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**Report No 22004/3**

**March 2023**

# EMISSIONS MANAGEMENT PLAN
# for
# PHOENIX PARK RECYCLING FACILITY

**Prepared for**

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

# DOCUMENT CONTROL SHEET

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|---|---|
| **SITE** | PHOENIX PARK RECYCLING FACILITY |
| **DOCUMENT TITLE** | EMISSIONS MANAGEMENT PLAN |
| **DOCUMENT NO.** | 22004/3 |
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| **RELATED DOCUMENTS** | |
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| **Report No 22004/1** | Site Condition Report |
| **Report No 22004/2** | Environmental Risk Assessment |
| **Report No 22004/4** | Environmental Management System |

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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 Emissions Management Plan (EMP) for a Waste Processing Facility off Wallend Road, Preston, Lancashire. This report has been prepared in support of a bespoke permit application.

1.1.2 Construction, demolition and excavation waste will be imported and treated to produce soil, soil substitutes and aggregate products. Recycled aggregate products will be produced in accordance with the WRAP End of Waste Criteria for the production of aggregates from inert waste.[1]

1.1.3 The aim of the EMP is to identify the potential risks of fugitive dust emissions from operations at the site, consider the impact to identified receptors and set out the required mitigation measures for the management of any dust or other emissions arising.

1.1.4 The treatment and movement of waste, storage of wastes and aggregate products, and associated HGV movements have the potential to generate dust and particulate ($PM_{10}$) emissions which may pose a risk of dust soiling impacts, ecological impacts or risks to human health from ambient $PM_{10}$.

1.1.5 The use of treatment plant and HGVs also have the potential to generate exhaust emissions which may pose a health risk to surrounding receptors.

1.1.6 The EMP is part of the Environmental Management System (EMS) for the site and is for use by management and site operators. A copy will be located within the site office.

[1] https://www.gov.uk/government/publications/quality-protocol-production-of-aggregates-from-inert-waste

1.1.7 The EMP has been prepared using the following guidance:

- Environment Agency Risk Assessment for Environmental Permits[2]
- Institute of Air Quality Management (IAQM)[3]
- Control & Monitor Emissions for your Environmental Permit[4]

## 1.2 Site Details

1.2.1 The site is located off Wallend Road at Preston Docklands, Lancashire, PR2 2HW. The waste processing facility will be located 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 A.

1.2.2 The proposed waste facility 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 for car parking for Phoenix Park. The processing facility will include a wash plant and crusher. The wash plant will be constructed on a new concrete pad. A bund will be constructed around the permit area to contain surface water runoff which will be directed to an interceptor and storage tank.

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

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.

## 1.3 Surrounding Area and Receptor Details

1.3.1 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.

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2 https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit

3 IAQM Guidance on the assessment of dust from demolition and construction, January 2014. Whilst this guidance is specifically for 'construction dust', in the absence of separate guidance for dust from waste or mineral sites, the IAQM guidance can be used as a starting point for waste dust assessment with appropriate modification or minor adjustments.

4 https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit

1.3.2 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.

1.3.3 The Trax Motor Sport Academy includes motor cross and go-kart tracks with associated facilities. The Academy is used exclusively by Pioneer Tec[5] 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.

1.3.4 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.

1.3.5 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.

1.3.6 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.

1.3.7 The closest residences are the static caravans approximately 380 m to the west of the processing facility. 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.

## 1.4 AQMA Status

1.4.1 Reference to the interactive DEFRA Air Quality Management Area (AQMA) mapping tool[6] identifies that the site is not located within an AQMA for $PM_{10}$.

1.4.2 Reference to the UK Ambient Air Quality Interactive Map[7] 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 $m^3$.

[5] https://pioneertec.co.uk/
[6] https://uk-air.defra.gov.uk/aqma/maps
[7] Data obtained using interactive background maps https://uk-air.defra.gov.uk/data/gis-mapping

## 1.5 Climate Details

1.5.1 Reference has been made to data for Blackpool Squires Gate monitoring station[8], 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).

1.5.2 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.

