

## Appendix A. Planning Inspectorate screening matrices

Potential effects upon the designated sites which are considered in this assessment are provided below in Table C.1 to be in line with Planning Advice Note Ten. The European sites included within the screening assessment are:

- The Broads SAC
- Broadland SPA
- Broadland Ramsar site

Table C.1 Potential effects upon the designated sites with reference to Planning Inspectorate Advice Note Ten

Designation	Effects in submission information	Presented in screening matrix as
The Broads SAC	Water pollution as a result of hydrological linkage	Water pollution
	Public access/disturbance – disturbance of otter by noise and lighting	Disturbance
	Air pollution as a result of atmospheric nitrogen deposition	Air pollution
	Cumulative effects in combination with other developments	Cumulative effects
Broadland SPA	Water pollution and hydrological changes – reduction in nesting/drinking/preening/foraging habitat	Water pollution & hydrological changes
	Air pollution - reduction in nesting/roosting/foraging habitat	Air pollution
	Disturbance associated with human activity in the form of noise and light.	Disturbance
	Cumulative effects in combination with other developments	Cumulative effects
Broadland Ramsar	Water pollution and hydrological changes – adverse effects on qualifying features	Water pollution & hydrological changes
	Air pollution - adverse effects on qualifying features	Air pollution

Designation	Effects in submission information	Presented in screening matrix as
	Disturbance associated with human activity in the form of noise and light.	Disturbance
	Cumulative effects in combination with other developments	Cumulative effects

Evidence for, or against, likely significant effects on the European site(s) and its qualifying feature(s) is detailed within the footnotes to the screening matrices below in Tables C.2 to C.4, inclusive.

Matrix Key:

- ✓ = Likely significant effect cannot be excluded
- ✗ = Likely significant effect can be excluded
- C = construction
- O = operation
- D =decommissioning
- n/a = where effects are not applicable.

## The Broads SAC

Table C.2 Screening matrix of the potential likely significant effects upon The Broads SAC.

Name of European Site and Designation: The Broads SAC												
EU Code: UK0013577												
Distance to NSIP: 11.5km												
European site features	Likely effects of NSIP											
Effect	Water pollution			Disturbance			Air pollution			Cumulative effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp</i>	x <sub>a</sub>	x <sub>a</sub>	n/a	n/a	n/a	n/a	x <sub>a</sub>	x <sub>a</sub>	n/a	x <sub>e</sub>	x <sub>e</sub>	n/a
Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation	x <sub>a</sub>	x <sub>a</sub>	n/a	n/a	n/a	n/a	x <sub>a</sub>	x <sub>a</sub>	n/a	x <sub>e</sub>	x <sub>e</sub>	n/a
Transition mires and quaking bogs	x <sub>a</sub>	x <sub>a</sub>	n/a	n/a	n/a	n/a	x <sub>a</sub>	x <sub>a</sub>	n/a	x <sub>e</sub>	x <sub>e</sub>	n/a
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	x <sub>a</sub>	x <sub>a</sub>	n/a	n/a	n/a	n/a	x <sub>a</sub>	x <sub>a</sub>	n/a	x <sub>e</sub>	x <sub>e</sub>	n/a
Alkaline fens	x <sub>a</sub>	x <sub>a</sub>	n/a	n/a	n/a	n/a	x <sub>a</sub>	x <sub>a</sub>	n/a	x <sub>e</sub>	x <sub>e</sub>	n/a
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	x <sub>a</sub>	x <sub>a</sub>	n/a	n/a	n/a	n/a	x <sub>a</sub>	x <sub>a</sub>	n/a	x <sub>e</sub>	x <sub>e</sub>	n/a
Molinia meadows on calcareous, peaty or	x <sub>a</sub>	x <sub>a</sub>	n/a	n/a	n/a	n/a	x <sub>a</sub>	x <sub>a</sub>	n/a	x <sub>e</sub>	x <sub>e</sub>	n/a

Name of European Site and Designation: The Broads SAC												
EU Code: UK0013577												
Distance to NSIP: 11.5km												
European site features	Likely effects of NSIP											
Effect	Water pollution			Disturbance			Air pollution			Cumulative effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
clayey silt laden soils ( <i>Molinion caeruleae</i> )												
Desmoulin's whorl snail	x a	x a	n/a	n/a	n/a	n/a	x a	x a	n/a	x e	x e	n/a
Lesser whirlpool ram's horn snail	x a	x a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x e	x e	n/a
Fen orchid <i>Liparis loeselii</i>	x a	x a	n/a	x a	x a	n/a	n/a	n/a	n/a	x e	x e	n/a
Otter	x a,b	x a,b	n/a	x b	x b	n/a	x a	x a	n/a	x e	x e	n/a

a.

None of the qualifying habitats for the Broads SAC are located where there is a direct hydrological link between the Proposed Scheme and these qualifying habitats. The nearest point of the Broads SAC lies 11.5 km east from the Proposed Scheme. There is a hydrological link that starts at Cantley Steam at the Proposed Scheme, which flows into Mill Stream and eventually into the River Yare, which runs into the Broads SAC. The large distance of 11.5km from the Proposed Scheme and the SAC means that any pollutants would have sufficiently diluted such that there will be **no likely significant effects** upon the SAC or its qualifying features during construction. Similarly, as described in Section 5. 8 of ES Chapter 5 – Air Quality (**APP-042**), the distance of the NSN and Ramsar sites from the Proposed Scheme is such that there will be no likely significant effects as a result of air pollution.

