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Hoyles Lane, Cottam

Shadow Habitats Regulations Assessment Report

Compiled by Ecology Services Ltd.

on behalf of

Emerald Green on behalf of Bethell Construction Ltd.

November 2023

1 Church Row Chambers
Longton
Preston
Lancashire PR4 5PN.

tel: 01772 614932
fax: 01772 614930
email: info@ecologyservices.co.uk
web: www.ecologyservices.co.uk

Ref: **23152**
Written by: **LR**
Checked: **LES**
Approved: **LES**

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1.0 Introduction

1.1 This Shadow Habitats Regulations Assessment (SHRA) Report has been prepared by Ecology Services Limited on behalf of Emerald Green (on behalf of Bethell Construction Ltd.) to inform proposed installation of a new sewer on land between Hoyles Lane, Cottam, Preston, PR4 0NB (National Grid Reference (NGR) 349815, 432516) and the Lea Gate Pumping Station, Blackpool Road, Clifton, Preston, PR4 0XD (NGR 347877, 430008), hereinafter referred to as 'the site'. The location of the site is shown on Figure 1.

1.2 The site is located within a Natural England (NE) Impact Risk Zone (IRZ) associated with a number of statutorily protected sites. These include Ribble Estuary Site of Special Scientific Interest (SSSI), plus the Ribble and Alt Estuaries Special Protection Area (SPA) and Ramsar site located 2.4km southwest of the site and Newton Marsh SSSI located 2.3km west of the site. The requirements to consult Natural England for the IRZ include planning proposals for pipelines.

1.3 This SHRA Report has therefore been produced to assess the effects of the proposed development upon the Ribble and Alt Estuaries Special Protection Area (SPA) and Ramsar site.

1.4 A meeting was held with Alison Watson, Sustainable Development Lead Adviser, Natural England Cheshire, Greater Manchester, Merseyside and Lancashire Area Team on 31st October 2023 through its Discretionary Advice Service (DAS) to discuss the existing baseline assessments being used to inform HRA, the scope of HRA and SHRA and advice on any required mitigation options. Natural England's advice has been used to inform this SHRA.

2.0 Habitats Regulations Assessment

2.1 Under Article 6 of the Habitats Directive, an assessment is required where a plan or project may give rise to significant effects upon a Natura 2000 site(s) (European site(s) in the UK). A review of European sites in the UK has been undertaken, none of the sites lie within the proposed development boundary, but one site, the Ribble and Alt Estuaries Special Protection Area (SPA) and Ramsar site has been considered as potentially being indirectly affected by the proposals.

2.2 Natura 2000 is the network of areas designated to conserve natural habitats and species that are rare, endangered, vulnerable or endemic within the European Community. These include Special Areas of Conservation (SACs), designated under the Habitats Directive for their habitats and/or species of European importance, and Special Protection Areas (SPAs), classified under Directive 2009/147/EC on the Conservation of Wild Birds for rare, vulnerable and regularly occurring migratory bird species and internationally important wetlands (NB Council Directive 79/409/EEC has now been replaced by Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds).

2.3 The requirements of the Habitats Directive were transposed into English and Welsh law by means of the Conservation of Habitats and Species Regulations 2017 (as amended), through paragraph 3, Article 6 and Paragraph 4, Article 6 of the Habitats Directive. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 will continue the same provision for European protected species, licensing requirements and protected areas after Brexit. This report refers to the National Site Network of European

sites in the UK in relation to the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended).

2.4 As a matter of policy, the English Government has chosen to apply the procedures described below, unless otherwise specified, in respect of Ramsar sites and potential SPAs (pSPAs), even though these are not European sites as a matter of law. Planning authorities should also take note of proposed SACs in their consideration of any planning applications that may affect the site (ODPM Circular 06/2005). Most Ramsar sites are also a SPA or SAC, but the Ramsar features and exact boundary lines may vary from those for which the site is designated as a European site.

2.5 The aim of HRA is to determine, taking into account the site's conservation objectives and qualifying criteria, whether a proposed development either in isolation or in combination with other plans, is likely to have a likely significant effect on a European Site in the UK. Where likely significant effects are identified, an appropriate assessment is required to determine whether the proposal will adversely affect the integrity of the site(s).

2.6 A significant effect is any effect that is likely to undermine the site's conservation objectives in the light of the characteristics and specific environmental conditions of a European Site.

2.7 The integrity of a site is defined as the "coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and / or the levels of populations of the species for which it was designated"[1].

3.0 Description of the Proposals

3.1 The proposals are for the construction of a new sewer c. 4km long. The sewer improvement works commence at the junction of Westward Close and Hoyles Lane and run west to the junction of Sidgreaves Lane, before extending south parallel to the west side of the highway onto agricultural fields and open countryside. The pipeline route continues in a southerly direction, through fields and crossing multiple key features, including various minor and major highways, Lancaster Canal (a wildlife corridor and Biological Heritage Site [BHS]), the Blackpool-Preston railway line, around the western perimeter of Ashton & Lea Golf Club, before crossing Savick Brook (also a BHS). From the south side of Savick Brook, the new sewer runs in a south-westerly direction, crossing the recently completed Preston West Distributor Route (PWDR) before connecting into the existing Lea Gate WwPS. For further detail, refer to drawings 80061057-GHD-MISCE-99-DR-01-00009 and 80061057-GHD-MISCE-99-DR-01-00010 (Figure 2).

3.2 The key construction activities will include:

- Site establishment & compound creation;
- Creation of temporary accesses at Lea Road, Sidgreaves Lane (x2), Darkinson Lane & Riversway;
- Open cut works to install new sewer pipeline; and
- Guided auger boring works underneath the Lancaster Canal, the Preston to Blackpool railway line and Savick Brook.

[1] https://www.gov.uk/guidance/appropriate-assessment

4.0 Habitats Regulation Assessment Process

4.1 Habitats Regulations assessments comprise of four distinct stages, as detailed in Table 1. However, it may not be necessary to undertake all stages, if it can be determined that the works have no significant effects upon a European Site.

Table 1: Habitats Regulations Assessment Process

Stages	Overview
Stage 1 – Screening (ALSE)	Evidence gathering stage which involves the identification of European sites that could be affected by the project, the characteristics of these sites and their conservation objectives. The information collected is then used to assess for likely impacts upon a European site of the proposed development alone or in combination with other plans or projects.
Stage 2 - Appropriate Assessment	Detailed consideration of the impact on the integrity of the European sites of the proposed development alone or in combination. Effects are assessed in respect to the site's conservation objectives, its structure and function, to determine adverse effects on the integrity of the European(s) site. Integrity is described by OPDM Circular 06/2005: Biodiversity and Geological Conservation as "the site's coherence, ecological structure and function across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of species for which it was classified". A Competent Authority must undertake an Appropriate Assessment.
Stage 3 - Assessment of Alternative Solutions	Options identified to potentially have a negative impact should be investigated to identify if there are alternatives that have a lesser effect on the European site(s).
Stage 4 - Assessment where no Alternatives Exist & Negative Impacts Remain	At Stage 4, an assessment is made with regard to whether or not the proposed development is necessary for Imperative Reasons of Overriding Public Interest (IROPI), which is a difficult test to satisfy. If it is, this stage also involves the determination of compensatory measures needed to protect and maintain the overall coherence of the National Site Network of European sites in the UK.

4.2 This Shadow HRA Report has been produced following the recent Court of Justice of the European Union (CJEU) judgement (People over/Wind & Sweetman v Coillte Teoranta Case C323-17), dated 12th April 2018, in Ireland[2].

4.3 The ruling stated:

> *'Article 6(3). must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the*

[2] Under section 6(3) EU (Withdrawal) Act 2018 (as amended), the courts in the UK, with the sole exception of the Supreme Court, will continue to be bound by HRA judgments handed down by the CJEU and by domestic courts prior to 31 December 2020 when interpreting the Conservation of Habitats and Species Regulations 2017 (as amended). This is the case as long as the Conservation of Habitats and Species Regulations 2017 (as amended) remain unmodified by Parliament.

screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site.'

4.4 The assessment shall take into account measures that are standardly adopted as part of the aforementioned activity, at the Screening Stage.

5.0 Identification & Description of European Sites

5.1 Identification of the European sites was obtained in November 2023 utilising the Multi-Agency Geographic Information for the Countryside (MAGIC) website (https://magic.defra.gov.uk/) to locate the European sites in the UK including possible SACs (pSACs) / potential SPAs (pSPAs) / proposed Ramsar Sites.

5.2 The search for European sites in the UK included any sites coincident with the proposed development and sites outside the proposed development area, taking into consideration the designation criteria.

5.3 The site is located approximately 2.4km north east of the Ribble and Alt Estuaries Special Protection Area (SPA) and Ramsar site (see Figure 1). The SPA covers an area of 12,412.31ha and the Ramsar site 13,464ha.

5.4 The citations, data forms and conservation objectives of the above sites are included at Appendix 1. Table 2 below summarises the interest features of the Ribble and Alt Estuaries Special Protection Area (SPA) and Ramsar site taken from Natural England's Conservation Advice for Marine Protected Areas[3].

3 https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9005103&SiteName=ribble%20and%20alt%20estuaries&SiteNameDisplay=Ribble%20and%20Alt%20Estuaries%20SPA&countyCode=25&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=20&HasCA=1

Table 2: Statutory Designated Sites Overview

Site	Designation	Distance	Overview
Ribble and Alt Estuaries	SPA & Ramsar	2.4km south west	*Ribble and Alt Estuaries SPA* Breeding birds: - Common tern *Sterna hirundo* - Lesser black-backed gull *Larus fuscus* - Ruff *Philomachus pugnax* Non-breeding birds: - Bar-tailed godwit *Limosa lapponica* - Bewick's swan *Cygnus columbianus* - Black-tailed godwit *Limosa limosa* - Dunlin *Calidris alpina* - Golden plover *Pluvialis apricaria* - Grey plover *Pluvialis squatarola* - Knot *Calidris canutus* - Oystercatcher *Haematopus ostralegus* - Pink-footed goose *Anser brachyrhynchus* - Pintail *Anas acuta* - Redshank *Tringa totanus* - Ringed plover *Charadrius hiaticula* - Sanderling *Calidris alba* - Shelduck *Tadorna tadorna* - Teal *Anas crecca* - Whooper swan *Cygnus cygnus* - Wigeon *Anas penelope* Seabird assemblage, breeding: The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at over 20,000 seabirds. At the time of classification, the site supported qualifying numbers of black-headed gull (*Chroicocephalus ridibundus*), lesser black-backed gull and common tern in the breeding season.

Site	Designation	Distance	Overview
			Waterbird assemblage, non-breeding: The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting over 20,000 waterbirds in any season. At the time of classification, the site supported 323,861 individual waterbirds (5 year peak mean 1993/4 – 1997/8). These include cormorant (*Phalacrocorax carbo*), Bewick's swan, whooper swan, pink-footed goose, shelduck, wigeon, teal, pintail, scaup (*Aythya marila*), common scoter (*Melanitta nigra*), oystercatcher, ringed plover, golden plover, grey plover, lapwing (*Vanellus vanellus*), knot, sanderling, dunlin, black-tailed godwit, bar-tailed godwit, whimbrel (*Numenius phaeopus*), curlew (*Numenius arquata*) and redshank in the non-breeding season. *Ribble and Alt Estuaries Ramsar site* The site qualifies under Ramsar criterion 2 - This site supports up to 40% of the Great Britain population of natterjack toads *Bufo calamita*. The site qualifies under Ramsar criterion 5 - assemblages of international importance: Species with peak counts in winter: 222,038 waterfowl (5 year peak mean 1998/99-2002/2003) The site qualifies under Ramsar criterion 6 – species/populations occurring at levels of international importance: Species regularly supported during the breeding season: -Lesser black-backed gull Species with peak counts in spring/autumn: -Ringed plover -Grey plover -Red knot -Sanderling -Dunlin -Black-tailed godwit -Common redshank -Lesser black-backed gull

Site	Designation	Distance	Overview
			Species with peak counts in winter: -Tundra (Bewick's) swan -Whooper swan -Pink-footed goose -Common shelduck -Eurasian wigeon -Eurasian teal -Northern pintail -Eurasian oystercatcher -Bar-tailed godwit

The Conservation Objectives of European Sites

5.5 Under the Conservation of Habitats and Species Regulations 2017 (as amended), the appropriate statutory nature conservation body (in this case Natural England) has a duty to communicate the conservation objectives for a European site to the relevant/competent authority responsible for that site. The information provided must also include advice on any operations which may cause deterioration of the features for which the site is designated.

5.6 The Conservation Objectives for a European site are intended to represent the aims of the Habitats and Birds Directives (transposed into English and Welsh law by means of the Conservation of Habitats and Species Regulations 2017 (as amended)) in relation to that site. To this end, habitats and species of European importance in the UK should be maintained or restored to 'favourable conservation status' (FCS), as defined in Article 1 of the Habitats Directive below:

5.7 The conservation status of a natural habitat will be taken as 'favourable' when:

- Its natural range and the area it covers, within that range are stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- Conservation status of typical species is favourable as defined in Article 1(i).

5.8 The conservation status of a species will be taken as favourable when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

5.9 Guidance from the European Commission (Managing Natura 2000 sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC[4]) indicates that the Habitats Directive intends FCS to be applied at the level of an individual site, as well as to habitats and species across their European range. Therefore, in order to properly express the aims of the Habitats Directive for an individual site, the conservation objectives for a site are essentially to maintain (or restore) the habitats and species of the site at (or to) FCS.

5.10 Conservation Objectives are included in Appendix 1, these were obtained from Natural England's website and are for the SPA:

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

[4] Under section 6(2) of the EU (Withdrawal) Act 2018 (as amended), courts and tribunals "may have regard to anything done by the CJEU or another EU entity [i.e. the European Commission] (…) so far as it is relevant to any matter before the court or tribunal". While the legislation is not specifically empowering Local Planning Authorities (LPAs) / the Planning Inspectorate (PINS) to have regard to this Guidance, given that the Courts above them will have this option, it would be logical that the LPA/ PINS could also do so.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*
- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.*

This document should be read in conjunction with the accompanying Supplementary Advice document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

5.11 NE's conservation advice on Operations including feature sensitivities has been reviewed, however there is no reference to installation of pipelines. The scope of potential effects covered by this SHRA was discussed and agreed with NE at the DAS meeting on 31st October 2023.

6.0 Shadow HRA Assessment

Screening European Sites

6.1 The review of European sites has confirmed that the proposed development does not directly affect a European site. The site and surrounding fields have potential to support foraging non-breeding birds associated with the European site.

6.2 A 1% significance threshold is commonly applied in assessment of birds e.g. species qualify under Article 4.1 of the Birds Directive where a site supports more than 1% of the National population of a species and a site qualifies article 4.2 if it supports 1% or more of the biogeographical population of a species.

6.3 Table 3 below details the current national 1% threshold and equivalent 1% threshold levels for the Ribble and Alt Estuaries SPA and Ramsar site) (data sourced from WeBS Report Online[5] for 2017/18-2021/22, Austin et. al., 2023).

Table 3: Significance thresholds

Species	National Threshold	Ribble Estuary Threshold (5-yr mean peak count)	Alt Estuary threshold (5-yr mean peak count)	Ribble and Alt Estuary Threshold (5-yr mean peak count)
Bar-tailed godwit	500	26 (2,584)	40 (3,960)	65 (6,544)
Bewick's swan	44	0.03 (3)	0 (0)	0.03 (3)
Golden plover	4,000	44 (4,370)	0.44 (44)	44 (4,414)
Whooper swan	160	6 (561)	0.05 (5)	6 (566)
Ringed plover	420	46 (4,605)	6 (598)	52 (5,203)
Sanderling	200	57 (5,716)	21 (2,069)	78 (7,785)
Black-tailed godwit	390	41 (4,102)	5 (536)	46 (4,638)
Dunlin	3,400	488 (48,814)	48 (4,756)	536 (53,570)
Grey plover	330	28 (2,805)	12 (1,227)	40 (4,032)
Knot	2,600	328 (32,756)	171 (17,055)	498 (49,811)
Oystercatcher	2,900	112 (11,236)	49 (4,866)	161 (16,102)

[5] https://app.bto.org/webs-reporting/

Species	National Threshold	Ribble Estuary Threshold (5-yr mean peak count)	Alt Estuary threshold (5-yr mean peak count)	Ribble and Alt Estuary Threshold (5-yr mean peak count)
Pink-footed goose	5,100	250 (25,007)	156 (15,648)	406 (40,655)
Pintail	200	14 (1,338)	0.04 (4)	13 (1,342)
Redshank	940	22 (2,179)	8 (803)	30 (2,982)
Shelduck	470	39 (3,904)	4 (447)	44 (4,351)
Teal	4,300	71 (7,069)	6 (620)	77 (7,689)
Wigeon	4,500	499 (49,935)	0.03 (3)	499 (49,938)
Lesser black-backed gull	1,200	4 (395)	7 (708)	11 (1,103)
Non-breeding assemblage only species				
Curlew	1,200	11 (1,092)	14 (1,372)	25 (2,464)
Cormorant	620	10 (975)	9 (867)	18 (1,842)
Common scoter	1,300	32 (3,240)	95 (9,534)	128 (12,774)
Lapwing	6,200	129 (12,904)	3 (268)	132 (13,172)
Scaup	39	0.02 (2)	0.06 (6)	0.08 (8)
Whimbrel	1	1.3 (128)	0.14 (14)	1.4 (142)

Summary of Survey Data

6.4 This section provides a summary and evaluation of the survey results collected during a detailed desk study using the following resources:

- Lancashire Environment Record Network (LERN),
- Wetland Bird Survey (WeBS),
- Fylde Bird Club,
- Natural England commissioned research reports (Bowland Ecology, 2021, Devenish et. al., 2017 and Brides et. al. 2013) and
- Lancashire County Council's Preston Western Distributor and East West Link Road Environmental Statement and HRA Screening and Appropriate Assessment (2017 and 2018).