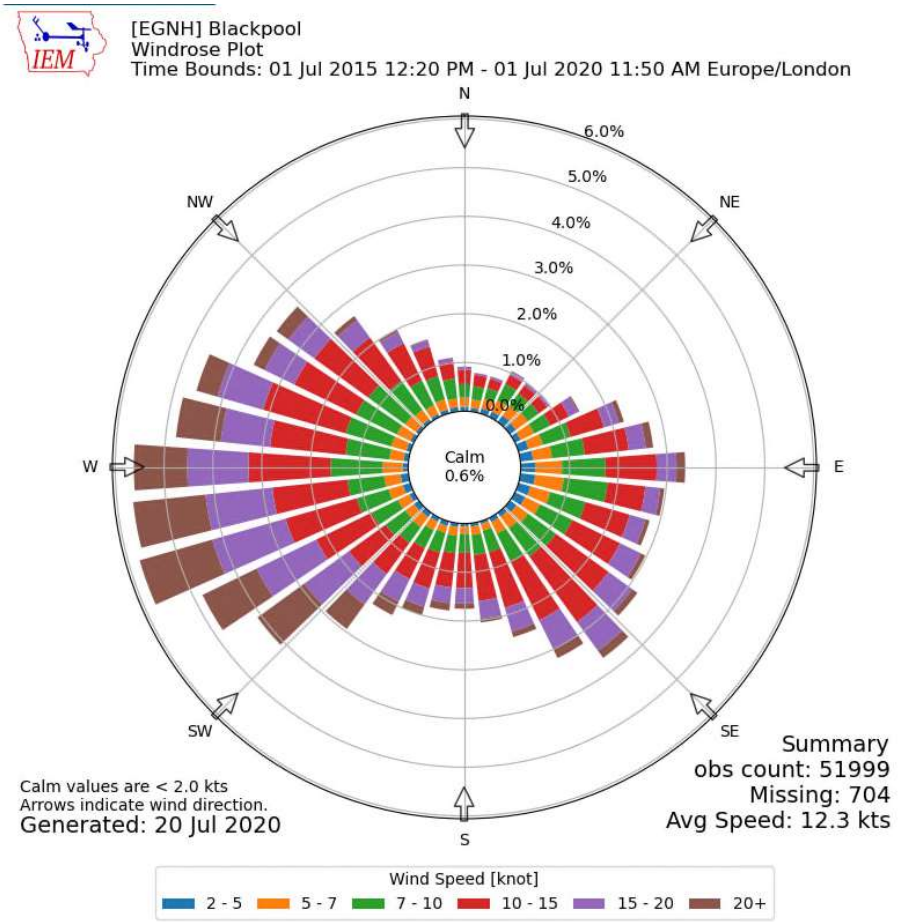



**Figure 1: Wind Rose for Blackpool Airport (July 2015 to July 2020)**

1.5.3 Reference has been made to Met Office data for Myserscough[9], 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, therefore providing natural dampening approximately 43% of the year.

[8] https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gctcfvseb
[9] https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gcw435f21

# 2. ASSESSMENT OF RECEPTORS

## 2.1 Receptors

2.1.1 Guidance requires that receptors within 1 km of the site that may be impacted by dust are identified, and that a further assessment is made to identify which of these are sensitive. Drawing No 22004/03 in Appendix A and Figure 2 below shows the site and surrounding area setting.


**Figure 2: Site and Surrounding Area**
**Notes:**

Predominant Wind Direction

Proposed Site Boundary

2.1.2 Table 1 lists the receptors located within 1 km of the processing facility and their distance and direction from the site, along with the reference as per Drawing No 22004/03.

2.1.3 The sensitivity of each receptor to dust soiling effects to people or property, human health effects of $PM_{10}$ and the ecological effects of dust deposition has been assessed using the IAQM guidance.

2.1.4 The sensitivity of surrounding receptors to human health effects has been assessed based on 2021 background annual mean $PM_{10}$ concentration at <13.0 $\mu g/m^3$ which is well below the annual mean Air Quality Objective of 40 $\mu g/m^3$.

| Ref | Receptor | Direction from | Approximate Distance from (m) | No of Receptors | Receptor Sensitivity | | |
|---|---|---|---|---|---|---|---|
| | | | | | Dust Soiling | Human Health Impacts | Ecological Impacts |
| **Domestic Dwellings** | | | | | | | |
| 1 | Trax Academy Static Caravans | W | 380 | 10-100 | Low | Low | - |
| | Lea Suburb | NW | 600 – 1 km | >100 | Low | Low | - |
| | Larches Suburb | NE | 670 – 1 km | >100 | Low | Low | - |
| | Riverway Dockland Apartments (Lockside Road) | E | 770 | >100 | Low | Low | - |
| | New Hall Farm | NW | 860 | 1-10 | Low | Low | - |
| | Marsh Farm | S | 970 | 1-10 | Low | Low | - |
| **Industrial/Commercial Premises** | | | | | | | |
| 2 | Phoenix Park Motor Trax / Motor Academy | N | Adjacent | 10-100 | Medium | Low | - |
| | LCC Preston Waste Transfer Station | N | 35 | 10-100 | Low | Low | - |
| | Riversway Motor Park | NE | 320 | 10-100 | Low | Low | - |
| | Booths Manufacturing Depot | E | 400 | 10-100 | Low | Low | - |
| | Riversway Commercial Park | E | 675 | 10-100 | Low | Low | - |
| | Railway Station | E | 630 | 1-10 | Low | Low | - |
| | Pumping Station | ESE | 640 | 1-10 | Low | Low | - |
| **Public Rights of Way** | | | | | | | |
| 3 | Surrounding Footpaths | S | 240 – 1 km | - | Low | Low | - |
| **Highway/Major Road or Transport Link** | | | | | | | |
| 4 | Wallend Road | E | Adjacent | - | Low | - | - |
| | Riversway | N | 465 | - | Low | - | - |
| | Nelson Way | E | 370 | - | Low | - | - |
| | Rail Line | E | 530 | - | Low | - | - |

