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Bramford to Twinstead Reinforcement

Volume 6: Environmental Information

Document 6.3.7.3: ES Appendix 7.3 – Aquatic Ecology Baseline Report

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Contents

1.	Introduction	1
1.1	Overview	1
1.2	Structure of this Report	1
1.3	Legislation and Policy	1
2.	Methodology	2
2.1	Scope	2
2.2	Desk Study	2
2.3	Field Survey	2
2.4	Watercourse Habitat Sensitivity	5
2.5	Limitations	6
3.	Results	7
3.1	Desk Study	7
3.2	Field Survey	10
3.3	Watercourse Habitat Sensitivity	12
Ann	ex A. MoRPh Survey Photographs	15
Ann	23	
Ann	ex C. Watercourse Habitat Sensitivity Assessment	29

1. Introduction

1.1 Overview

- 1.1.1 National Grid Electricity Transmission plc (here on referred to as National Grid) is making an application for development consent to reinforce the transmission network between Bramford Substation in Suffolk, and Twinstead Tee in Essex. The Bramford to Twinstead Reinforcement ('the project') would be achieved by the construction and operation of a new electricity transmission line over a distance of approximately 29km (18 miles), the majority of which would follow the general alignment of the existing overhead line network.
- 1.1.2 This Aquatic Ecology Baseline Report has been produced to support the application for development consent and the accompanying Environmental Statement (ES) under the Planning Act 2008.

1.2 Structure of this Report

1.2.1 The report comprises the results of a desk study undertaken to establish the aquatic ecology baseline and the results of a Modular River Physical (MoRPh) survey and River Condition Assessment. Chapter 2 describes the methodology used for the desk study and the field survey. Chapter 3 presents the results of the desk study and the field survey.

1.3 Legislation and Policy

- 1.3.1 In England aquatic habitats and species are afforded protection to varying degrees through national and European legislation:
 - Conservation of Habitats and Species Regulations 2017 (as amended);
 - Wildlife and Countryside Act 1981 (as amended);
 - The Water Environment (Water Framework Directive) (England and Wales) Regulations 2007;
 - The Salmon and Freshwater Fisheries Act 1975;
 - The Eel (England and Wales) Regulations 2009; and
 - Natural Environment and Rural Communities Act 2006 (Habitats and Species of Principal Importance).

2. Methodology

2.1 Scope

2.1.1 The approach to establishing the aquatic ecology baseline is based on that outlined in Chapter 7 Biodiversity in the Scoping Report (**application document 6.5.1**) for the project. The methodology has been informed by consultation and engagement with Natural England and the Environment Agency.

2.2 Desk Study

- 2.2.1 Data requests for protected and notable (including non-native) species were made to Suffolk Biodiversity Information Service (SBIS), Essex Wildlife Trust (EWT) and Essex Field Club (EFC) in 2021 and were updated in June 2022. The results presented in this report represent a 1km area around the Order Limits.
- 2.2.2 Environment Agency data was retrieved from the Ecology and Fish Data Explorer (Environment Agency, 2022a) up to 5km from the Order Limits to account for the highly mobile behaviour and seasonal presence of fish within river catchments. This is a freely available online repository of biological monitoring data collected between 1985 and 2022. For this report, data collected between 2010 and 2022 was reviewed. As the dataset is regularly updated, 2010 is considered a reasonable date to ensure all the relevant survey areas were captured.
- 2.2.3 Designated site citations/descriptions within 1km of the project were also reviewed for mention of aquatic habitats or features.
- 2.2.4 A range of aquatic habitats were sampled for aquatic invertebrates using a kick sweep methodology in 2013 for the project. This data was not collected using standard monitoring methods but provides a snapshot of invertebrate diversity of the sites sampled. The results of this survey are reported in the desk study.

2.3 Field Survey

2.3.1 Watercourses within the Order Limits were surveyed as part of UK Habitat Classification surveys in 2021 and 2022. MoRPh survey and subsequent River Condition Assessments were undertaken.

Modular River Physical (MoRPh) Survey

- 2.3.2 The MoRPh survey characterises the channel, banks and immediate bank tops (to 10m from the bank top edge) of a river. Full details of the MoRPh survey methodology can be found in the Technical Reference Manual (Gurnell *et al.*, 2022).
- 2.3.3 The MoRPh survey comprised all watercourses within the Order Limits as shown on ES Figure 7.3.1: Aquatic Ecology Baseline (**application document 6.4**). The MoRPh surveys were undertaken between the 31 August and 3 September 2021. Further surveys were undertaken on the 27 and 28 April 2022. All surveys were undertaken during clear dry weather conditions and water levels were within normal range at all sites on all survey days. All surveys were undertaken on the bankside with the most suitable access.
- 2.3.4 A single MoRPh survey was applied to a module of river. The length of each module varied depending on the width of the river channel. The module length was approximately two channel widths long, as defined in Table 2.1. Five continuous MoRPh surveys were

carried out along the watercourse to characterise a subreach. This set of surveys is known as a MoRPh5 survey.

MoRPh River Width (m)	River Length for Each Module Survey (m)
<5m	10m
5 to < 10m	20m
10 to < 20m	30m
20 to < 30m	40m
≥ 30m	50m (large river type)

Table 2.1 – River Lengths for MoRPh Surveys for Different River Widths

- 2.3.5 A standard data form was used to collect information on:
 - Channel dimensions;
 - Bank top: floodplain measurements;
 - Bank face and channel margin measurements; and
 - Channel bed measurements.
- 2.3.6 MoRPh5 surveys were repeated so that a minimum of 20% of the river within the study area was surveyed. Subreaches were spaced evenly and located to best capture variations along the reach. Where only two subreaches were needed, the most impacted/modified and the most natural subreaches in the survey area were captured. Based on the Order Limits and adhering to the standard survey guidance, the following survey requirements have been calculated based on potentially impacted reaches (Table 2.2). See ES Figure 7.3.1: Aquatic Ecology Baseline (**application document 6.4**) for a map of the location of each MoRPh5 survey.

