

Technical Report

Copart – Sandycroft Industrial Estate

Shadow Habitats Regulations Assessment

Copart UK Ltd

February 2025



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1 Introduction

1.1 Terms of Reference

Atmos Consulting Ltd (Atmos) were commissioned by Savills on behalf Copart UK Ltd in May 2023, to provide ecological support of the Site at an area of land adjacent to Copart Chester in Sandycroft Industrial Estate, hereafter referred to as the 'Site'.

The Site is located immediately adjacent to the River Dee and Bala Lake Special Area of Conservation (SAC) and the River Dee Site of Special Scientific Interest (SSSI), and 5km south of the Dee Estuary Special Protected Area (SPA) and Ramsar.

Accordingly, this Shadow Habitats Regulations Assessment (SHRA) has been produced to compile all the necessary details relating to the proposed works and the potential for effects on the primary or qualifying features of the SACs, SPA and Ramsar. This will enable the Competent Authority (Flintshire County Council) and Statutory Consultee (Natural Resources Wales NRW) to utilise the information to inform their own assessment.

In Article 6(3) of the EC Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora – The Habitats Directive, any project or plan which is not directly connected with or necessary to the management of a European site but would be likely to have a significant effect either alone or in combination with other plans or projects shall be subject to an Appropriate Assessment of its implications for the European site in view of that site's conservation objectives. In light of the findings and subject to the provisions of Article 6(4) of the Habitats Directive, the Competent Authority shall agree to the plan or project only after ensuring that it will not affect the integrity of the European site. Whilst mitigation may be considered at the Appropriate Assessment stage it is not to be considered when initially screening the project in order to determine whether or not an Appropriate Assessment is needed.

Article 6(4) makes provision that if a negative assessment is made of the implications of the project on the site, and in the absence of other alternative solutions, the plan or project can go ahead for imperative reasons of overriding interest (IROPI) but that compensatory measures must be taken to ensure that the overall coherence of the site is protected/maintained. A distinction is to be drawn between mitigation and compensation.

Since this is a project, as defined by the Habitats Directive, and transposed into English and Welsh law in The Conservation of Habitats and Species Regulations (2017), which is not directly connected with or necessary to the management of the SAC, SPA and Ramsar, then a Habitats Regulations Assessment (HRA) will be required. This will be carried out by the Competent Authority, advised by the Statutory Nature Conservation Body. Although the United Kingdom has now left the European Union, the requirement has been transposed over into English and Welsh law as part of the departure arrangements and so it is still necessary to be carried out.

1.2 Objectives

The purpose of this report, which has been commissioned by Savills on behalf of Copart UK Ltd to carry out a shadow HRA, for discussion with the Competent Authority and Statutory Consultee. To do this, a two-stage assessment will be carried out:

