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Report No 22004/2B

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ENVIRONMENTAL RISK ASSESSMENT for PHOENIX PARK RECYCLING FACILITY

Prepared for

PHOENIX PARK NW CIC
Riverside Park
Wallend Road
Preston
PR2 2HW

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1. INTRODUCTION

1.1 Report Context

1.1.1 The Arley Consulting Company Limited (TACCL) has been commissioned by Phoenix Park NW CIC to prepare an environmental permit application for their site at Phoenix Park, off Wallend Road, Preston, Lancashire. This risk assessment forms part of the application.

1.1.2 The application is for a bespoke permit to allow physical treatment of waste to produce soil, soil substitutes and aggregate. Treatment will be by separation, sorting, screening, crushing, washing and blending of waste.

1.1.3 This report has been prepared following guidance available on the gov.uk website, particularly:

- Risk Assessment for your Environmental Permit
- Control & Monitor Emissions for your Environmental Permit

1.1.4 The site is situated within 10 km of a European habitats site and a habitats assessment is required. This has been incorporated into this risk assessment.

1.2 Site Details and Surrounding Area

1.2.1 The site is located off Wallend Road at Preston Docklands, Lancashire, PR2 2HW. This is situated at the eastern end of the Phoenix Park complex, close to the entrance. The approximate National Grid Reference for the centre of the site is SD 49717 29230 and the location is shown on Drawing No 22004/01, contained in Appendix C.

1.2.2 The site will cover an area of approximately 2,442 m^2 and currently consists of a level surface with either tarmac or hardstanding and is used as a car park. The processing facility will include a wash plant and crusher. The wash plant will be constructed on a new concrete pad.

1.2.3 A bund will be constructed around the permit area to contain surface water runoff which will be directed to an interceptor and harvested for reuse. Water from the interceptor will be stored in an underground storage tank and reused on site for the wash plant and dust suppression. Surplus water will be removed by tanker for off-site disposal.

1.2.4 The entrance to the site is from Wallend Road via electronic security gates. The site is secured by 1.8 m high security fencing.

1.2.5 Beneath the site is a culverted watercourse (CD Drain) which underlies the site in a north/south direction, discharging to the Ribble Estuary some 50 m south of the permit boundary.

1.2.6 The surrounding area is a mix of commercial, industrial and rural land use. Directly to the north is Preston Waste Transfer Station operated by Lancashire County Council. To the east is the Docklands area which is a mixture of commercial and industrial use. To the south is the Ribble Estuary, which is bordered by saltmarsh and mud flats. Beyond the river further south is farmland used for grazing sheep.

2. IDENTIFICATION OF RISKS

2.1 Activities

2.1.1 Aggregate processing will be conducted using fixed wash plant and mobile crushing plant according to demand for products.

2.1.2 Treatment will comprise one or more of: sorting, separation, crushing, screening, washing and blending of waste for recovery as a soil, soil substitute or aggregate.

2.1.3 Hardcore will be dry crushed to produce 6F2.

2.1.4 Washing of soil/stone mixtures will be carried out to produce a clean stone product. Waste will be loaded into a hopper which feeds the rinsing screen. From this stone and sand is screened into separate stockpiles to produce various sizes of pipe bedding (eg. <40mm, <20mm and <10 mm) and sand at < 5 mm.

2.1.5 Wash water will be returned into a thickening tank where it is separated into water/sludge by flocculation. Sludge will be sent for filtration and water is returned to the water feed tank for reuse. The plant will be a closed loop system, there will be no discharge of water. Water is lost as moisture in the filtercake and the system will be topped up with clean water. The water source will initially be harvested surface water and mains water, with plans to investigate possible installation of a borehole for water abstraction.

2.1.6 Incoming wastes and derived aggregate products will be stored within the permit area. An indicative layout is shown on Drawing No 22004/02 contained in Appendix C.

2.1.7 Proposed waste types are listed in Table 1 below. This list mirrors the waste types allowed under the end of waste protocol. The predominant waste types will be concrete, bricks, soil and stones from construction, demolition and excavation.

Waste Code	Description
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07 *May include excavation from mineral workings*
01 04 09	Waste sand and clay *Must not include contaminated sand*
10 11 03	Waste glass based fibrous material *Waste without organic binders only*
15 01 07	Glass packaging
17 01 01	Concrete *Must not include concrete slurry*
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02 02	Clean glass Must not include fibreglass or glass fibre
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01 *Only bituminous mixtures from the repair and refurbishment of the asphalt layers of roads and other paved areas (excluding bituminous mixtures containing coal tar and classified as waste code 17 03 01)* *Must not include coal tar or tarred products* *Must not include freshly mixed bituminous mixtures*
17 05 04	Soil and stones other than those mentioned in 17 05 03 *Must not contain any contaminated soil or stone from contaminated sites*
17 05 06	Dredging spoil other than those mentioned in 17 05 05 *Only inert aggregate from dredgings* *Must not contain contaminated dredgings* *Must not contain fines*
17 05 08	Track ballast, soil and stones other than those mentioned in 17 05 07 *Must not contain soil and stones from contaminated sites*
17 09 04	Mixed construction and demolition waste other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 *mixed construction and demolition waste, limited to that generated from utilities trenching, consisting of sub base aggregates, and containing only material that would be described as 17 01 01, 17 03 02 and 17 05 04*
19 12 05	Glass *Does not include glass from cathode ray tubes*
19 12 09	Minerals (eg sand, stones) *Must not contain contaminated concrete, bricks, tiles, sand, stone or gypsum from recovered plasterboard*
20 01 02	Glass *Must not include fibreglass*
20 02 02	Garden and park waste (including cemetery waste) – soil and stones *Must not contain contaminated stones from garden and parks waste*

Table 1: Proposed Waste Types

2.2 Identification of Receptors

2.2.1 The location of the site in relation to potential receptors is shown on Drawing No 22004/03, which is contained in Appendix C. This illustrates the position of identified receptors within 1 km m of the site. Potential receptors are summarised in Table 2.

Ref	Receptor	Direction from Site	Approximate Distance from Site (m)
Domestic Dwellings			
1	Trax Academy Static Caravans	W	380
	Lea Suburb	NW	600 – 1 km
	Larches Suburb	NE	670 – 1 km
	Riverway Dockland Apartments (Lockside Road)	E	770
	New Hall Farm	NW	860
	Marsh Farm	S	970
Industrial/Commercial Premises			
2	United Utilities Inert Waste Processing	E	Adjacent
	Motor Trax / Motor Academy	N	Adjacent
	Veolia Preston Waste Transfer Station	N	35
	Riversway Motor Park	NE	320
	Booths Manufacturing Depot	E	400
	Riversway Commercial Park	E	675
	Railway Station	E	630
	Pumping Station	ESE	640
Public Rights of Way			
3	Surrounding Footpaths	S	240 – 1 km
Highway/Major Road or Transport Link			
4	Wallend Road	E	Adjacent
	Riversway	N	465
	Nelson Way	E	370
	Rail Line	E	530
Controlled Waters			
5	CD Drain (culverted below site)	Under site	
	Ribble Estuary	S	50
	Reservoir	N	200
	Mill Brook	ESE	760
	Preston Docklands Basins	E	880
	Farm Ditches	N, W, S	~700
Ecological Receptors			
6	Mud flats and salt marsh priority habitat	S	50
	Masons Wood Priority Habitat	NW	728

Table 2: Potential Receptors Within 1 km

2.2.2 To the west is Phoenix Park which houses Trax motorsport academy. This was formerly Lea Marsh landfill site operated by Preston Borough Council. The licence was surrendered in 1993 and the site restored.

2.2.3 The Trax Motor Sport Academy includes motor cross and go-kart tracks with associated facilities. The Academy is used exclusively by Pioneer Tec[1] who are an Ofsted approved specialist therapeutic care and education provider for looked after children aged 11-18. The children are housed on site in static caravans with 24 hour care.

[1] https://pioneertec.co.uk/

2.2.4 A planning application is currently being prepared to develop Phoenix Park as an extensive commercial leisure development which will include a large residential educational facility (Pheonix Building), and a number of outdoor sports including a dry ski slope, climbing wall and water skiing complex.

2.2.5 There is a waste processing facility close to the site; approximately 35 m to the north off Wallend Road is the Preston waste transfer station. In addition, Clifton Marsh landfill site operated by Suez is situated immediately to the west of the Trax Academy boundary, approximately 1.2 km from the site. These operations have the potential to contribute to dust/particulate emissions in the area.

2.2.6 Approximately 320 m to the north-east along Riversway (A583) is the Riversway Motor Park which includes a number of different car dealerships including Audi, Arnold Clark and Skoda. Approximately 400 m east is the Booths Manufacturing Depot, part of a commercial business park which extends to the east.

2.2.7 The closest residences are the static caravans approximately 380 m to the west. The next closest are located in Lea Town approximately 600 m to the north. The Riversway Dockland apartments are approximately 770 m to the east.

Public Rights of Way

2.2.8 There are a number of public footpaths to the south of the site, across the river, shown on the receptor drawing.

Highway or Minor Road

2.2.9 Wallend Road is the access road. The closest 'A' road is the A583 Riversway some 465 m to the north. There is a tourist rail line that runs adjacent to Preston Docklands, approximately 530 m to the east; this rail line is used infrequently in winter for Santa Specials.

Surface Water

2.2.10 The Ribble Estuary is situated approximately 50 m to the south of the site. The EAs Catchment Data Explorer[2] shows the site to be situated between the Savick Brook and Fylde South Drains Operational Catchment and the Ribble Estuary[3] catchment.

2.2.11 The Ribble Estuary is reported[3] as having bad ecological status. Reasons for this are listed as:

[2] https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3392
[3] https://environment.data.gov.uk/catchment-planning/WaterBody/GB531207112400

- phytoplankton, macroalgae and inorganic nitrogen from continuous sewage discharge
- high levels of PAHs, polybrominated diphenyl ethers (PBDE) and mercury and its compounds
- physical modification

2.2.12 The Savick Brook catchment is reported[2] as having moderate ecological status. Reasons for not achieving good are listed as:

- phosphate and ammonia due to poor nutrient management from agricultural land, intermittent sewage discharge and mis-connections
- physical modification for navigation (access for canal boats)

2.2.13 There is a culverted drainage channel beneath the site, running in a north/ south direction into the Ribble Estuary, marked as CD Drain on the receptor drawing.

