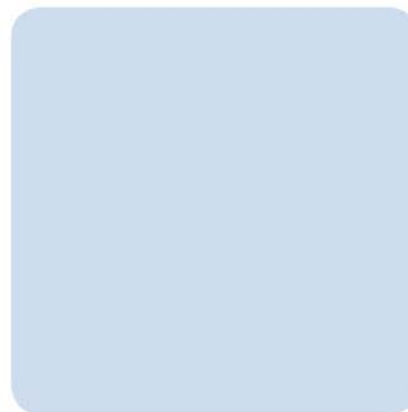




Operating Techniques Update  
Atlantic Ecopark  
Newton Road, Rumney, Cardiff  
On behalf of Atlantic Recycling Limited



**Date:** 01/11/2016

**Our Ref:** JCD0170

**RPS**


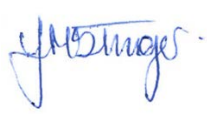

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# Quality Management

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## Amendment Record

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Revision No.	Date	Reason for Change	Authors Initials

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# Drawings & Appendices

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## Drawings

JCD 0170-PER-02

## Appendices

<b>Appendix 1</b>	<b>Pre-application meeting notes</b>
<b>Appendix 2</b>	<b>Environmental Risk Assessment</b>
<b>Appendix 3</b>	<b>Baseline and Site Condition Report</b>
<b>Appendix 4</b>	<b>Process description flow charts for RDF and SRF</b>

# 1 Introduction

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## 1.1 The Applicant

1.1.1 Atlantic Recycling Limited (herein referred to as 'ARL') currently operates an Ecopark facility at its Newton Road site, Rumney, Cardiff which includes the following activities:-

- Soil Processing Facility (permitted, operational);
- Waste Transfer Station (WTS) with Treatment (permitted, operational);
- Wood Processing Facility (permitted, operational); and,
- Refuse Derived Fuel (RDF) and Solid Recovered Fuel (SRF) Processing Facility (permitted, operational)

1.1.2 ARL is also permitted to store some wastes in the WTS without treatment for example asbestos.

1.1.3 ARL is a part of the Dauson Environmental Group Limited. The group is made up of a series of companies specialising in land regeneration, environmental remediation, demolition, materials recycling, ground works and civil engineering operations.

1.1.4 The original Environmental Permit for the Newton Road site EAWML30347 was issued on the 14<sup>th</sup> of October 2005 to Neal Soils Suppliers Limited and subsequently transferred to ARL on the 29<sup>th</sup> of November 2010. The Environmental Permit has undergone four variations following its transfer to ARL; the permit was varied to its current status on the 3<sup>rd</sup> November 2016 as EPR/PP3993VS/S005.

1.1.5 The Ecopark is currently permitted to accept up to 220,000 tonnes of waste per year in accordance with the current permit for the site. This would increase to 280,000 tonnes per year which is consistent with the previous version of the permit prior to the recent surrender of the IVC activity.

## 1.2 The Site

1.2.1 The site is located to the south-east of Cardiff City Centre at Atlantic Ecopark which is situated off Newton Road, Rumney. The site is surrounded by a series of drainage ditches/reens and lies within the footprint of a Site of Special Scientific Interest (SSSI). Site access is from the B4239 (Wentloog Avenue) via Newton Road which provides access to the primary road network and M4.

1.2.2 The general site location is shown on drawing JCD 0170-02-Permit Boundary Plan and the site address is:

Atlantic Recycling Limited  
Atlantic Ecopark  
Newton Road  
Rumney  
Cardiff

- 1.2.3 The National Grid Reference of the facility is NGR ST 239 783.

### 1.3 **Proposed Variation**

- 1.3.1 ARL is applying to modify their existing permit. Changes to the permit relate to;
- Treatment of the sites surface water;
  - Inclusion of a new dedicated RDF/SRF processing facility separate to the current WTS activity on site including an associated increase in tonnages; and
  - Removal of “other specifications” from Table S3.2 and S3.3.
- 1.3.2 There will be no changed to the permitted Wood Processing Facility and the Soil Processing Facility; as such no further reference to these activities is made within this variation application or the associated documentation. It should therefore be assumed at all times that the previously submitted detailed information is still relevant for these activities.
- 1.3.3 There is no change to the overall area to be occupied by the permitted activities. A site layout plan is included with reference JCD0170-PER-002.
- 1.3.4 ARL wishes to install and operate a Waste Water Treatment Plant (WWTP) on site. ARL proposes the operation of the WWTP is included within Table S1.1 as an additional activity with descriptions D6 and D8. The bespoke system is designed to treat ARL's site surface waters, meeting the numerical limits specified in Table S3.1 of the current permit. The treated waters will continue to discharge via the existing outfall point D1 (JCD 0170-PER-02), and the compliance monitoring point is at D2 where water enters the SSSI reen system. The full process description can be found below in section 2.
- 1.3.5 ARL also wishes to modify the conditions of Table S2.4 'waste types and quantities for refuse derived fuel and solid recovered fuel processing' within the current Environmental Permit to allow an increase in permitted tonnage, from 40,000 to 100,000 tonnes per annum. An in-vessel composting activity has recently been surrendered which was permitted to accept 60,000 tonnes per annum. The increase in the tonnage of waste for RDF/SRF processing is consistent with the overall tonnage previously allowed at the site. The new RDF/SRF processing facility will be a state of the art processing facility specifically designed to accept predominantly 19 category wastes which generally contain greater volumes of recyclates and are more appropriate for the production of SRF and RDF. A dedicated building will be constructed in accordance with planning permission 08/00626 to house the new SRF processing plant and the mobile plant currently at the WTS to produce RDF. The Facility will provide flexibility in terms of the products processed and outputs generated. The Facility will produce both RDF and SRF, dependent on the customers' requirements as well as a number of recycle streams.
- 1.3.6 It is recognised that the new RDF/SRF Processing Facility will constitute an installation under the Industrial Emissions Directive (IED) as a Section 5.4A(1)(b)(ii) Facility and as such is required to conform to Best Available Techniques for such activities in accordance with



Environment Agency Guidance S5.06 for the Recovery and Disposal of Hazardous and Non-Hazardous Wastes. None of the other permitted activities are considered to be directly associated activities under the IED.

- 1.3.7 Waste brought to the site under 19 category EWC codes will be directed to the RDF/SRF processing facility for processing. This will reduce the volume of waste subject to internal transfer. The WTS will continue to accept predominantly 17 category EWC codes. The full process description can be found below in section 2.
- 1.3.8 Should waste be brought to the site under a 191212 category EWC code that, on inspection is more suited to treatment at the Facility it was not originally accepted at, wastes will be transferred within the site.
- 1.3.9 ARL requests the removal of the “other specifications” from table S3.2 and table S3.3 to be replaced by a new IMS procedure the justification for which is set out in section 5.
- 1.3.10 The above proposed changes to the Environmental Permit are considered to represent a Substantial Variation, as confirmed by Natural Resources Wales pre-application discussions held on site on 20<sup>th</sup> of July 2016 (Appendix 1).
- 1.3.11 The construction, commissioning and infrastructure works for the new facility will take place in accordance with an approved Construction Quality Assurance (CQA) Plan. ARL plan to complete the build by December 2017.

## **1.4 Guidance and Legislative Requirements**

- 1.4.1 To support this application to vary the current Environmental Permit, ARL are required to confirm whether their proposed operations will take place in line with standards set by any relevant Environment Agency Sector Guidance Note and legislation and therefore represent Best Available Techniques (BAT). Where the proposed operations will deviate from the relevant Guidance Note or where there is no Guidance for the proposed operations, the permit application must include:
  - A description of the operations that will take place at the site; and
  - A justification of the measures that will be used to control emissions from the process(es).
- 1.4.2 In relation to the proposed waste management activities at the Atlantic Ecopark, there are a number of documents that provide technical guidance for the proposed operations and these are identified below:
  - EPR1.00 How to Comply with your Environmental Permit, Natural Resources Wales, October 2014;
  - Fire Prevention and mitigation plan guidance – Waste, Natural Resources Wales, May 2016;
  - Environmental Permitting Guidance The Waste Framework Directive, DEFRA, March 2010;
  - Section Guidance Note S5.06: Guidance on the Recovery and Disposal of Hazardous and Non-Hazardous Waste, Environment Agency 2004.

- BREF, Integrated Pollution Prevention and Control Reference Document on BAT for the Waste Treatments Industries, August 2006.

## 2 In Process Controls

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### 2.1 Pre-Acceptance procedures to assess wastes

- 2.1.1 ARL has established pre-acceptance procedures which have been approved by NRW under the existing permit. It is not proposed to make changes to the currently approved pre-acceptance system as these procedures would remain appropriate following this variation.;
- 2.1.2 All acceptance routes will continue to be subject to pre-acceptance evaluation (either as part of any contract or enquiry arrangements) prior to arrival on site and it will be recommended that all deliveries be booked in for acceptance prior to arrival on site. Delivery to site without pre-booking may result in materials being rejected from the site / delayed at the weighbridge.
- 2.1.3 The following information will be requested from all customers prior to booking in for acceptance:
- Waste EWC Code;
  - Process generating SIC Code (where appropriate);
  - Hazardous Properties (if any);
  - Delivery container type (where appropriate); and

#### **Waste Acceptance Procedures**

- 2.1.4 Waste acceptance procedures will similarly be carried out in accordance with established and approved procedures which are summarised below.
- 2.1.5 All vehicles entering the site will drive to the weighbridge and take instructions from the Weighbridge Operator. Where appropriate first time visitors will be required to confirm their registration as a waste carrier to the site and will be issued with instructions on health and safety and site procedures. Visitors other than customers bringing waste to the site must sign the Visitors Book before proceeding onto the site, and sign out prior to leaving.
- 2.1.6 In order to fulfil Duty of Care requirements, drivers of vehicles bringing waste to the site must provide a waste transfer note detailing the source location and description of the waste they are carrying. Seasonal duty of care notes are provided by some customers for inputs where the producer, description of waste, approximate quantity and carrier does not vary. A copy of these notes will be held at the site office.
- 2.1.7 The site operative will question the driver if unsure about the waste description to ensure it complies with the requirements of the Environmental Permit for the site and any associated booking. A visual check will be made, whenever possible, to ensure an adequate description has been provided.

- 2.1.8 If the site operative is satisfied that the waste is acceptable at the site within the terms of the Environmental Permit, the customer will be directed to the appropriate discharge location. Waste categorised as category 19 EWC Code wastes will be directed towards the new Facility.
- 2.1.9 If the site operative is not satisfied by either the waste description or the content of the incoming load, the vehicle will be directed to a waste checking area. The load will be inspected thoroughly to decide on its acceptability.
- 2.1.10 If the site operative is satisfied that the waste is not acceptable under the terms of the Environmental Permit, entry to the site will be refused and the registration number of the vehicle recorded separately in the site diary. As noted above, if on inspection wastes accepted at the RDF/SRF processing facility are considered more appropriate for the WTS these will be transferred.

### **Waste Inspection**

- 2.1.11 Once the vehicle has discharged its load, a site operative will visually check its contents to ensure no unpermitted waste is included. This visual check will continue whilst the waste is being moved into the correct waste processing area.

### **Unacceptable Waste**

- 2.1.12 If the site operative identifies wastes for which the site is not permitted or is unsure of its acceptability, the site manager will be called. The registration number of the vehicle that discharged the waste will be taken; the site manager will inspect the waste and decide on the safety of the load. If possible, and if it is safe to do so, the unpermitted waste will be loaded back onto the vehicle, which discharged it. If not possible or safe to do so, the site manager will consult NRW on the course of action to be taken. No tipping will be allowed in the area of this waste until a decision has been made. Such incidents will be recorded in the Site Diary for inspection as appropriate.

### **Dangerous Substances**

- 2.1.13 Should dangerous substances be delivered and discharged at the site they will be isolated from any other area by provision of an exclusion zone marked out with cones and rope or similar and the tipping area closed.
- 2.1.14 On assessment of the material, tipping will continue in the alternative-tipping zone.
- 2.1.15 NRW will be informed immediately and advice sought on how to deal with the materials.
- 2.1.16 Should there be any reason to suspect that fumes or leakage is likely to affect site operatives and customers the site area will be evacuated and the fire service called out and specialist advice will be sought from them.
- 2.1.17 Appropriate actions to remove the substances from the site will be taken following consultations with the fire service and NRW.

### **Waste Quantity Measurement Systems**

- 2.1.18 Quantities of incoming wastes to the facility shall be recorded in metric tonnes utilising the site weighbridge via the existing access road.
- 2.1.19 Quantities of outgoing materials shall also be recorded using the weighbridge.
- 2.1.20 All site records will be collated and stored at the site office so to ascertain waste throughput at the site.
- 2.1.21 The weighbridge is calibrated annually in accordance with the manufacturer's recommendations.

### **Waste Storage**

- 2.1.22 All wastes will be stored in line with the requirements of the relevant Directives and associated guidance documents as listed in Section 1.4 above.
- 2.1.23 A fire prevention and mitigation plan is in place for the activities currently taking place at the site. This plan will be updated prior to commencement of RDF/SRF processing within the new building.
- 2.1.24 RDF and SRF produced will be stored in stockpiles in compliance with the maximum pile size and minimum separation distances set out in Table 1 of the NRW Fire Prevention and Mitigation Plan Guidance – Waste, unless a site specific arrangement is developed and agreed with NRW.
- 2.1.25 Storage and treatment of wastes within the RDF/SRF processing facility comprise of the following activities:
  - D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced);
  - R13: Storage of waste consisting of materials intended for submission to any of the 'R' operations listed in Annex IIB of the Waste Framework Directive (excluding temporary storage, pending collection, on the site where it is produced);
  - R3: Recycling / reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes);and
  - R5: Recycling / reclamation of other inorganic materials.
- 2.1.26 Post processing, loose waste will be stored within the building, baled waste will be stored in the area known as field 1 on impermeable surface with sealed drainage.
- 2.1.27 All storage areas will be provided with spill kits.

### **Commercial and Industrial Wastes**

- 2.1.28 Wastes being accepted into the WTS will be directed to an appropriate tipping location on the impermeable hardstanding area, adjacent to the current waste sorting process.

- 2.1.29 From here, wastes will be inspected and sorted for the removal of bulky or unsuitable wastes. Bulky wastes will be added to the appropriate waste type stock piles for onwards transportation. Unsuitable or non-conforming wastes will be quarantined and removed from site at the first available opportunity.

## **2.2 Waste Transfer Station**

### **Process Changes**

- 2.2.1 The WTS will continue to operate as currently permitted and agreed with NRW. Once the RDF/SRF processing facility is operational loads of waste categorised as a category 19 waste code will be automatically directed to it rather than to the WTS. This will reduce the volume of internal transfer between the WTS and new facility.

## **2.3 Materials Recycling Processing Facility**

### **Overview**

- 2.3.1 The new RDF/SRF processing facility will be located south of the WTS and extending to the east. The new Facility will process waste that will mainly constitute papers, plastics, cardboard and other packaging via the plant and machinery incorporating the latest technology.
- 2.3.2 The new facility will be 150 metres in length with a width of 30 metres and a height of 14.4 metres to the eaves of the building. The facility will be constructed on an impermeable hardstanding, with a fully sealed drainage system. Rain water will be collected from the roof, will be re-used for dust suppression on-site. During prolonged periods of rain, if storage capacity is exceeded, collected rain water will be discharged directly to the reens or field ditches.
- 2.3.3 The height of the proposed building is critical in order to house the new plant and machinery which works far more efficiently at the height proposed. The basic functionality of the plant relies on material being initially raised by conveyor belt to allow the material to be gravity fed through the processing stages, thus minimising the need conveyors and allowing the plant to discharge into hoppers or bays without the need for additional mechanical handling machinery with associated overall energy efficiency savings.
- 2.3.4 The SRF processing and end product will conform to the relevant CEN Technical Standard.
- 2.3.5 It is noted that there is no legal definition of RDF however the DEFRA trial definition states: "Refuse derived fuel (RDF) consists of residual waste that is subject to a contract with an end-user for use as a fuel in an energy from waste facility. The contract must include the end-user's technical specifications relating as a minimum to the calorific value, the moisture content, the form and quantity of the RDF. It is therefore not necessary for material to go through any specific process in order to be RDF.

## **RDF and SRF Process Description**

- 2.3.6 A written description of the process for the production of RDF and SRF follows and a graphic description is at appendix 4.
- 2.3.7 Category 19 EWC waste codes approved for acceptance criteria as described above will be tipped within the Waste Reception area. Residual materials, resulting from the WTS, will be transferred to RDF/SRF processing building waste reception area by loading shovel and mechanical conveyor belt where they are stockpiled, loose inside the building.
- 2.3.8 If RDF is being produced the current mobile plant on site will be used to shred the waste and remove metals.
- 2.3.9 If SRF is being produced the following process occurs:
- 2.3.10 Waste from the stock pile areal is fed into a slow speed shredder for initial sizing to a uniform 300mm. Material then passes under an over band electro magnet to remove ferrous metals. Metals removed will then be transferred to the WTS and stored in accordance with the current permit conditions.
- 2.3.11 Material then passes through a 3D Combi Flip Flow screen to remove the <10mm 'fines'. The fines will then be transferred to the WTS for storage in accordance with the current permit conditions.
- 2.3.12 The material that is 10 to 40 mm then passes into a 2 way drum separator and is divided into stone and light fraction. The stone is bulked up and sent for recovery. The light fraction is bulked up for RDF feedstock.
- 2.3.13 The 40 to 300 mm material passes through a 3 way drum and a manual quality pick. The stone is sent for recovery, mid-heavy product is sent for recovery and in compliant SRF material is bulked up for RDF feedstock. The remaining 40 to 300 mm light fraction is passed through a high speed shredder to become 30 mm SRF product that will then either be stored loose or baled depending on customer requirements.
- 2.3.14 Baling and wrapping is an automated system which wraps the bales in high density plastic wrap.
- 2.3.15 The bales are then tied with plastic / steel ties. These are interchangeable depending on the nature of the wrap (plastic for SRF and RDF bales and steel for recyclable / recoverable bales i.e. plastics).

## **2.4 Water Treatment Plant**

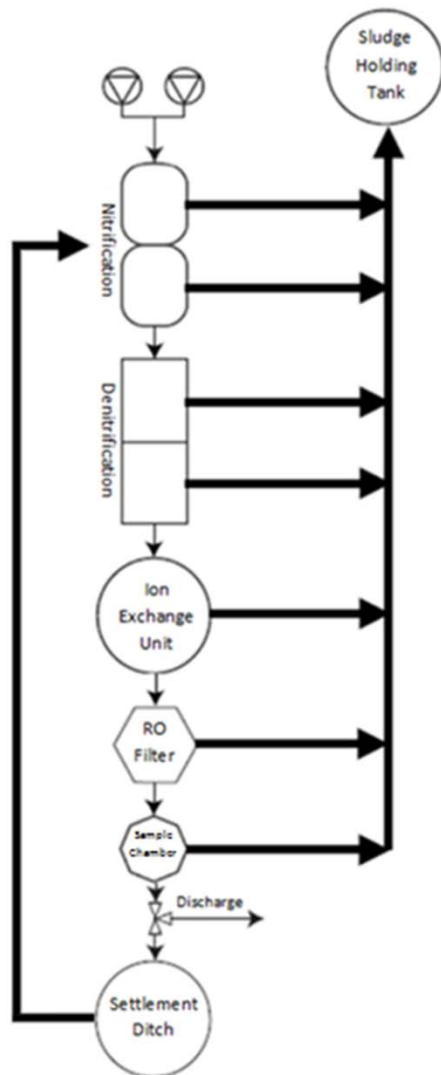
### **Overview**

- 2.4.1 The WWTP has been specifically designed to treat the sites surface water to the limits specified in Table S3.1 of ARL's environmental permit. The WWTP will receive all surface waters from

the site (other than rain water collected from the roof the RDF/SRF processing facility), treating the effluent before its controlled release into the local water environment at D1.

2.4.2 The WWTP consists of a series of treatment phases, which collectively deliver a process to achieve the desired effluent quality standard. Figure 1.1 identifies the key phases in water treatment.

2.4.3 Figure 1.1 Water Treatment Plant Process



### Water Treatment Process Description

2.4.4 Pumped flow from the interceptor enters the first SAF cell via a high level inlet pipe and flows vertically via a down-pipe to enter above the membrane diffuser, then upwards through the crossflow block media. Flow exits the first cell through a cut out in the dividing wall, then down another pipe in the second reactor cell. The same flow path is then repeated through the remaining SAF cells. In this way, all flow is upwards, i.e. concurrent with the air.



- 2.4.5 Air is provided via a set of duty/standby 3kW side channel air blowers located in the adjacent GRP enclosure. Air enters each SAF cell via removable fine bubble membrane diffusers. Butterfly valves are fitted to the airline to each manifold to allow adjustment to ensure the same air flow pattern in all four SAF cells when observed above via the SAF inspection hatches.
- 2.4.6 Each SAF cell has a valve connected to the sludge outlet connected to a common sludge outlet pipework. One end of the outlet pipework is blanked off for cleaning purposes, whilst the other end is connected to the Quarantine/Sludge tank. A 4 inch bauer coupling can be attached to this pipework for tankering away the SAF contents (sludge's) if this is operationally required.
- 2.4.7 Site surface waters are pumped directly into the primary settlement tank, the tank provides an opportunity for solids to settle, and removed into the sludge holding tank; the remaining waters will then flow into the next phase of treatment. The unit comprises of two twin cell tanks, tank one, known as the nitrification tank, reduced the BOD and converts excess ammonia to nitrate and then tank two, known as the denitrification tank, removes the nitrate.
- 2.4.8 Tank water level monitors will provide additional mechanism for leak detection.
- 2.4.9 The initial nitrification phase will focus on the parameters below;
- dissolved oxygen;
  - ammoniacal nitrogen;
  - nitrite;
  - nitrate;
  - biochemical oxygen demand;
  - total suspended solids and
  - pH.
- 2.4.10 Nitrification is a biological treatment process to remove ammonia from the incoming wastewater. This is achieved using two different types of autotrophic bacteria (Nitrosomonas and Nitrobacter). The Nitrosomonas bacteria oxidise ammonia to nitrite and then the Nitrobacter oxidise nitrite to nitrate.
- 2.4.11 Both Nitrosomonas and Nitrobacter can only develop biochemical activity in an environment containing dissolved oxygen.
- 2.4.12 The formed nitrate can be used by most micro-organisms in the biomass' sludge as a substitute for dissolved oxygen. In an anoxic environment, characterised by the presence of nitrate and the absence of dissolved oxygen, the nitrate ion can be reduced by organic matter to nitrogen gas: this process is called denitrification.
- 2.4.13 The alkalinity consumption by nitrification may result in a reduction of pH. The magnitude of this reduction depends on the initial alkalinity and the oxidised ammonium concentration. During denitrification, half of the alkalinity consumption for nitrification is recovered. Thus the pH may not require correction when the full process is achieved.

- 2.4.14 If the first biological reactor is kept completely aerobic, the nitrified mixed liquor will need to flow to the second tank that acts as a dedicated settlement zone, where an adequate environment can be established for denitrification to occur. This will occur as soon as the oxygen is consumed.
- 2.4.15 As a result of the development of denitrification in the settler, nitrogen bubbles will be formed and these will rise to the liquid surface. To optimise the treatment process flows will be retained within the SAF unit system for a minimum of four hours.
- 2.4.16 Treated effluent failing the specified limits will be diverted into the quarantine tanks.
- 2.4.17 If treated effluent is diverted to the quarantine tank a decision will be made as to whether this can be retreated or if it needs to be tankered to an appropriate treatment facility. If the ATP is at an appropriate level the effluent will be diverted back into the primary settlement tank.
- 2.4.18 A Submerged Aerated Filtered (SAF) Unit operates in both the nitrification and denitrification process.
- 2.4.19 Heavy metals are ionised during the process and become attached to KDF resin. As resin becomes infused with heavy metals it is replaced. Resin removed will be disposed of at an appropriate facility.
- 2.4.20 Any sludge and solids collected in the settlement tanks will be removed by vacuum tanker as necessary and disposed of at an appropriate facility.

## **2.5 Management**

- 2.5.1 ARL will continue to operate under its existing EMS which has been agreed with NRW. This will be reviewed and updated prior to commencement of the new installation.
- 2.5.2 Procedures are in place for documentation and record management; non-conformance; competence, training and awareness; and monitoring and measurement.
- 2.5.3 The Technically Competent Manager for the site will not change as a result of this variation as the current TCM is suitably qualified for the new facility.

## **2.6 Raw Materials**

- 2.6.1 The RDF/SRF processing facility is primarily fed by incoming waste, and does not require significant additional raw materials for their operation other than the fuel oil for the plant on site and oils and greases for maintenance works. The sorted recyclates like wood, cardboard and hard plastics are re-processed therefore diverting it from the traditional solution of landfill.
- 2.6.2 The WWTP does not require significant amounts of raw materials.
- 2.6.3 There will be no change to the water usage on site. However, collected rain water from the new building will be used for dust suppression across the whole permitted site. There will therefore be a reduction in the amount of fresh water usage

## **2.7 Energy Efficiency**

- 2.7.1 The SRF processing plant will be state of the art and more energy efficient than the current plant. It is intended that RDF production will reduce as contracts are entered into for SRF production.
- 2.7.2 The WWTP has low energy usage and is not expected to impact usage at the site.

## **2.8 Closure and Decommissioning**

- 2.8.1 The Ecopark Facility is made up of a series of mobile plant units that can be dismantled and removed / replaced from site as and when required.
- 2.8.2 There are no underground tanks or pipework.

## **3 Emissions Control and Abatement**

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### **3.1 Point Source Emissions to Air**

- 3.1.1 There will be no point source emissions to air from the site operations.

### **3.2 Point Source Emissions to Surface Water**

- 3.2.1 The discharge point D2 is already contained within the environmental permit and is controlled and monitored in accordance with the permit and the limits set out in Table S3.1. The WWTP will treat water prior to being discharged at point D1 in accordance with the operating techniques set out in this document. The WWTP will ensure that the water to be discharged is in compliance with the limits in the permit and will therefore allow for discharge into the reens which is currently being prevented.
- 3.2.2 Run-off from the building housing the RDF/SRF processing facility will be collected in a sealed system and used for dust suppression on site. During periods of prolonged heavy rain, run-off may exceed the storage capacity. In this event the excess water will be discharged directly into the reens or field ditches.
- 3.2.3 There will be no run off from the operational area and the field ditch located to the east of the facility will be further protected by the provision of a 7m buffer zone where no activities or traffic will take place.
- 3.2.4 The remainder of the site drains naturally.
- 3.2.5 In line with the requirements of Environment Agency Sector Guidance Note S5.06 for the Recovery and Disposal of Hazardous and Non-Hazardous Waste the drainage system covering the area of the site on which the RDF/SRF processing operations will take place, will be a sealed drainage system as described above that will be pumped to the WWTP.

### **3.3 Point Source Emissions to Groundwater**

- 3.3.1 There will be no point source emissions to groundwater from the site operations.

### **3.4 Point Source Emissions to Land**

- 3.4.1 There will be no point source emissions to land from the waste operations on site.

### **3.5 Fugitive Emissions to Surface Water and Groundwater**

- 3.5.1 The site will be engineered to provide robust containment systems to ensure that there will be no fugitive emissions to surface water or groundwater. In line with Sector Guidance Note S5.06 and BREF. Appropriate site surfacing and drainage facilities will be provided as detailed above and subject to regular inspections and maintenance. There are no proposed changes to the drainage in place at the site.

- 3.5.2 Training will also be provided to all staff relating to the use of spill kits and the Accident Management Plan and Spill Clean-Up Procedures.
- 3.5.3 All site personnel will be tasked with monitoring for evidence of spillages and leakage during their day to day routine. Any evidence of spillage or leakage will be reported to the Site Manager or his nominated deputy for remedial action.

### **3.6 Fugitive Emissions to Air**

- 3.6.1 The operation of the WWTP is not likely to generate fugitive emissions to air such as dust / particulates. However, there is the potential for such fugitive emissions to be generated during the RDF/SRF processing. This activity is to take place wholly within a new purpose built building and therefore any such emissions are likely to be contained within the building rather than released into the wider medium. The building will be fitted with extractors which will ensure that dust from the building is captured in a filter. The dust will be vacuum extracted from the filters as necessary and sent to an appropriate facility for processing.
- 3.6.2 The monitoring of dust and particulate generation at the facility will be visual and will be controlled with the use of damping down of waste materials using a tractor / plant and a bowser.

### **3.7 Odour**

- 3.7.1 As identified in the site Environmental Risk Assessment (Appendix 2) the site will not pose a significant risk of odour related impact due to the nature of the incoming waste streams, the containment of the treatment process within a building, the baling of processed material stored outside the building, the location of the site, away from potentially sensitive receptors and the risk management measures proposed.

### **3.8 Noise and Vibration**

- 3.8.1 As identified in the site Environmental Risk Assessment (Annex 1) the proposed waste activity is not considered to represent a significant risk of noise or vibration due to the nature of the operation, the remote location of the site and the risk management measures proposed. In addition it is intended that the building containing the RDF/SRF processing facility will be insulated for sound.

## 4 Best Available Techniques

The following areas have been considered under the relevant sections of S5.06 'Guidance for Recovery and Disposal of Hazardous and Non Hazardous Waste' and the following best available techniques have been considered to ensure protection of the environment:-

Consideration	Proposal	BAT/BREF
Pre acceptance procedure	See s2.1.1 -2.1.3 above. The pre acceptance procedure in place at the site is considered to comply with BAT.	S5.06 s2.1.1
Acceptance of waste	See s2.1.4 – 2.1.9 above.	S5.06 s2.1.2
Waste storage	See section 2.1.21 above.	S5.06 s2.1.3
Treatment	Waste is treated in accordance with the operating techniques in s2.3 above.	S5.06 s2.1.4
Emission Control	See s3 above.	S5.06 s2.2
Management	A Technically Competent Manager is appointed for the site and has the appropriate WAMITAB qualification and continuing competence certification.	S5.06 s2.3
Raw Materials	There is very little use of raw materials, minimal water usage.	S5.06 s2.4
Energy	Records of fuel and energy usage maintained to enable annual reporting	S5.06 s2.7
Accidents	Site information and contacts list included as part of the EMS. Company's own generic Site Operational/Accident Procedures in place driven by risk assessment.	S5.06 s2.8
Impact Assessment	H1 based risk assessment in place see appendix 2.	S5.06 s4.1
Habitats Regulations	A habitats assessment is in place see appendix 2.	S5.06 s4.3
Monitoring	All monitoring requirements for the site have been agreed with NRW and are within the existing waste operation permit. It is not proposed that any of these change due to the new installation. The monitoring programme is compliant with BAT.	S5.06 s2.10
Installation issues	Waste accepted at the site for non-listed activities will be separated at the accepted stage and will be directed to the WTS for appropriate treatment or storage. There are no directly associated activities.	S5.06 s2.12

## 5 Surface and Groundwater Monitoring

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### 5.1 Current Situation

- 5.1.1 Table S3.2 contains the requirement to monitor surface water at specified points SW3 to SW17 as per Drawing Number JER5040-002b which is included in the Permit at Schedule 7. The table specifies: the monitoring points; the parameter to be measured; the frequency; and the method. It also contains “other specifications” which are the former Countryside Council for Wales trigger levels for the Gwent Levels. The surface water monitoring points are not discharge points and no point source emissions occur. They are therefore regulated under condition 3.2.1 “substances not controlled by an emission limit”.
- 5.1.2 Table S3.3 contains the requirement to monitor groundwater at specified points WS1 – WS5 as per Drawing Number JER5040-002b which is included in the Permit at Schedule 7. The table specifies: the monitoring points; the parameter to be measured; the frequency; and the method. It also contains “other specifications” which were derived from a limited data set and were intended to be reviewed once further data had been collected. The groundwater monitoring points are not discharge points and no point source emissions occur. They are therefore regulated under condition 3.2.1 “substances not controlled by an emission limit”.