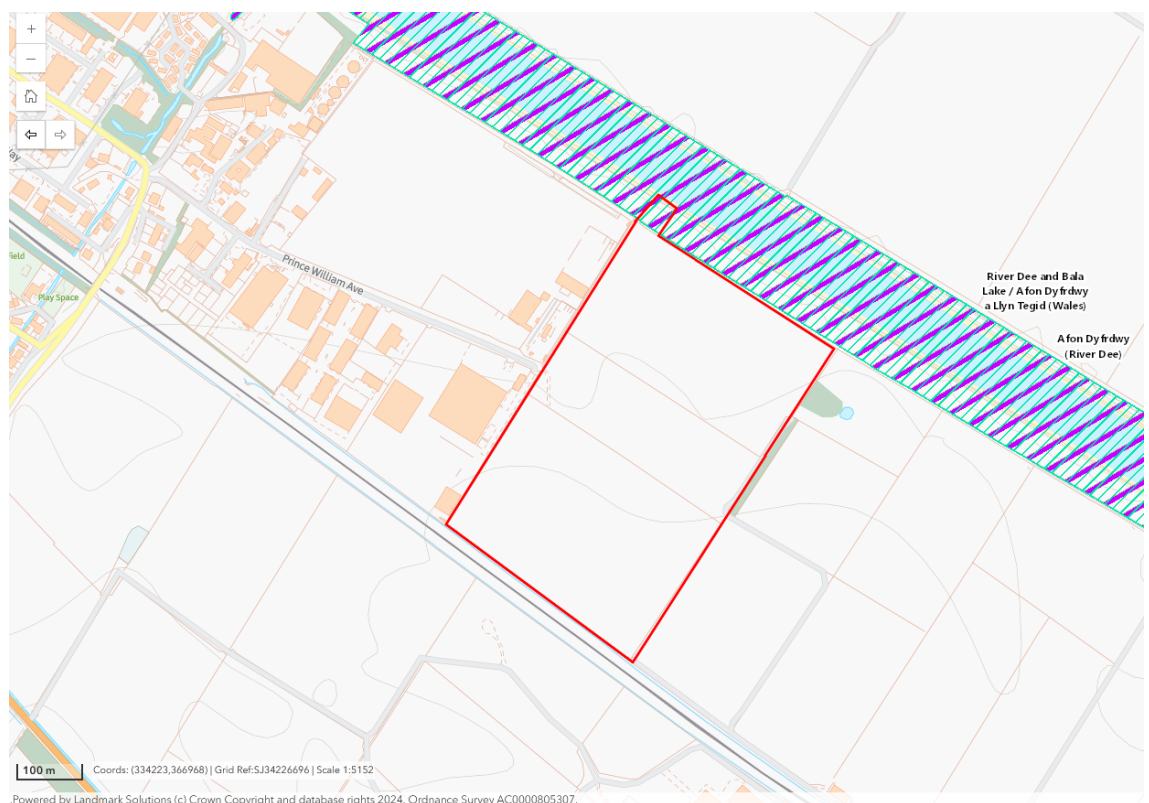
- Screening – the determination of whether there is a likely significant effect (LSE) on the qualifying features of the SAC, SPA and Ramsar; and
- Appropriate assessment (only if a likely significant effect is identified).
- The appropriate assessment assesses the LSE to determine the scale of the effect and if it could adversely affect the integrity of the site. This is done by assessing the potential impacts against the conservation objectives of the SAC, SPA and Ramsar to determine if the conservation objectives can be maintained in light of the project going ahead.

1.3 Proposed Works

Site Location

The Site is located in Sandycroft Industrial Estate, in Deeside, Wales. The Site is arable fields and is an area of land adjoining the existing Copart car recycling facility. The working area and the proximity to the designated sites are shown within the redline boundary shown in Figure 1 below.

Figure 1: Working Area



Source: Magic Map- OS Maps 2024

Nature of Works

The proposed development involves the expansion of the existing Copart UK Ltd Chester site, which is located adjacent to this Site. The existing car recycling facility is on the edge of the industrial estate, with fields beyond, into which the expansion is proposed. The works will involve site clearance to remove the hedgerow in the centre of the Site and stoning of the arable fields to join up with the existing hardstanding area

within the Copart site. The proposals also include the creation of a drainage outfall which will flow into the River Dee.

Thereafter, the Site would be operational as a car recycling facility, extending the current industrial activities into a larger area.

General Methods

The proposed works will involve;

- Site investigation works (bore holing) in area for the outfall,
- The reduction of topsoil with some areas proposed to be removed and others to be retained across the Site,
- The creation of a gravel surface which will be at a similar datum level of the existing Site,
- Construction of new outfall headwall;
- Installation of the security perimeter fencing and,
- Installation of security cameras and lighting columns.

Timescales

The works will take place from late September early October 2025, continuing until mid to late summer 2026. Works will be undertaken through Monday-Friday between the times of 8am-5pm.

2 Statutory Designated Sites

2.1 River Dee & Bala Lake SAC

The following habitats and species are present as qualifying features of the River Dee & Bala Lake SAC:

- Water courses of plain to montane levels with the *Ranunculon fluitantis* and *Callitricho-Batrachion* vegetation

Annex II species that are a primary reason for selection of this site;

- Atlantic salmon *Salmo salar*
- Floating water-plantain *Luronium natans*

Annex II species present as a qualifying feature, but not a primary reason for site selection;

- Sea lamprey *Petromyzon marinus*
- Brook lamprey *Lampetra planeri*
- River lamprey *Lampetra fluviatilis*
- Bullhead *Cottus gobio*
- Otter *Lutra lutra*

Conservation Objectives

The conservation objectives for the River Dee & Bala Lake SAC (Natural England, 2018) are listed below.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species,
- The structure and function (including typical species) of qualifying natural habitats,
- The structure and function of the habitats of qualifying species,
- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely,
- The population of qualifying species, and,
- The distribution of qualifying species within the site.

