

Great Yarmouth Third River Crossing

Application for Development Consent Order

Document 6.2: Environmental Statement

Volume II: Technical

Appendix 6G: Ecological

Assessment Detailed

Results and Impacts

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (“APFP”)

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CONTENTS	PAGE No.
Tables	ii
Plates	iii
1 Ecological Assessment Detailed Results and Impacts	1
1.1 Breydon Water SSSI/SPA/Ramsar	1

Tables

Table 1.1: Annual Mean NO _x Concentration at Breydon Water SSSI	2
Table 1.2: Annual Mean N Deposition Rates Concentration at Breydon Water SSSI	3

Plates

Plate 1.1: Location of the Modelled Transects for Breydon Water SSSI/SPA/Ramsar	2
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1 Ecological Assessment Detailed Results and Impacts

1.1 Breydon Water SSSI/SPA/Ramsar

Assessment of Ambient NO_x Concentrations

- 1.1.1 The NO_x concentrations for transect points modelled at 10m intervals from the nearest modelled road (the A47) and across the Breydon Water Site of Special Scientific Interest (SSSI)/Special Protection Area (SPA)/Ramsar are presented in Table 1.1. Air quality dispersal modelling for NO_x showed no change in NO_x concentrations between the Do Minimum and Do Something scenarios up to a distance of 155m from the nearest modelled road.
- 1.1.2 Modelling does not indicate an increase in NO_x concentrations at the Breydon Water SSSI/SPA/Ramsar as a result of the Scheme. The annual mean objective for NO_x (30µg/m³), established for the protection of vegetation and ecosystems, is not exceeded. Therefore, as specified in the DMRB guidance, no further assessment of ecological impacts at the Breydon Water SSSI/SPA/Ramsar as a result of changes in NO_x concentrations is required.
- 1.1.3 The location of the modelled transects for Breydon Water SSSI/SPA/Ramsar is presented in Plate 1.1. The coverage of the traffic model Traffic Reliability Area which is based upon the area over which changes in traffic should be considered where the changes in traffic are potentially in exceedance of the criteria set out in the DMRB as given in Chapter 6 Section 6.4, and therefore qualify as part of the LARN, did not extend for the entirety of the perimeter of Breydon Water, however coverage was sufficient to make an assessment for the NO_x and nitrogen sensitive neutral grassland habitat in SSSI Unit 10.