### 5.2 Requested change

- 5.2.1 The “other specifications” within the table are not compliance limits however there has been confusion as to their status and a tendency for them to be treated as such.
- 5.2.2 It is proposed that the “other specifications” columns from both table S3.2 and table S3.3 be removed and that these values are put into an IMS procedure. ARL will continue to undertake monitoring in accordance with Tables S3.2 and 3.3 and no change to the monitoring requirements currently stated is being requested.
- 5.2.3 The EA regulatory guidance<sup>1</sup> “Control and monitor emissions for your environmental permit” states that “if your risk assessment shows you have a risk of these types of emissions (fugitive emissions to surface and groundwater) you may need to provide an emissions management plan”. Emissions management was included as part of the original permit application and is included in the section of emissions control and abatement above.
- 5.2.4 Emissions from the activities carried out at the site are controlled by the use of buffer zones and cut-off ditches leading to a sealed drainage system.

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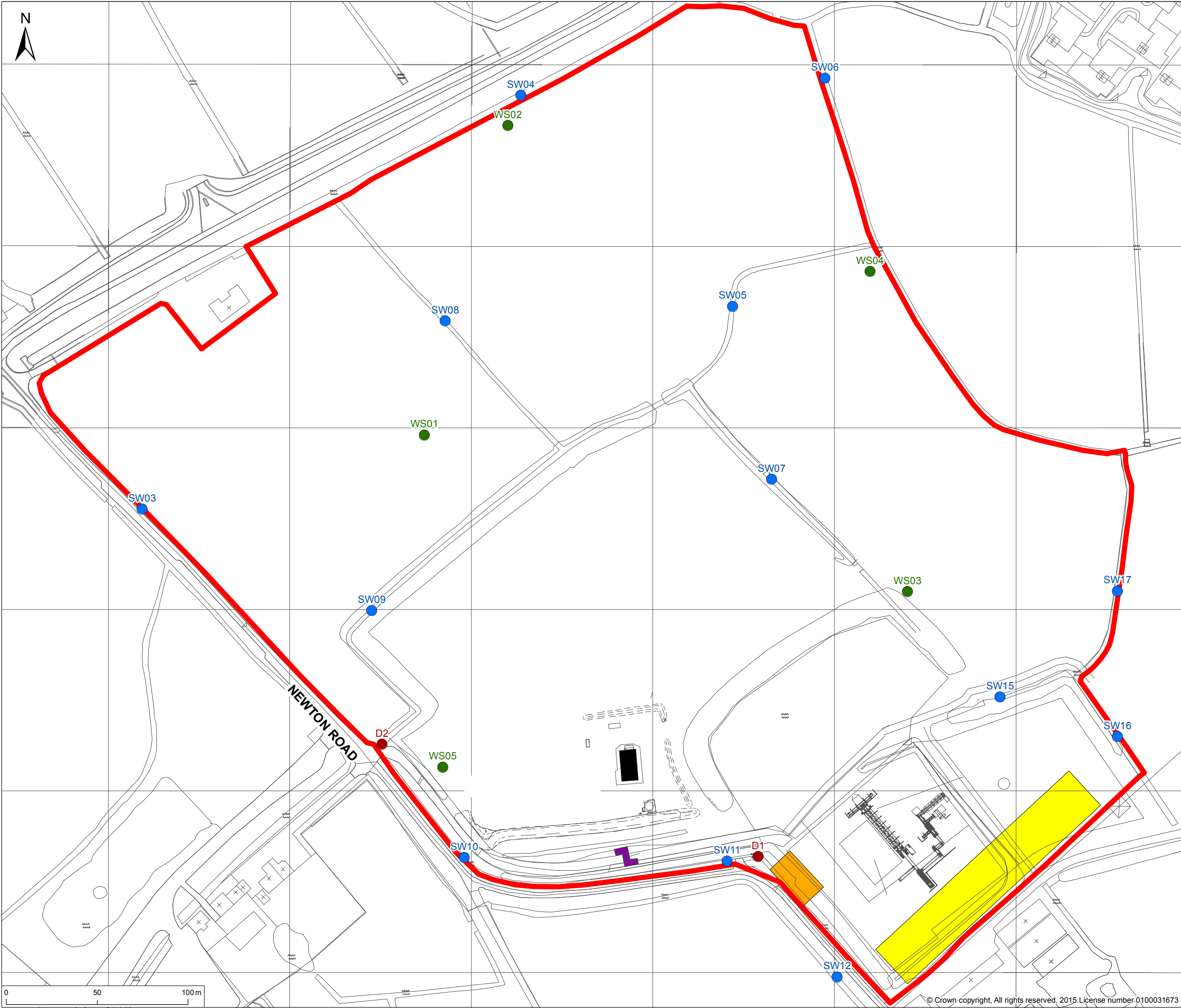
<sup>1</sup> Whilst this guidance only applies to England we assume that this represents best practice and therefore a common approach would be taken in Wales. It has not been possible to find equivalent or alternative guidance from NRW.  
<https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>

- 5.2.5 The levels in relation to groundwater were intended to be reviewed once a better picture of the background levels had been established. Inclusion in an IMS procedure is in keeping with the original intention and will allow future discussion of appropriate levels and actions to be taken in the event of exceedances. Groundwater has been monitored since the permit was issued and RPS is currently carrying out a review of all monitoring data to inform a Baseline Water Environment and Monitoring Report that will characterise the site.
- 5.2.6 There is no intention to change any of the values at this time, simply to move the values into the IMS in order to allow further explanation as to their status and use.



# Drawings

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Notes

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2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

- Legend
- Atlantic Recycling Permit Boundary
  - Offices
  - Weighbridge
  - Proposed RDF/SRF Processing Building
  - Proposed Waste Water Treatment Plant
  - Surface Water Monitoring Location
  - Groundwater Monitoring Location
  - Discharge Location

Rev	Description	Date	Initial	Checked



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Client ATLANTIC RECYCLING

Project ATLANTIC RECYCLING, CARDIFF

Title PROPOSED PERMIT VARIATION

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JCD0170	1:2,000	NOV 16

Drawing Number	Rev
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## Appendices

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### Pre-application meeting note

Date:	20/07/2016	Venue:	Atlantic Recycling
Those present:	John Edwards (Atlantic Recycling), Gareth Danter-Hill, Hannah Loughlin (NRW), Katie Edwards-Williams and Amy Powell (RPS)		
Project name:	Atlantic Recycling	Project reference:	JCD0170
Subject of meeting:	Pre-application discussion – Atlantic Recycling		
Item:	Description:	Action:	
1	<p><b>The Water Treatment Plant</b></p> <p>AP provided an overview of the proposed Hydrologica treatment plant.</p> <p>Treatment trials have been underway since Summer 2015 to find the appropriate solution to meet the limits specified by NRW. During this time, trials have been set back by a blocked pump and an onsite fire. These incidents have delayed the trials, but have been valuable in terms of developing a robust treatment system capable of working in challenging environments.</p> <p>The system will comprise of primary settlement – 2 nitrification cells – 2 denitrification cells – Ionisation tank – sample unit – final discharge into the environment / or quarantine + recirculate waters for treatment.</p> <p>The key benefit of a Hydrologica system is the use of Adenosine Triphosphate (APT) monitoring. APT allows plant operative in real time establish the effectiveness of the system. If APT count is low or below a certain threshold the plant operative can add additional enzymes to immediately improve the systems treatment capabilities and achieve the limits set by the regulator.</p> <p>Hydrologica will provide Atlantic with full training, and where required assistance with operational matters. Operative can sample, and where necessary re-divert flows for further treatment if required quarantine flows, minimising the risk to the environment. The use of APT monitoring will significantly reduce quarantined flows.</p> <p>The treated waters will continue to discharge via D1 and discharge into the SSSI at D2. D2 will remain the point of compliance.</p> <p><b>AP: Atlantic will provide sample data for the system, to assist NRW in their determination of the variation permit application.</b></p> <p><b>Permit Variation</b></p> <p>Atlantic will apply to vary the existing permit operating on site, adding operation of the treatment plant as a listed activity within the permit.</p>		
2	<p><b>Future Developments</b></p> <p>KWE provided an overview of future works Atlantic would like to undertake in its drive to improve on-site operations and compliance.</p> <p><b>In Vessel Compound</b></p> <p>Atlantic has taken the decision not to progress the development of the in-vessel composting facility. An application will be submitted to NRW to remove the IVC activity currently listed on the permit.</p>		

	<p>HL confirmed the removal of the activity will be subject to the standard fee of £770, as the activity have not commenced, this is in line with NRW Charging Guidance.</p> <p><b>AP: AP to email GDH to confirm surrender application.</b></p> <p><b>RDF / SRF</b></p> <p>Atlantic Recycling are awaiting a pre-application meeting with Cardiff City Council to discuss the development of a large building. The building will be approximately 150 metres in length, 60 metres and 30 metres to the eaves.</p> <p>The building will include a reception area, to receive incoming wastes, treat, process and produce a RDF/SRF product, dependent on the clients specifications. Depending on the contract, Atlantic would like to be flexible in terms of process, i.e. one day treat and produce SRF, the next RDF, all dependent on the client's requirements.</p> <p>The inclusion of the new infrastructure will allow Atlantic to be adaptable to future market advancements.</p> <p><b>Temporary Building</b></p> <p>ARL proposed to use a temporary building for RDF/SRF processing, whilst the large processing building is developed. GDH confirmed the temporary building will not require inclusion within the permit.</p>	
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### Environmental Risk Assessment




## Environmental Risk Assessment

Atlantic Ecopark, Newton Road, Rumney

On Behalf of




Atlantic Recycling Limited

<p><b>Date:</b> November 2016 <b>Our Ref:</b> JCD0170</p> <p><b>RPS</b> Park House, Greyfriars Road, Cardiff CF10 3AF</p> <p><b>Tel:</b> (0) 2920 668662 <b>Fax:</b> (0) 2920 668622 <b>Email:</b> rpssw@rpsgroup.com</p>		

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## Quality Management

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# 1 Introduction

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## 1.1 Background and Scope of the Assessment

- 1.1.1 An Environmental Risk Assessment and (where applicable) a Habitats Risk Assessment is required to support any Environmental Permit variation application, in order to identify whether the proposed activities on a site are likely to give rise to unacceptable environmental impacts on sensitive receptors within the locality.
- 1.1.2 The current facility operates under an environmental permit and consideration of the environmental risk associated with the permitted activities was considered at the time of the original application. Current permitted activities which will not change have therefore not been considered within this assessment. The scope of this ERA considers risks associated with the changes subject to this application to vary the environmental permit.

## 1.2 Proposed Variation

- 1.2.1 Currently Atlantic Recycling Limited (Atlantic) operates an EcoPark Facility at its Newton Road site, Rumney, Cardiff which includes the following activities:-
- Soil Processing Facility (permitted, not operational);
  - Waste Transfer Station with Treatment (permitted, operational);
  - Wood Processing Facility (permitted, operational); and,
  - Refuse Derived Fuel (RDF) and Stabilised Residual Fuel (SRF) Processing Facility (permitted, operational)
- 1.2.2 Atlantic is also permitted to store some wastes in the waste transfer station without treatment for example asbestos.
- 1.2.3 Atlantic wishes to modify their existing permit. Changes to the permit relate to;
- Treatment of the sites surface water;
  - Inclusion of a new dedicated RDF and SRF Processing Facility separate to the current Waste Transfer Station activity on site including an associated increase in tonnages; and
  - The inclusion of “other specifications” within tables S3.2 and S3.3.
- 1.2.4 This will result in changes to Table S1.1, Table S2.4, Table S3.2 and S3.3.

- 1.2.5 The variation also provides details on the proposed future layout for the facility including the proposed dedicated RDF and SRF processing building.
- 1.2.6 In total, the site is currently permitted to accept 220,000 tonnes per annum of waste materials, this will increase to 280,000 following the variation.

### 1.3 Risk Assessments

- 1.3.1 As identified above there are two elements to the risk assessment for the proposed operations:

- An Environmental Risk Assessment (ERA); and
- A Habitats Risk Assessment (HRA).

- 1.3.2 This ERA has been carried out in accordance with the Environment Agency's (EAs) Guidance Note: Risk Assessments for your Environmental Permit<sup>1</sup> (to which Natural Resources Wales (NRW) subscribe), applications must follow the following steps:

- Identifying and consider risks for the site, and the sources of the risks;
- Identify the receptors (people animals, property and anything else that could be affected by the hazard) at risk from the site;
- Identify the possible pathways from the sources of the risk to the receptor;
- Assess risks relevant to the specific activity and check they're acceptable and can be screened out;
- State what will be done to control risks if they're too high; and
- Submit the risk assessment as part of the permit application.

- 1.3.3 The ERA Guidance sets out the risks that should be considered as follows:

- any discharge, for example sewage or trade effluent to surface or groundwater;
- accidents;
- odour (not for standalone water discharge and groundwater activities);

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<sup>1</sup> <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>

- noise and vibration (not for standalone water discharge and groundwater activities);
  - uncontrolled or unintended ('fugitive') emissions, for which risks include dust, litter, pests and pollutants that shouldn't be in the discharge; and
  - visible emissions, e.g. smoke or visible plumes.
- 1.3.4 Guidance recognises that not all risks will be relevant to all sites and where no significant risk can occur this need only be stated.
- 1.3.5 There is an existing surface water discharge from the site to a settlement ditch via the existing interceptor at point D1 that discharges via a chamber allowing the treated water to be emitted to the reens at point D2. This is an existing discharge point at the site that has been previously considered and risk assessed. The Waste Water Treatment Plant will treat waste water before it is discharged at point D1 and therefore is designed to improve the quality of the water discharged at point D2.
- 1.3.6 There are no discharges to air, sewer or land associated with this variation. No visible plumes will be generated from the changes.
- 1.3.7 A Habitats Risk Assessment to review the impact of waste management activities on sensitive habitats has been undertaken. The approach taken has been to: identify relevant sensitive habitats; identify potential hazards that are likely to affect the interest features; and assess the potential magnitude of any effects.

## **1.4 Results of the Risk Assessment**

- 1.4.1 The risk assessments provided in Appendix 1 and 2 to this report show that the proposed variation to the operation of the RDF and SRF Processing Facility and the Waste Water Treatment Plant will not be detrimental to human health or the environment.
- 1.4.2 Operation of the overall facility will in fact, help to achieve the recycling and landfill diversion targets rates for the UK with specific reference to the Commercial and Industrial Sectors.
- 1.4.3 The proposed mitigation measures to be in place as part of the operations, i.e. storage facilities, new building etc, and the installation of the Waste Water Treatment Plant will

reduce the potential for any impact on the environment and human health and thus aid the ongoing operation of the facility.

Appendices

Appendix 1

Environmental Risk Assessment



**Appendix 1 Table A – Odour risk assessment and management plan**

Hazard	Receptor/s	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Odorous wastes accepted into the site	Industrial units (adjacent to site boundary)  Gwent Levels – Rumney & Peterston SSSI (adjacent to site)  Traveller Settlement (400m north)  B4239 Wentloog Avenue (440m north)	Air	Wastes will be preferentially pre-booked for delivery to the site and will always be visually inspected upon arrival at the site.  Upon acceptance the waste is directed to the waste reception area which will be located inside the new building.  The SSSI is not considered particularly sensitive to odour.  The nature of the wastes to be accepted at RDF and SRF processing facility has a low odour potential and therefore no odours should be detected at sensitive receptors in the vicinity of the site. Further these wastes are currently handled within the permitted facility and no odour complaints have been received to date.  Any non-conforming wastes identified on site will be segregated from the site wastes and held in a sealed skip in the quarantine area for disposal off-site  The Operator's Environmental Management System includes a procedure for handling and recording odour complaints. This includes a requirement to investigate any complaint and where remedial action is taken that this be recorded and provided to the NRW.	Low	Low (wastes received should have low odour)  Odour nuisance	Not significant
Odour release from the storage of baled RDF, SRF and Recyclates	Industrial units (adjacent to site boundary)  Gwent Levels – Rumney & Peterston SSSI (adjacent to site)  Traveller Settlement (400m north)  B4239 Wentloog Avenue (440m north)	Air	All RDF and SRF will be processed /prepared and, where required, baled inside the processing. If waste is to be stored outside it will be baled and wrapped in 6 - 8 layers of wrap and stacked in a suitable manner as to restrict the potential for damage occurring during storage.  All materials baled, wrapped and stored on site will have been mechanically sorted on site during the treatment process, and potentially shredded in the case of SRF, and as such will have been aerated during treatment.  The existing RDF process does not have a history of odour complaints. The RDF/SRF will be produced from similar wastes to that used in the permitted facility	Low	Low  Odour nuisance	Not significant
			Materials will be stored on site for short periods pending delivery to end users and in			

			<p>accordance with the requirements of the Waste Framework Directive.</p> <p>The Operator's Environmental Management System includes a procedure for handling and recording odour complaints. This includes a requirement to investigate any complaint and where remedial action is taken that this be recorded and provided to the NRW.</p>			
Emissions of chemicals etc from waste materials stored on site	<p>Industrial units (adjacent to site boundary)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p> <p>Traveller Settlement (400m north)</p> <p>B4239 Wentloog Avenue (440m north)</p>	Air	<p>All wastes are to be pre-booked for delivery to the site and will be visually inspected upon arrival at the site</p> <p>All purely residual waste loads will be diverted from site direct to landfill disposal</p> <p>The nature of the wastes to be accepted at the site is such that no odorous waste should be present on site</p> <p>Any non-conforming wastes identified on site will be segregated from the site wastes and held in a sealed skip in the quarantine area for disposal off-site</p>	Low	Odour nuisance	Not significant.

### **Appendix 1 Table B – Noise risk assessment and management plan**

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Noise and Vibration from waste operations	<p>Industrial units (adjacent to site boundary)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p> <p>Traveller Settlement (400m north)</p> <p>B4239 Wentloog Avenue</p>	Noise through the air and vibration through the ground	<p>All potentially noisy activities will take place within a building including shredding and baling of SRF, RDF and recyclates. The building will be fitted with acoustic cladding to minimise any noise emission.</p> <p>Vehicle movements are only expected to increase slightly as a result of this variation and therefore not anticipated to increase noise significantly.</p> <p>During the selection process for new plant and equipment consideration has been given to the minimisation of noise. All new plant and equipment will meet all legislation and statutory guidance on noise levels.</p>	<p>Low</p> <p>Continuous low level exposure</p>	<p>Low</p> <p>Annoyance / nuisance to receptors</p> <p>Loss of amenity</p>	Low if properly managed.

	(440m north)		<p>All plant equipment will be subject to regular inspection and planned preventative maintenance schedules to maintain its operational performance.</p> <p>Current monitoring procedures include regular inspections around the perimeter and operational area of the site will be undertaken to establish whether excessive noise is being produced and/or carried off the site. These will continue in accordance with current procedures following the variation. Results of noise inspections are recorded as soon as they have been completed and by the person who completed them. These records will be available for inspection by NRW.</p> <p>There have been no noise or vibration complaints relating to vehicle movements at the site.</p> <p>The Operator's Environmental Management System includes a procedure for handling and recording noise complaints. This includes a requirement for all investigations into the source of the noise and any remedial action taken to be recorded and provided to the relevant authorities.</p>			
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**Appendix 1 Table C – Fugitive emissions risk assessment and management plan**

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Releases of dust from site roads and operational areas	<p>Industrial units (adjacent to site boundary)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p> <p>Traveller Settlement (400m north)</p> <p>B4239 Wentloog Avenue (440m north)</p>	Air	<p>All operators vehicles transporting materials to and from the facility will be sheeted or have enclosed containers to prevent fugitive emissions of dust from vehicles.</p> <p>The waste reception area for the RDF/SRF process is inside a building which will be fitted with extractors.</p> <p>Dust suppression techniques such as bowsers and spray irrigation systems will be available on site if required for the management of any dusts generated on site.</p> <p>This site is serviced by existing infrastructure including hardstanding and fully functioning drainage</p> <p>Regular inspections will be undertaken around the site perimeter, operational area, haul roads and highway for dust. Remedial action eg dampening or use of a road sweeper will be undertaken if dust is identified as a problem. Records of all</p>	Low	<p>Low</p> <p>Respiratory problems, annoyance</p>	Not Significant

			inspections for dust will be recorded as soon as the inspection is complete and by the person who completed it. These records will be available for inspection by the relevant authorities.			
Release of dust / litter from waste during transportation / handling / storage on site	Industrial units (adjacent to site boundary)  Gwent Levels – Rumney & Peterston SSSI (adjacent to site)  Traveller Settlement (400m north)  B4239 Wentloog Avenue (440m north)	Air  Land	<p>All vehicles delivering wastes to the site to be covered. Wastes arriving the RDF/SRF Processing Facility will be stored within a building with doors kept shut except for access.</p> <p>Following a delivery vehicles will be inspected to ensure they are free from litter prior to leaving the RDF/SRF waste reception area.</p> <p>All wastes and recyclates leaving the site to be containerised and baled where required by the end user.</p> <p>All RDF and SRF baling will take place within a building and all bales will be shrink wrapped with 6-8 layers of wrap to reduce fugitive emissions during processing and storage. Any split bales will be removed from the storage area and further shrink wrap applied.</p> <p>Site housekeeping procedures ensure that site areas are routinely checked and should litter be identified arrangements would be made to clean the affected area. These procedures will cover the areas subject to changes in this variation.</p>	Low	Low  Visual, annoyance	Not significant
Releases of contaminated site surface water / run off	Gwent Levels – Rumney & Peterston SSSI (adjacent to site)  Groundwater	Land  Water	<p>The site contains suitably graded impermeable surfacing that directs all site run off to the drainage channel running through the site and into the sealed site drainage system.</p> <p>Water is treated within the WWTP and tested prior to discharge. Buffer storage is included to hold off-spec water from the WWTP. Any off-spec effluent would be preferentially treated again in the WWTP, if unsuitable for treatment arrangements to remove the material off site would be made.</p>	Low	Medium  Environmental degradation	Not significant

### Appendix 1 Table D – Accident risk assessment and management plan

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Operator error	Air/land/water (dependent on the	Various	- The control systems will include alarms to alert the operator of potential			

	nature of the error)	dependant on nature of error	<p>operational problems and where relevant will be triggered with sufficient safety margin permitting operator intervention to prevent an actual problem occurring.</p> <p>All operational staff will be fully trained against the site operating procedures including actions to take in the event of an operational problem. Only trained staff will be permitted to operate the new plant.</p> <p>Training will include awareness raising of key plant parameters and the potential implications of failure to control operations as designed and the associated potential impact on the environment.</p> <p>Procedures/work instructions to control key operational impacts associated with the changes included within this variation will be incorporated within ARLs existing the EMS and all employees will be briefed on their implementation.</p>			
Inadvertent damage to storage tanks/containers causing loss of containment (including fuel/oils, ELV waste substances)	<p>Site drainage system</p> <p>Local Air Quality</p> <p>Industrial units (adjacent to site)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p>	Transport through the site drainage system, percolation through the ground	<p>Discharges to surface water are mitigated by the use of interceptors which will be used to protect emissions to surface water.</p> <p>The inclusion of the WWTP provides treatment and monitoring of water prior to discharge and includes buffer capacity to hold any out of spec water prior to further treatment or removal off-site.</p> <p>A hard, impermeable surface, subject to routine maintenance to ensure its integrity is not compromised, will underlay all raw material storage areas to prevent fugitive emissions to groundwater should spills/ leaks occur.</p> <p>The generator has an internal fuel storage tank which has secondary bunding with a capacity of 110%.</p> <p>Regular visual inspections of all bunds, tanks and containers will occur to ensure that the integrity is not compromised with no signs of damage or leaks. All storage tanks/containers will comprise materials which are resistant to the vessel content.</p> <p>A maintenance programme will be established for the inspection of all storage tanks, ancillary equipment and containment measures.</p> <p>Potential releases to surface water and/or groundwater would require simultaneous failure of the storage containers and secondary containment.</p> <p>Bulk deliveries (i.e. diesel) will be overseen by a trained member of staff who will be responsible for checking that there is sufficient capacity in the storage vessel to</p>			

			<p>receive the delivery.</p> <p>An Accident Management Plan consistent with NRW Guidance 'How to comply with your Environmental Permit' is in place at the site which includes documented procedures for managing spillages of oils to minimise impacts. This will be updated to include the new processes.</p> <p>A site spill procedure to be followed in the event of a spillage is in place as part of the EMS. Spill kits will be available to contain and clean up the spill and staff will be trained in their use. Procedures are in place for ensuring spill kit inventories are maintained.</p>			
Fire in material/waste storage areas causing emissions to air	<p>Local Air Quality</p> <p>Industrial units (adjacent to site)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p>	Air	<p>Stockpiles and waste storage areas will be appropriately managed. RDF/SRF stockpiles will be managed in accordance with FPP guidance.</p> <p>The Accident Management Plan and a Fire Prevention Plan in place at the site are maintained in accordance with NRW Guidance 'How to comply with your environmental permit' and 'Fire prevention and mitigation plan guidance – Waste'. These plans contain emergency response procedures in relation to fire events. Measures for fire prevention and early detection of an incident are incorporated within the FPP and will be extended as appropriate to the areas subject to this variation.</p>	Low	<p>Low-Medium depending on scale of incident. With control measures as per FPP impacts likely to be short-term</p> <p>Smoke, local nuisance, risk of fire spreading to other areas or premises.</p>	Not significant
Spillages of liquids/contaminated run-off from waste and potentially contaminated fire water.	<p>Land &amp; surface water</p> <p>Industrial units (adjacent to site)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p>	Percolation through the soil, transport through drainage system	<p>Impermeable pavement will direct water to the sealed drainage system. The inclusion of the WWTP provides treatment and monitoring of water prior to discharge and includes buffer capacity to hold any out of spec water prior to further treatment or removal off-site.</p> <p>Appropriate bunding will be provided for all storage tanks/containers to mitigate the risk of spillages and fugitive releases to water.</p> <p>All appropriate personnel on the site will be trained on pollution prevention and control requirements.</p> <p>A site spill procedure to be followed in the event of a spillage is in place as part of the EMS. Spill kits will be available to contain and clean up the spill and staff will</p>	Low	<p>Low-Medium depending on scale of incident. With control measures as per FPP impacts likely to be short-term</p>	Not significant

			<p>be trained in their use. Procedures are in place for ensuring spill kit inventories are maintained.e.</p> <p>An Accident Management Plan in accordance with NRW Guidance 'How to comply with your Environmental Permit' is in place at the site which includes documented procedures for handling spillages and fire water run-off to minimise impacts. This will be updated to include the new activities.</p>			
Flooding	<p>Site and nearby residential and industrial development</p> <p>Industrial units (adjacent to site)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p>	Overland flow	<p>The site is located within the flood catchment zone for the mouth of the Severn Estuary however there are earthen bunds and drainage ditches within and around the site to prevent the site from flooding.</p> <p>NRW's flood risk map shows that the majority of the site is at low risk of flooding from rivers and the sea.</p>	Low	<p>Low/medium depending on scale of flood</p> <p>Flooding leading to loss of material from the RDF/SRF storage area.</p>	Not significant if appropriately controlled
Pests on site	<p>Site and nearby residential and industrial development</p> <p>Industrial units (adjacent to site)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p>	Travel within the waste or through the drainage system	<p>The nature of the waste to be accepted at the new RDF/SRF process are not expected to be highly attractive to pests. .</p> <p>There have been very few incidents relating to pests at the site.</p> <p>All hardstanding areas will be regularly swept and maintained in good working order</p> <p>Site housekeeping procedures ensure that site areas are routinely checked and should litter be identified arrangements would be made to clean the affected area. These procedures will cover the areas subject to changes in this variation.</p> <p>Pest control to be used if becomes a problem</p>	Low/Medium	<p>Low</p> <p>Nuisance, annoyance</p>	Not significant if appropriately controlled
Vandalism	<p>Site and nearby residential and industrial development</p> <p>Industrial units (adjacent to the site)</p> <p>Gwent Levels – Rumney &amp; Peterston SSSI (adjacent to site)</p>	Entry to the site during closed periods	<p>Site security is employed to patrol site during closed periods.</p> <p>CCTV is in operation around the weighbridge and it is intended that additional CCTV will be installed to cover the WTS as well as the areas that will be utilised for the new activities subject to changes in this variation.</p> <p>The entrance gates to the site are locked during non-operational hours preventing vehicular access to the site during those times. Various natural barriers exist around the remainder of the site to deter trespassers.</p>	Medium	Variable depending on nature of vandalism.	Not significant if appropriately controlled





Appendix 2

Habitats Risk Assessment

## Habitats Risk Assessment

### Stage 1: Identify the Sensitive Habitats

Sensitive habitats within 2km of the proposed site have been identified and are detailed in Table A below. Information on the interest features is also included.

#### ***Appendix 2: Table A: Sensitive Habitats within 2km of the proposed site***

Sensitive Habitat	Distance from the Site (m)	Interest Features
Gwent Levels – Rumney and Peterstone SSSI	Within site boundary	The designation of these SSSIs is primarily as representatives of grazing marsh / reed habitats. In addition, the Levels also qualify as SSSI on the basis of their invertebrate assemblages, with significant plant species, otters, water voles and breeding birds also being additional qualifying features.
Severn Estuary Ramsar site, SAC, SPA, Important Bird Area, SSSI	1240m to the southeast	Designated for numerous features including immense tidal range, unusual estuarine communities, reduced species diversity and high productivity.

## Stage 2: Identify the potential hazards that are likely to affect the interest features

In Stage 2, potential hazards from the waste management operations that are likely to affect the Interest Features are identified and an assessment made as to whether the Interest Features will be exposed to the hazard. The results of Stage 2 are set out in Table B below.

### Appendix 2 Table B: Stage 2 assessment

Sensitive Interest Features	Potential Hazard	Potential exposure to hazard and mechanism of effect/impact if known
<b>Gwent Levels – Rumney and Peterstone SSSI</b>		
The designation of these SSSIs is primarily as representatives of grazing marsh / reed habitats. In addition, the Levels also qualify as SSSI on the basis of their invertebrate assemblages, with significant plant species, otters, water voles and breeding birds also being additional qualifying features.	Potentially contaminated run-off from waste management operations.	The infrastructure on the site is designed to prevent uncontrolled releases of contaminated water.
	Noise	
	Dust	Emissions of dust from the site could smother flora.
<b>Severn Estuary</b>		
Designated for numerous features including immense tidal range, unusual estuarine communities, reduced species diversity and high productivity.	Noise	Noise emissions may interfere with breeding habits of birds.
	Dust	Dust emissions may smother sensitive heather flora.

### **Stage 3: Assessment of magnitude of any effects**

In Stage 3, an assessment is made to determine whether the potential scale or magnitude of any effects on the Interest Features is significant. The assessment is undertaken on taking only the potential effects of the proposed site in question and also the effects of the proposed site in combination with other activities permitted in the surrounding area. A summary of the assessment is detailed below.

#### **a) Assessment of significance from proposed site only**

The magnitude of potential effects on the Interest Features of the sensitive habitats is not considered to be significant for the following reasons.