6.5 The data search with Lancashire Environmental Records Network (LERN) was undertaken on 19th September 2023. The data from the Fylde Bird Group was provided on 27th September 2023 and from WeBS on 5th October 2023.

Desk study

Lancashire Environment Records Network

6.6 The data search with Lancashire Environment Records Network found records of the following bird species associated with the designated sites within 2km of the centre of the site (covering a minimum 500m buffer to the site) of the development site.

Table 4: LERN records of bird species associated with the designated sites

Species	No. records	Date of record(s)	Nearest record from site centre (m)	Notes
Oystercatcher	18	1997-2015	323	Max. count 4 PWD (June 2015). Confirmed breeding 1999. Possible breeding 2005.
Pink-footed goose	2	2015		Max. count 36 PWD[1] and EWL[2] (both records, Jan

Species	No. records	Date of record(s)	Nearest record from site centre (m)	Notes
				2015).
Redshank	3	1990-2018	1816	Max count 1 Lea Marsh (1990 and May 1996). Probable breeding Lea Marsh 1990-2007.
Shelduck	11	1996-2015	1378	Max. count 53 (Lea Marsh, May 1996).
Teal	12	1997-2018	256	Max count 11, PWD (Nov 2014) (100s in Sept 1997, Lea Marsh subsite 2).
Lesser black-backed gull	20	2013-2015	73	130 PWD and EWL (Feb. 2015, both records)
Non-breeding assemblage only species				
Curlew	30	1998-2015	231	633 EWL (Jun 2015). Proven breeding 1998, possible breeding 1999, probable breeding 2015.
Cormorant	6	2014-2015	839	Max count 1 PWD (all records).
Lapwing	38	1990-2018	275	Max. count 638 EWL (Jun 2015). Proven breeding 1999 & 2002. Probable breeding Lea Marsh 1990-2007. Possible breeding New Hall Farm, 2005. Evidence of breeding 2018.

[1] Preston Western Distributor survey corridor
[2] East West Link Road survey corridor

6.7 The site is located in a Forestry Commission (FC)/ British Trust for Ornithology (BTO) wader zonal map area and the southernmost end borders a pink-footed goose regular fly over area and whooper swan Sensitive Waterbird Area (SWA) (see Figure 5).

6.8 The FC/BTO wader zonal maps have been developed to inform and minimise conflict between wader conservation and forest expansion. In addition to guiding wader conservation, forest planning and other proposals, the maps can be used to assess the relative importance of particular landscapes, land uses and areas with statutory designations for breeding waders.

6.9 For pink-footed goose and whooper swan, tetrads (2 x 2km squares) are classified based on their greatest regular level of use. The Sensitive Waterbird Area includes all tetrads with a greatest regular use class of at least '1% Lancashire & North Merseyside Population' (Major Feeding Area), plus any adjacent tetrads that are regularly flown over (Regular Flyover Area) by geese and swans.

6.10 The Sensitive Waterbird Area only shows where sufficient data exist, birds may also occur in significant numbers in other areas of Lancashire that lie within their foraging range. As the boundary of the Waterbird Sensitivity Area is defined on a tetrad basis it will also contain land that is not regularly utilised by geese and swans.

Wetland Bird Survey (WeBS)

6.11 The 5 year mean peak WeBS data for Lancaster Canal – Cottam lock to bridge 18 (see Figure 3) for the species associated with the designated sites (wintering, autumn and spring passage).

- Oystercatcher, 1 (Spring only)
- Lesser black-back gull, 0 (Spring only – peak count of one bird recorded in 2015/16 only)
- Cormorant, 1 (Winter only)

6.12 The WeBS count area is located c. 310m east of the site boundary at its nearest point.

6.13 Data were provided by WeBS, a Partnership jointly funded by the British Trust for Ornithology, Royal Society for the Protection of Birds and Joint Nature Conservation Committee, in association with The Wildfowl & Wetlands Trust, with fieldwork conducted by volunteers.

Fylde Bird Club

6.14 The Fylde Bird Club provided records since 1998 within approximately 500m of the site. The data obtained in September 2023 is presented at Table 5.

Table 5: Fylde Bird Club records within 500m of the proposed development

Species	No. records	Date	Location (no. records)	Max and average counts (location and year)	No. records by season
Bar-tailed godwit	0	-	-	-	-
Bewick's swan	0	-	-	-	-
Golden plover	0	-	-	-	-
Whooper swan	6	2010-2022	Cottam, Sidgreaves Lane (1) Clifton Marsh (1) Lea, Blackpool Road (1) Lea Marsh (3)	16 (Lea Marsh, Feb 2012). Average count 6.	Aut. passage: 1 Winter: 3 Spr. passage: 2
Ringed plover	0	-	-	-	-
Sanderling	0	-	-	-	-
Black-tailed godwit	3	2010-2022	Clifton (1) Lea Marsh (1) Ribble Link (1)	45 (Ribble Link, Jan 2022). Average count 18.	Aut. passage: 2 Winter: 1 Spr. passage: 0
Dunlin	4	2009-2018	Clifton Marsh (2) Lea Marsh (2)	15+ (Lea Marsh, Oct 2010). Average count 11.	Aut. passage: 2 Winter: 1 Spr. passage: 1
Grey plover	0	-	-	-	-
Knot	0	-	-	-	-
Oystercatcher	47	2004-2022	Ashton and Lea GC (3) Clifton Marsh (23) Cottam (4) Lea (3) Lea Marsh (11) Lea Town (3)	80 (Clifton Marsh, Mar 2004). Average count 9.	Aut. passage: 2 Winter: 6 Spr. passage: 39
Pink-footed goose	0	-	-	-	-
Pintail	0	-	-	-	-

Species	No. records	Date	Location (no. records)	Max and average counts (location and year)	No. records by season
Redshank	20	2004-2019	Clifton Marsh (5) Lea Marsh (15)	50+ (Lea Marsh, Oct 2010). Average count 8.	Aut. passage: 2 Winter: 5 Spr. passage: 13
Shelduck	20	1998-2022	Clifton (2) Clifton Marsh (3) Lea (1) Lea Gate (1) Lea Marsh (11) Lea Town (2)	82 (Lea, Apr 1998). Average count 16.	Aut. passage: 3 Winter: 7 Spr. passage: 10
Teal	0	-	-	-	-
Wigeon	0	-	-	-	-
Lesser black-backed gull	31	2002-2022	Ashton and Lea GC (1) Clifton (2) Clifton Marsh (1) Cottam (17) Lea (3) Lea Marsh (5) Lea Town (1) Ribble Link (1)	170 (Clifton Marsh, Aug 2002). Average count 12.	Aut. passage: 7 Winter: 15 Spr. passage: 9
Non-breeding assemblage only species					
Curlew	23	1998-2021	Ashton and Lea GC (2) Clifton (1) Clifton Marsh (4) Cottam (1) Lea (5) Lea Marsh (4) Lea Town (6)	350 (Clifton Marsh, Jan 2001). Average count 55.	Aut. passage: 5 Winter: 10 Spr. passage: 8
Cormorant	27	2002-2022	Clifton Marsh (1) Cottam, Lancaster Canal (1) Lea, Lea Road (2) Lea Gate (5) Lea Marsh (8) Lea Town (3) Ribble Link (7)	30+ (Lea Marsh, Oct 2010). Average count 5.	Aut. passage: 6 Winter: 19 Spr. passage: 2
Common scoter	2	2020-2021	Lea, Lea Road (2)	10+ (Lea, Lea Road, Mar 2021). Average count 6.	Aut. passage: 0 Winter: 1 Spr. passage: 1
Lapwing	52	1998-2021	Clifton, Blackpool Road (4) Clifton Marsh (21) Cottam (3) Hoyles Lane (1) Lea (2) Lea Gate (1) Lea Marsh (15) Lea Town (3) Ribble Link (2)	2,500 (Clifton Marsh, Jan 2001). Average count 138.	Aut. passage: 11 Winter: 5 Spr. passage: 36
Scaup	0	-	-	-	-
Whimbrel	13	1998-2021	Clifton (1) Clifton Marsh (6) Cottam (3) Lea Gate (1)	109 (Clifton Marsh, Apr, 2018). Average count 32.	Aut. passage: 0 Winter: 0 Spr. passage: 13

Species	No. records	Date	Location (no. records)	Max and average counts (location and year)	No. records by season
			Lea Marsh (1) Lea Town (1)		

Aut. passage = Jul-Oct, Winter = Nov-Mar, Spr. passage = Apr-Jun

Identification of Functionally Linked Land supporting SPA waterbirds in the North West of England* (*Bowland Ecology, 2021)

6.15 Natural England's Commissioned Report NECR361 (Bowland Ecology, 2021) did not identify the land in the vicinity of the proposed pipeline as high, moderate, low or negligible potential as functionally linked land. The report states that this information can be used to infer functional linkage by users of the maps e.g. if a cluster of fields containing significant counts occur within a larger area of the same habitat the user might infer that those species could be using the surrounding fields. The nearest such land is c. 1.14km to the south of the site.

Mapping and Assessing Pink-footed Goose Usage of Land Beyond SPA Boundaries in Northwest England (Devenish et. al., 2015)

6.16 This study focussed on the Borough of Fylde, but also encompassed the area within which the site lies. The study modelled post-2000 data from the Fylde Bird Group, Lancashire and Cheshire Fauna Society, BirdTrack, eBird and individuals. Visibility (size of open habitats), distance from roosting sites, agricultural area within the surrounding 25ha and elevation were also fed into the model to predict geese presence. The model produced a map identifying high and medium priority areas which were considered to provide suitable habitat for pink-footed geese and low priority areas offering lower habitat suitability and considered unlikely to be used by pink-footed geese. The model showed good correlation with expert-designated areas of importance for pink-footed geese. The area around the proposed development site was largely modelled to be low priority with very small areas of medium priority. The resolution of the map was not sufficient to establish whether any of the medium priority areas coincided with the proposed route.

6.17 Appended to the Devenish et. al. (2015) report are maps showing occurrence points for pink-footed geese provided by all sources for project (1989-2016). No records of pink-footed geese were identified within 500m of the proposed development.

Mapping the distribution of feeding pink-footed geese in England (Brides, et. al., 2013).

6.18 This study involved the collation of data and the construction of sensitivity maps to aid location of onshore wind farms in England, based on the feeding distribution of pink-footed Goose Anser brachyrhynchus, with special reference to the Special Protection Area (SPA) network. The maps provide an indication of where wind farm development is most likely to come into conflict with this species; they are an indicative tool that enables the identification of areas where impacts of turbines on geese may be of concern and others where impacts on geese may be minimal. However, the lack of structured surveys means that currently the maps do not replace the requirement for site specific survey to fully assess local levels of feeding activity.

6.19 Data for the period 1986/87 to 2012/13 was collected from a variety of sources including:

- Sightings of marked geese (collated by WWT);
- Counts made when undertaking goose age assessments as part of the Goose & Swan Monitoring Programme (GSMP);

- Data from the 2004/05 WWT SPA feeding distribution study – goose counters provided non-numeric information on the distribution of feeding geese relative to SPAs;
- BirdTrack data collated by the British Trust for Ornithology (BTO);
- *Ad hoc* bird records supplied by county recorders, goose counters and other birdwatchers.

6.20 Caveats when using the sensitivity maps included that the lack of standardised survey coverage means that there is no guarantee that feeding pink-footed geese do not occur in 1km squares shown here with no presence, i.e. an absence of goose records could be because of the absence of geese or the absence of records/recorders. Also, the maps are not a substitute for site-specific assessments of the impact of individual wind turbines or proposed developments on geese, but are intended as an indicative map of areas of highest likely bird sensitivity to help guide decision-makers in the early stages of the planning process.

6.21 Nonetheless, the maps show no records of foraging activity by pink-footed geese in the vicinity of the proposed development.

Preston Western Distributor and East West Link Road Environmental Statement (LCC, 2017)

6.22 Six wintering bird survey visits were undertaken once a month between October 2014 and March 2015 to inform the Environmental Impact Assessment for the Preston Western Distributor and East West Link Road (LCC, 2017). The study area incorporated all land within 500m of the road scheme. The area surveyed covers the majority of the area within 500m of the proposed pipeline.

6.23 Bird surveys undertaken in 2014 and 2015 recorded the presence of six qualifying bird species of the SPA and Ramsar site. This included lesser black-backed gull (breeding season) although they were not confirmed as breeding within the study area. Pink-footed goose, shelduck, teal, oystercatcher and wigeon were recorded over the winter.

6.24 Five qualifying over-wintering bird species for the Ribble and Alt Estuaries SPA were recorded during the surveys. The majority of these species occurred in low numbers and/or on an occasional basis with the exception of teal and pink-footed goose

6.25 Teal were recorded in relatively low numbers until January (peak count 50) and February (peak count 36). The largest concentrations were recorded on Bartle Wetland BHS to the north of the study area with moderate numbers also recorded on ponds to the far south.

6.26 A small flock of 36 pink-footed geese was recorded on one occasion (January) during the survey period within an improved grassland field west of Bartle Hall.

6.27 Small numbers of wintering waders (assemblage species) were also recorded within the study area. Curlew were recorded over three months: January, February and March, with a peak count in March of 24. Lapwing were recorded over four months (December to March) with a peak count of 224 in February. Small flocks of lapwing were recorded on PWD, whilst they were recorded in relatively high numbers on EWLR (peak count of 183 in February) where they appeared to favour the centre of the study area in grassland habitats close to the M55 motorway.

6.28 In general, the species recorded were not observed to be reliant exclusively on habitats within the study area. Both the larger species (waders, wildfowl and gulls) and passerines are likely to utilise additional habitats outside the study area for foraging and roosting.

Evaluation

6.29 LERN provided no nationally important counts of species associated with the European designated sites, but there were significant counts of shelduck, curlew, lapwing and lesser black-backed gull in the context of the Ribble and Alt Estuaries and Ribble Estuary alone. These are, however, the peak count of all the counts provided and do not indicate whether the area is regularly being used by significant numbers of birds. The site is located in a FC/BTO wader zonal map area and the southernmost end borders a pink-footed goose regular fly over area and whooper swan Sensitive Waterbird Area (SWA).

6.30 None of the 5 year mean peak WeBS counts Lancaster Canal – Cottam lock to bridge 18 are significant when compared to Table 5 above.

6.31 Fylde Bird Club returned nationally significant counts of whimbrel for Clifton Marsh (also significant in the context of the Ribble and Alt Estuaries and Ribble Estuary alone), significant counts of whooper swan, redshank, shelduck, curlew, cormorant, lapwing and lesser black-backed gull in the context of the Ribble and Alt Estuaries and Ribble Estuary alone and redshank in the context of the Ribble Estuary alone. These are, however, the peak count of all the counts made between 1998 and 2023 and do not indicate whether the area is regularly being used by significant numbers of birds. The average counts were significant for whimbrel at all levels and for whooper swan, curlew, lapwing and lesser black-backed gull at the Ribble and Alt Estuaries and Ribble Estuary alone. However, the Fylde Bird Club records are not the result of regular counts as are WeBS counts or specific surveys such as the Preston Western Distributor and East West Link Road surveys. The greatest number of records of the species with significant average counts was for lapwing with a total of 52 records spanning over twenty years of which only 8 records were above the significance threshold. It cannot be concluded, therefore, that any of these species are regularly present in significant numbers. The more significant counts were mostly from Clifton/Clifton Marsh and Lea/Lea Marsh at the southern end of the pipeline.

6.32 The Natural England commissioned research reports (Bowland Ecology, 2021, Devenish et. al., 2015 and Brides et. al. 2013) predicted and identified limited evidence of foraging pink footed geese in the vicinity of the proposed development. This is supported by the lack of designation of the area as a Regular Flyover Area, Major Feeding Area or Sensitive Waterbird Area. The site is, however, located in a FC/BTO wader zonal map area.

6.33 In order to determine the importance of the study area to the qualifying species for the Ribble and Alt Estuaries SPA population for the Preston Western Distributor and East West Link Road surveys, estimates were taken from BTO Bird facts (August 2015) and compared to the maximum number of each species recorded over the survey period.

6.34 In general, the five SPA and Ramsar site winter qualifying species recorded were found to use the study area in small numbers on an occasional basis. Teal were recorded on five visits, although the numbers of birds recorded were still relatively low (peak count of 50 across the study area). Lapwing (an assemblage species) were recorded in large numbers for the East West Link Road between December and March (peak count of 208), which is significant in the context of the Ribble and Alt Estuaries and Ribble Estuary alone. Overall, the numbers of SPA qualifying bird species recorded were not considered to represent a significant proportion of the UK, SPA, Ramsar or local populations, based on the small

numbers of each species recorded within the study area (<1% of the cited Ribble and Alt estuary SPA or Ramsar site populations), and an even smaller percentage of the UK population as a whole. The Preston Western Distributor and East West Link Road survey data has also been compared with the latest significance levels in Table 5 above and numbers recorded remain below the 1% significance thresholds. However, it was recognised that species which occur in locally important numbers on the SPA and Ramsar site do occur within the study area, and therefore there may be a small amount of connectivity between these areas.

