

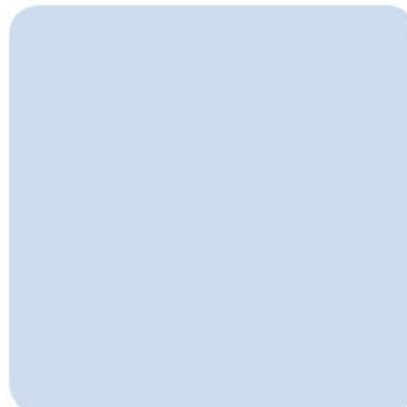
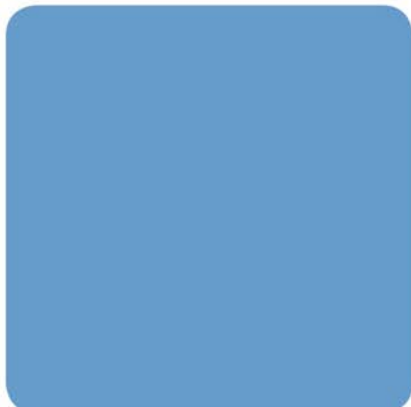


Environmental Permit Application

Operating Techniques and Monitoring Techniques Report

Materials Recycling Facility, Esperanto Way, Newport

Wastesavers Limited



Date: August 2015

Our Ref: JER6447

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Quality Management

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Amendment Record

Revision No.	Date	Reason for Change	Authors Initials

Contents

Quality Management	i
Amendment Record	ii
Contents	iii
Tables, Drawings & Appendices	v
1 Introduction	6
1.1 Application Overview	6
1.2 The Site and its Setting	6
<i>Ecological Designations</i>	<i>7</i>
1.3 General Project Description	8
2 Detailed Project Description	10
2.1 Waste Reception	10
2.2 Waste Processing	10
3 Operations	11
3.1 Pre-Acceptance Procedures to Assess Wastes	11
3.2 Waste Acceptance	11
<i>General</i>	<i>11</i>
<i>Waste Inspection</i>	<i>12</i>
<i>Unacceptable Waste</i>	<i>13</i>
<i>Waste Quantity Measurement Systems</i>	<i>13</i>
3.3 Waste Management	13
<i>General</i>	<i>13</i>
<i>Materials Recycling Facility</i>	<i>14</i>
<i>Transfer of Food Waste</i>	<i>15</i>
<i>Raw Materials</i>	<i>15</i>
3.4 Closure and Decommissioning	15
4 Management	16
4.1 General	16
<i>Operations and Maintenance</i>	<i>16</i>
<i>Competence and Training</i>	<i>17</i>
<i>Organisation</i>	<i>17</i>
4.2 Accident Management	17
<i>Site Security</i>	<i>19</i>
4.3 Energy Efficiency	19

	<i>General Energy Efficiency Issues</i>	<i>19</i>
	<i>Operating, maintenance and housekeeping measures</i>	<i>19</i>
	<i>Physical Techniques</i>	<i>20</i>
	<i>Building Services.....</i>	<i>20</i>
4.4	Efficient use of Raw Materials and Water	20
4.5	Avoidance, Recovery and Disposal of Wastes	21
5	Emissions Control and Abatement	22
5.1	Emissions to Air	22
5.2	Emissions to Surface Water and Sewer	22
5.3	Emissions to Land	22
5.4	Fugitive Emissions	22
5.5	Odour.....	24
5.6	Control of Flies and Pests.....	24
5.7	Noise and Vibration	25
5.8	Monitoring and Reporting of Emissions (Water, Sewer and Air).....	25
	<i>Monitoring and Reporting of Emissions to Water and Sewer</i>	<i>25</i>
	<i>Monitoring and Reporting of Waste Emissions.....</i>	<i>25</i>
6	Environmental Risk Assessment Summary.....	26
6.2	Emissions to Air	26
	There are no point source emissions to air at the site	26
6.3	Emissions to Water and Sewer.....	26
6.4	Noise.....	26
	References	27

Tables, Drawings & Appendices

Drawings

JER6447-PER-001_D_150526	Site Location Plan
JER6447-PER-004_D_150803	Environmental Permit Boundary
JBR2664 200	Drainage Layout

Appendices

Appendix 1	List of European Waste Codes to be accepted at MRF
Appendix 2	Environmental Risk Assessment
Appendix 3	Flood Consequences Assessment
Appendix 4	OPRA Profile
Appendix 5	Pre-Application Correspondence
Appendix 6	Standard Operating Procedure “Kerbside Collection”
Appendix 7	Odour Management Plan
Appendix 8	EMS Index

1 Introduction

1.1 Application Overview

- 1.1.1 This document forms the application for a bespoke environmental permit for Wastesavers Limited (Wastesavers) Materials Recycling Facility (MRF) in Newport under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) (EPR). The applicant and operator of the proposed facility is Wastesavers.
- 1.1.2 Wastesavers is proposing to expand the activities currently conducted on site under various exemptions, to allow for increased throughput of materials and expansion of permitted wastes. The MRF activity will be permitted as a recovery waste operation under the Waste Framework Directive for the recovery of waste, subject to the Materials Recycling Facility Code of Practice as implemented via the Environmental Permitting (England and Wales) Regulations 2014 (amended).
- 1.1.3 The proposed Materials Recycling Facility (MRF) at Esperanto Way currently operates under a number of exemptions. The proposal will see the facility operate as a waste operation, regulated by a Waste Operation Environmental Permit.
- 1.1.4 Recyclables are collected on a weekly basis, including food waste and cardboard, and then delivered to the existing depot. From 1st April 2016 cans and plastics will be mixed. Waste is then sorted, bulked and baled and finally stored prior to off-site transfer.
- 1.1.5 The current MRF operated on site will be expanded to increase storage space. This facility will continue to receive local authority public waste and commercial waste but will increase the throughput to meet legislative requirements for recycling. The list of permitted waste types will also be expanded, full details can be found in Part B4 application form. The proposed layout of the new site is shown in *Drawing JER6447-PER-004_D_150803*.

1.2 The Site and its Setting

- 1.2.1 The application site comprises the existing MRF at Esperanto Way, Newport, NP19 0RD and land adjacent (north eastern boundary) to this facility located approximately 1.8km from Newport city centre on the Orb Industrial Estate.
- 1.2.2 For identification purposes the application site is approximately centred at Ordnance Survey grid reference ST 32026 86241 (postcode NP19 0RD). The site location plan is presented in *Drawing JER6447-PER-001_D_150526*. The newly proposed installation boundary is presented in *Drawing JER6447-PER-004_D_150803*.
- 1.2.3 The application site is approximately 0.87ha in area and comprises the existing Wastesavers Recycling Depot together plus an additional area of currently vacant land to the north east that is 0.28ha in size. The two sections comprise of; the existing MRF comprising of a main yard and existing building the front of which houses the reception area, offices, meeting room,

canteen and toilet/cleaning facilities for staff, and the back of which contains the waste processing hall. The other section of the application site is a portion of adjacent land which will be developed to extend both the boundary of the current site and the existing building to facilitate additional waste storage and loading space. Access to the site is via the existing access to the MRF from Esperanto Way.

- 1.2.4 The wider area is an industrial landscape comprising Felnex, Stephenson Street and Reevesland Industrial Estates. The River Usk is approximately 120m east of the site boundary. The east-west running Southern Distributor Road is located approximately 1200m north of the site boundary.

Proximity to Sensitive Receptors

Residential Areas and other Sensitive Receptors

- 1.2.5 The nearest residential areas and other sensitive receptors to the proposed application site have been identified as follows:
- River Usk (120m west);
 - Coronation Park (100m south);
 - Royal Gwent Hospital (1500m north west);
 - Alexandra Road (600m north west);
 - Lysaght Way (1km north east)

Ecological Designations

- 1.2.6 There are two internationally designated nature conservation sites within 10km of the site, the River Usk Special Area for Conservation (SAC) (120m to the south) and the Severn Estuary SAC with Marine Components, Special Protection Area SPA with marine components and RAMSAR site (3km to the south).
- 1.2.7 There is one nationally designated nature conservation site within 2km of the site: the River Usk (SSSI) (120m west). There are three more within 3km: the Newport Wetlands (SSSI) (3km south east); the Gwent Levels (SSSI) (3km south east); and the Severn Estuary (National Nature Reserve) (3km south).
- 1.2.8 There are no non-statutory designated nature conservation sites within 2km of the application site. There is an RSPB Reserve 3.5km to the south of the site.
- 1.2.9 The nearest named watercourse is the River Usk which is located approximately 120m west of the site.
- 1.2.10 No artificial watercourses / features (e.g. canals, reservoirs) have been identified within 1km of the site except Alexandra Docks which is approximately 800m west of the site on the other side of the River Usk.

1.3 General Project Description

1.3.1 This section provides an overview of the proposals. This is supplemented by further details in Sections 2 - 6 as follows:

- Section 2 details the proposed management practices which will be in place at the Materials Recycling Facility with specific detail relating to:
 - Accident Management;
 - Energy Efficiency;
 - Efficient use of raw materials and water;
 - Avoidance, recovery and disposal of wastes.
- Section 3 addresses the operational measures which will be in place to prevent and/or control the environmental effects of the proposals.
- Section 4 identifies the nature of emissions from the Materials Recycling Facility and details the monitoring systems which will be in place.
- Section 5 summarises the conclusions from the detailed assessments undertaken to predict the environmental effects from the Materials Recycling Facility.

1.3.2 The information provided within this application has been set out with due regard to the BAT guidance provided within EPA 1.0 How to Comply with your Environmental Permit Environment Agency, 2013; The Waste Framework Directive, DEFRA, March 2010; and EPA 5.06 Recovery and Disposal of Hazardous and Non Hazardous Waste Activities, Environment Agency, 2004.

1.3.3 The application site is an existing site which is to be expanded to increase storage; the site currently operates under various exemptions. The application will allow for an increased throughput of materials and an expansion of permitted wastes, which will help increase the recycling rate in the area meeting new statutory recycling targets. The proposed throughput of the facility would be approximately 21,000 tonnes per annum.

1.3.4 The MRF will treat and store paper, cardboard, cans, glass, plastics, textiles, small domestic appliances and food wastes before onward transfer for recycling/re-use. Meeting demand from both domestic customers (approximately 145,000 population) and commercial customers who also have new obligations under the Welsh Government recycling targets to separate more materials. Increasing the throughput of material and raising the recycling rate at the site will help to meet the Welsh Government recycling targets and further reduce waste to landfill.

1.3.5 The main elements of the Materials Recycling Facility will comprise:

- Pre-Acceptance Waste Assessment;
- Weighbridge;
- Waste acceptance;
- Waste Reception building (bulker, bailer) and storage;
- External storage;
- Vehicle wash;

- Offices;
- A new one-way circulation route around the site with a new egress onto Esperanto Way area parking;
- Additional Parking and
- Fire Detection and Protection System.

2 Detailed Project Description

2.1 Waste Reception

- 2.1.1 The Materials Recycling Facility currently accepts paper, cardboard, cans, glass, plastics, textiles, small domestic appliances and food wastes. These waste types will form the basis of the newly permitted MRF waste types and will be amended to include more waste types as detailed in *Appendix 1*.
- 2.1.2 An environmental risk assessment based on the H1 Environmental Risk Assessment Tools has been completed for the proposed operations at the facility and is included in the Environmental Risk Assessment document.
- 2.1.3 Materials will be assessed as part of the pre-acceptance checks; assessment will be in line with the Wastesavers standard operating procedure “Kerbside Collection”. Materials will be off loaded into the relevant bays and then baled/stored for onward reprocessing.

2.2 Waste Processing

- 2.2.1 Waste will be checked and then undergo treatment in readiness for onward transfer for recycling or re-use. Treatment will include sorting, bulking, baling and storage.
- 2.2.2 Food wastes will be bulked covered and stored within an enclosed barn in readiness for onwards transfer to another regulated facility for recycling.
- 2.2.3 Steel, aluminium, and plastics are sorted and baled on receipt. Card is also baled on receipt. All other materials will be sorted in readiness for onwards transfer.
- 2.2.4 Once processed, materials will be stored in designated and segregated storage areas ready for collection (see *Drawing JER6447-PER-004_D_150803_Installation Boundary*). Processed waste will be weighed at the outgoing weighbridge for onward transport off-site for recycling/re-use.

3 Operations

3.1 Pre-Acceptance Procedures to Assess Wastes

- 3.1.1 All deliveries to the Waste Reception building will be subject to pre-acceptance evaluation prior to arrival on site and it will be recommended that a delivery schedule be agreed with commercial customers prior to arrival on site.
- 3.1.2 Wastesavers offers a kerbside collection. Collections are made in accordance with the Standard Operating Procedure “Kerbside Collection” (*Appendix 7*).
- 3.1.3 The following information will be requested from all customers (local authority and commercial) prior to booking in for acceptance:
- Waste EWC Code;
 - Process generating SIC Code (where appropriate);
 - Delivery container type (where appropriate);
 - Written description of the material; and
 - Anticipated date and time of delivery.
- 3.1.4 For each new waste enquiry and comprehensive characterisation of the waste and identification of a suitable treatment method will be undertaken.
- 3.1.5 Where applicable, for existing waste customers, a representative sample of the waste will be taken from the production process and analysed.
- 3.1.6 All deliveries will be subject to a Waste carriers licences check.

3.2 Waste Acceptance

General

- 3.2.1 The incoming waste recyclables will be delivered to the Materials Recycling Facility within enclosed / sheeted vehicles which reduces the potential for dust emissions during transport. The use of enclosed vehicles reduces the potential for dust emissions during transport.
- 3.2.2 All vehicles entering the site will drive to the weighbridge (located next to the offices) to undertake Duty of Care paperwork checks 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.
- 3.2.3 Visitors to the site will be required to sign the Visitors Book in reception before proceeding onto the site, and sign out prior to leaving. Unless they are approved subcontractors undertaking e.g. maintenance works, all other visitors are escorted around the facility.

- 3.2.4 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. Annual duty of care notes will be accepted for those repeat / contractual 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.
- 3.2.5 Where possible the Weighbridge Operator will carry out a visual inspection of the incoming materials, however, materials will be inspected at the kerbside in line with Wastesavers "Kerbside Collection" standard operating procedure.
- 3.2.6 Provided the Weighbridge Operator is satisfied with the incoming load the vehicle will be directed to the designated areas for offloading and processing (see *Drawing JER6447-PER-004_D_150803_Installation Boundary*). Where the Weighbridge Operator is not satisfied with the paperwork provided or the description of the incoming waste loads the vehicle will either be directed to a holding area on site pending further information / inspection or will be rejected directly from the site.
- 3.2.7 If the Weighbridge Operator is satisfied that the waste is not acceptable under the terms of the Environmental Permit, entry to the site will be refused and the details of the event recorded separately in the site diary.

Waste Inspection

- 3.2.8 Once the vehicle has completed its pre-acceptance and Duty of Care paperwork checks the vehicle will be directed to the Waste Reception building, or other appropriate location, for offloading and processing.
- 3.2.9 The roller shutter doors of the Waste Reception building will be closed unless for access and egress. Access and egress will likely be required throughout operational hours..
- 3.2.10 Once the vehicle has reached the unloading area, it will offload the material into the appropriate location. Steel, aluminium and plastics will be separated and baled on receipt, and transported to designated storage areas. Incoming cardboard will also be baled, prior to storage. Glass and textiles will be unloaded in their respective storage areas. Unloading and storage operations will be overseen by a Site Operative who will undertake a visual inspection of the material. Any non-conforming wastes will be removed (either by hand / plant) and preferably reloaded for removal from site, or if not possible quarantined.
- 3.2.11 Food wastes are accepted at the facility for bulking and onwards transportation to appropriate final treatment facilities only. This waste will enter the food waste storage area and will be immediately bulked with the existing food waste waiting off site transportation.

Unacceptable Waste

- 3.2.12 If the Site Operative identifies wastes for which the site is not permitted during offloading, the vehicle registration number will be recorded and the client informed; where possible wastes will also be reloaded for removal from site.
- 3.2.13 If wastes cannot be removed from the site they will be quarantined within a sealed skip in the Waste Reception areas pending removal from the facility. A note will be made in the Site Diary of all non-conforming wastes on site.
- 3.2.14 Where incoming wastes are identified to contain dangerous or hazardous wastes that are not permitted, these will be quarantined and if necessary the area evacuated until Natural Resources Wales can be contacted for further guidance relating to the management of the material.
- 3.2.15 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.
- 3.2.16 Appropriate actions to remove the substances from the site will be taken following consultations with the fire service and Natural Resources Wales.

Waste Quantity Measurement Systems

- 3.2.17 Quantities of incoming wastes to the facility shall be recorded in metric tonnes utilising the incoming site weighbridge. This information is retained on a central server that is backed up daily.
- 3.2.18 Quantities of outgoing products and commodities shall also be recorded, using the site's weighbridge.
- 3.2.19 All site records will be collated and stored at the site office so as to ascertain waste throughput at the site and the quantity of waste / products exported from the site by weight and type on a monthly basis.
- 3.2.20 The weighbridge is to be calibrated annually in accordance with the manufacturer's recommendations.

3.3 Waste Management

General

- 3.3.1 All wastes will be stored in line with the requirements of the relevant Directives and associated guidance documents as listed in *Section 1.3* above.
- 3.3.2 The MRF has been designed with the intention of processing general household wastes sourced from the public and similar commercial wastes.

Materials Recycling Facility

- 3.3.3 The MRF is classified as a Recovery Activity rather than a Disposal Activity under the following categories as defined in annex 2 of the Waste Framework Directive.
- **R3:** Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation process).
 - **R4:** Recycling / reclamation of metals and metal compounds;
 - **R5:** Recycling / reclamation of other inorganic materials;
 - **R11:** Use of waste obtained from any of the operations numbered R1 to R10
 - **R12:** Exchange of waste for submission to any of the operations numbered R1 to R11
 - **R13:** Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)
- 3.3.4 The process activities carried out at the MRF include the following:-
- Manual and mechanical sorting;
 - Screening
 - Bulking;
 - Metals separation; and
 - Baling;
- 3.3.5 The MRF will sort and screen the received wastes before bulking according to type:
- Cardboard will be baled and stored;
 - Plastics, Steel and Aluminium cans will be sorted, baled and stored;
 - Glass will be stored for recycling;
 - Paper and Textiles will be stored;
 - Food waste will be bulked and stored for onwards transportation to appropriate final treatment facilities for recycling.
- 3.3.6 A conveyor belt feeds the materials into the baler. Bales are then transported to their respective storage locations.
- 3.3.7 Bales are regularly inspected to ensure they remain sealed.
- 3.3.8 Food wastes will be covered and stored in readiness for onwards transfer to another regulated facility for recovery.
- 3.3.9 Plastics and steel bales generated on site are moved outside for storage in the external designated storage areas on site.
- 3.3.10 Aluminium, paper, card and food will be stored inside. Glass, plastics acting as an overspill will be stored in external storage areas (*Drawing JER6447-PER-004_D_150803*)
- 3.3.11 The facility has the capacity to store a maximum of 254 bales of segregated waste in the designated storage areas (*Drawing JER6447-PER-004_D_150803*). When sufficient stock has

accumulated these bales are processed and transferred from the facility via enclosed vehicles for onward reprocessing.

- 3.3.12 On site checks will be made when placing the bales to ensure that guidance and site procedures are adhered to with regards to the storage of waste and fire risk at the facility. The Site Supervisor will observe bale storage arrangements and check these against the approved site plans.
- 3.3.13 Designated storage areas for all wastes on site are delineated on *Drawing JER6447-PER-004_D_150803*.
- 3.3.14 All storage areas will be provided with spill kits.
- 3.3.15 All designated storage areas and containers will be appropriately labelled.
- 3.3.16 A list of waste codes that will be accepted by the installation is included in permit application.

Transfer of Food Waste

- 3.3.17 The MRF is also utilised for the bulking and transfer of food waste. The waste are purely bulked and transferred at the facility only, they are not treated.

Raw Materials

- 3.3.18 The MRF does not require raw materials for its operation other than the wastes described in this application and fuels and oils for the plant and equipment on site. Fuel stored on site will be stored in bunded containers.

3.4 Closure and Decommissioning

- 3.4.1 A Site Closure Plan is in place at the facility as part of the sites Environmental Management System. This is subject to annual review and updated as and when operations on site change.