Site drainage may become contaminated as a result of activities on the site. To mitigate impacts from these potential contaminants, the hardstanding area on which the waste operations will take place will drain to a sealed drainage system that will flow through the Waste Water Treatment Plant before discharging to surface water. The WWTP provides treatment and monitoring of water prior to discharge and includes buffer capacity to hold any out of spec water prior to further treatment or removal off-site.

Preventative measures will be undertaken to reduce noise emissions of activities, these include ensuring mobile plant is silenced to the current recommended standards, drop heights are kept to a practicable minimum and any noise complaints will be investigated and details recorded in the Site Diary.

The proposed waste types at the site have a low dust generating potential. The proposed activities are to take place inside a building with appropriate dust extraction.

Suitable dust suppression equipment will be available on site in the event that dust is identified as a problem from the external storage and handling of waste.

### Baseline Report/Site Condition Report



**Atlantic Recycling Ltd**

**Variation Application EPR/PP3993VS/S005**

**Appendix 3: Application Baseline and Site Condition Report**



**Date:** 01/11/2016

**Our Ref:** JCD0170

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**DELIVERING QUALITY**

## Quality Management

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## Executive Summary

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This document represents the Baseline Report (BR) for Atlantic Recycling Limited's RDF/SRF Processing Facility and the Site Condition Report (SCR) for the whole permitted site, submitted as part of an application to Natural Resources Wales for a variation to its Environmental Permit to include a new installation under the Industrial Emissions Directive (IED).

No application site condition report was submitted at the time of the original application although some intrusive site investigation did take place. It is therefore considered appropriate to produce this now.

The IED identifies 8 stages in the process of producing a BR. This document addresses the required stages and in doing so determines the extent to which site investigation and a SCR is required.

An appraisal of the proposed development site has been carried out and data relating to the surrounding areas has been reviewed in order to describe the conditions of the site, and in particular, to identify any substance in, on or under the land that may constitute a pollution risk to the land.

Substances to be stored on site have been identified and, where they may pose a potential pollution risk, suitable mitigation measures will be implemented at the operational phase to protect the land and groundwater from contamination.

It is considered that operation of the proposed development will not pose a significant environmental risk. Adequate containment measures shall be provided for all potentially hazardous substances and all operational storage areas are to be equipped with impervious hard standing.



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# 1 Introduction

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- 1.1 The Industrial Emissions Directive (IED) [i], Article 22, paragraphs 2 to 4, contains provisions for the definitive cessation of activities involving the use, production or release of relevant hazardous substances in order to prevent and tackle potential soil and ground water contamination from such substances. A key tool in this respect is the establishment of a 'baseline report'. Where an activity involves the use, production or release of relevant hazardous substances and having regard to the possibility of soil and groundwater contamination, a baseline report is to be drawn up before starting the operation of the installation. The report will form the basis for a comparison with the state of contamination upon definitive cessation of activities. Where information produced pursuant to other national or Union law reflects the state at the time the report is drawn up, that information may be included in, or attached to, the baseline report.
- 1.2 RPS Planning and Development (RPS) has been commissioned by Atlantic Recycling Limited (ARL) to prepare this BR in association with a bespoke Environmental Permit Variation Application for an RDF/SRF Processing Facility, at Atlantic EcoPark, Rumney, Cardiff. The permit to be varied is an Environmental Permit number EPR/PP3993VS/S005 and was originally issued on 14<sup>th</sup> October 2005 to Neal Soil Suppliers Limited.
- 1.3 Records of the site and surrounding areas have been reviewed in order to describe the condition of the site prior to construction and operation of the RDF/SRF Processing Facility and also to identify those measures which will be in place during the operation of the proposed installation to ensure that its operation does not give rise to pollution of land or groundwater.
- 1.4 The site condition review included:
- i) Review of relevant documentation;
  - ii) Review of the operational aspects of the existing and proposed facility; and
  - iii) Review of the environmental setting to assess the sensitivity of the surrounding environment to contamination.
- 1.5 This report has been prepared in accordance with the European Commission Guidance concerning baseline reports [ii] required under the IED.
- 1.6 RPS has prepared this report based on information and data available at the time of preparation of the report.

## Site Location

- 1.7 The site is located to the south-east of Cardiff City Centre at Atlantic Ecopark which is situated off Newton Road, Rumney. The site is surrounded by a series of drainage ditches and reens and lies within the footprint of a Site of Special Scientific Interest (SSSI). Site access is from the B4239 (Wentloog Avenue) via Newton Road which provides access to the primary road network and M4.

- 1.8 The general site location is shown on drawing JCD 0170-02-Permit Boundary Plan and the site address is:

Atlantic Recycling Limited  
Atlantic Ecopark  
Newton Road  
Rumney  
Cardiff  
CF3 2EJ

- 1.9 The National Grid Reference of the facility is NGR ST 239 783.

### **Details of Proposed Installation**

- 1.10 The operator wishes to modify the conditions of Table S2.4 A4 RDF and SRF Processing Facility 'waste types and quantities for refuse derived fuel and solid recovered fuel processing' within the current Environmental Permit to allow an increase in permitted tonnage, from 40,000 to 100,000 tonnes per annum. ARL plan to construct a dedicated building to operate a separate SRF and RDF processing line in accordance with planning permission 08/00626 issued by Cardiff City Council in 2009. The Facility will be built to withstand the fluctuating market, providing flexibility in terms of the products processed and outputs generated. The Facility will produce both RDF and SRF, dependent on the customers' requirements as well as a number of recycle streams. Waste brought to the site under 19 category EWC codes will be directed to the Facility for processing.
- 1.11 The new RDF/SRF processing facility will be a state of the art processing facility specifically designed to accept predominantly 19 category wastes which generally contain greater volumes of recyclates and are more appropriate for the production of SRF and RDF.
- 1.12 A site plan showing the layout, along with drainage plan is presented in the main application document.
- 1.13 All process areas will be constructed with hard standing surfacing designed to be impervious to the materials being handled.
- 1.14 The waste processed at the facility will be non-hazardous. There are limited ancillary raw materials used and stored within the facility. These include lubricants and oils for plant and machinery maintenance. These are stored in a designated shed. Oils are stored in steel drums each on a spill pallet. Tubes of greases are also stored. There is a single door to the shed which is kept locked except for access which must be authorised by the yard forman. The shed is equipped with a mobile spill station containing absorbent mats, socks and granules for use in containing and cleaning up spills.
- 1.15 For a full detailed description of the proposed RDF/SRF Processing Facility, please refer to the main application document.

## **Scope of Baseline Report**

- 1.16 The BR includes all operational and process areas for the proposed RDF/SRF Processing Facility as indicated on the site layout plan as provided within the main application documents. As this is an application to vary an existing Environmental Permit it will rely on information obtained during a site investigation prior to the issue of the original permit in 2005.

## **Site Condition Report**

- 1.17 A Site Condition Report which follows the H5 template is provided to regularise the position with regard to the entire site covered by the permit. Whilst the site has been operational for a number of years it is the application section of the report that is provided here. The operational section will be completed in due course.

## 2 Objectives of Baseline Report

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### Objectives

- 2.1 This BR is required to satisfy the requirements of the IED.
- 2.2 Article 22(2) specifies that a baseline report should contain at least the following information:
- a) information on the present use and, where available, on past uses of the site; and
  - b) where available, existing information on soil and groundwater measurements that reflect the state at the time the report is drawn up or, alternatively, new soil and groundwater measurements having regard to the possibility of soil and groundwater contamination by those hazardous substances to be used, produced or released by the installation concerned.
- 2.3 This BR will provide a point of reference at the start of the additional operations so that, in the event of the Permit being surrendered, a decision can be made as to whether there has been any additional contamination of the site during the operation of the RDF/SRF Processing Facility and ensure that the condition of the land and groundwater are in a “satisfactory state” when an application to surrender the permit is made.
- 2.4 In order to satisfy the requirements this report will use NRW’s H5 Site Condition Report guidance [iii] and templates to provide the relevant information but will also incorporate the information required for baseline reports as set out in EU guidance.
- 2.5 The EU guidance follows an eight stage process, covering the following main elements:
- Stages 1-3: to decide whether a baseline report is required;
  - Stages 4-7: to determine how a baseline report has to be prepared;
  - Stage 8: to determine the content of the report.
- 2.6 This report identifies the environmental setting and history of the site, identifies activities that will be conducted at the installation that may lead to land pollution and identifies and assesses the preventative measures that are in place to protect the land.
- 2.7 Following the issue of a varied Permit, the Operator shall ensure that procedures are implemented to ensure that the operational phase of the SCR (sections 4-7) can be completed and that the necessary data is collected to demonstrate the land is in a ‘satisfactory state’ should the Permit need to be surrendered.
- 2.8 Sections 8-10 of the SCR will be completed by the Operator upon Permit surrender to demonstrate that a ‘satisfactory state’ has been achieved.

### 3 IED Stages in Producing a Baseline Report

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*Stage 1 – Identify which hazardous substances are used, produced or released at the installation and produce a list of these substances.*

- 3.1 No hazardous substances will be used in the process of producing RDF or SRF. The input waste material is classified under EWC 191212 and is non-hazardous. No other substances are added to the material during the processing.
- 3.2 Metals and stones are removed during the process and stored separately from the final product. It is not considered that the process is likely to produce any hazardous substances. The storage arrangements for these materials will remain as currently permitted.
- 3.3 In the circumstances where no hazardous substances are used or produced by the process it is not considered possible that hazardous substances could be released.
- 3.4 As no hazardous substances have been identified it is not considered necessary to consider the remaining stages of the IED Baseline Report.

## 4 Site Condition Report

### Site Condition Report Summary

SITE DETAILS	
Name of the applicant	Atlantic Recycling Limited
Activity address	Atlantic EcoPark, Newton Rd, Rumney, Cardiff, CF3 2EJ.
National grid reference	NGR ST 239 783

Document reference and dates for Site Condition Report at permit application and surrender	161102 R JCD0170 FB H5 final
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Document references for site plans (including location and boundaries)	JCD0170-PER-002 in JCD0170 R 160915 FB Operating Techniques final
--	---

Condition of the land at permit issue	
Environmental setting including: geology hydrogeology surface waters	Details on the geology, hydrogeology and hydrology are provided in section 4.3, 4.4 and 4.5 of this SCR, and within the Groundsure Report in Appendix A.
Pollution history including: pollution incidents that may have affected land historical land-uses and associated contaminants any visual/olfactory evidence of existing contamination evidence of damage to pollution prevention measures	<p>Details regarding pollution incidents in the vicinity of the proposed site are provided in section 4.6 of this SCR.</p> <p>There have been no incidents resulting in spillages of hazardous substances within the proposed site boundary.</p> <p>Historical land uses associated with the proposed site are detailed in section 4.6 of this SCR.</p> <p>New pollution prevention measures are to be implemented on site, during and following commissioning of the RDF/SRF Processing Facility. Site Environmental Procedures, and inspection regimes will be implemented during the operational phase to identify and mitigate any pollution incidents or detriment caused to the condition of the land.</p>



Condition of the land at permit issue	
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	Details regarding historical contamination of the proposed site are provided in section 4.6 and Appendix B of this SCR.
Baseline soil and groundwater reference data	Reference documents as provided within section 6 and Appendix B to this SCR.
Supporting information	Source information identifying environmental setting and pollution incidents – see Groundsure Report in Appendix A to this SCR; Historical Ordnance Survey plans – see Appendix A to this SCR; Site Reconnaissance – see Appendix B Historical investigation / assessment / remediation / verification - See Appendix B to this SCR; Baseline soil and groundwater reference data – See Appendix B to this SCR.

Permitted activities	
Permitted activities	Details regarding permitted activities for the proposed site are provided in section 1.2 of this SCR.
Non-permitted activities undertaken	N/A
Document references for:  plan showing activity layout; and environmental risk assessment.	Site Plans are provided within the main application. JCD0170-PER-002 indicates the location of the facility and surrounding area.  An Environmental Risk Assessment has been undertaken in accordance with the Environment Agency's H1 guidance. This is included within the supporting information to the main application document for an Environmental Permit (Appendix 2 to the main application).

## 5 Condition of the Land at Permit Issue

### Site Setting and Sources of Desk Study Information

- 5.1 The following sections detail the sources of desk study information search in order to describe the condition of the installation, and in particular, to determine the potential for substances to be present in, on or under the land associated with present and past uses of the site and its surrounding areas.
- 5.2 A search was undertaken through the Groundsure database in July 2016 to obtain;
- Information held by NRW regarding water abstractions and effluent licenses, waste disposal facilities and other prescribed processes at the site and within its immediate vicinity;
  - Previous Pollution Incidents within a 1,000m radius of the site;
  - Information held by the British Geological Survey relating to geology and hydrogeology;
  - Historical Land Maps; and
  - Previous site investigation studies undertaken.
- 5.3 A copy of the Groundsure report is included within Appendix A to this report.

### Environmental Consents, Licenses, Authorisations, Permits and Designations for the Site and Surrounding Areas

#### Water Discharges and Abstraction Licenses

- 5.4 There are no groundwater abstraction licences within 2 km of the Site. There are no surface water abstraction licences within 2 km of the site.
- 5.5 There are records of 5 active discharge consents located within 500 m of the Site. The details of which are provided in Table 4.1 below.

**Table 4.1 Discharge Consents**

Address & permit number	Distance from the Proposed Site	Discharge Type	Receiving Water Body	Comments
Pond A Wentloog Avenue, Cardiff – AN028290101	53 m north	Trade Discharges - unspecified	Unspecified	Issued 15/07/1998
Ystradyrodwg/Pontypri dd Trunk – AN0045101	189 m south	Sewage Discharges – Sewer Storm Overflow	Unspecified	Issued 27/03/2008
Pond B & Pond C Wentloog Avenue, Cardiff – AN028290201	234 m north	Trade Discharges - unspecified	Unspecified	Issued 15/07/1998

Address & permit number	Distance from the Proposed Site	Discharge Type	Receiving Water Body	Comments
Trowbridge Road, Rumney – AB0034202	446 m north west	Miscellaneous Discharges – surface water	Unspecified	Issued 23/01/1963
Site 1 Newlands Road – AN028610101	488 m north	Trade Discharges - drainage	Unspecified	Issued 12/11/1998

5.6 The site does not lie within a groundwater source protection zone.

### Statutory Designated Sites within 5km

5.7 A search was undertaken to obtain details of any nature conservation designations for the site and surrounding area. Statutory designation sites within a 2km search radius around the proposed site installation boundary are summarised in the table below.

**Table 4.2 Statutory Designated Sites**

Site Name	Designation	Distance from the Proposed Site
Gwent Levels – Rumney and Peterstone	Site of Special Scientific Interest (SSSI)	On site
Severn Estuary	Site of Special Scientific Interest (SSSI); Special Area of Conservation (SAC); Special Protection Area (SPA); Ramsar Site	34 m south east
Severn Estuary	Site of Special Scientific Interest (SSSI)	1018 m east

5.8 In addition, one Scheduled Ancient Monument ‘Relict Seawall on Rumney Great Wharf’ is located approximately 400m south west.

### Environmental Permitted Facilities

5.9 The following table summarises both historical and registered installations, Landfill Sites and other Waste Facility applications made to NRW (and formerly the Environment Agency) located within 500 m of the site. Table 4.3 below includes details of register status for each facility.

5.10 There have been various permit applications under the IPPC regime at the site in the name of Neal Soil Suppliers Limited. Neal Soil Suppliers Ltd is a sister company to Atlantic Recycling Ltd and occupies the land adjoining the site to the west. Details of authorisations are set out in Table 4.3 below.

**Table 4.3 Summary of Registered Permitted Sites**

Permit Holder	Location	Process	Environmental Regime	Status	Distance from the Proposed Site
<i>Integrated Pollution Prevention and Control Authorisations</i>					
Neal Soil	Newton Rd,	Soils and aggregate	IED and EPR	Active	37 m south

Permit Holder	Location	Process	Environmental Regime	Status	Distance from the Proposed Site
Suppliers Ltd	Cardiff	processing; washing plant for hazardous and non-hazardous waste; waste transfer station	Authorisation		west

**Table 4.4 Summary of Registered Historical And Active Landfill Sites**

Distance from the Proposed Site	Location & License Holder	Status	Waste Type
<i>Active Landfills</i>			
47 m south west	Lamby Way Depot, Lamby Way, Cardiff – The County Council of the City and County of Cardiff	Active (modified)	Household, Commercial & Industrial Waste Landfill
<i>Historical Landfills</i>			
On site	David Neal, Ty-To-Maen, Cardiff	Historic (last recorded waste 31/12/1992)	Inert, Commercial, Household Waste
On site	HW Neal, Middle Newton Farm, Cardiff	Historic Issued 7/03/1988 (no record of surrender)	Inert, Industrial, Commercial, Household, Special Waste
204 m south east	NW Neal and Partners, Middle Newton Farm, Cardiff	Historic (last recorded waste 31/12/1995)	Inert, Industrial, Commercial, Household, Special Waste
429 north west	South Glamorgan County Council, The Old Piggery, Wentloog Road, Cardiff	Historic Issued 13/06/1988 Surrendered 11/01/1991	Inert, Industrial, Household Waste
480 m north west	Trowbridge Corporation, Trowbridge Mawr, Cardiff	Historic (last recorded waste 31/12/1963)	Commercial, Household Waste
595 m north west	HW Neal and Partners, Skewbridge, Wentloog Rd, Cardiff	Historic Issued 7/03/1988 Surrendered 7/03/1989	Inert Waste
800 m west	Mardy Ltd, Lamby Way, Cardiff	Historic Issued 13/06/1988 (no record of surrender)	Inert Waste
952 m north west	Unknown, Heron Rd Industrial Estate, Heron Rd, Cardiff	Historic (last recorded waste 31/12/1984)	Inert Waste

## Geology

- 5.11 The superficial (drift) and solid geology beneath the site is described as Tidal Flat Deposits. The solid geology is shown to comprise of: Cae Castell Formation; Cardiff Group; Mercia Mudstone Group (Conglomerate); Mercia Mudstone Group (Mudstone); and Rhymney Grit Member.
- 5.12 During the site investigation in 2005 the site geology was verified to a maximum depth of 5 metres below ground level. The general geological sequence identified by intrusive investigation was:
- Made Ground
  - Clay (of the Tidal Flat Deposits)
- 5.13 Made ground was encountered at each borehole location and proven to a maximum depth of 1.5mBGL.
- 5.14 Made ground encountered across the site consisted mainly of gravelly or sandy clay, with the gravel comprising concrete or brick.
- 5.15 Brown/grey clay was predominantly found to underlie the made ground at all exploratory hole locations. The strength of the clay varies becoming softer with depth. Organic matter consisting of plant roots/wood was identified at each location, between depths of 1.5 to 5 mBGL.
- 5.16 Further details of the geology of the site are in section 3 and 4.1.2 of the 2005 site investigation report at Appendix B.

## Hydrogeology

- 5.17 The Tidal Flat Deposits that immediately underlie the site are designated unproductive strata by Natural Resources Wales. The bedrock of the Mercia Mudstone Group that is concealed beneath the Tidal Flat Deposits are designated a Secondary A aquifer, reflecting the predominance of lower permeability layers which store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. Not only is the bedrock aquifer considered to be of low productivity, it is also of uncertain potability owing to the proximity of the saline surface waters of the Severn Estuary.
- 5.18 The low permeability Tidal Flat Deposits provides an effective barrier to underlying the Secondary A aquifer. The Tidal Flat Deposits are largely composed of low permeability clay deposits with little connectivity with surface water receptors on the site.
- 5.19 The site does not lie within a groundwater Source Protection Zone (SPZ) and no groundwater abstractions are identified within 2 km of the proposed site.
- 5.20 Further information regarding geology and hydrogeology are provided in section 3.1.4 and 4.1.3 of the 2005 site investigation report at Appendix B.

## Hydrology

- 5.21 The site is located on the western edge of the Gwent Levels, within Rumney and Peterstone SSSI.
- 5.22 The reën system within the site is one of the primary reasons for the designation of the levels as a SSSI. Across the SSSI as a whole the reëns create a very extensive interconnected linear habitat of high nature conservation value. Many reëns have notable botanical and invertebrate interest, with several Red Data Book and Notable aquatic plant species recorded as features of the SSSI.
- 5.23 The network of reëns at the site is illustrated on the Composite Plan (JCD 0170:03 rev10). No reëns are in the specific location of the proposed installation.

## Pollution History

### Environmental Controls

- 5.24 The operator has implemented an Environmental Management System (EMS) in relation to the current waste activities taking place at the site. This will be updated to include the installation prior to commissioning of the RDF/SRF Processing Facility. The management, monitoring and reporting requirements of the Environmental Permit will be complied with, which will ensure that any environmental protection elements are implemented. The EMS has previously been agreed with NRW and any updates will be made in accordance with the relevant guidance and in consultation with NRW.

### Pollution Incidents and Emergency Response

- 5.25 The Groundsure Report records 20 pollution incidents within a 500 m radius of the site. 1 of the pollution incidents was classified with a category 1 major severity; 8 of the incidents were classified with a category 2 significant severity; 10 of the incidents were classified with a category 3 minor severity; and 1 incident was classified 4 having no impact. These are detailed in Table 4.6 below.

**Table 4.5 Summary of Recorded Pollution Incidents**

Date of Incident	Distance and direction from site	Impact Type	Pollutant
2/04/2001	On site	Water: Category 3 (minor) Land: Category 3 (minor) Air: Category 3 (minor)	Oils and Fuel
27/03/2012	On site	Water: Category 4 (no impact) Land: Category 2 (significant) Air: Category 2 (significant)	Sewage materials
27/03/2012	On site	Water: Category 4 (no impact)	Inert materials and

Date of Incident	Distance and direction from site	Impact Type	Pollutant
		Land: Category 1 (major) Air: Category 4 (no impact)	wastes
20/02/2012	On site	Water: Category 2 (significant) Land: Category 4 (no impact) Air: Category 4 (no impact)	General biodegradable materials and waste
1/08/2012	On site	Water: Category 2 (significant) Land: Category 4 (no impact) Air: Category 4 (no impact)	Contaminated water
28/03/2014	On site	Water: Category 3 (minor) Land: Category 3 (minor) Air: Category 2 (significant)	Atmospheric Pollutants and Effects
18/09/2013	On site	Water: Category 2 (significant) Land: Category 3 (minor) Air: Category 4 (no impact)	Specific waste materials
20/09/2001	On site	Water: Category 4 (no impact) Land: Category 4 (no impact) Air: Category 3 (minor)	Atmospheric pollutants and effects
4/08/2003	On site	Water: Category 4 (no impact) Land: Category 4 (no impact) Air: Category 3 (minor)	Atmospheric pollutants and effects
5/11/2003	79 m east	Water: Category 4 (no impact) Land: Category 4 (no impact) Air: Category 3 (minor)	Atmospheric pollutants and effects
29/04/2003	91 m north east	Water: Category 4 (no impact) Land: Category 4 (no impact) Air: Category 3 (minor)	Atmospheric pollutants and effects
15/09/2002	180 m south west	Water: Category 4 (no impact) Land: Category 4 (no impact) Air: Category 4 (no impact)	Atmospheric pollutants and effects
30/07/2002	203 m north west	Water: Category 4 (no impact) Land: Category 4 (no impact) Air: Category 3 (minor)	Atmospheric pollutants and effects
12/04/2003	264 m south east	Water: Category 3 (minor) Land: Category 3 (minor) Air: Category 3 (minor)	Atmospheric pollutants and effects
21/04/2003	344 m north east	Water: Category 3 (minor) Land: Category 3 (minor) Air: Category 4 (no impact)	Inert materials and wastes
10/07/2003	347 m north east	Water: Category 3 (minor) Land: Category 4 (no impact) Air: Category 4 (no impact)	Inert materials and wastes

Date of Incident	Distance and direction from site	Impact Type	Pollutant
21/11/2007	482 m west	Water: Category 3 (minor) Land: Category 2 (significant) Air: Category 4 (no impact)	Specific waste materials (metals)
21/11/2007	482 m west	Water: Category 3 (minor) Land: Category 2 (significant) Air: Category 4 (no impact)	Specific waste materials (vehicles and vehicle parts)
21/11/2007	428 m west	Water: Category 3 (minor) Land: Category 2 (significant) Air: Category 4 (no impact)	Specific waste materials (tyres)
22/06/2001	499 m north	Water: Category 3 (minor) Land: Category 4 (no impact) Air: Category 4 (no impact)	Oils and Fuel

### Site History

5.26 Historical mapping indicates that from 1882 to approximately 2000 the entire site was principally farmland. The first waste management licence was granted for the site in 2000 and various waste activities have taken place on different areas of the site since that time.

### Historical Contamination

5.27 Land use indicated in the historical Ordnance Survey maps, included within the Groundsure Report (Appendix A) is summarised in Table 4.7 below.

**Table 4.6 Historical Land Use of the Site and Adjacent Areas**

Date From - To	Onsite Land Use	Surrounding Areas Land use (250 m radius)
1882 - 1966	The site is an area of farmland with several drainage reens crossing the site.	The surrounding area shows similar characteristic to the site
1966-1989	No significant change	Middle Newton Farm has been developed to the south of the site with several large farm buildings shown. A caravan park is located to the north east
1989 - 1991	No significant change.	Middle Newton Farm has developed further and several large buildings lie immediately to the south of the site. Electricity lines and a pylon are shown along the southern border to the site. A large sewage pit is located approximately 100 m south east of the site.
1991 - 2000	No significant change.	Wentloog Avenue borders the site to the north.
2000 - 2016	No significant changes are shown on historical mapping . Waste operations began on site following the issue of a waste management licence.	No significant changes are shown on historical mapping.



## **Reference Data**

- 5.28 The site investigation undertaken by RPS in 2005 covered a much larger area than the installation will occupy and no specific sampling was carried out in the area of the installation. Nonetheless NRW have accepted that the 2005 site investigation represents the baseline for the entire Atlantic Ecopark site including the area of the installation.

## 6 Operational Phase of Site Condition Report

### Operational Phase

- 6.1 During the life of the Permit, the following sections of the SCR template (EPR H5) will be maintained in order that the Operator can demonstrate that the land is in a 'satisfactory state' should the Permit be surrendered. Relevant information, as identified within the template below, will need to be collected and recorded throughout the life of the Permit. In addition, relevant procedures will be reviewed, where relevant to ensure sufficient data is available when the site seeks to cease the permitted activities.

CHANGES TO THE ACTIVITY	
Have there been any changes to the activity boundary?	If yes, provide a plan showing the changes to the activity boundary.
Have there been any changes to the permitted activities?	If yes, provide a description of the changes to the permitted activity.
Have any 'dangerous substances' not identified in the application SCR been used or produced as a result of the permitted activities	If yes, list them
Checklist of supporting information	Plan showing any changes to the boundary (where relevant); Description of the changes to the permitted activities (where relevant); and List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)

MEASURES TO BE TAKEN TO PROTECT THE LAND	
Use records collected during the life of the permit to summarise whether pollution prevention measures worked. If this is not possible, collect land and/or groundwater data to assess whether the land has deteriorated.	
Checklist of supporting information	Inspection records and summary of findings of inspections for all pollution prevention measures; and Records of maintenance, repair and replacement of pollution prevention measures

POLLUTION INCIDENTS THAT MAY HAVE HAD AN IMPACT ON LAND, AND THEIR REMEDIATION	
Summarise any pollution incidents that may have damaged the land. Describe how these were investigated and remedied. If this is not possible, collect land and /or groundwater reference data to assess whether the land has deteriorated while you've been there.	
Checklist of supporting information	Records of pollution incidents that may have impacted on land; and Records of their investigation and remediation
SOIL GAS AND WATER QUALITY MONITORING (WHERE UNDERTAKEN)	

Provide details of any soil gas and/or water monitoring undertaken. Include a summary of the findings. State whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how this was investigated and remedied.	
Checklist of supporting information	Description of soil gas and/or water monitoring undertaken; and Monitoring results (including graphs)

## 7 Surrender Phase

- 7.1 At permit surrender, the following sections of the SCR template (EPR H5) will be completed and submitted to the Environment Agency as part of the Permit Surrender Application. Information that has been gathered over the lifetime of the Permit will be used to identify whether the land is in a satisfactory condition. If necessary, surrender reference data will be collected and remediation will be undertaken if required.

<b>DECOMMISSIONING AND REMOVAL OF POLLUTION RISK</b>	
Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how this was investigated and remedied.	
Checklist of supporting information	<ul style="list-style-type: none"> <li>▪ Site Closure Plan;</li> <li>▪ List of potential sources of pollution risk; and</li> <li>▪ Investigation and remediation reports (where relevant)</li> </ul>

<b>REFERENCE DATA AND REMEDIATION (WHERE RELEVANT)</b>	
State whether land and/or groundwater data was collected or whether it wasn't required because the information within the Surrender Site Condition Report shows that the land has not deteriorated.	
If any land and/or groundwater reference data was collected, summarise what this entailed, and what the data found. State whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a "satisfactory state". If it isn't, a summary of what has been done to remedy this should be provided. SITA must confirm that the land is now in a "satisfactory state" at surrender.	
Checklist of supporting information	<ul style="list-style-type: none"> <li>▪ Land and/or groundwater data collected at application (if collected);</li> <li>▪ Land and/or groundwater data collected at surrender (where needed);</li> <li>▪ Assessment of satisfactory state; and</li> <li>▪ Remediation and verification reports (where undertaken)</li> </ul>
<b>STATEMENT OF SITE CONDITION</b>	
Provide a statement about the condition of the land at the site. This should confirm that:	
<ul style="list-style-type: none"> <li>• the permitted activities have stopped;</li> <li>• decommissioning is complete, and the pollution risk has been removed; and</li> <li>• the land is in a satisfactory condition.</li> </ul>	

## 8 Conclusions

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- 8.1 RPS Planning and Development has undertaken an assessment of the site condition of land located to the south of the current waste transfer station at Atlantic EcoPark, in support of the application for a variation of the current Environmental Permit for an RDF/SRF processing facility. The primary purpose of this report is to provide information to NRW in relation to the planned operations and to provide them with a framework against which the potential future contamination issues will be assessed.
- 8.2 The published geology of the area and ground investigations at the site have indicated that the site is underlain by Made Ground and Tidal Flat Deposits. The Tidal Flat Deposit is classified as unproductive strata. The low permeability Tidal Flat Deposits provides an effective barrier to underlying the Secondary A aquifer. The Tidal Flat Deposits are largely composed of low permeability clay deposits with little connectivity with surface water receptors on the site. The Severn estuary lies approximately 30 m to the south of the site.
- 8.3 Historical site uses have identified potential historical contamination sources, namely historic waste activities at the site. Phase II intrusive ground investigation within the site boundary identified Made Ground mainly consisting of gravelly or sandy clay, with the gravel comprising concrete and brick. Occasional fragments of metal were also identified in certain locations.
- 8.4 The principal potential sources of land and water contamination during site operation include leachate from waste stockpiles. A number of mitigation measures, including concrete hard standing across operational areas of the site and sealed drainage system, will reduce the potential for contamination pathways to be present and prevent adverse impact during the operational life of the site.