6.35 The use of habitats within the study area as a breeding, foraging and roosting resource for SPA and Ramsar site qualifying species was considered to be typical for the district in respect to the habitat types found within the study area. The numbers of qualifying bird species recorded during the surveys were considered to represent a very small and insignificant proportion of the UK and local population. It is acknowledged that the data gathered to inform the Preston Western Distributor and East West Link Road schemes was gathered nine years ago, however, the surveys are the most comprehensive surveys undertaken in the vicinity of the proposed works, the LERN and Fylde Bird Club data being ad hoc records. Other than construction of new housing at the Cottam end and construction of the Preston Western Distributor and East West Link Road schemes, little other land use change is evident reviewing historic online aerial imagery. It is therefore considered unlikely that there would have been any increase in usage of the area by wintering birds.

Summary of Wintering Bird Survey Results

6.36 The data from LERN did not identify any significant counts of species for which the European sites are designated, however the Fylde Bird Club returned nationally significant average counts for whimbrel (significance level of 1 bird) and significant average counts for whooper swan, curlew, lapwing and lesser black-backed gull in the context of the Ribble and Alt Estuaries and Ribble Estuary alone. However, there were nonetheless relatively few records spanning over 20 years and it cannot be concluded from the data that any of these species are regularly present in significant numbers. The more significant counts were mostly from Clifton/Clifton Marsh and Lea/Lea Marsh at the southern end of the pipeline.

6.37 The Natural England commissioned research reports (Bowland Ecology, 2021, Devenish et. al., 2015 and Brides et. al. 2013) predicted and identified limited evidence of foraging pink footed geese in the vicinity of the proposed development. The site is, however, located in a FC/BTO wader zonal map area.

6.38 Wintering bird surveys undertaken for the Preston Western Distributor and East West Link Roads in 2014/15, which covered the majority of the area within 500m of the proposed pipeline, considered the numbers of qualifying bird species recorded during the surveys to represent a very small and insignificant proportion of the UK and local population. However, it was recognised that species which occur in locally important numbers on the SPA and Ramsar site do occur within the study area, and therefore there may be a small amount of connectivity between these areas. While the data gathered to inform the road schemes was gathered nine years ago, the surveys are the most comprehensive surveys undertaken in the vicinity of the proposed works, asides construction of the road schemes and housing at the Cottam end, little other land use change is evident reviewing historic online aerial imagery. It is therefore considered unlikely that there would have been any increase in usage of the area by wintering birds.

6.39 It is therefore concluded that the land within 500m surrounding the proposed development does not constitute functionally linked land.

Potential Effects

6.40 The site lies within a Natural England SSSI Impact Risk Zone (IRZ) associated with the Ribble Estuary SSSI, a component of the European sites. The relevant planning considerations for the majority of the site are extracted below.

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?
2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

All Planning Applications

Infrastructure

Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.

Wind & Solar Energy

Solar schemes with footprint > 0.5ha, all wind turbines.

Minerals, Oil & Gas

Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.

Rural Non Residential

Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha.

Residential

Rural Residential

Any residential development of 50 or more houses outside existing settlements/urban areas.

Air Pollution

Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t).

Combustion

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

Waste

Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.

Composting

Discharges

Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.

Water Supply

Notes 1

New residential developments in this area should consider recreational disturbance impacts on the coastal designated sites. Please consider this issue in the HRA screening.

Notes 2

GUIDANCE - How to use the Impact Risk Zones

/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf

6.41 The threshold for consultation with Natural England with regards discharges falls to 5m^3/day towards the southern end of the pipeline. East of the junction between Hoyles Lane and Redwood Drive, the following consultation categories apply.

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?
2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

All Planning Applications

Infrastructure

Airports, helipads and other aviation proposals.

Wind & Solar Energy

Solar schemes with footprint > 0.5ha, all wind turbines.

Minerals, Oil & Gas

Rural Non Residential
Residential
Rural Residential
Air Pollution
Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m².
Combustion
General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste
Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.
Composting
Discharges
Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.
Water Supply
Notes 1
Notes 2
GUIDANCE - How to use the Impact Risk Zones
/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf

6.42 The proposed development does not directly affect a European site. Potential indirect effects on the European Site include pollution, temporary loss/ damage of supporting habitat during construction and disturbance (noise/ visual/ lighting) of wintering birds using potentially functionally linked land in the vicinity of the site during construction.

6.43 The wintering birds desktop study has concluded that the land within 500m surrounding the proposed development does not constitute functionally linked land. Therefore, there will be no effects of temporary loss/ damage of supporting habitat during construction or disturbance (noise/ visual/ lighting) of wintering birds using potentially functionally linked land in the vicinity of the site during construction.

6.44 The Lancaster Canal has distant hydrological connectivity to the European designated sites (c. 9.25km via the Savick Brook to the east and R. Ribble), however, the Lancaster Canal is raised above the surrounding land and the new pipe will be bored at least 3.5m below the invert beneath the Lancaster Canal. There is therefore no risk of potential pollution via the Lancaster Canal.

6.45 Once completed, there will be no change to the volume of flow through the sewer and any permanent discharges will be unchanged. No likely significant effects as a result of pollution are, therefore, anticipated during operation.

6.46 Table 6 lists potential impact pathways which have been reviewed to determine impacts to SPA features.

Table 6: Impact Pathways

Pollution	Via surface water run-off and dewatering activities carrying sediment and fuel/chemicals from spillages potentially feeding into the River Ribble via interconnected watercourses during construction.

6.47 The following sections review potential impact pathway in detail looking at direct and indirect impacts upon the European sites and potential receptors.

Direct Impacts

6.48 The proposed development is not directly located within any European Site. There are no direct impacts upon any European Sites.

Indirect Impacts

Pollution

6.49 Construction at the southern end of the pipeline route is in close proximity to the Savick Brook which feeds into the R. Ribble c. 1.6km south of Lea Gate Pumping Station, c. 1.83km up river from the European designated sites. Without implementation of appropriate mitigation measures, there is a risk of pollution to the European designated sites impacting on associated interest features via surface water run-off and dewatering activities carrying silt/sediment and fuel/chemicals from spillages during construction.

6.50 Given the distance between the southern end of the pipeline and the European designated sites (3.43km) it is considered low risk that pollution would reach the European designated site and it is therefore considered low risk that there would be a significant effect on interest features of the European designated sites. Without implementation of appropriate mitigation measures, there remains a small risk of potential pollution to the European designated sites and associated interest features during construction.

In Combination Effects (Screening stage)

6.51 The Habitats Regulations 2017 (as amended) requires the assessment of likely significant effects either alone or in combination with other plans or projects. In combination effects differ from cumulative effects in Environmental Impact Assessment (EIA) in that these are effects which may or may not interact with each other, but which could affect the same receptor or interest feature. Cumulative effects refer to occasions where another project could have an impact via the same pathway e.g. if both proposals caused disturbance to birds.

6.52 Where the project has no effect i.e. zero / neutral impact alone, there is no possibility of in combination effects. Sweetman C-258/11 (2013) stated that:

"*The requirement that the effect in question be significant lays down a de minimis threshold. Plans or projects that have no appreciable effect on the site are therefore excluded".*

6.53 Recent Natural England responses and Secretary of State decisions have made reference to effects "not perceptible" / "nugatory" / "indistinguishable from background variations".

6.54 The above assessment has identified no likely significant effects in relation to temporary loss/ damage of supporting habitat during construction and disturbance (noise/ visual/ lighting) of wintering birds using potentially functionally linked land in the vicinity of the site during construction or pollution during operation of the sewer. There is a small risk of potential pollution to the European designated sites and associated interest features during construction.

6.55 The potential effects of pollution during construction alone and in combination with other plans or projects are considered further at the Appropriate Assessment stage. No other appreciable risks arising from the proposals were identified that have the potential to act in combination with similar risks from other proposed plans or projects to also become significant.

Appropriate Assessment

6.56 The screening assessment identified the potential for a likely significant effect of pollution on the interest features of the Ribble and Alt Estuaries European designated site during construction.

6.57 A draft Surface Water Management Plan (SWMP) has been produced for the proposed works by Bethell Construction Ltd. (BCL, see Appendix 2). This plan sets out how surface water and groundwater pumped out of excavations will be managed and monitored during the works, to ensure that impacts on watercourses are kept to a minimum. The plan identifies the risks and mitigation to be implemented in relation to:

- Surface water management,
- Dewatering and Permit to Pump,
- Abstraction permits (in the event that ground water monitoring determines that dewatering of the excavation is expected to produce in excess of 20m^3 per day and/or requires complicated treatment in order to be suitable for discharge to a surface water),
- Condition survey of specified watercourses,
- Land drainage considerations,
- Water quality management during construction and
- Site run-off and pollution control measures during the works.

6.58 Proposed mitigation measures include:

- To minimise impacts on watercourses (Lancaster Canal and Savick Brook), guided auger boring will be implemented at least 3.5m below the invert for the watercourses.
- Where the ground falls towards a watercourse or other potential pollution receptors, the working areas will be surrounded by sediment fencing. Multiple layers of fencing will be installed for runoff to pass through in highly sensitive areas of site.
- In addition, surface water runoff drains should be segregated from the site using silt fencing to preclude site runoff laden with fine sediment from reaching the watercourses. Any field drains that are severed shall be reinstated as part of the overall reinstatement of the working area.
- Excavated materials to be removed from site as produced, or covered over with visqueen until removed.
- Topsoil and spoil piles should be bunded and seeded and surrounded by sediment fencing to limit potential for run off and situated in areas which are protected by site sediment control measures. All topsoil and spoil will be stored in stockpiles >10 m away from any watercourses.
- Pollution prevention measures as detailed in the archived Environment Agency (EA) Pollution Prevention Guidelines series (including PPG5: Works and Maintenance in or near Water) will be implemented throughout the works to reduce the likelihood and magnitude of impacts.
- Dewatering (if required) will either comprise of a settlement treatment system and surface discharge to grassed fields as agreed (subject to Land Owner agreement), or alternatively, via discharge to the existing sewer network (subject to UU Operations agreement). Where dewatering is to be achieved via the use of over pumping, a Permit to Pump shall be obtained from United Utilities, as per Standard Operating Procedure. Dewatering shall discharge to a settlement tank and discharge diffuser. No water will at any time be discharged to the watercourse without prior consents being in place.

- Ground/surface water within the trenches in open fields / farmland is to be pumped to ground which will eventually reach the watercourses. Silt fencing will be erected and maintained in these areas along with the digging of surface 'grips' with straw bales deployed to mitigate any silt present.
- The auger boring system will be enclosed within sheet piled cofferdams with concrete bases on both sides of the ditch to prevent risk of spills and runoff to the river channel. Emerald Green Environmental Management Services (EGEMS) will be present throughout auger boring works.
- Excavated material will be temporarily stored in a suitable location where runoff to the watercourse is not possible before being removed from site under appropriate permits to a registered waste disposal site.
- Any water in the cofferdams will be discharged through the temporary water treatment system or to the sewer, under permission from United Utilities.
- All fuels, COSHH materials to be stored as far from watercourse as possible, in/on bund with a capacity of 110% of the volume of all the liquids/materials to be stored within it.
- Spill kits (appropriately spaced to absorb and contain all Fuel, Oil & COSHH materials to be used on the project) shall be kept adjacent to the storage area, and with each machine.
- Toolbox Talks shall be delivered to and made available to the Site Team.

6.59 EGEMS will conduct a condition survey of specific watercourse locations to provide a record of the baseline condition and ensure reinstatement is completed back to its original state. BCL will monitor identified LA controlled ordinary watercourses & Savick Brook to detect changes in water quality and potential pollution incidents which may be linked to the works, determine the effectiveness of working methods, existing silt prevention measures and recommend alterations or additions as required. Several levels of monitoring will be implemented during construction.

- During the auger boring under Lancaster Canal, Preston – Blackpool Railway line & Savick Brook.
- While any temporary water treatment system is in use, regular checks will be made on the outlet effluent water quality, upstream of the discharge point.
- During all other periods of works, EGEMS representative will regularly monitor water quality.

6.60 Throughout the works, monitoring will be undertaken at each sampling point in a systematic way to ensure consistency. The sampling records will also make note of the construction activities at the time, as well as the weather conditions. A standard checklist/monitoring log will be developed and implemented. Silt fencing and surface 'grips' with straw bales deployed to mitigate any silt present in ground/surface water pumped to ground within the open fields / farmland will be monitored on a daily basis and maintained / replaced when required.

6.61 With implementation and monitoring of the Surface Water Management Plan, risk of pollution of the watercourses will be minimal. Given this, the scale of works and the distance between the works and the European designated sites (c. 3.43km via the Savick Brook and River Ribble), it is considered that there will be no appreciable risk of pollution.

In Combination Effects (Appropriate Assessment stage)

6.62 While it is considered that there will be no appreciable risk of pollution as a result of the proposed works alone, a brief review of in combination effects has been undertaken to assess potential impacts in combination with other plans or projects.

6.63 A review of the following has been undertaken within the vicinity of the proposed development site as confirmed with Natural England (email dated 7th November 2023):

- The incomplete or non-implemented parts of plans or projects that have already commenced;
- Plans or projects given consent or given effect but not yet started.
- Plans or projects currently subject to an application for consent or proposed to be given effect;
- Projects that are the subject of an outstanding appeal;
- Ongoing plans or projects that are the subject of regular review.
- Any draft plans being prepared by any public body;
- Any proposed plans or projects published for consultation prior to the application.

6.64 The search was undertaken for the most recent three years, most planning permissions being valid for a period of three years. Small householder applications such as extensions and consented projects which have been completed have been excluded unless there are any ongoing disturbance effects. There were no recently refused applications which could be subject to an appeal. The search identified the following projects close or adjacent to the project listed on either the Preston City Council or Lancashire County Council planning portals (see Figure 4):

- 06/2018/0885 - Bloor Homes, Land off Riversway and West of Dodney Drive, Lea, Preston. An outline application for up to 280 dwellings and associated infrastructure and open space. Located south of Savick Brook, in a field through which a haul road for the proposed project runs.
- 06/2022/1101 – Story Homes, Lea Road, Preston. A hybrid planning application including full planning application for 163no. dwellings (northern parcel) and outline planning application for residential development of up to 120no. dwellings, located in the northern part of a field through which the Lea Road to Sidgreaves Lane haul road runs for the proposed works.
- LCC/2022/0049 – Cottam Parkway Railway Station, Lea Road, Preston (south of the Story Homes site). Located in the southern part of a field through which the Lea Road to Sidgreaves Lane haul road runs.
- 06/2023/0830 – Breck Homes, Sidgreaves Lane, Preston. A housing development for 102no. affordable dwellings north of Hoyles Lane. Planning has yet to be granted, however, Natural England has requested an HRA to be undertaken with regards increased recreational pressure.

6.65 06/2020/1454 – Bryars Farm, Lea Lane, Preston was also reviewed. This was an extension to a caravan park west of the Preston Western Distributor Road granted in 2021 which has already been implemented. The HRA Screening report for the project concluded that given the size of the proposed development, location at some 4km from the SSSI boundary and level of existing disturbance on site it was considered that the development would not have any significant effect on the coastal designated sites.

6.66 **Land off Riversway**: the HRA for the development (GMEU, 2018) concluded that the integrity of the European sites concerned would not be affected by water pollution alone or in combination with any other plans or projects. It is understood that construction for this

site will commence in 2024 and will coincide with works on the new pipeline. Work on land off Riversway is due to start on the eastern side and the pipeline works will be finished before construction on the land off Riversway progresses to the western side. The HRA for the land off Riversway concluded no significant impacts of water pollution due to:

- The absence of construction within 40m of the Savick Brook and by working to best practice guidelines produced by the Environment Agency;
- Existing utilities being damaged during demolition and/ or construction e.g. foul and surface water drains, oil pipe lines etc. because existing drains have been identified, no construction is proposed over the sewers and the sewers are separated from the watercourse by a flood embankment.
- A major flood event during construction, the majority of the site is outside high risk fluvial flooding zones and the site is protected by and existing flood defence.

6.67 **Lea Road, Preston**: The HRA screening report (e3p, 2022) concluded that, with the exception of potential disturbance due to increased recreational pressure, it was unlikely that the construction or operation of the site would have any likely significant effects on the qualifying features of the Ribble and Alt Estuaries SPA and Ramsar site. The site is not hydrologically linked to the European designated sites.

6.68 **Cottam Parkway Railway Station**: The HRA (Jacobs, 2021) concluded no likely significant effects on water quality. The alone effects were considered to be absent or negligible and any contribution to a combined effect was considered to be de minimis (inconsequential). As such it was considered that the scheme could not contribute significantly to any in combination effects.

6.69 **Sidgreaves Lane, Preston**: an HRA has been requested by Natural England in respect of increased recreational pressure. Natural England's consultation response does not refer to potential pollution effects. There is no obvious direct hydrological connectivity with the designated sites and the site is c. 4.82km from the European designated sites.

6.70 The following relevant plans have also been assessed for in combination effects:

- Preston Local Plan 2012-26
- Central Lancashire Adopted Core Strategy, July 2012
- Joint Lancashire Minerals and Waste Development Framework Core Strategy DPD, February 2009; and
- Review of the Joint Lancashire Minerals and Waste Local Plan, Autumn 2018.