Crossing ID	Reach	Watercourse Name	River Width	Module Length	MoRPh5 Length	Number of MoRPh5 Field Surveys
W-AB-30	B2T_14	Belstead Brook	>5 m	10 m	50 m	1
W-AB-32	B2T_13	Spring Brook	>5 m	10 m	50 m	1
W-AB-4	B2T_12	Belstead Brook	>5 m	10 m	50 m	1
W-AB-46	B2T_11	River Brett (Trib 2)	>5 m	10 m	50 m	1
W-AB-47	B2T_10	River Brett (Trib 1)	>5 m	10 m	50 m	1
W-C-1	B2T_09	River Brett	5-10 m	20 m	100 m	1
W-D-1	B2T_08	River Brett (Trib 3)	>5 m	10 m	50 m	1
W-D-8	B2T_07	River Box (Trib 1)	>5 m	10 m	50 m	2
W-E-10	B2T_06	River Box	>5 m	10 m	50 m	1
W-F-6	B2T_05	River Stour (Trib 4)	>5 m	10 m	50 m	1

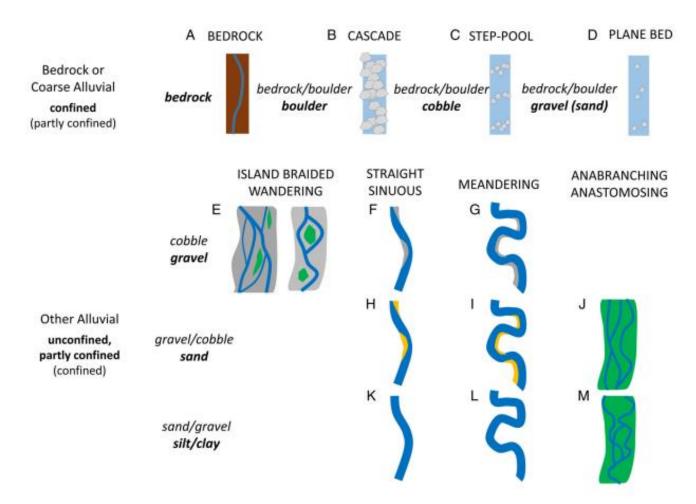
Table 2.2 – Watercourse Field Survey Reaches

Crossing ID	Reach	Watercourse Name	River Width	Module Length	MoRPh5 Length	Number of MoRPh5 Field Surveys
W-F-12 W-F-10	B2T_04	River Stour (Trib 3)	>5 m	10 m	50 m	1
W-G-5	B2T_03	River Stour	5-10 m	20 m	100 m	1
W-G-12	B2T_02	River Stour (Trib 2)	>5 m	10 m	50 m	2
W-G-16	B2T_01	River Stour (Trib 1) (Henny Meadow Fleet)	>5 m	10 m	50 m	2
			-			47

Total MoRPh5 surveys 17

2.3.7 Once the survey was completed, the data gathered on the morphological characteristics of the watercourse surveyed was entered into the Cartographer website (Cartographer Studios Ltd, 2023). The Cartographer website was used along with desk study information to conduct the necessary analyses to provide the River Type (category A to M) as shown in Illustration 2.1.

Illustration 2.1 – River Types Found in England (Taken from Gurnell *et al.,* 2020)



River Condition Assessment

2.3.8 A River Condition Assessment output required for use in the Natural England Biodiversity Metric Tool 3.1 (2021) was also produced categorising each reach as either: Best; Good; Fairly Good; Moderate; Fairly Poor; or Worst.

2.4 Watercourse Habitat Sensitivity

- 2.4.1 A study of watercourse crossings has been undertaken to determine the sensitivity for aquatic ecological features. Watercourses were ranked, determined by whether they appear as Main rivers, named watercourses, tributaries or minor field drains in Ordnance Survey (OS) mapping.
- 2.4.2 Watercourse crossings were first assessed for their potential suitability to support aquatic features. The watercourses scoped out at this stage were typically relic field drains, networks of minor drains in close proximity to each other that could be characterised using a single site, or minor tributaries with limited hydrological connectivity to the Order Limits. This exercise was conducted primarily using aerial imagery (Esri, 2022), available data published on the Environment Agency Ecology and Fish Data Explorer (Environment Agency, 2022f) and the Environment Agency Data Catchment Explorer (Environment Agency, 2022a). Photographs and information collected from the MoRPh surveys were also used in this process.
- 2.4.3 Each watercourse was then classified as high, moderate or low sensitivity for aquatic ecological features. Sensitivity was determined by an experienced field surveyor. This took cognisance of the physical habitat observed at each site (aerial photography and/or site photographs), the presence of optimal/suboptimal habitats for species of conservation interest, general aquatic flora and fauna and the potential influence of wider catchment pressures:
 - Low sensitivity habitats: These are typified by either dry, or low-energy river typologies, hydromorphologically inactive, in heavily urbanised or intensively managed settings potentially affected by historic modification or management (dredging, abstraction, intensive adjacent land use). Under these scenarios, low sensitivity habitats would retain a broadly ubiquitous habitat type supporting common aquatic flora and fauna. Macrophytes are likely to be absent with limited suboptimal habitats for fish and invertebrates;
 - **Moderate sensitivity habitats**: These represent watercourses that could support species of conservation interest. These watercourses are generally associated with greater habitat diversity, either in terms of multiple flow or sediment types present, interaction between riparian and aquatic habitats, or absence of obvious environmental stress such as modification and management. These watercourses are likely to be free flowing watercourses that support limited macrophyte cover and areas of sedimentation and channelisation apparent, and/or characterised by a reduced number of habitat types offering suboptimal fish habitat and moderate invertebrate diversity; and
 - **High sensitivity habitats**: These are watercourses containing a diverse range of substrate and flow habitat types, with diverse macrophyte cover, a low degree of siltation and minimal channel modification.

2.5 Limitations

2.5.1 Access for MoRPh5 survey was not possible due to land access constraints at B2T_08 (W-D-3 - River Brett Tributary 3) as shown on ES Figure 7.3.1: Aquatic Ecology Baseline (**application document 6.4**) and no data was collected at this reach. However, other survey locations along the River Box and its tributaries were surveyed and therefore the lack of field data at this specific location does not affect the understanding of the catchment as a whole.

3. Results

3.1 Desk Study

Designated Sites

3.1.1 Seven County Wildlife Sites (CWS) with specific reference to supporting aquatic habitats or features have been identified from within 1km of the Order Limits (Table 3.1). These are shown on ES Figure 7.3.1: Aquatic Ecology Baseline (**application document 6.4**).

Table 3.1 – Designated Sites within 1km of the Order Limits with Aquatic Habitats or Features Specified in their Citations

Designated Site	Distance to the Order Limits	Aquatic Features
Sproughton Park CWS	100m east	Wet grassland, wet woodland and ditches associated with Belstead brook. Supporting Odonata, invertebrates and aquatic/riparian mammals.
Valley Farm Meadow CWS	Within	Waterlogged marsh grassland including bistort (<i>Persicaria bistorta</i>) which is considered rare in Suffolk.
River Brett (sections) CWS	400m south	Highly diverse wetland flora comprising flowering rush (<i>Butomus umbellatus</i>), reedmace (<i>Typha</i> species), greater pond sedge (<i>Carex riparia</i>), starwort (<i>Callitriche</i> species), mare's tail (<i>Equisetum arvense</i>) and river water dropwort (<i>Oenanthe fluviatilis</i>).
Layham Pit Woodland and Meadow CWS	Within	Wet grassland and wet woodland.
Bushy Park Wood CWS	Immediately adjacent (south)	Two streams arising from wet flushes, flowing through woodland.
River Box Meadows CWS	765m north	Two floodplain meadows of botanical value and associated watercourses.
Assington Meadows CWS	495m north	Stony base watercourse giving rise to flush areas which support a diverse wet grassland community.