2.2 The Dee Estuary SPA

The area designated is large, spanning over 14,291 hectares. The site is of major importance for waterbirds; during the winter the intertidal flats, saltmarshes and fringing habitats including coastal grazing marsh/fields, provide feeding and roosting sites for internationally important numbers of ducks and waders; in summer the site supports nationally important breeding colonies of two species of tern. The site is also important during migration periods, particularly for wader populations moving along the west coast of Britain and for Sandwich terns post-breeding.

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. 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.

Table 1: Qualifying species for the Dee Estuary SPA and estimated population size for qualifying species as listed on the SPA citation

Species	Scientific name	Reason for Inclusion	Population	Population Estimate ¹	% of sub-species/ regional population
Bar-tailed Godwit	<i>Limosa lapponica</i>	Article 4.1	Wintering	1 150	2.2% of GB
Common Tern	<i>Sterna hirundo</i>	Article 4.1	Breeding	392	3.2% of GB
Little Tern	<i>Sterna albifrons</i>	Article 4.1	Breeding	69	2.9% of GB
Sandwich Tern	<i>Sterna sandvicensis</i>	Article 4.1	Passage	957	2.3% of GB
Redshank	<i>Tringa totanus</i>	Article 4.2	Passage	8 795	5.9% Eastern Atlantic (wintering)
Shelduck	<i>Tadorna tadorna</i>	Article 4.2	Wintering	7 725	2.6% North-western Europe
Teal	<i>Anas crecca</i>	Article 4.2	Wintering	5 251	1.3% North-western Europe
Pintail	<i>Anas acuta</i>	Article 4.2	Wintering	5 407	9.0% North-western Europe
Oystercatcher	<i>Haematopus ostralegus</i>	Article 4.2	Wintering	22 677	2.5% Europe & N/W Africa (wintering)
Grey Plover	<i>Pluvialis squatarola</i>	Article 4.2	Wintering	1 643	1.1% Eastern Atlantic (wintering)
Knot	<i>Calidris canutus</i>	Article 4.2	Wintering	12 394	3.5% NE

¹ Population estimates are based upon co-ordinated counts carried out by volunteers across the estuary as part of a nationwide scheme. Estimates are based upon summing the number of actual birds counted at each count site; as such they represent the best and most accurate estimate of the population of that species of bird in the SPA. Due to the difficulties of this kind of survey over such large areas, there will be a degree of inaccuracy associated with the counts so that although they are quoted to the best estimate available, they should be read as that number is an approximation of the number actually present.

Species	Scientific name	Reason for Inclusion	Population	Population Estimate ¹	% of sub-species/ regional population
	<i>islandica</i>				Can/Grl/ Iceland/NW Eur
Dunlin	<i>Calidris alpina</i>	Article 4.2	Wintering	27 769	2.0% N Siberia/Europe/ W Africa
Black-tailed Godwit	<i>Limosa limosa islandica</i>	Article 4.2	Wintering	1 747	2.5% Iceland (breeding)
Curlew	<i>Numenius arquata</i>	Article 4.2	Wintering	3 899	1.1% Europe (breeding)
Redshank	<i>Tringa totanus</i>	Article 4.2	Wintering	5 293	3.5% Eastern Atlantic (wintering)
Assemblage: Qualifies under Article 4.2 as in the non-breeding season it regularly supports 120,726 individual waterbirds including: Great Crested Grebe <i>Podiceps cristatus</i>, Cormorant <i>Phalacrocorax carbo</i>, Shelduck <i>Tadorna tadorna</i>, Wigeon <i>Anas penelope</i>, Teal <i>Anas crecca</i>, Pintail <i>Anas acuta</i>, Oystercatcher <i>Haematopus ostralegus</i>, Grey Plover <i>Pluvialis squatarola</i>, Lapwing <i>Vanellus vanellus</i>, Knot <i>Calidris canutus</i>, Sanderling <i>Calidris alba</i>, Dunlin <i>Calidris alpina</i>, Black-tailed Godwit <i>Limosa limosa islandica</i>, Bar-tailed Godwit <i>Limosa lapponica</i>, Curlew <i>Numenius arquata</i> and Redshank					

There are a number of habitats within the SPA, which support the qualifying bird species, but which do not occur within the European marine site as they occur above highest astronomical tide. These habitats include coastal grazing marsh used by waterbirds for feeding, roosting and loafing, and the nesting areas of common terns. Conservation objectives covering the use of such coastal habitats by the qualifying bird species are appended to the SPA conservation objectives. They are provided for information only and do not constitute advice under Regulation 33(2) of the Conservation (Natural Habitats & c.) Regulations 1994

Conservation Objectives

The conservation objectives for the Dee Estuary/ Aber Dyfrdwy SPA (Natural England, 2019²) are listed below.