**Table 1: Potential Receptors Within 1 km**

| Ref | Receptor | Direction from | Approximate Distance from (m) | No of Receptors | Receptor Sensitivity | | |
|---|---|---|---|---|---|---|---|
| | | | | | Dust Soiling | Human Health Impacts | Ecological Impacts |
| **Controlled Waters** | | | | | | | |
| 5 | CD Drain (culverted below site) | On site | On site | - | Low | - | Low |
| | River Ribble Estuary & Wildlife | S | 50 | - | Low | - | Low |
| | Reservoir | N | 200 | - | Low | - | Low |
| | Mill Brook | ESE | 760 | - | Low | - | Low |
| | River Ribble | E | 820 | - | Low | - | Low |
| | Preston Docklands Basins | E | 880 | - | Low | - | Low |
| | Farm Ditches | N, W, S | ~700 | - | Low | - | Low |
| **Designated Sites/ Ecological Receptors** | | | | | | | |
| 6 | Masons Wood Priority Habitat | NW | 728 | - | Low | - | Low |

**Table 1 (cont): Potential Receptors Within 1 km**

## 2.2 Receptor Sensitivity Assessment

### Residential Receptors

2.2.1 There are currently 12 static caravans located approximately 380 m to the west where the students of Pioneer Tec reside. This receptor is considered as having low sensitivity to dust/particulates due to the small number of residents and distance from the source (IAQM).

2.2.2 The suburbs of Lea Town and Larches are >600 m to the north-west and north-east respectively. Due to the distance from potential dust source, these residential receptors are at very low risk of impacts from dust soiling from the proposed waste facility.

2.2.3 There are a small number of apartments situated at the Riversway Docklands, however these are approximately 770 m to the east and are also considered to be at very low risk from dust soiling.

2.2.4 There are two small farmsteads within 1 km of the site, although these are between 860 – 970 m from the proposed treatment facility and therefore also at very low risk from potential dust soiling.

### Commercial/Industrial Receptors

2.2.5 The closest industrial receptors are either students and employees at Pioneer Tec. Based on the proximity of these receptors, they are classified by IAQM as having medium sensitivity to dust soiling.

2.2.6 The adjacent Motor Trax site includes a number of existing motor bike and go-kart tracks. These tracks are dirt tracks and when in use, are likely to be a source of dust emissions. Users of the tracks would be highly unlikely to notice dust emissions from the proposed facility in the midst of the dust emissions arising from biking/karting on the dirt tracks.

2.2.7 The proposed Pioneer Building on the adjacent Trax Academy site will be for residential students, however this building is ~465 m to the west of the processing site and as such due to the distance, is classified as being a low sensitivity receptor.

2.2.8 Based on the nature of the activities of the adjacent Motor Trax/ Academy site and the distance of the Pioneer Building from the processing facility, this medium sensitivity receptor has been reclassified as a low sensitivity receptor.

2.2.9 Preston Council's waste transfer station is located 35 m to the north of the site. Based on the distance from the site (ie >20 m), IAQM classify this industrial receptor as being a low sensitivity receptor. Similarly, the Riversway Motor Park is 320 m to the north-east and also a low sensitivity receptor.

**Public Rights of Way**

2.2.10 There are a number of footpaths to the south of the site. IAQM considers footpaths as being low sensitivity to dust impacts due to transient exposure of footpath users.

**Highway or Minor Road**

2.2.11 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. These transport links are all considered to be low sensitivity receptors based on IAQM guidance.

**Controlled Waters**

2.2.12 The closest watercourse to the site is the 'CD Drain' which is culverted beneath the site, running in a north/ south direction discharging into the Ribble Estuary which is located approximately 50 m to the south; the estuary in this location is not a designated site. The Ribble Estuary becomes designated as a SSSI approximately 2.9 km further south-west.

2.2.13 There are a number of farm ditches to the north and south of the site. Non-designated watercourses are considered to be low sensitive receptors by IAQM.

**Ecological Receptors**

2.2.14 Masons Priority Habitat Woodland is located approximately 728 m to the north-west. Non designated sites are considered to be low sensitive receptors by IAQM.

# 3. SITE OPERATIONS

## 3.1 Waste Deliveries

3.1.1 HGVs will enter the Phoenix Park complex via the electric gated entrance. A new access road will be constructed around the processing facility for access to the Phoenix Park complex so that both areas are completely separate.

3.1.2 Haulage operators will be given specific instruction at the waste pre-acceptance stage that all waste loads should be enclosed in trailers or covered prior to entering site (as detailed in Section 3 of the EMS).

3.1.3 Waste acceptance procedures are outlined in the EMS which include;

- Ensuring that all HGVs transporting waste into or out of the site will be covered;
- If a load arrives at site that appears to be non-conforming due to it being mainly dust following initial inspection, it is rejected; and
- If a load is deposited at the site and then found to be dusty, it will be dampened down prior to processing.

3.1.4 Haulage operators removing aggregate products from site are instructed to cover loads on leaving the site.

## 3.2 Overview of Waste Processing and Emissions Controls

3.2.1 The site will be permitted to accept waste for physical treatment to produce aggregate products. Treatment comprises one or more of: sorting, separation, crushing, screening, washing and blending of waste for recovery as a soil, soil substitute or aggregate.

3.2.2 Hardcore will be crushed prior to screening.

3.2.3 Washing of soil/stone mixtures will be carried out to produce a clean stone product. Waste will be loaded into a hopper which feeds a 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.

3.2.4 A maximum of 150,000 tonnes of waste will be accepted per annum. The predominant waste types are concrete, bricks, soil and stones from construction, demolition and excavation works.