4 Management

4.1 General

- 4.1.1 An Environmental Management System (EMS) has been established in accordance with the requirements of EA Horizontal Guidance Note H6 – Environmental Management Systems. The EMS combines both the quality and health and safety management systems to form an Integrated Management System (IMS). An overview of the EMS can be seen in *Appendix 8*.
- 4.1.2 All staff and contractors will be made aware of the EMS as part of the induction training and a copy will be made available on site.
- 4.1.3 A system for keeping all relevant records including but not limited to the following is in place at the facility:
- Transfer notes /duty of care documentation;
 - Records of incidents, accidents and emergencies including details of follow-up; and
 - Other records required to be kept by the permit.
- 4.1.4 This procedure will be expanded to cover all aspects for record keeping required by the EMS under EA Horizontal Guidance Note H6 – Environmental Management Systems.
- 4.1.5 As part of the formal EMS, systems have been developed and implemented for undertaking audits, setting and reporting of environmental performance, objectives, targets and programmes for future improvements.
- 4.1.6 Prior to commencing commissioning of the upgraded MRF, all key procedures will be in place as detailed below.

Operations and Maintenance

- 4.1.7 Procedures are in place to ensure that those operations which have the potential to give rise to significant environmental effects are controlled. Procedures not only cover normal operation but also address abnormal operation. In particular procedures have been developed in relation to the following:
- Waste reception and handling, including waste acceptance procedures; and
 - Storage, handling and removal of wastes from the site.
- 4.1.8 Planned maintenance routines have been established to ensure all key plant components which have the potential to affect the environmental performance of the MRF remain in good working order. Maintenance routines draw on manufacturer's recommendations, and will be amended where operational experience during the lifetime of the MRF deems it necessary.
- 4.1.9 To mitigate the risk of unplanned maintenance Wastesavers will carry out the following:

- Consider redundancy to the design capacity of significant ancillary equipment with high probability for failure;
- Carry out preventative maintenance and monitoring in accordance with the procedures in the operations and maintenance manual;
- Implement service contracts that will ensure sufficient supply of spare components; and
- Arrange for adequate maintenance support to address unplanned equipment failures.

Competence and Training

- 4.1.10 Operator training will be provided to ensure that the MRF will be operated by a fully trained workforce. Training will not only address normal operations but will also include those actions required in the event of abnormal operations and emergencies.
- On an ongoing basis employees will be trained and made aware of the possible environmental impacts of their activities and emergency response training will be undertaken in line with our training procedures.
 - As specified on an individuals' certificates e.g. for first aid, individual Certificates of Technical Competence (CoTC) or Construction Site Certification Scheme (CSCS) cards. Mark Miller is currently working towards the CoTC. As agreed with NRW, if required WRAP will provide interim cover whilst Mark attains CoTC. Mark Miller will be the CoTC holder at the facility and the in-house CoTC trainer.
- 4.1.11 Job specifications will be defined and will include details on relevant qualifications and training (including where relevant on the job training) required for that role. Records of training will be stored and maintained. Records as a minimum will include details relating to the date, type of training and training provider.
- 4.1.12 All relevant staff (including contractors forming part of the commissioning team) will as necessary be made aware of the relevant requirements of the permit, in particular those conditions in relation to emission limits and notification procedures. A copy of the permit will be available for reference within the Weighbridge Office.
- 4.1.13 Procedures will also be in place to ensure that contractors undertaking work at the installation are qualified for the task they are undertaking.

Organisation

- 4.1.14 Roles and responsibilities will be clearly defined within the management system.
- 4.1.15 Further details on specific aspects of the management systems for the MRF are provided in the following sections.

4.2 Accident Management

- 4.2.1 An accident management plan (AMP) and procedures to follow in the event of an emergency or accident/incident are in place at the facility. These include small incidents such as minor spills

and leaks and complaints as well as major incidents such as a fire or explosion. In particular there will be a procedure including a system for recording and allocating appropriate follow-up for accidents, incidents and non-conformances.

- 4.2.2 The existing AMP will be reviewed and if necessary amended, to include relevant information related to the proposed changes to the MRF. It will be consistent with similar plans already in place for the existing MRF operated by Wastesavers, although tailored for the site and specific nature of activities subject to this application. Where relevant the AMP will include any actions required in the event of an incident, accident or emergency. The AMP will also consider risks posed by adjacent sites that could have the potential to impact on the site.
- 4.2.3 To support this application an initial environmental risk assessment is provided in *Appendix 6*.
- 4.2.4 This will be reviewed prior to commencing operation after the planned expansion development and maintained as part of the AMP throughout the operational life of the MRF.
- 4.2.5 Flooding
- 4.2.6 The NRW floodplain map indicates that the site is located within Flood Zone 3 (1 in 100 annual probability) of river flooding, however the risk of flooding from rivers and seas map indicates the specific area of the site is considered to have a low risk (less than 1 in 100 but greater than or equal to 1 in 1,000). The River Usk and its banks are considered the high risk areas (greater than to equal to 1 in 30), with the area east and south of the boundary of the site considered to have a medium (less than 1 in 30) flood risk.
- 4.2.7 Site levels are generally above 7 metres Above Ordnance Datum (AOD), with the built footprint at c. 7.2mAOD. The Environment Agency's flood map of April 2015 assumes there are no flood defences, indicates that the majority of the site lies within Flood Zone 3, and is at 'high probability' (1 in 200 or greater annual probability of flooding from the sea) of flooding. The site specific Flood Consequence Assessment in *Appendix 5*, summarised;
- 4.2.8 There is no historical evidence of flooding at the site.
- 4.2.9 The site is at negligible to very low susceptibility to surface water flooding.
- 4.2.10 The susceptibility to groundwater flooding is low.
- 4.2.11 The risk of flooding from infrastructure failure is considered to be low.
- 4.2.12 The risk of flooding from reservoir failure has been assessed as low to negligible.
- 4.2.13 The proposed development is appropriate for the present flood zone and the zone.
- 4.2.14 There will be a 3,043 m² increase in low permeability cover, with surface runoff to be controlled at an agreed rate.
- 4.2.15 The attenuation volume required to restrict runoff to the 1 in 1 year (100% annual probability) current runoff rate of 3.8 l/s from a 1 in 100 year storm event plus 20% for climate change has been determined to be approximately 192 m³ for the Site.

- 4.2.16 The outline drainage scheme indicates that run-off would run-off into a new drainage network, passing through an interceptor and 192 m³ storm water retention tank prior to discharging into the existing surface water system.
- 4.2.17 It is advised that Welsh Water is consulted to ascertain available capacity and any recommendation incorporated into the development drainage design scheme.
- 4.2.18 Concluding that the proposed development is at low risk of flooding and appropriate to the location, meeting the requirements of Planning Policy Wales and TAN15.

Fire Water

- 4.2.19 All surface water onsite discharge directly in the Dŵr Cymru Welsh Water sewer via an on-site oil interceptor.

Site Security

- 4.2.20 A closed circuit television system (CCTV) for process monitoring and security will be installed on site. The camera locations will be determined at the detail design stage.
- 4.2.21 The CCTV system will have the functionality to record, view and store images from different locations around the plant
- 4.2.22 Vehicles accessing the site will pass via a manned weighbridge. Where possible deliveries of wastes will take place during the following hours, although on some occasions it may be necessary for deliveries to be made outside these core hours:
- 07:00 to 17:30 hrs Monday to Friday, including Saturdays following a Bank Holidays.
- 4.2.23 There will be no reception / exports of wastes on Sundays or Bank Holidays, including Christmas, Boxing and New Year's Day.

4.3 Energy Efficiency

General Energy Efficiency Issues

- 4.3.1 The MRF has been designed and will be operated and maintained to minimise internal energy demand.
- 4.3.2 The MRF will require energy to operate e.g. electricity to drive pumps, motors etc. The energy will be supplied in the form of electricity to drive pumps and gas for heating in the office area.
- 4.3.3 An energy efficiency plan will be implemented and reviewed periodically in accordance with the requirements of the Environmental Permit.

Operating, maintenance and housekeeping measures

- 4.3.4 Where relevant, operating procedures will include details of techniques to ensure that the MRF is operated efficiently. Maintenance and housekeeping measures will be developed as part of the preventative maintenance system. This will include details of the measures specifically

aimed at maintaining the efficiency of the MRF during its operational life. In particular procedures will cover the following items:

- operation of motors and drives – daily/shift checks on operations and conditions;
- Lubrication systems – schedule for routine lubrication.

Physical Techniques

- 4.3.5 Insulation will be provided to avoid heat losses from relevant plant items and plant will be housed within buildings with doors kept shut other than for access.

Building Services

- 4.3.6 Energy requirements for building services will be low. Energy efficient lighting will be employed where feasible and lights will be turned off in unoccupied buildings where they are not required for safety or security reasons.
- 4.3.7 Space heating will be limited to manned areas such as the control room and administration areas, heating of other process buildings will not be required.

4.4 Efficient use of Raw Materials and Water

- 4.4.1 The MRF will not use raw materials other than small amounts of water for the vehicle wash, cleaning and to service the office block.
- 4.4.2 In addition to water small quantities of general maintenance oils and greases will also be required and fuel for vehicles on site.

4.5 Avoidance, Recovery and Disposal of Wastes

- 4.5.1 Materials delivered to the site are managed via the on-site pre-acceptance procedures in place at the facility as detailed above.
- 4.5.2 Materials deposited at the MRF are pre-treated with a view to being transported to suitable third parties for recovery / recycling.
- 4.5.3 The metals screened out of the MRF processes are recovered via a suitable metals recovery facility. Any remaining bulky or oversize waste is reviewed for recovery and only disposed of where no alternative outlets are availability.
- 4.5.4 Effluent / leachate generated by the conveyor system, which carry plastics and cans is collected in the floors pits and then tankered off site for treatment as required.
- 4.5.5 In addition to the above main wastes, smaller quantities of waste oils, used drums and containers will be generated. Where possible, empty drums and containers will be returned to the manufacturers. Waste oils will be sent for recycling. Any off specification materials accepted at the facility are also likely to require alternative disposal / recovery; although volumes cannot be defined, they are expected to be low.
- 4.5.6 Where ever possible, Wastesavers will seek to recover or recycle wastes rather than disposing of them.

5 Emissions Control and Abatement

5.1 Emissions to Air

- 5.1.1 There are no point source emissions to air at the site.

5.2 Emissions to Surface Water and Sewer

- 5.2.1 There are no point source emissions to surface or groundwater at the site.
- 5.2.2 Water runoff from the vehicle wash is collected, discharges via a Class 1 Interceptor into the existing surface water sewer. This area is bunded by a concrete kerb.
- 5.2.3 Surface water from the site, including rain water runoff from roofs of the buildings will be collected through slotted drains (around the perimeter of the site) and surface water manholes located around the site (Drawing JBR2664 200 Drainage Layout). The site operates a Grey Water system enabling rainfall collected from the roof to be reused for flushing the toilets and washing vehicles. All surface water will run through a sealed pipe drainage system to existing surface water sewer (south and west of site) or proposed new surface water sewer in north and east area of the site.
- 5.2.4 Process water from both the vehicle wash and operations area will discharge via a Class 1 Interceptor before directly discharging into the existing surface water sewer.
- 5.2.5 Flows collected from the internal road ways and associated hardstanding areas will be passed through a Class 1 Bypass Separator compliant with the Environment Agency's pollution guidance documentation.
- 5.2.6 All external yard and roads pavements subject to vehicular traffic are also drained through pollution prevention devices in the form of class 1 full separator units. There is a dedicated fuelling area for the on-site plant a class 1 forecourt separator is incorporated locally for this in addition to the main separator, therefore effectively providing two tier protection. The fuel tank will be an above ground self bunded unit with integral pump cabinet.

5.3 Emissions to Land

- 5.3.1 There will be no direct or indirect releases to land or groundwater from the MRF.

5.4 Fugitive Emissions

- 5.4.1 Fugitive releases have been identified and assessed as part of the Environmental Risk Assessment (see *Appendix 3*). The assessment indicates that the proposed measures for control of fugitive releases will ensure that no significant risks from fugitive releases are expected from the proposed MRF.

- 5.4.2 Fugitive emissions of dust to air are limited at the facility as on-site activities are managed to limit emissions, including the nature of materials delivered on and off site. Where appropriate roller shutter door systems are employed and remain closed except for access and egress.
- 5.4.3 Good housekeeping practices will be in operation to ensure that any spillages of potentially dusty materials are cleared up at the earliest opportunity and vehicles will benefit from the on-site vehicle wash. Yard areas will be regularly cleaned.
- 5.4.4 Spill kits will be available for clean-up of any oils stored and used within the MRF and will be located in proximity to the relevant storage area(s) and/or delivery points. Site personnel will be appropriately trained in the use of these kits. Site procedures will detail those actions which should be followed in the event of a spillage.
- 5.4.5 Fugitive emissions to surface water / groundwater are limited at the facility as all processing activities are undertaken within buildings with sealed drainage that is collected and discharged into the mains sewer, with the exception of periodical process water in the conveyors floor pits, which is collected and tankered away for off-site treatment. All external surfaces are hard standing with impervious surfaces and surface water collected outside of the buildings feeds into the sealed drainage system. Impervious surfaces and containment facilities are subject to an inspection and maintenance programme.
- 5.4.6 Given the above control measures run off from process areas at the facility are contained within the sealed water system.
- 5.4.7 The incoming waste storage bays will be constructed of concrete and will be impervious.
- 5.4.8 All process areas will be located on hard standing.
- 5.4.9 All bunds will be visually inspected to ensure they remain free of rainwater and spillages/leaks and that their condition has not deteriorated (i.e. no signs of cracks or damage).
- 5.4.10 Bunds will be designed to catch leaks from the existing on-site diesel tank.
- 5.4.11 Bunds will have no outlet (i.e. no drains or taps) and drain to a blind collection point. Any pipework will be routed within bunded areas with no penetration of contained surface.
- 5.4.12 Storage areas will have appropriate signs and notices and be clearly marked out and all containers will be clearly labelled with their contents.
- 5.4.13 Procedures will be in place for visual inspection of all bunds to ensure they remain free from accumulation of rainwater and any spillages or leaks. Good housekeeping practices will be employed at all times. In the event of visible oil and grease being present in the water, the contaminated waters would either be treated on site or tankered for off-site disposal.
- 5.4.14 Following completion of the detailed design stage a final site drainage plan will be made available to NRW; 'JBR2664 200 – Drainage Layout' provides an indicative drainage plan for the site.

- 5.4.15 During commissioning of the new underground surface drains and foul drains (to serve the extension) will be subject to integrity testing and will be certified as sound prior to operations recommencing.
- 5.4.16 Fugitive emissions to air are unlikely to occur as a result of the following control measures which will be implemented:
- Food waste will be bulked, covered and stored within an enclosed barn in readiness for onwards transfer to another regulated facility.
 - Roller shutter doors, where appropriate, will be used, kept closed and only opened for vehicle access / egress;
 - Waste bales are stored no more than 5 bales high in designated storage areas to restrict damage from passing vehicles;
 - Plant has been designed to minimise handling where possible;
 - Roadways on site will be surfaced to prevent dust creation;
 - Waste will be delivered to site in covered vehicles;
 - Planned preventative maintenance (PPM) will be implemented to reduce the risk of unplanned/abnormal emissions from plant and equipment;
 - Roads and vehicle will be regularly cleaned to minimise the risk of any mud being transferred to the public highway;
 - Skips and other storage vessels will be covered or located within a building.

5.5 Odour

- 5.5.1 The primary source of odour from the MRF is from the incoming food waste.
- 5.5.2 Odorous wastes will arrive on site in enclosed vehicles and will be stored within an enclosed building and transported off-site within 24 hours of receipt.
- 5.5.3 An Odour Management Plan for the facility is attached in *Appendix 8* and includes the following control measures:-
- Ensure that roller shutter doors on the Food Waste building are maintained shut other than for vehicle access / egress;
 - Process food wastes within 24 hours of arrival on site to reduce degradation potential;
 - Only retain food wastes for onwards transfer on site for a maximum of 24 hours to reduce degradation potential, food will normally be less than 24 hours; and
 - Update OMP on a regular basis
- 5.5.4 No complaints have been received at the site in regard to odour.

5.6 Control of Flies and Pests

- 5.6.1 Pest Management has been identified as a risk at the site. The Environmental Risk Assessment, as part of the onsite EMS proposes the following control measures at the facility:-

- Outside operational hours, all roller shutter doors are to be kept closed. Roller shutter doors will remain closed unless for access and egress;
- Potentially odorous materials are to be processed within 24 hours of arriving on site;
- No wastes, except baled, is to be stored externally to the building (excluding glass which will be stored covered in the designated glass bay and textiles which will be stored in a covered storage container);
- Further to the above where flies and pests are identified on site an investigation will be undertaken to determine the specific type of pest / fly that is present to enable the most effective control measures to be implemented.

5.7 Noise and Vibration

- 5.7.1 Noise and vibration effects from the MRF are not expected to change as the site is already in operation and no complaints have been received previously.
- 5.7.2 There will be a short period during the construction of the extension to the site where noise levels might increase slightly due to construction works.
- 5.7.3 Increased traffic in relation to extra deliveries on and off the site has been considered at the planning stage and is not expected to have a significant impact.
- 5.7.4 On the basis of the above it has been deemed that there will be no significant adverse effects arising from noise from the operation of the MRF.

5.8 Monitoring and Reporting of Emissions (Water, Sewer and Air)

- 5.8.1 The proposed monitoring arrangements are summarised below. These will be agreed in detail through the Environmental Permitting process administered by NRW.

Monitoring and Reporting of Emissions to Water and Sewer

- 5.8.2 Although water discharges from the site are predicted to increase, the existing arrangements for monitoring and reporting will continue.
- 5.8.3 Discharges to sewer will be limited to domestic effluents from the onsite amenities and site drainage.

Monitoring and Reporting of Waste Emissions

- 5.8.4 The mass / volume of the waste will also be recorded, through the weighbridge, prior to off-site transportation.
- 5.8.5 Incoming and outgoing waste will be sampled and the composition will be analysed and reported to the regulator as per the Material Facilities Regulatory Guidance.
- 5.8.6 No hazardous waste will be treated at the site and therefore there is no need to monitor the hazard characteristics of waste or record handling precautions / substances with which it cannot be mixed.

6 Environmental Risk Assessment Summary

- 6.1.1 To support this application an environmental risk assessment has been completed. The full details of this assessment is appended to this application and for each of the environmental issues discussed within this section a reference to the location of the full assessment is provided.

6.2 Emissions to Air

- 6.2.1 There are no point source emissions to air at the site.

6.3 There are no point source emissions to air at the site Emissions to Water and Sewer

- 6.3.1 Although the proposed Facility will increase process emissions to sewer these are not considered to be significantly different from those currently discharged.

6.4 Noise

- 6.4.1 The facility has been operational for ten years. The facility is located in an industrial setting. It is envisaged the noise levels will not elevate above the existing background noise levels.

References

1. Getting the Basics Right, (EPR 1.00), April 2008, Environment Agency.
2. Combustion Activities (EPR 1.01), March 2009, Environment Agency.
3. EPR – H1, Environmental Risk Assessment, Part 1, Simple assessment of environmental risk for accidents, odour, noise and fugitive emissions, version 080328, 28th March 2008, Environment Agency.
4. EPR – H1, Environmental Risk Assessment, Part 2, Assessment of point source releases and cost-benefit analysis, version 080328, 28th March 2008, Environment Agency.
5. IPPC H1 Integrated Pollution Prevention and Control (IPPC), Environmental Assessment of BAT, Version 2, July 2003, Environment Agency.
6. IPPC H2 Integrated Pollution Prevention Control (IPPC), Energy Efficiency, Version 3, February 2002, Environment Agency.
7. SI 1994/2716 Conservation (Natural Habitats etc.) Regulations 1994.