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 Birds Directive³, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features;

² <http://publications.naturalengland.org.uk/file/5008539580104704>

³ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds

- 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.

3 Stage 1-Screening

In the first stage of HRA, a project is screened to establish if there will be a likely significant effect, either alone or in combination with other proposals/projects with potential to have an effect upon the SACs. In reaching this conclusion it is settled law that a precautionary approach should be taken to this assessment and that an LSE should be assumed unless the risk can be excluded. This test of likely significant effect (LSE) determines whether the second stage of the process, Appropriate Assessment (AA) is required. Where no LSE is identified, then AA is not required; conversely, where LSE is identified, then AA is required to determine if there will be adverse impacts which would prevent the conservation objectives from being met and therefore the integrity of the European site being adversely affected.

3.1 Review of Existing Information

A desk-based review of the data obtained from Cofnod and the British Trust of Ornithology (BTO) relating to the working area and a 2km buffer. The following data was obtained:

- Details of non-statutory designated sites of nature conservation importance within 2km of the site, e.g. areas included on the Ancient Woodland Inventory (AWI), Sites of Nature Conservation Interest (SNCIs) and Local Wildlife Sites (LWSs); and
- Details of legally protected species or otherwise notable⁴ species within 2 km of the site.

3.2 Survey Methodology

An extended phase 1 habitat survey (JNCC, 2010) was carried out by an experienced ecologist on 26th May 2023 to include the land within the Site boundary and a 100m buffer, where access permitted. A separate Preliminary Ecological Appraisal (3503 R1 Rev4 Sandycroft Industrial Estate PEA Report as issued) has been produced and will be submitted alongside the HRA.

3.2.1 Limitations

Extended Phase I habitat surveys can be undertaken throughout the year, with the optimal time for undertaking surveys typically considered April to September. The survey was carried out within this optimal timeframe.

3.3 Habitats

The entire Site is comprised of arable fields, at the time of the survey the top two fields were planted with a grass type cover crop and the third field had recently been ploughed and planted. Hedgerows ran along all field boundaries. Habitats within the wider area consisted of improved and arable fields with a small patch of mixed

⁴ Species listed within published red data lists or within national and local policies as being of conservation concern. These include species listed under the Flintshire Biodiversity Action Plan BAP and Species of Principal Importance in Wales (Environment (Wales) Act 2016).

plantation woodland along the eastern Site boundary, the River Dee adjacent to the north, improved grassland to the south and hardstanding and industrial buildings to the west.

3.4 Species

The data search returned records for Atlantic salmon all of which were located upstream from the Site. There were no other recent records for species that are features of the SAC returned within 2km of the Site.

No records of birds relating to the Ramsar / SPA designation were returned for inside the Site or within 1km of the Site.

3.5 Proposed Construction Works

The proposed works include the reduction of topsoil, the creation of a gravel surface, the creation of new outfall drainage systems into the River Dee, the installation of security fencing, the installation of security cameras and lighting.

3.5.1 Connectivity and Impact Pathways - SAC

The habitats recorded within the Site entirely comprised of arable fields. These are not habitats that are features of the SAC designation and as they are terrestrial, they are not connected to the intertidal habitats and mudflats as part of the SAC designation. It is considered that the Annex I habitat features are sufficiently far enough away from the Site that it is considered there is no mechanism for a likely significant effect of these features of the SAC.

Floating water plantain is only present in Bala Lake itself and not within the river adjacent or downstream from the Site, it is therefore found there will be no likely significant effect on this feature of the SAC.

The following features of the SAC do not occur within the working area or in proximity to it and where they do occur, they are sufficiently far enough away from the working area that it is considered there is no mechanism for a likely significant effect:

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide (intertidal mudflats and sandflats)
- Salicornia and other annuals colonising mud and sand
- Atlantic salt meadows
- Annual vegetation of drift lines

The Annex II species that are features for the SAC include Atlantic salmon, sea lamprey, brook lamprey, river lamprey, bullhead, and otter all of which are mobile species and could be within the SAC directly adjacent from the Site. The proposed works could impact all these species indirectly through pollution during the construction of the gravel surface and through the creation of a new outfall drainage system. Pollution will also result in an indirect effect on otter populations by negatively affecting their food availability.