3.1.2 It is acknowledged that the Stour and Orwell Estuaries Special Protection Area and Ramsar sites are hydrologically connected to the crossings within the Order Limits (approximately 5.7km to nearest point). These are the assessed in the Habitats Regulations Assessment Report (**application document 5.3**).

Fish

3.1.3 Fisheries data obtained from the Environment Agency for waterbodies that cross the Order Limits is shown in Table 3.2, with sites principally focussed on the main river crossings. Fish records obtained from the local biological records centres correlates with the Environment Agency data and these records are shown on ES Figure 7.3.1: Aquatic Ecology Baseline (**application document 6.4**). Very little data was available from tributaries, drains or non-main river waterbodies.

- 3.1.4 The main river crossings support a diverse range of cyprinid fish species, typical of large rivers and streams in lowland settings. A number of species of conservation value were reported across the study area:
 - Annex II Habitats Directive species brook lamprey (*Lampetra planeri*), spined loach (*Cobitis taenia*), and bullhead (*Cottus gobio*); and
 - Species of Principal Importance European Eel (*Anguilla anguilla*), brown/sea trout (*Salmo trutta*) and spined loach.
- 3.1.5 Non-native fish species were recorded at four sites (Shalford Weir, Polstead Mill, Polstead Ford and Hadleigh Town). Non-native fish species included zander (*Sander lucioperca*), rainbow trout (*Oncorhynchus mykiss*) and feral goldfish (*Carassius auratus*).

Site	Fish Species
Belstead Brook – W-AB-4 and W-AB-30	
Layham Hall (2160m downstream)	Bullhead, European eel, minnow
Belstead house (3640m downstream)	Three spined stickleback, brown/sea trout, European eel, stone loach
Alder Carr (470m downstream)	Three spined stickleback, brown/sea trout, stone loach
River Brett – W-C-1	
Hadleigh STW (560m upstream)	Roach, pike, perch, gudgeon, bullhead, stone loach, minnow, European eel, three spined stickleback
Hadleigh Town (2655m upstream)	Roach, dace, pike, perch, gudgeon, three spined stickleback, minnow, bullhead, European eel, feral goldfish
Peyton Hall (4625m upstream)	Brown/sea trout, rudd, dace, stone loach, three spined stickleback, European eel, roach
Waterhouse Farm (2130m downstream)	European eel, minnow, three spined stickleback, stone loach, gudgeon, dace, chub, pike, bullhead, roach, perch, rudd, tench,
River Box – W-E-10	
Peyton Hall Farm (640m upstream)	Dace, minnow, stone loach, gudgeon, bullhead, three spined stickleback
Stone Street (1500m upstream)	Rudd, brown/sea trout, stone loach, three spined stickleback, European eel, chub, dace
Sherbourne House Fm (4600m upstream)	Brown/sea trout, stone loach, three spined stickleback
Polstead Mill (1390m downstream)	Brown/sea trout, rudd, roach, dace, stone loach, feral goldfish, minnow, three spined stickleback, roach x common bream hybrid, European eel, rainbow trout
Polstead Ford (785m downstream)	Brown/sea trout, dace, rudd, stone loach, three spined stickleback, minnow, European eel, chub, rainbow trout, roach,
Scotland Street (3200m downstream)	European eel, three spined stickleback, gudgeon, stone loach, minnow, chub, dace, roach, brown/sea trout, tench, rudd

Table 3.2 – Fish Species Reported (Environment Agency Data, 2022f)

Site	Fish Species
River Stour – W-G-5	
Pitmere A (420m upstream)	Bleak (<i>Alburnus alburnus</i>), bullhead, chub (<i>Leuciscus cephalus</i>), common bream (<i>Abramis brama</i>), dace (<i>Leuciscus leuciscus</i>), European eel, gudgeon (<i>Gobio gobio</i>), lamprey spp, minnow, perch (<i>Perca fluviatilis</i>), pike (<i>Esox lucius</i>), roach (<i>Rutilus rutilus</i>), ruffe (<i>Gymnocephalus cernua</i>), spined loach, stone loach (<i>Barbatula barbatula</i>), tench (<i>Tinca tinca</i>)
Lamarsh FGS A (1230m downstream)	Roach, dace, chub, pike, perch, gudgeon, minnow, European eel, common bream, tench, ruffe, roach, common bream hybrid, spined loach, bullhead, stone loach, three spined stickleback, bleak
Shalford Weir (2115m upstream)	Roach, barbel (<i>Barbus barbus</i>), pike, perch, chub, tench, gudgeon, minnow, spined loach, European eel, ruffe, dace, common bream, stone loach, bullhead, zander, three spined stickleback
Bakers Mill A (5000m upstream)	Roach, pike, perch, chub, gudgeon, European eel, tench, ruffe, stone loach, minnow, bullhead, dace, spined loach
Bures Bridge A (3900m downstream)	Roach, perch, dace, pike, tench, chub, common bream, bullhead, roach x bream hybrid, ruffe, stone loach, spined loach, European eel, rudd (<i>Scardinius erythrophthalmus</i>), bleak, brook lamprey, gudgeon
Henny Meadow Fleet – W-G-16 and W-G	G-19
Great Henny (Within the Order Limits)	Bullhead (Cottus gobio), minnow (Phoxinus phoxinus), spined loach
Daws Hall (1200m upstream)	Three spined stickleback (<i>Gasterosteus aculeatus</i>), brook lamprey (<i>Lampetra planeri</i>), bullhead, minnow

Invertebrates

3.1.6 Desk study data obtained from the Environment Agency for invertebrates for four crossings across the Order Limits is listed in Table 3.3. This data demonstrates good freshwater habitat quality, and typical invertebrate rich communities.

Table 3.3 – Invertebrate Survey Data (Environment Agency, 2022f)

Site	Invertebrate Species
Belstead Brook (W-AB-4)	Relatively diverse community indicating good water quality.
0.2km upstream	No notable species
Spring Brook (W-AB-32)	Relatively diverse community indicating moderate - good water quality.
1.2km downstream	No notable species
River Brett (W-C-1)	Relatively diverse community indicating good water quality.
1.6km upstream	No notable species
River Stour (W-G-5)	Relatively diverse community indicating good water quality.
0.8km upstream	No notable species

3.1.7 Two aquatic invertebrate species of conservation interest were identified in the SBIS records. The scarce chaser (*Libellula fulva*) was reported from the Rivers Stour, Box and

Brett and their tributaries. This species favours lowland river floodplains and slow flowing meandering rivers with good water quality and stands of submerged and floating plants. Prolific stands of emergent vegetation are associated with the presence of the species. Scarce chaser populations are now considered stable in the UK. A single record of the water beetle (*Nebrioporous depressus*) was provided for the River Box. No other species of conservation interest were reported from EWT or EFC.