6.71 **Preston Local Plan 2012-26** (adopted 2nd July 2015): The Habitats Regulations AA Screening Report for the Preston Local Plan (Preston City Council, 2013) concluded that the plan would not have a significant effect on any European sites and that, consequently an Appropriate Assessment would not be required. An addendum report (Preston City Council, 2014) did not alter that conclusion.

6.72 **Central Lancashire Core Strategy, July 2012:** A revised HRA of the Central Lancashire Core Strategy (which covers Preston City Council, South Ribble Borough Council and Chorley Council) was published in November 2011. Effects were identified as possible for air quality issues at the Bowland Fells SPA and water quality and hydrology issues for the Ribble and Alt Estuary SPA and Ramsar, however other Core Strategy policies were considered able to mitigate any potential effects and the phased delivery of development over a 15 year period means that the effects would be lesser than if development occurred at one point in time. The HRA found the Central Lancashire Core Strategy to have no likely

significant effects on the identified Natura 2000 sites and no further assessment work was required at that stage.

6.73 **Joint Lancashire Minerals and Waste Development Framework Core Strategy DPD, February 2009:** An HRA of the Review of the Joint Lancashire Minerals and Waste Development Framework was undertaken (LCC, 2011). The HRA report concluded that any impacts could be mitigated against subject to the application of other policies within the plan, most notably Policy DM2 which is concerned with environmental safeguards. The HRA report found the Lancashire Minerals and Waste Site Allocation and Development Management Polices DPD to have no likely significant effects on the identified European sites and no further assessment work was required at that stage.

6.74 An Additional Sites Habitats Regulations Screening Report was produced in March 2012 (LCC, 2012). This report concluded that the three additional sites will have no likely significant effects on the identified European site and no further assessment work was required at that stage.

6.75 **Review of the Joint Lancashire Minerals and Waste Local Plan, Autumn 2018:** An HRA of the Review of the Joint Lancashire Minerals and Waste Local Plan was undertaken (LCC, 2018). The HRA concluded that any impacts could be mitigated against through the application of other policies within the plan, most notably Policy MW1 which is concerned with environmental safeguards. This HRA report found the Review of the Joint Lancashire Minerals and Waste Local Plan to have no likely significant effects on the identified European sites and no further assessment work was required at that stage.

6.76 The in combination effects assessment found no potential for in combination effects with Lea Road, Sidgreaves Lane or Cottam Parkway Railway Station or the relevant local plans. Construction of the land off Riversway may coincide with the construction of the new pipeline. However, with implementation of the proposed mitigation for both schemes and given the distance between the works and the European designated sites (c. 3.43km for the new pipeline and 4.23km for the land off Riversway via the Savick Brook and River Ribble at the nearest point), it is considered that there will be no appreciable risk of pollution.

7.0 Conclusion

7.1 This Shadow Habitats Regulations Assessment has been undertaken based on a review of the European sites and desk study records and has looked at both effects of the proposed development and in combination effects.

7.2 A Habitat Regulation Assessment can only be undertaken by a Competent Authority. Under the Habitat Regulations, “competent authority” in England includes any Minister of the Crown (as defined in the Ministers of the Crown Act 1975), government department, statutory undertaker, public body of any description or person holding a public office. The following conclusions are to provide guidance for this assessment.

7.3 The wintering bird desk study concluded that the land within 500m of the new pipeline does not constitute functionally linked land. This is supported by Natural England commissioned reports which predicted and identified limited evidence of foraging pink-footed geese in the vicinity of the proposed development.

7.4 The proposed development does not directly affect a European site.

7.5 The assessment of likely significant effects identified that without implementation of appropriate mitigation measures, there is a risk of pollution to the European designated sites impacting on associated interest features via surface water run-off and dewatering activities carrying silt/sediment and fuel/chemicals from spillages during construction. Given the distance between the southern end of the pipeline and the European designated sites (3.43km) it is considered low risk that pollution would reach the European designated sites and it is therefore considered low risk that there would be a significant effect on interest features of the European designated sites.

7.6 Potential pollution of the European designated sites has been taken forward to the Appropriate Assessment stage. The appropriate assessment has concluded that with implementation and monitoring of the Surface Water Management Plan, risk of pollution of the watercourses will be minimal. Given this, the scale of works and the distance between the works and the European designated sites (c. 3.43km via the Savick Brook and River Ribble), it is considered that there will be no appreciable risk of pollution.

7.7 The in combination effects assessment identified a potential in combination effect with development of land off Riversway. However, with implementation of the proposed mitigation for both schemes and given the distance between the works and the European designated sites (c. 3.43km for the new pipeline and 4.23km for the land off Riversway via the Savick Brook and River Ribble at the nearest point), it is considered that there will be no appreciable risk of pollution.

7.8 Natural England should be consulted on the findings of this Habitat Regulations Assessment.

8.0 References

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Preston City Council (2014). Preston Local Plan 2012-26 Site Allocations and Development Management Policies Development Plan Document Habitats Regulations Assessment (HRA Screening Report) Addendum: June 2014.

Figure 1:
Site Location and Designated Sites Plan

Hoyles Lane, Cottam

Figure 1: Site Location and Designated Sites

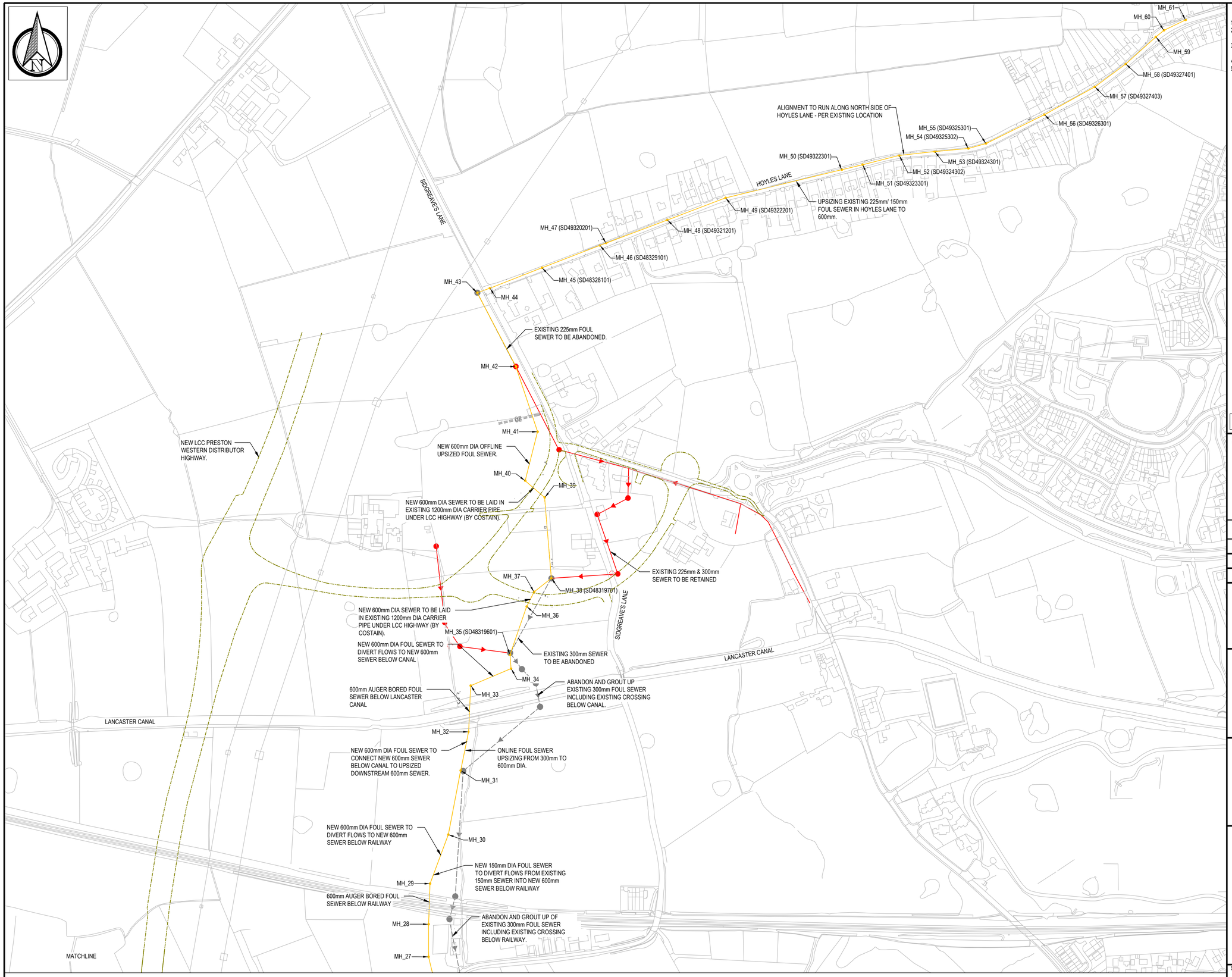
Map Ref (NGR): 348830, 431300

0 500 1,000 m

- Site Boundary
- Ribble and Alt Estuaries SPA and Ramsar Site

ecology services
Environmental Consultants

Figure 2:
Overview Site Plan



0 25 50 75 100 125m

SCALE 1:2500 AT ORIGINAL SIZE

SITE PLAN

SCALE 1 : 2500

GENERAL NOTES

1. DO NOT SCALE FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm) & ALL LEVELS ARE IN METRES (m) AOD, UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS & LEVELS CHECKED ON SITE AND ANY DISCREPANCIES SHOULD BE REPORTED TO GHD.
4. ALL LEVELS SHOWN ARE RELATIVE TO ORDNANCE DATUM.
5. THIS DOCUMENT IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT PROJECT STANDARDS AND SPECIFICATIONS.

LEGEND

- PROPOSED MANHOLE
- EXISTING MANHOLE
- ABANDONED MANHOLE
- PROPOSED GRAVITY SEWER
- EXISTING SEWER/ SURVEYED EXISTING COMBINED SEWER
- ABANDONMENT
- EXISTING HIGH PRESSURE GAS MAIN
- LCC PRESTON WESTERN DISTRIBUTOR HIGHWAY

THIS DRAWING SHOULD BE REPRODUCED IN COLOUR

CURRENT ISSUE INFORMATION

VERSION	AUTH	CHKD	REVD	REASON FOR ISSUE	DATE
P02	JK	PB	PB	FOR CONSTRUCTION APPROVAL	30.08.23
S4				ISSUED FOR CONSTRUCTION APPROVAL	
SUITABILITY CODE				SUITABILITY DESCRIPTION	

GHD
Building 49, Thornton Science Park, Poole Lane, Ince, CH2 4NU
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E UKmail@ghd.com W www.ghd.com
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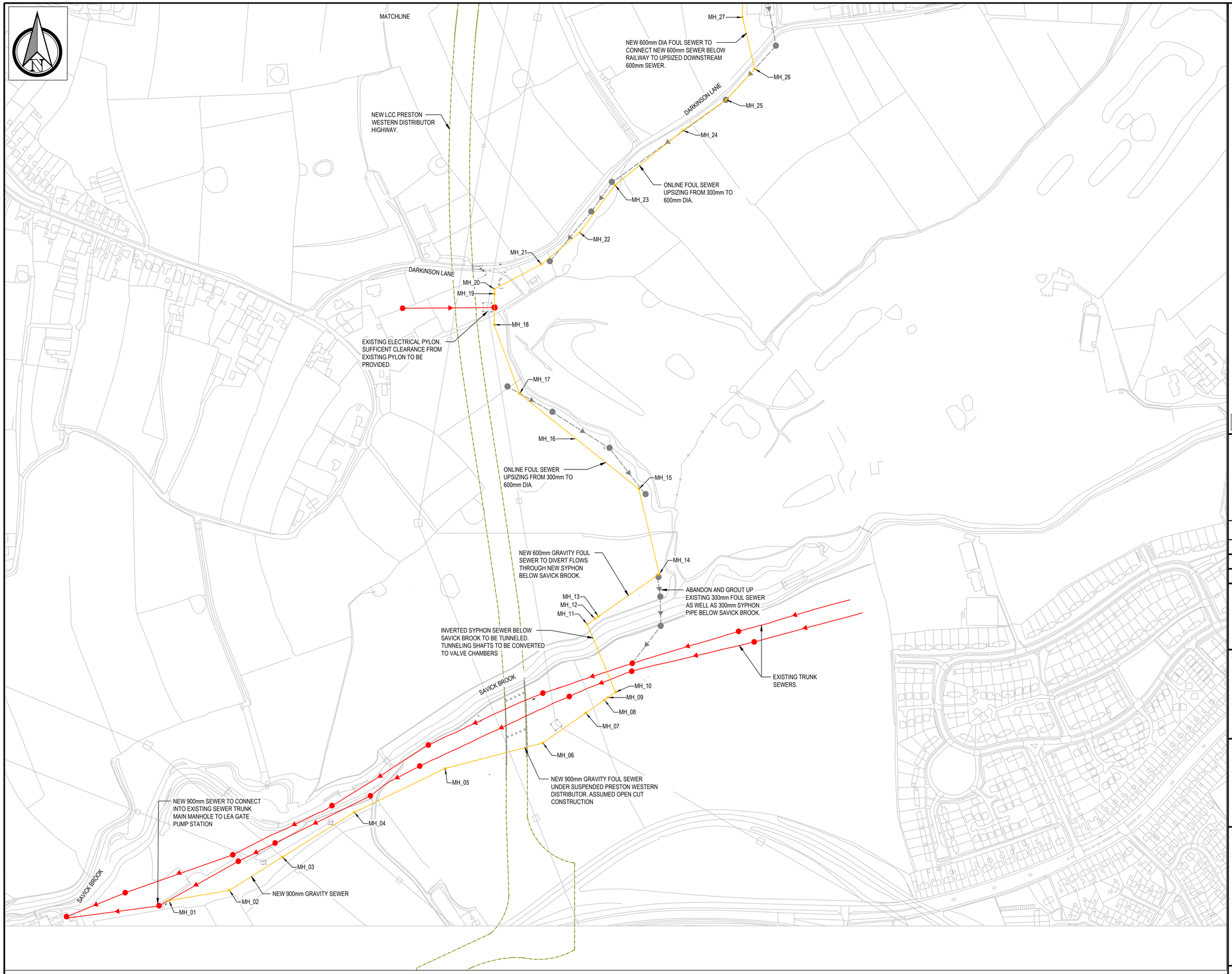
HOYLES LANE

OVERVIEW SITE PLAN

SHEET 1

SCALE	SHEET SIZE
1:2500	A1
DRAWING NUMBER	REVISION
80061057-02-GHD-MISCE-99-DR-01-00009	P02



0 25 50 75 100 125m

SCALE 1:2500 AT ORIGINAL SIZE

SITE PLAN

SCALE 1 : 2500

GENERAL NOTES

1. DO NOT SCALE FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm) & ALL LEVELS ARE IN METRES (m) AOD, UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS & LEVELS CHECKED ON SITE AND ANY DISCREPANCIES SHOULD BE REPORTED TO GHD.
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LEGEND

- PROPOSED MANHOLE
- EXISTING MANHOLE
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- EXISTING SEWER/ SURVEYED EXISTING COMBINED SEWER
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Building 49, Thornton Science Park, Poole Lane, Ince, CH2 4NU
T 01244 621000 F 01244 621000
E UKmail@ghd.com W www.ghd.com
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HOYLES LANE

OVERVIEW SITE PLAN

SHEET 2

SCALE	SHEET SIZE
1:2500	A1
DRAWING NUMBER	REVISION
80061057-02-GHD-MISCE-99-DR-01-00010	P02

Figure 3:
WeBS Core Count Areas

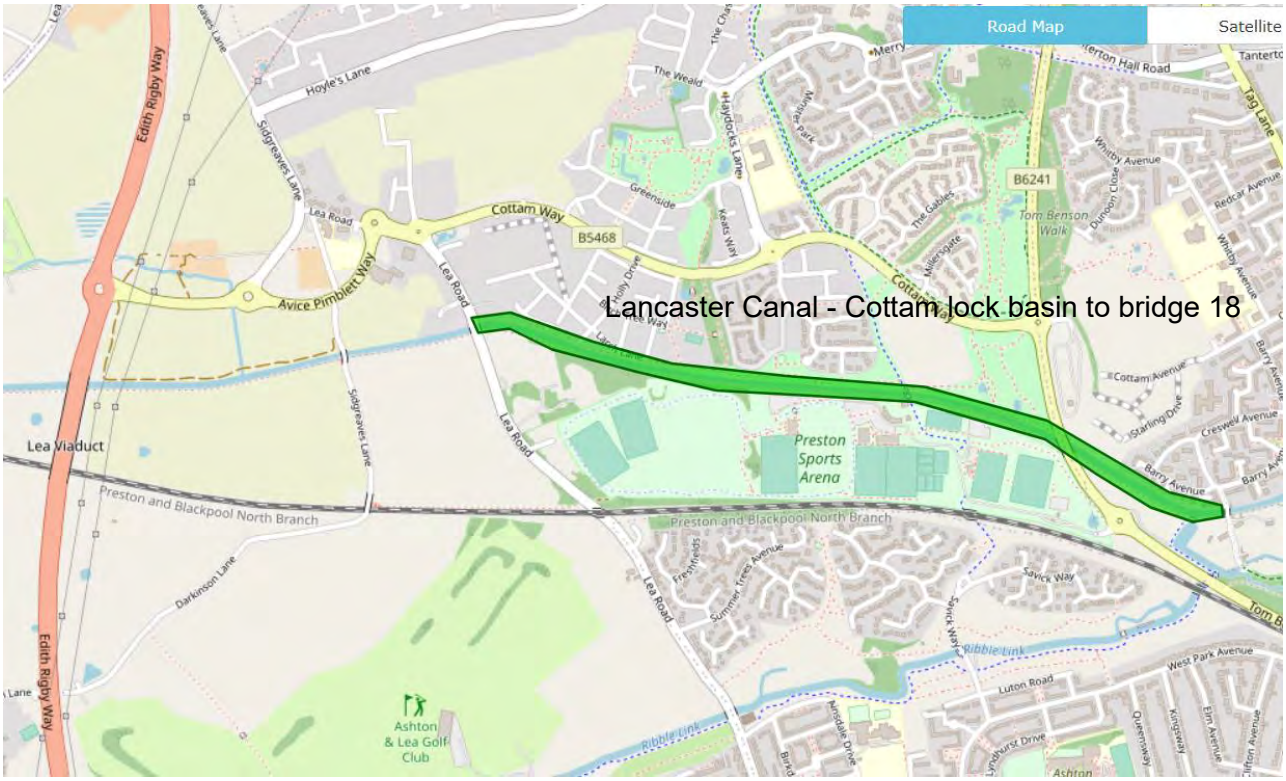

Figure 4:
Location of In Combination Effects Projects

Hoyles Lane, Cottam

Figure 4: Location of in Combination Effects Projects

Map Ref (NGR): 347877, 430008

- Site Boundary
- In Combination Effects Projects
- Ribble and Alt Estuaries SPA and Ramsar

Sidgreaves Lane

Lea Road

Cottam Parkway Railway Station

Land off Riversway

Millennium Ribble Link

Savick Brook

River Ribble

0 0.5 1 km

ecology services

Environmental Consultants

Figure 5:
Wintering Bird Zones

Hoyles Lane, Cottam

Figure 5: Wintering Bird Zones

Map Ref (NGR): 348830, 431300

- Site Boundary
- Pink-footed Goose Regular Flyover Area
- Whooper Swan Sensitive Waterbird Area
- Forestry Commission/ British Trust for Ornithology Wader Zonal Map

ecology services
Environmental Consultants

Appendix 1:
European Site Citations and Conservation Objectives

EC Directive 79/409 on the Conservation of Wild Birds: Citation for Special Protection Area (SPA)

Name: Ribble & Alt Estuaries

Unitary Authority/County: Lancashire; Sefton.