3.2.5 Control of exhaust emissions from plant will be predominantly through use of high tier emissions standard[10] plant/machinery and regular inspection and maintenance of machinery.

3.2.6 Dust/particulate emission mitigation and control will primarily be through avoidance and containment. If there are still potential emissions, then these will be mitigated by suppression measures as follows:

Avoidance/Containment:

- Woodland screening to the north and south of the site will aid in restricting windblown dust;
- Wheel cleaning facility
- Speed limit restrictions;
- Waste processing will not be undertaken in high winds to reduce off site impacts;
- Movement of material at the site will be conducted by fully trained and competent operators who are aware of the requirement for careful movement and avoidance of double handling;
- All HGVs transporting material into or out of the site will be covered;
- Daily inspections of site road and sweeping when required. Removal of mud from vehicles; and
- Minimising drop heights during tipping and movement of wastes/aggregates.

[10] Emissions Standards are set out in the 'Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999' as amended.

Suppression:

- Crushing plant is fitted with dust suppression equipment
- The washing process will supress dust by dampening the waste
- Use of water bowser to dampen stockpiles if dust is becoming an issue; and
- Sufficient water supplies will be maintained on site to suppress dust arising on the access and haul roads, plant storage area, and operational area.

## 3.3 Mobile Plant and Equipment

3.3.1 Waste treatment plant includes a crusher and fixed washing plant. Gaseous emissions will be produced by the internal combustion engines of the plant.

3.3.2 Mobile plant (eg loader, shovel) will be used at the site. The operator will ensure all mobile plant used at the site will be predominantly high tier[9] emissions ratings plant.

3.3.3 IAQM guidance states that mobile plant are *'unlikely to make a significant impact on local air quality'*, and would not need to be assessed as part of an Air Quality Assessment.

3.3.4 Regular servicing of plant, vehicles and machinery will be carried out according to applicable legislation. Daily checks and arrangements for repair are conducted in accordance with the EMS.

3.3.5 Any major services and repairs required for mobile plant will be conducted off site. If replacement of plant/machine is required then the highest emission standard possible available will be purchased.

3.3.6 Daily checks on vehicles and plant are carried out by operatives before use and these are recorded on a daily site check sheet.

3.3.7 All drivers of mobile plant and operators of stationary plant will be fully trained in the correct and safe use of the relevant machinery to ensure that the operating techniques are undertaken in line with the guidance within the manufacturers' instructions.

3.3.8 Staff will be trained on the use of mobile plant to reduce emissions where possible, including anti-idling.

3.3.9 Plant and machinery will be refuelled from the on-site bunded fuel tank as required.

## 3.4 Dust Suppression Equipment

3.4.1 The crusher is a mobile unit and includes integrated dust suppression. The exact layout of the suppression system may vary depending on the manufacturer of the plant used, however it will typically be a water spray bar mounted on the output conveyor.

3.4.2 A water bowser will be used to damp down stockpiles and site surfaces in order to prevent dust generation.

## 3.5 Water Supply

3.5.1 Water used for dust suppression will be sourced from collected surface water runoff; cut-off drains along the northern site boundary will direct surface water runoff initially to an interceptor where settled water will then overflow into an underground water storage tank for site use.

3.5.2 Mains water supply will also be available.

3.5.3 In the unlikely scenario that water is unavailable and the resulting site conditions gave rise to a high risk of dust emissions waste operations would be temporarily suspended.

# 4. DUST AND PARTICULATE MANAGEMENT

## 4.1 Responsibility for Implementation of Plan

4.1.1 The Site Manager (SM) has overall responsibility for the control of the waste operations at the site and is responsible for ensuring that the procedures in the EMP are followed. The SM will:

- Ensure that the EMP is effectively communicated to all staff, and that any additional staff that may be required are competent to undertake their roles;
- Ensure that all operations and management procedures outlined in this document are implemented and complied with;
- Ensure that the EMS is reviewed annually, or following:
  - Permit variation
  - Accident, complaint or breach of permit
  - A new environmental issue
  - Any major changes to site operations
- Completion and storage of all required records for the EMP.

4.1.2 The SM may delegate some mitigation tasks to site representatives (eg dust monitoring, use of water bowser for dust suppression, training of other staff).

## 4.2 Sources and Control of Dust/ Particulates

4.2.1 Potential emissions that may be generated from waste operations at the site are predominantly dust/particulates and include the following:

- Dust/particulates from HGV movements, uncovered vehicles carrying waste soils/aggregates, or mud on the wheels deposited from vehicles off-site;
- Dust/particulates from tipping, movement and processing of imported wastes;
- Dust/particulates from stockpiled wastes/aggregates;

- Exhaust emissions from the use of mobile plant, treatment plant and generators; and

- Exhaust emissions from HGV movements.

4.2.2 In addition, use of the adjacent motor cross and go-kart tracks also have the potential to generate dust. The waste transfer station to the north of the site will also be a possible source of dust generation.

4.2.3 Surrounding agricultural land to the north and south may also be a source of dust/particulates during dryer months or during certain farming operations.