Drawings



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Legend

Permit Boundary

River Usk Special Area of Conservation (SAC) & Site of Special Scientific Interest (SSSI)

Rev	Description	Date	Initial	Checked



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Client WRAP

Project NEWPORT

Title SITE LOCATION PLAN

Status	Drawn By	PM/Checked By
PRELIMINARY	RJ	AP
Job Ref	Scale @ A3	Date Created
JER6447	1:10,000	MAY 15

Drawing Number	Rev
JER6447-PER-001	-

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- LEGEND**
- Installation Boundary
 - Covered Storage Bays (Concrete Surface)
 - Storage (Concrete Surface)
 - Concrete Surface Other
 - Proposed Flood Light (Pole Mounted)
 - Proposed Flood Light (Wall Mounted)
 - Existing Flood Light (Pole Mounted)
 - Existing Flood Light (Wall Mounted)

Data Source
RPS Oxford Drawing Ref: 0557-0004-06

Rev	Description	Date	Initial	Checked



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Client WRAP

Project NEWPORT WASTE DEPOT EXTENSION

Title INSTALLATION BOUNDARY

Status	Drawn By	PM/Checked by
PRELIMINARY	JGB	AP
Job Ref	Scale @ A3	Date Created
JER6447	1:500	AUG 15

Drawing Number	Rev
JER6447-PER-004	-



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- KEY
- Existing Drainage
- Surface Water Sewer (SWS)
 - SWS manhole
 - Foul Water Sewer (FWS)
 - FWS manhole
 - Class 1 interceptor
- Proposed Drainage
- Surface Water Sewer (SWS)
 - SWS Aco drain
 - SWS Aco universal gully/connector
 - SWS manhole
 - Class 1 interceptor
- Only required if there is not an existing interceptor for the surface water as it exists on site
- Surface water storage facility provided by Polypipe WMS (or similar approved) arrangement under the car parking area
- Foul Water Sewer (FWS)
 - FWS manhole

A	Drainage layout amended	09.06.15	GP	CCA
Rev	Description	Date	Initial	Checked



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Client WRAP

Project Esperanto Way
Newport

Title Drainage Strategy

Status	Drawn By	PM/Checked by
Draft	GP/CCA	CCA
Job Ref	Scale @ A3	Date Created
JBR2664	1:500	june15

Drawing Number	Rev
200	A

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Appendices

List of European Waste Codes to be accepted at MRF

WTS List

EWC	Description
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 02	WASTES FROM ELECTRICAL AND ELECTRONIC EQUIPMENT
16 02 14	Discarded equipment other than those mentioned in 16 02 09 and 16 02 13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 06	BATTERIES AND ACCUMULATORS
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
17 05 08	track ballast other than those mentioned in 17 05 07
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 12	WASTES FROM THE MECHANICAL TREATMENT OF WASTE (FOR EXAMPLE SORTING, CRUSHING, COMPACTING, PELLETISING) NOT OTHERWISE SPECIFIED
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPERATELY COLLECTED FRACTIONS)
20 01	SEPERATELY COLLECTED FRACTIONS (EXCEPT 15 01)
20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 02	GARDEN AND PARK WASTES (INCLUDING CEMETRY WASTE)
20 02 01	biodegradable waste
20 02 02	soil and stones
20 03	OTHER MUNICIPAL WASTES
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 07	bulky waste

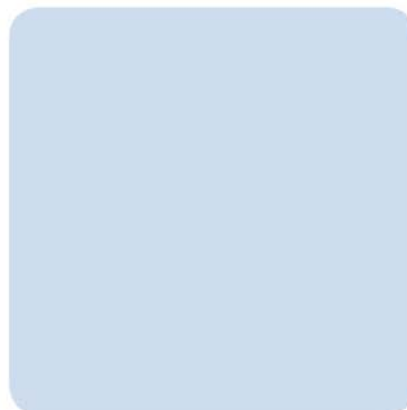
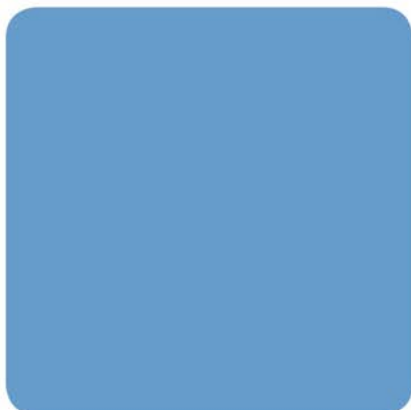
Environmental Risk Assessment



H1 Environmental Risk Assessment

Material Recycling Facility, Esperanto Way, Newport

Wastesavers Limited



Date: August 2015

Our Ref: JER6447

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Quality Management

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Amendment Record

Revision No.	Date	Reason for Change	Authors Initials

Contents

Quality Management	i
Amendment Record	ii
Contents	iii
1 Introduction	1
1.1 Summary of Risk Assessments	1
1.2 Proposed Activities on Site	1
1.3 Location of Site	2
1.4 Waste Types	3
2 Amenity and Accidents Environmental Risk Assessment	4
3 Surface Water Discharge	11
4 Air Emissions	12
5 Site Waste	13
6 Global Warming Potential	14
7 Groundwater	15

Tables, Drawings & Appendices

Table

Table 2-1	Odour risk assessment and management plan.....	5
Table 2-2	Fugitive Emissions risk assessment and management plan.....	6
Table 2-3	Noise risk assessment and management plan.....	8
Table 2-4	Accident risk assessment and management plan	9

Drawings

JER6447-PER-001_D_150526	Site Location Plan
JER6447-PER-004_D_150803	Installation Boundary Plan
JBR2664 200	Drainage Strategy

1 Introduction

1.1 Summary of Risk Assessments

1.1.1 As part of an application for an environmental permit Operators must assess the risk to the environment and human health from the activities they seek to permit. The Environment Agency H1 Environmental Risk Assessment Guidance comprises a series of guidance notes covering a range of environmental risks.

- Annex (a) Amenity and Accidents;
- Annex (d) Surface Water Discharges;
- Annex (f) Air Emissions
- Annex (g) Site Waste
- Annex (h) Global Warming Potential

1.2 Proposed Activities on Site

1.2.1 Wastesavers Limited (Wastesavers) is applying for a Waste Operation Environmental Permit. The proposed Materials Recycling Facility (MRF) at Esperanto Way currently operates under a number of exemptions.

1.2.2 Recyclables are collected on a weekly basis, including food waste and cardboard, and then delivered to the existing depot. From 1st April 2016 cans and plastics will be mixed. Waste is then sorted, bulked and baled and finally stored prior to off-site transfer.

1.2.3 The current MRF operated on site will be expanded to increase storage space. This facility will continue to receive local authority public waste and commercial waste but will increase the throughput to meet legislative requirements for recycling. The list of permitted waste types will also be expanded. The proposed layout of the new site is shown in *Drawing JER6447-PER-004_D_150803*.

1.2.4 The existing Waste Reception and Treatment building (currently housing a waste reception area, mechanical and manual sorting area and baling area) and site offices will remain in their current locations in the centre of the site. Material storage areas will move to the newly extended area of the site (as per Drawing *JER6447-PER-004_D_150803*).

1.2.5 A new extension to the Waste Reception and Treatment building will be added to the north of the current building on what is currently, undeveloped land and will be used for storage. An extension to the existing building will be used for cardboard, plastic and can storage. Extra parking will also be added to the site. A new barn will also be built to house food storage, paper and glass bulking.

- 1.2.6 The existing weighbridge will continue to serve the site. The existing weighbridge is located next to the current offices for weighing inbound waste. A new one way circulation route around the site with a new egress onto Esperanto Way will be installed.
- 1.2.7 The waste will then be treated / stored according to type and in accordance with the permitted activities on site.

1.3 Location of Site

- 1.3.1 The application site comprises Wastesavers existing MRF at Esperanto Way, Newport, NP19 0RD and land adjacent (north eastern boundary) to this facility located approximately 1.8km from Newport city centre on the Orb Industrial Estate.
- 1.3.2 For identification purposes the application site is approximately centred at Ordnance Survey grid reference ST 32026 86241 (postcode NP19 0RD). The site location plan is presented in *Drawing JER6447-PER-001_D_150526*. The newly proposed facility boundary is presented in *Drawing JER6447-PER-004_D_150803*.
- 1.3.3 The application site is approximately 0.87ha in area and comprises the existing Wastesavers Recycling Depot together plus an additional area of currently vacant land to the north east that is 0.28ha in size. The two sections comprise of; the existing MRF comprising of a main yard and existing building the front of which houses reception area, offices, meeting room, canteen and toilet/cleaning facilities for staff, and the back of which contains the waste processing hall. The other section of the application site is a portion of adjacent land which will be developed to extend both the boundary of the current site and the existing building to facilitate additional waste storage and loading space. Access to the site is via the existing access to Wastesavers MRF from Esperanto Way.
- 1.3.4 The wider area is an industrial landscape comprising Felnex, Stephenson Street and Reevesland Industrial Estates. The River Usk is approximately 120m east of the site boundary. The east-west running Southern Distributor Road is located approximately 1200m north of the site boundary.
- 1.3.5 The nearest residential areas and other sensitive receptors to the proposed application site have been identified as follows:
- River Usk (120m west);
 - Coronation Park (100m south);
 - Royal Gwent Hospital (1500m north west);
 - Alexandra Road (600m north west); and
 - Lysaght Way (1km north east).
- 1.3.6 There are two internationally designated nature conservation sites within 10km of the site, the River Usk Special Area for Conservation (SAC) (120m to the south) and the Severn Estuary

SAC with Marine Components, Special Protection Area SPA with marine components and RAMSAR site (3km to the south).

- 1.3.7 There is one nationally designated nature conservation site within 2km of the site: the River Usk (SSSI) (120m west). There are three more within 3km: the Newport Wetlands (SSSI) (3km south east); the Gwent Levels (SSSI) (3km south east); and the Severn Estuary (National Nature Reserve) (3km south).
- 1.3.8 There are no non-statutory designated nature conservation sites within 2km of the application site. There is an RSPB Reserve 3.5km to the south of the site.
- 1.3.9 The nearest named watercourse is the River Usk which is located approximately 120 m west of the site.
- 1.3.10 No artificial watercourses / features (e.g. canals, reservoirs) have been identified within 1km of the site except Alexandra Docks which is approximately 800m west of the site on the other side of the River Usk.

1.4 Waste Types

- 1.4.1 The waste types currently accepted on site are listed in the Environmental Permit Application documentation.
- 1.4.2 Wastesavers is proposing to expand the list of permitted wastes and this proposed list is in the Environmental Permit application documentation.
- 1.4.3 No waste streams will be mixed (including non-hazardous and hazardous wastes); apart from cans and plastics at the MRF and all waste will be segregated at source.
- 1.4.4 Materials will be treated and stored before being transported off-site for recycling/recovery/disposal.

2 **Amenity and Accidents Environmental Risk Assessment**

2.1.1 This section provides the relevant risk assessments of amenity and accident risks associated with the MRF facility.

2.1.2 The scope of the assessment has covered the following:

- Odour;
- Noise and vibration;
- Fugitive emissions; and
- Accidents.

2.1.3 Results of the assessment are provided in the following tables:

- *Table 2-1 Odour risk assessment and management plan;*
- *Table 2-2 Assessment of fugitive emissions risks;*
- *Table 2-3 Assessment of noise and vibration risks; and*
- *Table 2-4 Assessment of accidental risks.*

Table 2-1 Odour risk assessment and management plan

Hazard	Receptors	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Odour from vehicles delivering waste to the site.	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m)	Air	Vehicles are inspected on arrival. Wastes are only kept on site for limited periods with odorous wastes removed as a priority. Vehicles are sheeted / sealed. Appropriate site signs. Ensure that customers abide by site procedures as laid out in site rules and procedures.	Low	Nuisance	Low
Odour from Reception Area	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m)	Air	Food waste is stored in a sealed bulker with a cover, in an enclosed building with a roller shutter door. It is removed off site every 24 hours. Food waste storage area roller shutter doors are kept closed except for access/egress. All other wastes are stored in line with JER6447-PER-004_D_150803.	Low	Nuisance	Very low
Odour from site cleanliness	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m)	Air	Site staff to ensure regular sweeping of site throughout the day and immediate clean-up of any deposition of waste on pad / outside yard area. Site manager to ensure high standards of housekeeping.	Low / medium	Nuisance	Low
Odour from leachate on site	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m)	Air	Any puddles or standing water to be cleaned away. Drainage is to a sealed pipe system. Site manager to ensure high standards of housekeeping. Sealed drainage system.	Low	Nuisance	Very low
Odour from contaminants removed by screening process	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m)	Air	Container is removed from site daily.	Low	Nuisance	Low

Table 2-2 Fugitive Emissions risk assessment and management plan

Hazard	Receptors	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Releases to Air						
Dust from vehicles delivering waste to the site.	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m)	Air	Vehicles are sheeted. Appropriate site signs. Ensure that customers abide by site procedures as laid out in site rules and procedures. Regular cleaning using on site vehicle wash and housekeeping of external areas.	Low	Nuisance	Very low
Dust from Waste Reception Area	Site staff	Air	Enclosed building with roller shutter doors to be kept closed except for access/egress. Correct PPE to be worn by staff. Regular housekeeping to ensure dust levels kept to a minimum.	Low	Nuisance	Very low
Pests - Flies	Site staff, visitors to site	Air	Food waste is stored in sealed containers All waste received (apart from glass, textiles & plastic over spill) and stored pre-treatment within enclosed building with roller shutter doors. Vehicles are sheeted. Waste stored in sealed containers.	Low/medium	Nuisance	Low
Litter	Local residents at Coronation Park (100m) and Alexandra Road (600m), River Usk (SSSI, SAC)	Air	Site enclosed by fencing. Regular housekeeping maintained throughout site. Vehicles are sheeted.	Low/Medium	Low/Nuisance	Low
Releases to Land						

Hazard	Receptors	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Pests – Rats, Seagulls, foxes & flies	Site staff, visitors to site	Land	Food waste is stored in a sealed bulker with a cover, in an enclosed building with a roller shutter door. It is removed off site every 24 hours. Vehicles are sheeted. Waste stored in sealed containers.	Low/medium	Nuisance	Low
Releases to Water						
Abnormal / Emergency – Release of contaminant to River Usk	River Usk (SSSI, SAC)	Discharge to watercourse	Spill Procedure, as part of the on-site Environmental Management system contains information on emergency / abnormal procedures in the event of a contaminated release to nearby watercourse. Spill kits are located on site, to create bunds, and/or absorb spilled material. Action taken will be dependent of the volume of spilled material. Weekly visual inspections undertaken of the full drainage system and noted in the site diary. Fuel / oil storage bays are bunded to reduce the potential for spillage / discharge.	Low/Medium	Contamination of River Usk SSSI, SAC	Low

Table 2-3 Noise risk assessment and management plan

Hazard	Receptors	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk
Noise emissions from fixed plant at the MRF	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m), River Usk (SSSI, SAC)	Noise propagation through the air	The Operator's Environmental Management System (EMS) will include a procedure for handling noise complaints and an action plan to be implemented where noise monitoring indicates that noise is being generated in excess of agreed levels. This will include 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. For the existing recycling site, to date, there have not been any noise complaints.	Low	Nuisance/Medium (disruption to wildlife)	Low/Medium if properly managed.
Noise associated with deliveries and collections from heavy goods vehicles at the MRF	Site staff, visitors to site, local residents at Coronation Park (100m) and Alexandra Road (600m), River Usk (SSSI, SAC)	Noise propagation through the air and vibration through the ground.	Deliveries to the site and collections/transport from it will only occur between the hours of 07:00 and 17:30.	Low	Nuisance/Medium (disruption to wildlife)	Low/Medium if properly managed.

Table 2-4 **Accident risk assessment and management plan**

Ha ard	Probability of exposure	Consequence	Magnitude of consequence	Risk Management	What is the overall risk
Fire	Low	Potential for paper and cardboard waste to burn.	High	The paper and card waste is stored separately and away from activities that may cause a fire risk or any flammable liquids such as fuels. The site has fire risk assessment, reviewed as and when required. Each member of staff has a basic understanding of fire safety through induction training.	Medium, with prescribed mitigation measures
Failure of mains services (water, electricity)	Med	MRF systems and facilities would cease to operate.	Medium	Plant would close until such time as services were running again. Sealed drainage system and enclosed buildings would ensure containment of waste/waste water.	Low
Flood	Medium	Damage to site, flood waters collecting waste and contaminants from site	High	The site is recorded as being within a flood zone. Registered with Flood Warning Direct. The site will follow the Newport City Emergency Plan in an event. Business continuity plan and procedure. Appropriate signage showing emergency contact numbers.	Medium, with mitigation measures
Spill or leak	Med	Risk of spill running to drain or off site	Med	The site has bunding and drains can be shut off in event of a spill Staff are trained in spill response procedure All potential polluting substances on site are correctly banded and bunding is checked	Low

Hazard	Probability of exposure	Consequence	Magnitude of consequence	Risk Management	What is the overall risk
				weekly.	
Vandalism	Low	Damage to Property resulting in pollution Possible arson attack	Med-High	The site is manned during working hours (07:00-17:30). The site has security fencing and when the site is closed, CCTV is in operation at all times with an audio warning system.	Low
Fire Water	Med	Risk of contamination of the surrounding land and local water course	Med	The drainage from the site collects into a system of sealed pipe work that leads into the local Dŵr Cymru Sewage Network.	Low

3 Surface Water Discharge

- 3.1.1 Water runoff from the vehicle wash is collected, discharges via a Class 1 Interceptor into the existing surface water sewer. This area is bunded by a concrete kerb.
- 3.1.2 Surface water from the site, including rain water runoff from roofs of the buildings will be collected through slotted drains (around the perimeter of the site) and surface water manholes located around the site (*Drawing JBR2664 200*). The site operates a Green Water system enabling rainfall collecting from the roof to be reused for flushing the toilets and washing vehicles. All surface water will run through a sealed pipe drainage system to existing surface water sewer (south and west of site) or proposed new surface water sewer in north and east area of the site.
- 3.1.3 Process water from both the vehicle wash and operations area will discharge via a Class 1 Interceptor before directly discharging into the existing surface water sewer.

4 Air Emissions

4.1.1 There are not any point source emissions to air at the site.

5 Site Waste

- 5.1.1 The MRF processes and treats non-hazardous waste inputs and manufactures bales of recyclables and stores bales/recovered waste for onward transport/collection. Any waste remaining from these wastes or waste produced by the site will be removed from site for recovery / disposal.
- 5.1.2 As part of the waste management procedure on site, each waste stream will be characterized and quantified and suitability of various recovery/disposal options will be assessed and recorded in accordance with the waste hierarchy as set out in the Waste Framework Directive.
- 5.1.3 The main permit application documentation details the waste streams that are processed through the site.

6 Global Warming Potential

- 6.1.1 The facility is an existing operational site that is being extended to increase recycling rates in the area. As a result of the extension the facility will require an Environmental Permit for operation. As the facility is currently operational it is not considered appropriate to undertake a global warming potential assessment at this time.

7 Groundwater

- 7.1.1 The site does not stand on a Groundwater Protection Zone.
- 7.1.2 The site area is covered in hardstanding that will limit any discharge to groundwater from process areas. There are no discharges to groundwater from the facility.

Drawings



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Legend

Permit Boundary

River Usk Special Area of Conservation (SAC) & Site of Special Scientific Interest (SSSI)

Rev	Description	Date	Initial	Checked



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Client WRAP

Project NEWPORT

Title SITE LOCATION PLAN

Status	Drawn By	PM/Checked By
PRELIMINARY	RJ	AP
Job Ref	Scale @ A3	Date Created
JER6447	1:10,000	MAY 15

Drawing Number	Rev
JER6447-PER-001	-

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- LEGEND**
- Installation Boundary
 - Covered Storage Bays (Concrete Surface)
 - Storage (Concrete Surface)
 - Concrete Surface Other
 - Proposed Flood Light (Pole Mounted)
 - Proposed Flood Light (Wall Mounted)
 - Existing Flood Light (Pole Mounted)
 - Existing Flood Light (Wall Mounted)

Data Source
RPS Oxford Drawing Ref: 0557-0004-06

Rev	Description	Date	Initial	Checked



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Client WRAP

Project NEWPORT WASTE DEPOT EXTENSION

Title INSTALLATION BOUNDARY

Status	Drawn By	PM/Checked by
PRELIMINARY	JGB	AP
Job Ref	Scale @ A3	Date Created
JER6447	1:500	AUG 15

Drawing Number	Rev
JER6447-PER-004	-



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- KEY
- Existing Drainage
- Surface Water Sewer (SWS)
 - SWS manhole
 - Foul Water Sewer (FWS)
 - FWS manhole
 - Class 1 interceptor
- Proposed Drainage
- Surface Water Sewer (SWS)
 - SWS Aco drain
 - SWS Aco universal gully/connector
 - SWS manhole
 - Class 1 interceptor
- Only required if there is not an existing interceptor for the surface water as it exists on site
- Surface water storage facility provided by Polypipe WMS (or similar approved) arrangement under the car parking area
- Foul Water Sewer (FWS)
 - FWS manhole

A	Drainage layout amended	09.06.15	GP	CCA
Rev	Description	Date	Initial	Checked



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Client WRAP

Project Esperanto Way
Newport

Title Drainage Strategy

Status	Drawn By	PM/Checked by
Draft	GP/CCA	CCA
Job Ref	Scale @ A3	Date Created
JBR2664	1:500	june15

Drawing Number	Rev
200	A

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Flood Consequences Assessment

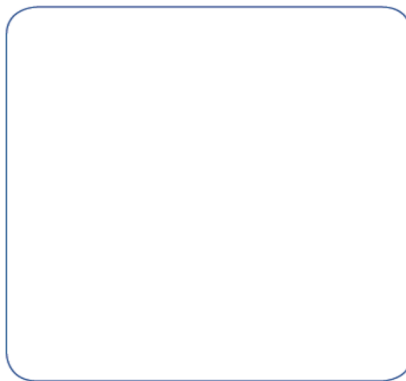
RPS

Newport Depot, Esperanto Way.