Site description: The Ribble and Alt Estuaries SPA lies on the coast of Lancashire and Sefton in northwest England. The SPA encompasses all or parts of Ribble Estuary SSSI and Sefton Coast SSSI. It comprises two estuaries, of which the Ribble is by far the larger, together with an extensive area of sandy foreshore along the Sefton Coast, and forms part of the chain of west coast SPAs that fringe the Irish Sea. Indeed, there is considerable interchange in the movements of birds between this site and Morecambe Bay, Mersey Estuary, Dee Estuary and Martin Mere. A large proportion of the SPA is within the Ribble Estuary National Nature Reserve. The site consists of extensive areas of sand and mudflats and, particularly in the Ribble, large areas of saltmarsh. There are also areas of coastal grazing marsh. The intertidal flats are rich in invertebrates on which waders and some wildfowl feed. The highest densities of feeding birds are on the muddier substrates of the Ribble, though sandy shores throughout are also used. Saltmarshes and coastal grazing marshes support high densities of wildfowl and these, together with intertidal sand and mudflats throughout, are used as high tide roosts. The site supports internationally important populations of waterbirds in winter, including swans, geese, ducks and waders. It is also of major importance during migration periods, especially for wader populations moving along the west coast of Britain. The larger expanses of saltmarsh and areas of coastal grazing marsh support breeding birds, including large concentrations of gulls and terns. These seabirds feed both offshore and inland, outside the SPA. Several species of waterfowl (notably Pink-footed Goose *Anser brachyrhynchus*) utilise feeding areas on agricultural land outside the SPA boundary.

Size of SPA: The SPA covers an area of 12,412.31 ha.

Qualifying species:
The site qualifies under **article 4.1** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:

Annex 1 species	Count and season	Period	% GB population
Ruff *Philomachus pugnax*	1 nest - breeding	Late 1980s count	9.1%
Common Tern *Sterna hirundo*	182 pairs - breeding	Count as at 1996	1.5%
Bewick's Swan *Cygnus columbianus bewickii*	276 individuals - wintering	5 year peak mean 1993/94 - 1997/98	3.9%
Whooper Swan *Cygnus cygnus*	182 individuals - wintering	5 year peak mean 1993/94 - 1997/98	3.3%
Golden Plover *Pluvialis apricaria*	3,598 individuals - wintering	5 year peak mean 1993/94 - 1997/98	1.4%
Bar-tailed Godwit *Limosa lapponica*	20,086 individuals - wintering	5 year peak mean 1993/94 - 1997/98	37.9%

The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in Annex I) in any season:

Migratory species	Count and season	Period	% of population
Lesser Black-backed Gull *Larus fuscus graellsii*	1,800 pairs - breeding	Count as at 1993	1.5% Western Europe/ Med/W Africa
Ringed Plover *Charadrius hiaticula*	1,657 individuals - passage	5 year peak mean 1993 - 1997	3.3% Europe/ Northern Africa (win)
Sanderling *Calidris alba*	6,535 individuals - passage	5 year peak mean 1993 - 1997	6.5% E Atlantic/W&S Africa (win)
Redshank *Tringa totanus*	3,247 individuals - passage	5 year peak mean 1993 - 1997	2.2% Eastern Atlantic (wintering)
Pink-footed Goose *Anser brachyrhynchus*	11,764 individuals - wintering	5 year peak mean 1993/94 - 1997/98	5.2% E Greenland/ Iceland/UK
Shelduck *Tadorna tadorna*	4,925 individuals - wintering	5 year peak mean 1993/94 - 1997/98	1.6% Northwestern Europe
Wigeon *Anas penelope*	85,259 individuals - wintering	5 year peak mean 1993/94 - 1997/98	6.8% W Siberia & NW/NE Europe
Teal *Anas crecca*	7,157 individuals - wintering	5 year peak mean 1993/94 - 1997/98	1.8% Northwestern Europe
Pintail *Anas acuta*	2,731 individuals - wintering	5 year peak mean 1993/94 - 1997/98	4.6% Northwestern Europe
Oystercatcher *Haematopus ostralegus*	18,535 individuals - wintering	5 year peak mean 1993/94 - 1997/98	2.1% Europe & N/W Africa (win)
Grey Plover *Pluvialis squatarola*	9,355 individuals - wintering	5 year peak mean 1993/94 - 1997/98	6.2% Eastern Atlantic (wintering)
Knot *Calidris canutus islandica*	68,922 individuals - wintering	5 year peak mean 1993/94 - 1997/98	19.7% NE Can/Grl/ Iceland/NW Eur
Sanderling *Calidris alba*	2,882 individuals - wintering	5 year peak mean 1993/94 - 1997/98	2.9% E Atlantic/W&S Africa (win)
Dunlin *Calidris alpina alpina*	39,376 individuals - wintering	5 year peak mean 1993/94 - 1997/98	2.8% N Siberia/Europe/ W Africa
Black-tailed Godwit *Limosa limosa islandica*	1,273 individuals - wintering	5 year peak mean 1993/94 - 1997/98	1.8% Iceland (breeding)
Redshank *Tringa totanus*	2,505 individuals - wintering	5 year peak mean 1993/94 - 1997/98	1.7% Eastern Atlantic (wintering)

Assemblage qualification:
The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season:

In the non-breeding season, the area regularly supports 323,861 individual waterbirds (5 year peak mean 1993/94 - 1997/98), including Cormorant *Phalacrocorax carbo*, Bewick's Swan *Cygnus columbianus bewickii*, Whooper Swan *Cygnus cygnus*, Pink-footed Goose *Anser brachyrhynchus*, Shelduck *Tadorna tadorna*, Wigeon *Anas penelope*, Teal *Anas crecca*, Pintail *Anas acuta*, Scaup *Aythya marila*, Common Scoter *Melanitta nigra*, Oystercatcher *Haematopus ostralegus*, Ringed Plover *Charadrius dubius*, Golden Plover *Pluvialis apricaria*, Grey Plover *Pluvialis squatarola*, Lapwing *Vanellus vanellus*, Knot *Calidris canutus islandica*, Sanderling *Calidris alba*, Dunlin *Calidris alpina alpina*, Black-tailed Godwit *Limosa limosa islandica*, Bar-tailed Godwit *Limosa lapponica*, Whimbrel *Numenius phaeopus*, Curlew *Numenius arquata* and Redshank *Tringa totanus*.

The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by over 20,000 seabirds in any season:

In the breeding season, the area regularly supports 29,236 individual seabirds (count period ongoing), including Black-headed Gull *Larus ridibundus*, Lesser Black-backed Gull *Larus fuscus graellsii* and Common Tern *Sterna hirundo*.

Non-qualifying species of interest:

The following Annex 1 species occur in non-breeding numbers of less than European importance (less than 1% of the Great Britain population): Hen Harrier *Circus cyaneus*, Merlin *Falco columbarius*, Peregrine *Falco peregrinus* and Short-eared Owl *Asio flammeus*.

Status of SPA:

1) The Ribble Estuary SPA was classified on 31 August 1982.
2) The Alt Estuary SPA was classified on 28 November 1985.
3) The Ribble & Alt Estuaries SPA was classified on 16 February 1995, subsuming the Alt Estuary SPA and the Ribble Estuary SPA.
4) An extension to the Ribble & Alt Estuaries SPA, at the southern end of the Sefton Coast SSSI, was classified on 28 November 2002.

NATURA 2000 – STANDARD DATA FORM

Special Protection Areas under the EC Birds Directive.

Each Natura 2000 site in the United Kingdom has its own Standard Data Form containing site-specific information. The data form for this site has been generated from the Natura 2000 Database submitted to the European Commission on the following date:

22/12/2015

The information provided here, follows the officially agreed site information format for Natura 2000 sites, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

The Standard Data Forms are generated automatically for all of the UK's Natura 2000 sites using the European Environment Agency's Natura 2000 software. The structure and format of these forms is exactly as produced by the EEA's Natura 2000 software (except for the addition of this coversheet and the end notes). The content matches exactly the data submitted to the European Commission.

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

Further technical documentation may be found here
http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

As part of the December 2015 submission, several sections of the UK's previously published Standard Data Forms have been updated. For details of the approach taken by the UK in this submission please refer to the following document:
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

More general information on Special Protection Areas (SPAs) in the United Kingdom is available from the SPA home page on the JNCC website. This webpage also provides links to Standard Data Forms for all SPAs in the UK.

Date form generated by the Joint Nature Conservation Committee
25 January 2016.

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK9005103**

SITENAME **Ribble and Alt Estuaries**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

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1.1 Type	1.2 Site code
A	UK9005103

1.3 Site name

Ribble and Alt Estuaries

1.4 First Compilation date	1.5 Update date
1995-02	2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:	

1.7 Site indication and designation / classification dates

Date site classified as SPA:	1995-02
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/uksi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/uksi/2011/625/contents/made).

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
-2.987222222	53.70555556

2.2 Area [ha]:

12449.92

2.3 Marine area [%]

76.5

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKD4	Lancashire
UKD5	Merseyside

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	G
B	A054	Anas acuta			w	2731	2731	i		G	B		C	
B	A052	Anas crecca			w	7157	7157	i		G	C		C	
B	A050	Anas penelope			w	85259	85259	i		G	B		C	
B	A040	Anser brachyrhynchus			w	11764	11764	i		G	B		B	
B	A062	Aythya marila			w	114	114	i		G	C		C	
B	A144	Calidris alba			c	6535	6535	i		G	B		C	
B	A144	Calidris alba			w	2882	2882	i		G	B		C	
B	A672	Calidris alpina alpina			w	39376	39376	i		G	B		C	
B	A143	Calidris canutus			w	68922	68922	i		G	A		C	
B	A137	Charadrius hiaticula			c	1657	1657	i		G	B		C	
		Cygnus												

B	A037	columbianus bewickii			w	276	276	i		G	B		C
B	A038	Cygnus cygnus			w	182	182	i		G	B		C
B	A130	Haematopus ostralegus			w	18535	18535	i		G	B		C
B	A183	Larus fuscus			r	1800	1800	p		G	C		C
B	A179	Larus ridibundus			r	11900	11900	p		G	B		C
B	A157	Limosa lapponica			w	20086	20086	i		G	A		C
B	A616	Limosa limosa islandica			w	1273	1273	i		G	C		C
B	A065	Melanitta nigra			w	746	746	i		G	B		C
B	A160	Numenius arquata			w	2046	2046	i		G	C		C
B	A158	Numenius phaeopus			c	697	697	i		G	B		C
B	A017	Phalacrocorax carbo			w	311	311	i		G	B		C
B	A151	Philomachus pugnax			r	1	1	p		G	B		B
B	A140	Pluvialis apricaria			w	3598	3598	i		G	C		C
B	A141	Pluvialis squatarola			w	9355	9355	i		G	B		C
B	A193	Sterna hirundo			r	182	182	p		G	C		C
B	A048	Tadorna tadorna			w	4925	4925	i		G	C		C
B	A162	Tringa totanus			w	2505	2505	i		G	C		C
B	A162	Tringa totanus			c	3247	3247	i		G	C		C
B	A142	Vanellus vanellus			w	16496	16496	i		G	C		C

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

3.3 Other important species of flora and fauna (optional)

Species					Population in the site			Motivation	
		Scientific						Species	Other

Group	CODE	Name	S	NP	Size		Unit	Cat.	Annex		categories			
					Min	Max		C|R|V|P	IV	V	A	B	C	D
B	SBA	Seabird assemblage			29236	29236	i							X
B	WATR	Waterfowl assemblage			323861	323861	i						X	

- **Group:** A = Amphibians, B = Birds, F = Fish, Fu = Fungi, I = Invertebrates, L = Lichens, M = Mammals, P = Plants, R = Reptiles
- **CODE:** for Birds, Annex IV and V species the code as provided in the reference portal should be used in addition to the scientific name
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Unit:** i = individuals, p = pairs or other units according to the standard list of population units and codes in accordance with Article 12 and 17 reporting, (see reference portal)
- **Cat.:** Abundance categories: C = common, R = rare, V = very rare, P = present
- **Motivation categories: IV, V:** Annex Species (Habitats Directive), **A:** National Red List data; **B:** Endemics; **C:** International Conventions; **D:** other reasons

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N07	1.0
N03	17.0
N02	82.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil &
Geology: alluvium,sand,sedimentary,neutral,mud,basic,sedimentary,sand,basic,alluvium,neutral 2 Terrestrial: Geomorphology and landscape: coastal,lowland,lowland,coastal 3 Marine: Geology: mud,sedimentary,sand 4 Marine: Geomorphology: open coast (including bay),estuary,intertidal sediments (including sandflat/mudflat),intertidal sediments (including sandflat/mudflat),open coast (including bay),estuary

4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Philomachus pugnax (Western Africa - wintering) 9.1% of the GB breeding population Count as at late 1980s Sterna hirundo (Northern/Eastern Europe - breeding) 1.5% of the GB breeding population Count as at 1996 Over winter the area regularly supports: Cygnus columbianus bewickii (Western Siberia/North-eastern & North-western Europe) 3.9% of the GB population 5 year peak mean 1993/94 - 1997/98 Cygnus cygnus (Iceland/UK/Ireland) 3.3% of the GB population 5 year peak mean 1993/94 - 1997/98 Limosa lapponica (Western Palearctic - wintering) 37.9% of the GB population 5 year peak mean 1993/94 - 1997/98 Pluvialis apricaria [North-western Europe - breeding] 1.4% of the GB population 5 year peak mean 1993/94 - 1997/98 ARTICLE 4.2 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Larus fuscus (Western Europe/Mediterranean/Western Africa) 1.5% of the breeding population Count as at 1993 Larus ridibundus (North-western Europe - breeding) 7.1% of the population in Great Britain Count as at 1996 Over winter the area regularly supports: Anas acuta (North-western Europe) 4.6% of the population 5 year peak mean 1993/94 - 1997/98 Anas crecca (North-western Europe) 1.8% of the population 5 year peak mean 1993/94 - 1997/98 Anas penelope (Western Siberia/North-western/North-eastern Europe) 6.8% of the population 5 year peak mean 1993/94 - 1997/98 Anser brachyrhynchus (Eastern Greenland/Iceland/UK) 5.2% of the population 5 year peak mean 1993/94 - 1997/98 Aythya marila (Northern/Western Europe) 1.0% of the population in Great Britain 5 year peak mean 1993/94 - 1997/98 Calidris alba (Eastern Atlantic/Western & Southern Africa - wintering) 2.9% of the population 5 year

peak mean 1993/94 - 1997/98 Calidris alpina alpina (Northern Siberia/Europe/Western Africa) 2.8% of the population 5 year peak mean 1993/94 - 1997/98 Calidris canutus (North-eastern Canada/Greenland/Iceland/North-western Europe) 19.7% of the population 5 year peak mean 1993/94 - 1997/98 Haematopus ostralegus (Europe & Northern/Western Africa) 2.1% of the population 5 year peak mean 1993/94 - 1997/98 Limosa limosa islandica (Iceland - breeding) 1.8% of the population 5 year peak mean 1993/94 - 1997/98 Melanitta nigra (Western Siberia/Western & Northern Europe/North-western Africa) 2.7% of the population in Great Britain 5 year peak mean 1993/94 - 1997/98 Numenius arquata (Europe - breeding) 1.7% of the population in Great Britain 5 year peak mean 1993/94 - 1997/98 Phalacrocorax carbo (North-western Europe) 2.4% of the population in Great Britain 5 year peak mean 1993/94 - 1997/98 Pluvialis squatarola (Eastern Atlantic - wintering) 6.2% of the population 5 year peak mean 1993/94 -1997/98 Tadorna tadorna (North-western Europe) 1.6% of the population 5 year peak mean 1993/94 - 1997/98 Tringa totanus (Eastern Atlantic - wintering) 1.7% of the population 5 year peak mean 1993/94 - 1997/98 Vanellus vanellus (Europe - breeding) 0.8% of the population in Great Britain 5 year peak mean 1993/94 - 1997/98 On passage the area regularly supports: Calidris alba (Eastern Atlantic/Western & Southern Africa - wintering) 6.5% of the population 5 year peak mean 1993 - 1997 Charadrius hiaticula (Europe/Northern Africa - wintering) 3.3% of the population 5 year peak mean 1993 - 1997 Numenius phaeopus (Europe/Western Africa) 13.9% of the population in Great Britain 5 year peak mean 1993/94 - 1997/98 Tringa totanus (Eastern Atlantic - wintering) 2.2% of the population 5 year peak mean 1993 - 1997 ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS During the breeding season the area regularly supports: 29236 seabirds(5 year peak mean 1991/92-1995/96) Including: Larus ridibundus , Larus fuscus , Sterna hirundo , Over winter the area regularly supports: 323861 waterfowl (5 year peak mean 1991/92-1995/96) Including: Phalacrocorax carbo , Cygnus columbianus bewickii , Cygnus cygnus , Anser brachyrhynchus , Tadorna tadorna , Anas penelope , Anas crecca , Anas acuta , Aythya marila , Melanitta nigra , Haematopus ostralegus , Charadrius hiaticula , Pluvialis apricaria [North-western Europe - breeding], Pluvialis squatarola , Vanellus vanellus , Calidris canutus , Calidris alba , Calidris alpina alpina , Limosa limosa islandica , Limosa lapponica , Numenius phaeopus , Numenius arquata , Tringa totanus