## Glossary

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Terms	Full Description
SRF	Solid Recovered Fuel
EMS	Environmental Management System
EPR	Environmental Permitting (England & Wales) Regulations (2010)
WML	Waste Management Licence
IED	Industrial Emissions Directive
SCR	Site Condition Report
IPC	Integrated Pollution Control
IPPC	Integrated Pollution Prevention and Control
DAA	Directly Associated Activity
NGR	National Grid Reference
SSSI	Special Site of Scientific Interest
SPA	Special Protection Area
SAC	Special Area of Conservation
EA	Environment Agency
NRW	Natural Resources Wales
SPZ	Source Protection Zone
TPH	Total Petroleum hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
VOCs	Volatile Organic Compounds
SVOCs	Semi Volatile Organic Compounds

## Appendices

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## Appendix A: Groundsure Report

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RPS

R P S PLANNING & DEVELOPMENT, 2420 THE  
QUADRANT, AZTEC WEST,  
BRISTOL, BS32 4AQ

Groundsure  
Reference:

RPS-3186026

Your Reference:

PO16-  
621\_JDC0170\_Atlantic\_SP1\_Inves

Report Date

20 Jul 2016

Report Delivery  
Method:

Email - pdf

## Groundsure Enviro Insight

Address: TY TO MAEN FARM, NEWTON ROAD, CARDIFF, CF3 2EJ

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

#BodyContact#

Yours faithfully,

RPS Group

Enc.  
Groundsure Enviroinsight

# Groundsure Enviro Insight

Address: TY TO MAEN FARM, NEWTON ROAD, CARDIFF, CF3 2EJ  
Date: 20 Jul 2016  
Reference: RPS-3186026  
Client: RPS



Aerial Photograph Capture date: 14-Jul-2013  
Grid Reference: 323563,178394  
Site Size: 55.61ha

Report Reference: RPS-3186026  
Client Reference: PO16-621\_JDC0170\_Atlantic\_SP1\_Inves

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# Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	8	5	20
1.2 Additional Information – Historical Tank Database	0	0	2	3
1.3 Additional Information – Historical Energy Features Database	0	0	3	6
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	1	2
1.6 Potentially Infilled Land	0	4	2	13
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	15	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	1	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	5	9
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	9	0	4	7
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency Registered Landfill Sites	0	1	0	0	0	Not searched
3.1.2 Environment Agency Historic Landfill Sites	4	0	1	2	3	5
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	12	2
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	2	4	8	4	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	7	2	6	2	18	26

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	6	1	14	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

## Section 6: Hydrogeology and Hydrology

0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	4	7	5	0	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

## Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Medium
7.4 Are there any Flood Defences within 250m of the study site?	Yes
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	Yes
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

## Section 8: Designated Environmentally Sensitive Sites

On-site    0-50m    51-250    251-500    501-1000    1000-2000

8.1 Records of Sites of Special Scientific Interest (SSSI)	1	1	0	0	0	2
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	1	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	1	0	0	0	0
8.5 Records of Ramsar sites	0	1	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	1
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0



Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	1	0

Section 9: Natural Hazards	
9.1 What is the maximum risk of natural ground subsidence?	Moderate
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Moderate
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Negligible
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Moderate
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 5 and 10% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	Basic radon protective measures are necessary.

Section 10: Mining	
10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	Yes
10.3 Are there any brine affected areas within 75m of the study site?	No

# Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

## 1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

## 2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

## 3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

## 4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

## 5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

## 6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

## 7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

## 8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

## 9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

## 10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

## 11. Contacts


This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.


## Note: Maps


Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).


Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".


All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.


 Site Outline


 Industrial Land Use


 Potentially Infilled Land

 Search Buffers (m)

 Energy Features

 Petrol Stations

 Tanks

 Garages

# 1. Historical Industrial Sites

## 1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 33

ID	Distance [m]	Direction	Use	Date
1A	12	SE	Unspecified Wharf	1916
2A	12	SE	Unspecified Wharf	1916
3B	17	SE	Unspecified Wharf	1901
4B	17	SE	Unspecified Wharf	1901
5C	43	SW	Sewage Pipe	1901
6C	43	SW	Sewage Pipe	1901
7D	44	SW	Sewer Pipe	1901
8D	44	SW	Sewer Pipe	1901
9O	160	SE	Unspecified Wharf	1949
10	220	NW	Sewage Pipe	1899
11E	229	NE	Unspecified Commercial/Industrial	1973
12	230	NE	Unspecified Commercial/Industrial	1987
13E	241	NE	Unspecified Commercial/Industrial	1964
14F	254	SW	Unspecified Wharf	1949
15H	255	NE	Unspecified Stores	1949
16G	279	N	Railway Sidings	1949
17F	304	SW	Unspecified Wharf	1901
18F	304	SW	Unspecified Wharf	1901
19	305	N	Timber Yard	1973
20A	309	E	Unspecified Wharf	1987
21A	309	E	Unspecified Wharf	1973
22A	309	E	Unspecified Wharf	1964
23F	311	SW	Unspecified Wharf	1916
24F	311	SW	Unspecified Wharf	1916
25G	336	N	Disused Railway Sidings	1973
26G	336	N	Railway Sidings	1964
27P	351	SW	Refuse Heap	1987
28H	397	NE	Unspecified Works	1987
29L	415	N	Unspecified Depot	1964
30I	484	NW	Railway Sidings	1947
31I	488	NW	Railway Sidings	1916
32I	488	NW	Railway Sidings	1916

33I

491

NW

Railway Sidings

1880

## 1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

5

ID	Distance (m)	Direction	Use	Date
34J	116	NE	Tanks	1992
35J	116	NE	Tanks	1986
36K	388	NE	Unspecified Tank	1966
37K	436	NE	Unspecified Tank	1966
38L	462	N	Unspecified Tank	1966

## 1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

9

ID	Distance (m)	Direction	Use	Date
39M	212	N	Gas Governor	1991
40M	213	N	Gas Governor	1998
41M	213	N	Gas Governor	1992
42	266	E	Electricity Substation	1999
43N	332	N	Electricity Substation	1998
44N	332	N	Electricity Substation	1992
45N	333	N	Electricity Substation	1991
46	426	NE	Electricity Substation	1999
47	427	W	Electricity Substation	1995

## 1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary:

0

Database searched and no data found.

## 1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 3

ID	Distance (m)	Direction	Use	Date
48	250	N	Motor Car Depot	1966
49E	251	NE	Motor Car Depot	1966
50	284	NW	Garage	1966

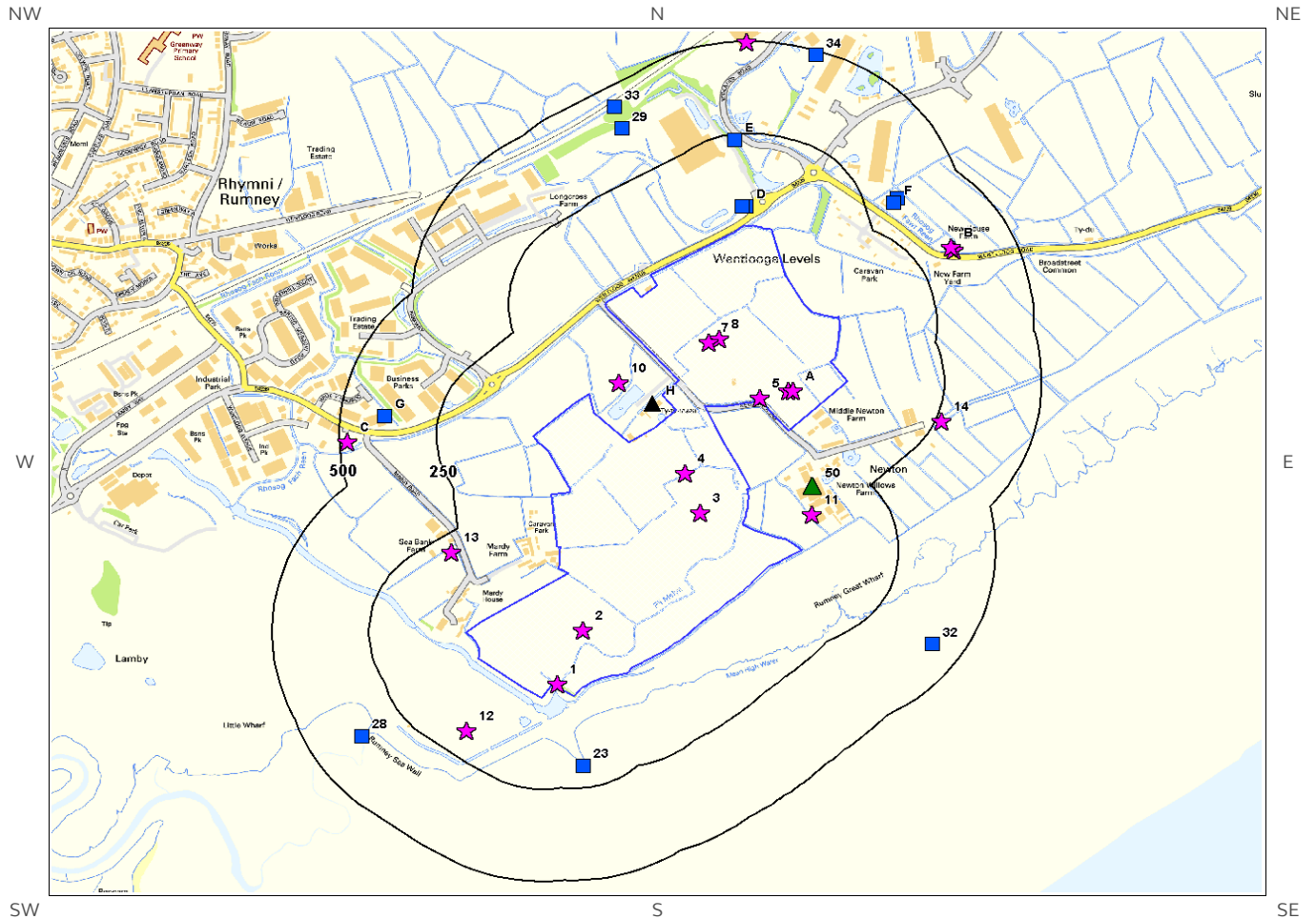
## 1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 19

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
51A	12	SE	Unspecified Wharf	1916
52A	12	SE	Unspecified Wharf	1916
53B	17	SE	Unspecified Wharf	1901
54B	17	SE	Unspecified Wharf	1901
55	144	SE	Pond	1987
56O	160	SE	Unspecified Wharf	1949
57F	254	SW	Unspecified Wharf	1949
58F	304	SW	Unspecified Wharf	1901
59F	304	SW	Unspecified Wharf	1901
60A	309	E	Unspecified Wharf	1964
61A	309	E	Unspecified Wharf	1973
62A	309	E	Unspecified Wharf	1987
63F	311	SW	Unspecified Wharf	1916
64F	311	SW	Unspecified Wharf	1916
65P	351	SW	Refuse Heap	1987
66	422	NW	Pond	1882
67Q	439	NW	Pond	1882
68Q	483	NW	Pond	1987
69	486	NW	Pond	1882

## 2. Environmental Permits, Incidents and Registers Map



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- |                               |                                       |  |
|-------------------------------|---------------------------------------|--|
| Site Outline                  | Recorded Pollution Incident           | RAS 3 & 4 Authorisations                                       |
| Dangerous Substances (List 1) | Dangerous Substances (List 2)         | Part A(1) Authorised Processes and Historic IPC Authorisations |
| Water Industry Referrals      | Licenced Discharge Consents           | Part A(2) and Part B Authorised Processes                      |
| Red List Discharge Consents   | Sites Determined as Contaminated Land | COMAH / NIHHS Sites  |
|                               |                                       | Hazardous Substance Consents and Enforcements                  |



## 2. Environmental Permits, Incidents and Registers

### 2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

#### 2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

#### 2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

15

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
51H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Neal Soil Suppliers Limited Process: RECOVERY OF WASTE; HAZARDOUS WASTE &gt;10T/D BY RECYCLING INORGANICS (NOT METALS)</p> <p>Permit Number: LP3534CE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2012-08-01 Status: Refused</p>
52H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Neal Soil Suppliers Limited Process: -</p> <p>Permit Number: NP3336FD Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2012-01-01 Status: Determination</p>
53H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Eco Park Process: CREATED BY IED - DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING RECYCLING OR RECLAMATION OF INORGANIC MATERIALS OTHER THAN METALS OR METAL COMPOUNDS</p> <p>Permit Number: EP3031ZE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 26/3/2013 Last date noted as effective: 2013-07-01 Status: Effective</p>



ID	Distance (m)	Direction	NGR	Details	
54H	37	SW	323480 178550	Operator: Neal Soil Suppliers Ltd Installation Name: Neal Soil Suppliers Limited Process: RECOVERY OF WASTE; HAZARDOUS WASTE >10T/D SOLVENT RECLAMATION	Permit Number: LP3534CE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2012-08-01 Status: Refused
55H	37	SW	323480 178550	Operator: Neal Soil Suppliers Ltd Installation Name: Neal Soil Suppliers Limited Process: OTHER WASTE DISPOSAL; NON-HAZARDOUS WASTE >50T/D BY PHYSICO-CHEMICAL TREATMENT	Permit Number: LP3534CE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2012-08-01 Status: Refused
56H	37	SW	323480 178550	Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Eco Park Process: CREATED BY IED - DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING SOLVENT RECLAMATION OR REGENERATION	Permit Number: EP3031ZE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 26/3/2013 Last date noted as effective: 2013-07-01 Status: Effective
57H	37	SW	323480 178550	Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Eco Park Process: CREATED BY IED - DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT	Permit Number: EP3031ZE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 26/3/2013 Last date noted as effective: 2013-07-01 Status: Effective
58H	37	SW	323480 178550	Operator: Neal Soil Suppliers Ltd Installation Name: Neal Soil Suppliers Limited Process: OTHER WASTE DISPOSAL; HAZARDOUS WASTE >10T/D	Permit Number: LP3534CE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2012-08-01 Status: Refused
59H	37	SW	323480 178550	Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Eco Park Ea/epr/vp3095fs/v007 Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING SOLVENT RECLAMATION OR REGENERATION	Permit Number: EP3031ZE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 26/3/2013 Last date noted as effective: 2016-07-06 Status: Superseded
60H	37	SW	323480 178550	Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Eco Park Ea/epr/vp3095fs/v007 Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING RECYCLING OR RECLAMATION OF INORGANIC MATERIALS OTHER THAN METALS OR METAL COMPOUNDS	Permit Number: EP3031ZE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 26/3/2013 Last date noted as effective: 2016-07-06 Status: Superseded

ID	Distance (m)	Direction	NGR	Details
61H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Eco Park Ea/epr/vp3095fs/v007 Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO- CHEMICAL TREATMENT</p> <p>Permit Number: EP3031ZE Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 26/3/2013 Last date noted as effective: 2016-07-06 Status: Superseded</p>
62H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Ecopark Epr/vp3095fs Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING SOLVENT RECLAMATION OR REGENERATION</p> <p>Permit Number: LP3739EG Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 6/11/2013 Last date noted as effective: 2016-07-06 Status: Effective</p>
63H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Ecopark Epr/vp3095fs Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING RECYCLING OR RECLAMATION OF INORGANIC MATERIALS OTHER THAN METALS OR METAL COMPOUNDS</p> <p>Permit Number: LP3739EG Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 6/11/2013 Last date noted as effective: 2016-07-06 Status: Effective</p>
64H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Atlantic Ecopark Epr/vp3095fs Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO- CHEMICAL TREATMENT</p> <p>Permit Number: LP3739EG Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 6/11/2013 Last date noted as effective: 2016-07-06 Status: Effective</p>
65H	37	SW	323480 178550	<p>Operator: Neal Soil Suppliers Ltd Installation Name: Neal Soil Suppliers Limited Process: RECOVERY OF WASTE; HAZARDOUS WASTE &gt;10T/D SOLVENT RECLAMATION</p> <p>Permit Number: NP3336FD Original Permit Number: NP3336FD EPR Reference: - Issue Date: - Effective Date: 5/3/2012 Last date noted as effective: 2016-07-06 Status: Superseded</p>

### 2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

### 2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

## 2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

## 2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

1

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
50	157	NE	323890 178326	Address: Neal Environmental Ltd, Newton Willows, Newton Road, Rumney, Cardiff, CF3 2EJ Process: Rendering Status: Current Permit Permit Type: Part B Enforcement: Information Requested, Not Received Date of Enforcement: Information Requested, Not Received Comment: Information Requested, Not Received

## 2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

## 2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

14

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
21D	53	N	323720 179090	Address: WATER TREATMENT AREA 1 WENTLOOG LEV, WATER TREATMENT AREA 1 WENTLOOG, WENTLOOG LEVELS , , , , , , , , Effluent Type: UNSPECIFIED Permit Number: AN027940101 Permit Version: 1 Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 25/02/1998 Effective Date: 25-Feb-1998 Revocation Date: 06/01/1999
22D	53	N	323710 179090	Address: POND A WENTLOOG AVENUE WENTLOOG, POND A WENTLOOG AVENUE, WENTLOOG, CARDIFF, CARDIFF CBC, CF3 8ER Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AN028290101 Permit Version: 1 Receiving Water: Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 15/07/1998 Effective Date: 15-Jul-1998 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details	
23	189	S	323300 177570	Address: YSTRADYRODWG/PONTYPRIDD TRUNK, YSTRADYRODWG/PONTYPRIDD TRUNK, UNKNOWN, UNKNOWN, UNKNOWN, UNKNOWN Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0045101 Permit Version: 4	Receiving Water: Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 27/03/2008 Effective Date: 27-Mar-2008 Revocation Date: -
24E	234	N	323690 179270	Address: POND B & POND C WENTLOOG AVENUE, POND B & POND C, WENTLOOG AVENUE, RUMNEY, CARDIFF, CF3 8ER Effluent Type: UNSPECIFIED Permit Number: AN027940201 Permit Version: 1	Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 25/02/1998 Effective Date: 25-Feb-1998 Revocation Date: 06/01/1999
25E	234	N	323690 179270	Address: POND B & POND C WENTLOOG AVENUE, POND B & POND C, WENTLOOG AVENUE, RUMNEY, CARDIFF, CF3 8ER Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AN028290201 Permit Version: 1	Receiving Water: Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 15/07/1998 Effective Date: 15-Jul-1998 Revocation Date: -
26F	321	E	324100 179100	Address: SHIRENEWTON CARAVAN PARK WENTLOOG R, SHIRENEWTON CARAVAN PARK WENTLOO, WENTLOOG ROAD CARDIFF, CARDIFF, CARDIFF, CARDIFF Effluent Type: UNSPECIFIED Permit Number: AN0043301 Permit Version: 1	Receiving Water: Status: CONSENT EXPIRED - TIME LIMIT Issue date: 16/10/1987 Effective Date: 16-Oct-1987 Revocation Date: 29/04/1993
27F	334	E	324110 179110	Address: SHIRENEWTON CARAVAN PARK WENTLOOG R, SHIRENEWTON CARAVAN PARK WENTLOO, WENTLOOG ROAD CARDIFF, CARDIFF, CARDIFF, CARDIFF Effluent Type: UNSPECIFIED Permit Number: AN0043302 Permit Version: 1	Receiving Water: Status: CONSENT EXPIRED - TIME LIMIT Issue date: 16/10/1987 Effective Date: 16-Oct-1987 Revocation Date: 29/04/1993
28	368	SW	322730 177650	Address: LAMBY WAY LANDFILL SITE, EASTERN EXTN, LAMBY WAY, RUMNEY, CARDIFF, CF3 2EQ Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AN028920101 Permit Version: 1	Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 27/05/1999 Effective Date: 27-May-1999 Revocation Date: 26/06/2006
29	385	NW	323400 179300	Address: MOTOR RACE TRACK WEST OF TROWBRIDGE, MOTOR RACE TRACK, WEST OF TROWBRIDGE RD, WENTLOOG, CARDIFF Effluent Type: UNSPECIFIED Permit Number: AN0239201 Permit Version: 1	Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 01/02/1993 Effective Date: 01-Feb-1993 Revocation Date: 03/11/1997
30G	388	W	322790 178520	Address: Unknown Unknown Unknown Unknown Unk, Unknown Unknown Unknown Unknown, UNKNOWN UNKNOWN UNKNOWN UNKNOWN, UNKNOWN UNKNOWN UNKNOWN, UNKNOWN UNKNOWN, UNKNOWN Effluent Type: UNSPECIFIED Permit Number: AN0127401 Permit Version: 2	Receiving Water: Status: CONSENT EXPIRED - TIME LIMIT Issue date: 04/01/1989 Effective Date: 04-Jan-1989 Revocation Date: 17/10/1994

ID	Distance (m)	Direction	NGR	Details
31G	388	W	322790 178520	<p>Address: Unknown Unknown Unknown Unknown Unk, Unknown Unknown Unknown Unknown, UNKNOWN UNKNOWN UNKNOWN UNKNOWN, UNKNOWN UNKNOWN UNKNOWN, UNKNOWN UNKNOWN, UNKNOWN Effluent Type: UNSPECIFIED Permit Number: AN0127401 Permit Version: 1</p> <p>Receiving Water: Status: REVOKED - UNSPECIFIED Issue date: 01/01/1901 Effective Date: 01-Jan-1901 Revocation Date: 03/01/1989</p>
32	422	SE	324200 177900	<p>Address: SHIRENEWTON GYPSY SITE CARDIFF, SHIRENEWTON GYPSY SITE, CARDIFF, , Effluent Type: SALINE WATER - NON DESIGNATED BATHING BEACHES Permit Number: AC0141601 Permit Version: 1</p> <p>Receiving Water: Status: REVOKED (WRA 91, S88 &amp; SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 06/03/1984 Effective Date: 06-Mar-1984 Revocation Date: 11/07/2003</p>
33	446	NW	323381 179359	<p>Address: TROWBRIDGE ROAD RUMNEY CARDIFF, TROWBRIDGE ROAD, RUMNEY, CARDIFF, CARDIFF CBC Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: AB0034202 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 23/01/1963 Effective Date: 23-Jan-1963 Revocation Date: -</p>
34	488	N	323900 179500	<p>Address: SITE 1 NEWLANDS ROAD WENTLOOG COR P, SITE 1, NEWLANDS ROAD, WENTLOOG CORPORATE PARK, CARDIFF Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: AN028610101 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT (WRA 91, S88 &amp; SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 12/11/1998 Effective Date: 12-Nov-1998 Revocation Date: -</p>

### 2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

### 2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

## 2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

## 2.3 Environment Agency Recorded Pollution Incidents

### 2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

20

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	0	On Site	323233 177791	Incident Date: 02-Apr-2001 Incident Identification: 1379 Pollutant: Oils and Fuel Pollutant Description: Other Oil or Fuel Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
2	0	On Site	323299 177937	Incident Date: 27-Mar-2012 Incident Identification: 974802 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 2 (Significant)
3	0	On Site	323600 178257	Incident Date: 27-Mar-2012 Incident Identification: 974899 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 1 (Major) Air Impact: Category 4 (No Impact)
4	0	On Site	323561 178365	Incident Date: 20-Feb-2012 Incident Identification: 963346 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5	0	On Site	323754 178569	Incident Date: 01-Aug-2012 Incident Identification: 1020890 Pollutant: Contaminated Water Pollutant Description: Other Contaminated Water Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6A	0	On Site	323839 178589	Incident Date: 28-Mar-2014 Incident Identification: 1221944 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 2 (Significant)
7	0	On Site	323622 178720	Incident Date: 18-Sep-2013 Incident Identification: 1160253 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste Water Impact: Category 2 (Significant) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
8	0	On Site	323650 178730	Incident Date: 20-Sep-2001 Incident Identification: 31934 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
9A	0	On Site	323827 178588	Incident Date: 04-Aug-2003 Incident Identification: 179028 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
10	79	E	323390 178610	Incident Date: 05-Nov-2003 Incident Identification: 200054 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

ID	Distance (m)	Direction	NGR	Details	
11	91	NE	323889 178251	Incident Date: 29-Apr-2003 Incident Identification: 154791 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
12	180	SW	322998 177665	Incident Date: 15-Sep-2002 Incident Identification: 107875 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
13	203	NW	322959 178149	Incident Date: 30-Jul-2002 Incident Identification: 95684 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
14	264	SE	324223 178506	Incident Date: 12-Apr-2003 Incident Identification: 150597 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
15B	344	NE	324246 178978	Incident Date: 21-May-2003 Incident Identification: 159843 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
16B	347	NE	324254 178972	Incident Date: 10-Jul-2003 Incident Identification: 172457 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
17C	482	W	322692 178449	Incident Date: 21-Nov-2007 Incident Identification: 546543 Pollutant: Specific Waste Materials Pollutant Description: Metal Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
18C	482	W	322692 178449	Incident Date: 21-Nov-2007 Incident Identification: 546543 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
19C	482	W	322692 178449	Incident Date: 21-Nov-2007 Incident Identification: 546543 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
20	499	N	323719 179536	Incident Date: 20-Jun-2001 Incident Identification: 10386 Pollutant: Oils and Fuel Pollutant Description: Other Oil or Fuel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

### 2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

## 2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

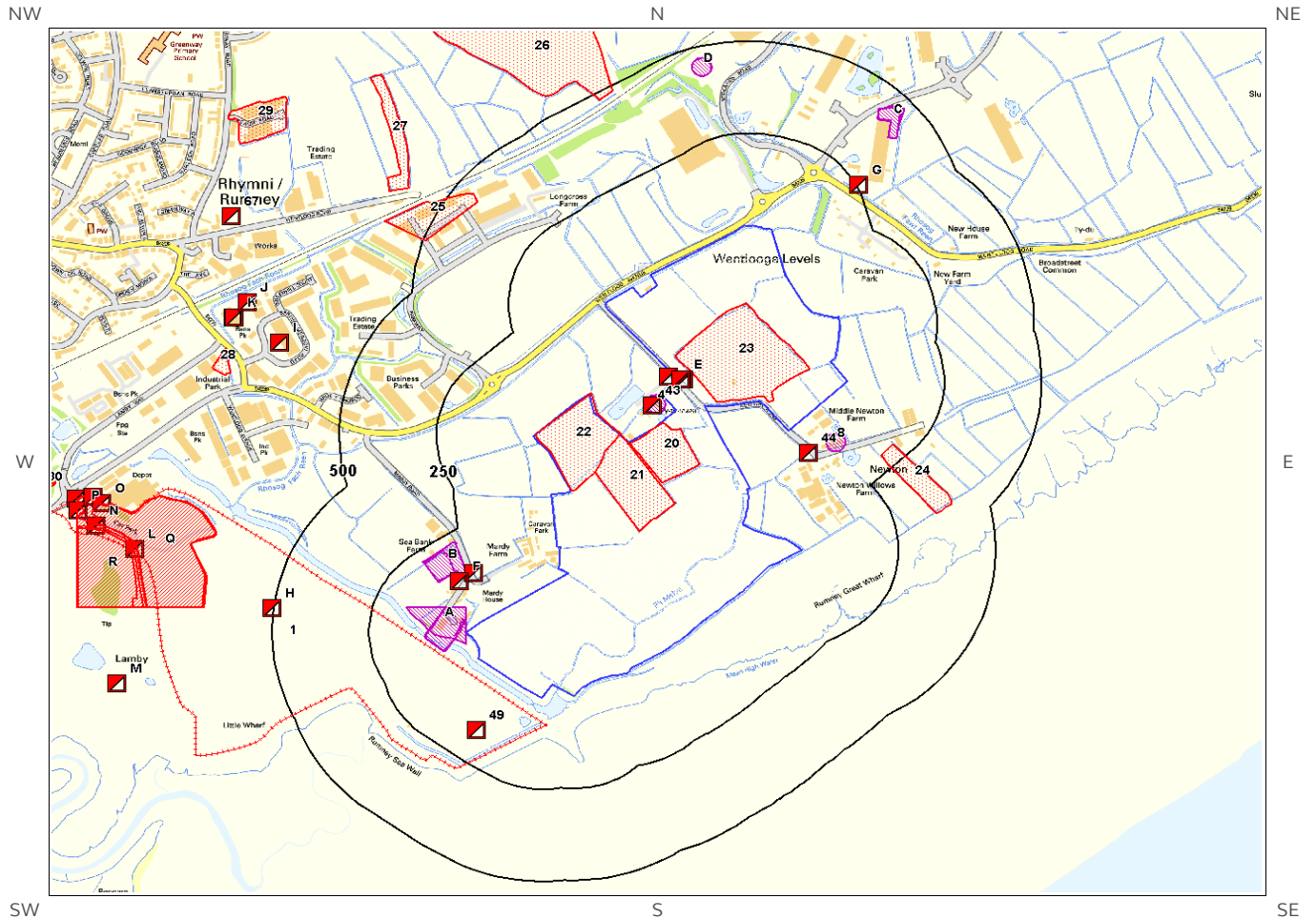
0

Database searched and no data found.

