>	No
	Turbidity	<p>These works may create a short term localised turbidity from boats movements on the broads, but the boats</p>	No	<p>These works may create a short term localised turbidity from boats movements on the broads, but the</p>	No

Qualifying feature	Risk (Pressure)	Likely significant effect alone	Yes or No	Likely significant effect in combination	Yes or No
		/ barges will have to move slowly due to plant and materials being carried to site. Wigeon has not been recorded on the site within the last 10 years.		boats / barges will have to move slowly due to plant and materials being carried to site. Wigeon has not been recorded on the site within the last 10 years.	

^ Protected area under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

* Priority natural habitat/priority species

8. Alone assessment (further details)

The works will not have a significant effect on any of the features of the designated sites. There is potential for short term noise disturbance from the installation works over a number of days that could impact bird species such as Marsh Harrier. This has been mitigated by the works being undertaken between September and February.

The works may create a short term localised siltation in the water channels connecting the broad to the Main River Bure. If siltation occurs from the works they will immediately stop and silt curtains will be used to mitigate the risk of pollution, ensuring no significant effect on any of the features of the designated sites.

These works may create a short term localised turbidity from boats movements on the broads, but the boats / barges will have to move slowly due to plant and materials being carried to site, as such the impact will not have a significant effect on any of the features of the designated sites.

9. In combination assessment (further details)

Not applicable. Risks same as standalone assessment.

10. Information / Advice

This section summarises the information and or advice requested / received during the screening.

Environment Agency internal advice and consultation (if applicable)

Natural England are the applicant and their environmental statement submitted with this application provides the basis for this assessment. Internally this assessment forms our advice on the impacts on the designated features from these proposed works.

Natural England information / advice (if applicable)

Natural England are the applicant and their environmental statement submitted with this application provides the basis for this assessment.

Third party advice (if applicable)

Not applicable

11. References

Hoveton Great Broad Restoration Scheme - Environmental Statement Volume I,
Dated July 2014.

12. Decision

The Environment Agency:

Concludes there is no likely significant effect

Name of Environment Agency officer: Benjamin Peter Freeman

Job title: FCRM Officer

Date: 30/04/2021

13. Consultation (if applicable)

Date sent to Natural England for consultation: **Not applicable**

Date response received from Natural England: **Not applicable**

**Natural England advice on the screening for likely significant effects
(if applicable)**

Not applicable – As this assessment concludes that there is no likely significant effect on the designated features there is not requirement for us to consult with Natural England. We are sending copies of this assessment to Natural England for information only.

Do Natural England have concerns about the assessment? **Not applicable**

Do Natural England have concerns about the decision? **Not applicable**

Name of Natural England officer: **Not applicable**

Job title: **Not applicable**

Date: **Not applicable**