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	M01		B
H	J02		B
H	I01		B
H	K02		I
H	H04		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	D05		I
H	A04		I
H	D05		I
H	A02		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://publications.naturalengland.org.uk/category/6490068894089216

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

http://publications.naturalengland.org.uk/category/3212324

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK01	37.6	UK04	100.0		

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [ ] Yes
- [ ] No, but in preparation
- [X] No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE NATURA 2000 STANDARD DATA FORMS

The codes in the table below are also explained in the official European Union guidelines for the Standard Data Form. The relevant page is shown in the table below.

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	Designated Special Protection Area	53
B	SAC (includes candidates Special Areas of Conservation, Sites of Community Importance and designated SAC)	53
C	SAC area the same as SPA. Note in the UK Natura 2000 submission this is only used for Gibraltar	53

3.1 Habitat representativity

CODE	DESCRIPTION	PAGE NO
A	Excellent	57
B	Good	57
C	Significant	57
D	Non-significant presence	57

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha□ rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	15%-100%	58
B	2%-15%	58
C	< 2%	58

3.1 Conservation status habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global grade habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	15%-100%	62
B	2%-15%	62
C	< 2%	62
D	Non-significant population	62

3.2 Conservation status species (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' Or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Assemblages types

CODE	DESCRIPTION	PAGE NO
WATR	Non breeding waterfowl assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code
BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK02	Marine Nature Reserve	67
UK04	Site of Special Scientific Interest (UK)	67

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.

2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.

3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

Joint Nature Conservation Committee
Monkstone House
City Road
Peterborough
Cambridgeshire PE1 1JY
UK
Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948
Email: RIS@JNCC.gov.uk

2. Date this sheet was completed/updated:

Designated: 16 February 1995

3. Country:

UK (England)

4. Name of the Ramsar site:

Ribble and Alt Estuaries

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area:

** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* □;
ii**) an electronic format** (e.g. a JPEG or ArcView image) Yes
iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* □;

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

53 42 41 N 02 58 44 W

9. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Preston

The site occupies a stretch of coastline between Liverpool and Preston on the north-west coast of England. It lies between the Mersey estuary and Morecambe Bay.

Administrative region: Lancashire; Merseyside; Sefton

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 13464.1

Min. -2
Max. 19
Mean 1

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

A large area including two estuaries which form part of the chain of west coast sites which fringe the Irish Sea. The site is formed by extensive sand and mudflats backed, in the north, by the saltmarsh of the Ribble Estuary and, to the south, the sand dunes of the Sefton Coast. The tidal flats and saltmarsh support internationally important populations of waterfowl in winter and the sand dunes support vegetation communities and amphibian populations of international importance.

13. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

2, 5, 6

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 2

This site supports up to 40% of the Great Britain population of natterjack toads *Bufo calamita*.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:
222038 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6 – species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species regularly supported during the breeding season:

Lesser black-backed gull , *Larus fuscus graellsii*, W Europe/Mediterranean/W Africa	4108 apparently occupied nests, representing an average of 2.7% of the breeding population (Seabird 2000 Census)

Species with peak counts in spring/autumn:

Ringed plover , *Charadrius hiaticula*, Europe/Northwest Africa	3761 individuals, representing an average of 5.1% of the population (5 year peak mean 1998/9-2002/3 - spring peak)
Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa -wintering	11021 individuals, representing an average of 4.4% of the population (5 year peak mean 1998/9-2002/3 - spring peak)
Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering)	42692 individuals, representing an average of 9.4% of the population (5 year peak mean 1998/9-2002/3)
Sanderling , *Calidris alba*, Eastern Atlantic	7401 individuals, representing an average of 6% of the population (5 year peak mean 1998/9-2002/3 - spring peak)
Dunlin , *Calidris alpina alpina*, W Siberia/W Europe	38196 individuals, representing an average of 2.8% of the population (5 year peak mean 1998/9-2002/3 - spring peak)
Black-tailed godwit , *Limosa limosa islandica*, Iceland/W Europe	3323 individuals, representing an average of 9.4% of the population (5 year peak mean 1998/9-2002/3)
Common redshank , *Tringa totanus totanus*,	4465 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)
Lesser black-backed gull , *Larus fuscus graellsii*,	1747 individuals, representing an average of 2.8% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Tundra swan , *Cygnus columbianus bewickii*, NW Europe	230 individuals, representing an average of 2.8% of the GB population (5 year peak mean 1998/9-2002/3)
Whooper swan , *Cygnus cygnus*, Iceland/UK/Ireland	211 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)
Pink-footed goose , *Anser brachyrhynchus*, Greenland, Iceland/UK	6552 individuals, representing an average of 2.7% of the population (5 year peak mean 1998/9-2002/3)

Common shelduck , *Tadorna tadorna*, NW Europe	2944 individuals, representing an average of 3.7% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian wigeon , *Anas penelope*, NW Europe	69841 individuals, representing an average of 4.6% of the population (5 year peak mean 1998/9-2002/3)
Eurasian teal , *Anas crecca*, NW Europe	5107 individuals, representing an average of 1.2% of the population (5 year peak mean 1998/9-2002/3)
Northern pintail , *Anas acuta*, NW Europe	1497 individuals, representing an average of 2.4% of the population (5 year peak mean 1998/9-2002/3)
Eurasian oystercatcher , *Haematopus ostralegus ostralegus*, Europe & NW Africa -wintering	18926 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3)
Bar-tailed godwit , *Limosa lapponica lapponica*, W Palearctic	13935 individuals, representing an average of 11.6% of the population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.
Details of bird species occuring at levels of National importance are given in Section 22

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	basic, neutral, sand, alluvium, sedimentary
Geomorphology and landscape	lowland, coastal, intertidal sediments (including sandflat/mudflat), open coast (including bay), estuary
Nutrient status	mesotrophic
pH	alkaline, circumneutral
Salinity	brackish / mixosaline, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Blackpool, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/blackpool.html) Max. daily temperature: 12.9° C Min. daily temperature: 6.4° C Days of air frost: 40.3 Rainfall: 871.3 mm Hrs. of sunshine: 1540.3

General description of the Physical Features:

The Ribble and Alt Estuaries lie on the Irish Sea coast of north-west England. The site comprises two estuaries, of which the Ribble Estuary is by far the larger, together with an extensive area of sandy foreshore along the Sefton Coast. The site consists of extensive sand- and mud-flats and, particularly in the Ribble Estuary, large areas of saltmarsh. There are also areas of coastal grazing marsh located behind the sea embankments.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Ribble and Alt Estuaries lie on the Irish Sea coast of north-west England. The site comprises two estuaries, of which the Ribble Estuary is by far the larger, together with an extensive area of sandy foreshore along the Sefton Coast. The site consists of extensive sand- and mud-flats and, particularly in the Ribble Estuary, large areas of saltmarsh. There are also areas of coastal grazing marsh located behind the sea embankments.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping

19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	75
H	Salt marshes	16
E	Sand / shingle shores (including dune systems)	8
Ts	Freshwater marshes / pools: seasonal / intermittent	1

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The Ribble and Alt Estuaries contain extensive areas of intertidal sand and mudflats. These are backed by, on the Ribble, one of the most extensive areas of grazed saltmarsh in Britain and, along the Sefton Coast, the largest calcareous dune complex in north-western England.

The intertidal flats support internationally important populations of waterfowl which feed on a rich invertebrate fauna and *Enteromorpha* beds.

The saltmarsh supports a range of vegetation communities typical of north-west England maintained by stable grazing regimes. However, the estuary is accreting in response to large-scale land-claim, with *Spartina anglica* dominant in the pioneer stages with *Festuca rubra* and *Puccinellia maritima* dominating the grazed sward. Natural transitions are prevented by coastal defence structures. Small areas of saltmarsh also occur in discrete locations along the Sefton Coast.

The sand dunes display a full range of plant communities and habitat types from embryo to grey dunes with transitions to dune grassland and heath. Numerous species-rich slacks can be found throughout the dune transition but generally the extent of vegetation cover and species diversity increases with distance from the sea. *Elytrigia juncea* and *Elymus arenarius* dominate the embryo dunes (NVC SD5&7), being replaced by *Ammophila arenaria* in the mobile yellow dunes (SD6); large areas of bare sand are still present. Two distinct types of vegetation dominate the extensive grey dunes, the first a *Festuca rubra/Rubus caesius* dune pasture and a *Salix repens/R. caesius*/dwarf shrub (SD9

variants). These dunes also support two large coniferous plantations which support a distinctive flora. Elsewhere, and in the absence of management, smaller areas of secondary deciduous scrub/woodland remain including *Hippophae rhamnoides* and various *Populus* spp. Dune slacks are regularly found throughout the dune complex. Normally dominated by creeping willow, they also support a diverse flora including the nationally rare liverwort, *Petalophyllum ralfsii* and dune helleborine *Epipactis dunensis* (SD15&16). Dune grassland and heath occupy fragmented locations on the extreme eastern edge of the system with *Calluna vulgaris* and *Carex arenaria* both strong characteristics.

The dune system is a candidate Special Area of Conservation for the following Annex I habitats: dunes with creeping willow; shifting dunes; humid dune slacks; shifting dunes with marram; petalwort *Petalophyllum ralfsii*; great crested newt *Triturus cristatus*; coastal dune heathland; and dune grassland ('grey dunes'). The last two are priority habitat types under the EC Habitats Directive.

Ecosystem services

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

International importance

Lower plants

Petalophyllum ralfsii Petalwort (Conservation status: European Red List: Vulnerable; Habitats Directive Annex II species (S1395))

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Birds

Species currently occurring at levels of national importance:

Species regularly supported during the breeding season:

Black-headed gull , *Larus ridibundus*, N & C Europe	14888 apparently occupied nests, representing an average of 11.6% of the GB population (Seabird 2000 Census)
Common tern , *Sterna hirundo hirundo*, N & E Europe	182 pairs, representing an average of 1.7% of the GB population (1996)

Species with peak counts in spring/autumn:

Ruff , *Philomachus pugnax*, Europe/W Africa	60 individuals, representing an average of 8.5% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian curlew , *Numenius arquata arquata*, N. a. arquata Europe (breeding)	2502 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , *Tringa nebularia*, Europe/W Africa	9 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Red-throated diver , *Gavia stellata*, NW Europe	56 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)

Great cormorant , *Phalacrocorax carbo carbo*, NW Europe	463 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)
Northern shoveler , *Anas clypeata*, NW & C Europe	200 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
Black (common) scoter , *Melanitta nigra nigra*,	691 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
European golden plover , *Pluvialis apricaria apricaria*, P. a. altifrons Iceland & Faroes/E Atlantic	3588 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , *Tringa erythropus*, Europe/W Africa	2 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Black-headed gull , *Larus ridibundus*, N & C Europe	16849 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

Species occurring at levels of national importance:

Natterjack toad *Bufo calamita* (Habitats Directive Annex IV species (S1202)) (c. 40% GB population)

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23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

Aesthetic
Archaeological/historical site
Environmental education/ interpretation
Fisheries production
Livestock grazing
Non-consumptive recreation
Scientific research
Sport fishing
Sport hunting
Tourism
Transportation/navigation

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:

ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:

iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+
Public/communal	+	+

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Gathering of shellfish	+	
Bait collection	+	
Permanent arable agriculture		+
Grazing (unspecified)	+	
Hunting: recreational/sport	+	
Industry	+	
Sewage treatment/disposal	+	+
Harbour/port		+
Flood control	+	+
Irrigation (incl. agricultural water supply)		+
Mineral exploration (excl. hydrocarbons)	+	
Oil/gas exploration		+
Oil/gas production		+
Transport route	+	+
Urban development		+
Military activities		+

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2	Coastal erosion is a factor at Formby Point with an estimated loss of 4 metres per year. It is a concern because pine woodland on the sand dunes is causing coastal squeeze and therefore preventing sand dune habitats from rolling back; as such dune slack habitats for natterjack toads are declining/being lost.	+		+

For category 2 factors only.
What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?
Erosion - At Ainsdale Sand Dunes National Nature Reserve English Nature have made efforts to restore dune habitat; an Environmental Impact Assessment has been carried out with a view to submitting a tree-felling application in February 2005.

Is the site subject to adverse ecological change? NO

27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	+
National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
Special Area of Conservation (SAC)	+	
Management plan in preparation	+	

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Contemporary.

Fauna.
Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.
Annual natterjack toad monitoring programme: Leisure Services, Metropolitan Borough of Sefton and English Nature Ainsdale NNR.

Completed.

Flora.
National sand dune survey. Sefton coast NCC Report (Edmondson *et al*. 1989)
Bryophyte surveys (various) of Sefton Coast (M Newton).
Ribble and Alt NVC saltmarsh survey 2002 (The Environment Partnership 2003)

Fauna.
Invertebrate surveys (numerous)

Documents held by various authorities on the coast including English Nature & Metropolitan Borough of Sefton.
For a full account of reports, papers etc, reference should be made to:
The sand dunes of the Sefton Coast (Atkinson & Houston 1993).

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

The Metropolitan Borough of Sefton, English Nature, National Trust and RSPB all lead guided walks onto suitable areas of the coast at all times of the year.
The entire site is reasonably well provided with fixed interpretation panels at many of the main public access points around the site.
The RSPB is developing educational/visitor facilities at its Reserve.
Southport Pier is developing into a major wildlife interpretation centre. English Nature, RSPB and Sefton Council are working on the project.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities, Facilities provided and Seasonality.
Infrastructure developments

There are caravan parks adjacent to the site at Formby and moorings in the Alt. No major expansion anticipated.

Land-based recreation

There is intensive recreational use of the northern beaches (Southport & Ainsdale) where traditional activities are concentrated. These include beach car parking, and, during the summer months several large-scale events. Elsewhere, recreation is more informal and less intensive - but all beach activities

on the Sefton Coast are managed by the Beach Management Plan. The golf courses are heavily used; Royal Birkdale hosted the British Open Golf Championship in 1998.

Water-based recreation

Mainly a summer activity based on the beach at Southport. Becoming more common but has, in the past, included pleasure trips on hovercraft.

Airborne recreation

Some disturbance in winter months by micro-lights, particularly to pink-footed goose populations.

Wildfowling

Occurs on extensive areas of the Ribble including the NNR. Usually controlled by agreement.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see **15** above), list full reference citation for the scheme.

Site-relevant references

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone**: +41 22 999 0170** • Fax: **+41 22 999 0169** • email: **ramsar@ramsar.org**

European Site Conservation Objectives for Ribble and Alt Estuaries Special Protection Area Site Code: UK9005103

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A037 *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)
A038 *Cygnus cygnus*; Whooper swan (Non-breeding)
A040 *Anser brachyrhynchus*; Pink-footed goose (Non-breeding)
A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
A050 *Anas penelope*; Eurasian wigeon (Non-breeding)
A052 *Anas crecca*; Eurasian teal (Non-breeding)
A054 *Anas acuta*; Northern pintail (Non-breeding)
A130 *Haematopus ostralegus*; Eurasian oystercatcher (Non-breeding)
A137 *Charadrius hiaticula*; Ringed plover (Non-breeding)
A140 *Pluvialis apricaria*; European golden plover (Non-breeding)
A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
A143 *Calidris canutus*; Red knot (Non-breeding)

Contd/

A144 *Calidris alba*; Sanderling (Non-breeding)
A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
A151 *Philomachus pugnax*; Ruff (Breeding)
A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
A162 *Tringa totanus*; Common redshank (Non-breeding)
A183 *Larus fuscus*; Lesser black-backed gull (Breeding)
A193 *Sterna hirundo*; Common tern (Breeding)
Waterbird assemblage
Seabird assemblage

This is a European Marine Site

This SPA is a part of the Ribble and Alt Estuaries European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via GOV.UK.