- 3.1.8 Environment Agency data identified freshwater shrimp (*Crangonyx pseudogracilis*) and freshwater snail (*Potamopygrus antipodarium*). These species are considered naturalised non-native species and are widely found within waterbodies in the study area.
- A number of pond and stream features were surveyed in 2013 for aquatic invertebrates. Invertebrate samples were collected at six sites, as shown on ES Figure 7.3.1: Aquatic Ecology Baseline (**application document 6.4**) and analysed to species level. No species of conservation interest were recorded from any of the pond or riverine sites. All species were considered ubiquitous to the habitat types present.

Macrophytes and Phytobenthos

- 3.1.10 No phytobenthos data was identified within 2km of the Order Limits between 2010 and 2022.
- 3.1.11 The Environment Agency (2022f) provided macrophyte data for the River Box, located approximately 1.3km downstream of the Order Limits. This did not include any notable, protected or non-native aquatic flora but supported a community of commonly occurring species, typical of the physical habitat on site.
- 3.1.12 SBIS provided records for a number of aquatic and semi aquatic macrophytes species on watercourses within the study area. All species are considered to be common and ubiquitous to the habitats they were recorded in.

3.2 Field Survey

MoRPh Survey

3.2.1 ES Figure 7.3.1: Aquatic Ecology Baseline (**application document 6.4**) shows the MoRPh5 survey locations. The river type of each reach is shown in the final column in Table 3.4. Photographs of each MoRPh survey reach are shown in Annex A. River types H, K and F were identified (see Illustration 2.1).

Crossing ID	Associated MoRPh5/ Subreach	Watercourse	Sinuosity Index	Reach Valley Gradient	Coarsest Bed Material	Average Bed Material	River Type
W-AB-30	B2T_14_01	Belstead Brook	1.024258	1.92E-06	во	GP	F
W-AB-32	B2T_13_01	Spring Brook	1.014122	0.00807	GP	GP	F
W-AB-4	B2T_12_01	Belstead Brook	1.072027	0.004188	во	GP	F
W-AB-46	B2T_11_01	River Brett (Trib 2)	1.071106	9.02E-06	GP	SA	Н
W-AB-47	B2T_10_01	River Brett (Trib 1)	1.040724	0.013575	SA	SA	Н
W-C-1	B2T_09_01	River Brett	1.107826	8.70E-04	GP	SA	Н

Table 3.4 – River Type Results

Crossing ID	Associated MoRPh5/ Subreach	Watercourse	Sinuosity Index	Reach Valley Gradient	Coarsest Bed Material	Average Bed Material	River Type
W-D-8	B2T_07_01	River Box (Trib 1)	1.025826	0.009738	GP	SA	Н
W-E-2	B2T_07_02						
W-E-10	B2T_06_01	River Box	1.296465	0.00171	GP	SA	Н
W-F-6	B2T_05_01	River Stour (Trib 4)	1.021231	0.004246	SA	SI	К
W-F-12 W-F-10	B2T_04_01	River Stour (Trib 3)	1.056791	0.012778	GP	SA	Η
W-G-5	B2T_03_01	River Stour	1.156118	0.002637	GP	SA	Н
W-G-12	B2T_02_01	River Stour (Trib 2)	1.053604	0.012089	GP	SA	Н
W-G-12	B2T_02_02						
W-G-16	B2T_01_01	River Stour (Trib 1)	1.089252	0.008411	GP	SA	Н
W-G-19	B2T_01_02	(Henny Meadow Fleet)					

River Condition Assessment

- 3.2.2 A summary of the River Condition Assessment results are shown in Table 3.5with the full data provided in Annex B.
- 3.2.3 An 'overdeep' assessment was carried out based on channel dimensions recorded during the MoRPh surveys to determine whether reaches were classed as 'overdeep'. This is indicated by a width:depth ratio less than 4. The condition class of reaches found to be 'overdeep' have been dropped by one class. These changes are present in Table 3.5.

Crossing ID	Associated MoRPh5/ Subreach	River Shape	Average Width (m)	Average of Positive Indicators	Average of Negative Indicators	Condition Score (Preliminary)	Baseline Condition Class (Final) with 'Overdeep' Assessment
W-AB-30	B2T_14_01	1.73913	4	2	-0.46154	1.538462	Moderate
W-AB-32	B2T_13_01	0.796178	2.5	1.789474	-0.30769	1.481781	Moderate
W-AB-4	B2T_12_01	2.329546	4.1	1.842105	-0.30769	1.534413	Moderate
W-AB-46	B2T_11_01	1.791045	2.4	1.842105	-0.07692	1.765182	Moderate
W-AB-47	B2T_10_01	1.422222	0.64	2.052632	-0.07692	1.975709	Moderate
W-C-1	B2T_09_01	3.636364	8	1.263158	-0.30769	0.955466	Moderate
W-E-2	B2T_07_02	1.027397	1.5	2.157895	-0.07692	2.080972	Moderate

Table 3.5 – River Condition Assessment Results

Crossing ID	Associated MoRPh5/ Subreach	River Shape	Average Width (m)	Average of Positive Indicators	Average of Negative Indicators	Condition Score (Preliminary)	Baseline Condition Class (Final) with 'Overdeep' Assessment
W-D-8	B2T_07_01	0.115385	0.3	1.157895	-0.15385	1.004049	Fairly Poor
W-E-10	B2T_06_01	1.754386	4	1.684211	-0.46154	1.222672	Fairly Poor
W-F-6	B2T_05_01	1.724138	2	1.526316	-0.15385	1.37247	Moderate
W-F-12 W-F-10	B2T_04_01	0.991304	1.14	2.210526	0	2.210526	Moderate
W-G-5	B2T_03_01	2	8	0.894737	-0.46154	0.433198	Fairly Poor
W-G-12	B2T_02_02	1.197183	1.7	1.684211	-1.23077	0.453441	Moderate
W-G-12	B2T_02_01	1.875	1.8	1.842105	-0.23077	1.611336	Moderate
W-G-19	B2T_01_02	1.209678	3	1.473684	-1.30769	0.165992	Poor
W-G-16	B2T_01_01	0.882353	1.8	1.578947	-0.38462	1.194332	Fairly Poor

- 3.2.4 The preliminary condition scores provided in the penultimate column in Table 3.5 were referenced against the river type threshold scores (Gurnell, *et al.*, 2020) to determine the baseline condition class. Four of the 16 subreaches achieved 'fairly poor' condition. Five subreaches achieved 'moderate' condition and eight achieved 'fairly good' condition.
- 3.2.5 River shape (third column in Table 3.5) is calculated to determine the potential of the surveyed channel being sufficiently overdeep to adversely affect river connectivity. All subreaches scored below 4 the threshold whereby the river is highly likely to be overdeep. This suggests that all rivers in the area are likely to be overdeep, reducing their condition score.