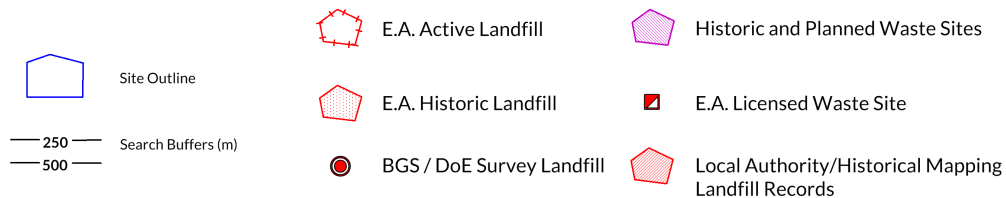
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# 3. Landfill and Other Waste Sites Map



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# 3. Landfill and Other Waste Sites

## 3.1 Landfill Sites

### 3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

1

The following Environment Agency landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	47	SW	100000 100000	<p>Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP Landfill Reference: 30235.0 Environmental Permitting Regulations (Waste) Reference: CCC002 Landfill Type: A4 : Household, Commercial &amp; Industrial Waste Landfill</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff Status: Modified IPPC Reference: EPR Reference:</p>

### 3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

15

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
20	0	On Site	323500 178400	<p>Site Address: Ty-To-Maen, Cardiff Waste Licence: Yes Site Reference: - Waste Type: Inert, Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: David Neal First Recorded: 31-Dec-1990 Last Recorded: 31-Dec-1991</p>
21	0	On Site	323400 178300	<p>Site Address: Ty-To-Maen Farm, Cardiff Waste Licence: Yes Site Reference: - Waste Type: Inert, Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: David Neal First Recorded: 31-Dec-1990 Last Recorded: 31-Dec-1991</p>
22	0	On Site	323200 178400	<p>Site Address: Ty-To-Maen Farm, Cardiff Waste Licence: Yes Site Reference: - Waste Type: Inert, Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: David Neal First Recorded: 31-Dec-1991 Last Recorded: 31-Dec-1992</p>

ID	Distance (m)	Direction	NGR	Details	
23	0	On Site	323700 178600	Site Address: Middle Newton Farm, Newton Road, Rumney, Cardiff Waste Licence: Yes Site Reference: 88/02, 6815/0094 Waste Type: Inert, Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 07-Mar-1988 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Mr H W Neal First Recorded: 21-May-1986 Last Recorded: 31-Dec-1990
24	204	SE	324100 178300	Site Address: Middle Newton Farm, Newton Road, Rumney, Cardiff Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Special, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: N W Neal and Partners First Recorded: 31-Dec-1990 Last Recorded: 31-Dec-1995
25	429	NW	322900 179000	Site Address: The Old Piggery, Wentloog Road, Rumney, Cardiff Waste Licence: Yes Site Reference: 88/04 Waste Type: Inert, Industrial, Household, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 13-Jun-1988 Licence Surrendered: 11-Jan-1991 Licence Holder Address: Cathedral Road, Cardiff Operator: - Licence Holder: South Glamorgan County Council First Recorded: 31-Dec-1988 Last Recorded: 31-Dec-1990
26	480	NW	323100 179500	Site Address: Trowbridge Mawr, Cardiff Waste Licence: - Site Reference: - Waste Type: Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Trowbridge Corporation First Recorded: 31-Dec-1959 Last Recorded: 31-Dec-1963
27	595	NW	322800 179200	Site Address: Skewbridge, Wentloog Road, Cardiff Waste Licence: Yes Site Reference: 88/02, 6815/0075 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 07-Mar-1988 Licence Surrendered: 07-Mar-1989 Licence Holder Address: Middle newton Farm, Rumney, Cardiff Operator: - Licence Holder: H W Neal and Partners First Recorded: 31-Dec-1988 Last Recorded: 31-Dec-1992
28	800	W	322300 178600	Site Address: Mardy Limited, Lamby Way, Rumney Waste Licence: Yes Site Reference: 88/05 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 13-Jun-1988 Licence Surrendered: Licence Holder Address: Lamby Way, Rumney Operator: - Licence Holder: Mardy Limited First Recorded: 31-Dec-1988 Last Recorded: 31-Dec-1989
29	952	NW	322400 179300	Site Address: Heron Road Industrial Estate, Heron Road, Rumney Waste Licence: - Site Reference: - Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1960 Last Recorded: 31-Dec-1979
30	1107	W	321800 178200	Site Address: Rumney River Infill, Lambyway, Cardiff Waste Licence: Yes Site Reference: - Waste Type: Inert, Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 01-Sep-1976 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Cardiff City Council First Recorded: 31-Dec-1981 Last Recorded: 31-Dec-1984

ID	Distance (m)	Direction	NGR	Details	
Not shown	1370	SW	321900 176800	Site Address: Pengram Moors Landfill, Cardiff, South Glamorganshire Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1376	SW	321400 176000	Site Address: British Steel Corporation, Rover Way, Cardiff East Moors, Cardiff, South Glamorgan Waste Licence: - Site Reference: - Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: British Steel Corporation Licence Holder: - First Recorded: 31-Dec-1940 Last Recorded: -
Not shown	1445	NW	321500 178500	Site Address: Brachdy Lane, Rumney, Cardiff Waste Licence: Yes Site Reference: 6/78 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 30-Oct-1978 Licence Surrendered: 31-Dec-1982 Licence Holder Address: Riverside Works, Ely Operator: - Licence Holder: W T Davies Transport Limited First Recorded: 31-Dec-1978 Last Recorded: 01-Apr-1982
Not shown	1478	NW	321300 178500	Site Address: New Road, Cardiff Waste Licence: - Site Reference: - Waste Type: Inert, Commercial, Household, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1950 Last Recorded: 31-Dec-1964

### 3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

### 3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

14

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
96L	679	W	322178 178151	Refuse Tip	1986 mapping	Polygon
97Q	680	W	322196 178151	Refuse Tip	1998 mapping	Polygon
98Q	680	W	322196 178151	Refuse Tip	1994 mapping	Polygon

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
99Q	682	W	322177 178151	Refuse Tip	1989 mapping	Polygon
100Q	682	W	322177 178151	Refuse Tip	1961 mapping	Polygon
101Q	682	W	322177 178151	Refuse Tip	1989 mapping	Polygon
102R	832	W	322085 178110	Refuse Tip	1989 mapping	Polygon
103R	832	W	322085 178110	Refuse Tip	1986 mapping	Polygon
104R	832	W	322085 178110	Refuse Tip	1989 mapping	Polygon
105R	832	W	322085 178110	Refuse Tip	1961 mapping	Polygon
106R	853	W	322075 178108	Refuse Tip	1994 mapping	Polygon
107R	853	W	322075 178108	Refuse Tip	1998 mapping	Polygon
Not shown	1274	W	321781 177449	Refuse Tip	1968 mapping	Polygon
Not shown	1274	W	321781 177449	Refuse Tip	1970 mapping	Polygon

## 3.2 Other Waste Sites

### 3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

18

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
2A	0	On Site	322923 177950	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1998	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
3A	0	On Site	322923 177950	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1999	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

ID	Distance (m)	Direction	NGR	Details		
4	4	SW	323488 178551	Type of Site: Recycling Facility Site Address: Ty to Maen Farm, Newton Road, Rumney, CARDIFF, South Glamorgan, CF3 2EJ	Planning Application Reference: 08/00626/E Date: 14/03/2011	Further Details: Scheme comprises proposed ecopark including a composting facility and a materials recycling facility. An application (ref: 08/00626/E) for detailed planning permission was granted by Cardiff C.C. We have been advised the clients have their own preferred contractor. Start date, value and contract period are a guideline only. We have been advised the clients have their own preferred contractor. Data Source: Historic Planning Application Data Type: Point
5A	15	W	322946 177940	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1988	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
6A	15	W	322946 177940	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1988	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
7A	20	NW	322947 177940	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1992	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
8	78	SE	323951 178448	Type of Site: Waste Transfer Station (Conversion) Site Address: Middle Newton Farm, Newton Road, Rumney, CARDIFF, South Glamorgan, CF3 2EJ	Planning Application Reference: 02/459/R Date: -	Further Details: Scheme comprises reclassification of soil yard as a waste transfer station. An application (ref: 02/459/R) for Detailed Planning permission was submitted to Cardiff C.C. on 4th March 2002. Data Source: Historic Planning Application Data Type: Point
9B	127	NW	322945 178124	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1961	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
10B	127	NW	322945 178124	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1986	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
11B	127	NW	322945 178124	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1986	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
12B	127	NW	322945 178124	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1989	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
13B	127	NW	322945 178124	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1989	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

ID	Distance (m)	Direction	NGR	Details		
14B	151	NW	322931 178111	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 0	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
15B	151	NW	322931 178111	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1992	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
16C	391	NE	324093 179319	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1999	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
17C	391	NE	324094 179315	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1992	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
18D	420	N	323607 179468	Type of Site: Waste Transfer Station Site Address: South Wales International Frei, Newlands Road, Wentloog, CARDIFF, South Glamorgan, CF3 2EU	Planning Application Reference: 11/01384/DCO Date: 13/03/2012	Further Details: Scheme comprises construction of a waste transfer station. An application (ref: 11/01384/DCO) for detailed planning permission was submitted to Cardiff C.C. A detailed planning application has been submitted. Data Source: Historic Planning Application Data Type: Point
19D	420	N	323607 179467	Type of Site: Recycling Facility Site Address: Newlands Road, Trowbridge Road, CARDIFF, South Glamorgan, CF3 2EU	Planning Application Reference: 09/00246/E Date: -	Further Details: Scheme comprises construction of an integrated waste management facility incorporating autoclave technology, materials recycling and combined heat and power generation, ancillary offices and weighbridge office, and associated roads, car parking and landscaping. Construction - black top surfacing, planting site works. An application (ref: 09/00246/E) for detailed planning permission was granted by Cardiff C.C. Start date is a guideline only. We have been advised that this scheme is on hold. The project status will be re-checked on a regular basis. Data Source: Historic Planning Application Data Type: Point



### 3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

61

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
35E	0	On Site	323553 178621	<p>Site Address: Ty To Maen Farm, Newton Rd, Rhymney, Cardiff, CF3 2EJ Type: Household, Commercial &amp; Industrial Waste T Stn Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NEA006 EPR reference: - Operator: Neal Soil Suppliers Ltd Waste Management licence No: 30347 Annual Tonnage: 124999.0</p> <p>Issue Date: 14/10/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Soil Recycling Transfer Station Correspondence Address: Ty To Maen Farm, Newton Road, Rumney, Cardiff, CF3 2EJ</p>
36E	0	On Site	323559 178621	<p>Site Address: Atlantic Eco Park, Newton Road, Rumney, Cardiff, Glamorgan, CF3 2EJ Type: Special Waste Transfer Station Size: &gt;= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NEI024 EPR reference: EA/EPR/PP3993VS/V002 Operator: Atlantic Recycling Ltd Waste Management licence No: 30347 Annual Tonnage: 280000.0</p> <p>Issue Date: 14/10/2005 Effective Date: 15/11/2010 Modified: 01/03/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Atlantic Recycling Ltd Correspondence Address: -</p>
37E	0	On Site	323559 178621	<p>Site Address: Ty To Maen Farm, Newton Road, Rumney, Cardiff, Glamorgan, CF3 2EJ Type: Special Waste Transfer Station Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NEA006 EPR reference: VP3395FK/V002 Operator: Neal Soil Suppliers Ltd Waste Management licence No: 30347 Annual Tonnage: 124999.0</p> <p>Issue Date: 14/10/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Neal Soil Suppliers Ltd Correspondence Address: -</p>
38E	0	On Site	323559 178621	<p>Site Address: Atlantic Eco Park, Newton Road, Rumney, Cardiff, Glamorgan, CF3 2EJ Type: Special Waste Transfer Station Size: &gt;= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NEI024 EPR reference: EA/EPR/PP3993VS/V004 Operator: Atlantic Recycling Limited Waste Management licence No: 30347 Annual Tonnage: 280000.0</p> <p>Issue Date: 14/10/2005 Effective Date: 15/11/2010 Modified: 10/04/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Atlantic Recycling Limited Correspondence Address: -</p>
39E	0	On Site	323559 178621	<p>Site Address: Atlantic Eco Park, Newton Road, Rumney, Cardiff, Glamorgan, CF3 2EJ Type: Special Waste Transfer Station Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: NEI024 EPR reference: PP3993VS/V004 Operator: Atlantic Recycling Limited Waste Management licence No: 30347 Annual Tonnage: 0.0</p> <p>Issue Date: 14/10/2005 Effective Date: 15/11/2010 Modified: 10/04/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Atlantic Recycling Limited Correspondence Address: -</p>



ID	Distance (m)	Direction	NGR	Details	
40E	0	On Site	323559 178621	<p>Site Address: Ty - To - Maen Farm, Newton Road, Rumney, Cardiff, Glamorgan, CF3 2EJ</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: NEI024</p> <p>EPR reference: EA/EPR/PP3993VS/T001</p> <p>Operator: Atlantic Recycling Ltd</p> <p>Waste Management licence No: 30347</p> <p>Annual Tonnage: 124999.0</p>	<p>Issue Date: 14/10/2005</p> <p>Effective Date: 15/11/2010</p> <p>Modified: 02/12/2009</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Transferred</p> <p>Site Name: Waste Transfer Station At Ty - To - Maen Farm</p> <p>Correspondence Address: -</p>
41E	0	On Site	323559 178621	<p>Site Address: Atlantic Recycling Limited, Rumney, Cardiff, Cardiff, CF3 2EJ</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: PP3993VS</p> <p>EPR reference: -</p> <p>Operator: Atlantic Recycling Limited</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 280000.0</p>	<p>Issue Date: 14/10/2005</p> <p>Effective Date: 14/10/2005</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
42E	13	SW	323520 178628	<p>Site Address: Atlantic Eco Park, Newton Road, Rumney, Cardiff, Glamorgan, CF3 2EJ</p> <p>Type: Physical Treatment Facility</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: NEA007</p> <p>EPR reference: VP3095FS/V010</p> <p>Operator: Neal Soil Suppliers Ltd</p> <p>Waste Management licence No: 30348</p> <p>Annual Tonnage: 1003999.0</p>	<p>Issue Date: 03/05/2006</p> <p>Effective Date: -</p> <p>Modified: 20/05/2015</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Modified</p> <p>Site Name: Neal Soil Supplies Ltd</p> <p>Correspondence Address: -</p>
43	37	SW	323480 178550	<p>Site Address: Neal Soil Suppliers Ltd, Atlantic Ecopark NRW/EPR/VP3095FS/V010, Atlantic Ecopark Newton Road, CF3 2EJ</p> <p>Type: Physical Treatment Facility</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: VP3095FS</p> <p>EPR reference: -</p> <p>Operator: Neal Soil Suppliers Ltd</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 06/11/2013</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: Atlantic Ecopark NRW/EPR/VP3095FS/V010</p> <p>Correspondence Address: -</p>
44	77	SE	323880 178420	<p>Site Address: Ty To Maen Farm, Newton Road, Rhumney, Cardiff, Glamorgan, CF3 2EJ</p> <p>Type: Physical Treatment Facility</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: NEA002</p> <p>EPR reference: XP3895FD/S002</p> <p>Operator: Neal Soil Suppliers Ltd</p> <p>Waste Management licence No: 30237</p> <p>Annual Tonnage: 150000.0</p>	<p>Issue Date: 21/12/2000</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: 25/05/2006</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Surrendered</p> <p>Site Name: Neal Soil Suppliers</p> <p>Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details
45F	125	NW	322983 178073	<p>Site Address: Old Army Camp, Mardy Road, Rumney, Cardiff, Glamorgan, CF3 2EH</p> <p>Type: Metal Recycling Site (Vehicle Dismantler)</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: AZI001</p> <p>EPR reference: VB3597TS/T001</p> <p>Operator: Gmh Vehicle Recyclers Limited</p> <p>Waste Management licence No: 30148</p> <p>Annual Tonnage: 5000.0</p> <p>Issue Date: 13/10/1994</p> <p>Effective Date: 18/10/2013</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Transferred</p> <p>Site Name: Gmh Vehicle Dismantlers</p> <p>Correspondence Address: -</p>
46F	125	NW	322983 178073	<p>Site Address: Old Army Camp, Mardy Road, Rumney, Cardiff, Glamorgan, CF3 2EH</p> <p>Type: Metal Recycling Site (Vehicle Dismantler)</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: GMH001</p> <p>EPR reference: EA/EPR/QP3099FU/A001</p> <p>Operator: Goodliffe J</p> <p>Waste Management licence No: 30148</p> <p>Annual Tonnage: 5000.0</p> <p>Issue Date: 13/10/1994</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: G M H Vehicle Dismantlers</p> <p>Correspondence Address: -</p>
47F	125	NW	322983 178073	<p>Site Address: Gmh Vehicle Dismantlers, Rumney, Cardiff, Cardiff, CF3 2EH</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: VB3597TS</p> <p>EPR reference: -</p> <p>Operator: Gmh Vehicle Recyclers Limited</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 5000.0</p> <p>Issue Date: 13/10/1994</p> <p>Effective Date: 13/10/1994</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
48F	126	NW	323019 178095	<p>Site Address: G M H Vehicle Dismantlers, Maerdy Road, Rumney, Cardiff, CF3 8EH</p> <p>Type: Metal Recycling Site (mixed MRS's)</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: GMH001</p> <p>EPR reference: -</p> <p>Operator: Goodliffe J</p> <p>Waste Management licence No: 30148</p> <p>Annual Tonnage: 5000.0</p> <p>Issue Date: 13/10/1994</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: G M H Vehicle Dismantlers</p> <p>Correspondence Address: Seabank Farm, Maerdy Road, Rumney, Cardiff, CF3 8EH</p>
49	164	SW	323025 177667	<p>Site Address: Lamby Way Open Windrow Composting Facility, Lamby Way, Rumney, Cardiff, Cardiff, CF3 4EQ</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: AB3096CP</p> <p>EPR reference: -</p> <p>Operator: Kelda Organic Energy (Cardiff) Limited</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 25000.0</p> <p>Issue Date: 29/02/2016</p> <p>Effective Date: 29/02/2016</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details
50G	255	NE	324009 179150	<p>Site Address: Old Rover Works, Wentloog Road, Rumney, Cardiff, Glamorgan, CF3 2EE</p> <p>Type: Metal Recycling Site (mixed MRS's)</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: K&amp;L001</p> <p>EPR reference: ZP3699FS/S003</p> <p>Operator: Mr Michael S Kelly &amp; Mr Graham J Leadbetter</p> <p>Waste Management licence No: 30047</p> <p>Annual Tonnage: 2499.0</p> <p>Issue Date: 04/07/1991</p> <p>Effective Date: -</p> <p>Modified: 24/08/2010</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Modified</p> <p>Site Name: K &amp; L Car Dismantlers</p> <p>Correspondence Address: -</p>
51G	255	NE	324009 179150	<p>Site Address: K &amp; L Car Dismantlers, Old Rover Works, Rumney, Cardiff, Cardiff, CF3 2EE</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ZP3699FS</p> <p>EPR reference: -</p> <p>Operator: Mr Michael S Kelly &amp; Mr Graham J Leadbetter</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 2499.0</p> <p>Issue Date: 04/07/1991</p> <p>Effective Date: 04/07/1991</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
52H	504	W	322500 178000	<p>Site Address: Cardiff Council, Lamby Way Landfill Site EPR/JP3239ST, Lamby Way Landfill Site Lamby Way, Cardiff, CF3 8EQ</p> <p>Type: Borehole</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: JP3239ST</p> <p>EPR reference: -</p> <p>Operator: Cardiff Council</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 603650.0</p> <p>Issue Date: 08/01/2007</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: Lamby Way Landfill Site EPR/JP3239ST</p> <p>Correspondence Address: -</p>
53H	504	W	322500 178000	<p>Site Address: Cardiff Council, Lamby Way Landfill Site EPR/JP3239ST, Lamby Way Landfill Site Lamby Way, Cardiff, CF3 8EQ</p> <p>Type: Landfill taking Non-Biodegradable Wastes</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: JP3239ST</p> <p>EPR reference: -</p> <p>Operator: Cardiff Council</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 603650.0</p> <p>Issue Date: 08/01/2007</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: Lamby Way Landfill Site EPR/JP3239ST</p> <p>Correspondence Address: -</p>
54I	702	W	322520 178721	<p>Site Address: Safety Kleen U K Ltd, Safetykleen Uk, Spring Meadow Business Park, Rumney, Cardiff, CF3 2ES</p> <p>Type: Special Waste Transfer Station</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: DP3399FJ</p> <p>EPR reference: -</p> <p>Operator: Safety Kleen U K Ltd</p> <p>Waste Management licence No: 30117</p> <p>Annual Tonnage: 4999.0</p> <p>Issue Date: 13/07/1992</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: Safetykleen Uk</p> <p>Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details	
55I	702	W	322520 178721	Site Address: Safetykleen Uk, Spring Meadow Business Pa, Rumney, Cardiff, CF3 2ES Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: DP3399FJ EPR reference: - Operator: Safety Kleen U K Ltd Waste Management licence No: 0 Annual Tonnage: 4999.0	Issue Date: 13/07/1992 Effective Date: 13/07/1992 Modified: - Surrendered Date: 0 Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
56I	702	W	322520 178721	Site Address: Unit 4, Spring Meadow Business Park, Rumney, Cardiff, CF3 2ES Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SAF001 EPR reference: EA/EPR/DP3399FJ/V007 Operator: Safety Kleen U K Ltd Waste Management licence No: 30117 Annual Tonnage: 4999.0	Issue Date: 01/03/1995 Effective Date: - Modified: 28/03/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Safetykleen Uk Correspondence Address: -
57I	702	W	322520 178721	Site Address: Unit 4, Spring Meadow Business Park, Rumney, Cardiff, CF3 2ES Type: Special Waste Transfer Station Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: SAF001 EPR reference: DP3399FJ/V007 Operator: Safety Kleen U K Ltd Waste Management licence No: 30117 Annual Tonnage: 0.0	Issue Date: 01/03/1995 Effective Date: - Modified: 28/03/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Safetykleen Uk Correspondence Address: -
58J	822	NW	322437 178830	Site Address: Acorn Environmental Special Waste Transfer Station, Land/ Premises At, Wentloog, Cardiff, Cardiff, CF3 2ES Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: BP3095FX EPR reference: - Operator: Acorn Environmental Ltd (in Administrative Receivership) Waste Management licence No: 0 Annual Tonnage: 4999.0	Issue Date: 21/11/1995 Effective Date: 21/11/1995 Modified: - Surrendered Date: 0 Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
59J	822	NW	322437 178830	Site Address: Land/ Premises At, Spring Meadow Road, Wentloog, Cardiff, Glamorgan, CF3 2ES Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ACO001 EPR reference: BP3095FX/A001 Operator: Acorn Environmental Ltd (in Administrative Receivership) Waste Management licence No: 30171 Annual Tonnage: 4999.0	Issue Date: 21/11/1995 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Acorn Environmental Special Waste Transfer Station Correspondence Address: -
60K	837	NW	322401 178787	Site Address: Acorn Environmental Transfer Stn, Spring Meadow Road, Wentloog, Cardiff, CF3 8ES Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ACO001 EPR reference: - Operator: Acorn Environmental Ltd Waste Management licence No: 30171 Annual Tonnage: 4999.0	Issue Date: 21/11/1995 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Acorn Environmental Special Waste Transfer Station Correspondence Address: Spring Meadow Road, Wentloog, Cardiff, CF3 8ES

ID	Distance (m)	Direction	NGR	Details	
61K	839	NW	322400 178789	<p>Site Address: Safety Kleen S E Wales, Unit 4, Spring Meadow Industrial Estate, Trowbridge, Cardiff, CF3 2ES</p> <p>Type: Special Waste Transfer Station</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: SAF001</p> <p>EPR reference: -</p> <p>Operator: Safety Kleen U K Ltd</p> <p>Waste Management licence No: 30117</p> <p>Annual Tonnage: 5000.0</p>	<p>Issue Date: 01/03/1995</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Safety Kleen S E Wales</p> <p>Correspondence Address: Unit 4, Spring Meadow Ind Est, Trowbridge, Cardiff, CF3 2ES</p>
62L	882	W	322147 178159	<p>Site Address: Lamby Way Landfill Eastern Extension, Highways &amp; Parks, "Lamby Way Depot," , "Lamby Way, Rumney", Cardiff, CF3 2HP</p> <p>Type: Household, Commercial &amp; Industrial Waste Landfill</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC002</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Of Cardiff</p> <p>Waste Management licence No: 30235</p> <p>Annual Tonnage: 603650.0</p>	<p>Issue Date: 09/06/2000</p> <p>Effective Date: -</p> <p>Modified: 25/10/2004</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Modified</p> <p>Site Name: Lamby Way Landfill Eastern Extension</p> <p>Correspondence Address: Cardiff County Council, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
63L	882	W	322147 178159	<p>Site Address: Lamby Way Landfill Eastern Extension, Highways &amp; Parks, Lamby Way Depot,, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Other Landfill Site taking Special Waste</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC002</p> <p>EPR reference: -</p> <p>Operator: Cardiff County Council</p> <p>Waste Management licence No: 30235</p> <p>Annual Tonnage: 485000.0</p>	<p>Issue Date: 09/06/2000</p> <p>Effective Date: -</p> <p>Modified: 18/05/2001</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Modified</p> <p>Site Name: Lamby Way Landfill Eastern Extension</p> <p>Correspondence Address: Cardiff County Council, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
64M	910	W	322101 177793	<p>Site Address: Lamby Way Landfill South, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR005</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Cardiff</p> <p>Waste Management licence No: 30066</p> <p>Annual Tonnage: 10950.0</p>	<p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: 22/05/2001</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: IPPC</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: Highways &amp; Parks, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
65M	910	W	322101 177793	<p>Site Address: Lamby Way Landfill South, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Other Landfill Site taking Special Waste</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR005</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Cardiff</p> <p>Waste Management licence No: 30066</p> <p>Annual Tonnage: 37674.0</p>	<p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: 22/05/2001</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: Highways &amp; Parks, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>

ID	Distance (m)	Direction	NGR	Details	
66M	910	W	322101 177793	<p>Site Address: Lamby Way Landfill South, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Other Landfill Site taking Special Waste</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR005</p> <p>EPR reference: -</p> <p>Operator: Cardiff County Council</p> <p>Waste Management licence No: 30066</p> <p>Annual Tonnage: 37674.0</p>	<p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: 22/05/2001</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: Highways &amp; Parks, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
67	981	NW	322395 179063	<p>Site Address: K &amp; L Car Dismantlers, Wentloog Road, Rumney, Cardiff, CF3 8EE</p> <p>Type: Metal Recycling Site (mixed MRS's)</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: K&amp;L001</p> <p>EPR reference: -</p> <p>Operator: K &amp; L Car Dismantlers</p> <p>Waste Management licence No: 30047</p> <p>Annual Tonnage: 4999.0</p>	<p>Issue Date: 04/07/1991</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: K &amp; L Car Dismantlers</p> <p>Correspondence Address: Old Rover Works, Wentloog Road, Rumney, Cardiff, CF3 8EE</p>
68N	997	W	322046 178224	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household, Commercial &amp; Industrial Waste Landfill</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC002</p> <p>EPR reference: XP3595FN/V006</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 30235</p> <p>Annual Tonnage: 603650.0</p>	<p>Issue Date: 09/06/2000</p> <p>Effective Date: -</p> <p>Modified: 25/10/2004</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Modified</p> <p>Site Name: Lamby Way Landfill Eastern Extension</p> <p>Correspondence Address: -</p>
69N	997	W	322046 178224	<p>Site Address: Lamby Way Landfill Eastern Extension, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: XP3595FN</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 603650.0</p>	<p>Issue Date: 09/06/2000</p> <p>Effective Date: 09/06/2000</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
70O	1003	W	322060 178283	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC001</p> <p>EPR reference: MP3195FR/A001</p> <p>Operator: Cardiff Council</p> <p>Waste Management licence No: 30213</p> <p>Annual Tonnage: 50075.0</p>	<p>Issue Date: 07/09/2001</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way M R F &amp; Household Waste Site</p> <p>Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details	
710	1003	W	322060 178283	<p>Site Address: Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC001</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 30213</p> <p>Annual Tonnage: 50075.0</p>	<p>Issue Date: 07/09/2001</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way M R F &amp; Household Waste Site</p> <p>Correspondence Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
720	1003	W	322060 178283	<p>Site Address: Lamby Way M R F &amp; Household Waste Site, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC001</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Of Cardiff</p> <p>Waste Management licence No: 30213</p> <p>Annual Tonnage: 50075.0</p>	<p>Issue Date: 07/09/2001</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way M R F &amp; Household Waste Site</p> <p>Correspondence Address: Cardiff County Council, Lamby Way Depot,, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
730	1003	W	322060 178283	<p>Site Address: Lamby Way M R F &amp; Household Waste Site, Rumney, Cardiff, Cardiff, CF3 2HP</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: MP3195FR</p> <p>EPR reference: -</p> <p>Operator: Cardiff Council</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 50075.0</p>	<p>Issue Date: 07/09/2001</p> <p>Effective Date: 07/09/2001</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Expired</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
740	1003	W	322060 178284	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: WIL017</p> <p>EPR reference: EP3995FL/A001</p> <p>Operator: Cardiff Council</p> <p>Waste Management licence No: 30338</p> <p>Annual Tonnage: 74999.0</p>	<p>Issue Date: 24/03/2005</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way Depot</p> <p>Correspondence Address: -</p>
750	1003	W	322060 178284	<p>Site Address: Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: WIL017</p> <p>EPR reference: EP3995FL/A001</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 30338</p> <p>Annual Tonnage: 74999.0</p>	<p>Issue Date: 24/03/2005</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way Depot</p> <p>Correspondence Address: -</p>



ID	Distance (m)	Direction	NGR	Details	
760	1003	W	322060 178284	<p>Site Address: Lamby Way Depot, Lamby Way Depot, Lamby Way, Rumney, Cardiff, Cardiff, CF3 2HP</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: EP3995FL</p> <p>EPR reference: -</p> <p>Operator: Cardiff Council</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 74999.0</p>	<p>Issue Date: 24/03/2005</p> <p>Effective Date: 24/03/2005</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
770	1030	W	322038 178300	<p>Site Address: Lamby Way Depot, Rumney, Cardiff, CF3 2HP</p> <p>Type: Composting Facility</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: WIL017</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 30338</p> <p>Annual Tonnage: 74999.0</p>	<p>Issue Date: 24/03/2005</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way</p> <p>Correspondence Address: Lamby Way Depot, Rumney, Cardiff, CF3 2HP</p>
780	1030	W	322038 178300	<p>Site Address: Lamby Way M R F &amp; Household Waste Site, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC001</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Of Cardiff</p> <p>Waste Management licence No: 30213</p> <p>Annual Tonnage: 50075.0</p>	<p>Issue Date: 07/09/2001</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way M R F &amp; Household Waste Site</p> <p>Correspondence Address: Cardiff County Council, "Lamby Way Depot,", "Lamby Way, Rumney", Cardiff, CF3 2HP</p>
790	1030	W	322038 178300	<p>Site Address: Lamby Way M R F &amp; Household Waste Site, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC001</p> <p>EPR reference: -</p> <p>Operator: Cardiff County Council</p> <p>Waste Management licence No: 30213</p> <p>Annual Tonnage: 50075.0</p>	<p>Issue Date: 07/09/2001</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way M R F &amp; Household Waste Site</p> <p>Correspondence Address: Cardiff County Council, Lamby Way Depot,, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
800	1030	W	322038 178300	<p>Site Address: Lamby Way Depot, Rumney, Cardiff, CF3 2HP</p> <p>Type: Composting Facility</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: WIL017</p> <p>EPR reference: -</p> <p>Operator: Cardiff City &amp; County Council</p> <p>Waste Management licence No: 30338</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 24/03/2005</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way</p> <p>Correspondence Address: Lamby Way Depot (composting Facility), Rumney, Cardiff, CF3 2HP</p>

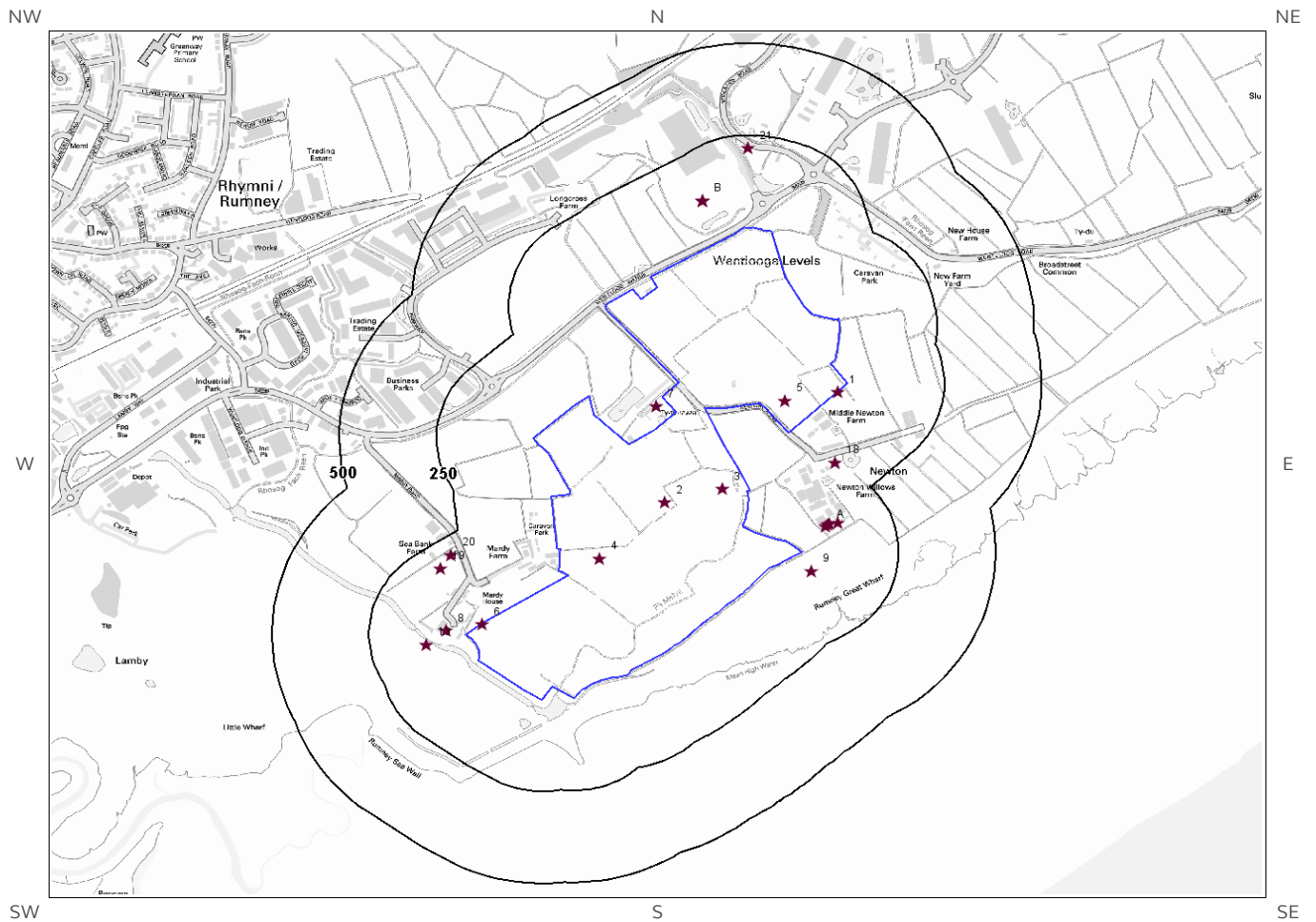


ID	Distance (m)	Direction	NGR	Details	
81O	1030	W	322038 178300	<p>Site Address: Lamby Way Depot, Rumney, Cardiff, CF3 2HP</p> <p>Type: Composting Facility</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: WIL017</p> <p>EPR reference: -</p> <p>Operator: Cardiff City &amp; County Council</p> <p>Waste Management licence No: 30338</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 24/03/2005</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Lamby Way</p> <p>Correspondence Address: Andrew Williamson, Lamby Way Depot (composting Facility), Rumney, Cardiff, CF3 2PH</p>
82P	1052	W	322001 178264	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR005</p> <p>EPR reference: EP3499FB/V002</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 30066</p> <p>Annual Tonnage: 10950.0</p>	<p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: 22/05/2001</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: To PPC</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: -</p>
83P	1052	W	322001 178264	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, South Glam, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR038</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 30397</p> <p>Annual Tonnage: 75000.0</p>	<p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: IPPC</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
84P	1052	W	322001 178264	<p>Site Address: Lamby Way Landfill South, Rumney, Cardiff, Cardiff, CF3 2HP</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: EP3499FB</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 10950.0</p>	<p>Issue Date: 30/07/1992</p> <p>Effective Date: 30/07/1992</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Expired</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
85P	1052	W	322001 178264	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR038</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff (dummy Licence)</p> <p>Waste Management licence No: 30397</p> <p>Annual Tonnage: 75000.0</p>	<p>Issue Date: 7/30/1992</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: IPPC</p> <p>Site Name: Lamby Way Landfill South (dummy)</p> <p>Correspondence Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p>