Flood Consequences Assessment

On Behalf of

WRAP



April 20154

Our Ref: JER6447

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Quality Management

Prepared by:	Jonathan Morley Senior Consultant	
Reviewed by:	Dr Paul Hardwick Associate	
Date:	April 2015	
Revision:		
Project Number:	JER6447	
Document Reference:	JER6447 - Newport Depot FCA_FINAL	



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- 1 This report contains only that available factual data for the Site which was obtained from the sources described in the text. These data were related to the Site on the basis of the location information made available to RPS and its sub-consultants by the client.
- 2 The assessment of the Site is based on information supplied by the client and on-site inspections undertaken by RPS and its sub-consultants. Relevant information was also obtained from other sources.
- 3 The report reflects both the information provided to RPS and its sub-consultants in documents made available for review and the results of observations and consultations by RPS staff and its sub-consultants.
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Amendment Record

Revision No.	Date	Reason for Change	Authors Initials

Executive Summary

- S1 RPS has undertaken a Flood Consequences Assessment (FCA) in accordance with the requirements of Planning Policy Wales, TAN15 and the Newport Local Development Plan for the proposed development at Esperanto Way, Newport.
- S2 The development site to be located within DAM Flood Zone C1 medium probability of flooding extents. EA mapping shows the site to be located in undefended Flood Zone 3. Detailed hydraulic modelling produced as part of the Newport SFRM indicates that the site is located beyond the present day (2011) 1 in 200 year tidal flood extents. However, NRW has confirmed that during events greater than the present day 1 in 200 year event the Site is potentially at risk of flooding to depths of 2.02m for a 1 in 200 year event plus climate change and 1.58m for a 1 in 1,000 year event. Therefore the site has been determined to be at high risk of tidal flooding.
- S3 There is no historical evidence of flooding at the site.
- S4 The site is at negligible to very low susceptibility to surface water flooding.
- S5 The susceptibility to groundwater flooding is low.
- S6 The risk of flooding from infrastructure failure is considered to be low.
- S7 The risk of flooding from reservoir failure has been assessed as low to negligible.
- S8 The proposed development is defined as less vulnerable in TAN15, and an extension to an existing development, therefore deemed appropriate for the present flood zone.
- S9 There will be a 3,043 m² (35%) increase in low permeability cover, surface runoff will be controlled at the current rate and discharged via the existing drainage network.
- S10 The attenuation volume required to restrict runoff to the 1 in 1 year (100% annual probability) current runoff rate of 3.8 l/s from a 1 in 100 year storm event plus 20% for climate change has been determined to be approximately 192 m³ for the Site.
- S11 The outline drainage scheme indicates that run-off would run-off into a new drainage network, passing through an interceptor and 192 m³ storm water retention tank prior to discharging into the existing surface water system.
- S12 This FCA and supporting documentation shows that the proposed development at this location meets the requirements of PPW, TAN15 and the Newport Local Development Plan policies.

Contents

1	Scope of Work	1
1.1	Background.....	1
1.2	Project Scope.....	2
2	Sources of Information	3
2.1	Introduction	3
2.2	Legislation and Guidance	4
2.3	Climate Change	6
3	Site Setting	7
3.1	Site Location	7
3.2	Existing Development.....	7
3.3	Proposed Development.....	7
4	Flood risk	9
4.1	Introduction	9
4.2	Fluvial and Tidal Flooding.....	9
4.3	Flooding from rising / high groundwater	10
4.4	Groundwater Source Protection Zones	10
4.5	Reservoir Failure Assessment.....	10
4.6	Sewer/Water Main Failure Assessment	11
4.7	Surface water flooding.....	11
4.8	Historical flood events	12
5	Flood Risk Vulnerability Classification.....	13
5.2	Current Flood Risk	13
6	Drainage	14
6.1	Surface Water and Drainage	14
6.2	Legislative background.....	14
6.3	Existing Drainage System	15
6.4	Current Runoff Rate	15
6.5	Proposed Runoff Rate.....	15
6.6	Runoff Calculations	15
7	Flood Mitigation.....	17
7.1	Surface Water Attenuation	17
8	Justification Test	18
9	Summary and Conclusions.....	19
9.1	Summary	19
9.2	Flood Risk.....	19
9.3	Conclusion	19

Tables and Figures

Tables

Table 1- Information sources consulted during preparation of the report	3
Table 2 - Land Use Types for the Existing Site and Proposed Development.	8
Table 3 - Runoff characteristics.....	16

Figures

Figure 1 - EA reservoir failure flood map.	11
Figure 2 - EA surface water map.....	12

Drawings

Drawing 1	Site location plan
Drawing 2	Existing site layout
Drawing 3	Proposed site layout
Drawing 4	Development Advice Map
Drawing 5	Environment Agency Flood Zones
Drawing 6	Newport SFRM 1 in 200 year tidal flood mapping

Appendices

Appendix 1	Correspondence
Appendix 2	Topographical Survey
Appendix 3	WinDes Calculations
Appendix 4	Outline Drainage Plan

1 Scope of Work

1.1 Background

- 1.1.1 At the request of WRAP, RPS Planning and Development Ltd (RPS) has carried out a site-specific Flood Consequences Assessment (FCA) for a proposed development off Esperanto Way, Newport. The FCA was prepared in accordance with Planning Policy Wales (PPW) and Technical Advice Note 15 (TAN15).
- 1.1.2 This FCA report will form part of the planning application for the development.
- 1.1.3 The key objectives of the FCA are:
- To assess the flood risk to the proposed development and to demonstrate the feasibility of appropriately designing the development such that any residual flood risk to the development and users would be acceptable;
 - To assess the potential impact of the proposed development on flood risk elsewhere and to demonstrate the feasibility of appropriately designing the development such that the development would not increase flood risk elsewhere; and
 - To satisfy the requirements of PPW and TAN15 which require FCAs to be submitted in support of planning applications for development in areas of flood risk.
- 1.1.4 Current guidance on development and flood risk identifies several key aims for a development to ensure that it is sustainable in flood risk terms. These aims are as follows:
- The development should not be at a significant risk of flooding and should not be susceptible to damage due to flooding;
 - The development should not be exposed to flood risk such that the health, safety and welfare of the users of the development, or the population elsewhere, is threatened;
 - Normal operation of the development should not be susceptible to disruption as a result of flooding;
 - Safe access to and from the development should be possible during flood events;
 - The development should not increase flood risk elsewhere;
 - The development should not prevent safe maintenance of watercourses or maintenance and operation of flood defences;
 - The development should not be associated with an onerous or difficult operation and maintenance regime to manage flood risk. The responsibility for any operation and maintenance required should be clearly defined;
 - Future users of the development should be made aware of any flood risk issues relating to the development;
 - The development design should be such that future users will not have difficulty obtaining insurance or mortgage finance, or in selling all or part of the development, as a result of flood risk issues;

- The development should not lead to degradation of the environment; and
- The development should meet all of the above criteria for its entire lifetime, including consideration of the potential effects of climate change.

1.1.5 The FCA was undertaken with due consideration of these sustainability aims.

1.2 Project Scope

1.2.1 This FCA report is structured as follows:

- Section 2 identifies the sources of information that have been consulted in preparation of the report.
- Section 3 provides a review of the Site and immediate surrounding area.
- Section 4 reviews publicly available hydrological data and undertakes a flood consequences assessment of the proposed development scheme.
- Section 5 describes the site's vulnerability status in line with PPW and TAN15.
- Section 6 describes the flood risk management measures that should be applied to the Site, where required.
- Section 7 provides a summary and conclusion to the report.

2 Sources of Information

2.1 Introduction

2.1.1 Table 1 below lists the information sources consulted during preparation of this report.

Table 1- Information sources consulted during preparation of the report

Data	Source	Notes
Site setting and hydrology.	Natural Resources Wales and OS Mapping 1: 50 000 Sheet 171: Cardiff and Newport.	Area information, rivers and other watercourses, general site environs, built environment, catchment Information.
Geology.	Natural Resources Wales and BGS 1: 50 000: Sheet 249: Newport.	Site and area geology.
Natural Resources Wales.	Natural Resources Wales data holdings, customer service and engagement team.	Current flood risk, local flood defences, flood levels, supplementary geology and groundwater information.
Local Planning Authority (LPA).	Newport City Council.	Flood Zoning Local Development Plan.
Water Utility Company.	Welsh Water.	Public sewer assets in the vicinity of the site.
Flood Risk Assessment and Planning Guidance.	Planning Policy Wales (PPW) and Technical Advice Note 15 (TAN15).	Flood zoning for the site as used by NRW in Wales.
Reports.	Capita Symonds August 2009	River Usk 2D Joint Probability model. Environment Agency Wales SFRM Framework Commission, River Usk SFRM Hazard Mapping, Final.
	JBA December 2011	JBA, Newport SFRM Modelling Update of Newport Tidal Model, Final report, December 2011.
	Newport SFCA, 2012	Newport City Council, January 2012. Stage 2 SFCA Addendum.
	Newport SFCA, 2012	Newport City Council, January 2012. Stage 2 SFCA Addendum.
	Newport SFCA, 2013.	Newport City Council, March 2013. Stage 3 SFCA.

2.2 Legislation and Guidance

Regional Planning Policy

- 2.2.1 PPW Chapter 13 Minimising and Managing Environmental Risk and Pollution outlines the Welsh Government's objectives to address flood risk.

Paragraph 13.4 states:

Development proposals in areas defined as being of high flood hazard should only be considered where:

- *new development can be justified in that location, even though it is likely to be at risk from flooding; and*
- *the development proposal would not result in the intensification of existing development which may itself be at risk; and*
- *new development would not increase the potential adverse impacts of a flood event.*

- 2.2.2 PPW is supplemented by a series of Technical Advice Notes (TAN). Technical guidance on development and flood risk is provided by TAN 15.

Newport Local Development Plan 2011 to 2026, revised deposit plan June 2013.

- 2.2.3 The Local Development Plan (LDP) document sets out detailed planning policies and proposals for Newport City Council.

- 2.2.4 The LDP policies relevant to hydrology and flood risk are:

Policy SP1 Sustainability

- 2.2.5 Proposals will be required to make a positive contribution to sustainable development by concentrating development in sustainable locations on brownfield land within the settlement boundary. They will be assessed as to their potential contribution to:

- Minimising the risk of and from flood risk, sea level rise and the impact of climate change;

Policy SP3 Flood Risk

- 2.2.6 *Newport's coastal and riverside location necessitates that development be directed away from areas where flood risk is identified as a constraint and ensure that the risk of flooding is not increased elsewhere. Development will only be permitted in flood risk areas in accordance with national guidance. Where appropriate a detailed technical assessment will be required to ensure that the development is designed to cope with the threat and consequences of flooding over its lifetime. Sustainable solutions to manage flood risk should be prioritised.*

Policy SP4 Water Resources

2.2.7 *Development proposals should, protect water quality during and after construction and result in no net increase in surface water run-off through the sustainable management of water resources by:*

- *The use of sustainable drainage systems;*
- *The reuse of water and reduction of surface water run-off through high quality designed developments;*
- *Careful consideration of the impact upon finite water resources, particularly in terms of increased pressures on abstraction and the impact of climate change.*
- *Ensuring development is appropriately located and phased so that there is capacity in the waste water, sewerage and water supply as well as the protection of water quality.*

Policy GP1 General Development Principles – Climate Change

2.2.8 *Development proposals should:*

- *Be designed to withstand the predicted changes in the local climate and to reduce the risk of flooding on site and elsewhere, unless the risk and consequences of flooding are demonstrated as being acceptably managed, including the avoidance of non-permeable hard surfaces.*

Policy GP6 General Development Principles – Quality of Design

2.2.9 *Good quality design will be sought in all forms of development. The aim is to create a safe, accessible, attractive and convenient environment. In considering development proposals the following fundamental design principles should be addressed:*

- *Sustainability: new development should be inherently robust, energy and water efficient, flood resilient and adaptable, thereby facilitating the flexible reuse of the building.*

GP7 General Development Principles – Environmental Protection and Public Health

2.2.10 *Development will not be permitted which would cause or result in unacceptable harm to health because of land contamination, dust, instability or subsidence, air, heat, noise or light pollution, flooding, water pollution, or any other identified risk to environment, local amenity or public health and safety.*

Policy CE10 Coastal Zone

2.2.11 *Development will not be permitted in the coastal area or adjoining the tidal river unless:*

- *In the undeveloped coastal area such development is required to be on the coast to meet an exceptional need which cannot reasonably be accommodated elsewhere;*

- *The area is not itself at risk nor will the proposed development exacerbate risks from erosion, flooding or land instability development which requires a coastal location should be sited within the developed coastal zone.*

2.3 Climate Change

- 2.3.1 The effects of future climate change over the next few decades are predicted to result in milder wetter winters and hotter drier summers in the UK. The UK Meteorological Office Climate Projections Report UKCP09 indicates that the predicted increased frequency of heavy, intense precipitation will lead to increased peak river flows in combination with rising sea levels and will have a major impact on the potential for future flooding. UKCP09 provides advice on indicative sensitivity ranges for the predicted impacts of climate change. Based on a high emissions scenario for Wales, sea levels may be up to 0.433 m higher in 2080 than in 1990, and winter mean precipitation intensity could be up to 26% higher than current levels in 2080.
- 2.3.2 In addition, TAN15 notes that peak river flow could be 20% higher than current levels.
- 2.3.3 For the purposes of this report the TAN15 20% climate change allowance has been adopted for use in the development attenuation calculations.

3 Site Setting

3.1 Site Location

- 3.1.1 The application area is located c.1.8 km southeast of Newport City Centre and c.50 m east of the River Usk at National Grid Reference 332012, 186231 (Drawing 1). The area is bordered to the immediate west by the River Usk, to the north and east by commercial and industrial units, and to the south by Stephenson Street with a recreation area, Coronation Park beyond.
- 3.1.2 Access to the site is via Esperanto Way, off Stephenson Street.

3.2 Existing Development

- 3.2.1 The site (Drawing 2) consists of a rectangular parcel of land covering c.0.88 ha encompassing the existing Wastesavers facility, associated car parking and areas of hardstanding, with small areas of soft landscaping. The site is characterised by the following footprints:
- Wastesavers building (1,224 m²) (low permeability footprint)
 - Car parking and hardstanding areas (3,446 m²) (low permeability footprint)
 - Soft landscaping and gravel areas (4,093 m²) (permeable footprint)
- 3.2.2 Site levels are generally above 7m Above Ordnance Datum (AOD), with the built footprint at c.7.2mAOD. A topographical survey of the site is included as Appendix 2.

3.3 Proposed Development

- 3.3.1 The proposed development is an extension to the Wastesavers facility (Drawing 3) to incorporate the following:
- 4 No. covered storage bays;
 - 2 No. open storage bays;
 - 19 No. new staff parking spaces;
 - Hardstanding area for external storage; and
 - Redesign of internal traffic flow.
- 3.3.2 The low permeability footprint will increase by 3,043 m² from 4,670 m² to 7,713 m².
- 3.3.3 Ground floor levels within the development will be set at 7.2 mAOD to match those of the existing built footprint.
- 3.3.4 Table 2 below illustrates the area and percentage change alteration in low permeable surfacing types for the existing site and proposed extension.

Table 2 - Land Use Types for the Existing Site and Proposed Development.

Land Use Type	Total Land Use Area			
	Existing Site		Proposed Development	
	m ²	%	m ²	%
Built area	1,224	14	1,743	20
Hard standing	3,446	39	5,970	68
Gravel	802	9	536	6
Soft landscaping	3,291	38	514	6
Total	8,763	100	8,763	100

4 Flood risk

4.1 Introduction

- 4.1.1 This section outlines the potential flood risk to the proposed development site.

4.2 Fluvial and Tidal Flooding

- 4.2.1 TAN15 Development Advice Mapping (DAM) (Drawing 4) shows that the Site is located within Zone C1, defined as areas at risk of flooding during a 1 in 1,000 year event and protected by flood defences.
- 4.2.2 The Environment Agency (EA) flood map of April 2015 (Drawing 5) which assumes there are no flood defences, indicates that the majority of the site lies within Flood Zone 3, and is at high probability (1 in 200 or greater annual probability of flooding from the sea) of flooding.
- 4.2.3 The closest water features to the proposed development is the tidally influenced River Usk located immediately to the west of the application area.
- 4.2.4 The River Usk is one of the largest rivers in Wales being over 120 km long from its source to mouth. It rises in the mountains of mid-Wales then flows southeast through Abergavenny and Usk and through the centre of Newport to the Severn estuary. Newport has the highest tidal range of any city centre in the world and the tidal reach extends upstream as far as Newbridge-on-Usk.
- 4.2.5 There are no other significant water features within 500 m of the proposed development.
- 4.2.6 Joint probability hydrological modelling undertaken by JBA as part of the Newport Strategic Flood Risk Management Framework (SFRM) provided 2 Dimensional modelled flood extents for the River Usk for a range of return periods, including flood defences. The 1 in 200 year combined tidal and fluvial present day (2011) modelled outputs for the application area indicate that the site is not at risk of flooding (Drawing 3).
- 4.2.7 NRW has confirmed that that defended model extents including an allowance for Climate Change and greater than 1 in 200 year indicate that the Site could be at risk of flooding to a levels of:
- 9.22m AOD during a 1 in 200 year plus climate change (75 year lifetime of development):
 - 8.78m AOD during a 1 in 1000 year current day:
- 4.2.8 Therefore, based on a 7.2m AOD floor level the Site is potentially at risk of flooding to depths of 2.02m for the 1 in 200 year plus climate change and 1.58 m for the 1 in 1,000 year event.
- 4.2.9 Taking all of the above information into account the application area is assessed to be at high risk of tidal flooding.

Flood Defences

- 4.2.10 NRW has supplied information on flood defences to the immediate west of the site (Drawing 6), which comprise a privately owned and maintained flood embankment. No further information relating to the crest level or state of the defences has been provided.

4.3 Flooding from rising / high groundwater

- 4.3.1 BGS online mapping (accessed April 2015) indicates that the site is underlain by Superficial Deposits comprising Made Ground and Tidal Flat Deposits (sands, silts and clays). British Geological Survey (BGS) mapping (sheet 263 Cardiff) shows that the superficial deposits are underlain by Triassic Mercia Mudstone bedrock comprising metamorphosed sedimentary mudstones and subordinate sandstones and siltstones.
- 4.3.2 The Mercia Mudstone is classified under the Water Framework Directive as a Secondary B Aquifer, which may store and yield limited amounts of groundwater in localised features such as fissures, thin permeable horizons and weathered zones.
- 4.3.3 Although there are considerable granular deposits the NRW/EA note that there is no evidence of groundwater issuing at the surface in the area around the site, although the watercourse that runs adjacent to the site is likely to be in hydraulic continuity with groundwater in the bedrock.
- 4.3.4 The Newport SFCA Stage 1 (2011) states that *“Groundwater levels are believed to rise and fall slowly within Newport. Therefore, groundwater levels are not a significant flood risk on a strategic scale within Newport. In addition, the local geology (predominantly mudstone, siltstone and sandstone) is not believed to yield significant quantities of groundwater.”*
- 4.3.5 Based on the information above and the elevated area in which the site is located the potential for groundwater flooding is considered to be low.