3.3 Watercourse Habitat Sensitivity

3.3.1 A summary of the Watercourse Habitat Sensitivity results is shown in Table 3.5with the full data provided in Annex C. Eighty watercourses were screened out at the desk study stage. These were typically relic field drains, networks of minor drains in close proximity to each other that could be characterised using a single site, or minor tributaries with limited hydrological connectivity to the Order Limits. The remaining watercourses were surveyed on site to assess the watercourse habitat sensitivity (Table 3.6). Of the scoped in watercourses 23 were dry at the time of survey and are not shown in Table 3.6.

Crossing ID	Name	Habit	at Sui	tability	/	Notes and Sensitivity Category (green = low; yellow = moderate)				
		Salmonid	European eel	Lamprey	Bullhead	Cyprinidae	WC Crayfish	Invertebrates	Macrophytes (%)	
W-AB-4	Unnamed	Ν	Y	Ν	Y	Y	Ν	Ν	0	Shaded, woodland stream, shallow.
W-AB-30	Unnamed	Ν	Y	Ν	Y	Y	Ν	Ν	0	Mixed gravel, low flow diversity
W-AB-32	Unnamed	Ν	Ν	Ν	Y	Ν	Ν	Y	0	Very shallow, shaded
W-AB-46	Unnamed	Ν	Y	Ν	Ν	Ν	Ν	Y	0	Heavily shaded, woody stream, shallow
W-AB-47	Unnamed	Ν	Ν	Ν	Ν	Ν	Ν	Ν	0	Minor tributary, very shallow
W-C-1	River Brett	Ν	Y	Ν	Ν	Y	Ν	Y	2	Main watercourse. Deep, wide, glide flows
W-D-5 / W-D-7	Unnamed	Ν	Ν	Ν	Y	Ν	Ν	Ν	0	Wooded stream. Very shallow, heavy shade
W-D-8	Unnamed	Ν	Ν	Ν	Ν	Ν	Ν	Ν	0	Minor tributary. Very shallow, shaded
W-E-1	Unnamed	Ν	Ν	Ν	Ν	Ν	Ν	Ν	2	Minor tributary. Very shallow, shaded
WE-10	River Box	Ν	Y	Ν	Y	Y	Ν	Y	15	Shallow, flow and substrate diversity
W-F-6	Unnamed	Ν	Y	Ν	Ν	Y	Ν	Y	0	Heavily shaded, shallow, substrate diversity
W-F-10/ W-F-12	Unnamed	Ν	Ν	Ν	Ν	Ν	Ν	Ν	0	Minor tributary. Very narrow
W-G-5	River Stour	Y	Y	Ν	Y	Y	Y	Y	5	Main river. Deep, glide flows
W-G-8	Unnamed	Ν	Y	Ν	Ν	Y	Ν	Ν	0	Minor tributary. No cover, wooded stream
W-G-12	Unnamed	Ν	Y	Ν	Ν	Y	Ν	Y	20	Heavily shaded wooded stream, filamentous algae
W-G-17 / W-G-18	Unnamed	Ν	Ν	Ν	Ν	Ν	Ν	Ν	50	Pooled area, heavily silted

Table 3.6 - Habitat sensitivity of surveyed watercourses

Crossing ID	Name	Habit Salmonid	at Suit	tability ambrev	Bullhead	Cyprinidae	WC Crayfish	nvertebrates	Macrophytes (%)	Notes and Sensitivity Category (green = low; yellow = moderate)
W-G-19	Henny Meadow Fleet	Y	Y	Ν	Ν	Y	Ν	Y	0	Suitable for coarse and salmonid species but heavily shaded

- 3.3.2 Twelve watercourses had low ecological sensitivity and tended to be shallow, narrow streams in a woodland setting. These sites were heavily shaded from the woodland canopy resulting in poor riparian cover or in-channel macrophyte growth. Watercourses typically were either low energy or held very low water levels, reducing habitat diversity for aquatic features.
- 3.3.3 Five watercourses had moderate sensitivity habitats and were larger watercourses including the Rivers Brett, Box and Stour. These had a mix of habitat types for aquatic flora and fauna and sufficient water depth to allow year-round utilisation. No high sensitivity habitats for aquatic ecology features were identified.

Photograph 3.1a and b – River Stour (W-G-5) and River Brett (W-C-1)



Annex A. MoRPh Survey Photographs

Reach	Description	Photograph
Belstead Brook W-AB-30 B2T_14_01	Upstream of the midpoint at subreach B2T_14_01.	
Belstead Brook W-AB-30 B2T_14_01	Downstream of the midpoint at subreach B2T_14_01.	
Spring Brook W-AB-32 B2T_13_01	Upstream of the midpoint at subreach B2T_13_01.	
Spring Brook W-AB-32 B2T_13_01	Downstream of the midpoint at subreach B2T_13_01.	

Reach	Description	Photograph
Belstead Brook W-AB-4 B2T_12_01	Upstream of the midpoint at subreach B2T_12_01.	
Belstead Brook W-AB-4 B2T_12_01	Downstream of the midpoint at subreach B2T_12_01.	
River Brett tributary 2 W-AB-46 B2T_11_01	Upstream of the midpoint at subreach B2T_11_01.	
River Brett tributary 2 W-AB-46 B2T_11_01	Downstream of the midpoint at subreach B2T_11_01.	

Reach	Description	Photograph
River Brett tributary 1 W-AB-47 B2T_10_01	Upstream of the midpoint at subreach B2T_10_01.	
River Brett tributary 1 W-AB-47 B2T_10_01	Downstream of the midpoint at subreach B2T_10_01.	
River Brett W-C-1 B2T_09_01	Upstream of the midpoint at subreach B2T_09_01.	
River Brett W-C-1 B2T_09_01	Downstream of the midpoint at subreach B2T_09_01.	

Reach	Description	Photograph
W-E-2 B2T_07_02	Upstream of the midpoint at subreach B2T_07_02.	
W-E-2 B2T_07_02	Downstream of the midpoint at subreach B2T_07_02.	
River Box tributary 1 W-E-14 B2T_07_01	Upstream of the midpoint at subreach B2T_07_01.	
River Box tributary 1 W-E-14 B2T_07_01	Downstream of the midpoint at subreach B2T_07_01.	

Reach	Description	Photograph
River Box W-E-10 B2T_06_01	Upstream of the midpoint at subreach B2T_06_01.	
River Box W-E-10 B2T_06_01	Downstream of the midpoint at subreach B2T_06_01.	
River Stour tributary 4 W-F-6 B2T_05_01	Upstream of the midpoint at subreach B2T_05_01.	
River Stour tributary 4 W-F-6 B2T_05_01	Downstream of the midpoint at subreach B2T_05_01.	