4.2.4 Tables 2 and 3 below detail the sources of emissions at the site and include the pathways to identified receptors. Proposed mitigation and control measures are provided for each source-pathway-receptor linkage, and an assessment of overall risk is provided for each emission source.

| Source | Pathway | Receptor | Type of Impact | Mitigation and Control Measures | Overall Risk |
|---|---|---|---|---|---|
| **Mud:**<br><br>HGV movements, or from uncovered vehicles<br><br>Brought out on wheels of vehicles and deposited off-site | Wheels and vehicles tracking mud on and off-site and dropping off when dry, then resuspension as airborne particles | Local residents<br><br>Surrounding employees<br><br>Pedestrian users of footpaths<br><br>River Ribble Estuary & Wildlife | Dust deposition soiling surfaces<br><br>Visible dust plumes<br><br>Elevated $PM_{10}$ and associated health impacts<br><br>Ecological impacts | **Avoidance/ Containment:**<br>Wheel washing facility.<br>Limit vehicle speeds to < 10 mph.<br>Haulage operators instructed to use wheel wash on leaving.<br><br>**Suppression:**<br>Use of mobile water bowser to dampen road/site surface as required.<br><br>**Management Control (EMS):**<br>Regular monitoring of off-site roads and use of road sweeper if required.<br>Visual dust monitoring during daily checks.<br>All vehicles will be covered before entering and leaving site in accordance with Waste Acceptance Procedures. | **Low** |
| **Dust /particulates:**<br><br>Generated from waste tipping, processing, movement and stockpiles storage | Atmospheric dispersion (wind-blown dust) | Local residents<br><br>Surrounding employees<br><br>Pedestrian users of footpaths<br><br>River Ribble Estuary & Wildlife | Dust deposition soiling surfaces<br><br>Visible dust plumes<br><br>Elevated $PM_{10}$ and associated health impacts<br><br>Ecological impacts | **Avoidance/ Containment:**<br>Tree lines to the north and south of the facility will restrict dust movement.<br>Waste processing will be suspended in windy conditions if dust is being blown off site.<br>Minimise drop heights during tipping and movement of wastes/aggregates.<br>Clean up any spillages that occur during material loading into vehicles.<br>Careful placement of material onto the crusher/screener, into vehicles or stockpiles by fully trained and competent operatives.<br><br>**Suppression:**<br>Use of mobile water bowser to dampen stockpiles if dust is being generated.<br>Dust suppression system installed in crusher.<br><br>**Management Control (EMS):**<br>Visual dust monitoring during daily checks. | **Low** |

**Table 2: Assessment of Risks from Dust/Particulates**

| Source | Pathway | Receptor | Type of Impact | Mitigation and Control Measures | Overall Risk |
|---|---|---|---|---|---|
| **Gaseous pollutants:**<br><br>HGV exhaust emissions | Atmospheric dispersion | Local residents<br><br>Surrounding employees<br><br>Pedestrian users of footpaths | Increase in airborne particles and in nitrogen dioxide, sulphur dioxide and associated human health impacts | **Avoidance/ Containment:**<br>Regulatory controls and best practice measures are in place.<br><br>**Management Control (EMS):**<br>Ensure all vehicles switch off engines - no idling vehicles.<br>Regular inspection and maintenance.<br>Use of higher tier emission standard[9] machinery/plant where available. | **Very Low** |
| **Gaseous pollutants:**<br><br>Mobile plant exhaust emissions | Atmospheric dispersion | Local residents<br><br>Surrounding employees<br><br>Pedestrian users of footpaths | Increase in airborne particles and in nitrogen dioxide, sulphur dioxide and associated human health impacts | **Avoidance/ Containment:**<br>Regulatory controls and best practice measures are in place.<br>Use of higher tier emission standard machinery/ plant[9] where available.<br><br>**Management Control (EMS):**<br>Ensure all vehicles switch off engines - no idling vehicles.<br>Regular inspection and maintenance. | **Very Low** |

**Table 3: Assessment of Risks from Gaseous Pollutants**

## 4.3 Monitoring and Inspections

4.3.1 The SM or delegated representative will undertake daily on and offsite inspections including dust soiling checks of surfaces around the site and the site access road to monitor compliance with the EMP. Inspection results will be recorded in the site diary, and a record kept detailing weather conditions.

4.3.2 In effect, visual assessment of dust will be undertaken by site operatives at all times during the day, as they will be trained with the EMP and will take preventative/ suppression mitigation measures if required. If visible dust is observed, this will trigger the use of dust suppression and a site operative/SM will position and switch on the mobile bowser unit. Operatives are trained to be more aware of dust potential during periods of strong winds and waste processing may be ceased.

4.3.3 Quantitative monitoring of particulates ($PM_{10}$) is not considered to be warranted at this site due to the low sensitivity of surrounding receptors, and the avoidance, containment and suppression mitigation measures in place.

## 5. CONTINGENCY AND ACTION PLAN

5.1 In the event that dust/particulates or excessive vehicle emissions are perceived as a concern by site operatives or as the result of a complaint, the source will be investigated immediately by the SM.

5.2 When investigating any such report, the following factors will be considered:

- Location of the source relative to receptors;
- Prevailing wind directions on site; and
- Dust/particulates and vehicle emissions from external source including waste operations in Lodge Bank Industrial Estate and the adjacent timber yard.