ID	Distance (m)	Direction	NGR	Details
86P	1052	W	322001 178264	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR038</p> <p>EPR reference: EA/EPR/DP3695FD/A001</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff ( D U M M Y L I C E N C E )</p> <p>Waste Management licence No: 30397</p> <p>Annual Tonnage: 75000.0</p> <p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: To PPC</p> <p>Site Name: Lamby Way Landfill South ( D U M M Y L I C E N C E )</p> <p>Correspondence Address: -</p>
87P	1052	W	322001 178264	<p>Site Address: Lamby Way Landfill South, Lamby Way Depot, Rumney, Cardiff, South Glam, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR038</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Of Cardiff</p> <p>Waste Management licence No: 30397</p> <p>Annual Tonnage: 75000.0</p> <p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: IPPC</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: Highways And Parks, Lamby Way Depot, Rumney, Cardiff, South Glam, CF3 2HP</p>
88P	1052	W	322001 178264	<p>Site Address: Lamby Way Landfill South ( D U M M Y L I C E N C E ), Rumney, Cardiff, Cardiff, CF3 2HP</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: DP3695FD</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 75000.0</p> <p>Issue Date: 30/07/1992</p> <p>Effective Date: 30/07/1992</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Expired</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>
89P	1052	W	322001 178264	<p>Site Address: Lamby Way Depot, Lamby Way, Rumney, Cardiff, Glamorgan, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR038</p> <p>EPR reference: DP3695FD/A001</p> <p>Operator: The County Council Of The City &amp; County Of Cardiff ( D U M M Y L I C E N C E )</p> <p>Waste Management licence No: 30397</p> <p>Annual Tonnage: 75000.0</p> <p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: To PPC</p> <p>Site Name: Lamby Way Landfill South ( D U M M Y L I C E N C E )</p> <p>Correspondence Address: -</p>
90P	1052	W	322001 178264	<p>Site Address: Lamby Way Landfill South, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR005</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Of Cardiff</p> <p>Waste Management licence No: 30066</p> <p>Annual Tonnage: 10950.0</p> <p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: 22/05/2001</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: IPPC</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: Highways &amp; Parks, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>

ID	Distance (m)	Direction	NGR	Details	
91P	1069	W	321994 178295	<p>Site Address: Lamby Way Landfill South, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p> <p>Type: Household Waste Amenity Site</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CAR005</p> <p>EPR reference: -</p> <p>Operator: The County Council Of The City And County Cardiff</p> <p>Waste Management licence No: 30066</p> <p>Annual Tonnage: 10950.0</p>	<p>Issue Date: 30/07/1992</p> <p>Effective Date: -</p> <p>Modified: 22/05/2001</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: IPPC</p> <p>Site Name: Lamby Way Landfill South</p> <p>Correspondence Address: Highways &amp; Parks, Lamby Way Depot, Lamby Way, Rumney, Cardiff, CF3 2HP</p>
Not shown	1129	NE	324608 179800	<p>Site Address: Neal Soil Suppliers, Ty To Maen Farm, Newton Road, Cardiff, CF3 8JE</p> <p>Type: Physical Treatment Facility</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: NEA002</p> <p>EPR reference: -</p> <p>Operator: Neals Soil Suppliers Ltd</p> <p>Waste Management licence No: 30237</p> <p>Annual Tonnage: 150000.0</p>	<p>Issue Date: 21/12/2000</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Neal Soil Suppliers</p> <p>Correspondence Address: Ty To Maen Farm, Newton Road, Rumney, Cardiff, CF3 8JE</p>
Not shown	1301	E	325246 178987	<p>Site Address: Unit 2, Sea View Bungalow, Peterstone, Wentlooge, Cardiff, Glamorgan, CF3 2TN</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: MRA003</p> <p>EPR reference: WP3495EH/A001</p> <p>Operator: Parsons Anthony</p> <p>Waste Management licence No: 100124</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 16/05/2008</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Unit 2, Sea View Bungalow</p> <p>Correspondence Address: -</p>
Not shown	1301	E	325246 178987	<p>Site Address: Unit 2, Sea View Bungalow, Peterstone, Wentlooge, Cardiff, Glamorgan, CF3 2TN</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: MRA003</p> <p>EPR reference: EA/EPR/WP3495EH/A001</p> <p>Operator: Parsons Anthony</p> <p>Waste Management licence No: 100124</p> <p>Annual Tonnage: 4999.0</p>	<p>Issue Date: 16/05/2008</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Unit 2, Sea View Bungalow</p> <p>Correspondence Address: -</p>
Not shown	1301	E	325246 178987	<p>Site Address: Unit 2, Sea View Bungalow, Peterstone, Wentlooge, Cardiff, Newport, CF3 2TN</p> <p>Type: -</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: WP3495EH</p> <p>EPR reference: -</p> <p>Operator: Anthony Parsons</p> <p>Waste Management licence No: 0</p> <p>Annual Tonnage: 4999.0</p>	<p>Issue Date: 16/05/2008</p> <p>Effective Date: 16/05/2008</p> <p>Modified: -</p> <p>Surrendered Date: 0</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Effective</p> <p>Site Name: -</p> <p>Correspondence Address: -</p>

# 4. Current Land Use Map



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Site Outline



Current Industrial Sites



Electricity Transmission Cables



Search Buffers (m)



Petrol & Fuel Sites



Gas Transmission Pipelines

## 4. Current Land Uses

### 4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

21

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Pylon	323957 178592	CF3	Electrical Features	Infrastructure and Facilities
2	0	On Site	Shaft	323511 178292	CF3	Unspecified Quarries Or Mines	Extractive Industries
3	0	On Site	Pylon	323660 178328	CF3	Electrical Features	Infrastructure and Facilities
4	0	On Site	Pylon	323343 178140	CF3	Electrical Features	Infrastructure and Facilities
5	0	On Site	Atlantic Recycling Ltd	323820 178568	Atlantic Eco Park, Newton Road, Rumney, Cardiff, CF3 2EJ	Recycling, Reclamation and Disposal	Recycling Services
6	0	On Site	Pylon	323040 177961	CF3	Electrical Features	Infrastructure and Facilities
7	29	SW	Cardiff Demolition Co Ltd	323488 178551	Ty to Maen Farm, Newton Road, Rumney, Cardiff, CF3 2EJ	Demolition Services	Construction Services
8	53	W	Scrap Yard	322948 177944	CF3	Scrap Metal Merchants	Recycling Services
9	56	SE	Rumney Great Wharf	323887 178105	CF3	Moorings and Unloading Facilities	Water
10A	92	NE	Silo	323924 178226	CF3	Hoppers and Silos	Farming
11A	100	NE	Silo	323930 178231	CF3	Hoppers and Silos	Farming
12A	105	NE	Silo	323934 178234	CF3	Hoppers and Silos	Farming
13	107	W	Tank	322896 177906	CF3	Tanks (Generic)	Industrial Features
14B	120	NW	G24 Innovations Turbine - Wind Onshore (DECC)	323609 179112	Wentloog Environmental Centre, Wentloog Avenue, Wentloog, South Glamorgan, CF3	Energy Production	Industrial Features
15B	121	NW	G24I Turbine	323607 179112	CF3	Energy Production	Industrial Features
16B	121	NW	G24I	323607 179112	Wentloog Environment Centre, Wentloog Avenue, Trowbridge, Cardiff, CF3	Energy Production	Industrial Features
17A	123	NE	Sewage Beds	323957 178237	CF3	Waste Storage, Processing and Disposal	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
18	138	SE	Neal Environmental Ltd	323949 178400	Newton Willows, Newton Road, Rumney, Cardiff, CF3 2EJ	Waste Storage, Processing and Disposal	Infrastructure and Facilities
19	185	NW	Scrap Yard	322934 178113	CF3	Scrap Metal Merchants	Recycling Services
20	203	NW	G M H Vehicle Recyclers	322959 178149	Old Army Camp, Mardy Road, Rumney, Cardiff, CF3 2EH	Scrap Metal Merchants	Recycling Services
21	217	N	Gas Governor Station	323724 179254	CF3	Gas Features	Infrastructure and Facilities

## 4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

0

Database searched and no data found.

## 4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

## 4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site:

0

Database searched and no data found.

## 5. Geology

### 5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

### 5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
TFD	TIDAL FLAT DEPOSITS	CLAY, SILT AND SAND [UNLITHIFIED DEPOSITS CODING SCHEME]

### 5.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
CAEC-SDAR	CAE CASTELL FORMATION	SANDSTONE AND [SUBEQUAL/SUBORDINATE] ARGILLACEOUS ROCKS, INTERBEDDED
CAA-MDSS	CARDIFF GROUP	MUDSTONE, SILTSTONE AND SANDSTONE
MMMF-CONG	MERCIA MUDSTONE GROUP (MARGINAL FACIES)	CONGLOMERATE
MMG-MDST	MERCIA MUDSTONE GROUP	MUDSTONE
RHM-SDST	RHYMNEY GRIT MEMBER	SANDSTONE

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

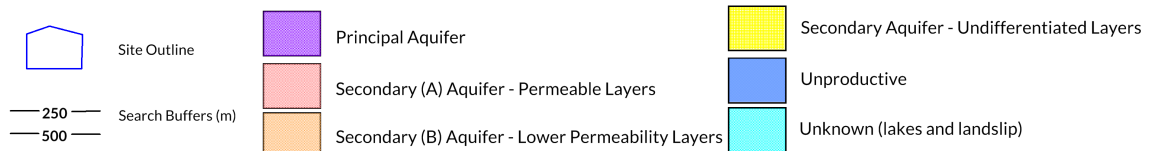


# 6 Hydrogeology and Hydrology

## 6a. Aquifer Within Superficial Geology



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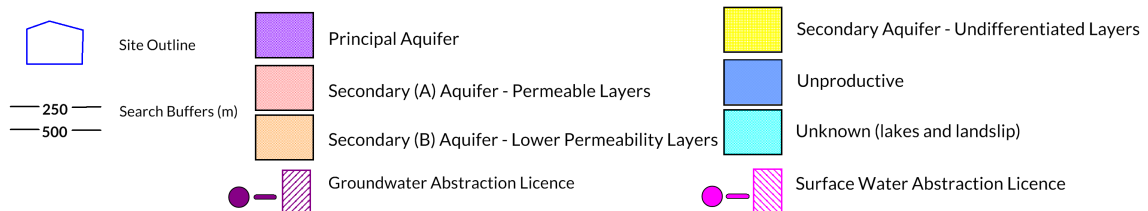




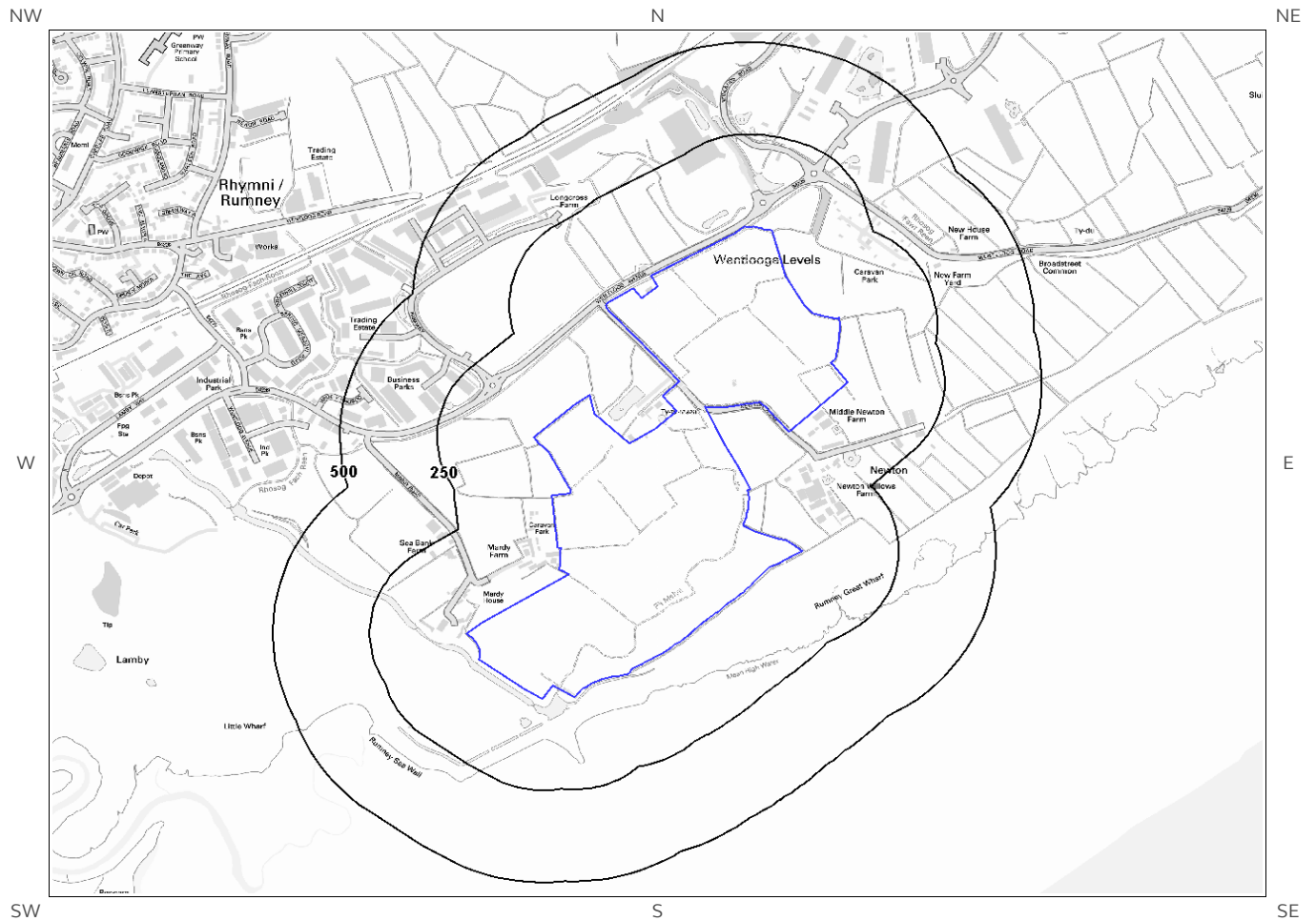
# 6b. Aquifer Within Bedrock Geology and Abstraction Licenses



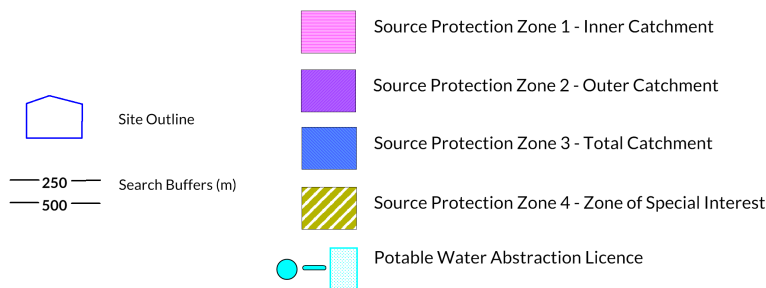
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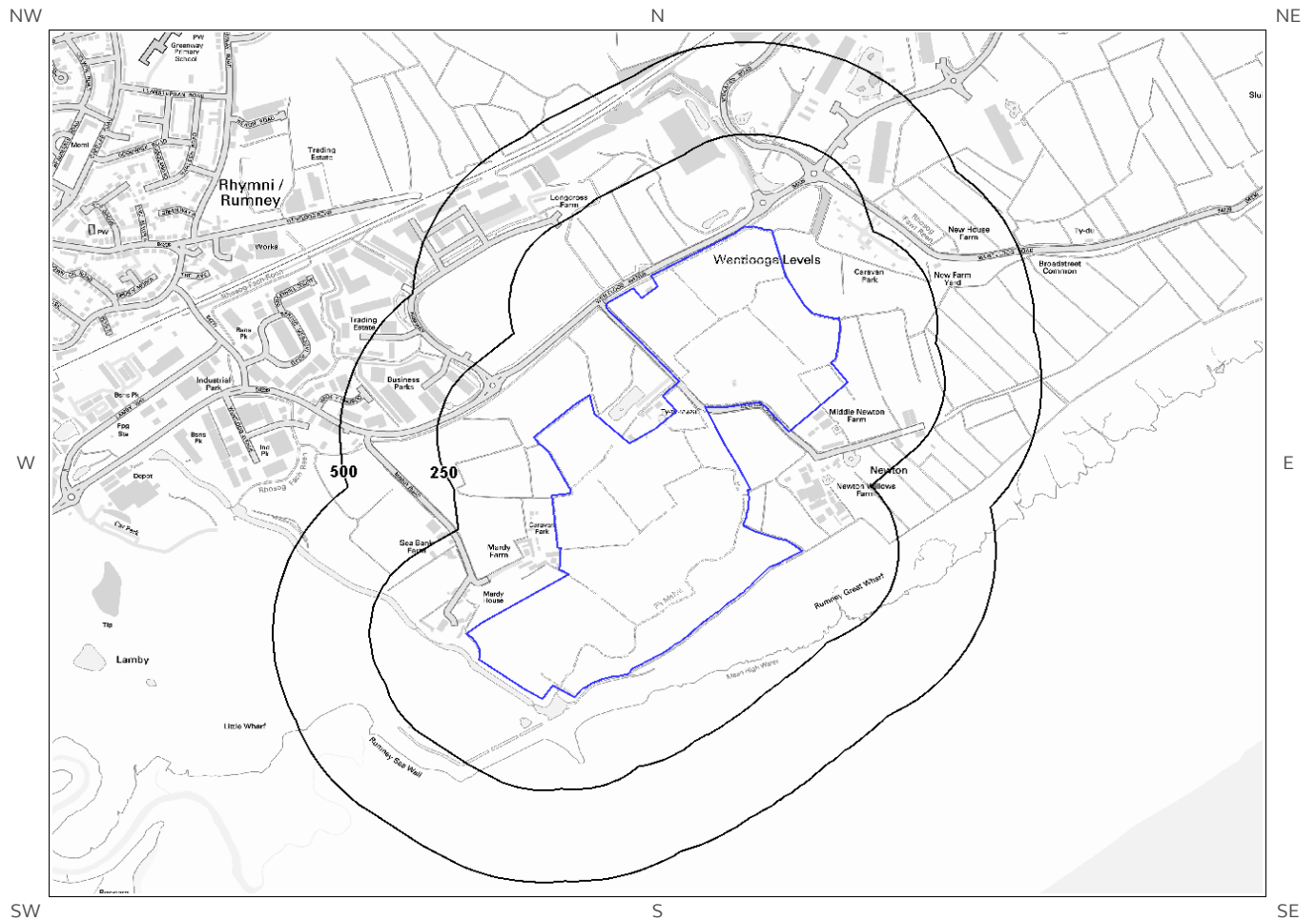
# 6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



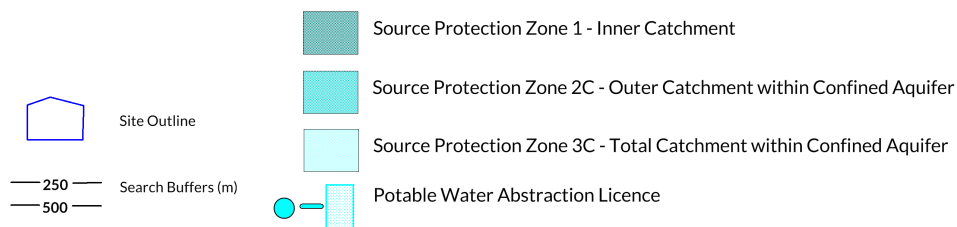
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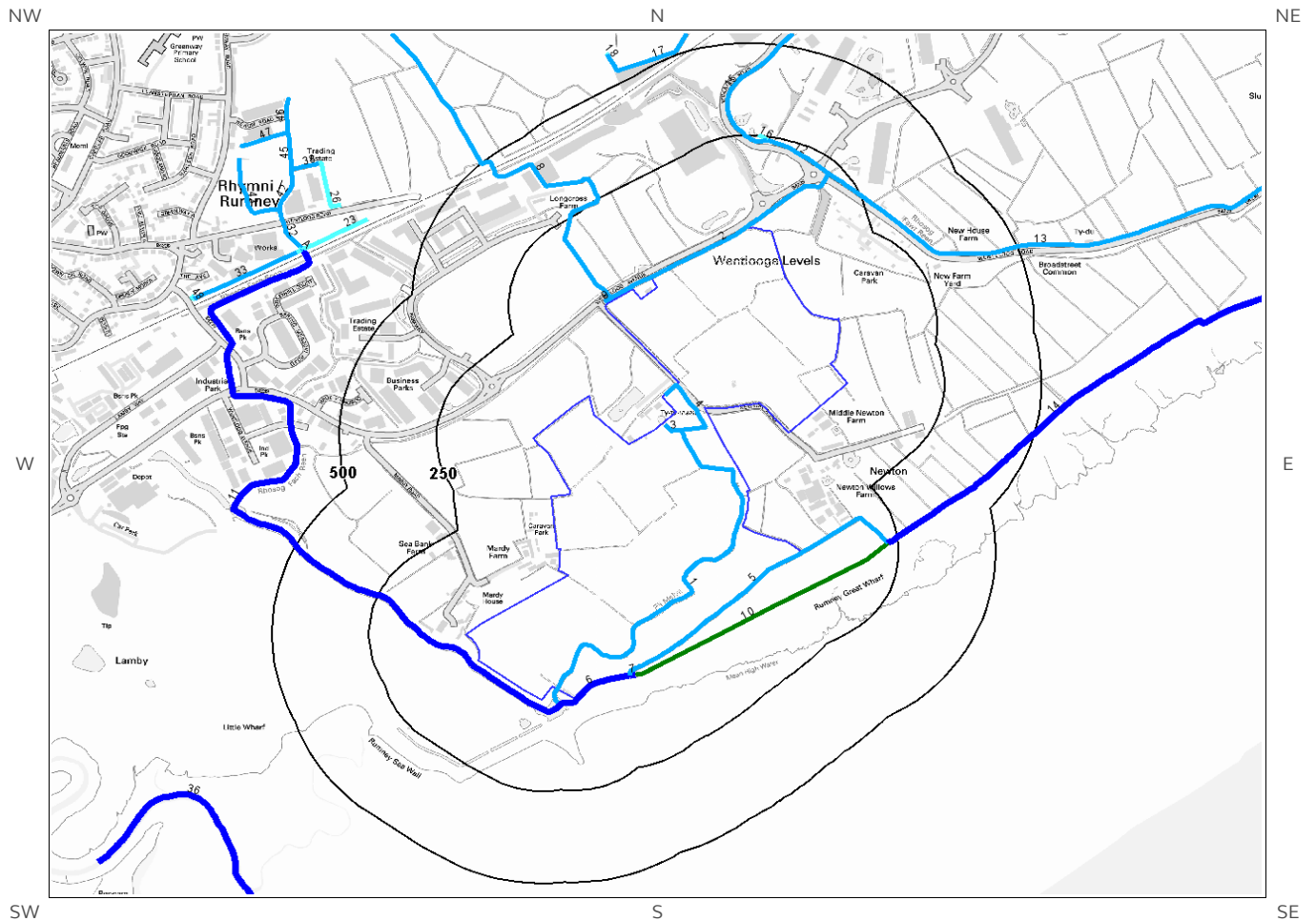
# 6d. Hydrogeology – Source Protection Zones within confined aquifer



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# 6e. Hydrology – Detailed River Network and River Quality



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- |  |                                       |  |                                     |
|--|---------------------------------------|--|-------------------------------------|
|  | Primary River                         |  | Canal                               |
|  | Secondary River                       |  | Canal Tunnel                        |
|  | Tertiary River                        |  | Culvert                             |
|  | Lake/Reservoir                        |  | Multiple Channel Culvert            |
|  | Underground River (inferred)          |  | Underground River (Potential Sewer) |
|  | General Quality Assessment: Biology   |  | Underground River (local knowledge) |
|  | General Quality Assessment: Chemistry |  |                                     |

# 6. Hydrogeology and Hydrology

## 6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

## 6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
4	0	On Site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
2	318	NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

## 6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? No

Database searched and no data found.



## 6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

## 6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

## 6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

## 6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

## 6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site?

Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.

Is there any Environment Agency information on river quality within 1500m of the study site?

No

#### 6.9.1 Biological Quality:

Database searched and no data found.

#### 6.9.2 Chemical Quality:

Database searched and no data found.

### 6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details
1	0	On Site	River Name: Pil Melyn Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
2	0	On Site	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
3	0	On Site	River Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
4	0	On Site	River Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
5	1	SE	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
6	2	S	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Primary River Main River Status: Currently Undefined
7	4	SE	River Name: - Welsh River Name: - Alternative Name: - River Type: Primary River Main River Status: Currently Undefined
8	9	NW	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
9	9	NW	River Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
10	17	SE	River Name: - Welsh River Name: - Alternative Name: - River Type: Culvert Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
11	19	SW	River Name: Rhosog Fach Reen Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
12	215	NE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
13	217	NE	River Name: Rhosog Fawr Reen Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
14	224	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
15	235	N	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
16	241	N	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined



## 6.11 Surface Water Features

Are there any surface water features within 250m of the study site?