Reach	Description	Photograph
River Stour tributary 3 W-F-12 W-F-10 B2T_04_01	Upstream of the midpoint at subreach B2T_04_01.	
River Stour tributary 3 W-F-12 W-F-10 B2T_04_01	Downstream of the midpoint at subreach B2T_04_01.	
River Stour W-G-5 B2T_03_01	Upstream of the midpoint at subreach B2T_03_01.	
River Stour W-G-5 B2T_03_01	Downstream of the midpoint at subreach B2T_03_01	

Reach	Description	Photograph
River Stour tributary 2 W-G-12 B2T_02_02	Upstream of the midpoint at subreach B2T_02_02.	
River Stour tributary 2 W-G-12 B2T_02_02	Downstream of the midpoint at subreach B2T_02_02.	
W-G-12 B2T_02_01	Upstream of the midpoint at subreach B2T_02_01.	
W-G-12 B2T_02_01	Downstream of the midpoint at subreach B2T_02_01.	

Reach	Description	Photograph
River Stour tributary 1 (Henny Meadow Fleet) W-G-19 B2T_01_02	Upstream of the midpoint at subreach B2T_01_02.	
River Stour tributary 1 (Henny Meadow Fleet) W-G-19 B2T_01_02	Downstream of the midpoint at subreach B2T_01_02.	
River Stour tributary 1 (Henny Meadow Fleet) W-G-16 B2T_01_01	Upstream of the midpoint at subreach B2T_01_01.	
River Stour tributary 1 (Henny Meadow Fleet) W-G-16 B2T_01_01	Downstream of the midpoint of subreach B2T_01_01.	

Annex B. River Condition Assessment

Table B1 – Eastern Watercourses (Bramford Substation to Polstead)

		Location							
Indicator Descriptor	Indicator	W-D-8 B2T_07_01	B2T_07_02 B2T_09_01 B2T_10_01 B2T_11_01 B2T_12_01 B2T_13_0 1.03 3.64 1.42 1.79 2.33 0.80 2.16 1.26 2.05 1.84 1.84 1.79 -0.08 -0.31 -0.08 -0.31 -0.31 -0.31 2.08 0.96 1.98 1.77 1.53 1.48 Moderate Moderate Moderate Moderate Moderate Fairly Pool 2 2 3 3 2	W-AB-31 B2T_13_01	W-AB-30 B2T_14_01				
River shape		0.12	1.03	3.64	1.42	1.79	2.33	0.80	1.74
Positive Index Average		1.16	2.16	1.26	2.05	1.84	1.84	1.79	2
Negative Index Average		-0.15	-0.08	-0.31	-0.08	-0.08	-0.31	-0.31	-0.46
Preliminary Condition Score		1.00	2.08	0.96	1.98	1.77	1.53	1.48	1.54
Final Condition Class inc. 'overdeep'		Fairly Poor	Moderate	Moderate	Moderate	Moderate	Moderate	Fairly Poor	Moderate
Bank Top									
Vegetation structure	B1	2	2	2	3	3	2	2	1
Tree feature richness	B2	1	2	0	2	1	2	2	0
Water-related features	B3	0	3	1	4	0	0	0	0
Non-Native Invasive Plant Species (NNIPS) cover	B4	0	0	0	0	0	0	0	0
Managed ground cover	B5	-2	-1	-2	-1	-1	-2	-2	-3

		Location							
		W-D-8	W-E-2	W-C-1	W-AB-47	W-AB-46	W-AB-4	W-AB-31	W-AB-30
Indicator Descriptor	Indicator	B2T_07_01	B2T_07_02	B2T_09_01	B2T_10_01	B2T_11_01	B2T_12_01	B2T_13_01	B2T_14_01
Bank Face									
Riparian vegetation structure	C1	2	3	2	2	2	3	3	2
Tree feature richness	C2	2	4	2	3	3	3	3	4
Natural bank profile extent	C3	3	3	3	2	3	3	3	3
Natural bank profile richness	C4	2	4	4	2	3	3	4	4
Natural bank material richness	C5	1	1	1	1	3	1	1	1
Bare sediment extent	C6	3	3	0	2	3	4	3	3
Artificial bank profile extent	C7	0	0	0	0	0	0	0	0
Reinforcement extent	C8	0	0	0	0	0	0	0	0
Reinforcement material severity	C9	0	0	0	0	0	0	0	0
NNIPS cover	C10	0	0	0	0	0	0	0	0
Channel Water Margins									
Aquatic vegetation extent	D1	0	1	2	3	0	0	0	1
Aquatic MoRPhotype richness	D2	0	1	2	2	0	0	0	1
Physical feature extent	D3	0	1	1	1	1	2	1	1
Physical feature richness	D4	0	1	1	1	2	1	1	2

		Location							
Indicator Descriptor	Indicator	W-D-8 B2T_07_01	W-E-2 B2T_07_02	W-C-1 B2T_09_01	W-AB-47 B2T_10_01	W-AB-46 B2T_11_01	W-AB-4 B2T_12_01	W-AB-31 B2T_13_01	W-AB-30 B2T_14_01
Artificial features	D5	0	0	0	0	0	0	0	-1
Channel Bed									
Aquatic MoRPhotype richness	E1	0	1	2	1	0	0	0	2
Tree features richness	E2	2	3	1	3	4	3	3	3
Hydraulic features richness	E3	1	2	0	2	1	2	2	2
Natural features extent	E4	0	2	0	1	2	2	2	3
Natural features richness	E5	0	1	0	1	1	1	1	1
Material richness	E6	3	3	0	3	3	3	3	4
Siltation	E7	0	0	0	0	0	-2	-2	-2
Reinforcement extent	E8	0	0	0	0	0	0	0	0
Reinforcement severity	E9	0	0	0	0	0	0	0	0
Artificial features severity	E10	0	0	0	0	0	0	0	0
NNIPS extent	E11	0	0	0	0	0	0	0	0
Filamentous algae extent	E12	0	0	-2	0	0	0	0	0

Table B2 – Western Watercourses (Polstead to Twinstead)