5.3 Remedial actions will be undertaken immediately where possible. Appropriate actions will be taken on an escalating basis and include the following as appropriate:

- Simple repairs or modifications to plant or machinery or switching off equipment.
- Deployment of road sweeper and mobile water bowser to clean and dampen site roads.
- Use of water suppression on stockpiles or site surfaces.
- Temporary suspension of outside waste processing operations.

5.4 The SM with the support of the Managing Director (MD) will coordinate more complex responses, which could include: review of customers at the pre-acceptance stage if certain hauliers continue to bring in mainly dusty loads or have excessive exhaust emissions; implementing a local community engagement exercise; or liaising with regulators.

5.5 Any incidents, their outcomes and details of any remedial actions taken related to emissions will be recorded in the site diary.

5.6 The SM will ensure that the site is equipped with contingency provisions for replacement plant and parts relating to emissions management equipment (eg suppression sprays and road sweeping equipment). The aim will be to repair equipment within 24 hours of breakdown. If key suppression equipment cannot be repaired or replaced within 24 hours, or other failure occurs (eg freezing water), the OD will consider whether to suspend processing operations based on the potential for dust emissions as a result of the breakdown.

# 6. REPORTING AND COMPLAINTS PROCEDURES

## 6.1 Reporting of Complaints

6.1.1 Any complaints relating to the site will be recorded in the site diary as detailed in the EMS. This includes complaints relating to dust or air quality.

6.1.2 All complaints received will be recorded and investigated by the SM. A response will be reported back to the complainant.

6.1.3 A record of incidents, accidents or non-conformances will be kept including the following information:

- Date and time of incident
- What happened
- What caused it
- Details of any contamination
- Who was involved
- What action was taken
- Were external agencies involved
- Any changes that have been made to the procedures/ EMS to ensure the incident does not reoccur

## 6.2 Management Responsibilities

6.2.1 The responsibility of handling complaints is with the SM with support from the MD. Incidents are investigated by the SM whereby rectifying action is determined.

## 7. SUMMARY AND CONCLUSIONS

7.1 Waste operations at the site will consist of processing construction, demolition and excavation wastes to produce recycled aggregate products using a mobile crusher and fixed washing plant.

7.2 The sensitivity of receptors to adverse impacts from dust has been assessed in accordance with IAQM guidance and determined to be low. The most sensitive receptors were identified as the adjacent users of the Phoenix Park complex. Users of the motor cross/go-kart tracks were reclassified as low sensitive receptors due to the nature of activity in generating dust.

7.3 There is also vegetation screening to the north and south of the processing facility which will reduce the likelihood of dust migration from the site.

7.4 Additional avoidance measures that may be employed include; suspending treatment during high winds, and covering of all HGVs. Containment of emissions will be conducted through; use of a wheel wash, regular inspections of off-site roads, limiting vehicle speeds, and anti-idling policy. Suppression measures include the use of a mobile water bowser to dampen site roads and stockpiles. The overall risk of emissions following mitigation measures has been determined as low.

7.5 The EMP will be reviewed annually as part of the annual review of the EMS, following any complaints received relating to emissions or following relevant variations to the waste operations.

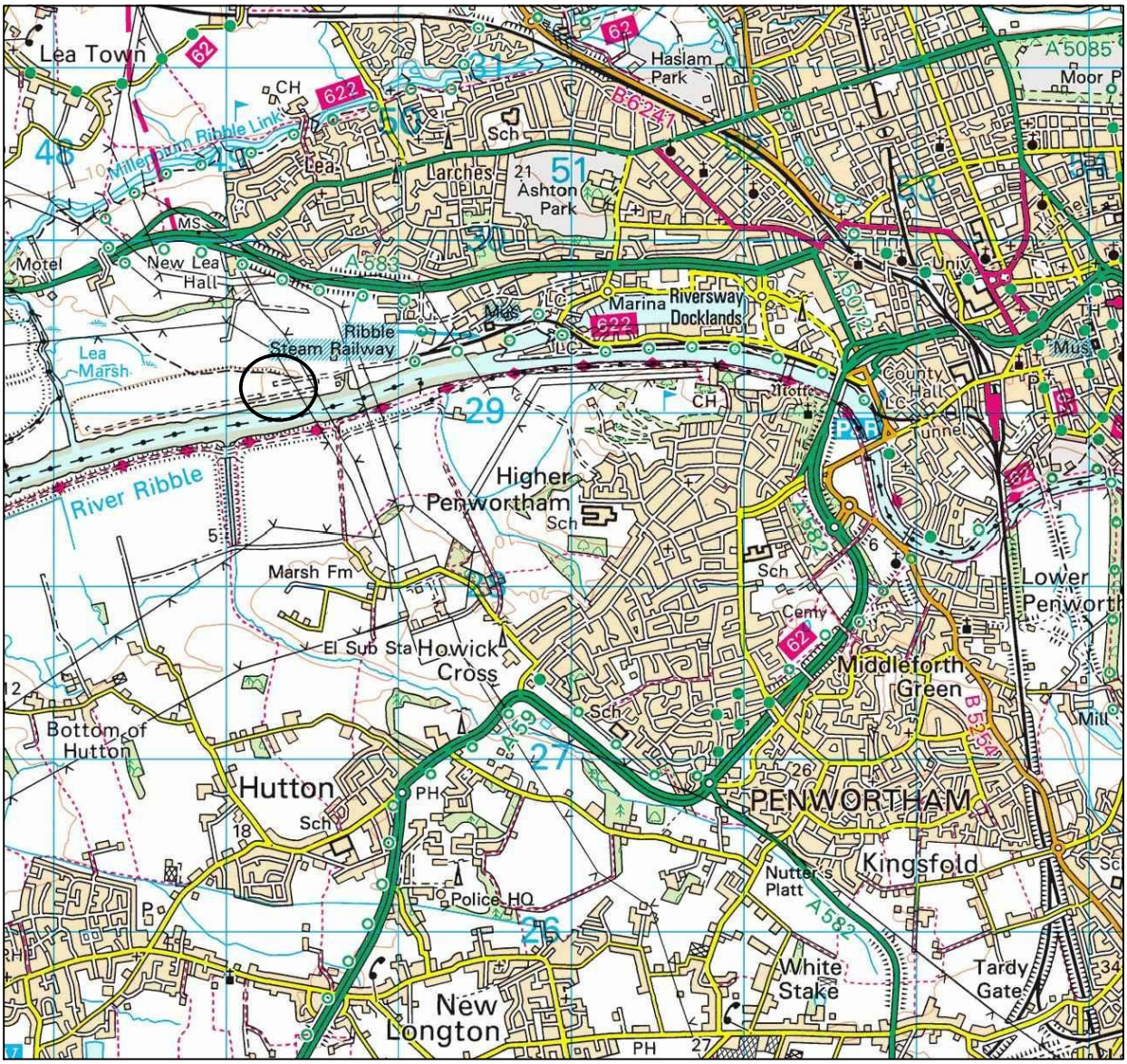
**M Birkett**
BSc (Hons) PG Dip GCIWM
**Senior Consultant**