During the works there will be an increase in human presence, traffic and noise through the use of machinery and the presence of contractors. This disturbance will be limited to the Site and during the construction phase noise will be limited within the hour of

8am-5pm Monday to Friday and the regular operation of the Site after construction the noise will be limited within the hours of 8am-5pm Monday to Friday. The work area is located next to the Copart Industrial Estate which already have levels of disturbance during the proposed work times. It is therefore considered that the increase noise levels for the time of the proposed works will not cause additional disturbance to the SAC species.

The new lighting will be placed adjacent to the River Dee. Otter are a nocturnal species and the increased lighting levels could disrupt or deter otter commuting or foraging behaviour within the SAC.

As a result, there is a finding of likely significant effect on the Annex II species in the absence of mitigation, and therefore AA is required in order to establish whether proposed works would have an adverse impact such that the integrity of the SAC could not be maintained and if so whether appropriate mitigation can be developed which would allow the integrity of the SAC to be maintained.

3.5.2 Connectivity and Impact Pathways – SPA/Ramsar

No species present in the SPA and Ramsar designation have been recorded within 1km.

During the works there will be increased traffic and noise through the use of machinery and presence of contractors. However, this disturbance will be limited to the arable areas on the Site, where no bird species related to the SPA designations have been recorded. The works will be undertaken in the daytime.

The working area is already fairly disturbed, with it being adjacent to an active railway and a busy industrial site. It is therefore considered that the works will not cause additional disturbance to the SPA bird species as the area is already subject to a high level of disturbance and the species have not been recorded in the Site or surrounding area.

Whilst disturbance and displacement of SPA birds is therefore not a likely significant effect, there is the potential for the proposed new outfall to cause indirect effects such as pollution, as set out in Section 1.3.

As a result, there is a finding of likely significant effect from pollution on the SPA species in the absence of mitigation, and therefore AA is required in order to establish whether proposed works would have an adverse impact such that the integrity of the SPA could not be maintained and if so whether appropriate mitigation can be developed which would allow the integrity of the SPA to be maintained.

3.6 Screening Summary

SAC

The habitats recorded within the Site are not habitats that are features of the SAC designation and they are not connected to the intertidal habitats and mudflats as part of the SAC designation. It is considered that the Annex I habitat features are sufficiently far enough away from the Site that it is considered there is no mechanism for a likely significant effect of these features of the SAC. This conservation objective does not require AA.

Floating water plantain is only present in Bala Lake itself and not within the river adjacent or downstream from the Site, it is therefore found there will be no likely significant effect on this feature of the SAC. This conservation objective does not require AA.

The proposed development has the potential to result in increased pollution/sedimentation into the River Dee & Bala Lake SAC through the use of machinery within close proximity of the SAC and through the creation a new outfall drainage system. The result of pollution into the River Dee could impact the qualifying species in the SAC designation.

The lighting will be adjacent to the SAC with suitable habitats present for otter. This could result in direct effects on otter foraging or commuting behaviour.

As a result, there is a finding of likely significant effect on features of the SAC in the absence of mitigation, and therefore AA is required in order to establish whether the proposed works would have an adverse impact such that the integrity of the SAC could not be maintained and if so whether appropriate mitigation can be developed which would allow the integrity of the SAC to be maintained.

SPA

The works will take place in the day and there will be increased human presence and noise through the use of machinery. However, this disturbance will be limited to the Site which is located near an active railway line busy industrial area. Therefore, the area is already subject to a level of disturbance which renders it unlikely that SPA bird species will be present. The works will result in no loss of habitat on which the birds depend as there are no records of designated birds within the Site or surrounding area.

The habitats on site are largely unsuitable for the birds present in the SPA designation, due to the intensive farming regime, however the construction of the new drainage outfall creates a new impact pathway through drainage into the River Dee. Therefore, there is a small risk these birds could be impacted indirectly via pollution.

As a result, there is a finding of likely significant effect on features of the SPA in the absence of mitigation, and therefore AA is required in order to establish whether proposed works would have an adverse impact such that the integrity of the SPA could not be maintained and if so whether appropriate mitigation can be developed which would allow the integrity of the SPA to be maintained.

4 Stage 2-Appropriate Assessment

Given that an LSE has been determined due to the effects of actions taken near the SAC and SPA to features indirectly linked to it, AA is required to determine if there is a potential adverse impact on the SAC, and if so whether it can be mitigated so as to avoid any such effect. In particular, an assessment must be made as to whether as a result of the works, without mitigation, the effects on the Annex II specie features are such that the conservation objectives could no longer be met/upheld.