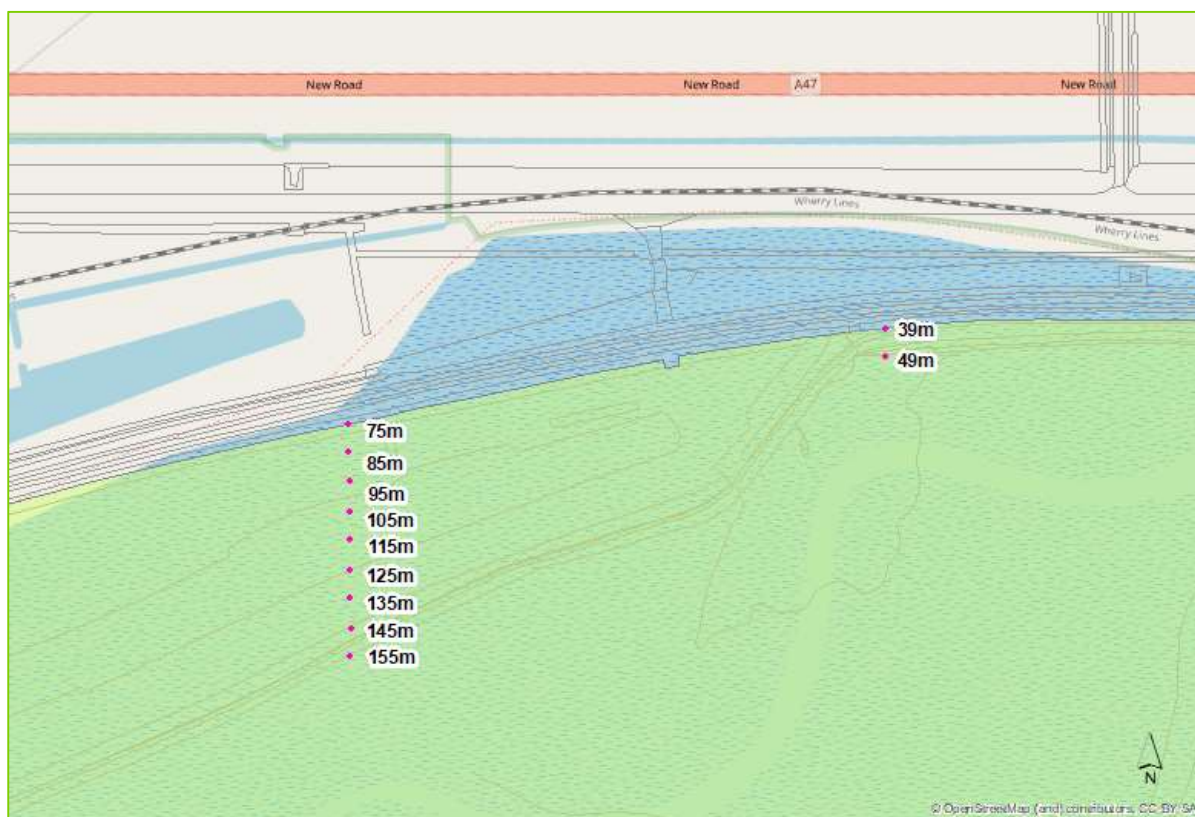


Plate 1.1: Location of the Modelled Transects for Breydon Water SSSI/SPA/Ramsar

Table 1.1: Annual Mean NO_x Concentration at Breydon Water SSSI

Distance from Edge of Nearest Modelled Road Link A47 New Road (m)	Annual Mean NO _x Concentrations (µg/m ³)			
	2017 BY	2023 DM	2023 DS	2023 DS-DM
39	19.0	14.8	14.8	0.0
49	18.1	14.3	14.3	0.0
75	16.3	13.3	13.3	0.0
85	16.0	13.2	13.2	0.0
95	15.8	13.0	13.0	0.0
105	15.6	12.9	12.9	0.0
115	15.4	12.9	12.9	0.0
125	15.3	12.8	12.8	0.0
135	15.2	12.8	12.7	0.0

Distance from Edge of Nearest Modelled Road Link A47 New Road (m)	Annual Mean NO _x Concentrations (µg/m ³)			
	2017 BY	2023 DM	2023 DS	2023 DS-DM
145	15.1	12.7	12.7	0.0
155	15.1	12.7	12.7	0.0

Assessment of Nitrogen Deposition

- 1.1.4** The results for predicted Nitrogen deposition rates (N-deposition) across the Breydon Water SSSI/SPA/Ramsar modelled transects are presented in Table 1.2. There is no change in N-deposition between the DM and DS scenario. As such, further assessment of the impacts of the Scheme upon ecology at Breydon Water SSSI/SPA/Ramsar due to changes in air quality is not required.

Table 1.2: Annual Mean N Deposition Rates Concentration at Breydon Water SSSI

Distance from Edge of Nearest Modelled Road Link A47 New Road (m)	Total N Deposition Rate (kg N ha ⁻¹ yr ⁻¹)			
	2017 BY	2023 DM	2023 DS	2023 DS-DM
39	12.0	10.4	10.4	0.0
49	11.9	10.3	10.3	0.0
75	11.9	10.3	10.3	0.0
85	11.8	10.3	10.3	0.0
95	11.8	10.3	10.3	0.0
105	11.8	10.3	10.3	0.0
115	11.8	10.3	10.3	0.0
125	11.8	10.3	10.3	0.0
135	11.8	10.3	10.3	0.0
145	11.8	10.3	10.3	0.0
155	11.8	10.3	10.3	0.0