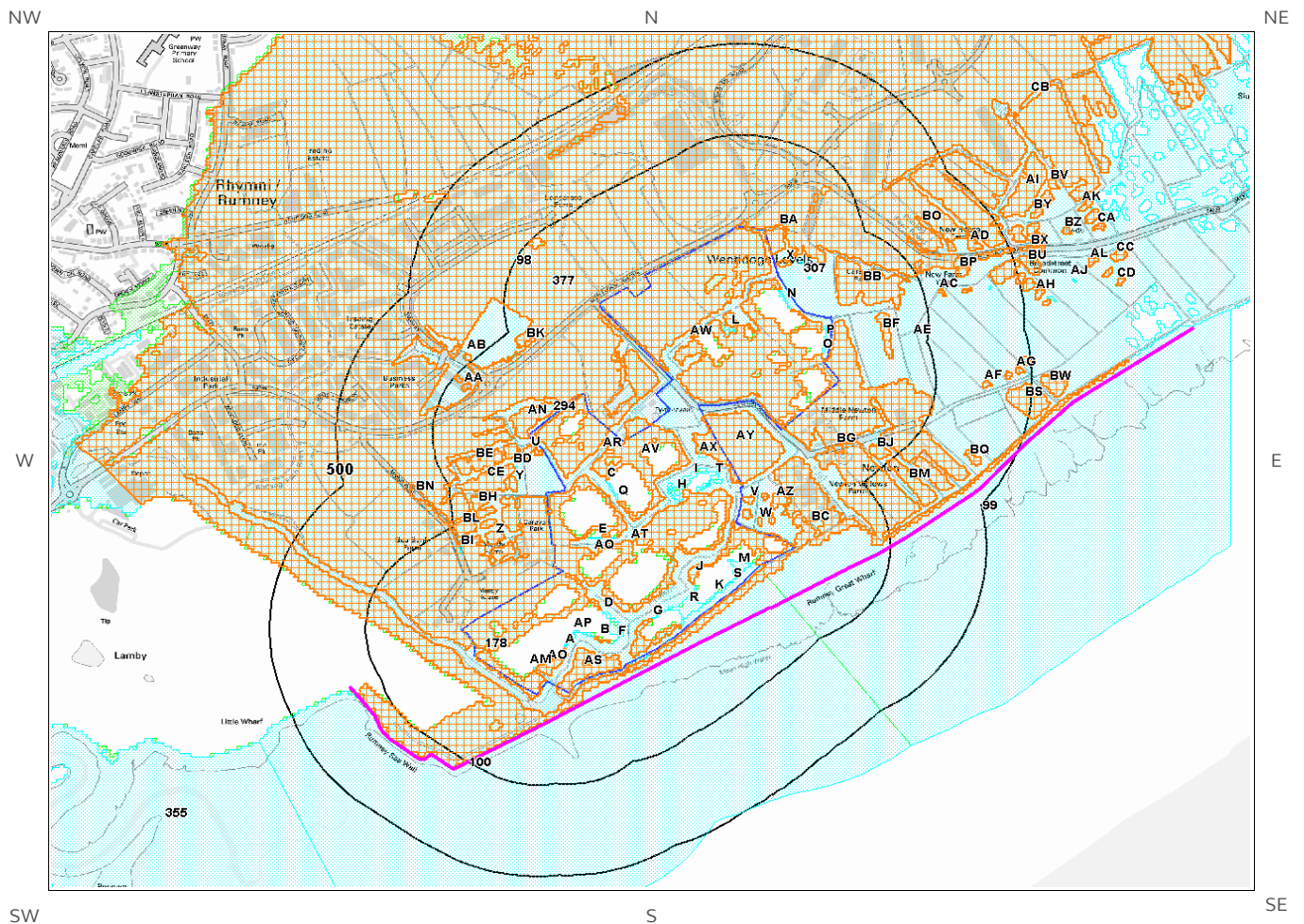
Yes

The following surface water records are not represented on mapping:

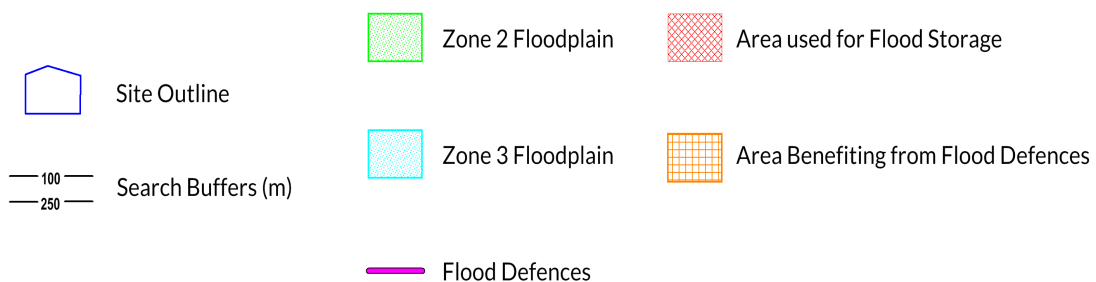
Report Reference: RPS-3186026  
Client Reference: PO16-621\_JDC0170\_Atlantic\_SP1\_Inves

Distance (m)	Direction
47	NW
63	S
64	SW
68	NE
69	NE
76	W
91	E
93	E
101	N
102	NW
118	SW
121	W
127	SE
128	SE
132	NW
144	SE
156	SE
162	N
188	SW
190	SE
191	SW
191	SE
193	NW
196	NW
205	NE
213	NE
213	NW
215	NE
215	NW
217	E
233	N
233	N
237	NE
242	N
249	SE
249	N
250	NW

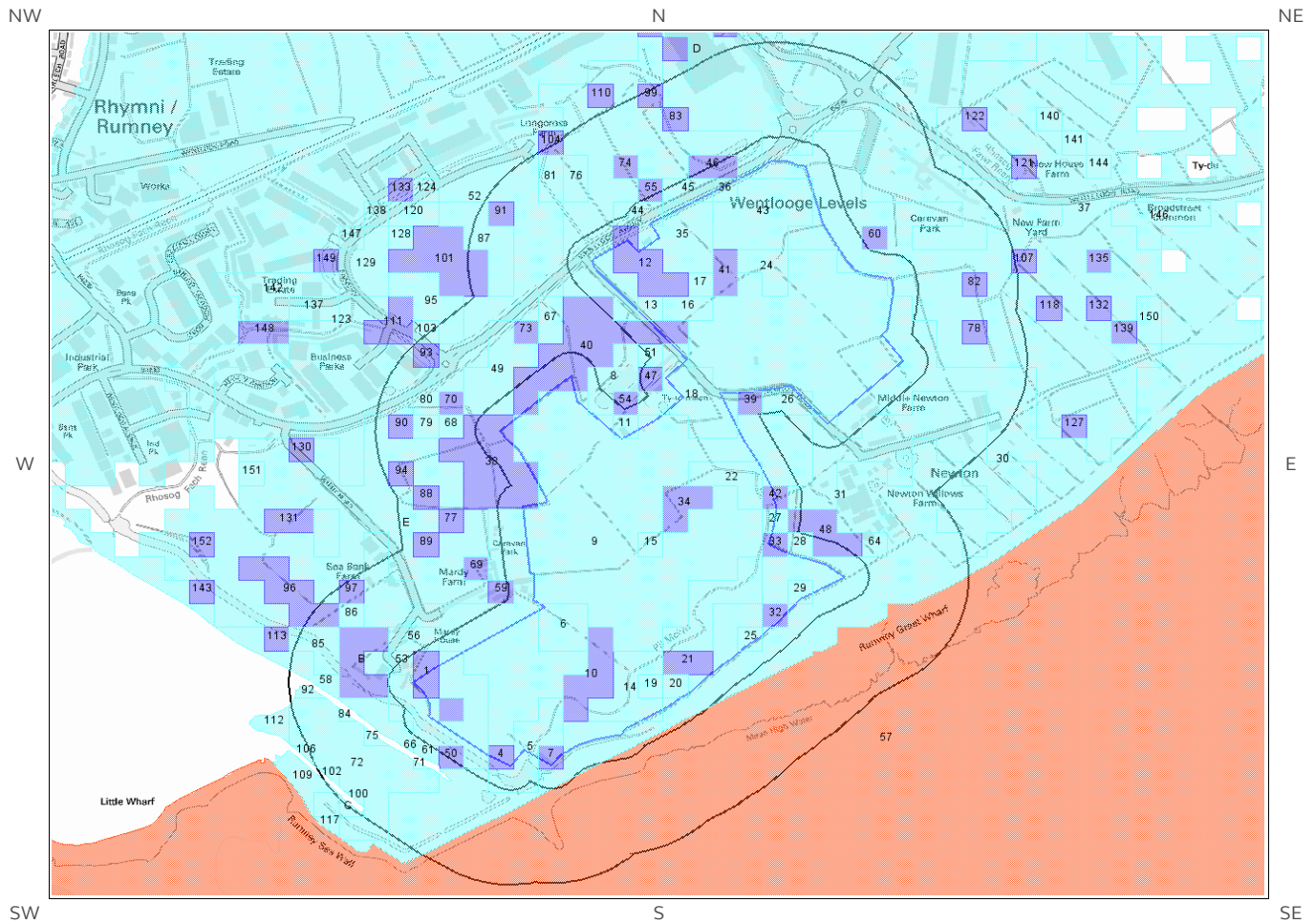
# 7a. Environment Agency Flood Map for Planning (from rivers and the sea)



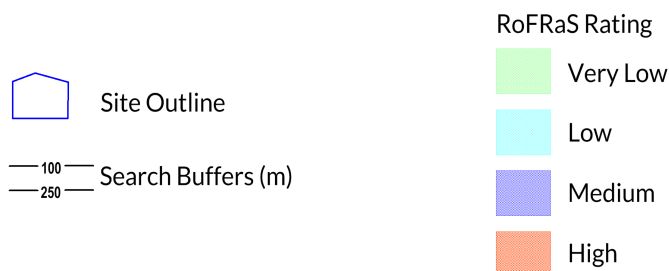
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# 7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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# 7 Flooding

## 7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain?

Yes

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1AN	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
2AM	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
3AO	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
4AS	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
5A	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
6A	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
7AP	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
8B	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
9AV	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
10E	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
11AQ	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
12D	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
13C	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
14AR	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
15B	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
16C	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
17C	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
18D	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
19E	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)

20C	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
21F	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
22Q	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
23F	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
24AU	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
25AT	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
26G	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
27G	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
28G	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
29H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
30H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
31R	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
32H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
33H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
34I	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
35H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
36J	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
37AY	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
38AW	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
39I	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
40AX	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
41J	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
42I	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
43T	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
44K	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
45K	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
46K	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
47L	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)

48L	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
49L	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
50M	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
51M	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
52M	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
53N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
54N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
55N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
56O	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
57P	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
58O	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
59P	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
60P	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
61P	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
62A	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
63D	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
64F	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
65K	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
66I	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
67N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
68K	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
69O	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
70Q	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
71A	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
72H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
73F	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
74M	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
75N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)



76R	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
77N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
78S	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
79C	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
80Q	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
81H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
82M	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
83S	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
84T	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
85G	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
86I	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
87D	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
88P	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
89P	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
90F	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
91O	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
92G	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
93H	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
94N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
95O	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
96C	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
97L	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
98	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
99	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
100	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
101AE	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
102N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
103N	0	On Site	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)

104U	0	SW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
105U	1	SW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
106V	2	E	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
107X	5	E	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
108V	8	E	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
109W	16	N	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
110W	29	N	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
111BA	30	E	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
112U	39	SW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
113BB	40	NE	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
114V	52	E	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
115BC	59	NE	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
116X	62	NE	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
117X	64	E	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
118AZ	69	N	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
119Y	74	W	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
120BD	78	SW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
121Y	81	SW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
122BE	83	SW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
123BF	113	E	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
124Z	116	W	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
125BG	121	SE	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
126BH	133	W	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
127Z	136	W	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
128BI	172	NW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
129AB	179	W	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
130BJ	185	SE	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
131BK	187	NW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)

132BL	187	W	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
133AA	194	NW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
134AA	225	NW	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)
135B M	245	SE	01-Jul-2016	Zone 2 - (Fluvial /Tidal Models)

## 7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain?

Yes

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1AN	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
2AM	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
3AO	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
4AS	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
5A	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
6A	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
7AP	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
8B	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
9AV	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
10E	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
11AQ	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
12D	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
13C	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
14AR	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
15B	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
16C	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
17C	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)

18D	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
19E	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
20C	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
21F	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
22Q	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
23F	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
24AU	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
25AT	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
26G	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
27G	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
28G	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
29H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
30H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
31R	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
32H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
33H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
34I	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
35H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
36J	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
37AY	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
38AW	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
39I	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
40AX	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
41J	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
42I	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
43T	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
44K	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
45K	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)

46K	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
47L	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
48L	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
49L	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
50M	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
51M	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
52M	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
53N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
54N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
55N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
56O	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
57P	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
58O	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
59P	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
60P	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
61P	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
62A	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
63D	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
64F	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
65K	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
66I	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
67N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
68K	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
69O	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
70Q	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
71A	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
72H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
73F	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)

74M	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
75N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
76R	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
77N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
78S	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
79C	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
80Q	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
81H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
82M	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
83S	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
84T	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
85G	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
86I	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
87D	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
88P	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
89P	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
90F	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
91O	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
92G	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
93H	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
94N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
95O	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
96C	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
97L	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
98	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
99	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
100	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
101AE	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)

102N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
103N	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
104U	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
105U	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
106V	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
107X	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
108V	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
109W	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
110W	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
111BA	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
112U	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
113BB	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
114V	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
115BC	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
116X	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
117X	0	On Site	01-Jul-2016	Zone 3 - (Fluvial Models)
118AZ	0	SW	01-Jul-2016	Zone 3 - (Fluvial Models)
119Y	1	SW	01-Jul-2016	Zone 3 - (Fluvial Models)
120BD	2	E	01-Jul-2016	Zone 3 - (Fluvial Models)
121Y	5	E	01-Jul-2016	Zone 3 - (Fluvial Models)
122BE	8	E	01-Jul-2016	Zone 3 - (Fluvial Models)
123BF	16	N	01-Jul-2016	Zone 3 - (Fluvial Models)
124Z	29	N	01-Jul-2016	Zone 3 - (Fluvial Models)
125BG	30	E	01-Jul-2016	Zone 3 - (Fluvial Models)
126BH	39	SW	01-Jul-2016	Zone 3 - (Fluvial Models)
127Z	40	NE	01-Jul-2016	Zone 3 - (Fluvial Models)
128BI	52	E	01-Jul-2016	Zone 3 - (Fluvial Models)
129AB	59	NE	01-Jul-2016	Zone 3 - (Fluvial Models)

130BJ	62	NE	01-Jul-2016	Zone 3 - (Fluvial Models)
131BK	64	E	01-Jul-2016	Zone 3 - (Fluvial Models)
132BL	69	N	01-Jul-2016	Zone 3 - (Fluvial Models)
133AA	74	W	01-Jul-2016	Zone 3 - (Fluvial Models)
134AA	78	SW	01-Jul-2016	Zone 3 - (Fluvial Models)
135B M	81	SW	01-Jul-2016	Zone 3 - (Fluvial Models)
	83	SW	01-Jul-2016	Zone 3 - (Fluvial Models)
	113	E	01-Jul-2016	Zone 3 - (Fluvial Models)
	116	W	01-Jul-2016	Zone 3 - (Fluvial Models)
	121	SE	01-Jul-2016	Zone 3 - (Fluvial Models)
	133	W	01-Jul-2016	Zone 3 - (Fluvial Models)
	136	W	01-Jul-2016	Zone 3 - (Fluvial Models)
	172	NW	01-Jul-2016	Zone 3 - (Fluvial Models)
	179	W	01-Jul-2016	Zone 3 - (Fluvial Models)
	185	SE	01-Jul-2016	Zone 3 - (Fluvial Models)
	187	NW	01-Jul-2016	Zone 3 - (Fluvial Models)
	187	W	01-Jul-2016	Zone 3 - (Fluvial Models)
	194	NW	01-Jul-2016	Zone 3 - (Fluvial Models)
	225	NW	01-Jul-2016	Zone 3 - (Fluvial Models)
	245	SE	01-Jul-2016	Zone 3 - (Fluvial Models)

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### 7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite?

Medium

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Medium (greater than 1 in 100 but less than 1 in 30) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	Medium
2A	0.0	On Site	Low
3A	0.0	On Site	Medium
4	0.0	On Site	Medium
5	0.0	On Site	Low
6	0.0	On Site	Low
7	0.0	On Site	Medium
8	0.0	On Site	Low
9	0.0	On Site	Low
10	0.0	On Site	Medium
11	0.0	On Site	Low
12	0.0	On Site	Medium
13	0.0	On Site	Low
14	0.0	On Site	Low
15	0.0	On Site	Low
16	0.0	On Site	Low
17	0.0	On Site	Low
18	0.0	On Site	Low
19	0.0	On Site	Low
20	0.0	On Site	Low
21	0.0	On Site	Medium
22	0.0	On Site	Low
23	0.0	On Site	Low
24	0.0	On Site	Low
25	0.0	On Site	Low
26	0.0	On Site	Low
27	0.0	On Site	Low
28	0.0	On Site	Low
29	0.0	On Site	Low
30	0.0	On Site	Low
31	0.0	On Site	Low
32	0.0	On Site	Medium
33	0.0	On Site	Medium

34	0.0	On Site	Medium
35	0.0	On Site	Low
36	0.0	On Site	Low
37	0.0	On Site	Low
38	0.0	On Site	Medium
39	0.0	On Site	Medium
40	0.0	On Site	Medium
41	0.0	On Site	Medium
42	0.0	On Site	Medium
43	0.0	On Site	Low
44	0.0	On Site	Low
45	0.0	On Site	Low
46	2.0	NW	Medium
47	5.0	W	Medium
48	9.0	N	Medium
49	10.0	NW	Low
50	11.0	SW	Medium
51	12.0	SW	Low
52	13.0	N	Low
53	14.0	NW	Low
54	26.0	NE	Medium
55	28.0	NW	Medium
56	28.0	NW	Low
57	32.0	SE	High
58	33.0	W	Low
59	37.0	SW	Medium
60	38.0	NE	Medium
61	40.0	SW	Low
62B	50.0	W	Medium

## 7.4 Flood Defences

Are there any Flood Defences within 250m of the study site?

Yes

The following flood defence records are represented as lines on the Flood Map:

ID	Distance (m)	Direction	Update
438	32	SE	30-Jun-2016
439	44	SE	30-Jun-2016
440	57	SE	30-Jun-2016
441	86	S	30-Jun-2016
442	100	SE	30-Jun-2016
443	154	E	30-Jun-2016

## 7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site?

Yes

## 7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

## 7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding?

Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

## 7.8 Groundwater Flooding Confidence Areas

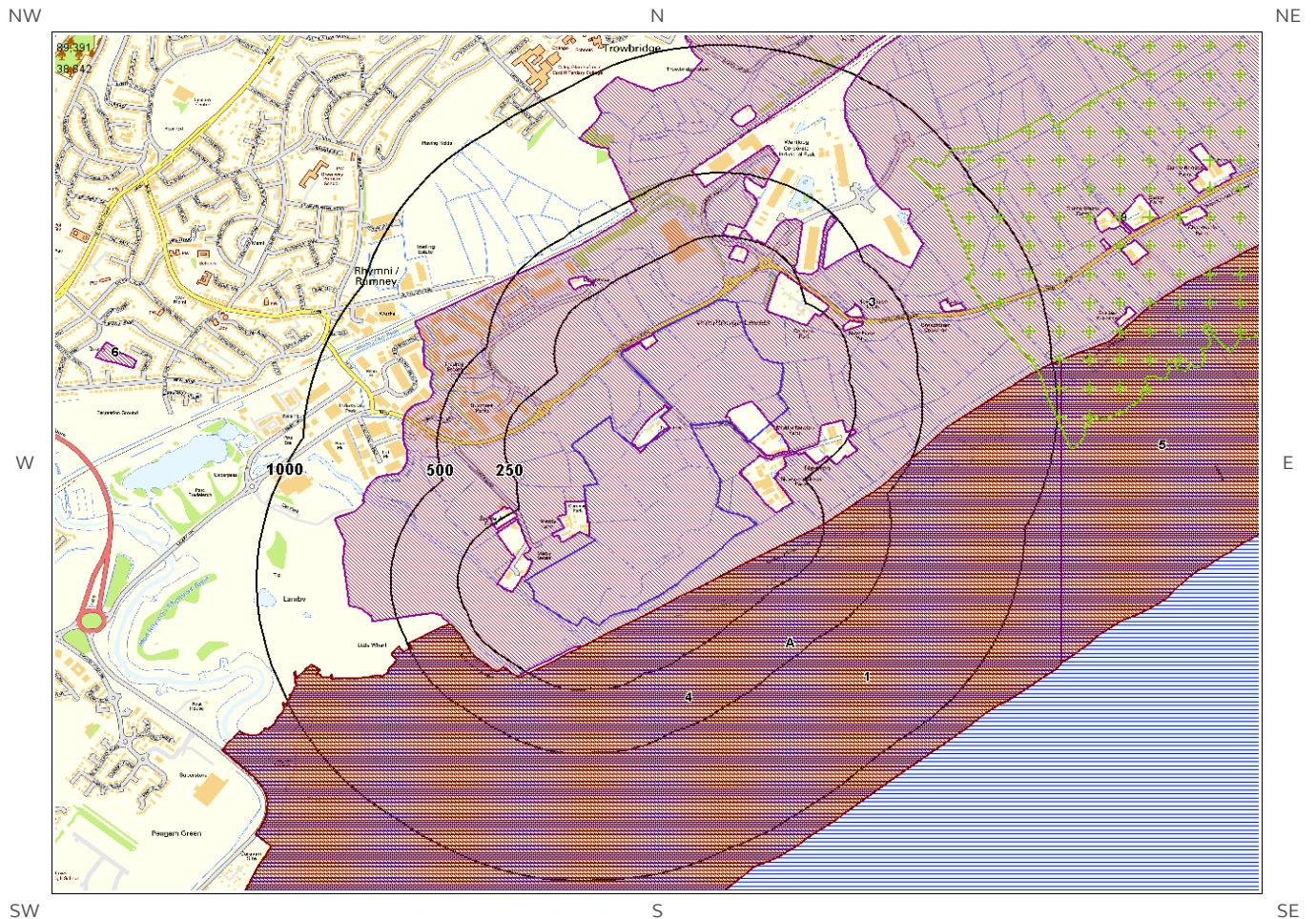
What is the British Geological Survey confidence rating in this result?

Low

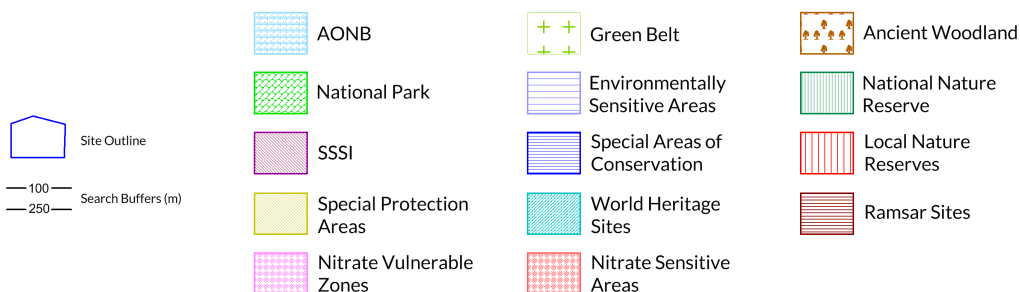
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

# 8. Designated Environmentally Sensitive Sites Map



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## 8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?

Yes

### 8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

4

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
3	0	On Site	GWENT LEVELS - RUMNEY AND PETERSTONE	Natural Resources Wales
4	34	SE	SEVERN ESTUARY	Natural Resources Wales
5	1018	E	SEVERN ESTUARY	Natural Resources Wales
6	1657	W	RUMNEY QUARRY	Natural Resources Wales

### 8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

### 8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

1

The following Special Area of Conservation (SAC) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SAC Name	Data Source
1	34	SE	Severn Estuary	Natural England

## 8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

1

The following Special Protection Area (SPA) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SPA Name	Data Source
2A	34	SE	Severn Estuary (Wales)	Natural Resources Wales

## 8.5 Records of Ramsar sites within 2000m of the study site:

1

The following Ramsar records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ramsar Site Name	Ramsar Site Status	Data Source
7A	34	SE	Severn Estuary (Wales)	Current	Natural Resources Wales

## 8.6 Records of Ancient Woodland within 2000m of the study site:

1

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1958	N	Unknown	Ancient and Semi-Natural Woodland

## 8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

## 8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.



## 8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

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## 8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

---

## 8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

---

## 8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

---

## 8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

---

## 8.14 Records of Green Belt land within 2000m of the study site:

1

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
9	762	NE	Newport Greenbelt	Newport

# 9. Natural Hazards Findings

## 9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

### 9.1.1 Shrink Swell

What is the maximum Shrink-Swell\* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

### 9.1.2 Landslides

What is the maximum Landslide\* hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property Ö no significant increase in insurance risk due to natural slope instability problems.

### 9.1.3 Soluble Rocks

What is the maximum Soluble Rocks\* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

\* This indicates an automatically generated 50m buffer and site.



#### 9.1.4 Compressible Ground

What is the maximum Compressible Ground\* hazard rating identified on the study site?

Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build Ò consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property × possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

#### 9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks\* hazard rating identified on the study site?

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

#### 9.1.6 Running Sand

What is the maximum Running Sand\*\* hazard rating identified on the study site?

Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant potential for running sand problems with relatively small changes in ground conditions. Avoid large amounts of water entering the ground (for example through pipe leakage or soak-aways). Do not dig (deep) holes into saturated ground near the property without technical advice. For new build Ò consider the consequences of soil and groundwater conditions during and after construction. For existing property Ò possible increase in insurance risk from running sand, for example, due to water leakage, high rainfall events or flooding.

### 9.2 Radon

#### 9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 5 and 10% of properties are above the Action Level.

\* This indicates an automatically generated 50m buffer and site.

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?      Basic radon protective measures are necessary.

# 10. Mining

## 10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

## 10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Usk	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

## 10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No

Guidance: No Guidance Required.

# Contact Details

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**Environment  
Agency**

**Public Health England**

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**The Coal  
Authority**

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This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

## Standard Terms and Conditions

### 1 Definitions

In these terms and conditions unless the context otherwise requires:

**“Beneficiary”** means the person or entity for whose benefit the Client has obtained the Services.

**“Client”** means the party or parties entering into a Contract with Groundsure.

**“Commercial”** means any building or property which is not Residential.

**“Confidential Information”** means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

**“Support Services”** means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

**“Contract”** means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

**“Third Party Data Provider”** means any third party providing Third Party Content to Groundsure.

**“Data Reports”** means reports comprising factual data with no accompanying interpretation.

**“Fees”** has the meaning set out in clause 5.1.

**“Groundsure”** means Groundsure Limited, a company registered in England and Wales under number 03421028.

**“Groundsure Materials”** means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

**“Intellectual Property”** means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

**“Mapping”** means a map, map data or a combination of historical maps of various ages, time periods and scales.

**“Order”** means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

**“Ordnance Survey”** means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

**“Order Website”** means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

**“Report”** means a Risk Screening Report or Data Report for Commercial or Residential property.

**“Residential”** means any building or property used as or intended to be used as a single dwelling.

**“Risk Screening Report”** means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

**“Services”** means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

**“Site”** means the area of land in respect of which the Client has requested Groundsure to provide the Services.

**“Third Party Content”** means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

**“User Guide”** means the user guide, as amended from time to time, available upon request from Groundsure and on the website ([www.Groundsure.com](http://www.Groundsure.com)) and forming part of this Contract.

### 2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client’s order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

### 3 The Client’s obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary’s needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client’s approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

### 4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

### 5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

## 6 Intellectual Property and Confidentiality

### 6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;
- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
- (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service;
- (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
- (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
- (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

## 7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or

subcontractors;

- (ii) any use made of the Reports, Services, Materials or any part of them; and
- (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

## 8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

- (i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or
- (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
- (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
- (iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

## 9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

- (a) supplied to the Client's specification(s) and in any event
- (b) by their nature cannot be returned.

## 10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

## 11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

## 12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website [www.tpos.co.uk](http://www.tpos.co.uk) or email: [admin@tpos.co.uk](mailto:admin@tpos.co.uk)

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. © Groundsure Limited June 2013



## Appendix B: Site Investigation

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## **Site Investigation Report**

**Neal Soils, Rumney, Cardiff**

**Private and Confidential**

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**Checked by:**  
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**Date:** 04/10/05

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This report has been produced by RPS within the terms of the contract with the client and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

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# 1 Introduction

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## 1.1 Background

RPS Planning Transport and Environment Ltd (RPS) were commissioned by Neal Soil Suppliers to undertake an intrusive investigation of their site at Rumney, Cardiff.

The site is located on Newton Lane, Rumney, shown on *Drawing JER3367-001* and is currently an active waste transfer and recycling unit.

## 1.2 Key Objectives

The key objectives of the intrusive investigation are to:

- Characterise and define the baseline ground, groundwater and surface water conditions at the site.
- Establish groundwater and surface water monitoring points for further monitoring as part of the Waste Management Licence.
- Compile relevant site and contamination data that will enable a more detailed appraisal of risks from the proposed site activities.

The requirements of the investigation were laid out in the letter from the Environment Agency ref. SEA/EMI/AOS/EAWML30347.

## 1.3 Report Structure

The remainder of the report is structured as follows:

*Section 2: Site Investigation Methodology.* Defines the approach of the investigation and the methodologies employed.

*Section 3: Ground Conditions.* Describes the ground and groundwater conditions identified during the intrusive site investigation.

*Section 4: Analytical Results.* This section identifies the chemical characteristics of the ground and groundwater at the site and the presence of contaminant sources.

*Section 5: Summary and Recommendations.* Summarises the conclusions of the report.

## 2 Site Investigation

---

### 2.1 Introduction

The main objective of the investigation was to identify the presence or otherwise of baseline contamination in soils and groundwater at the site. This section describes the methodologies employed during the site investigation works, and the protocols adopted to ensure that defensible data was acquired.

The investigation works were undertaken in accordance with current guidance advocated by Regulatory Authorities, including BS10175:2001 *Code of Practice for Investigation of Potentially Contaminated Sites* and BS5930:1999 *Code of Practice for Site Investigations*.

### 2.2 Fieldwork

Environmental Consultants from RPS supervised the progression of five exploratory holes across the site on the 6<sup>th</sup> September 2005. Ground conditions were logged in accordance with BS5930:1999, and also included notes of any visual or olfactory evidence of contamination. Any soils recovered from the exploratory works exhibiting olfactory or visual evidence of contamination were sampled.

In summary the fieldwork comprised:

- An underground services survey.
- Progression of five window sample boreholes installed with permanent gas and groundwater monitoring wells.
- Soil sampling throughout the exploratory works.
- Gas and groundwater monitoring / sampling of newly installed monitoring locations.
- Surface water monitoring from a number of field drains at the site.

The locations of all the sampling positions are shown on *Drawing JER3367-002*.

#### 2.2.1 Underground Services Survey

In order to protect site staff and minimise the risk of damage to buried services, an underground services survey was conducted in advance of drilling operations to assist with the placement of exploratory holes. A Cable Avoidance Tool (CAT) was used to detect any

services below ground. As a further mitigating measure, hand dug service pits were excavated to 1.2 m prior to drilling at each exploratory hole location, in order to ensure that underground services would not be impacted upon.

### **2.2.2 Window Sample Borehole Investigation**

A total of five window sample boreholes were advanced to depths of up to 5 metres below ground level (mBGL) across the site. Exploratory holes were positioned in order to determine the existing ground conditions across the site.

### **2.2.3 Soil Sampling**

All sampling and monitoring was undertaken in accordance with RPS' Site Investigation and Remediation Field Services Manual.

Soil samples were taken where appropriate during excavation of the boreholes in order to obtain representative samples of the strata. Any soils exhibiting visual or olfactory evidence of contamination were targeted for sampling and appropriate laboratory analysis.

The samples were dispatched for analysis to an MCERTS / UKAS accredited laboratory and scheduled for a range of analyses.

### **2.2.4 Gas and Groundwater Monitoring Wells**

Permanent groundwater monitoring wells were installed within each of the five exploratory holes. Each installation comprised 50 mm diameter plain standpipe screening out the made ground, followed by slotted piezometer pipe for the remaining depth. Specific details relating to each exploratory hole installation are shown on the borehole logs presented in *Appendix A*.

The annulus around the slotted well screen was backfilled with fine gravel in order to permit the flow of groundwater into the well. Bentonite pellets were installed in the annular space above the pea-gravel to affect a seal so as to ensure only water present in the formation adjacent to the slotted section of pipe could flow into the monitoring well. A steel vandal-resistant cover was positioned above each monitoring well, and concreted into place.

### **2.2.5 Gas Monitoring**

Gas monitoring was carried out in order to assess the nature of any landfill gas present or being generated in made ground or natural soil within the site. Monitoring was undertaken on 14<sup>th</sup> September 2005 in boreholes with monitoring wells using a portable gas analyser for the following:

- Carbon Dioxide (CO<sub>2</sub>) [% by volume]
- Methane (CH<sub>4</sub>) [% by volume]
- Oxygen (O<sub>2</sub>) [% by volume]
- Atmospheric Pressure (mb)
- Flow Rate (litres/hour)

### **2.2.6 Groundwater Sampling**

Groundwater monitoring and sampling was undertaken on the 14<sup>th</sup> September 2005. Groundwater levels were measured and samples were collected from four boreholes using disposable bailers on dedicated disposable lines. Borehole WS1 could not be sampled due to the borehole being damaged post installation.

Samples were collected, stored and transported in cool boxes with ice packs in order to ensure a nominal temperature of  $+ 4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . Groundwater samples were dispatched to a UKAS accredited laboratory for analysis.

The results of the monitoring rounds are included in *Appendix B*.

### **2.2.7 Surface Water Sampling**

Water samples were collected from three surface water locations on the site on 14<sup>th</sup> September 2005, of which are shown on *Drawing JER3367-002*.



## 3 Ground Conditions

---

### 3.1 Geology

#### 3.1.1 Introduction

The actual ground conditions encountered during the intrusive investigation are described in the following sections and, where applicable, reference should also be made to the individual exploratory hole records in *Appendix A*.

During this phase of the investigation geology on site has been verified to a maximum depth of five metres below ground level.

The general geological sequence identified by intrusive investigation is:

- Made ground.
- Clay.

#### 3.1.2 Made Ground

Made ground was encountered at each borehole location and proven to a maximum depth of 1.5 mBGL.

Made ground encountered across the site consisted mainly of gravelly or sandy clay, with the gravel comprising concrete or brick. Occasional fragments of metal were also identified within Borehole WS3.

#### 3.1.3 Natural Ground

Brown/grey clay was predominantly found to underlie the made ground at all exploratory hole locations. The strength of the clay varies, becoming softer with depth. Organic matter consisting of plant roots/wood was identified at each location, between depths of 1.5 to 5 mBGL. Sulphurous and organic odours were identified in four exploratory holes at depths of 1.2 to 4.5 mBGL. These were WS1, WS2, WS3 and WS5.

#### 3.1.4 Groundwater

Groundwater strikes were encountered in all five exploratory holes, with the highest strike at 1.40 mBGL in Borehole WS1. The deepest groundwater strike occurred in borehole WS3 at a

depth of 2.9 mBGL. Groundwater levels are provided with the monitoring results in *Appendix B*.

## 4 Results

---

### 4.1 Chemical Analytical Results

#### 4.1.1 Introduction

The soil samples recovered during the fieldwork were submitted to ALcontrol Geochem, an MCERTS / UKAS accredited laboratory for chemical analysis.