4.1 Current Use of the Area

The working area consists of three arable fields with arable and improved grassland on the eastern and southern boundaries, the River Dee to the north and the industrial estate to the west of the Site.

4.2 Assessment of Effects

A summary of the likely significant effects of the works against the Conservation Objectives and Performance Indicators for the River Dee & Bala Lake SAC is provided in Table 1 below.

Table 2: Assessment of Effects on Conservation Objectives for Features of River Dee & Bala Lake SAC

Attribute	Specified Limit	Predicted Effects from Proposed Works
Feature 2, 4, 5, 6 & 7: Atlantic Salmon, sea lamprey, brook lamprey, river lamprey & bullhead		
Extent and distribution of their habitat	No reduction in the area or quality of the habitat on a long-term basis	The proposed works are limited to the existing arable fields and will not take place within the SAC. No habitats within the SAC will be damaged /destroyed or barriers created as a result of the proposed works and development. The proposed new drainage outfall is situated in improved grassland so will not result in habitat loss but could cause indirect issues via pollution. The suspension of sediment could affect the water quality making the habitat unsuitable for all notable fish species. It is therefore found that the core management objective will not be maintained.
Supporting processes on which they rely - water quality.	Upper limit: None set. Lower limit: Chemical GQA Class A; Biological GQA Class A; Soluble Reactive Phosphorous values for individual stretches to be agreed between NRW as part	In the short term the construction of the gravel surface and increase in machinery presence could result in increased levels pollution and sedimentation within the River Dee reducing

Attribute	Specified Limit	Predicted Effects from Proposed Works
	of the Review of consents process; Annual Mean Suspended Solids for nursery grounds: <10 mg L ⁻¹ ; Annual Mean Suspended Solids for migratory passage: <25 mg L ⁻¹	water quality. In the long term the creation of a new outfall drainage system could have long term impacts on the level of pollution and sedimentation within the River Dee and the reducing in the water quality of the SAC. It is therefore found that the core management objective will not be maintained.
Population of the species	To be stable or increasing	The introduction of pollutants or sedimentation as a result of the proposed works could negatively impact on the population size of all notable fish species within the River Dee. If sediment were to be released it would smother out spawning grounds affecting preferred breeding habitat and impact on breeding. The works are however proposed to be undertaken within September outside the spawning season for salmon (October-November), sea lamprey spawning season (May-July), brook lamprey spawning season (May-June), river lamprey spawning season (April-May) and bullhead spawning season (February-June) The creation of the new outfall drainage system could affect the notable fish populations throughout the year through the introduction of pollution and sedimentation and therefor impact on breeding. It is therefore found that the core management objective will not be maintained.
Distribution of the species	Their natural range is not being reduced at present or in the foreseeable future	If sediment were to enter the river it would smother out spawning areas and could result in all the notable fish species breeding success and there would be a decrease in their range over time as juveniles will not replace older fish. Should pollution enter the watercourse, it would kill juvenile and adults causing an

Attribute	Specified Limit	Predicted Effects from Proposed Works
		immediate and long-term contraction of the population. It is found that the core management objective will not be maintained.
Feature 8: Otter		
Extent and distribution of their habitat	Range not to be reduced at present or in foreseeable future. Upper limit: None set. Lower limit: Otter signs to be found at 46 of the 59 sites (based on Otter Survey for Wales data, equates to 78% of sites but noted that otter likely to range throughout the SAC)	The proposed works are limited to the three arable fields within the Site which offer negligible suitability for otter. There were no signs of otter activity or holts within the Site or the wider area. The proposed drainage outfall is situated in an improved grassland bank with no otter holts present 1km up or down stream. It is therefore found that the core management objective will be maintained.
Structure and function	Upper limit: None set.	The proposed works are limited to the three arable fields within the Site and the works will only take place during the day. It is therefore found that the proposed works will not disrupt or deter otter foraging or commuting within the SAC. The proposed lighting however will be adjacent to the SAC which will result in an increase in light pollution. Otter are a nocturnal species and the additional permanent lighting could disrupt and deter otter foraging and commuting within the SAC.
Availability of food resource	Lower limit: Fish biomass stays within expected natural fluctuations. There should be no loss of amphibian habitat likely to be used by otters from the SAC population.	
Access and dispersal	Upper limit: None set. Lower limit: No loss or impairment of any such routes	
Disturbance	Upper limit: No significant increase in disturbance Lower limit: Nil	
Population of the species	Stable or increasing	The works will be undertaken adjacent to the SAC with the outfall directly flowing into the SAC, and could reduce the water quality due to pollutions/sedimentation. This could affect fish populations and indirectly result in a reduction in food availability for otter. It is therefore found that the core management objective will not be maintained.
Good quality vegetation for	No loss of otter breeding or	
		There were no otter holts recorded within the wider area of the Site therefore no