*b.*

It is proposed that the realignment of Cantley Steam will occur with the realignment being constructed and ecologically matured to optimum condition prior its connection to the existing Cantley Stream and the decommissioning of the existing stretch of Cantley Steam. This construction measure is with reference to best practice for protecting otters by maintaining the existing commuting route for otters to remain in situ with no impact upon otters or the integrity of their habitat throughout construction. **No likely significant effect is expected.**

*c.*

There are no likely significant cumulative effects of the A47/A11 Thickthorn Junction scheme in combination with other identified projects as detailed within the ES Chapter 15 – Cumulative Effects Assessment (**APP-052**) and Chapter 8 – Biodiversity (**APP-045**).

## Broadlands SPA

Table C.3 Screening matrix of the potential likely significant effects upon Broadlands SPA.

Name of European Site and Designation: Broadlands SPA												
EU Code: UK9009253												
Distance to NSIP: 11.5km												
European site features	Likely effects of NSIP											
Effect	Water Pollution & Hydrological Changes			Air Pollution			Disturbance			Cumulative effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Ruff	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Wigeon	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Gadwell	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Marsh harrier	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Hen harrier	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Shoveler	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Bittern	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Bewick's swan	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a
Whooper swan	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x c	x c	n/a

a.

There is a hydrological link that starts at Cantley Steam at the Proposed Scheme, which flows into Mill Stream and eventually into the River Yare, which runs into the Broadlands SPA. The large distance of 11.5km from the Proposed

Scheme and the SPA means that any pollutants would have sufficiently diluted such that there will be **no likely significant effects** upon the SPA or its qualifying features during construction or operation. Similarly, as described in Section 5.8 of ES Chapter 5 – Air Quality (**APP-042**), the distance of the NSN and Ramsar sites from the Proposed Scheme is such that there will be no likely significant effects as a result of air pollution.

*b.*

None of the qualifying bird species were recorded in the area of the Proposed Scheme during the 2017, 2018 and 2019 bird surveys. Furthermore, the Proposed Scheme will not improve access to the Broadlands SPA, nor will it contribute to recreational pressure. As such there will be **no likely significant effects** upon the SPA or its qualifying features during construction or operation.

*c.*

**1.1.1.** There are no likely significant cumulative effects of the A47/A11 Thickthorn Junction scheme in combination with other identified projects as detailed within the ES Chapter 15 – Cumulative Effects Assessment (**APP-052**) and Chapter 8 – Biodiversity (**APP-045**).

## Broadlands Ramsar

Table C.4 Screening matrix of the potential likely significant effects upon Broadlands Ramsar.

Name of European Site and Designation: Broadlands Ramsar												
EU Code: UK9009253												
Distance to NSIP: 11.5km												
European site features	Likely effects of NSIP											
Effect	Water Pollution & Hydrological Changes			Air Pollution			Disturbance			Cumulative effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> (sedges)	×a	×a	n/a	×a	×a	n/a	n/a	n/a	n/a	×d	×d	n/a
Alkaline Fens	×a	×a	n/a	×a	×a	n/a	n/a	n/a	n/a	×d	×d	n/a
Alluvial forests with <i>Alnus glutinosa</i> (alder) and <i>Fraxinus excelsior</i> (ash).	×a	×a	n/a	×a	×a	n/a	n/a	n/a	n/a	×d	×d	n/a
Desmoulin's whorl snail	×a	×a	n/a	×a	×a	n/a	n/a	n/a	n/a	×d	×d	n/a



Otter	x a	x a	n/a	x a	x a	n/a	x c	x c	n/a	x d	x d	n/a
Fen orchid	x a	x a	n/a	x a	x a	n/a	n/a	n/a	n/a	x d	x d	n/a
Bewick's swan	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x d	x d	n/a
Wigeon	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x d	x d	n/a
Gadwall	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x d	x d	n/a
Shoveler	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x d	x d	n/a
Pink-footed goose	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x d	x d	n/a
Greylag goose	x a	x a	n/a	x a	x a	n/a	x b	x b	n/a	x d	x d	n/a

a.

There is a hydrological link that starts at Cantley Steam at the Proposed Scheme, which flows into Mill Stream and eventually into the River Yare, which runs into the Broadlands SPA. The large distance of 11.5km from the Proposed Scheme and the SPA means that any pollutants would have sufficiently diluted such that there will be **no likely significant effects** upon the SPA or its qualifying features during construction or operation. Similarly, as described in Section 5. 8 of ES Chapter 5 – Air Quality (**APP-042**), the distance of the NSN and Ramsar sites from the Proposed Scheme is such that there will be no likely significant effects as a result of air pollution.

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- b.* None of the qualifying bird species were recorded in the area of the Proposed Scheme during the 2017, 2018 and 2019 bird surveys. Furthermore, the Proposed Scheme will not improve access to the Broadlands SPA, nor will it contribute to recreational pressure. As such there will be **no likely significant effects** upon the SPA or its qualifying features during construction or operation.
- c.* It is proposed that the realignment of Cantley Steam will occur with the realignment being constructed and ecologically matured to optimum condition prior its connection to the existing Cantley Stream and the decommissioning of the existing stretch of Cantley Steam. This construction measure is with reference to best practice for protecting otters by maintaining the existing commuting route for otters to remain in situ with no impact upon otters or the integrity of their habitat throughout construction. **No likely significant effect is expected.**
- d.* There are no likely significant cumulative effects of the A47/A11 Thickthorn Junction scheme in combination with other identified projects as detailed within the ES Chapter 15 – Cumulative Effects Assessment (**APP-052**) and Chapter 8 – Biodiversity (**APP-045**).