4.4 Groundwater Source Protection Zones

- 4.4.1 The British Geological Survey Aquifer data accessed from the Environment Agency's website indicates that the site is not located within a Source Protection Zone.

4.5 Reservoir Failure Assessment

- 4.5.1 NRW mapping on the EA website (Figure 1) shows the Site may be impacted should the Llandegfedd reservoir completely fail. However, NRW acknowledges that reservoir failure is very unlikely to happen given UK safety legislation pertaining to reservoir maintenance and inspection.
- 4.5.2 Based on the above the risk of flooding from a reservoir failure has been assessed as negligible to low.



Figure 1 - EA reservoir failure flood map.

4.6 Sewer/Water Main Failure Assessment

- 4.6.1 A formal drainage system was noted to be present within the application area during the site walkover. This comprised roof guttering systems and external car park areas that are served by gully pots. These are assumed to discharge to the local surface water sewer system. The site's foul water drainage currently drains to the foul sewer, under an existing agreement with Welsh Water. No water quality treatment measures were observed on the existing site.
- 4.6.2 Sewers would have been designed to industry standards (Sewers for Adoption). However; the most common causes of flooding from sewers are; inadequate flow capacity, blockages, pumping station failures, burst water mains, water inflow from rivers or the sea, tide locking, siltation, fats/greases, and sewer collapse. Should any of these events occur there is a risk of flooding by surcharge where the flood is in excess of the sewer capacity (usually 1 in 30 year event or greater).
- 4.6.3 Under the DG5 register requirements all water companies are obliged to keep a record of properties that have been affected by sewer flooding. The Newport SFCA does not provide any information pertaining to historical sewer flooding within the site or immediate surrounding area.
- 4.6.4 Taking into account the above, the elevation of the site and absence of any historical sewer flooding, the overall risk of flooding to the site via artificial drainage system failure is assessed to be low.

4.7 Surface water flooding

- 4.7.1 Surface water flooding happens when rainwater cannot drain away through the normal drainage systems or soak into the ground, and either lies on or flows over the ground instead.

- 4.7.2 EA online surface water flood mapping (accessed April 2015) indicates that the site is at very low risk of surface water flooding.

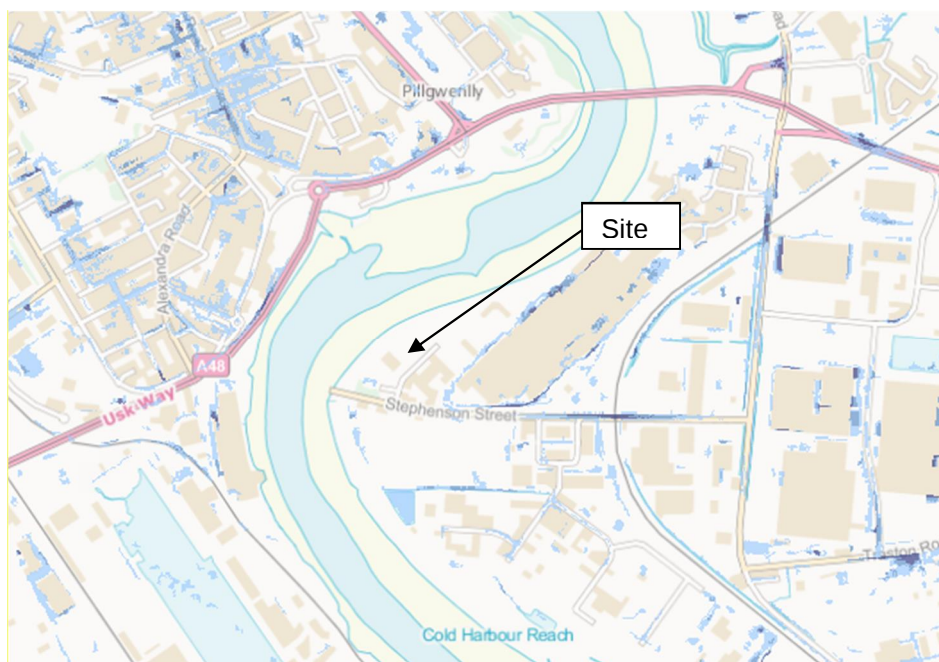


Figure 2 - EA surface water map.

4.8 Historical flood events

- 4.8.1 No historical flood information was provided by NRW in their information request response (Appendix 2).
- 4.8.2 The Newport SFCA Stage 1 notes that there have been a number of recorded incidents during flood events that occurred in the Decembers of 1979, 1981, 1989 and 1999. No information has been provided to indicate that the Site was impacted by any of the historical flood events.

5 Flood Risk Vulnerability Classification

- 5.1.1 In accordance with the Flood Risk Vulnerability Classification in Figure 2 of TAN15 a waste transfer facilities are classified as Less Vulnerable development.
- 5.1.2 Less Vulnerable uses are appropriate for locations in Flood Zone C1 (TAN15 Section 9) subject to the following:
- Application of the Justification Test; and
 - Management of surface water.
- 5.1.3 In addition the application should demonstrate:
- The flood risk is an acceptable consequence for nature of use;
 - Flood defences are adequate;
 - That an agreement for construction and maintenance costs is in place;
 - Future occupiers are aware of the flood risk;
 - Safe escape/evacuation routes are present;
 - An effective flood warning system is in place;
 - The development has incorporated flood resilience where appropriate; and
 - The development would not increase flooding elsewhere.

5.2 Current Flood Risk

- 5.2.1 DAM and EA mapping shows that the application site is at medium to high risk of tidal flooding from the River Usk.
- 5.2.2 Newport SFRM Modelling Update indicates that the application area is beyond the flood extents associated with the present day combined 1 in 200 year tidal and 1 in 2 year fluvial event. However, NRW has confirmed that during events greater than the present day 1 in 200 year event the Site is potentially at risk of flooding to depths of 2.02m for a 1 in 200 year event plus climate change and 1.58 m for a 1 in 1,000 year event.
- 5.2.3 Therefore the site has been determined to be at high risk of tidal flooding

6 Drainage

6.1 Surface Water and Drainage

- 6.1.1 The sustainable management of surface water is an essential element of reducing future flood risk to the site and its surroundings.
- 6.1.2 Undeveloped sites generally rely on natural drainage to convey or absorb rainfall, the water soaking into the ground or flowing across the surface into watercourses.
- 6.1.3 The effect of development is generally to reduce the permeability of at least part of the site, which markedly changes the site's response to rainfall. Without specific measures to manage surface water the volume of water and peak flow rate are likely to increase. Inadequate surface water drainage arrangements can threaten the development itself and increase the risk of flooding to others.
- 6.1.4 Surface water arising from a developed site should as far as is practicable be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development while reducing the risk of flooding at the site and elsewhere, taking climate change into account.

6.2 Legislative background

- 6.2.1 Following the implementation of the Flood and Water Management Act 2010 local flood risk has become the responsibility of the Local Planning Authority. The Act places new duties on upper tier Councils, by designating them as Lead Local Flood Authorities (LLFAs) for the coordination of local flood risk management in their respective administrative areas.
- 6.2.2 The Act establishes a SuDS Approving Body (the SAB) at county or unitary local authority levels. The SAB has responsibility for the approval of proposed drainage systems in new developments and redevelopments. Approval must be given before any developer can commence construction. In order to be approved, the proposed drainage system would have to meet national standards for sustainable drainage.
- 6.2.3 The SAB is also responsible for adopting and maintaining SuDS which serve more than one property, which they have approved. The Highways Authorities will be responsible for maintaining SuDS in public roads to National Standards.
- 6.2.4 The National Standards set out the criteria by which the form of drainage appropriate to any particular site or development can be determined, as well as requirements for the design, construction, operation and maintenance of SuDS.
- 6.2.5 Additional guidance for the use of SuDS is provided via CIRIA and BRE in the following:
 - C522 Sustainable Drainage Systems- Design Manual for England and Wales
 - C523 Sustainable Drainage Systems- Best practice

- C156 Infiltration Drainage Manual of Good practice
- BRE365 Soakaway design

6.3 Existing Drainage System

- 6.3.1 Details of the current on site drainage system and discharge locations have not been made available.

6.4 Current Runoff Rate

- 6.4.1 The site is presently covered by a mix of low permeability hardstanding and buildings.

6.5 Proposed Runoff Rate

- 6.5.1 The C522 Sustainable Drainage Systems- Design Manual for England and Wales indicates that for previously developed sites the flow rate discharged from the site must not exceed that prior to the proposed development for the:
- 1 in 1 year event;
 - 1 in 30 year event; and
 - 1 in 100 year event.

6.6 Runoff Calculations

- 6.6.1 An assessment of the current and proposed runoff rates was undertaken to determine the surface water attenuation requirements for the site.
- 6.6.2 The rates of runoff were determined using the current industry best practice guidelines as outlined in the Interim Code of Practice for SuDS. The Defra/EA recommended methodology for sites up to 50 hectares in area is the Institute of Hydrology Report 124 method (IoH 124). The runoff rates were calculated using the Micro Drainage WinDes software suite.
- 6.6.3 The following parameters were incorporated into the existing site runoff calculations:
- Catchment Area: 0.88ha (assume 47% permeable (landscaping) and 53% low permeable surfacing (hardstanding/buildings));
 - Average Annual Rainfall (SAAR): 981 mm/year;
 - Soil: 0.300;
 - Region No: 9
- 6.6.4 The following parameters were incorporated into the proposed development runoff calculations:
- Catchment Area: 0.88 ha (assume 12% permeable (landscaping) and 88% low permeable surfacing (hardstanding/buildings));
 - Average Annual Rainfall (SAAR FEH CD-ROM 3): 981 mm/year;
 - Soil: 0.300; and
 - Region No: 9.

- 6.6.5 Table 3 summarises the results of the runoff calculations and shows that following the construction of the proposed development that there will no alteration to the existing surface water runoff regime.

Table 3 - Runoff characteristics.

Annual Probability (Return Period, years)	Current Runoff (l/s)	Proposed Runoff (l/s)	Increase in Runoff (l/s)
100% (1)	3.8	5.3	1.5
QBAR urban	4.4	6.0	1.6
3.33% (30)	7.0	9.1	2.1
1% (100)	7.9	10.0	2.1
1% + Climate	9.5	12.0	2.5

Note: 20% added to rainfall data to account for long-term climate change

- 6.6.6 WinDes calculations (Appendix 3) demonstrate that the 3,043 m² increase in low permeability area surfacing for the proposed development would increase the runoff from the Site by up to 2.5 l/s.
- 6.6.7 Surface water runoff from the proposed low permeable extension area would be directed to the existing surface water drainage systems via a series of new drainage gutters and collection pots located within the perimeter of the built footprint (Appendix 4).

7 Flood Mitigation

7.1 Surface Water Attenuation

- 7.1.1 PPW, TAN15 and Newport LDP promote sustainable water management through the use of SuDS, in line with CIRIA C697 (2007). A hierarchy of techniques is identified:
- **Prevention** the use of good site design and housekeeping measures on individual sites to prevent runoff and pollution (e.g. minimise areas of hard standing).
 - **Source Control** control of runoff at or very near its source (such as the use of rainwater harvesting).
 - **Site Control** management of water from several sub-catchments (including routing water from roofs and car parks to one/several large soakaways for the whole site).
 - **Regional Control** management of runoff from several sites, typically in a detention pond or wetland.
- 7.1.2 To demonstrate that the application can provide attenuation for the worst-case scenario the attenuation storage volume requirement has been calculated using the industry standard Micro Drainage WinDes software incorporating the following parameters:
- FEH CD ROM 3 Catchment descriptors.
 - Return period: 100 years plus climate change (+ 20%).
 - Cv (proportion of rainfall forming surface water runoff): assume a factor of 75% for the development in summer, and 84% in winter (weighted average based on proposed land use).
 - Catchment Area: 0.3 ha (the increased area of low permeable surfacing).
 - 1 in 1 year runoff Rate: 3.8 l/s.
 - No infiltration losses to the ground (e.g. through the use of a lined pond or tank).
- 7.1.3 The system was modelled within WinDes as a tank/pond with controlled discharge via an orifice outflow control. The WinDes calculation sheets are included within Appendix 3.
- 7.1.4 The attenuation volume required to restrict runoff to the 1 in 1 year (100% annual probability) current runoff rate of 3.8 l/s from a 1 in 100 year storm event plus 20% for climate change has been determined to be approximately 192 m³ for the Site.
- 7.1.5 The proposed outline drainage scheme conveys run-off into a new drainage network, passing through a 192 m³ storm water retention tank and oil interceptor to ensure water quality is maintained prior to discharging into the public sewer system at the design rate (Appendix 4).

8 Justification Test

8.1.1 TAN15 states that new development should be directed away from Zone C and towards suitable land in Zone A, otherwise to Zone B where river or coastal flooding will be less of an issue. In Zone C2, highly vulnerable development and emergency services should not be permitted. All other new development should only be permitted within Zone C1 and C2 if determined by the local planning authority to be justified in that location.

8.1.2 Development will only be justified if it can be demonstrated that:

- i. Its location in Zone C is necessary to assist, or be part of, a local authority regeneration initiative or a local authority strategy required to sustain existing settlement; or
- ii. Its location in Zone C is necessary to contribute to key employment objectives supported by the local authority and other key partners, to sustain an existing settlement or region;

And

- iii. It concurs with the aims of Planning Policy Wales and meets the definition of previously developed land; and,
- iv. The potential consequences of a flooding event for the particular type of development have been considered, and in terms of the criteria contained in sections 5 and 7 and appendix 1 of TAN 15 is found to be acceptable.

8.1.3 Paragraph A1.14 of TAN 15 states that industrial developments should remain flood free in up to the 1 in 200 year tidal event. Beyond this threshold frequency, development would be expected to flood under extreme conditions. As the proposed development is an extension to aid the existing development, and additional car parking is for staff and collection vehicles only the proposed satisfying criteria iv.

8.1.4 Overall, it has been demonstrated that the development of the Site is justified and would be safe, without increasing flood risk elsewhere.

9 Summary and Conclusions

9.1 Summary

- 9.1.1 A site-specific Flood Consequences Assessment (FCA) in accordance with PPW and TAN15 has been undertaken for the proposed c.0.88 ha industrial development of Esperanto Way, Newport.

9.2 Flood Risk

- 9.2.1 DAM and NRW mapping shows that the site is located within an area defined as at medium risk flooding Flood Zone C1. Newport SFRM modelling outputs indicate that the site is located beyond the 1 in 200 year tidal flood extents. However, NRW has confirmed that during events greater than the present day 1 in 200 year event the Site is potentially at risk of flooding to depths of 2.02m for a 1 in 200 year event plus climate change and 1.58 m for a 1 in 1,000 year event. Therefore the site has been determined to be at high risk of tidal flooding.
- 9.2.2 There is no historical evidence of flooding at the site.
- 9.2.3 The site is at negligible to very low susceptibility to surface water flooding.
- 9.2.4 The susceptibility to groundwater flooding is low.
- 9.2.5 The risk of flooding from infrastructure failure is considered to be low.
- 9.2.6 The risk of flooding from reservoir failure has been assessed as low to negligible.
- 9.2.7 The proposed development is appropriate for the present flood zone and the zone.
- 9.2.8 There will be a 3,043 m² increase in low permeability cover, with surface runoff to be controlled at an agreed rate.
- 9.2.9 The attenuation volume required to restrict runoff to the 1 in 1 year (100% annual probability) current runoff rate of 3.8 l/s from a 1 in 100 year storm event plus 20% for climate change has been determined to be approximately 192 m³ for the Site.
- 9.2.10 The outline drainage scheme indicates that run-off would run-off into a new drainage network, passing through an interceptor and 192 m³ storm water retention tank prior to discharging into the existing surface water system.
- 9.2.11 It is advised that Welsh Water is consulted to ascertain available capacity and any recommendation incorporated into the development drainage design scheme.

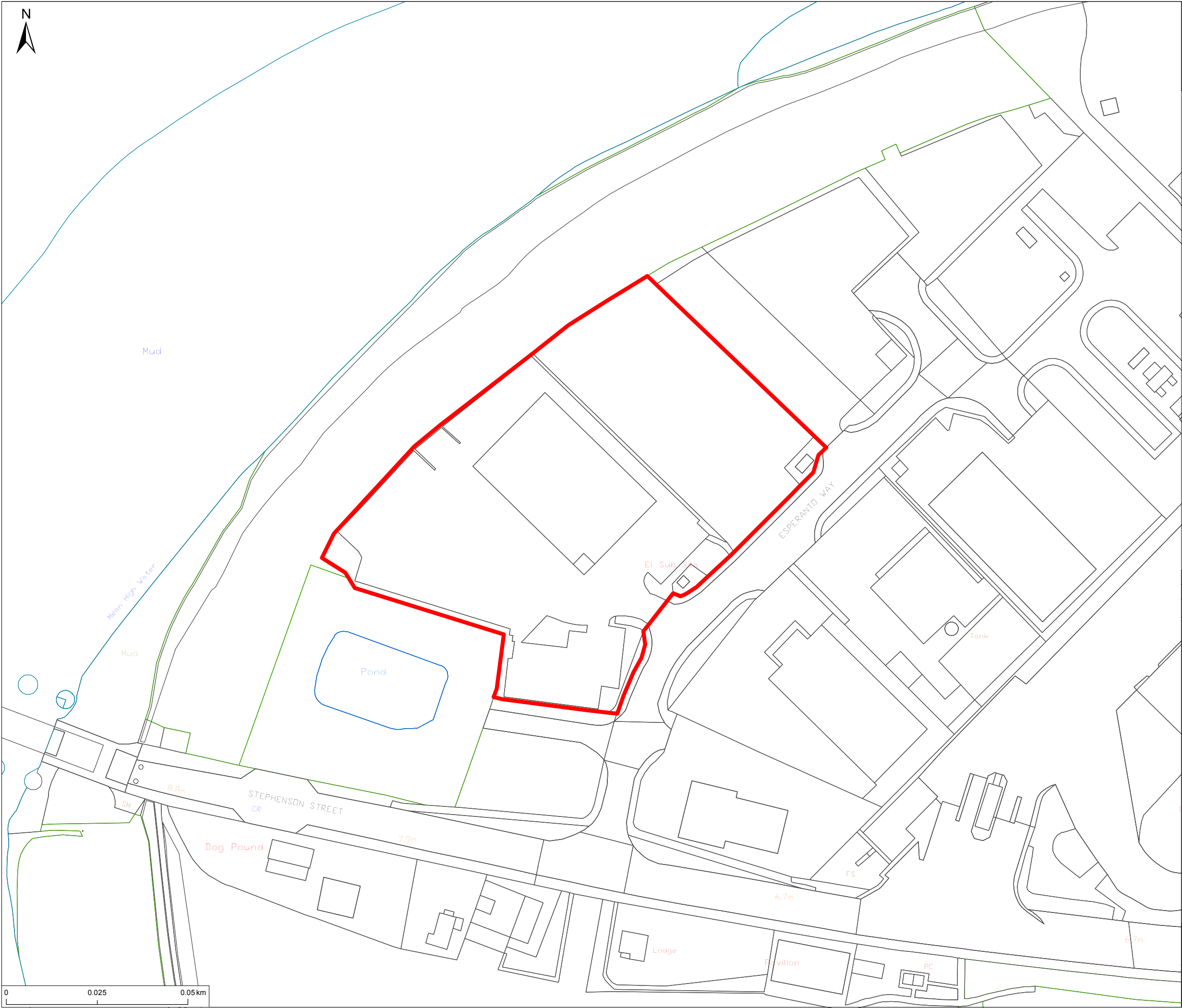
9.3 Conclusion

- 9.3.1 This FCA and supporting documentation illustrates that the proposed development is at low risk of flooding and appropriate to the location, meeting the requirements of PPW and TAN15.