Groundwater

2.2.14 Superficial geology consists of Tidal Flat Deposits (silt, clay and sand). These sedimentary superficial deposits formed between 2.5 million years ago and the present during the Quaternary period. These deposits are classed as unproductive aquifers.

2.2.15 Bedrock geology consists of Sherwood Sandstone Group, which is sedimentary bedrock formed between 272 and 237 million years ago during the Permian and Triassic periods. This is classified as a 'principal aquifer'.

2.2.16 The site is situated within zone III of the total catchment groundwater source protection zone for the principal aquifer.

2.2.17 There are no licensed groundwater abstractions within 500 m of the site.

2.3 Conservation/Habitats Sites

2.3.1 In accordance with The Countryside and Rights of Way Act 2000 (CRoW) and the Habitats Directive the location of the site in relation to specified protected habitats sites has been considered. The following screening distances have been applied:

- Habitats Directive designations, including Special Areas of Conservation (SAC), are subject to 10 km screening distance.

- Sites of Special Scientific Interest (SSSI), Local Nature Reserves (LNR) and Local Wildlife Sites (LWS) are subject to a 2 km screening distance.

- Areas identified with protected species are screened up to 500 m from the site.

2.3.2 Conservation screening was requested as part of pre-application advice from the EA in November 2022. This information was provided in March 2023 and the information has been used to identify habitats sites which must be considered in the risk assessment. This is included in Appendix A.

2.3.3 There is one designated habitats site within 10 km of the site and one local nature reserve within 2 km of the site. These are summarised in Table 3 below.

Site	Designation	Distance and Direction
Mud flats and salt marsh priority habitat	PHI	50 m S
River Ribble, Lower Tidal Section	LWS	50 m S
Ribble Estuary	MCZ	50 m S
Ribble and Alt Estuary	SPA, Ramsar, SSSI	3.4 km SW

Table 3: Ecological Sites
PHI = Priority Habitat Inventory
LWS = Local wildlife site
MCZ = Marine Conservation Zone
SPA = Special Protected Area
SSSI = Site of Special Scientific Interest

2.3.4 The closest conservation area to the site are the priority habitat mudflats along the banks of the River Ribble. These also make up part of the habitat of the River Ribble, Lower Tidal Section LWS. The LWS includes mud flats and salt marsh along the banks of the Ribble which connect to the SSSI/Ramsar area further to the south-west.

2.3.5 The stretch of the River Ribble adjacent to the site, and nearby tributaries, is a designated MCZ due to the presence of Smelt (*Osmerus eperlanus*). A fact sheet on the MCZ is contained in Appendix A which includes the following explanation:

MCZs, together with other types of marine protected areas, will form the UK contribution to an international network of protected sites in the north east Atlantic. The network will help to deliver the government's vision of clean, healthy, safe, productive and biologically diverse oceans and seas. MCZs protect typical, rare or declining habitats and species found in our seas.

Smelt were once widespread in estuaries in the UK but have declined considerably over the past 200 years. They are known to congregate in large shoals in lower estuaries and migrate into freshwater where they spawn in spring. Estuaries such as the Ribble therefore provide critical habitats required to complete smelt lifecycles, including for feeding and post-larval development. Smelt are viewed as an indicator of ecosystem health, being very sensitive to a broad range of environmental

degradations, including overfishing, loss of spawning habitat, blockage to migration and water quality impacts.

2.3.6 The River Ribble and tributaries which make up the MCZ has been identified in EA conservation screening as a migratory route for the following protected species:

- European Eel
- Atlantic Salmon
- River Lamprey
- Sea Lamprey
- Smelt

2.3.7 The Ribble and Alt Estuaries site is located to the south and west, with the closest point approximately 3.4 km to the south-west. A Ramsar site is a wetland of international importance and the Ramsar Information Sheet (RIS) for the site is contained in Appendix A and it describes the site as follows:

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.

2.3.8 The Ribble Estuary is also designated a SSSI. The following description is reproduced from the citation for the SSSI which is contained in Appendix A:

The Ribble Estuary is situated on the Lancashire coast west of Preston between Southport and Lytham St. Annes extending inland to Longton. It has extensive intertidal sand-silt flats with one of the largest areas of grazed greenmarsh in Britain and includes small areas of recently reclaimed saltmarsh. The estuary is of international importance for the passage and wintering waterfowl it supports, being a major link in the chain of estuaries down the west coast of Britain used by birds on migration between the breeding grounds in the far north and their wintering grounds further south. The Ribble Marshes National Nature Reserve is located in the centre of the SSSI and most of the foreshore in Sefton outside the NNR is covered by the Southport Sanctuary which provides a protected low tide roost for pinkfooted geese.

The mudflats are rich in invertebrates on which the waders and many of the wildfowl, especially shelduck, feed and the sandbanks also provide low tide roosting sites for pinkfooted geese. The saltmarshes consist mainly of saltmarsh grass/red fescue sward with a belt of cord-grass (Spartina) at the seaward edge. They provide roosting sites for the waders at high tide and support large numbers of wildfowl such as mallard, teal, wigeon and pink-footed geese.

The estuary supports internationally important numbers of the following waterfowl: Bewick's swan, pink-footed goose, shelduck, wigeon, oystercatcher, knot, sanderling, dunlin, black-tailed and bar-tailed godwit as well as smaller populations of lapwing, curlew, grey plover and golden plover. The total numbers of waterfowl are also of international importance. Wildfowl numbers regularly exceed the criterion of 10,000. During the period 1977–82 the peak counts of waders greatly exceeded the criterion of 20,000, being always in excess of 56,000 with a maximum of 86,000, keeping the Ribble in the top seven estuaries in Britain for waders. The breeding bird communities of the saltmarsh are also significant and include nationally important breeding populations of black-headed gull, common tern and redshank.

Enclosed by the Coastal Road is an area of reclaimed unimproved grazing marsh, an uncommon habitat in NW England. This still supports a variety of saltmarsh plants in the more brackish parts nearer the sea and along the creeks. Plants such as cord-grass, thrift, sea aster and the brackish water crowfoot (Ranunculus baudotii), a particularly scarce plant in NW England, occur here. These areas are important as a major high tide roost for waterfowl, especially redshank, grey plover, black-tailed godwit, dunlin, oystercatcher, Bewick's swan and wigeon. They also support a diverse breeding bird community which includes skylark, lapwing, teal, shoveler, ringed plover and snipe.

2.3.9 The SSSI unit closest to the site is Unit 14 *Longton Marsh*. This is an area of salt marsh which is reported to be in a favourable condition by Natural England[4] with the following comment:

The vegetation composition on this site is low in diversity and in some cases did fall below the generic standard. However the saltmarsh habitat for this site has never been diverse, and the site specific objectives should evolve to reflect this. The unit maintains essential requirements for supporting bird populations which is its special interest.

2.4 Identification of Hazards

2.4.1 Potential hazards from the proposed activities have been identified as:

- Noise and Vibration –traffic moving in and out of the site and processing plant carrying out crushing, screening, washing;
- Dust – generated in dry conditions from processing operations, stockpiles and site roads;
- Mud on the road – deposited on the public highway by outgoing vehicles;

[4] https://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1023543&SiteCode=s1004299&SiteName=&countyCode=&responsiblePerson=

- Accidents: contamination of controlled waters – although low risk inert material will be accepted for processing, there is a risk that unsuitable material may be brought onto site. This material may contain contaminants.

- Accidents: spillage/escape of process water from washing operation;

- Uncontained run-off – surface water run-off which may contain suspended solids.

2.4.2 The nature of wastes accepted at the site will result in negligible generation of odour due to the lack of biodegradable and/or odorous material.

2.4.3 Likewise, the wastes will not generate litter or attract birds, vermin or insects.

2.4.4 The operation is not considered to pose a risk to air (excepting fugitive dust) due to the nature of waste materials that are accepted.

2.4.5 An Emissions Management Plan has been prepared to assess the risks from dust emissions and present mitigation and control measures. This is presented as Report No 22004/3 and is included with the application.

2.4.6 Pre-application advice confirmed that a noise assessment would be required. This was undertaken by Philip Dunbavin Acoustics Limited. This assesses the risks from noise and is included with the Noise Management Plan, Report No 22004/5 included with the application.

Hazards applicable to the Conservation Sites and Species

2.4.6 The designation of the SSSI means greater consideration is given to maintaining conditions which will allow the rare and sensitive species to thrive. The hazards applicable from the activity are those that may reduce the quality of the surrounding habitat. These include:

- Settlement of dust on vegetation impairing plant growth and reducing quality of habitat;

- Settlement of contaminated dust due to accidental importation of hazardous material;

- Disturbance of birds due to noise and vibration;

- Reduction in water quality due to uncontrolled run-off carrying sediment or contaminants.

2.5 Baseline Conditions

Wind Direction

2.5.1 Reference has been made to data for Blackpool Squires Gate monitoring station[5], the nearest Met Office climate station to the site which provides monthly mean wind speeds values for the period 1991 – 2020. The average wind speed ranges from 9.75 knots in June (gentle breeze) to 12.05 in January (moderate breeze). The annual average wind speed between 1991 and 2020 was 10.73 knots (moderate breeze).

2.5.2 Based on the wind rose data presented in Figure 1, the prevailing wind direction is from the west, which is away from the closest sensitive receptors. The average wind speed (based on data between 2015 and 2020) is 12.3 knots, ie moderate breeze on the Beaufort Scale.