		Location							
Indicator Descriptor	Indicator	W-G-16 B2T_01_01	W-G-19 B2T_01_02	W-G-12 B2T_02_01	W-G-12 B2T_02_02	W-G-5 B2T_03_01	W-F-10 and 12 B2T_04_01	W-F-6 B2T_05_01	W-E-10 B2T_06_01
River shape		0.88	1.21	1.88	1.20	2	0.99	1.72	1.75
Positive Index Average		1.58	1.47	1.84	1.68	0.90	2.21	1.53	1.68
Negative Index Average		-0.39	-1.31	-0.23	-1.23	-0.46	0	-0.15	-0.46
Preliminary Condition Score		1.19	0.17	1.61	0.45	0.43	2.21	1.37	1.22
Final Condition Class inc 'overdeep'		Fairly Poor	Poor	Moderate	Moderate	Fairly Poor	Moderate	Moderate	Fairly Poor
Bank Top									
Vegetation structure	B1	2	2	4	3	2	3	2	2
Tree feature richness	B2	0	1	3	3	0	3	2	0
Water-related features	B3	0	0	2	0	0	2	0	0
NNIPS cover	B4	0	0	0	0	-1	0	-1	-1
Managed ground cover	B5	-2	-3	-1	-4	-2	0	0	-2
Bank Face									
Riparian vegetation structure	C1	2	2	2	3	2	2	3	2
Tree feature richness	C2	3	2	3	3	1	2	2	2
Natural bank profile extent	СЗ	3	2	3	2	2	3	2	3

		Location							
Indicator Descriptor	Indicator	W-G-16 B2T_01_01	W-G-19 B2T_01_02	W-G-12 B2T_02_01	W-G-12 B2T_02_02	W-G-5 B2T_03_01	W-F-10 and 12 B2T_04_01	W-F-6 B2T_05_01	W-E-10 B2T_06_01
Natural bank profile richness	C4	4	4	3	4	1	2	3	3
Natural bank material richness	C5	1	2	1	1	1	1	1	1
Bare sediment extent	C6	3	2	3	4	0	3	3	3
Artificial bank profile extent	C7	0	-2	0	-2	0	0	0	0
Reinforcement extent	C8	0	-2	0	-3	0	0	0	0
Reinforcement material severity	C9	0	-3	0	-2	0	0	0	0
NNIPS cover	C10	0	0	0	0	-3	0	-1	-3
Channel Margin									
Aquatic vegetation extent	D1	2	0	0	0	3	2	1	3
Aquatic MoRPhotype richness	D2	1	0	0	0	2	1	0	2
Physical feature extent	D3	1	1	1	1	0	1	1	0
Physical feature richness	D4	1	1	1	1	0	1	1	0
Artificial features	D5	0	-1	0	-1	0	0	0	0
Channel Bed									
Aquatic MoRPhotype richness	E1	1	0	0	0	2	2	1	1
Tree features richness	E2	1	3	3	3	1	3	2	2

National Grid | April 2023 | Bramford to Twinstead Reinforcement

		Location							
Indicator Descriptor	Indicator	W-G-16 B2T_01_01	W-G-19 B2T_01_02	W-G-12 B2T_02_01	W-G-12 B2T_02_02	W-G-5 B2T_03_01	W-F-10 and 12 B2T_04_01	W-F-6 B2T_05_01	W-E-10 B2T_06_01
Hydraulic features richness	E3	1	1	1	1	0	3	1	2
Natural features extent	E4	1	1	1	0	0	3	1	2
Natural features richness	E5	1	1	1	0	0	2	1	1
Material richness	E6	2	3	3	3	0	3	2	3
Siltation	E7	-3	-2	-2	0	0	0	0	0
Reinforcement extent	E8	0	0	0	0	0	0	0	0
Reinforcement severity	E9	0	0	0	0	0	0	0	0
Artificial features severity	E10	0	-4	0	-4	0	0	0	0
NNIPS extent	E11	0	0	0	0	0	0	0	0
Filamentous algae extent	E12	0	0	0	0	0	0	0	0

Annex C. Watercourse Habitat Sensitivity Assessment

Key:										
Screened out	by desk study									
Dry channel										
Low ecologica	al sensitivity									
Moderate ecc	logical sensitivity									
High ecologic	al sensitivity									
Crossing ID	Name	Hab	itat s	uitab	oility					Notes and Sensitivity
									()	Category
		Salmonid	European eel	Lamprey	Bullhead	Cyprinidae	WC Crayfish	Invertebrates	Macrophytes (%)	
W-AB-1	Unnamed watercourse									Screened out by desk study
W-AB-2	Unnamed watercourse									Screened out by desk study
W-AB-3	Unnamed watercourse									Screened out by desk study
W-AB-4	Unnamed watercourse	Ν	Y	Ν	Y	Y	Ν	Ν	0	Shaded, woodland stream, shallow.
W-AB-5-1	Unnamed watercourse									Dry
W-AB-6-1	Unnamed watercourse									Dry
W-AB-7-1	Unnamed watercourse									Dry
W-AB-8-1	Unnamed watercourse									Dry
W-AB-9-1	Unnamed watercourse									Screened out by desk study
W-AB-10-1	Unnamed watercourse									Screened out by desk study
W-AB-11-1	Unnamed watercourse									Screened out by desk study
W-AB-12-1	Unnamed watercourse									Dry
W-AB-13-1	Unnamed watercourse									Screened out by desk study
W-AB-14-1	Unnamed watercourse									Screened out by desk study

Crossing ID										Notes and Sensitivity Category
		Salmonid	European eel	Lamprey	Bullhead	Cyprinidae	WC Crayfish	Invertebrates	Macrophytes (%)	
W-AB-15-1	Unnamed watercourse									Screened out by desk study
W-AB-16-1	Unnamed watercourse									Screened out by desk study
W-AB-17-1	Unnamed watercourse									Dry
W-AB-19-1	Unnamed watercourse									Dry
W-AB-20-1	Unnamed watercourse									Dry
W-AB-21-1	Unnamed watercourse									Screened out by desk study
W-AB-22-1	Unnamed watercourse									Screened out by desk study
W-AB-23-1	Unnamed watercourse									Screened out by desk study
W-AB-24-1	Unnamed watercourse									Dry
W-AB-25-1	Unnamed watercourse									Screened out by desk study
W-AB-26-1	Unnamed watercourse									Dry
W-AB-27-1	Unnamed watercourse									Screened out by desk study
W-AB-28-1	Unnamed watercourse									Screened out by desk study
W-AB-29	Unnamed watercourse									Screened out by desk study
W-AB-30	Unnamed watercourse	Ν	Y	Ν	Y	Y	Ν	Ν	0	Mixed gravel, low flow diversity
W-AB-31	Unnamed watercourse									Screened out by desk study
W-AB-32	Unnamed watercourse	Ν	Ν	Ν	Y	Ν	Ν	Y	0	Very shallow, shaded
W-AB-33	Unnamed watercourse									Screened out by desk study
W-AB-34	Unnamed watercourse									Dry
W-AB-35	Unnamed watercourse									Screened out by desk study
W-AB-36	Unnamed watercourse									Dry
W-AB-37	Unnamed watercourse									Dry
W-AB-38	Unnamed watercourse									Dry
W-AB-39	Unnamed watercourse									Dry