**C Gettinby**
PhD BSc (Hons) MCIWM
**Director**

# APPENDIX A

## Drawings

NORTH





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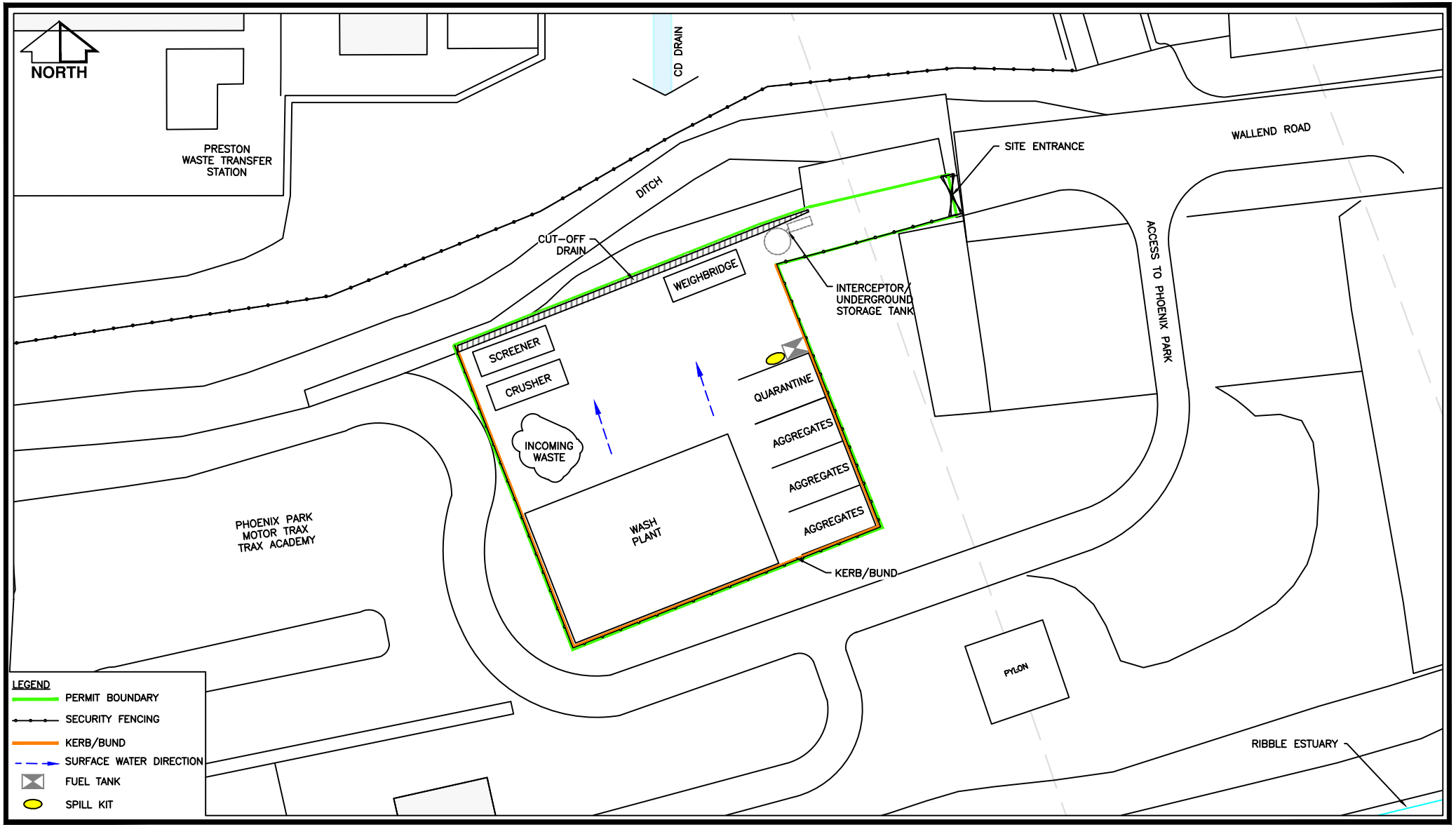
| | |
|---|---|
| CLIENT | PHOENIX PARK NW CIC |
| JOB TITLE. | PHOENIX PARK RECYCLING FACILITY |
| DRAWING TITLE. | SITE LOCATION PLAN |