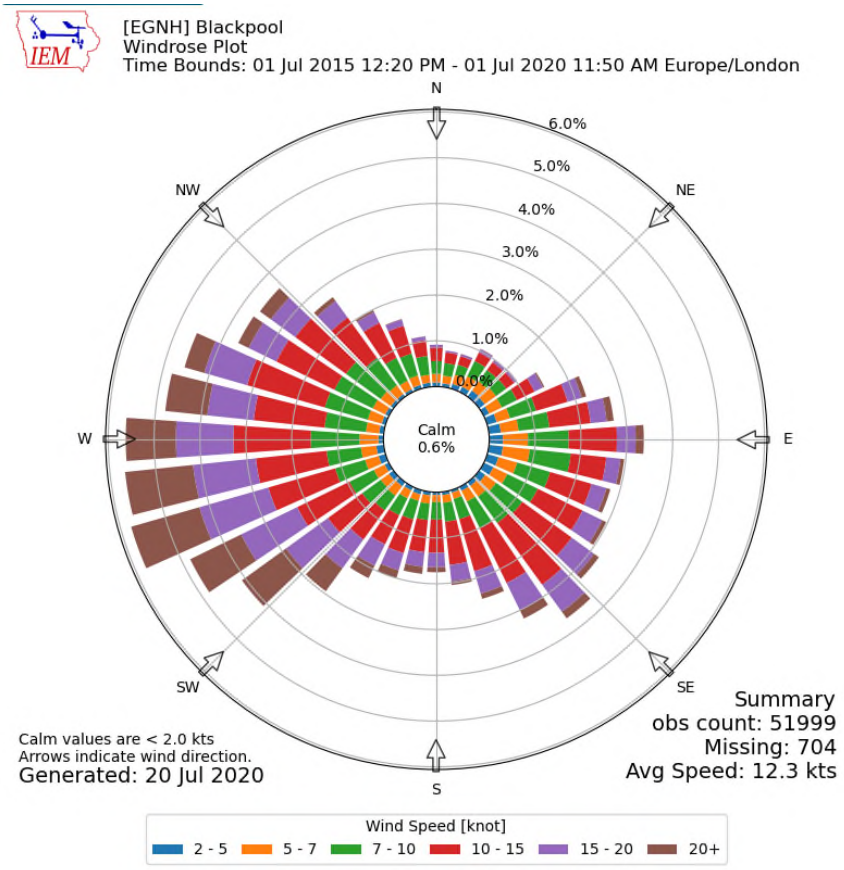


Figure 1: Wind Rose for Blackpool Airport (July 2015 to July 2020)

[5] https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gctcfvseb

Rainfall

2.5.3 Reference has been made to Met Office data for Myserscough[6], the nearest climate station to the site. Average annual rainfall during the period 1991 to 2020 was 1058 mm. The number of days of rainfall greater than or equal to 1 mm was 157.

Air Quality

2.5.4 Reference to the interactive DEFRA Air Quality Management Area (AQMA) mapping tool[7] identifies that the site is not located within an AQMA for PM_{10}.

2.5.5 Reference to the UK Ambient Air Quality Interactive Map[8] identifies background annual mean PM_{10} concentration for the area in 2021 as < 13 µg m^3, which is well below the annual mean Air Quality Objective of 40 µg m^3.

Potential for Flooding

2.5.6 With reference to the gov.uk Flood Map for Planning the site is in Flood Zone 1, an area with a low probability of flooding.

[6] https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gcw435f21
[7] https://uk-air.defra.gov.uk/aqma/maps
[8] Data obtained using interactive background maps https://uk-air.defra.gov.uk/data/gis-mapping

3. RISK ASSESSMENT AND MITIGATION

3.1 Methodology

3.1.1 Overall risk is a combination of the severity of an event and the likelihood that it will occur. Probability of occurrence is designated as:

- Probable – expected to occur based on previous occurrences
- Likely – expected to occur due to proposed changes
- Possible – this may occur, it may or may not have happened occasionally in the past
- Unlikely – not expected to occur
- Very Unlikely – has never and is not expected to occur.

3.1.2 The magnitude of risk is determined by the probability of exposure and the severity of the consequences, whereby:

- High – severe and long lasting environmental effects to the wider locality
- Medium – effects to the local environment and community
- Low - minor, short lived effects just beyond the site boundary
- Negligible – no discernible effect beyond the site boundary

3.1.3 An event could have a high probability of occurring but have minor environmental consequences; therefore it will be designated as a low risk. Likewise a risk with severe consequences could be unlikely to occur and will be designated as a low risk. A high risk designation would be assigned to an event that has severe consequences and is expected to occur.

3.1.4 The risks associated with the identified hazards have been assessed and are presented in Tables 4 to 8 including mitigation and control measures.

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Noise from incoming and outgoing vehicles (full & empty)	Residents at Pioneer Tec 380 m to the west	Air (noise) Vibration (ground)	Nuisance noise from delivery vehicles	Possible	Low	• Regular maintenance of access road & repair of pot-holes to minimise noise generated by vehicles; • Vehicle drivers to adhere to 10 mph speed limit on access and site roads, • All machinery & plant fitted with silencers & maintained as per manufacturer's specifications for efficient running; • Employment of good management techniques as per EMS to restrict plant noise; • Noise only during daytime working hours, no night time operations;	Low
Noise from aggregate processing (engine noise, material handling, crushing & screening)	Residents at Pioneer Tec 380 m to the west		Nuisance noise from processing operations during daytime working hours beyond the site boundary	Possible	Low		Low
	Employees at Trax Academy, Pioneer Tec and Preston Transfer Station; Pioneer Tec students using Trax facilities			Unlikely to be a nuisance: Operations at Trax have their own noise generating capacity (motorbikes and go carts) and the transfer station employees are inside.	Low		Low

Table 4: Assessment of Risks from Noise and Vibration

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Mud on the road	Wallend Road	Material carried on vehicle wheels and axles on leaving the site.	Mud carried onto public highway which could be a skid hazard for motorists.	Possible: however, processing area is hard standing, as is the site road	Medium	Measures in place to minimise the deposit of mud on public roads beyond the permit boundary are set out in EMS document including: • Wheel cleaning facility • Employment of a road sweeper	Low

Table 5: Assessment of Risks from Mud on the Road

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Surface water run-off carrying sediment	Ribble Estuary habitat and protected species	Surface water run-off during periods of heavy rain carrying suspended solids	Sediment laden water runs-off into river causing deterioration of water quality	Possible due to proximity and topography; surface water from site currently drains indirectly into the Ribble	Medium	Surface water will be contained within the site by a bund and directed to a silt trap and interceptor before release to a water storage tank for re-use on site. Excess water will be removed from site by tanker.	Low
Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste	Underlying ground & principal aquifer; Ribble Estuary habitat and protected species	Run-off seeps into ground and contaminates groundwater; or runs off site into Ribble.	Localised contamination of ground; small scale contamination of groundwater or surface water.	Unlikely: permitted waste types do not include sludges, liquids or contaminated waste;	Low	Waste will be stored in the secure site area. Waste acceptance controls & pre-acceptance procedures will prevent acceptance of contaminated waste. Interceptor will be fitted with a penstock valve so any large scale spillages can be isolated	Very Low
Spillage or leakage of wash plant water; leaching of contaminants from filtercake	Underlying ground & principal aquifer; Ribble Estuary habitat and protected species	Concentrated contaminants in recycled wash water or filtercake soak into underlying ground	Build up of contaminants in groundwater, deteriorating water quality	Possible - may be possibility of concentration effect in recycled wash water	Medium	A programme of sampling and testing of recycled water and filtercake will be undertaken to establish if contaminants are becoming concentrated. Filtercake will be stored on concreted surface Spillages will be contained in a sump within the concreted area and returned to the plant	Low

Table 6: Assessment of Risk from Uncontained Run-off

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Overall Risk
Non-compliant waste types, eg from importation & processing of contaminated material	Closest residents and neighbouring employees	Inhalation of windblown contaminated dust	Respiratory problems, reduction in local air quality	Unlikely as hazardous material not included on permit	Low	Permit conditions preclude acceptance of hazardous materials Waste acceptance controls & pre-acceptance procedures will prevent acceptance of non-compliant waste types In the event that non-conforming waste is unloaded the waste will be moved to a sealed container within the quarantine area to await re-loading & removal off-site as shown on the site plan	Low
	Ribble Estuary: priority habitat mudflats, LWS and MCZ Principal aquifer	Seepage into the ground and run off into the river	Contamination of controlled waters				
Spillage or leakage of fuel, oils & coolants Minor (< 5 litres) Major (> 5 litres)	Underlying ground and principal aquifer	Oil or fuel seeps into ground and contaminates groundwater	Localised contamination of ground, possible percolation into groundwater over a long period.	Possible if oil and fuel to be stored on site	Medium	Fuel to be stored in a bunded tank. Oils to be stored on drip trays or within bunded containers. Spillage procedure will be in place to clean up small scale spills EMS includes good practice measures such as use of drip trays whilst refuelling and clean up of any spillages Interceptor will be fitted with a penstock valve so any large scale spillages can be isolated	Low

Table 7 (continued overleaf): Assessment of Risk from Accidents

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Overall Risk
Accidental escape of process water from washing operation	Ribble Estuary, priority habitat mudflats LWS and MCZ Principal aquifer	Process water carrying sediment runs off site and into the river or seeps into ground	Contamination of controlled waters, reduction in water quality	Possible	Low	Operating procedures will be put in place through the EMS to carry out checks on hoses/connections before plant operation. Interceptor with penstock valve to be constructed to enable isolation of spillages	Low
Fire and firewater	Closest residents and neighbouring employees Ribble Estuary, priority habitat mudflats LWS and MCZ Principal aquifer	Overland flow of firewater; Increased airborne particulates from smoke and ash	Settlement of particles from smoke and ash, reduction in air quality Contaminated firewater flows into surface water or seeps into groundwater	Very unlikely: the risk of fire is very low as the material processed is non-combustible	Low	Permitted activities do not allow flammable materials to be accepted on site and burning of waste not allowed on site. The majority of waste accepted will be non-combustible.	Very Low
Flooding	Ribble Estuary, priority habitat mudflats LWS and MCZ Principal aquifer	Site floods and waste is washed off-site, adding sediment to the water environment	Inert material may be washed out of the site	Unlikely: The site is not in a high risk flooding area	Low	Water will be contained on site within the bunded area	Very Low