Crossing ID	Name	Hab	itat s	uitab	oility				_	Notes and Sensitivity Category
		Salmonid	European eel	Lamprey	Bullhead	Cyprinidae	WC Crayfish	Invertebrates	Macrophytes (%)	
W-AB-40	Unnamed watercourse									Screened out by desk study
W-AB-41	Unnamed watercourse									Dry
W-AB-42	Unnamed watercourse									Dry
W-AB-43	Unnamed watercourse									Screened out by desk study
W-AB-44	Unnamed watercourse									Screened out by desk study
W-AB-45	Unnamed watercourse									Dry
W-AB-46	Unnamed watercourse	Ν	Y	Ν	Ν	Ν	Ν	Y	0	Heavily shaded, woody stream, shallow
W-AB-47	Unnamed watercourse	Ν	Ν	Ν	Ν	Ν	Ν	Ν	0	Minor tributary, very shallow
W-C-1	River Brett	Ν	Y	Ν	Ν	Y	Ν	Y	2	Main watercourse, deep, wide, glide flows
W-D-1	Unnamed watercourse									Screened out by desk study
W-D-2	Unnamed watercourse									Screened out by desk study
W-D-3	Unnamed watercourse									Screened out by desk study
W-D-4	Unnamed watercourse									Screened out by desk study
W-D-7 W-D-5	Unnamed watercourse	Ν	Ν	Ν	Y	Ν	Ν	Ν	0	Wooded stream, very shallow, heavy shade
W-D-6	Unnamed watercourse									Screened out by desk study
W-D-8	Unnamed watercourse	Ν	Ν	Ν	Ν	Ν	Ν	Ν	0	Minor tributary, very shallow, shaded
W-E-1	Unnamed watercourse									Screened out by desk study
W-E-2	Unnamed watercourse	Ν	Ν	Ν	Ν	Ν	Ν	Ν	2	Minor tributary, very shallow, shaded
W-E-3	Unnamed watercourse									Screened out by desk study
W-E-4	Unnamed watercourse									Screened out by desk study
W-E-5	Unnamed watercourse									Screened out by desk study

Crossing ID	Name	Hab	itat s	uitab	oility					Notes and Sensitivity Category
		Salmonid	European eel	Lamprey	Bullhead	Cyprinidae	WC Crayfish	Invertebrates	Macrophytes (%)	
W-E-6	Unnamed watercourse									Screened out by desk study
W-E-7	Unnamed watercourse									Screened out by desk study
W-E-8	Unnamed watercourse									Screened out by desk study
W-E-9	Unnamed watercourse									Screened out by desk study
W-E-10	River Box	Ν	Y	Ν	Y	Y	Ν	Y	15	Shallow, flow and substrate diversity
W-E-11	Unnamed watercourse									Screened out by desk study
W-E-12	Unnamed watercourse									Screened out by desk study
W-E-13	Unnamed watercourse									Screened out by desk study
W-E-14	Unnamed watercourse									Screened out by desk study
W-F-1	Unnamed watercourse									Screened out by desk study
W-F-2	Unnamed watercourse									Screened out by desk study
W-F-3	Unnamed watercourse									Screened out by desk study
W-F-4	Unnamed watercourse									Screened out by desk study
W-F-5	Unnamed watercourse									Screened out by desk study
W-F-6	Unnamed watercourse	Ν	Y	Ν	Ν	Y	Ν	Y	0	Heavily shaded, shallow, substrate diversity
W-F-7	Unnamed watercourse									Screened out by desk study
W-F-8	Unnamed watercourse									Screened out by desk study
W-F-9	Unnamed watercourse									Screened out by desk study
W-F-10	Unnamed watercourse	Ν	Ν	Ν	Ν	Ν	Ν	Ν	0	Minor tributary, very narrow
W-F-11	Unnamed watercourse									Screened out by desk study
W-F-12	Unnamed watercourse									Screened out by desk study
W-F-13	Unnamed watercourse									Screened out by desk study
W-F-14	Unnamed watercourse									Screened out by desk study

Crossing ID	Name	Hab	itat s	uitab	oility				-	Notes and Sensitivity Category
		Salmonid	European eel	Lamprey	Bullhead	Cyprinidae	WC Crayfish	Invertebrates	Macrophytes (%)	
W-F-15	Unnamed watercourse									Screened out by desk study
W-G-1	Unnamed watercourse									Dry
W-G-2	Unnamed watercourse									Dry
W-G-3 & W- G-4	Unnamed watercourse									Dry
W-G-5	River Stour	Y	Y	Ν	Y	Y	Y	Y	5	Main river, deep, glide flows
W-G-6	Unnamed watercourse									Dry
W-G-7	Unnamed watercourse									Screened out by desk study
W-G-8	Unnamed	Ν	Y	Ν	Ν	Y	Ν	Ν	0	Minor tributary, no cover, wooded stream
W-G-9	Unnamed watercourse									Screened out by desk study
W-G-10	Unnamed watercourse									Dry
W-G-11	Unnamed watercourse									Screened out by desk study
W-G-12	Unnamed watercourse	Ν	Y	Ν	Ν	Y	Ν	Y	20	Heavily shaded wooded stream, filamentous algae
W-G-16	Henny Meadow Fleet	Y	Y	Ν	Ν	Y	Ν	Y	0	Suitable for coarse and salmonid species, heavily shaded
W-G-17	Unnamed watercourse	Ν	Ν	Ν	Ν	Ν	Ν	Ν	50	Pooled area, heavily silted
W-G-18	Unnamed watercourse									Screened out by desk study
W-G-19	Unnamed watercourse									Screened out by desk study
W-H-1	Unnamed watercourse									Screened out by desk study
W-H-2	Unnamed watercourse									Screened out by desk study
W-H-3	Unnamed watercourse									Screened out by desk study
W-H-4	Unnamed watercourse									Screened out by desk study
W-H-5	Unnamed watercourse									Screened out by desk study

Crossing ID	Name Habitat suitability									Notes and Sensitivity Category
		Salmonid	European eel	Lamprey	Bullhead	Cyprinidae	WC Crayfish	Invertebrates	Macrophytes (%)	
W-H-6	Unnamed watercourse									Screened out by desk study
W-H-7	Unnamed watercourse									Screened out by desk study
W-H-8	Unnamed watercourse									Screened out by desk study
W-H-9	Unnamed watercourse									Screened out by desk study
W-H-10	Unnamed watercourse									Screened out by desk study
W-H-11	Unnamed watercourse									Screened out by desk study
W-H-12	Unnamed watercourse									Screened out by desk study
W-H-13	Unnamed watercourse									Screened out by desk study
W-H-14	Unnamed watercourse									Screened out by desk study
W-H-15	Unnamed watercourse									Screened out by desk study
W-H-16	Unnamed watercourse									Screened out by desk study
W-H-17	Unnamed watercourse									Screened out by desk study
W-H-18	Unnamed watercourse									Screened out by desk study
W-H-19	Unnamed watercourse									Screened out by desk study
W-H-20	Unnamed watercourse									Screened out by desk study

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