Attribute	Specified Limit	Predicted Effects from Proposed Works
breeding otter	resting sites except by natural processes. Upper limit: None set. Lower limit: No reduction in the quality of or extent of suitable otter habitat	breeding habitat or breeding activity will be impacted as a result from the proposed works. It is found that the core management objective will be maintained.
Potential breeding sites	Upper limit: None set. Lower limit: There should be an increase in the number of known potential (in addition to actual) breeding sites on the River Dee from 72 to 76.	
Anthropogenic mortality	Upper limit: No increase in numbers of recorded road deaths Lower limit: Nil	
Distribution of the species	All man-made structures within or likely to be used by otters from the SAC population must incorporate effective measures to facilitate the safe movement and dispersal of otters	The arable fields within the Site are unsuitable for otter and there will no new proposed man-made structures created which could block otter commuting routes. Therefore, proposed development is not required to incorporate effective safe movement for otters. As such, this core management objective will be maintained.

4.3 Assessment of Effects – SPA

Table 3: Assessment of effects on Conservation Objectives for Dee Estuary SPA

Conservation Objective	Predicted effects of the proposed works
The supporting processes on which the habitats of the qualifying features rely	There would be no effect on the supporting processes of the habitats of the qualifying features because the distance of the working area, along with pollution prevention means any events are unlikely to be significant enough to affect the SPA. This conservation objective would be maintained.
The distribution of the qualifying features within the site	The area under consideration lies out with the SPA. The Site does not provide supporting habitat which are functionally linked due to the relatively no qualifying species present there. There is the potential for indirect impacts via pollution caused by the construction of the outfall into the River Dee. This conservation objective would be therefore not be maintained in during a pollution event.

As above, the review of the Conservation Objectives for the SPA has identified that there is the potential for features of the SPA to be indirectly affected and therefore would adversely impact the integrity of the SPA.

Given the sensitivity of the area, a review of mitigation which would be undertaken, including those designed into the works from an early stage has been provided in Section 4.6.

4.4 In-combination Effects

A search of the Flintshire County Council Planning Portal was conducted on February 28th 2025 to search for planning applications in the vicinity of the River Dee. There are no current works proposed to be undertaken within the vicinity of the Site, River Dee or within the River Dee. It is therefore not considered there are any projects which could have in-combination effects with the proposed works.

4.5 Summary

Without mitigation the works will have an effect on the integrity of the SAC and SPA indirectly. As set out in Table 1, potential LSE are identified on all Annex II species features of the River Dee and Bala Lake SAC, and indirect pollution events could impact the species designated under the SPA.

Mitigation is therefore required so that the project can proceed. These measures are set out below.

4.6 Mitigation

Mitigation is required in order to pass the appropriate assessment as the works will be occurring adjacent and within the SAC which supports sensitive species where there would otherwise be direct and indirect effects on the primary and qualifying features. The creation of the new outfall creates a new impact pathway and therefore the potential for indirect measures via pollution.

The following mitigation measures are incorporated into the proposals:

- There will be a number of pollution prevention measures in place that will be applied at all times (e.g. provision of a spill kit, inspection of all plant and equipment prior to use and plant nappies).
- All treatment of the water off flow from the Site will be confirming to the Simple Index Approach in the CIRIA Report C753 following the SuDS Manual.
- All material will be disposed of in the appropriate skip with secure lids and no holes in any of the skips so that there are no potential pollution incidents.
- Any dusty operations are to cease in the case of high winds to control the levels of dust entering the SAC.
- Refuelling: All refuelling will be carried out away from the SAC. At any refuelling point a spill kit will be available, an absorbent spill blanket will be laid out whilst refuelling takes place. Fuel will be contained within its own compound; at the end of each day the fuel will be secured within the compound.
- All plant will be parked in the compound overnight so that there are no potential pollution incidents while staff are not on site.