Table 7 (continued): Assessment of Risk from Accidents

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Disturbance of birds due to noise and vibration	Ribble Estuary SPA approximately 3.4 km to the west	Noise through the air and vibration through the ground.	Disruption to behaviour, reducing quality of the habitat	Very unlikely due to distance	Low	Noise controls as detailed in table 4	Very low
Settlement of dust on vegetation impairing plant growth and reducing quality of habitat		Airborne windblown dust	Smothering habitat with dust	Very unlikely due to distance from the site, any airborne dust would be deposited generally within 500 m;	Low	Dust Management Plan (report No 22004/3) in place to control and mitigate dust emissions Prevailing wind blows from the west, away from the SSSI Screening by vegetation between the site and the priority habitat along the banks of the River Ribble	Very low
Settlement of contaminated dust due to accidental importation of hazardous material		Airborne windblown dust	Toxic effects on species from contaminated dust deposit; Accumulation of phytotoxic material in soil	Very unlikely due to distance from site	Low	Controls on waste acceptance as detailed in table 7 to prevent acceptance of contaminated material.	Very low
Uncontrolled run-off carrying sediment or contaminants		Surface water run-off during periods of heavy rain carrying suspended solids	Sediment laden water runs-off into river causing deterioration of water quality	Possible due to proximity and topography; surface water from site currently drains indirectly into the River Ribble	Medium	Controls as detailed in table 6 to contain any sediment and spillages on site	Low

Table 8: Assessment of Risks to Habitats Site

4. MITIGATION AND CONTROL

4.0.1 Risks assessed as medium or high will require mitigation and control. Proposed measures, outlined in Tables 4 to 8 above, are presented in detail below.

4.1 Noise and Vibration

4.1.1 Noise and vibration risks associated with operations have been determined as low for the closest residential receptors at Pioneer Tec owing to their distance from the source.

4.1.2 This is mitigated to low risk by carrying out operations only during the working day.

4.1.3 Noise will be minimised by the maintenance of plant and the use of silencers and maintenance of roads.

4.2 Mud on Road

4.2.1 Risks associated with mud on road have been determined as medium.

4.2.2 This is mitigated to low risk by the use of a wheel cleaning facility. The EMS will include procedures for the prompt removal of any accidental deposit by a road sweeper, as well as regular checks and sweeping of the site entrance.

4.3 Control of Run-off

4.3.1 Surface water run-off will be directed towards a silt trap interceptor to remove suspended solids and any accidental small scale oil contamination from vehicles and plant. The interceptor will be fitted with a penstock valve so it can be isolated.

4.3.2 Water from the interceptor will be stored in an underground storage tank and reused on site for the wash plant and dust suppression. Surplus water will be removed by tanker for off-site disposal.

4.3.3 The area footprint beneath the wash plant will be concreted and laid to a fall with any run-off, drips and spillages drained to a sump in the centre. Contents of the sump will be returned to the wash plant.

4.3.4 The remainder of the site will be compacted hardstanding and used to store incoming waste and processed material. This area will drain towards the interceptor.

4.4 Waste Acceptance

4.4.1 Unsuitable waste will be prevented from being accepted into the site by checks carried out as part of the waste acceptance procedures, summarised below and contained in Section 3 of the EMS (Report No 22004/4).

4.4.2 Pre-Acceptance waste enquiries shall include information on the origin of the waste and whether it is from a contaminated site. When an enquiry is received, a member of the management team will carry out a site visit to inspect the waste. Photographs of the site and any stockpiles are taken. If the waste consists only of hardcore it will be accepted on the basis of the visual inspection.

4.4.3 In the case of waste which contains soil, classed as EWC 17 05 04, waste from greenfield sites will be accepted following a site inspection without analysis. Waste from brownfield sites will require chemical analysis to confirm that the soil is not contaminated. This is assessed by a member of the management team. Contaminated waste will not be accepted. Analytical test results are stored for up to 2 years.

4.4.4 If the waste is accepted as suitable it will be booked into site and undergoes further checks when it arrives as detailed in the appended procedure.

4.4.5 Waste which is found to be unsuitable after delivery will be rejected.

4.5 Sampling and Testing of Washwater

4.5.1 A programme of testing will be carried out during the first 3 months of operation to establish concentration of contaminants in washwater and identify whether these are becoming concentrated by recycling the washwater.

4.5.2 It is proposed to take weekly samples for the first month, reducing to fortnightly samples during the second and third month if contaminant concentration and variability is low.

4.5.3 It is proposed to test for the following parameters:

- Arsenic
- Chromium
- Cadmium
- Copper
- Lead

- Nickel
- Tin
- Zinc
- Total Petroleum Hydrocarbons (TPH)
- PAH 16
- pH

4.5.4 Sampling will be carried out by a trained competent technician and samples will be submitted to an accredited laboratory for analysis. A wash plant monitoring plan has been included in Appendix B.

4.5.5 The aim of the monitoring plan is to:

- characterise the washwater
- build up a picture of variation
- establish if contaminants are becoming concentrated

4.5.6 If contaminants are observed to be building up then an action plan will be proposed to reduce contaminants to an acceptable level.

5. CONCLUSIONS

5.1 The risks to the environment from the proposed activity have been determined and where required mitigation has been proposed to reduce the risks to an acceptably low level.

5.2 Noise is minimised by the maintenance of plant and the use of silencers, maintenance of roads and working within the permitted operational hours.

5.3 Risks from surface water run-off will be minimised through containment and primary treatment to remove sediment and catch any fuel or oil spillages in a silt trap interceptor.

5.4 Risks from accidents will be reduced through effective management of the site through an Environmental Management System, including waste acceptance procedures to prevent importation of contaminated waste.

5.5 The habitats sites have been assessed and it has been concluded that they are not at risk from the proposed operations, mainly due to the distance from site.

5.6 In conclusion it has been demonstrated that the risks posed by the proposed operation can be mitigated so they will not have a significant impact on the surrounding environment.

M Birkett
BSc (Hons) PG Dip GCIWM
Senior Consultant

C Gettinby
PhD BSc (Hons) MCIWM
Director

APPENDIX A

EA Conservation Screening Report

Nature and Heritage Conservation

Screening Report: Bespoke Waste

Reference	**EPR/LB3704KD/A001**
NGR	**SD 49712 29237**
Buffer (m)	**100**
Date report produced	**21**
Number of maps enclosed	**3**

The nature and heritage conservation sites and/or protected species and habitats identified in the table below must be considered in your application.

Nature and heritage conservation sites	Screening distance (m)	Further Information
Marine Conservation Zone (MCZ)	1000	Joint Nature Conservation Committee
Ribble Estuary		
Local Wildlife Sites (LWS)	200	Appropriate Local Record Centre (LRC)
River Ribble, Lower Tidal Section		

Protected Species	Screening distance (m)	Further Information
European Eel migratory route	up to 500m	Natural England
Atlantic Salmon migratory route		Environment Agency. Dial 03708 506 506 for your local Fisheries and Biodiversity team
River Lamprey migratory route		
Sea Lamprey migratory route		
Smelt migratory route		

Protected Habitats	Screening distance (m)	Further Information
Mudflats	up to 50m	Natural England

Where protected species are present, a licence may be required from Natural England to handle the species or undertake the proposed works.

The relevant Local Records Centre must be contacted for information on the features within local wildlife sites. A small administration charge may also be incurred for this service.

Please note we have screened this application for protected and priority sites, habitats and species for which we have information. It is however your responsibility to comply with all environmental and planning legislation, this information does not imply that no other checks or permissions will be required.

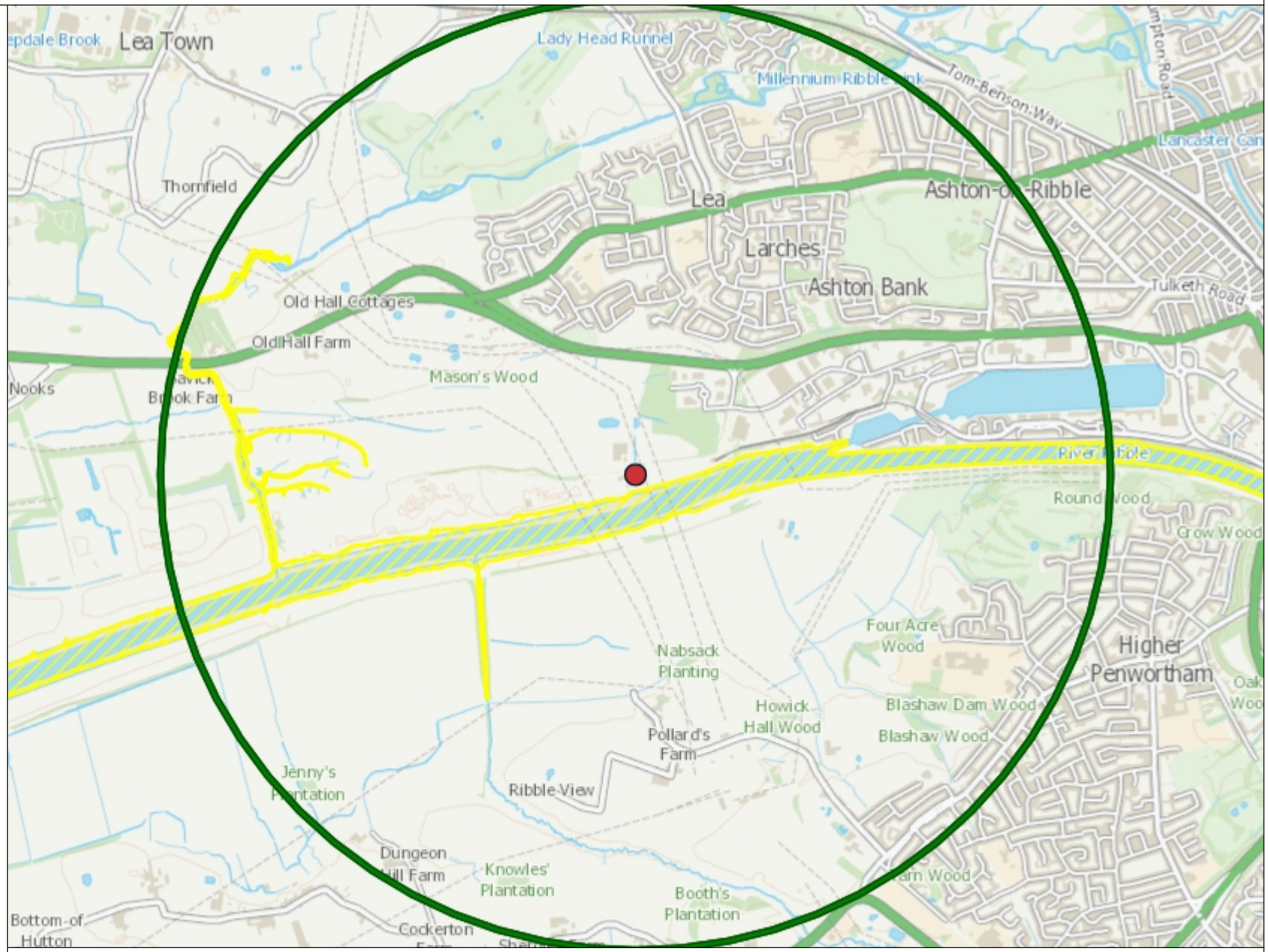
Please note the nature and heritage screening we have conducted as part of this report is subject to change as it is based on data we hold at the time it is generated. We cannot guarantee there will be no changes to our screening data between the date of this report and the submission of the permit application, which could result in the return of an application or requesting further information.