References

- BGS (1969), 1:50,000 Geological Sheet 249 Newport , Keyworth Nottingham.
- CIRIA Report C532. Control of Water Pollution from Construction Sites.
- CIRIA Report C502 Environmental Good Practice on Site.
- CIRIA Report C697 (2007) The SuDS manual.
- DEFRA, October 2006. Flood and Coastal Defence Appraisal Guidance FCDPAG4 Economic Appraisal Supplementary, Note to Operating Authorities Climate Change Impacts.
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- Environment Agency, July 2009. Fluvial Design Guide.
- JBA, December 2011. Newport SFRM Modelling Update of Newport Tidal Model, Final Report.
- Ordnance Survey Explorer (2012) 1:50,000 Map 171: Cardiff and Newport.
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- URS, August 2011. Stage 1 Strategic Flood Consequences Assessment, Final Report.
- URS, January 2012. Stage 2 Strategic Flood Consequences Assessment Addendum Prepared for: Newport City Council.
- URS, December 2012. Stage 2 Strategic Flood Consequences Assessment Addendum Update Prepared for: Newport City Council.
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- Welsh Government, February 2014. Planning Policy Wales, Edition 6.
- Welsh Government, July 2004. Planning Policy Wales, Technical Advice Note 15: Development and Flood Risk.

Drawings



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Legend

Site Boundary

A	Revised Red Line Boundary	18-03-15	GG	TP
Rev	Description	Date	Initial	Checked



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Client WRAP

Project ESPERANTO WAY

Title SITE BOUNDARY PLAN

Status	Drawn By	PM/Checked By
FINAL	GG	TP
Job Ref	Scale @ A3	Date Created
JPW0557	1:1,000	MAR 15

Drawing Number	Rev
JPW0557-004	A

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STORM MANHOLE SCHEDULE

CHAMBER REFERENCE	COVER LEVEL * m (A.O.D.)	INVERT LEVEL m (A.O.D.)	DEPTH m	CHAMBER TYPE	GRADIENT DOWN STREAM 1 IN
S1	49.95	49.11	0.84	C	100
S2	49.95	48.80	1.15	B	100
S3	49.95	48.56	1.39	B	100
S4	49.95	48.37	1.58	C	100
S5	49.95	48.28	1.67	B	To Be Confirmed
S6	49.88	48.90	0.98	B	50
S7	49.95	48.60	1.35	B	50
S8	49.96	48.42	1.54	B	100
S9	49.96	48.91	1.05	B	100
S10	Omitted				
S11	49.95	49.31	0.64	C	100
S12	Omitted				
S13	49.95	49.29	0.66	C	
S14	49.95	To Suit Extg Spur	To Be Confirmed	C	

NOTE: ALL PIPES TO
BE 1000 UNLESS
OTHERWISE NOTED

FOUL MANHOLE SCHEDULE

CHAMBER REFERENCE	COVER LEVEL * m (A.O.D.)	INVERT LEVEL m (A.O.D.)	DEPTH m	CHAMBER TYPE	GRADIENT DOWN STREAM 1 IN
F1	50.10	49.50	0.60	B	100
F2	50.10	49.30	0.80	B	50
F3	50.10	49.20	0.90	B	100
F4	50.10	49.30	0.80	B	50
F5	50.02	48.90	1.12	B	100
F6	50.10	48.80	1.30	C	100
F7	50.10	48.65	1.45	C	100
F8	50.15	To Suit Extg Spur	To Be Confirmed	C	

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NOTES

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- INTERCEPTORS AND RAINWATER TANKS TO BE INSTALLED IN STRICT ACCORDANCE WITH SUPPLIERS GUIDELINES.

01.06.04	UNDERSLAB DRAINAGE ADDED	JH
20.05.04	UNDERSLAB DRAINAGE ADDED	LHG
11.05.04	UPDATED TO SHOW ARCHITECTS RWP	LHG
04.03.04	DRAINAGE LAYOUT UPDATED TO LATEST ARCHITECTS PLANS	JH
Date		Drawn
Rev		Checked

Revisions

CLIENT

NEWPORT WASTE SAVERS

CONTRACT

NEWPORT WASTE SAVERS

DRAWING TITLE

DRAINAGE LAYOUT

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HCD GROUP LIMITED

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NEWPORT
24 JUN 2004
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CHECKED
JH

SCALES
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DATE
29/09/03

STATUS
CONSTRUCTION

DRAWING No.
E20082/202

Rev.
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Legend

- Application Boudary
- Covered Storage Bays (Concrete Surface)
- Storage (Concrete Surface)
- Concrete Surface Other
- Proposed Flood Light (Pole Mounted)
- Proposed Flood Light (Wall Mounted)
- Existing Flood Light (Pole Mounted)
- Existing Flood Light (Wall Mounted)

Rev	Description	Date	Initial	Checked



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Client WRAP

Project Newport Waste Depot Extension

Title Site Layout Plan

Status	Drawn By	PM/Checked by
Draft	AJC	TP
Job Ref	Scale @ A3	Date Created
JPW0557	1:500	July-15

Drawing Number	Rev
0557-0004-06	.

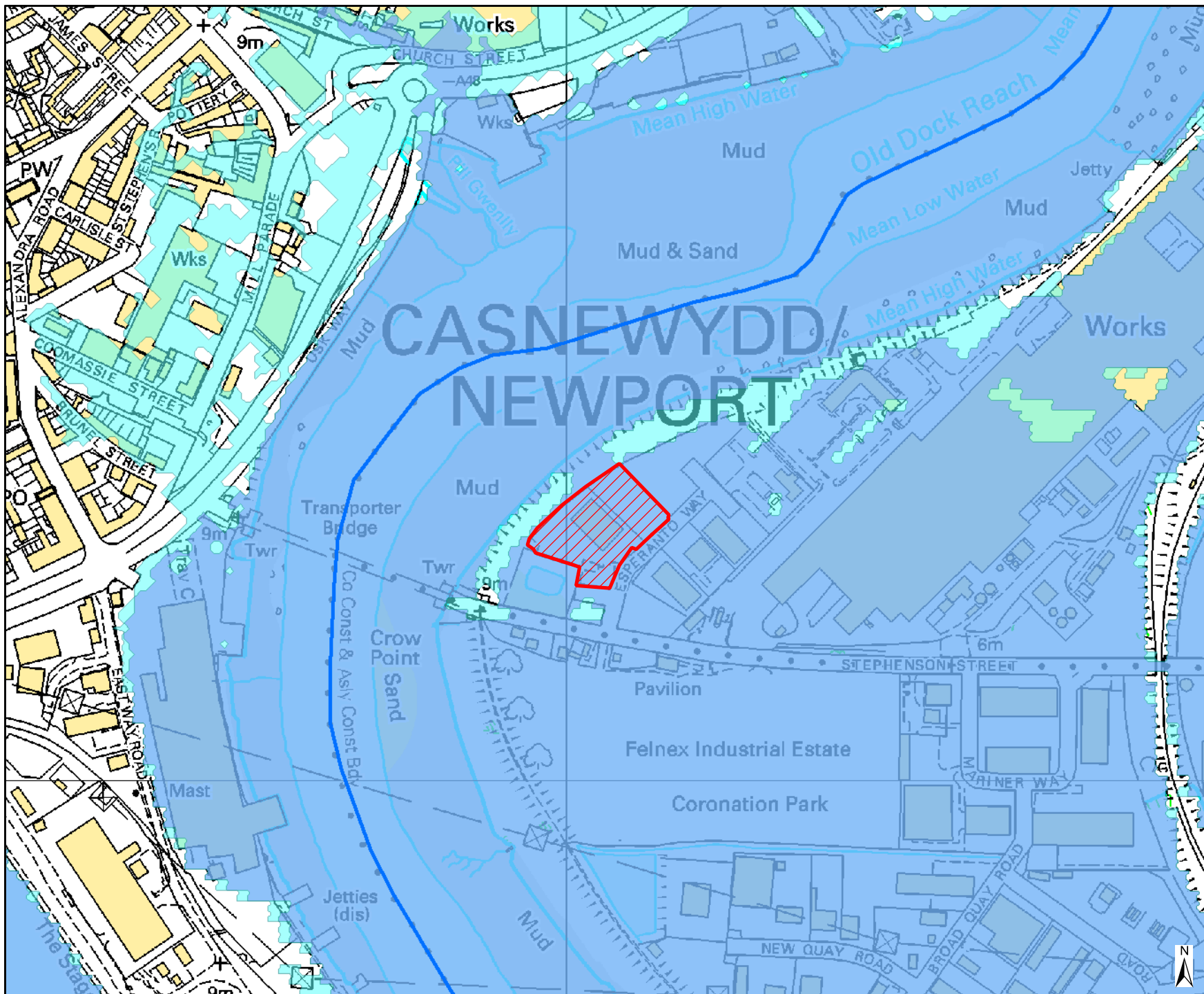
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Llywodraeth Cymru
Welsh Government

TAN 15 Development and Flood Risk Development Advice Map





Legend

-  Site Location
-  Flood Zone 3 (1 in 100 year undefended fluvial and 1 in 200 year undefended tidal extents)
-  Flood Zone 2 (1 in 1000 year undefended fluvial and tidal extents)
-  Areas benefiting from defences
-  Defences
-  Flood Storage Area
-  Main Rivers

 **Cyfoeth Naturiol Cymru**
Natural Resources Wales

Project

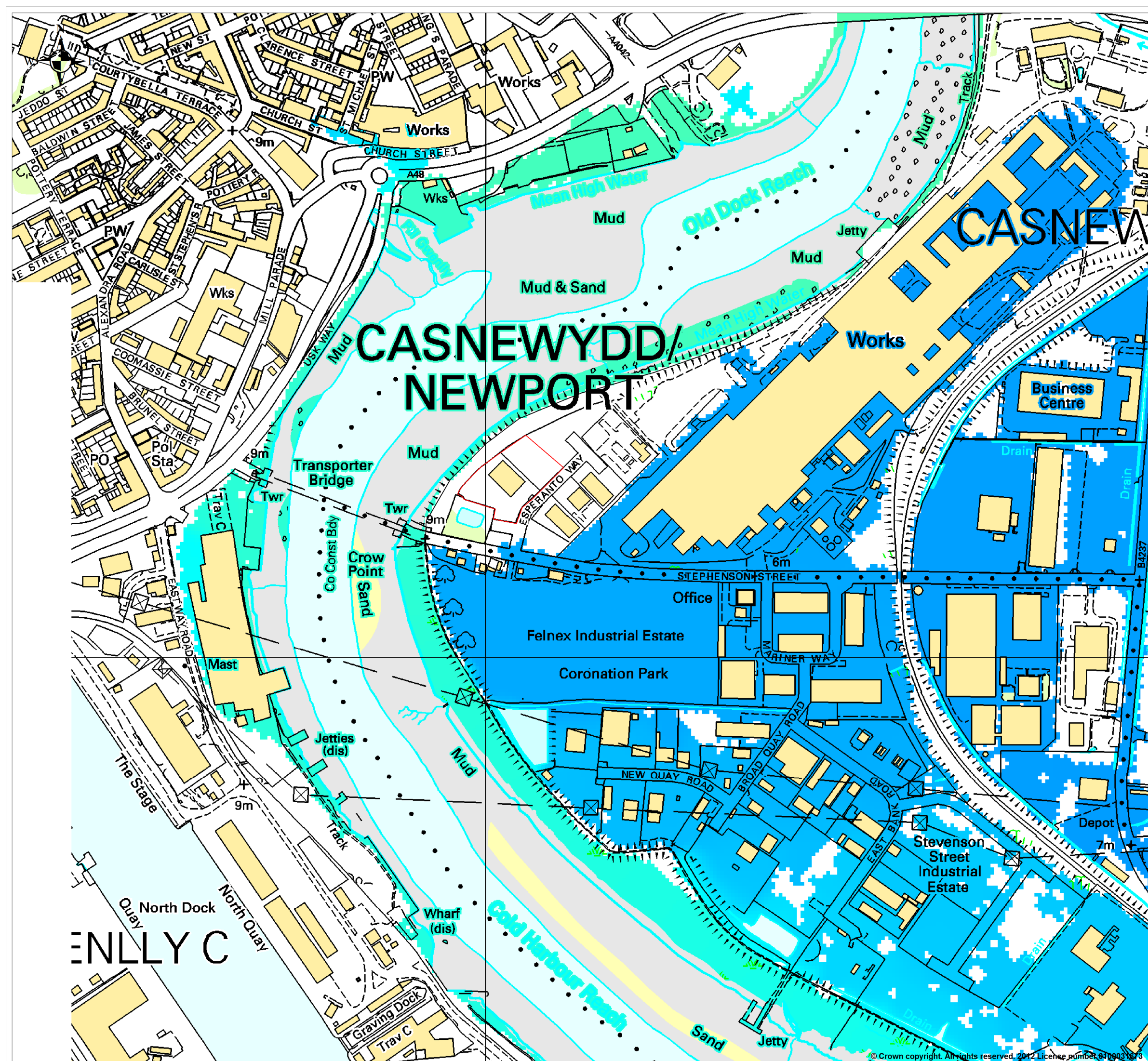
Esperanton Way,
Newport
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Drawing

Figure 1:
Current Floodmap
[v201411]

Date

22nd April 2015



Legend

Site Boundary

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Client WRAP

Project Flood Consequence Assessment
Esperanto Way, Newport

Title NRW (EA Wales) I in 200 year
modelled flood levels

Status DRAFT Drawn By JM Checked By PH

Job Ref JER6447 Scale @ A3 I: 5,000 @ A3 Date Created April 2015

Drawing Number *** Rev A

Appendices

Appendix 1

Correspondence

Jonathan Morley

From: South Wales Information <swinformation@cyfoethnaturiolcymru.gov.uk>
Sent: 23 April 2015 14:41
To: Jonathan Morley
Subject: ATI-07105a Environmental Information Request - Esperanton Way
Attachments: ATI-07105a - Esperanton Way, Newport.zip; Chainbridge Flow Data.xlsx; Standard_Notice.pdf; 2011s4895 Newport Tidal Model Rerun - Final Report v3.pdf; 150422_ATI-07105a - Esperanton Way, NP19 ORD..doc.pdf; ATI-07105a NRW VAT Receipt RPS.pdf

Dear Mr Morley

Our ref: ATI-07105a
Environmental Information - Esperanton Way

Thank you for your recent payment.

§ *Details of any recorded groundwater levels in the area, and groundwater vulnerability of the area;*
§ *Details of any groundwater flooding issues in the area, including flood levels, flood extents and any available anecdotal information;*

- Natural Resources Wales do not have any monitoring points recording groundwater levels in the vicinity of the site. We do not hold any records on groundwater flooding in this location. The Local Authority as Lead Local Flood Authority should be contacted for information on groundwater flooding
- The superficial deposits beneath the site have been classed as unproductive. These overlie Mercia Mudstone which has been classed as a Secondary B aquifer.

§ *Details of flood alleviation and defences in this area;*

- Please find attached the requested defence information. NRW does not own any flood defences in this area, they are either in Local Authority or Private ownership as such we do not have any standard of protection or crest level information for them.
- Newport CBC hold topographical survey data for the embankment which runs downstream from the transporter bridge.

Any gauged flow records for river networks in close proximity to the site, with associated estimated return periods;

- Please find attached the full period of record for day max and day mean flow data at Chainbridge. This is the closest flow site we have to the area requested. Some of the data has not been validated so please treat with caution.

Confirmation of Flood Zone;

Confirmation of the most recent SFCA;

Strategic Flood Consequence Assessment (SFCA) Flood zone extents for the area (electronic MapInfo Version if possible);

Flood Hazard, surface water and reservoir risk mapping for the area;

A online link to or copy of the most recent SFCA, including associated drawings, maps and appendices.

Mapping and records for any surface water assets owned or maintained.

Any existing river levels/modelled levels for nearby watercourses, for the 100 year, 100 year with climate change, 200 year, 200 year with climate change, 1000 year, and 1000 year with climate change flood events;

Any other flooding related data and/or reports held in relation to the site and immediate area.

Details of any historical flood events;

Details of any flooding due to drainage problems associated with the site, including flood levels, flood extents and any available anecdotal information;

- Any surface water models please contact the local authority who may be able to provide this information.
- All other information please see attached document.

Also attached is our Standard Notice, which outlines the Terms and Conditions of the uses of our information/data.

I hope you find the attached documents helpful. Please don't hesitate to contact us if you require any further information.

Kind regards
Carol

Carol Williams
Sywddog Ymholiadau Allanol
External Relations Officer
Cyfoeth Naturiol Cymru / Natural Resources Wales
Ffôn/Tel: 03000 653 153
E-bost/E-mail: accesstoinformationteam@naturalresourceswales.gov.uk
Gwefan/Website: www.cyfoethnaturiolcymru.gov.uk/www.naturalresourceswales.gov.uk

*Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.
Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.*

From: South Wales Information
Sent: 16 April 2015 15:31
To: 'Jonathan Morley'
Cc: James, Natalie
Subject: ATI-07105a Environmental Information Request

Dear Mr Morley

Our ref: ATI-07105a
Esperanton Way, Newport.

Payment by BACS is acceptable. And the information quoted in your email below is correct.
Please ensure you add the reference number **ATI-07105a** to help us identify your payment.

Please could you confirm which Product you are requesting:

I can confirm that we can provide you with a Product 4 for this site. This product is subject to a charge of £50.00 + VAT @ 20% = £60.00

We can provide the latest report which would contain the drawings, maps and appendices for the SFCA but this would have an additional fee of £50.00 + VAT @ 20% = £60.00

Once your payment is received the flood risk team will process the data.

Thanking you in advance
Carol

Carol Williams
Sywddog Ymholiadau Allanol
External Relations Officer
Cyfoeth Naturiol Cymru / Natural Resources Wales
Ffôn/Tel: 03000 653 153
E-bost/Email: carol.williams@cyfoethnaturiolcymru.gov.uk carol.williams@naturalresourceswales.gov.uk
Gwefan /Website: <http://www.cyfoethnaturiolcymru.gov.uk/> www.naturalresourceswales.gov.uk

*Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.
Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.*

From: Jonathan Morley [<mailto:jonathan.morley@rpsgroup.com>]
Sent: 16 April 2015 14:22
To: South Wales Information
Subject: RE: ATI-07105a Environmental Information Request

Good afternoon Carol,

Is it possible to pay via BACS for the data?

I have the below information for your northern office.

The BACS details are:

Account name: Natural Resources Wales
Account no: 12800 578
Sort Code: 08-33-00
Bank details: Citigroup Centre
Canada Square
London
E14 5LB

Kind regards

Jonathan

Jonathan Morley BSc (Hons)
Senior Geoenvironmental Engineer - RPS Planning & Development
Suite D10, Josephs Well, Hanover Walk,
Leeds, West Yorkshire, LS3 1AB.
United Kingdom
Tel: +44 (0) 113 220 6190
Direct: +44 (0) 113 2204427
Mobile: +44 (0) 7920 566017
Email: jonathan.morley@rpsgroup.com
www: www.rpsgroup.com

From: South Wales Information [<mailto:swinformation@cyfoethnaturiolcymru.gov.uk>]
Sent: 15 April 2015 10:05
To: Jonathan Morley
Subject: ATI-07105a Environmental Information Request

Dear Jonathan

Our ref: ATI-07105a

Your request has been logged with the above reference. Please note that under the Legislation we have up to 20 working days to respond to requests for information and data. We always endeavour to respond sooner than this whenever we can.

I can confirm that we can provide you with a Product 4 for this site. This product is subject to a charge of £50.00 + VAT @ 20% = £60.00

We can provide the latest report which would contain the drawings, maps and appendices for the SFCA but this would have an additional fee of £50.00 + VAT @ 20% = £60.00

This charge is not for the supply of information but to issue a copyright licence as set out in the Standard Notice; this will allow commercial re-use of the information.

In order to make this payment by credit / debit card please contact Carol Williams on 03000 653 153. Please note that for security reasons the cardholder will need to be present to authorise the transaction.

If you would rather send a cheque please make it payable to 'Natural Resources Wales' and send it to me at: External Relations, Natural Resources Wales, Rivers House, St Mellons Business Park, Cardiff, CF3 0EY

Please could you let me know how you wish to proceed with this request. Your request will be put on hold until I hear from you further

Kind regards
Carol

Carol Williams
Sywddog Ymholiadau Allanol
External Relations Officer
Cyfoeth Naturiol Cymru / Natural Resources Wales
Ffôn/Tel: 03000 653 153
Ebst/Email: carol.williams@cyfoethnaturiolcymru.gov.uk carol.williams@naturalresourceswales.gov.uk
Gwefan /Website:
<http://www.cyfoethnaturiolcymru.gov.uk/> www.naturalresourceswales.gov.uk

Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.

Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

----- Original Message -----

From: jonathan.morley@rpsgroup.com
Received: 10/04/2015 13:26
To: Enquiries Queue; info@newport.gov.uk
Subject: Environmental Information Request

Our Ref: JER6447
Email: Jonathan.morley@rpsgroup.com
Tel: 0113 220 6190
Date: 10th April 2015

Dear Sirs,

Environmental Information Request: Esperanton Way, Newport.

We are currently conducting a hydrological assessment for a parcel of land at Esperanton Way, Newport, NP19 0RD, NGR 332029, 186253 (site outlined in red on the attached plan).

To undertake the assessment RPS wish to obtain the following information:

Hydrology and Flooding

- Confirmation of Flood Zone;
- Confirmation of the most recent SFCA;
- Strategic Flood Consequence Assessment (SFCA) Flood zone extents for the area (electronic MapInfo Version if possible);

- Flood Hazard, surface water and reservoir risk mapping for the area;
- A online link to or copy of the most recent SFCA, including associated drawings, maps and appendices.
- Mapping and records for any surface water assets owned or maintained.
- Any existing river levels/modelled levels for nearby watercourses, for the 100 year, 100 year with climate change, 200 year, 200 year with climate change, 1000 year, and 1000 year with climate change flood events;
- Any gauged flow records for river networks in close proximity to the site, with associated estimated return periods;
- Details of any historical flood events;
- Details of any flooding due to drainage problems associated with the site, including flood levels, flood extents and any available anecdotal information;
- Records of any surface and groundwater discharges, abstractions including private licences and pollution incidents;
- Details of any recorded groundwater levels in the area, and groundwater vulnerability of the area;
- Details of flood alleviation and defences in this area;
- Details of any groundwater flooding issues in the area, including flood levels, flood extents and any available anecdotal information;
- Details of aquifer designation, soil classification, and Source Protection Zones in this area;
- Any other flooding related data and/or reports held in relation to the site and immediate area.

Please would you inform me of any data costs that may be incurred as soon as possible.

Should you have any queries please do not hesitate to contact me.

Yours faithfully
for RPS

Jonathan Morley

Jonathan Morley BSc (Hons)
Senior Engineer - RPS Planning & Development
 3rd Floor, 34 Lisbon Street,
 Leeds, West Yorkshire, LS1 4LX.
 United Kingdom
Tel: +44 (0) 113 220 6190
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www: www.rpsgroup.com

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RPS Planning and Development Limited, company number: 02947164 (England). Registered office: 20 Western Avenue Milton Park Abingdon Oxfordshire OX14 4SH.

RPS Group Plc web link: <http://www.rpsgroup.com>

ATI-07105a Esperanton Way, Newport

E: 332029 N: 186253

1.0 Current Flood Map

Figure 1 shows the current Flood Map (version 201411) at this location. The Flood Map represents a combination of the undefended fluvial and tidal flood extents derived from a combination of detailed local modelled and nationally generalised modelled data.

The current Flood Map in this area is derived from the Newport SFRM Modelling – Update of Newport Tidal Model study v3.1 & v3.2 undertaken by JBA Consulting in December 2012 (*ref 5*).

The current tidal flood data in this area was updated by NRW in 2013. This study uses sea level nodes within the Severn Estuary, based on a set of extreme sea levels generated by the EA in 2011 (*ref 2*) for current day (2008). The levels were projected in-land over a digital terrain model to produce depth and elevation grids as well as tidal mapped outlines for both the 0.5% (1 in 200) AEP (annual exceedance probability) and the 0.1% (1 in 1000) AEP; including climate change and upper confidence intervals (+/-95%).

More information on the Flood Map can be obtained from the Environment Agency website <https://www.gov.uk/government/organisations/environment-agency>

2.0 Local Flood Risk Mapping Study

Model Summary

The results summarised below are taken from the Newport SFRM Modelling – Update of Newport Tidal Model v3.1& v3.2 study. This study was commissioned to update the tidal flood model in the area. This study incorporates extreme tidal level prediction datasets together with new LiDAR data and information on changes to landforms in the area.

The baseline model also includes the improved Riverside tidal defences which were completed in summer 2012.

The final design model was run for defended and undefended tidal flood events (including defended with climate change) whilst QMED is used for fluvial inflows for all design runs.

Results:

The results from this study relate purely to tidal levels in the River Usk. The section 3.0 – 'Extreme Sea Levels & Climate Change Guidance' and associated tables below, relate to tidal levels from the Severn Estuary.

The polygon shown in the figures has been used to query the height, depth, velocity and hazard grids to provide the results in **Tables 1-6**. These represent the current day (2011) defended and undefended levels. Due to the sea level rise increments indicated in Table 6 the model will be run periodically (as opposed to annually). We do not expect significant changes to the data in the short term. We recommend that you interpolate the data between each column to achieve the appropriate figures for the timescales in question.

Example depth grids for the defended tidal 1 in 200 (2111) excluding confidence intervals and 1 in 200 (2111) including confidence intervals, are reproduced in **Figures 2 and 3**.

The defended 1 in 200 year (2086) including Confidence Interval hazard grid is represented in **Figure 4**. The hazard rating below relates to the Hazard to People Classification using the hazard matrix (*ref 6*).

Flood Hazard Rating (HR)	Colour Code	Hazard to People Classification
Less than 0.75		Very low hazard – Caution
0.75 to 1.25		Danger for some – includes children, the elderly and the infirm
1.25 to 2.0		Danger for most – includes the general public
More than 2.0		Danger for all – includes the emergency services

Model Results - the Site

*Null values show that the site is flood free for that return period.

Table 1: Defended with Climate Change (excluding upper confidence interval)

	1 in 200 (2011)	1 in 1000 (2011)	1 in 200 (2061)	1 in 200 (2086)	1 in 200 (2111)
Model Grid Size (m)	5	5	5	5	5
Wet Cells	0	334	334	334	334
Elevation, mean (mAOD)	NULL	8.78	8.89	9.22	9.54
Elevation, max (mAOD)	NULL	8.78	8.89	9.22	9.54
Depth, mean (m)	NULL	1.09	1.20	1.53	1.85
Depth, max (m)	NULL	1.56	1.67	2.00	2.32
Velocity, mean (m/s)	NULL	0.68	0.70	0.65	0.88
Velocity, max (m/s)	NULL	2.07	1.99	1.89	2.18
Hazard, mean	NULL	1.65	1.72	1.89	2.15
Hazard, max	NULL	2.88	3.00	2.90	3.41

Table 2: Defended with Climate Change (including upper confidence interval)

	1 in 200 (2011)	1 in 1000 (2011)	1 in 200 (2061)	1 in 200 (2086)	1 in 200 (2111)
Model Grid Size (m)	5	5	5	5	5
Wet Cells	334	334	334	334	334
Elevation, mean (mAOD)	8.95	9.43	9.31	9.56	9.92
Elevation, max (mAOD)	8.95	9.44	9.31	9.56	9.92
Depth, mean (m)	1.26	1.75	1.62	1.87	2.23
Depth, max (m)	1.73	2.22	2.09	2.35	2.70
Velocity, mean (m/s)	0.74	0.86	0.78	0.92	1.00
Velocity, max (m/s)	2.11	2.15	2.11	2.38	2.61
Hazard, mean	1.76	2.05	1.97	2.14	2.32
Hazard, max	3.07	3.30	3.11	3.49	3.78

Table 3: undefended Level Data (2011)

	1 in 200	1 in 1000
Model Grid Size (m)	5	5
Wet Cells	334	334
Elevation, mean (mAOD)	8.53	8.85
Elevation, max (mAOD)	8.53	8.85
Depth, mean (m)	0.84	1.16
Depth, max (m)	1.32	1.63
Velocity, mean (m/s)	0.23	0.26
Velocity, max (m/s)	1.83	1.82
Hazard, mean	1.48	1.68
Hazard, max	2.08	2.19

Model Results – Emergency Access to Site

An access route has not been provided.

Table 4: Defended with Climate Change (excluding upper confidence interval)

	1 in 200 (2011)	1 in 1000 (2011)	1 in 200 (2061)	1 in 200 (2086)	1 in 200 (2111)
Model Grid Size (m)					
Wet Cells					
Elevation, mean (mAOD)					
Elevation, max (mAOD)					
Depth, mean (m)					
Depth, max (m)					
Velocity, mean (m/s)					
Velocity, max (m/s)					
Hazard, mean					
Hazard, max					

Table 5: Defended with Climate Change (including upper confidence interval)

	1 in 200 (2011)	1 in 1000 (2011)	1 in 200 (2061)	1 in 200 (2086)	1 in 200 (2111)
Model Grid Size (m)					
Wet Cells					
Elevation, mean (mAOD)					
Elevation, max (mAOD)					
Depth, mean (m)					
Depth, max (m)					
Velocity, mean (m/s)					
Velocity, max (m/s)					
Hazard, mean					
Hazard, max					

Table 6: Defended Level Data (2011)

	1 in 200	1 in 1000
Model Grid Size (m)		
Wet Cells		
Elevation, mean (mAOD)		
Elevation, max (mAOD)		
Depth, mean (m)		
Depth, max (m)		
Velocity, mean (m/s)		
Velocity, max (m/s)		
Hazard, mean		
Hazard, max		

3.0 Extreme Sea Levels & Climate Change Guidance

In February 2011, new extreme sea levels were derived for England and Wales (*ref 2*), which supersede previous estimates for the Caldicot and Wentlooge Levels. These levels were derived using a tidal model calibrated to UK tidal gauge data. The model output is provided for node locations spaced at approximately 2km. 95% confidence bounds for these values were also derived using the confidence intervals for each node location. The extreme sea levels comprise still water level including storm surge, however they do not account for local wave action. The baseline estimations are for the year 2008, so climate change is calculated relative to this year, for example add 10.5mm for the year 2011.

Extreme sea levels for the node points closest to the site location are included in **Table 7** for a range of return periods (events) e.g. T100 is the 1 in 100 year return period tide, which is equivalent to the 1% AEP (Annual Exceedance Probability). The node locations are shown in **Figure 5**.

Table 7: 2008 Baseline Extreme Sea Levels for adjacent nodes

Node	Easting	Northing	Extreme Event Sea Level (mAOD)					
			T25	T50	T75	T100	T200	T1000
396	333517	182371	8.11	8.23	8.30	8.35	8.48	8.79
398	331070	182628	8.04	8.16	8.23	8.28	8.41	8.72

To provide the estimate of extreme sea levels for the site (**Table 8**), levels were interpolated from the adjacent nodes.

Table 8: 2008 Baseline Extreme Sea Levels interpolated between adjacent nodes

Node	Easting	Northing	Extreme Event Sea Level (mAOD)					
			T25	T50	T75	T100	T200	T1000
Site	333065	182714	8.09	8.21	8.28	8.33	8.46	8.77
95% Confidence Bound (+/- m):			0.20	0.20	0.30	0.30	0.40	0.60

The current guidance on climate change from DEFRA is as follows:

Table 9: Sea level rise, mm per year

Assumed vertical land movement	1990-2025	2025-2055	2055-2085	2085-2115
-0.5	3.5	8.0	11.5	14.5

The calculated future extreme sea levels are shown in **Table 10**. Adopting a precautionary approach as advised by Environment Agency guidance (*ref 4*), these levels include the upper level 95% confidence bound.

Table 10: Extreme sea levels for the site (including 95% Confidence Bound)

Year	Sea level rise(m)	Extreme Event Sea Level (mAOD)					
		T25	T50	T75	T100	T200	T1000
2015	0.025	8.3	8.4	8.6	8.7	8.9	9.4
2065	0.415	8.7	8.8	9.0	9.0	9.3	9.8
2090	0.717	9.0	9.1	9.3	9.4	9.6	10.1
2115	1.080	9.4	9.5	9.7	9.7	9.9	10.5

4.0 Additional Information

We hold no historic flooding information in this area.

The local authority may be able to provide information on issues such as localised flooding from sewers, drains and culverts.

5.0 References

1. Tidal Flood Mapping Study (Penarth and Chepstow), Study report Issue 1, Atkins July 2008
2. Department for Environment, Food and Rural Affairs, 2011. *Technical Report Design sea levels*. R&D Report SC060064. Defra/Environment Agency
3. Flood and Coastal Defence Appraisal Guidance: FCDPAG3 Economic Appraisal. Supplementary Note to Operating Authorities – Climate Change Impacts; October 2006; Department for Environment, Food and Rural Affairs.
4. Using the national coastal flood boundary data for England and Wales, Environment Agency Operational Instruction 490_11, Issued 4/2/2011
5. Newport SFRM Modelling: Update of Newport Tidal Model v3.2, JBA, December 2012.
6. Supplementary note on flood hazard ratings and thresholds for development planning and control purpose, May 2008

6.0 Notes

Un defended scenarios are provided as being a possible worst case scenario in the event of defence failure. They are used as the basis of the Flood Map.

Extreme sea levels provided as part of this project are accurate to one decimal place (**Table 10**). Two decimal places have been provided to show the gradual change between nodes seen in the model, however, this does not imply greater accuracy.

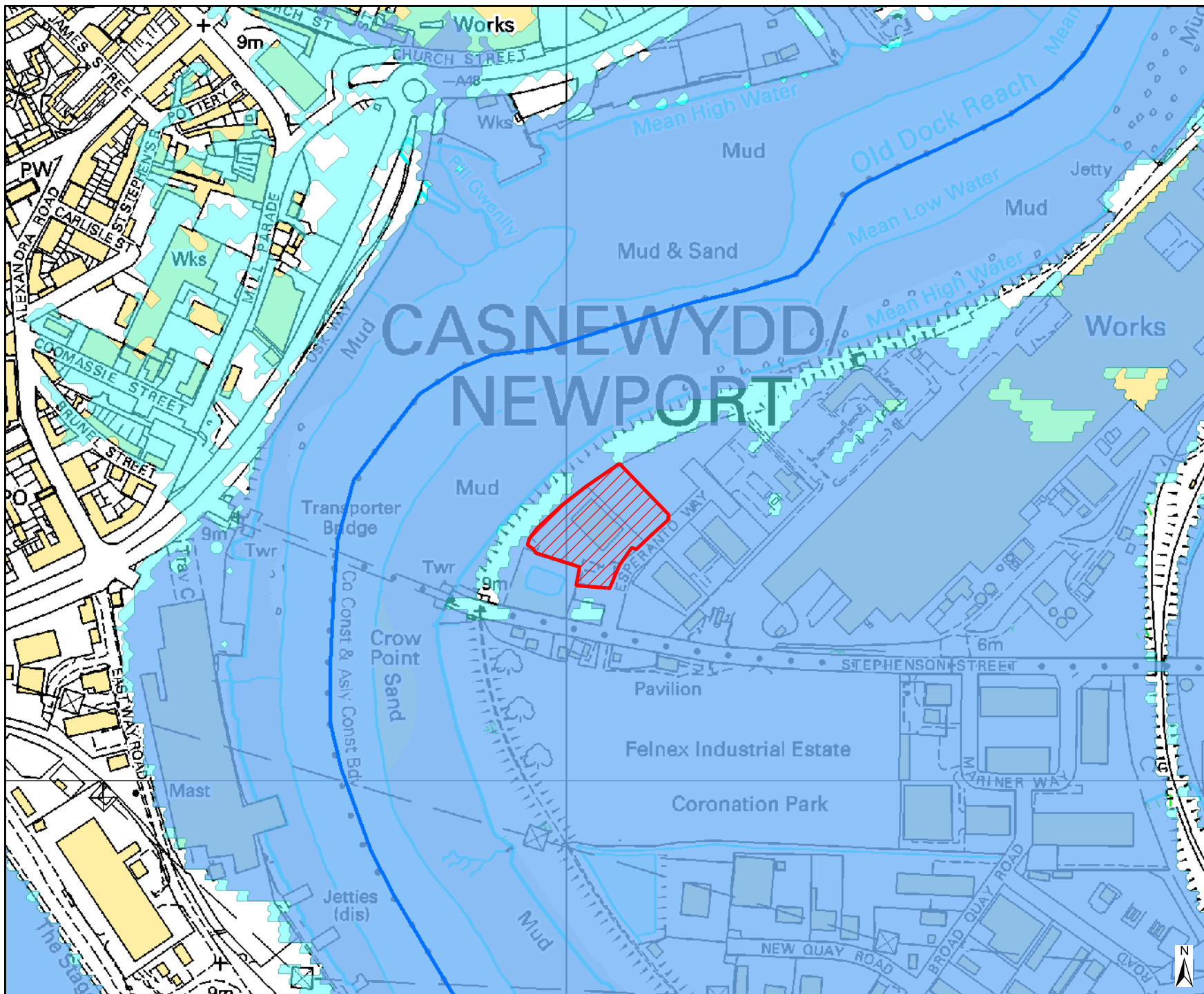
The scope of the model is the mapping of flood risk, it is not intended for detailed design. The model should be considered as the starting point for more detailed modelling, commensurate with the consequences of flooding at the site of interest.

NRW models are available under licence agreement for the purpose of further development. Contact Natural Resources Wales Access to Information team for details of terms, conditions and pricing.

If the data is used in support of an FCA, please include the reference number.

Please refer to NRW standard terms and conditions.

Flood Risk Analysis
22/04/2015



Legend

-  Site Location
-  Flood Zone 3 (1 in 100 year undefended fluvial and 1 in 200 year undefended tidal extents)
-  Flood Zone 2 (1 in 1000 year undefended fluvial and tidal extents)
-  Areas benefiting from defences
-  Defences
-  Flood Storage Area
-  Main Rivers

 **Cyfoeth Naturiol Cymru**
Natural Resources Wales

Project

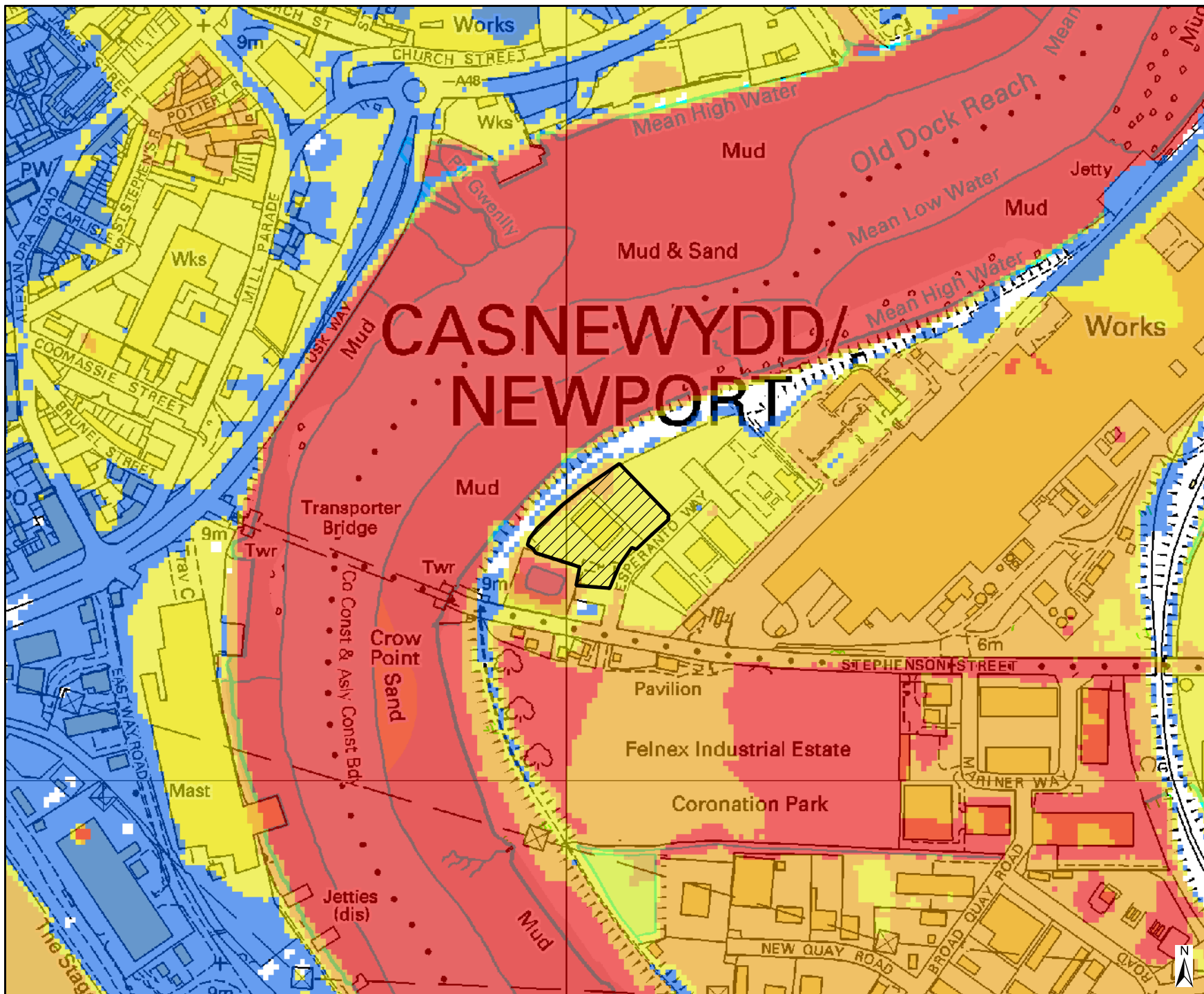
Esperanton Way,
Newport
[Ref: ATI-07105a]