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a Special Protection Area (SPA).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 4). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

Appendix 2:
Surface Water Management Plan (Draft)

Bethell Construction Ltd

Hoyles Lane Supply and Demand

Surface Water Management Plan (Draft)

CONTRACT: Hoyles Lane Supply and Demand (C&D PO 004)

LOCATION: Preston

CLIENT: United Utilities

DESIGNER: BCL

CONTRACT NUMBER: UU6222

PROJECTWISE REF:

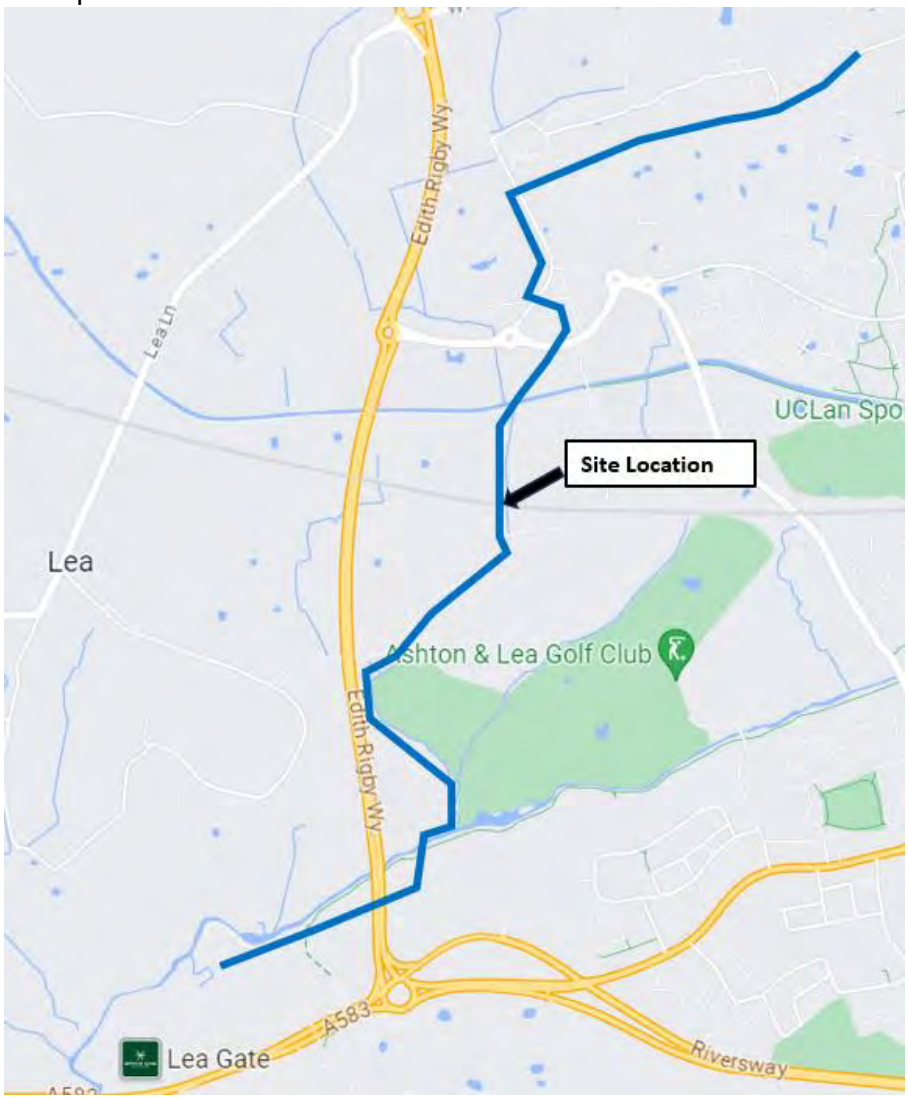
PLAN PREPARED BY: Adrian Townsend

Rev	Date	Author	Description
0	31.10.23	A Townsend	Draft Issue
1	07.11.23	A Townsend	Further Draft following comments from EGEMS.
2	13.11.23	A Townsend	"
3	16.11.23	A Townsend	Updated Plans Pg. 7,8,9,10

Contents

Introduction

Bethell Construction Ltd have developed this Surface Water Management Plan to support a Habitat Regulations Assessment (HRA) in association with works to install a sewer pipeline between Hoyles Lane, Preston to a connection point manhole to the East of Lea Gate PS. This plan is a requirement of the HRA and sets out how surface water and groundwater pumped out of excavations will be managed during the works, to ensure that impacts on watercourses are kept to a minimum.



Site Works Description

The proposed works are located in Cottam, Preston, located approx. 6km north-west of Preston town centre. The scheme extends between Hoyles Lane, Cottam and Lea Gate Wastewater Pumping Station (WwPS), 1.5km south of the village of Lea Town.

Figure 1: Hoyles Lane, Cottam relative to Preston Town Centre. Sewer route highlighted in red and temporary compounds in yellow.

The sewer improvement works commence at the junction of Westward Close and Hoyles Lane and run west to the junction of Sidgreaves Lane, before extending south parallel to the west side of the highway onto agricultural fields and open countryside. The pipeline route continues in a southerly direction, through fields and crossing multiple key features, including various minor and major highways, Lancaster Canal (a wildlife corridor and Biological Heritage Site [BHS]), the Blackpool-Preston railway line, around the western perimeter of Ashton & Lea Golf Club, before crossing Savick Brook (also a BHS). From the south side of Savick Brook, the new sewer runs in a south-westerly direction, crossing the recently completed Preston West Distributor Route (PWDR) before connecting into the existing Lea Gate WwPS. The total length of the sewer route is approximately 4 kilometres. For further detail, refer to drawings 80061057-GHD-MISCE-99-DR-01-00009 and 80061057-GHD-MISCE-99-DR-01-00010.

The key construction activities will include:

- Site establishment & compound creation
- Creation of temporary accesses at Lea Road, Sidgreaves Lane (x2), Darkinson Lane & Riversway.
- Open cut works to install new sewer pipeline
- Guided auger boring works underneath the Lancaster Canal, the Preston to Blackpool railway line and Savick Brook.

Surface Water Management

Risks:
The site is largely made up of existing farmland used by cattle with evidence of standing water in many of the fields along the construction corridor, this is likely to result in the surface water run off to communicate with open cut sewer pipeline trenches and associated smaller water courses. This will require a dewatering surface water management strategy to be developed.

Mitigation Measures:
Prior to mobilising the site, the working area shall be surveyed site for existing field drains.
A pre-construction land drainage design is to be developed in the working area.
Any field drains that are severed shall be reinstated as part of the overall reinstatement of the working area.

In the event that standing water becomes a significant issue on the site, a detailed dewatering regime shall be developed and implemented. This shall either comprise of a settlement treatment system and surface discharge to grassed fields as agreed (subject to Land Owner agreement), or alternatively, via discharge to the existing sewer network (subject to UU Operations agreement).

Where dewatering is to be achieved via the use of over pumping, a Permit To Pump shall be obtained from United Utilities, as per Standard Operating Procedure WwP/S/001/21/04.

All fuels, COSHH materials to be stored as far from watercourse as possible, in/on bund with a capacity of 110% of the volume of all the liquids/materials to be stored within it.

Spill kits (appropriately spaced to absorb and contain all Fuel, Oil & COSHH materials to be used on the project) shall be kept adjacent to the storage area, and with each machine.

Excavated materials to be removed from site as produced, or covered over with visqueen until removed.

Toolbox Talks shall be delivered to and made available to the Site Team.

Dewatering & Permit to Pump (UU)

Risks:
There is a requirement to maintain a dry working area within the manhole excavations at all times. Dewatering of this and the wider working area creates potential to cause discolouration to the receiving watercourses.

Water pollution is the most common cause of environmental incident by Contractors working on behalf of United Utilities and is a trend that the Client aims to reduce as a priority. Poorly

managed water management is a common cause of water pollution incidents, which are often highly visible.

Mitigation Measures:
Prior to making any dewatering discharges, permission shall be sought from the landowner and a 'Permit To Pump' (UU Standard Operating Procedure WwP/S/001/21/04), acquired from United Utilities.

A method statement detailing a sump and pump arrangement shall be developed and installed in the excavation in order to maintain a dry working area at all times. This shall discharge to a settlement tank and discharge diffuser.

Toolbox Talk shall be delivered to and made available to the Site Team.

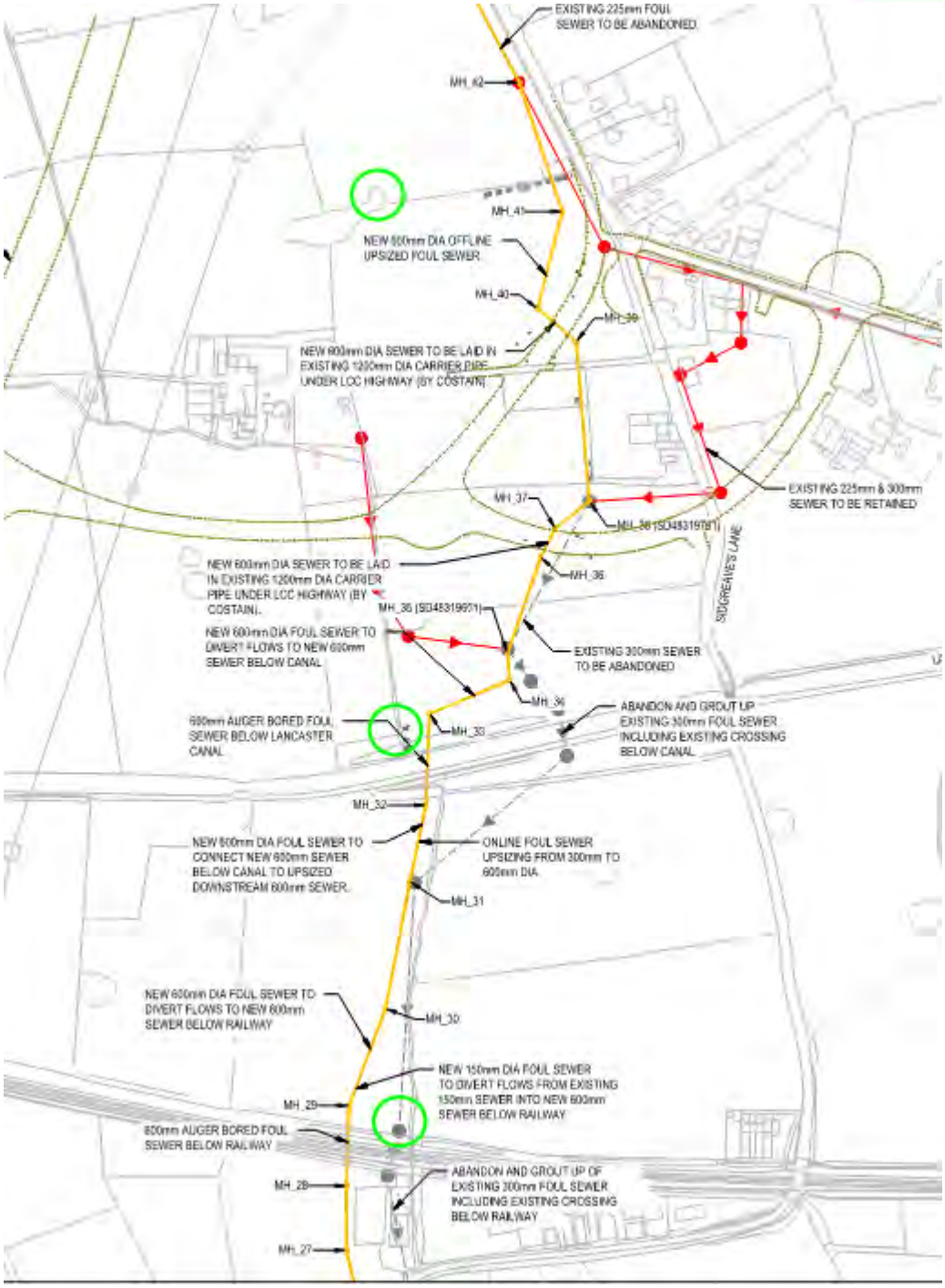
Permits – Abstraction

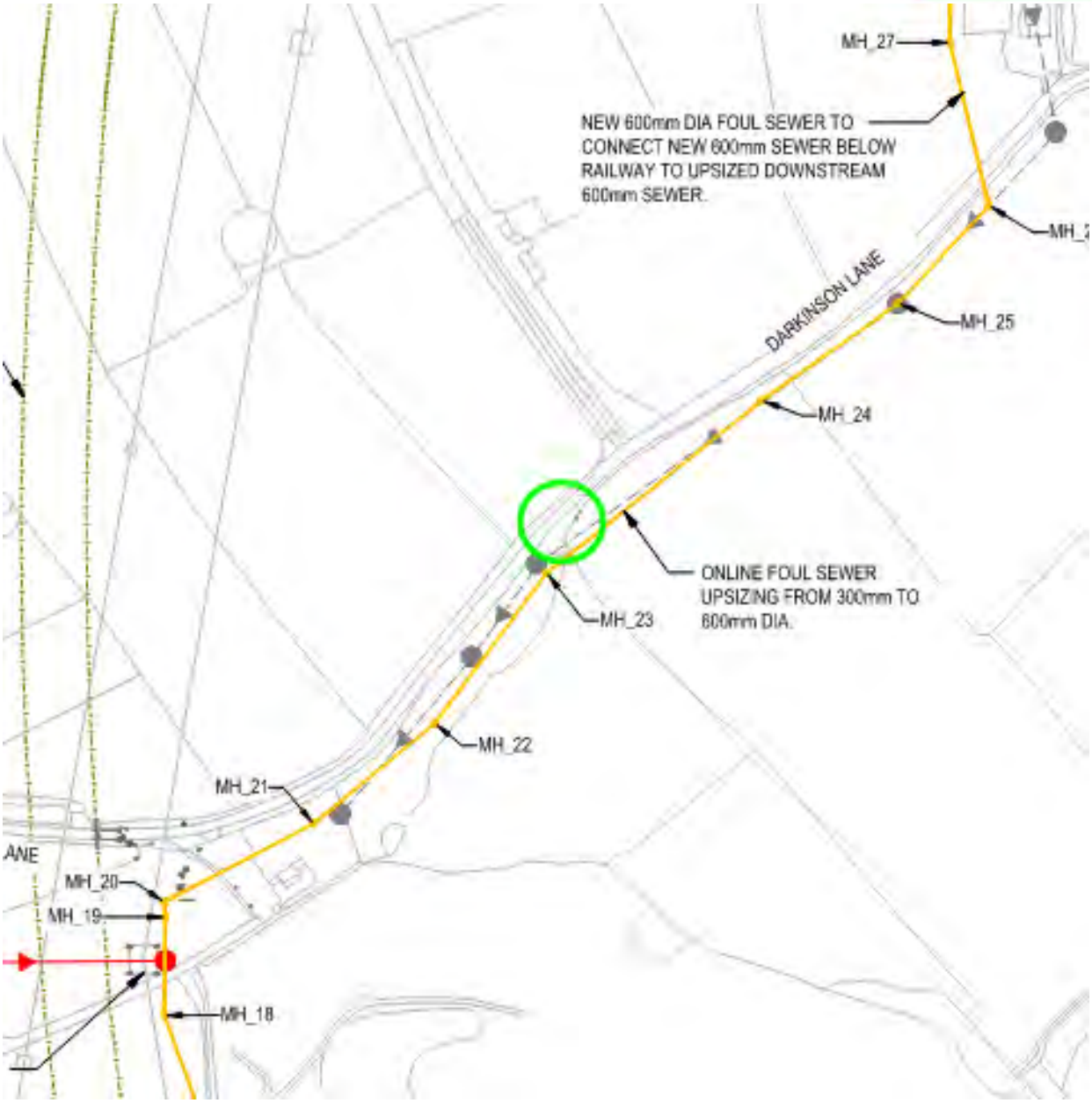
Risks:
In the event that ground water monitoring determines that dewatering of the excavation is expected to produce more than 20m^3 per day, and/or requires complicated treatment in order to be suitable for discharge to a surface water, a bespoke abstraction permit will be required, which will take up to 12 weeks to obtain.