- A bespoke CEMP will be create prior to construction to ensure pollution prevent measures are in line with British standards.
- The operational silt management will be in line with treatment of TSS (Total Suspended Solids) within the Simple Index Approach of CIRIA Report C753 "The SiDS Manual" with,
- Silt will be trapped within the Type 3 stone layer, similar to that of a large scale filter drain know as a 'French drain'
- Large catchpit chambers will be installed at the intermediate points of the carrier drains to retain silts/fines locally,
- Catch pitch/sump chambers will be in place at flow control points,
- Scour prevention and Reno Mattresses will be at the outfall point
- A site specific Operational and Maintenance Strategy (OMS) will be agreed with Flintshire Council at a later date.
- Prior to works commencing a pre-construction ecology check will be made of the working area and access points. The ecologist will check for protected species such as otter holts, bats, and nesting birds. Should a protected species/roost/holt/resting place be encountered, works will not commence, and Natural Resources Wales will be contacted to discuss it and the potential for licensing elements of any works that may disturb it.
- An experienced Ecological Clerk of Works (ECoW) will be appointed and attend Site at regular intervals throughout the project.
- A biosecurity risk assessment will be produced and followed so as not to introduce non-native species into the Dee Estuary and Bala Lake SAC.

4.7 Drainage Plan

The new headwall is proposed to be constructed as per the design statement (document ref: 10875-RL-XX-XX-RP-A-P0001). The new headwall will provide a new outfall into the River Dee, following the process of the existing outfall, with the above mitigation in place to maintain water quality and avoid discharge of pollutants into the SAC.

NRW have been consulted on the construction of the new headwall⁵ and have no objection in principal. Flintshire County Council have approved a new outfall with a limit of 90.l/s as peak SW discharge rate. The proposed design has a reduced outfall with 73.0l/s as the peak SW discharge rate so it is inside the previously agreed limits and no impacts are expected on the flow of the River Dee.

Treatment for water quality has been designed in accordance with the Simple Index Approach of CIRIA Report C753 and as replicated within the Statutory SuDS Standards for Wales.

⁵ Email chain between Thomas Jayne (Shear Design) and Rebecca Woodhall (NRW) January 2024

4.8 Lighting Plan

4.8.1 Construction Lighting Plan

During the construction phase the compound will be lit at night by local flood task specific lighting and lighting situated around the compound extent with all lighting directed towards the ground and in towards the Site away from the River Dee.

4.8.2 Permanent Lighting Plan

Without the creation of an ecologically sensitive lighting plan the population of otter were at risk from being disturbed by the proposed development. With this in mind, a lighting plan has been created and an assessment of this plan is included below. With the absence of guidance of the impacts of lighting on otter guidance has been adopted from the Bat Conservation Trust 2023⁶ as bats are considered to be the most sensitive species for lighting. The permanent lighting plan (Electrical Engineering Services External Services) has been designated to be as sensitive to ecology species as possible, this guidance notes suggests that bats can be affected by LUX levels as low as 3.6 LUX when commuting.

The proposed lighting is floor mounted, directing light away from the River Dee and downwards. The LUX levels on the proposed lighting plan that extent up to the boundary of the Site adjacent to the River Dee are limited to 0.2 LUX and higher levels of up to 30 LUX towards the Site away from the River Dee.

The proposed lighting strategy keeps the LUX levels which could cause an impact on any notable species within the Site, low LUX levels towards the River Dee and no additional light spill on to the River Dee itself reducing any negative effects the increased lighting could have on the notable bird species and otter.

⁶ <https://www.bats.org.uk/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance-note-update-released>

5 Conclusion

A HRA has been carried out for the extension of the Sandycroft Industrial Estate, in Deeside Wales:

- Stage 1- The project was screened, and a likely significant effect was identified for the proposed works through indirect pollution effects and permanent increase levels of lighting;
- Stage 2- a Appropriate Assessment was carried out which assessed features of the SAC immediately adjacent to the working areas. This showed the SAC species present could be significantly affected and that the conservation objectives of the River Dee & Bala Lake would not be maintained if the works went ahead without mitigation. A risk to the SPA species was also identified via indirect impacts via pollution events.
- Mitigation was introduced and has considered all the LSE anticipated on the qualifying features and are reduced such that there is not anticipated to be any effects from the proposed works on the integrity of the River Dee and Bala Lake SAC and Dee Estuary SPA and Ramsar, therefore, following the implementation of mitigation, the works pass appropriate assessment.

As a result, the HRA has shown that work can proceed without affecting the integrity of River Dee and Bala Lake SAC and Dee Estuary SPA and Ramsar. Appropriate good working practice are to be put in place to minimise disruption of the typical species found within the SAC and SPA during the proposed works and the operational phase of the Site.