Marine Conservation Zones

Environment Agency

Legend

Marine Conservation Zones



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Metres

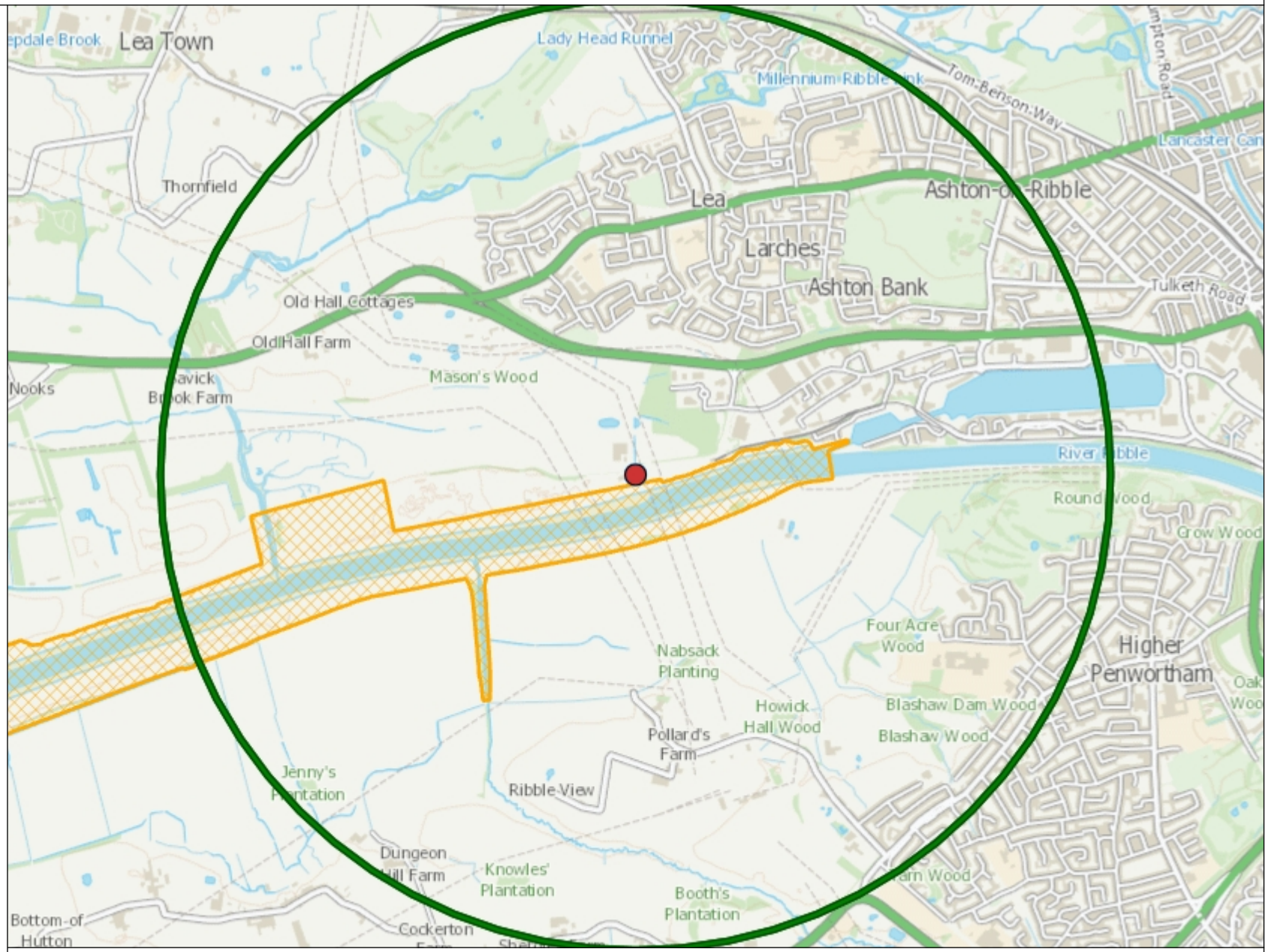
N W E S

Local Wildlife Sites

Environment Agency

Legend

Local Wildlife Sites



1: 25,000

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Metres

N W E S

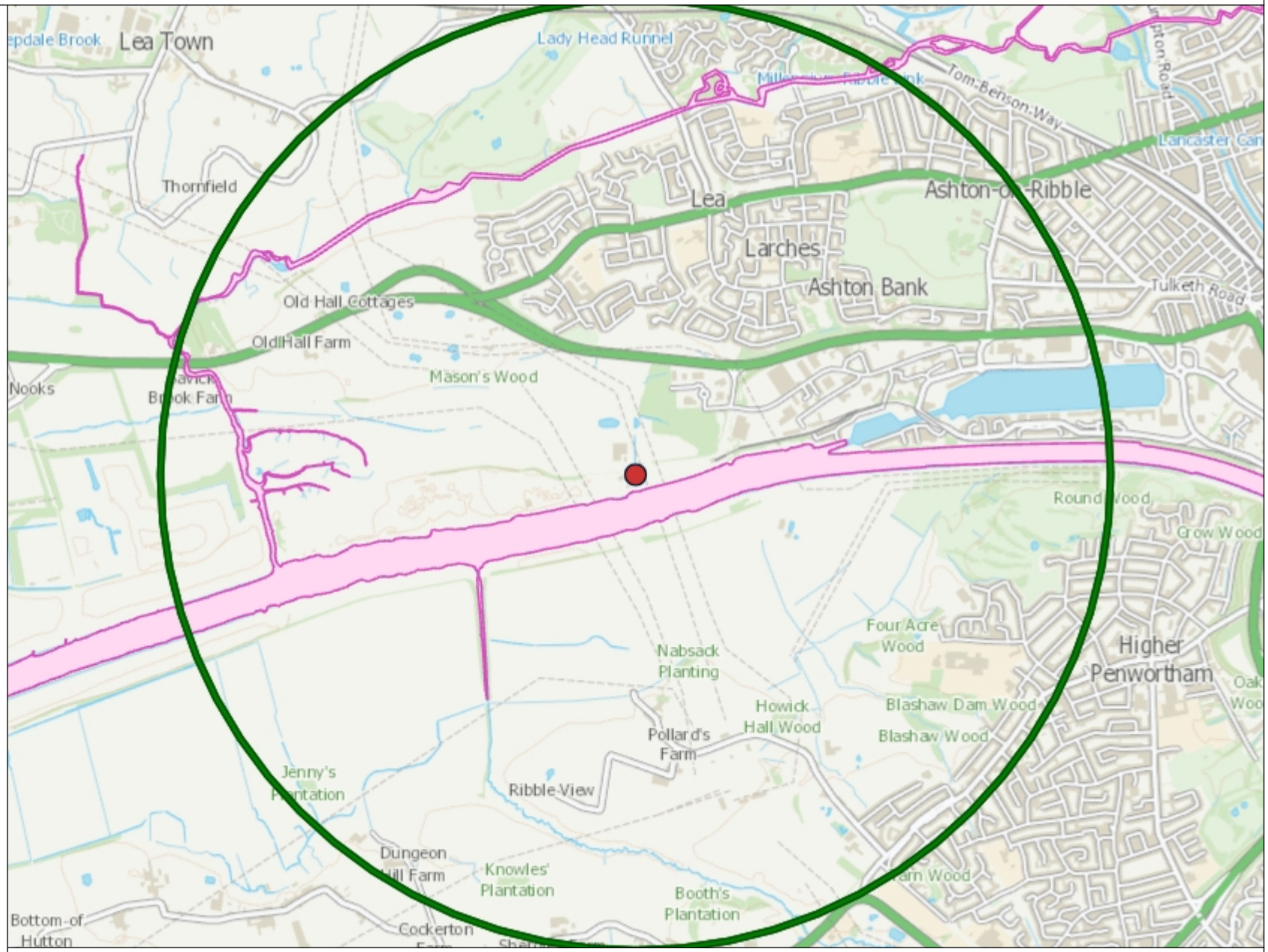
Protected Species

Environment Agency

Legend

Protected species screened for Env Permits - complete set

- Protected species, non fish
- Protected fish
- Protected fish migratory route



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Metres

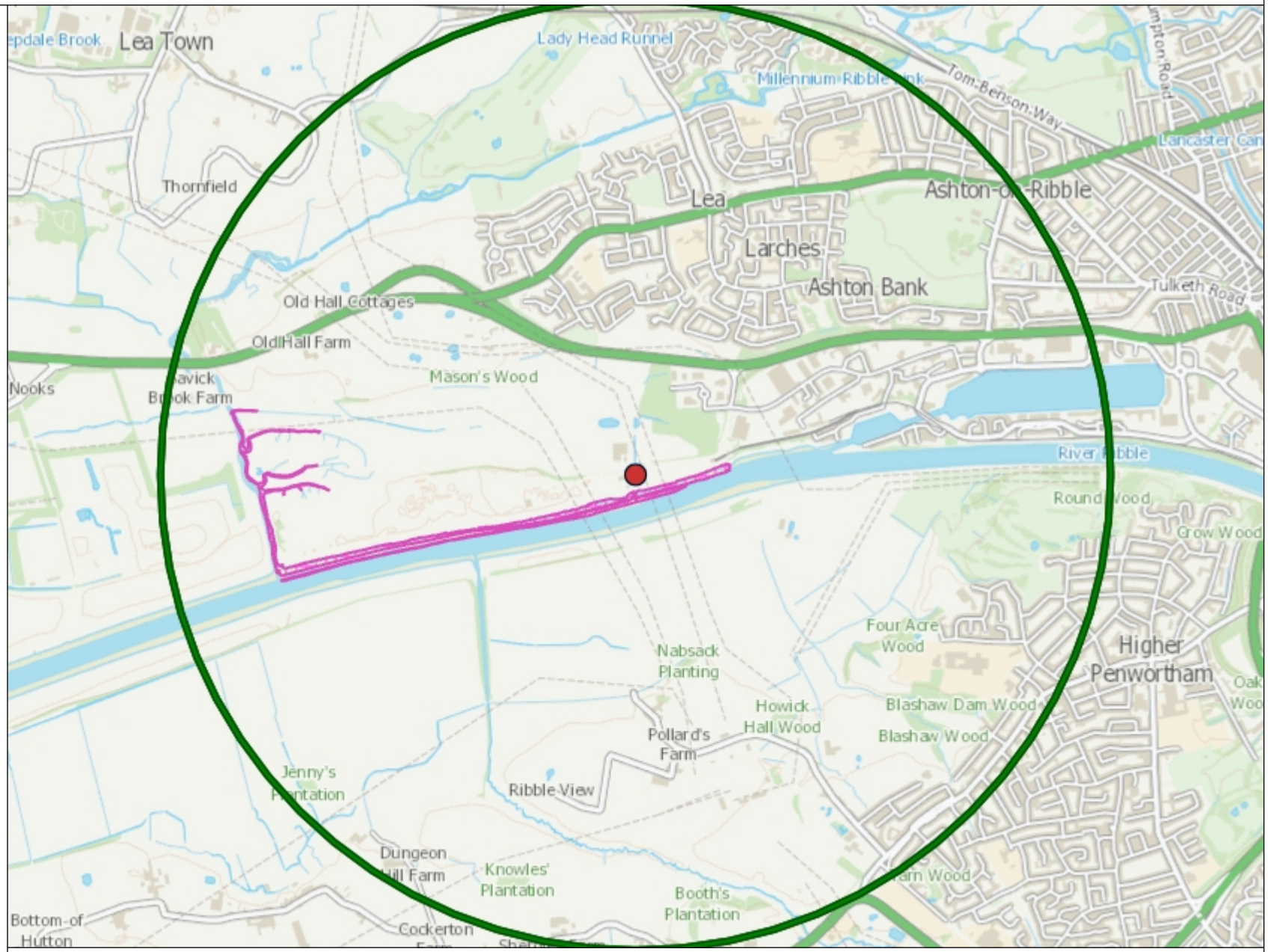
N W E S

Protected Habitats

Environment Agency

Legend

Protected Habitats screened for Env Permits



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Metres

N W E S

Ribble Estuary SSSI Notification

COUNTY: LANCASHIRE & MERSEYSIDE **SITE NAME:** RIBBLE ESTUARY

DISTRICT: FYLDE, SEFTON METROPOLITAN, SOUTH RIBBLE AND WEST LANCASHIRE

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981. Includes the Ribble Marshes National Nature Reserve declared under Section 19 of the National Parks and Access to the Countryside Act 1949.

Local Planning Authority: Fylde Borough Council, Sefton Metropolitan Borough Council, South Ribble Borough Council, West Lancashire Borough Council.

National Grid Reference: SD 375240 **Area:** 9226.3 (ha.) 22798.2 (ac.)

Ordnance Survey Sheet 1:50,000: 102, 108 **1:25,000:** SD 21, 22, 23, 31, 32, 33, 42

Date Notified (Under 1949 Act): – **Date of Last Revision:** 1979
1966 (Southport Sanctuary)
1976 (Ribble Estuary)

Date Notified (Under 1981 Act): 1984 **Date of Last Revision:** 1984

Other Information:

1. Listed as an internationally important coastal site in 'A Nature Conservation Review' ed. D A Ratcliffe (1977) Cambridge University Press.

2. 2,916 ha. of the foreshore west of the National Nature Reserve are covered by the Southport Sanctuary, a National Wildfowl Refuge made a statutory bird sanctuary by the Wild Birds (Southport Sanctuary) Order 1956 under the Protection of Birds Act 1954. By virtue of the Interpretation Act 1978 the Order remains in force.

3. 6,730.0 ha. of the SSSI are in Lancashire and 2,501.6 ha. are in Merseyside.

4. The area of the National Nature Reserve is 2302 ha.

5. The boundary of the SSSI has been modified by a number of deletions and one extension.

6. The site is adjacent to the Southport Sand Dunes and Foreshore SSSI.

Description and Reasons for Notification:

The Ribble Estuary is situated on the Lancashire coast west of Preston between Southport and Lytham St. Annes extending inland to Longton. It has extensive intertidal sand-silt flats with one of the largest areas of grazed greenmarsh in Britain and includes small areas of recently reclaimed saltmarsh. The estuary is of international importance for the passage and wintering waterfowl it supports, being a major link in the chain of estuaries down the west coast of Britain used by birds on migration between the breeding grounds in the far north and their wintering grounds further south. The Ribble Marshes National Nature Reserve is located in the centre of the SSSI and most of the foreshore in Sefton outside the NNR is covered by the Southport Sanctuary which provides a protected low tide roost for pinkfooted geese.

The mudflats are rich in invertebrates on which the waders and many of the wildfowl, especially shelduck, feed and the sandbanks also provide low tide roosting sites for pinkfooted geese. The saltmarshes consist mainly of saltmarsh grass/red fescue sward with a belt of cord-grass (*Spartina*) at the seaward edge. They provide roosting sites for the waders at high tide and support large numbers of wildfowl such as mallard, teal, wigeon and pink-footed geese.