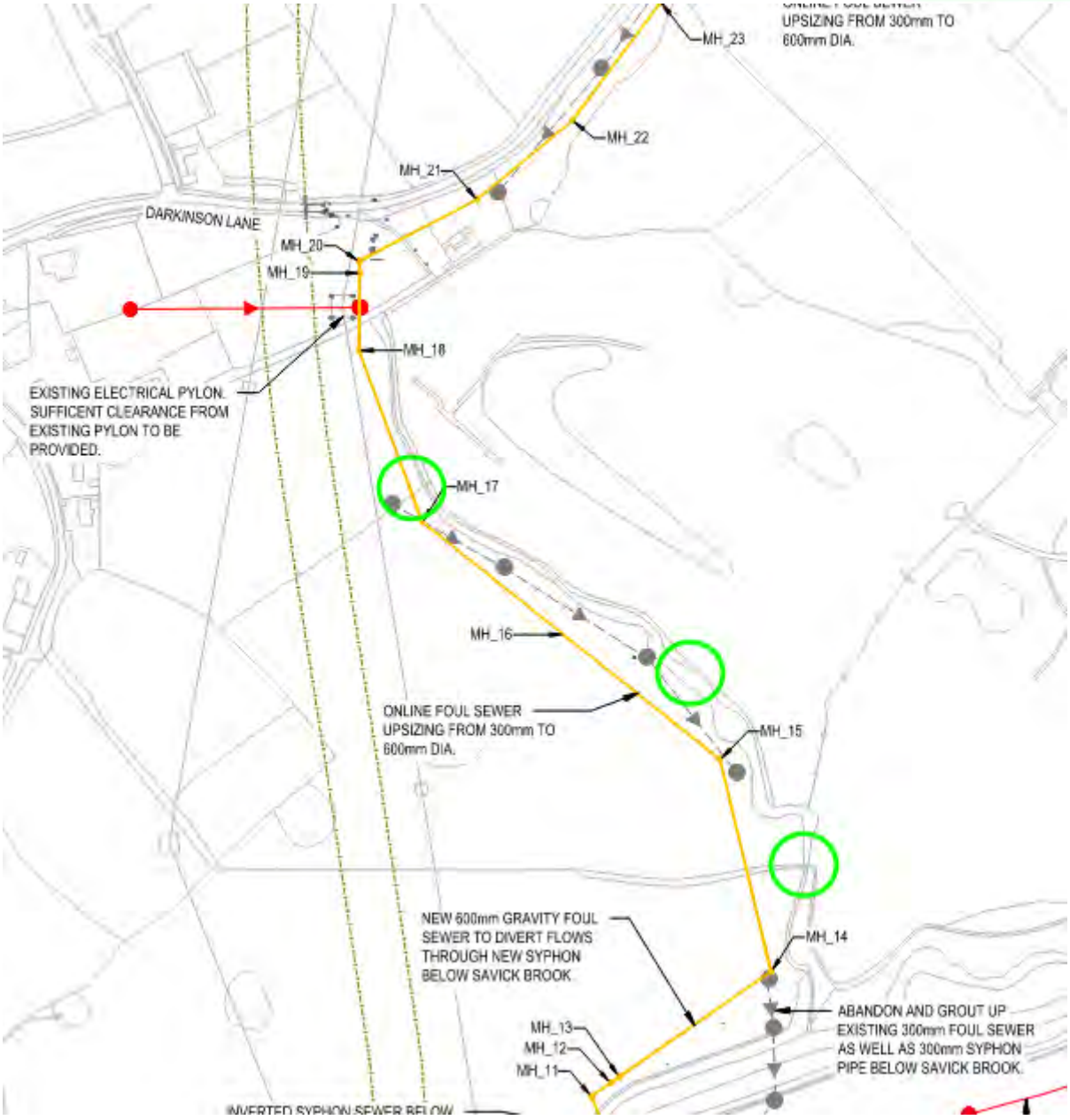
Mitigation Measures:
A method statement detailing a sump and pump arrangement shall be developed.
The abstraction permit shall be applied for.

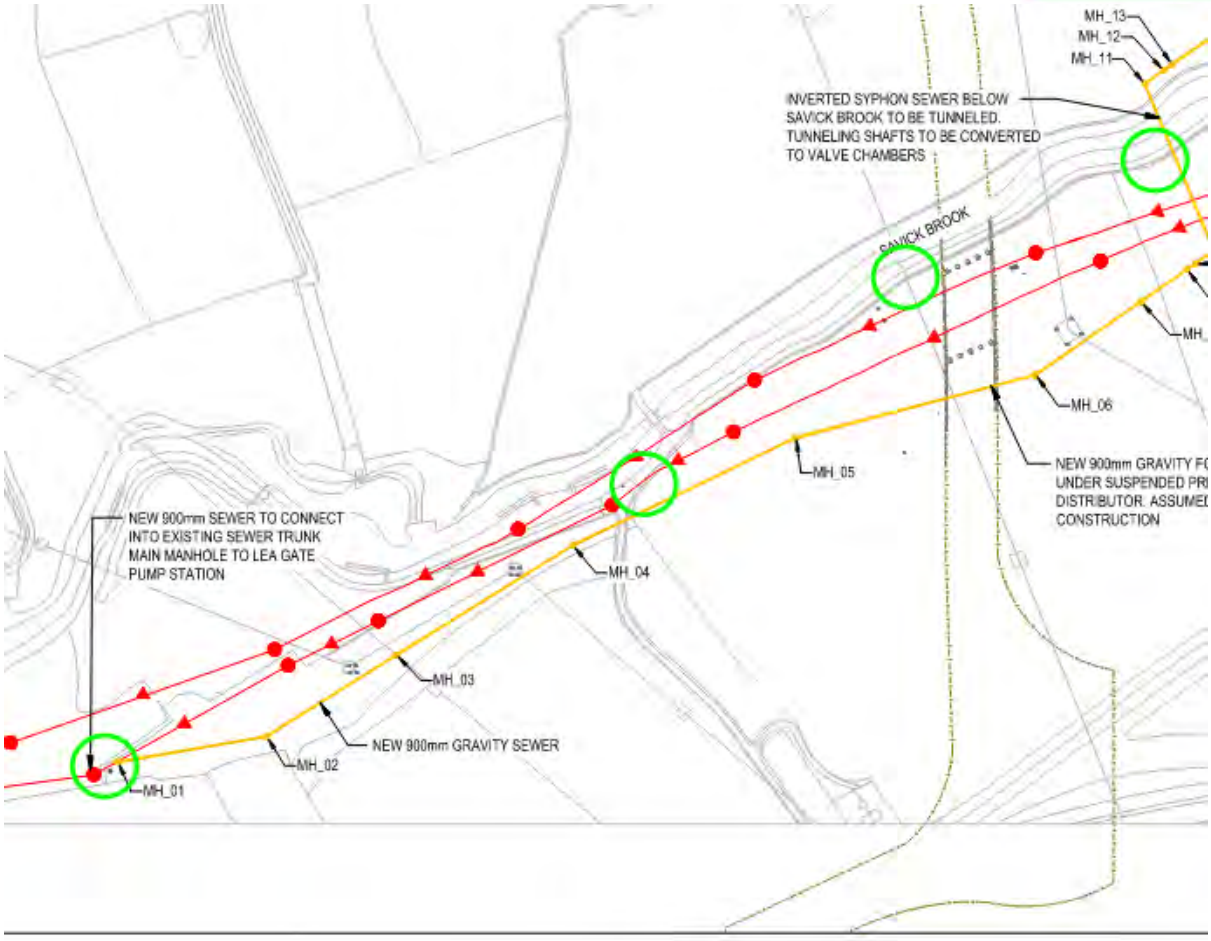
Condition Survey

BCL will conduct a condition survey of the watercourses shown below. This will ensure a record of the condition of the existing sites watercourse can be referred to and ensure reinstatement is completed back to its original state.


EXISTING 225mm FOUL SEWER TO BE ABANDONED
MH_42
MH_41
NEW 600mm DIA OFFLINE UPSIZED FOUL SEWER
MH_40
MH_39
NEW 600mm DIA SEWER TO BE LAID IN EXISTING 1200mm DIA CARRIER PIPE UNDER LCC HIGHWAY (BY COSTAIN)
EXISTING 225mm & 300mm SEWER TO BE RETAINED
MH_37
MH_36 (SD48319971)
SIDGREAVES LANE
NEW 600mm DIA SEWER TO BE LAID IN EXISTING 1200mm DIA CARRIER PIPE UNDER LCC HIGHWAY (BY COSTAIN).
MH_36
MH_36 (SD48319971)
NEW 600mm DIA FOUL SEWER TO DIVERT FLOWS TO NEW 600mm SEWER BELOW CANAL
EXISTING 300mm SEWER TO BE ABANDONED
MH_34
ABANDON AND GROUT UP EXISTING 300mm FOUL SEWER INCLUDING EXISTING CROSSING BELOW CANAL
600mm AUGER BORED FOUL SEWER BELOW LANCASTER CANAL
MH_33
MH_32
NEW 600mm DIA FOUL SEWER TO CONNECT NEW 600mm SEWER BELOW CANAL TO UPSIZED DOWNSTREAM 600mm SEWER.
ONLINE FOUL SEWER UPSIZING FROM 300mm TO 600mm DIA.
MH_31
NEW 600mm DIA FOUL SEWER TO DIVERT FLOWS TO NEW 600mm SEWER BELOW RAILWAY
MH_30
NEW 150mm DIA FOUL SEWER TO DIVERT FLOWS FROM EXISTING 150mm SEWER INTO NEW 600mm SEWER BELOW RAILWAY
MH_29
600mm AUGER BORED FOUL SEWER BELOW RAILWAY
ABANDON AND GROUT UP OF EXISTING 300mm FOUL SEWER INCLUDING EXISTING CROSSING BELOW RAILWAY
MH_28
MH_27


MH_27
NEW 600mm DIA FOUL SEWER TO CONNECT NEW 600mm SEWER BELOW RAILWAY TO UPSIZED DOWNSTREAM 600mm SEWER.
DARKINSON LANE
MH_25
MH_24
ONLINE FOUL SEWER UPSIZING FROM 300mm TO 600mm DIA.
MH_23
MH_22
MH_21
MH_20
MH_19
MH_18


UPSIZING FROM 300mm TO
600mm DIA.
MH_23
MH_22
MH_21
DARKINSON LANE
MH_20
MH_19
MH_18
EXISTING ELECTRICAL PYLON.
SUFFICENT CLEARANCE FROM
EXISTING PYLON TO BE
PROVIDED.
MH_17
MH_16
ONLINE FOUL SEWER
UPSIZING FROM 300mm TO
600mm DIA.
MH_15
NEW 600mm GRAVITY FOUL
SEWER TO DIVERT FLOWS
THROUGH NEW SYPHON
BELOW SAVICK BROOK
MH_14
ABANDON AND GROUT UP
EXISTING 300mm FOUL SEWER
AS WELL AS 300mm SYPHON
PIPE BELOW SAVICK BROOK.
MH_13
MH_12
MH_11



Land Drainage Considerations

BCL have engaged with a suitably qualified soil scientist / land drainage contractor. A survey of existing land drainage has been mapped across the working area with strategically placed pre-construction perforated land drains to be placed in order to prevent the working areas being affected. Potential receptors have been identified as shown in the 'Condition Survey' section.

Water Quality Management During Construction

BCL to Monitor identified LA controlled ordinary watercourses & Savick Brook to detect changes in water quality and potential pollution incidents which may be linked to the works, determine the effectiveness of working methods, existing silt prevention measures and recommend alterations or additions as required.

Provide a continual permanent record of the impact of the works on nearby watercourses.

The condition survey prior to the works and ongoing monitoring of the watercourse will be carried out by BCL environmental partners EGEMS.

During the construction phase of the project several levels of monitoring will be implemented.

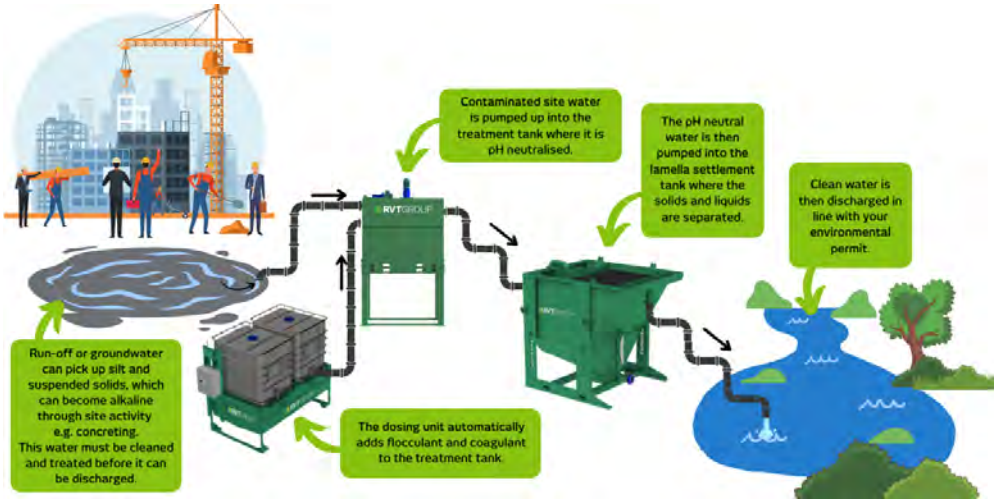
During the auger boring under Lancaster Canal, Preston – Blackpool Railway line & Savick Brook we will ensure water quality monitoring is carried out, alongside other responsibilities associated with the HRA.

While any temporary water treatment system is in use, regular checks will be made on the outlet effluent water quality, upstream of the discharge point.

During all other periods of works, EGEMS representative will regularly monitor water quality alongside other responsibilities outlined in the HRA

Throughout the works, monitoring should be undertaken at each sampling point in a systematic way to ensure consistency. The sampling records should also make note of the construction activities at the time, as well as the weather conditions. A standard checklist/monitoring log will be developed and implemented.

Bethell have developed a notional solutions re. WQM and treatment of ground and surface water. An example of this is shown below that is proposed where necessary.



Site Run Off & Pollution Control Measures During Works

A range of pollution prevention and sediment/ run off control measures will be implemented across the site.

Control of runoff -
Where the ground falls towards a watercourse or other potential pollution receptors, the working areas will be surrounded by sediment fencing.

In addition, surface water runoff drains should be segregated from the site using silt fencing to preclude site runoff laden with fine sediment from reaching the watercourse.

Topsoil and spoil piles should be bunded and seeded and surrounded by sediment fencing to limit potential for run off and situated in areas which are protected by site sediment control measures.

BCL environmental team EGEMS will monitor the effectiveness of these measures and provide recommendations for improvements as necessary.

No water will at any time be discharged to the watercourse without prior consents being in place.

Pollution prevention measures as detailed in the archived Environment Agency (EA) Pollution Prevention Guidelines series (including PPG5: Works and Maintenance in or near Water) will be implemented throughout the works to reduce the likelihood and magnitude of impacts. To include –

- Store waste in suitable containers of sufficient capacity to avoid loss, overflow or spillage,
- Store waste in designated areas, isolated completely from surface water drains and areas which discharge directly to the water environment,
- Measures for storing fuel, oil and chemicals including trade materials (sealant, adhesives etc), re-fuelling areas and spill kits and for re-fuelling (use of drip trays etc),
- Pollutants will be contained in sealed containers; the use of physical cleaning will be used instead of liquid chemicals wherever possible.

Site establishment -
Prior to commencement of construction activities, the site will first need to be established. This will involve the creation of haul roads into the site as well as hardstanding and working areas across the compound.

Silt fencing will be installed, this includes all areas within fields, in areas with steep slopes and along riverbanks. Multiple layers of fencing will be installed for runoff to pass through in highly sensitive areas of site.

All topsoil and spoil will be stored in stockpiles >10 m away from any watercourses. Topsoil bunds will be seeded with a general-purpose grass seed mix and enclosed in a sediment fence to help limit silt runoff during periods of rainfall.

manhole creation–

Manhole creation will be undertaken using an excavator and precast concrete rings.

Excavated material will be temporarily stored in a suitable location where run-off to the watercourse is not possible before being removed from site under appropriate permits to a registered waste disposal site.

Open cut works -

There is approx. 1000m of the pipeline which will be installed using open cut trenches within the highway on Hoyles Lane. Prior to any breaking of ground a valid permit to break ground will be in place. All known services will be verified, and the presence of any new unknown services will also be checked. This section of works will be in the carriageway and there will be suitable traffic management in place. The trenches will be of varying depths dependant on the point at which along the pipeline we are working (ranging from 4-5m deep.)

The first stage is to cut the tarmac along which the trench that will be excavated. The tarmac will only be cut for the section which is being dug out at that time.

The trench will be dug out using an excavator to the required depth to allow the pipeline to be installed. Temporary propping will be used as support for the excavation.

If groundwater is encountered, this will be removed using a submersible pump within the trench, and discharged to the sewer, under permission from United Utilities.

There is an approx.. additional 3000m of pipeline to be installed using open cut trenches across open fields / existing farmland. Prior to any breaking of ground a valid permit to break ground will be in place. All known services will be verified, and the presence of any new unknown services will also be checked.

A pre-construction drainage design is to be developed and then installed prior to the open cut works taking place. Ground/surface water within the trenches in open fields / farmland is to be pumped to ground which will eventually reach the the watercourse locations as shown above (condition survey section) In these areas silt fencing will be erected and maintained along with

the digging of surface ‘grips’ with straw bales deployed to mitigate any silt present. Again this is to be monitored on a daily basis & maintained / replaced when required.

Guided auger boring –

Guided auger boring is a trenchless excavation technique that is to be used to install pipelines underneath Lancaster Canal, Preston to Blackpool railway line and Savick Brook. The path of the new pipework will pass below the known invert of the watercourse channel.

The use of auger boring under Savick Brook helps to reduce the risk of mobilising sediment within this watercourse during the sewer pipeline installation.

Mitigation will be in place to limit the risk of auger boring, including:

- Environmental partners EGEMS to be present throughout auger boring works.
- The auger boring system will be enclosed within sheet piled cofferdams with concrete bases on both sides of the ditch to prevent risk of spills and runoff to the river channel.
- Excavated material will be temporarily stored in a suitable location where runoff to the watercourse is not possible before being removed from site under appropriate permits to a registered waste disposal site.
- Any water in the cofferdams will be discharged through the temporary water treatment system or to the sewer, under permission from United Utilities.