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

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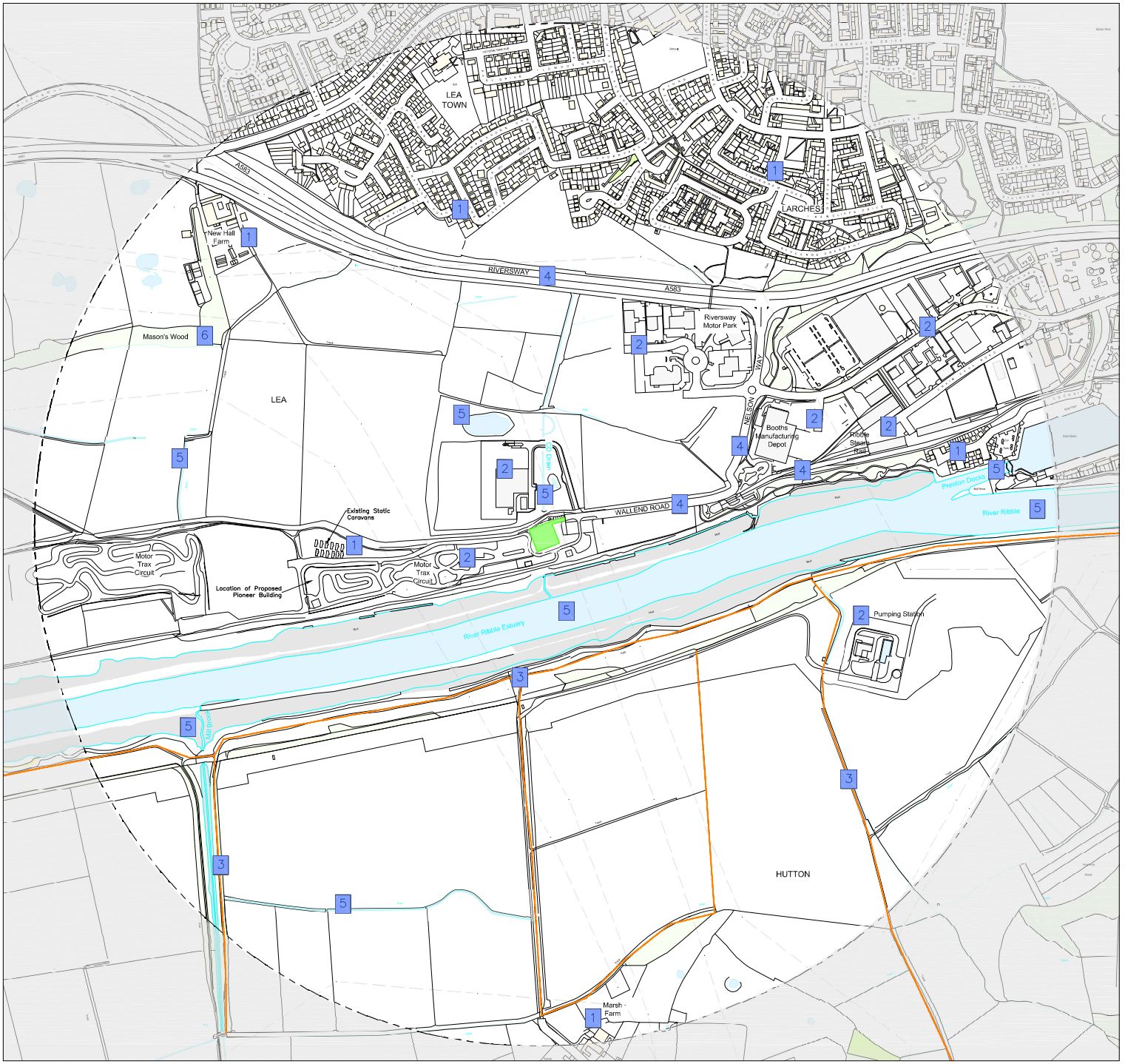
| | | | |
|---|---|---|---|
| CLIENT: PHEONIX PARK NW CIC | | DRAWN BY. M.Y.B. | APPROVED BY. C.G. |
| JOB TITLE. PHOENIX PARK RECYCLING FACILITY | | DATE. 16/12/2022 | DRAWING No. 22004/02 |
| DRAWING TITLE. INDICATIVE SITE LAYOUT PLAN | | SCALE @ A4. 1:500 | |




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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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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