The estuary supports internationally important numbers of the following waterfowl: Bewick's swan, pink-footed goose, shelduck, wigeon, oystercatcher, knot, sanderling, dunlin, black-tailed and bar-tailed godwit as well as smaller populations of lapwing, curlew, grey plover and golden plover. The total numbers of waterfowl are also of international importance. Wildfowl numbers regularly exceed the criterion of 10,000. During the period 1977–82 the peak counts of waders greatly exceeded the criterion of 20,000, being always in excess of 56,000 with a maximum of 86,000, keeping the Ribble in the top seven estuaries in Britain for waders. The breeding bird communities of the saltmarsh are also significant and include nationally important breeding populations of black-headed gull, common tern and redshank.

Enclosed by the Coastal Road is an area of reclaimed unimproved grazing marsh, an uncommon habitat in NW England. This still supports a variety of saltmarsh plants in the more brackish parts nearer the sea and along the creeks. Plants such as cord-grass, thrift, sea aster and the brackish water crowfoot (*Ranunculus baudotii*), a particularly scarce plant in NW England, occur here. These areas are important as a major high tide roost for waterfowl, especially redshank, grey plover, black-tailed godwit, dunlin, oystercatcher, Bewick's swan and wigeon. They also support a diverse breeding bird community which includes skylark, lapwing, teal, shoveler, ringed plover and snipe.

Ribble Estuary MCZ

Department for Environment, Food and Rural Affairs

Ribble Estuary Marine Conservation Zone

This document sets out why this site is important, the features protected and general management information.

31 May 2019

Smelt © Jack Perks

Overview

This site became a Marine Conservation Zone (MCZ) in May 2019. This means that specific features within this area are protected and, where necessary, regulators will manage marine activities.

Where is the site?

The Ribble Estuary MCZ is an inshore site that covers an area of approximately 15 km². It is located on the north-west coast of England, near Preston.

Why is the site important?

MCZs, together with other types of marine protected areas, will form the UK contribution to an international network of protected sites in the north east Atlantic. The network will help to deliver the government's vision of clean, healthy, safe, productive and biologically diverse oceans and seas. MCZs protect typical, rare or declining habitats and species found in our seas.

Smelt were once widespread in estuaries in the UK but have declined considerably over the past 200 years. They are known to congregate in large shoals in lower estuaries and migrate into freshwater where they spawn in spring. Estuaries such as the Ribble therefore provide critical habitats required to complete smelt lifecycles, including for feeding and post-larval development. Smelt are viewed as an indicator of ecosystem health, being very sensitive to a broad range of environmental degradations, including overfishing, loss of spawning habitat, blockage to migration and water quality impacts.

You can find detailed information about smelt at http://jncc.defra.gov.uk/page-4527.

Protected feature	General management approach
Smelt (*Osmerus eperlanus)*	Recover to favourable condition

Management of the site

Now that this site has been designated, some activities may need additional management. Activities and the management measures used to regulate them may need to change if new evidence becomes available.

Most marine activity is already regulated by the relevant regulatory bodies. There is an existing legal framework that regulators use to manage fishing, coastal development, recreation and pollution. This also applies in MCZs.

Regulators will manage each site according to the features and activities in, or near, a specific area. Management measures will be implemented at sites most at risk of damage first, regulating only those activities which have a detrimental impact on the designated features. Any management measures that are required for MCZs will be applied on a case-by-case basis.