Selected representative soil and groundwater samples collected during the investigation were tested for various potentially contaminative chemical compounds, which may be present due to historical activities at the site and reflect potential compounds that could be generated as a consequence of the proposed waste operations. The suites of laboratory analyses included:

- Ammoniacal Nitrogen.
- Total Sulphate.
- Metals.
- Nitrate and pH.
- Total Petroleum Hydrocarbons (TPH).

Laboratory test result data sheets for the soil and groundwater sample analyses are provided in *Appendix C*.

#### 4.1.2 Soil Analytical Results

All soil samples were taken at 0.5 mBGL in each borehole. The chemical results of the soil analysis are presented in Appendix C. The data collected and analysis undertaken will form the basis of the baseline characterisation for the Waste Management Licence.

#### 4.1.3 Groundwater Analytical Results

The results of the chemical analysis of groundwater and surface water samples are presented in Appendix C. These results will form the basis of the monitoring for the proposed waste activities. The location of the sampling points are shown on *Drawing JER3367-002*.

The chemical test results of groundwater samples have been compared against freshwater Environmental Quality Standards (EQS). Where EQS are not available U.K. Drinking Water

Standards have been utilised to provide an initial screening criteria. The chemical test results for groundwater and surface water and their comparison to the appropriate standards are displayed in Table 1.

Table 1. Chemical Analytical Results for Groundwater and Surface Water Samples

Determinand	Maximum concentration		EQS unless otherwise stated	Locations with exceedances above EQS / other
	Value	Units		
Arsenic	50	µg/L	29	None
<b>Boron</b>	<b>2,469</b>	µg/L	2,000	<b>WS2, WS5</b>
Cadmium	<0.4	µg/L	5	None
<i>Chromium</i>	5	µg/L	5 – 50	WS2
<i>Copper</i>	15	µg/L	1 – 28	WS3, WS5, SW2
<b>Lead</b>	<b>320</b>	µg/L	4 – 20	<b>WS3</b>
Nickel	10	µg/L	50 – 200	None
Selenium	9	µg/L	-	n/a
<i>Zinc</i>	36	µg/L	8 – 125	WS2 – 5, SW1 – 2
Mercury	<0.05	µg/L	1	None
Benzene	<10	µg/L	30	None
Toluene	<10	µg/L	50	None
Ethylbenzene	<10	µg/L	20 (200)	None
Xylene	<10	µg/L	30	None
TPH Total Aliphatics C5-C35	<10	µg/L	10 (UK DWS)	None
TPH Total Aromatics C6-C35	<10	µg/L	10 (UK DWS)	None
Conductivity	5.38	mS/cm	-	n/a
pH	8.27 – 8.61	pH units	-	n/a
Biological Oxygen Demand	21	mg/L	-	n/a
Dissolved Oxygen	9	mg/L	-	n/a
Nitrate as NO <sub>3</sub>	<0.3	mg/L	-	n/a
Nitrite	0.1	mg/L	-	n/a
Sulphate	174	mg/L	400	None
<b>Chloride</b>	<b>1,041</b>	mg/L	250	<b>WS2,4,5</b>
Phosphate	10.57	mg/L	-	n/a
<b>Ammoniacal Nitrogen as NH<sub>3</sub></b>	<b>0.184*</b>	mg/L	0.015	<b>WS2 – 5</b>
Total Organic Carbon	40	mg/L	-	n/a

Total Suspended Solids	143	mg/L	-	n/a
Naphthalene	<0.01	µg/L	10	None
Benzo(a)pyrene	<0.01	µg/L	10 (UK DWS)	None
Polycyclic Aromatic Hydrocarbons (PAHs) (Total of 16)	<0.01	µg/L	0.1 (UK DWS)	None

UK DWS = U.K. Drinking Water Standards. Bold text highlights exceedances above EQS / other. Italic text indicates that exceedances occur above lower limit of EQS / other.

\* These values were converted into  $\text{NH}_3$  assuming a pH of 8 and a water temperature of 16 °C using a conversion table obtained from The Institute of Food and Agricultural Sciences (IFAS), University of Florida. The conversion assumes that Ammoniacal Nitrogen value consists of  $\text{NH}_4^+$  (Ionised Ammonia) and  $\text{NH}_3$  (Unionized Ammonia). This is important to know since  $\text{NH}_3$  is the form which is toxic to fish. Water temperature and pH will effect which form of ammonia is predominant at any given time in an aquatic system.

Concentrations of organic determinands, including the aliphatic and aromatic bands of TPH, PAHs and BTEX compounds were below laboratory detection limit for all samples suggesting that there is no evidence of organic contamination in groundwater or surface water.

Concentrations of inorganic determinands exceeded their respective EQS values for Boron, Lead, Chloride and Ammoniacal Nitrogen as  $\text{NH}_3$  in a number of boreholes locations on the site.

In a number of groundwater and surface water samples, concentrations of the inorganic determinands Chromium, Copper and Zinc fell within their respective range of EQS limits and are generally nearer to the lower limit.

## 4.2 Groundwater and Gas Monitoring Results

The results of the groundwater and gas monitoring undertaken on 14<sup>th</sup> September 2005 are displayed in Table 2.

Table 2. Groundwater and Gas Monitoring Results

Borehole Number	Flow (l/h)	Atmospheric Pressure (mB)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	N <sub>2</sub> (%)	H <sub>2</sub> S (ppm)	CO (ppm)	Groundwater (mBGL)	Base of Borehole (mBGL)
WS1	-0.5	1022	0	0.6	20.8	78.5	0	0	0.91	4.28
WS2	0	1021	0	2.2	19.3	78.4	0	0	1.69	3.91

WS3	-0.1	1021	0	0.4	20.9	78.6	0	0	0.96	3.85
WS4	-0.2	1021	0	2.1	20	77.8	0	0	1.57	4.27
WS5	-0.1	1022	0	0.7	20	79.2	0	0	1.16	3.84

No Methane, Hydrogen Sulphide or Carbon Monoxide was detected in any of the boreholes. Carbon Dioxide was slightly elevated in the boreholes, particularly in WS2 (2.2%) and WS4 (2.1%). The air was Oxygen deficient in WS2 (19.3%) and was significantly below normal Oxygen air content of 20.9% in WS4 and WS5 (20% for both). Nitrogen concentrations ranged from 77.8 – 79.2%. Normal Nitrogen air content is about 79%. Atmospheric pressure was within the normal range. Low flow rate of air was encountered in all boreholes except WS2, reaching a maximum of 0.5 litres per hour in WS1.

Groundwater was encountered at depths of between 0.91 and 1.69 mBGL. The groundwater elevation was higher than that encountered as water strikes during the site investigation (ranging from 1.4 to 2.9 mBGL).

## 5 Summary and Conclusions

---

RPS Planning Transport and Environment Ltd (RPS) were commissioned by Neal Soil Suppliers to undertake an intrusive investigation of their site at Rumney, Cardiff. The purpose of the investigation was to characterise baseline ground, groundwater and surface water conditions at the site in Newton Lane, Rumney. The requirements of the investigation were laid out in the letter ref. SEA/EMI/AOS/EAWML30347.

Five window sampling boreholes were drilled on 6<sup>th</sup> September 2005 at locations across the site. Chemical analysis was undertaken for soil and groundwater samples obtained from the boreholes and surface water locations on 6<sup>th</sup> and 14<sup>th</sup> September 2005. All soil samples were taken at 0.5 mBGL in each borehole.

It is considered that the baseline ground, groundwater and surface water conditions have been characterised from the data collected. As part of the ongoing management of controlled waters risks the groundwater and surface waters can be monitored as stipulated in the Waste Management Licence. The soil data collected can form the basis of the licence surrender process.

Groundwater monitoring was undertaken on 14<sup>th</sup> September 2005 and groundwater was encountered at depths of between 0.91 and 1.69 mBGL. The groundwater elevation was higher than that encountered as water strikes during the site investigation (ranging from 1.4 to 2.9 mBGL).

The borehole logs indicate that groundwater is encountered in the shallow made ground and underlying clay. The made ground comprises a range of materials from gravel-sized fragments to clay. It is not considered that either the made ground or the underlying clay will be permeable. Winter groundwater levels have not been monitored however based on summer levels the proposed activities would not lead to a direct discharge of listed substances to groundwater.

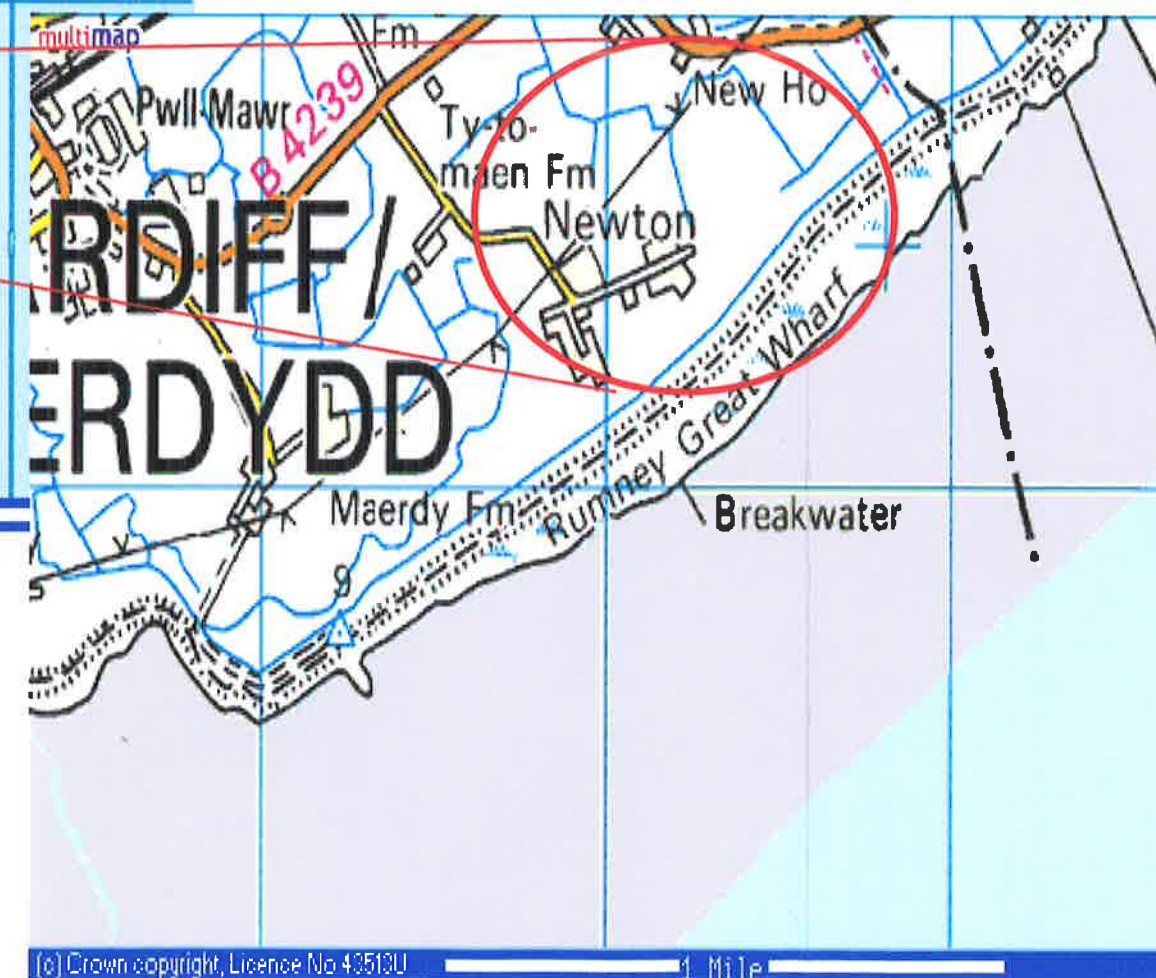
## Drawings

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SITE LOCATION



**RPS Consultants**  
THE ENVIRONMENTAL CONSULTANCY

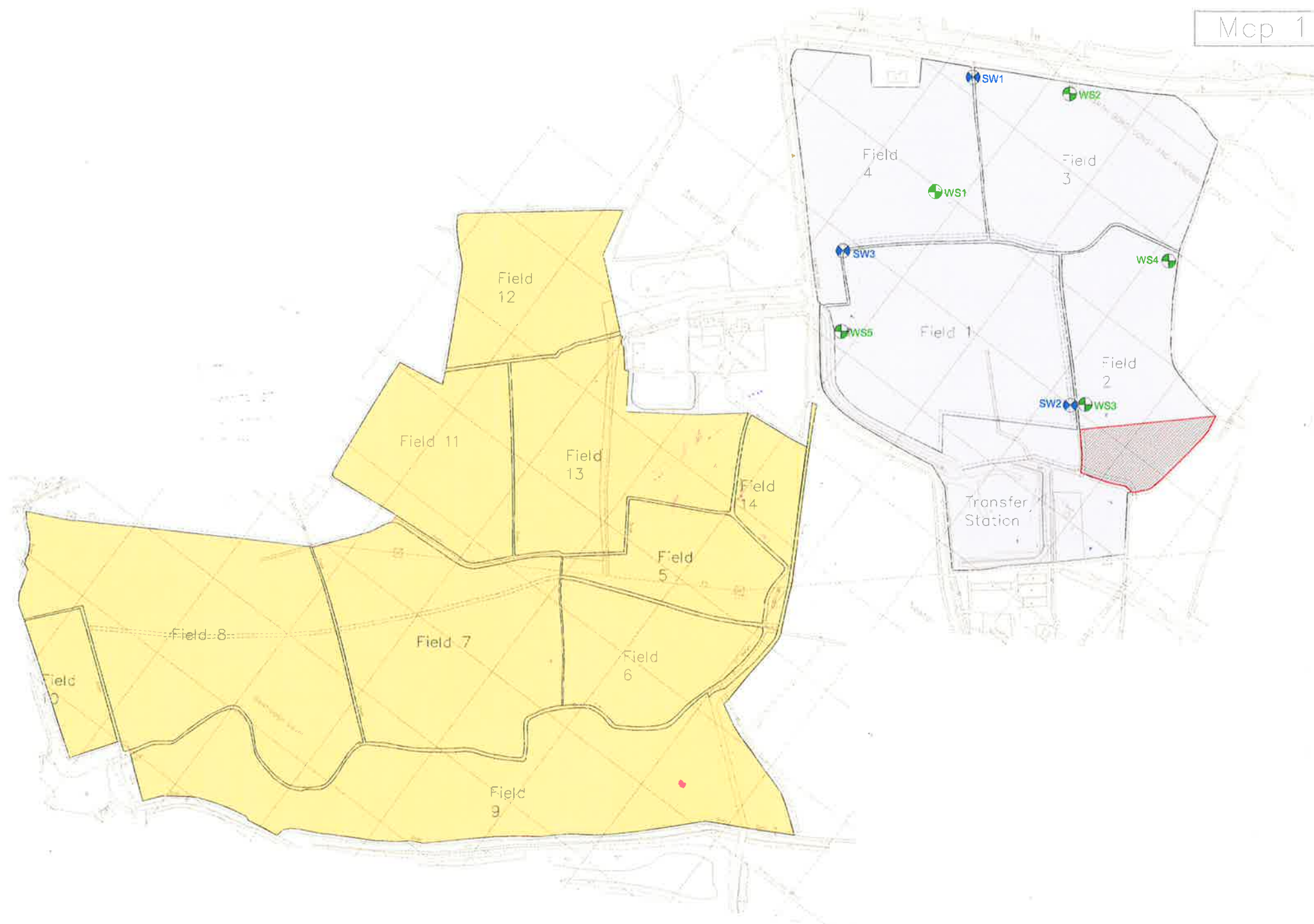
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Project Number	JER3367-001
Date	04/10/2005
Client	Neal Soils, Rumney, Cardiff
Description	

Job Name	
----------	--



17 09 04.



**Key:**

- Future Application Area
- Licence Area  
EAWMR30347
- Field boundary
- Designated Exemption Area
- WS1 Window Sample Hole Location
- SW1 Surface Water Sampling Location

**RPS** Planning, Transport and Environment

Conrad House  
Beaufort Square  
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Approved:

Revisions:

Date:  
20.09.05

Drawn by:  
M Dalton

Scale:  
1:5000

Client:  
Neal Soil Suppliers

Job:  
Soil Spreading, Wentloog

Drawing Title:  
Sampling Location Plan

Drawing Number:  
JER3367-002

## Appendices

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## **Appendix A**

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### **Exploratory Hole Logs**

## BOREHOLE LOG

Borehole No.

WS1

Sheet 1 of 1

Project Name: Neal Soils, Cardiff	Coordinates	Drilling Method:	Casing Details		Hole Type
Project No. JER3367	Northings: -	Start Date: 06/09/2005	Hole Diameter (mm)	Casing Depth (m)	WS
Location:	Eastings: -	End Date: 06/09/2005			Scale
Client:	Ground Level: -	m OD	Logged By: AP		1:50

Well	Water Strikes	Samples & In Situ Testing			Level (m AOD)	Depth (m)	Legend	Description Of Strata	
		Depth (m)	Type	Results					
						0.05		MADE GROUND: Brown grey sandy silt. Occasional fine to coarse, subangular to angular gravel and cobbles. Gravel is concrete.	
						0.10		MADE GROUND: Brown/grey clay.	0.50
						0.90		Firm to stiff grey/brown mottled CLAY.	1.00
						1.10		Firm grey and brown mottled CLAY. Damp.	
						1.40		Soft to firm grey and brown mottled CLAY. Wet.	1.50
						1.60		Soft grey and brown mottled CLAY. Wet.	1.50
								Very soft grey, very occasionally black CLAY. Wet.	2.00
						2.50		Soft to very soft SILT/CLAY. Wet. Silt includes frequent organic matter. Strong organic and sulphurous odours.	2.50
						2.70		Very soft grey, occasionally brown and black CLAY. Wet. Very occasional organic matter.	3.00
									3.50
									4.00
									4.50
									5.00
						5.00		End of Borehole at 5.00 m	5.00
									5.50
									6.00
									6.50
									7.00
									7.50
									8.00
									8.50
									9.00
									9.50
									10.00

Remarks:

## Chiselling Details

## Groundwater Notes

Time Taken	Depth From (m)	Depth To (m)	Tool Used	Strike (m)	Casing Depth (m)	Level After 20 Mins (m)
				1.40	-	-

AGS

## BOREHOLE LOG

Borehole No.

WS2

Sheet 1 of 1

Project Name: Neal Soils, Cardiff	Coordinates	Drilling Method:	Casing Details		Hole Type
Project No. JER3367	Northings: -	Start Date: 06/09/2005	Hole Diameter (mm)	Casing Depth (m)	WS
Location:	Eastings: -	End Date: 06/09/2005			Scale
Client:	Ground Level: -	m OD	Logged By: AP		1:50

Well	Water Strikes	Samples & In Situ Testing			Level (m AOD)	Depth (m)	Legend	Description Of Strata	
		Depth (m)	Type	Results					
						0.15		MADE GROUND: Brown gravelly clay. Includes cobbles. Gravel is fine to coarse, subrounded to angular. Occasional loose gravel.	0.50
								MADE GROUND: Firm to stiff grey and brown mottled clay. Very occasional gravel and cobbles.	1.00
						1.50		Firm grey and brown mottled CLAY. Occasionally sticky at 1.5-1.8m	1.50
						1.80		Soft to very soft grey CLAY. Wet. Occasional black and brown organic staining. Organic matter and sulphurous odours.	2.00
						2.20		No recovery.	2.50
						3.00		Soft to very soft grey CLAY. Wet. Occasional black and brown organic staining. Organic matter and sulphurous odours.	3.00
						3.50		Soft to very soft brown clayey silty PEAT. Wet. Frequent organic matter (mainly roots/wood).	3.50
						4.00		Very soft grey CLAY. Wet.	4.00
								End of Borehole at 4.00 m	4.50
									5.00
									5.50
									6.00
									6.50
									7.00
									7.50
									8.00
									8.50
									9.00
									9.50
									10.00

Remarks:

## Chiselling Details

## Groundwater Notes

Time Taken	Depth From (m)	Depth To (m)	Tool Used	Strike (m)	Casing Depth (m)	Level After 20 Mins (m)
				1.80	-	-



# BOREHOLE LOG

Borehole No.  
**WS3**  
Sheet 1 of 1

Project Name: Neal Soils, Cardiff		Coordinates Northings: - Eastings: -	Drilling Method:		Casing Details		Hole Type <b>WS</b>
Project No. JER3367			Start Date: 06/09/2005		Hole Diameter (mm)	Casing Depth (m)	
Location:			End Date: 06/09/2005				Scale <b>1:50</b>
Client:		Ground Level: -	m OD	Logged By: AP			

Well	Water Strikes	Samples & In Situ Testing			Level (m AOD)	Depth (m)	Legend	Description Of Strata	
		Depth (m)	Type	Results					
						0.15		MADE GROUND: Brown, dark brown and grey slightly sandy, gravelly silt / clay (topsoil). Gravel is subangular to angular, fine to coarse, occasional cobbles, brick. Dry. Unconsolidated in places.	0.50
								MADE GROUND: Firm to stiff brown to dark brown clay. Occasional sulphurous odour. Very occasional metal, brick, gravels of concrete. Damp below 0.5m.	1.00
						1.50		Firm, occasionally soft brown and grey mottled clay. Damp. Occasional fine gravel, sand, black and brown organic matter.	1.50
						2.50		Soft brown to dark brown and occasionally black clayey silty PEAT. Frequent organic matter (roots/wood). Sulphurous odour. Wet.	2.50
						3.50		Very soft grey CLAY. Wet. Occasional peat horizons. Frequent organic matter present. Occasional sulphurous and organic matter odours.	3.50
						4.50		Very soft grey CLAY. Wet. Very occasional organic matter.	4.50
						5.00		End of Borehole at 5.00 m	5.00
									5.50
									6.00
									6.50
									7.00
									7.50
									8.00
									8.50
									9.00
									9.50
									10.00

Remarks:

Chiselling Details				Groundwater Notes		
Time Taken	Depth From (m)	Depth To (m)	Tool Used	Strike (m)	Casing Depth (m)	Level After 20 Mins (m)
				2.90	-	-



# BOREHOLE LOG

Borehole No.  
**WS4**  
Sheet 1 of 1

Project Name: Neal Soils, Cardiff		Coordinates		Drilling Method:		Casing Details		Hole Type	
Project No. JER3367		Northings: -		Start Date: 06/09/2005		Hole Diameter (mm)		Casing Depth (m)	
Location:		Eastings: -		End Date: 06/09/2005					
Client:		Ground Level: -		m OD		Logged By: AP		Scale 1:50	

Well	Water Strikes	Samples & In Situ Testing			Level (m AOD)	Depth (m)	Legend	Description Of Strata	
		Depth (m)	Type	Results					
						0.20		MADE GROUND: Brown occasionally grey slightly sandy gravelly clay. Gravel is subangular to angular, fine to coarse, occasional cobbles of concrete and brick.	0.50
						0.80		Firm to stiff grey/brown mottled CLAY. Dry but damp in places.	1.00
								Stiff grey/brown mottled CLAY,	1.50
						1.80		Soft grey CLAY. Very occasional brown/black organic matter. Wet.	2.00
						2.00		Very soft grey CLAY. Wet. Very occasional black/brown organic matter.	2.50
									3.00
						3.00		No recovery.	3.50
						3.30		Very soft grey CLAY. Wet. Very occasional black/brown organic matter.	4.00
									4.50
						5.00		End of Borehole at 5.00 m	5.00
									5.50
									6.00
									6.50
									7.00
									7.50
									8.00
									8.50
									9.00
									9.50
									10.00

Remarks:	Chiselling Details				Groundwater Notes			
	Time Taken	Depth From (m)	Depth To (m)	Tool Used	Strike (m)	Casing Depth (m)	Level After 20 Mins (m)	
					1.90	-	-	



## BOREHOLE LOG

Borehole No.

WS5

Sheet 1 of 1

Project Name: Neal Soils, Cardiff	Coordinates	Drilling Method:	Casing Details		Hole Type
Project No. JER3367	Northings: -	Start Date: 06/09/2005	Hole Diameter (mm)	Casing Depth (m)	WS
Location:	Eastings: -	End Date: 06/09/2005			Scale
Client:	Ground Level: -	m OD	Logged By: AP		1:50

Well	Water Strikes	Samples & In Situ Testing			Level (m AOD)	Depth (m)	Legend	Description Of Strata	
		Depth (m)	Type	Results					
						0.03		MADE GROUND: Loose light brown/grey gravelly silt. Gravel is fine to coarse, subrounded to angular with occasional cobbles of concrete.	0.50
						1.20		MADE GROUND: Firm occasionally stiff brown/dark brown slightly sandy gravelly cobbly clay. Gravel is medium to coarse, subangular to angular. Cobbles are generally fine to medium, subangular to angular, mainly of concrete and brick.	1.00
						1.50		Stiff grey/brown mottled CLAY. Brown organic matter present. Dry. Sulphurous and organic matter odours.	1.50
								Stiff grey/brown mottled CLAY. Damp in places.	2.00
						2.20		Soft to firm grey CLAY. Damp to wet. Occasional brown/black organic matter particularly between 2.8 and 3m.	2.50
						3.10		End of Borehole at 3.10 m	3.00
									3.50
									4.00
									4.50
									5.00
									5.50
									6.00
									6.50
									7.00
									7.50
									8.00
									8.50
									9.00
									9.50
									10.00

Remarks:

Chiselling Details				Groundwater Notes		
Time Taken	Depth From (m)	Depth To (m)	Tool Used	Strike (m)	Casing Depth (m)	Level After 20 Mins (m)
				2.80	-	-

## **Appendix B**

---

### **Groundwater and Gas Monitoring Results**

# Wentloog/Neal Soils Gas and Groundwater Monitoring

Date: 14-Sep-05

Borehole Number	Flow (l/h)	aP (mB)	dP (Pa)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	Lower Exposure Limit (%)	O <sub>2</sub> (%)	N <sub>2</sub> (%)	H <sub>2</sub> S (ppm)	CO (ppm)	Dip to water (m)	Dip to Base (m)
WS1	-0.5	1022	-2	0	0.6	0	20.8	78.5	0	0	0.91	4.28
WS2	0	1021	0	0	2.2	0	19.3	78.4	0	0	1.69	3.91
WS3	-0.1	1021	0	0	0.4	0	20.9	78.6	0	0	0.96	3.85
WS4	-0.2	1021	0	0	2.1	0	20	77.8	0	0	1.57	4.27
WS5	-0.1	1022	0	0	0.7	0	20	79.2	0	0	1.16	3.84

## **Appendix C**

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### **Chemical Analytical Results**



☒

» Shown on prev. report

**Client Contact:** Phil Russell

[illegible]

**Date** 22.09.2005

**Date** 05.10.2005

- # ISO 17025 accredited
- M MCERTS accredited
- \* Subcontracted test
- » Shown on prev. report

**Matrix:** LIQUID  
**Location:** Neal Soil Supplies, Rumneys, Cardiff  
**Client Contact:** Phil Russell

**Date** 05.10.2005

**Date** 05.10.2005



☒

- # ISO 17025 accredited
- M MCERTS accredited
- \* Subcontracted test
- » Shown on prev. report

**Matrix:** LIQUID  
**Location:** Neal Soil Supplies, Rumneys, Cardiff  
**Client Contact:** Phil Russell

[illegible]

**Date** 05.10.2005

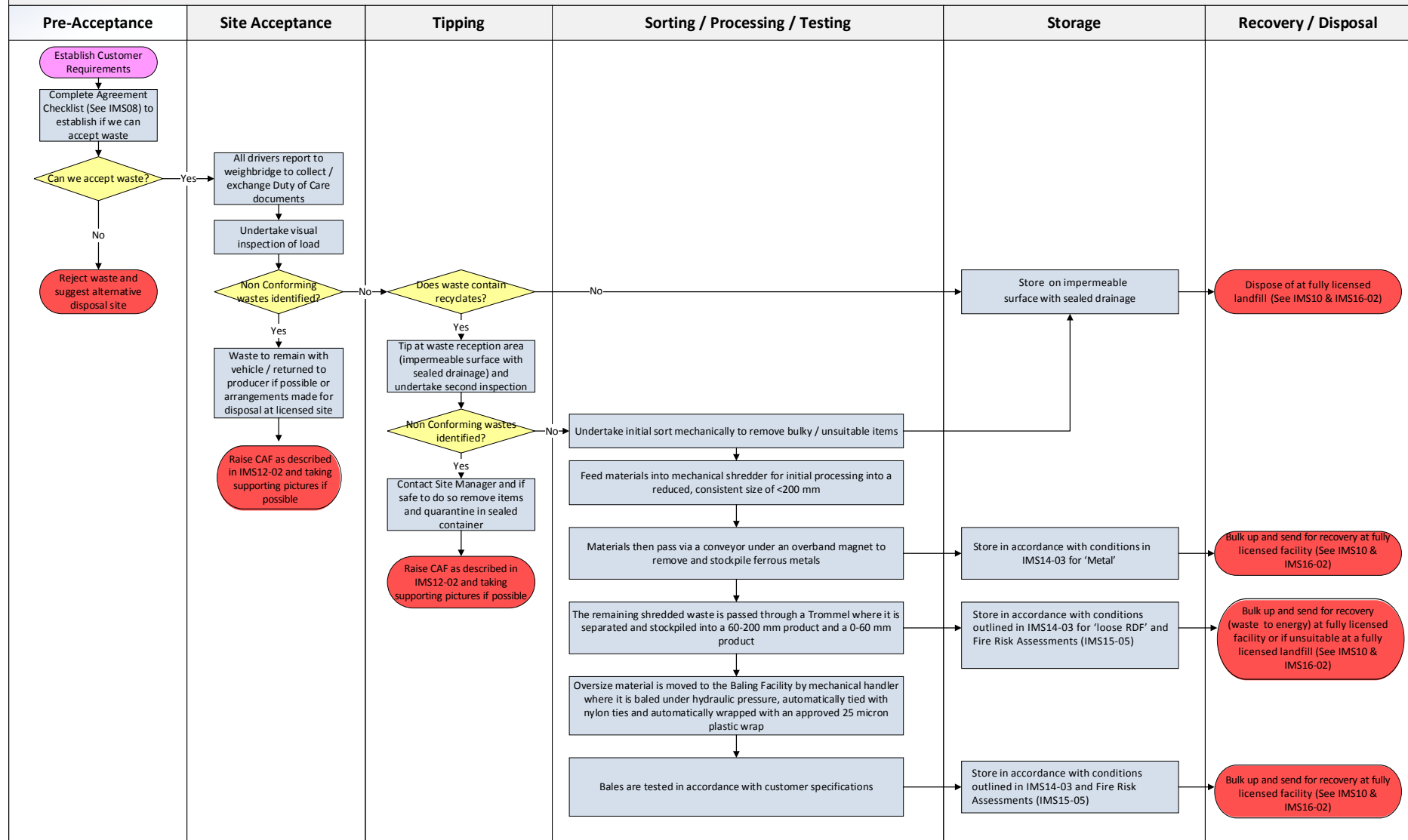
## References

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- i Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control): <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32010L0075&from=EN>
- ii European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions: [http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52014XC0506\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52014XC0506(01)&from=EN)
- iii <https://naturalresources.wales/media/1215/environmental-permitting-regulations-guidance-for-applicants-h5-site-condition-report-guidance-and-template.pdf>

### Process description flow charts for RDF and SRF

## IMS16-02-05 – RDF Operations



## SRF Processing Flow