Management in MCZs can take several different forms, including introducing voluntary measures, use of the existing planning and licensing framework, specific byelaws and orders. There has to be public consultation on permanent byelaws and orders. For activities that already need a marine licence, regulators consider the MCZ in their decision as soon as the site is consulted on. Find out more about marine licensing in MCZs at https://www.gov.uk/government/publications/marine-conservation-zones-mczs-and-marine-licensing.

Regulators

This table lists the authorities responsible for MCZs and the activities they manage.

Lead regulator	What it manages
Inshore Fisheries and Conservation Authorities (IFCAs) http://www.association-ifca.org.uk	• Fisheries in the inshore area (0-6 nautical miles (nm)) including commercial fisheries and recreational sea angling.
Marine Management Organisation (MMO) https://www.gov.uk/government/organisations/marine-management-organisation	• Fisheries within British limits around the coast of England. • Licensable activities such as construction, alteration or improvement of works, dredging and disposal, other removals or deposits, incineration or the scuttling of vessels within England's marine area. • Section 36 (of the Electricity Act 1989) Consents and Safety Zones for offshore renewable energy installations producing up to 100MW. • Activities requiring a marine wildlife licence.
Environment Agency (EA) https://www.gov.uk/government/organisations/environment-agency	• Fisheries for migratory and freshwater fish. • Coastal protection and flood management. • Water quality, including environmental permits for discharges from terrestrial sources.
Oil and Gas Authority https://www.ogauthority.co.uk/	• Licensing for exploration and exploitation of oil and gas reserves.
Department for Business, Energy and Industrial Strategy (BEIS) https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy **Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) – Part of BEIS**	• Oil and gas related activities • Renewable energy related activities • Environmental approvals and consents for offshore oil and gas related activities, Carbon Capture and Storage and Gas Unloading and Storage, and decommissioning activities.
Harbour Authorities and Local Planning Authorities	• Harbour authorities have management responsibilities for ports and coastal waters within their limits. • Local planning authorities manage activities at the coast. These include coastal recreation, public rights of way (including the English Coastal Path), tourism, economic regeneration, flood protection,

	and planning and development on coasts and estuaries, including aquaculture in the intertidal zone.
Department for Transport (DfT) https://www.gov.uk/government/organisations/department-for-transport	• Policy on environmental impacts associated with ports and shipping, including pollution from ships. • Policy on maritime safety including navigation safety.
Maritime and Coastguard Agency (MCA) - An Executive Agency of the Department for Transport https://www.gov.uk/government/organisations/maritime-and-coastguard-agency	• Vessel safety consents, including certification of seafarers and equipment.
Natural England (NE) https://www.gov.uk/government/organisations/natural-england	• Establishment and management of the English Coastal path. • Activities requiring consents and ascents within or adjacent to Sites of Special Scientific Interest (SSSIs). • Activities requiring wildlife licences for terrestrial and intertidal species.
The Planning Inspectorate https://www.gov.uk/government/organisations/planning-inspectorate	• Activities requiring Development Consent Orders under the Planning Act 2008, regarded as Nationally Significant Infrastructure Projects

Further information

Read about government policy on MCZs at:
https://www.gov.uk/government/collections/marine-conservation-zone-designations-in-england

Read the advice provided by Natural England on MCZs at:
http://publications.naturalengland.org.uk/publication/5703660445368320

The Ribble Estuary © Emily Hardman / Natural England

This publication is available at www.gov.uk/government/publications

Any enquiries regarding this publication should be sent to defra.helpline@defra.gov.uk

APPENDIX B

Wash Plant Monitoring Plan

1.0 GENERAL

This monitoring plan is in place to achieve the following goals:

- Characterise the washwater and filtercake
- Build up a picture of variation
- Establish if contaminants are becoming concentrated

Monitoring will be carried out by trained, competent personnel.

2.0 WASHWATER MONITORING

2.1 Sampling Location

Samples of wash water will be taken from a sampling point on the washwater return line. This will be identified once the plant is fully constructed and this plan will be updated.

2.2 Sampling Procedure

Samples will be collected from the sample point by holding a sampling bottle directly under the flow of water.

The sample bottle and cap are rinsed before filling with the sample, unless the bottle contains a preservative. Sample bottles are filled in compliance with the instructions provided by appropriate UKAS accredited laboratory located in the laboratory resource folder (LFR). Any preservatives required for particular samples are added, if not already provided in the bottle.

Bottle labels are filled in to include the site name, date, monitoring point or location reference. A chain of custody is completed for the sample.

Once collected, samples are placed in a cool box containing freezer blocks to keep them at a consistent temperature. They are then taken to an appropriate UKAS accredited laboratory.

Samples are tracked from site and through the laboratory process using a chain of custody provided by the laboratory, this is included when the samples are sent to the laboratory. This typically includes information regarding the sample number, type, date, time of sampling and the analyses to be performed.

2.3 Analytical Parameters

Wash water samples will be analysed for the following suite:

pH
Electrical Conductivity

Dissolved Organic Carbon
Metals (As, Cd, Cu, Cr, Pb, Ni, Sn & Zn)
Total TPH
Total PAHs

3.0 FILTERCAKE MONITORING

3.1 Sampling Location

Samples of filtercake will be taken from below the filter plant housing, where filtercake is dropped and stored.

3.2 Sampling Procedure

Samples will be collected by scooping the filtercake into 0.5 kg plastic tubs provided by the laboratory. Two samples will be taken from separate points in the stockpile on each monitoring occasion.

Samples will be labelled, stored and submitted to an accredited laboratory for testing as described in section 2.2 above.

3.3 Analytical Parameters

Filtercake samples will be analysed for the following suite:

pH
Total Organic Carbon
Metals (As, Cd, Cu, Cr, Pb, Ni, Sn & Zn)
Total TPH
Total PAHs

4.0 SAMPLING FREQUENCY, DATA RECORDING AND REVIEW

It is proposed to take weekly samples for the first month, reducing to fortnightly samples during the second and third month if contaminant concentration and variability is low.

When results are received from the laboratory they will be reviewed by the Technical Advisor, filed securely and logged onto a master spreadsheet.

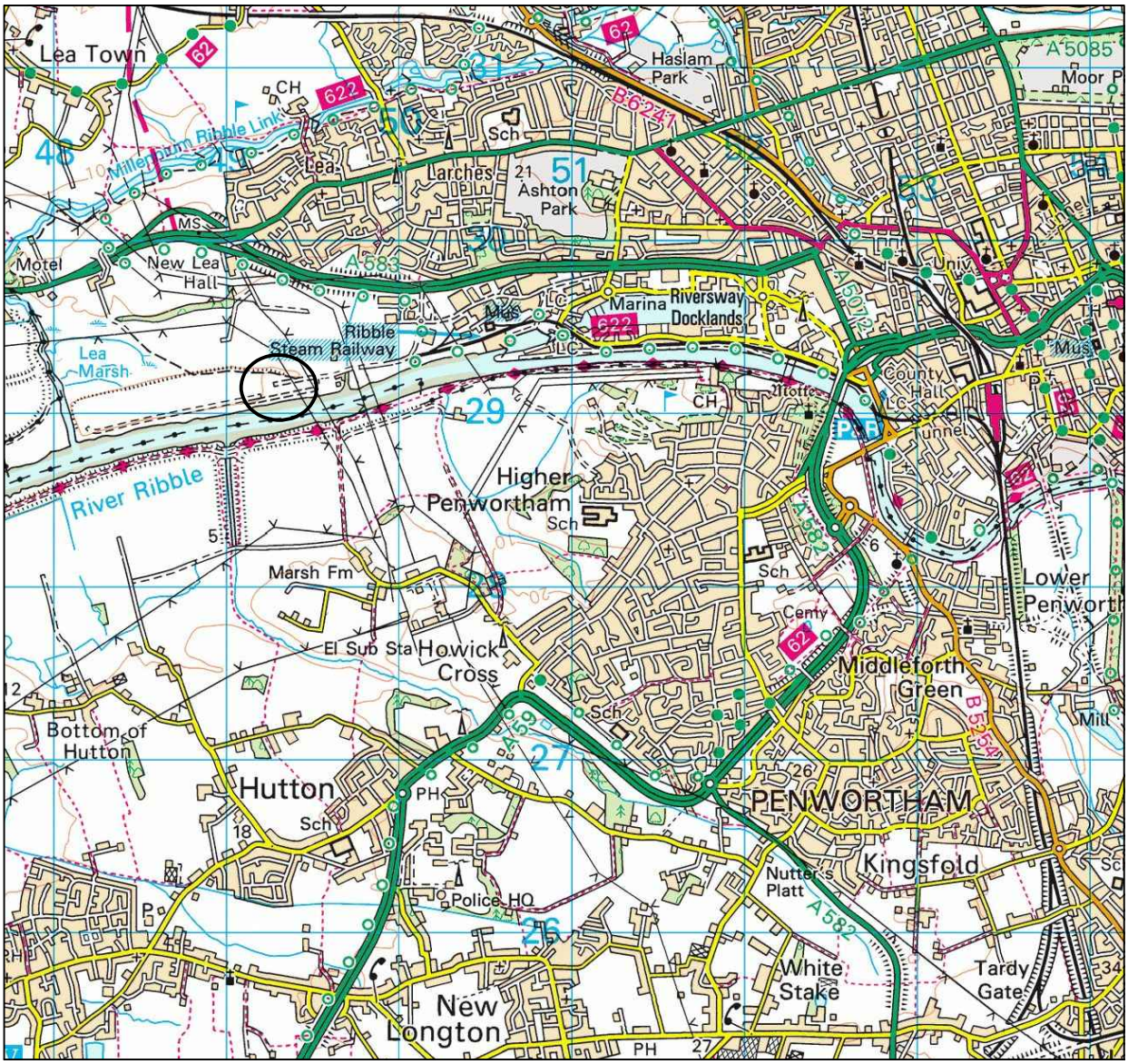
After three months of data collection a report will be produced on the characterisation and variability of the washwater and filtercake and the monitoring plan will be reviewed.

If contaminants are observed to be building up then an action plan will be proposed to reduce contaminants to an acceptable level.

APPENDIX C

Drawings

NORTH



THE ARLEY CONSULTING COMPANY LIMITED

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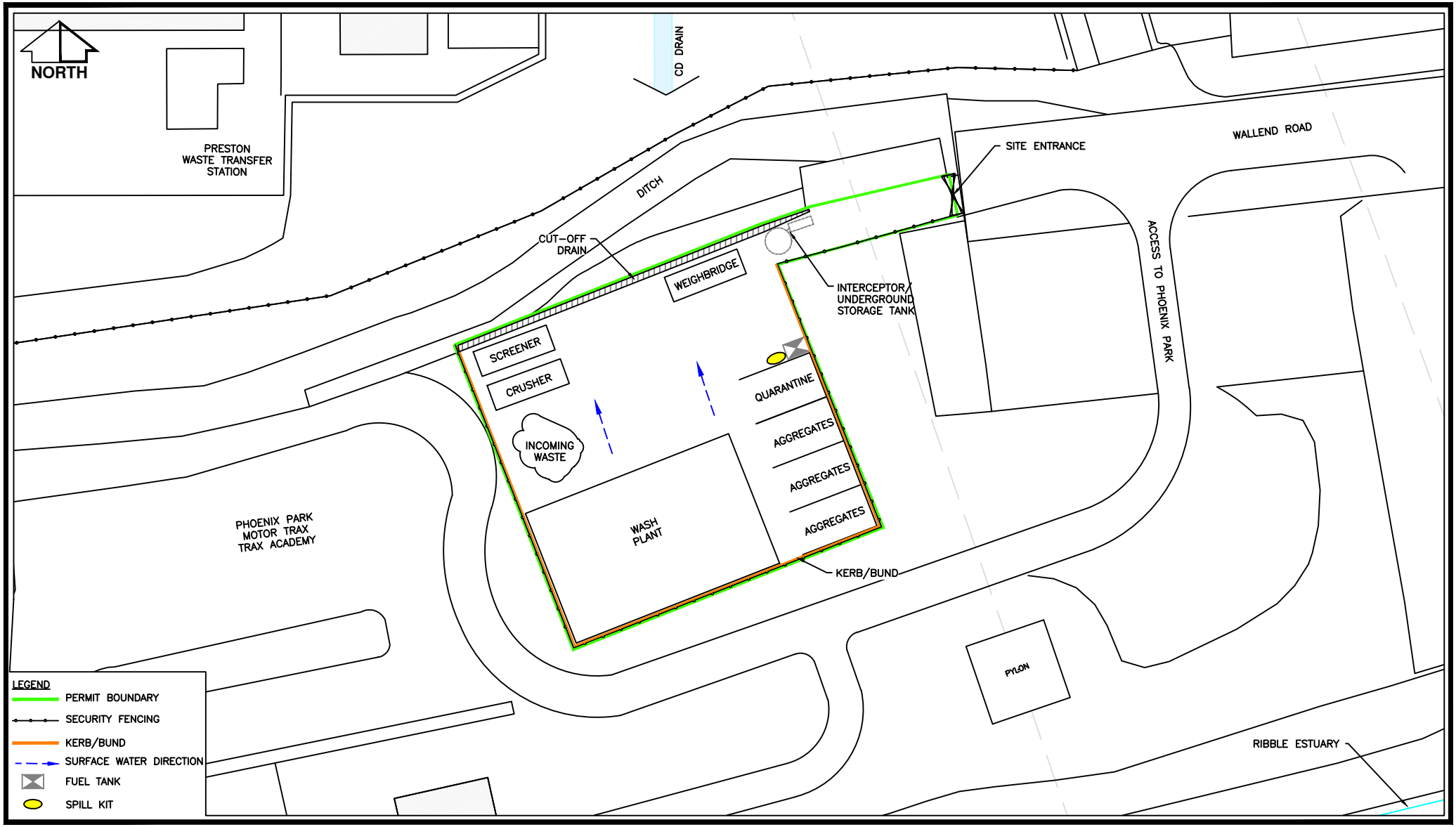
49-51 St Thomas's Road
Chorley, Lancashire PR7 1JE

Tel: 01257 278300
Fax: 01257 268063
E-mail: mailbox@taccl.co.uk

CLIENT	PHOENIX PARK NW CIC
JOB TITLE.	PHOENIX PARK RECYCLING FACILITY
DRAWING TITLE.	SITE LOCATION PLAN

DRAWN BY.	APPROVED BY.	DATE.	SCALE.	DRAWING No.
M.Y.B.	C.G.	19/12/2022	NTS	22004/01



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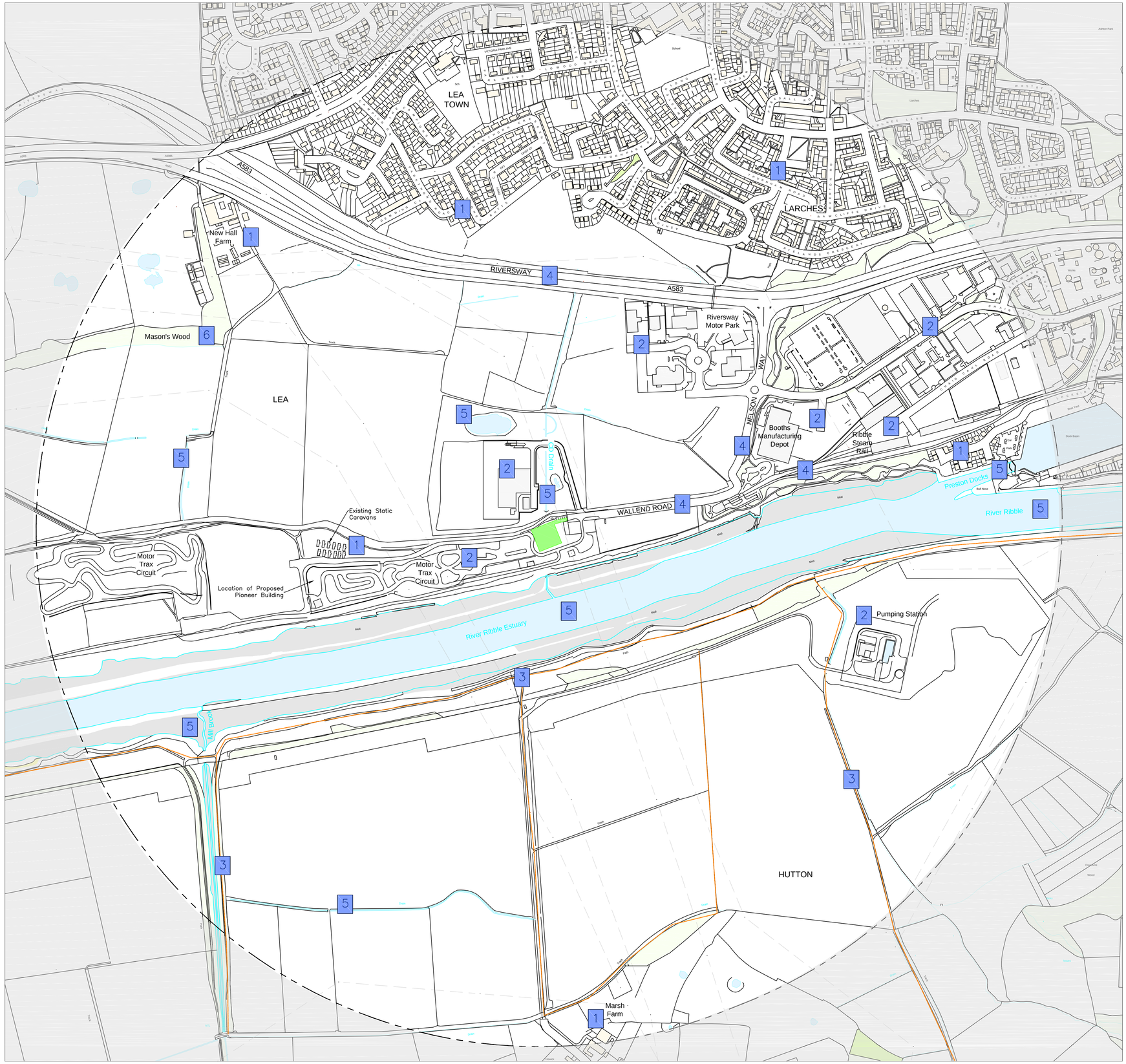
Tel: 01257 278300
Fax: 01257 268063
E-mail: mailbox@taccl.co.uk

CLIENT: PHEONIX PARK NW CIC		DRAWN BY. M.Y.B.	APPROVED BY. C.G.
JOB TITLE. PHOENIX PARK RECYCLING FACILITY		DATE. 16/12/2022	DRAWING No. 22004/02
DRAWING TITLE. INDICATIVE SITE LAYOUT PLAN		SCALE @ A4. 1:500	

NORTH



LEGEND

- PERMIT AREA
- 1 KM RECEPTOR BOUNDARY
- FOOTPATHS
- OVERHEAD ELECTRICITY LINES
- RESIDENTIAL AREA
- INDUSTRIAL/COMMERCIAL AREA
- WOODLAND
- WATERBODIES/WATERWAYS
- 1 RECEPTOR REFERENCE (SEE REPORT 22004/3)

PREVAILING WIND DIRECTION (FROM THE WEST)

REV.	DESCRIPTION	DATE	BY

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Chorley, Lancashire PR7 1JE
Tel: 01257 278300
Fax: 01257 268063
E-mail: mailbox@taccl.co.uk

CLIENT.
PHEONIX PARK NW CIC

JOB TITLE.
PHOENIX PARK PROCESSING FACILITY

DRAWING TITLE.
RECEPTORS 1 KM

DRAWN BY.	APPROVED BY.	DRAWING No.
M.Y.B.	C.G.	22004/03
DATE. 12/12/2022	SCALE @ A1. 1:4000	

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