Drawing

Figure 1:
Current Floodmap
[v201411]

Date

22nd April 2015



Legend

Site Location

Flood Depth (m)

0.0 - 0.3
 >0.3
 >0.6
 >1.0
 >2.0

Cyfoeth Naturiol Cymru
Natural Resources Wales

Project

Esperanton Way,
Newport
[Ref: ATI-07105a]

Drawing

Figure 2:
Depth Grid for 0.5% AEP
(1 in 200) year event -
defended excluding upper
confidence intervals (2111)

Date

22nd April 2015



Legend

- ★ Site Location
- Projection Lines
- Extreme Sea Level Node

 **Cyfoeth Naturiol Cymru**
Natural Resources Wales

Project

Esperanton Way,
Newport
[Ref: ATI-07105a]

Drawing

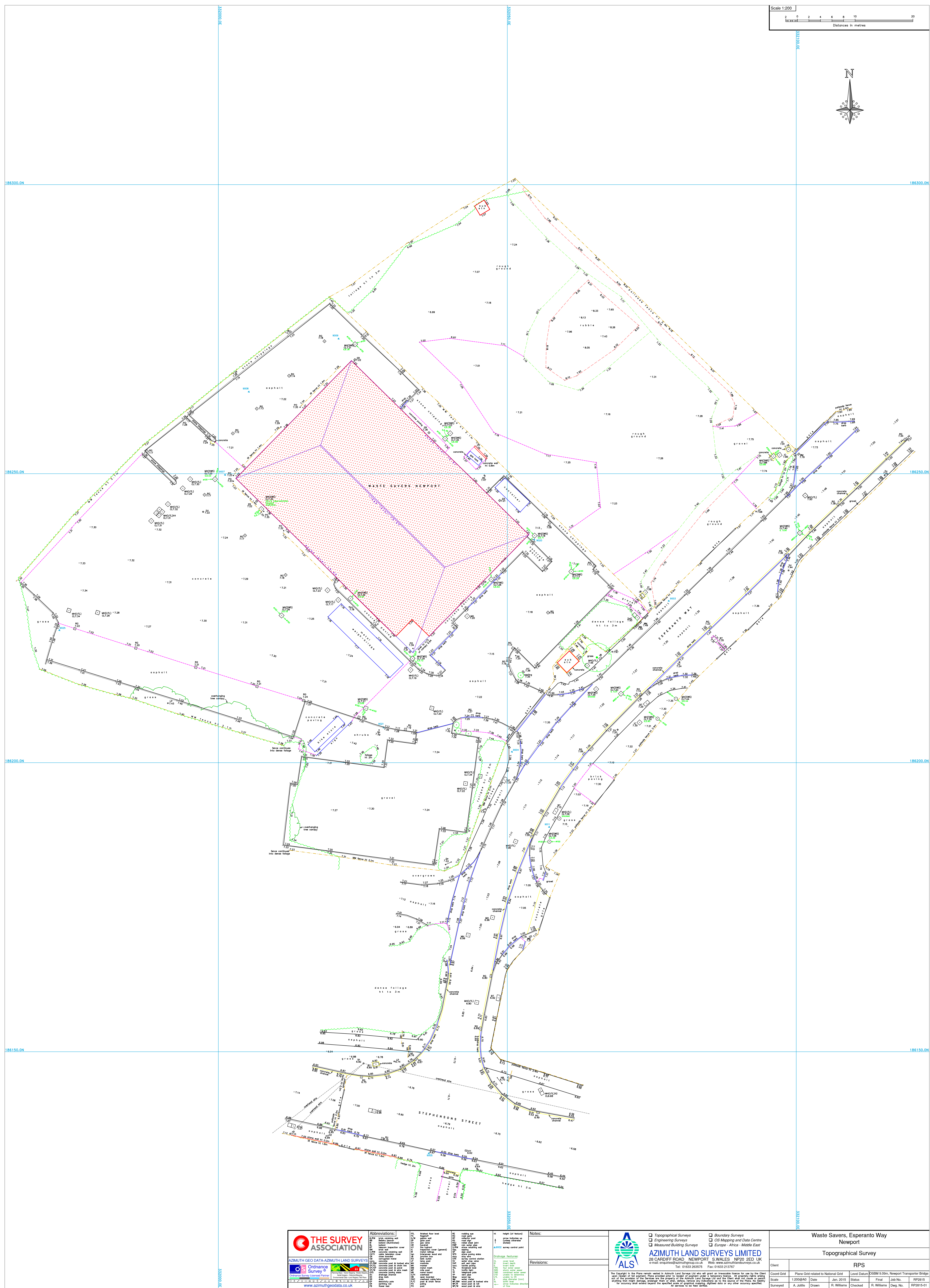
Figure 5:
Extreme Sea Level
Node Locations

Date

22nd April 2015

Appendix 2

Topographic Survey



Appendix 3

WinDes Calculations

RPS Planning & Development					Page 1		
3rd Floor 34 Lisbon Street Leeds LS1 4LX							
Date 04/06/2015 10:13 File NEWPORT ATTENUTAT...			Designed By jonathan.m... Checked By				
Micro Drainage			Source Control W.12.4				
<u>Summary of Results for 100 year Return Period (+20%)</u>							
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	8.680	0.680	2.1	0.0	2.1	78.2	O K
30 min Summer	8.824	0.824	2.3	0.0	2.3	94.7	O K
60 min Summer	8.988	0.988	2.5	0.0	2.5	113.6	O K
120 min Summer	9.165	1.165	2.7	0.0	2.7	133.9	O K
180 min Summer	9.264	1.264	2.9	0.0	2.9	145.4	O K
240 min Summer	9.327	1.327	2.9	0.0	2.9	152.6	O K
360 min Summer	9.395	1.395	3.0	0.0	3.0	160.5	O K
480 min Summer	9.430	1.430	3.0	0.0	3.0	164.5	O K
600 min Summer	9.455	1.455	3.1	0.0	3.1	167.3	O K
720 min Summer	9.471	1.471	3.1	0.0	3.1	169.2	O K
960 min Summer	9.462	1.462	3.1	0.0	3.1	168.1	O K
1440 min Summer	9.418	1.418	3.0	0.0	3.0	163.1	O K
2160 min Summer	9.331	1.331	2.9	0.0	2.9	153.0	O K
2880 min Summer	9.241	1.241	2.8	0.0	2.8	142.7	O K
4320 min Summer	9.076	1.076	2.6	0.0	2.6	123.8	O K
5760 min Summer	8.942	0.942	2.5	0.0	2.5	108.3	O K
7200 min Summer	8.833	0.833	2.3	0.0	2.3	95.8	O K
8640 min Summer	8.742	0.742	2.2	0.0	2.2	85.4	O K
10080 min Summer	8.667	0.667	2.1	0.0	2.1	76.7	O K
Storm Event			Rain (mm/hr)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Summer			141.447	0.0	19		
30 min Summer			86.673	0.0	33		
60 min Summer			53.110	0.0	64		
120 min Summer			32.544	0.0	122		
180 min Summer			24.437	0.0	182		
240 min Summer			19.942	0.0	242		
360 min Summer			14.974	0.0	360		
480 min Summer			12.219	0.0	414		
600 min Summer			10.437	0.0	476		
720 min Summer			9.175	0.0	540		
960 min Summer			7.374	0.0	674		
1440 min Summer			5.420	0.0	952		
2160 min Summer			3.983	0.0	1364		
2880 min Summer			3.201	0.0	1760		
4320 min Summer			2.344	0.0	2552		
5760 min Summer			1.879	0.0	3296		
7200 min Summer			1.583	0.0	4040		
8640 min Summer			1.376	0.0	4760		
10080 min Summer			1.222	0.0	5544		
©1982-2010 Micro Drainage Ltd							

RPS Planning & Development					Page 2		
3rd Floor 34 Lisbon Street Leeds LS1 4LX			Designed By jonathan.m... Checked By				
Date 04/06/2015 10:13 File NEWPORT ATTENUTAT...							
Micro Drainage			Source Control W.12.4				
<u>Summary of Results for 100 year Return Period (+20%)</u>							
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
15 min Winter	8.762	0.762	2.2	0.0	2.2	87.6	O K
30 min Winter	8.924	0.924	2.4	0.0	2.4	106.3	O K
60 min Winter	9.111	1.111	2.7	0.0	2.7	127.7	O K
120 min Winter	9.313	1.313	2.9	0.0	2.9	151.0	O K
180 min Winter	9.429	1.429	3.0	0.0	3.0	164.4	O K
240 min Winter	9.505	1.505	3.1	0.0	3.1	173.1	O K
360 min Winter	9.594	1.594	3.2	0.0	3.2	183.3	O K
480 min Winter	9.635	1.635	3.3	0.0	3.3	188.0	O K
600 min Winter	9.653	1.653	3.3	0.0	3.3	190.1	O K
720 min Winter	9.670	1.670	3.3	0.0	3.3	192.0	O K
960 min Winter	9.651	1.651	3.3	0.0	3.3	189.9	O K
1440 min Winter	9.577	1.577	3.2	0.0	3.2	181.4	O K
2160 min Winter	9.440	1.440	3.0	0.0	3.0	165.6	O K
2880 min Winter	9.305	1.305	2.9	0.0	2.9	150.1	O K
4320 min Winter	9.069	1.069	2.6	0.0	2.6	122.9	O K
5760 min Winter	8.887	0.887	2.4	0.0	2.4	102.0	O K
7200 min Winter	8.746	0.746	2.2	0.0	2.2	85.8	O K
8640 min Winter	8.636	0.636	2.0	0.0	2.0	73.1	O K
10080 min Winter	8.548	0.548	1.9	0.0	1.9	63.0	O K
Storm Event			Rain (mm/hr)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Winter			141.447	0.0	19		
30 min Winter			86.673	0.0	33		
60 min Winter			53.110	0.0	62		
120 min Winter			32.544	0.0	120		
180 min Winter			24.437	0.0	178		
240 min Winter			19.942	0.0	236		
360 min Winter			14.974	0.0	346		
480 min Winter			12.219	0.0	452		
600 min Winter			10.437	0.0	502		
720 min Winter			9.175	0.0	566		
960 min Winter			7.374	0.0	722		
1440 min Winter			5.420	0.0	1024		
2160 min Winter			3.983	0.0	1468		
2880 min Winter			3.201	0.0	1876		
4320 min Winter			2.344	0.0	2684		
5760 min Winter			1.879	0.0	3464		
7200 min Winter			1.583	0.0	4248		
8640 min Winter			1.376	0.0	4936		
10080 min Winter			1.222	0.0	5656		
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Date 04/06/2015 10:13 File NEWPORT ATTENUTAT...	Designed By jonathan.m... Checked By																																									
Micro Drainage	Source Control W.12.4																																									
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> <td>D3 (1km)</td> <td>0.351</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> <td>E (1km)</td> <td>0.295</td> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Site Location</td> <td></td> <td>F (1km)</td> <td>2.433</td> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>C (1km)</td> <td>-0.026</td> <td>Summer Storms</td> <td>Yes</td> <td>Climate Change %</td> <td>+20</td> </tr> <tr> <td>D1 (1km)</td> <td>0.413</td> <td>Winter Storms</td> <td>Yes</td> <td></td> <td></td> </tr> <tr> <td>D2 (1km)</td> <td>0.360</td> <td>Cv (Summer)</td> <td>0.750</td> <td></td> <td></td> </tr> </table> <u>Time / Area Diagram</u> Total Area (ha) 0.300 <table> <thead> <tr> <th>Time (mins)</th> <th>Area (ha)</th> </tr> </thead> <tbody> <tr> <td>0-4</td> <td>0.300</td> </tr> </tbody> </table>			Rainfall Model	FEH	D3 (1km)	0.351	Cv (Winter)	0.840	Return Period (years)	100	E (1km)	0.295	Shortest Storm (mins)	15	Site Location		F (1km)	2.433	Longest Storm (mins)	10080	C (1km)	-0.026	Summer Storms	Yes	Climate Change %	+20	D1 (1km)	0.413	Winter Storms	Yes			D2 (1km)	0.360	Cv (Summer)	0.750			Time (mins)	Area (ha)	0-4	0.300
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RPS Planning & Development		Page 4
3rd Floor 34 Lisbon Street Leeds LS1 4LX		
Date 04/06/2015 10:13 File NEWPORT ATTENUTAT...	Designed By jonathan.m... Checked By	
Micro Drainage	Source Control W.12.4	

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 8.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	115.0	2.800	115.0	5.600	115.0	8.400	115.0
0.400	115.0	3.200	115.0	6.000	115.0	8.800	115.0
0.800	115.0	3.600	115.0	6.400	115.0	9.200	115.0
1.200	115.0	4.000	115.0	6.800	115.0	9.600	115.0
1.600	115.0	4.400	115.0	7.200	115.0	10.000	115.0
2.000	115.0	4.800	115.0	7.600	115.0		
2.400	115.0	5.200	115.0	8.000	115.0		

Orifice Outflow Control

Diameter (m) 0.035 Discharge Coefficient 0.600 Invert Level (m) 8.000

Weir Overflow Control

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 10.000

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Appendix 4

Outline Drainage Plan

Appendix 4

OPRA Profile

Opra Spreadsheet for Waste Facilities

Version: **NRW v1** Release Date: **01-Apr-15**

Permit No: **EPR-UB3190HE**

Site Name: **Newport City Council Depot**

Date: **19/05/2015**

Operator: **Wastesavers**

Attribute	Bands	Points
<u>Complexity(s):</u>	A	4
<u>Emissions:</u>	C	15
<u>Location:</u>	C	3
<u>Operator Performance:</u>	A	2
	Total:	24

Fees and Charges	
Application Fee	£4,104
Normal Variation	£3,336
Full Surrender	£3,000
Part Surrender	£3,000
Subsistence	See Charge Tables

Compliance Rating

Subsistence Multiplier

100%

[Reference Sheet](#)

Complexity AttributeSite Type: A15 Complexity Band: **A**

2nd Site Type: ... 2nd Band:

Complexity Bands are based on a lookup table (see References tab)

More than one Complexity (Site Type) is required only in circumstances where the permit in question covers a landfill activity **and** a treating/keeping activity. In all other circumstances only one site type should be entered. Where more than one site type applies, the one carrying the highest relevant complexity band is used.

Emissions Attribute (Waste Input)

Waste Type	Annual Tonnage	Emission Threshold	Emission Index
Inert		1000	
Non Hazardous (Non Bio)	50,000	750	66
Non Hazardous (Bio)	25,000	500	50
Hazardous		250	
Total:			116

Band: **C**

Emission Bands are based on total index: <10=A, <100=B, <1000=C, <10000=D, >=10000=E

Location Attribute

<u>Question</u>	<u>Answer</u>	<u>Points</u>	<u>Question</u>	<u>Answer</u>	<u>Points</u>
Proximity to Human Occupation:	50m-250m	3	Direct run-offs:	Yes - With interceptors	1
Assessment under wildlife, countryside or habitats legislation:	Habitats	3	Air Quality Management Zone:	No	
Groundwater/Aquifers:	No		Flood Plain:	Yes	2
Sensitivity of surface water:	None		Total Points: 9		Band: C

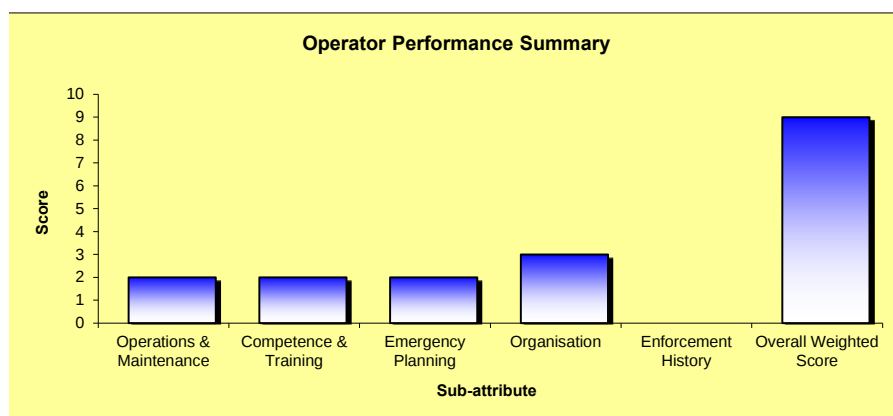
Location Bands are based on total points: 0-4=A, 5-8=B, 9-12=C, 13-18=D, >18=E

Operations & Maintenance				
1	Do you have documented operating procedures for operations that may have an adverse impact on the environment?	Yes	4	Max = 12 Weight = 20% Weighted Score 2.0
2	Is there a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative maintenance regime is appropriate?	Yes	2	
			0	
4	Do you have a preventative maintenance programme for items of plant whose failure could lead to impact on the environment?	Yes	2	
5	Does the preventative maintenance programme include regular checks and formal inspections of infrastructure items such as tanks, pipework, retaining walls, bunds and ducts?	Yes	2	
6	Are the reports, results and recommendations arising from your own audits made available to senior management on a regular basis?	Yes	2	
Operations and Maintenance Total			12	

Competence and Training - 20%			
1	Has a training needs assessment been carried out which: ☐ Identifies all posts for which specific environmental awareness training is required; and ☐ Identifies the scope and level to which such training is to be given?	Yes	3
2	Are training systems in place for all relevant staff that cover the following factors:		
	☐ the regulatory requirements associated with the Permit as they affect their roles and responsibilities;	Yes	2
	☐ likely potential environmental impacts which may be caused by plant under their control. This should cover both normal and abnormal circumstances;	Yes	2
	☐ reporting procedures to inform supervisors or managers of deviations from permit conditions;	Yes	3
	☐ procedures to be used by supervisors or managers for the reporting of deviations from permit conditions to the regulator	Yes	2
	☐ prevention of accidental emissions and action to be taken when accidental emissions occur?	Yes	2
3	Do you assess the potential environmental risks posed by the work of contractors and provide instructions to contractors about protecting the environment while working on site?	Yes	3
4	If there are industry standards for training in this sector (e.g. WAMITAB) do you apply them? (If no industry standards please leave blank)	Yes	0
Competence Training Total			17
			2.0
Weighted Score			
Max = 17			
Weight = 20%			

Emergency planning - 20%				
1	Is there an accident plan that complies with guidance covering the following aspects of foreseeable scenarios: likelihood, consequences,actions to prevent, action to take in the event it occurs?	Yes	10	Max = 12 Weight = 20% Weighted Score
2	Has the plan identified areas where improvement is needed?	Yes	2	
3	Where improvement has been identified, does the plan include an implementation programme with acceptable timescales to the regulator? If not, points will be deducted.	Yes	0	
			0	
			0	
			0	
			0	
			0	
Emergency planning Total			12	2.0

Organisation - 40%			
Internal/External Environment Management Systems: Answer either Question 1 or Question 2 NB: If your externally audited system is ISO9001 but you also have an internal environmental management system, you may be able to obtain a better score by providing answers to question 2			
1	Do you have a certified Environmental Management System, subject to external audit, which covers the activities allowed by this permit? If so which one?	ISO14001	15
Sub Total			15
2 If you do not operate an externally audited environmental management system but have an internal one, assess your system against the criteria below:			
2.1	Has your company adopted an environmental policy and programme which :		
	☐ includes a commitment to continual improvement and prevention of pollution?		0
	☐ includes a commitment to comply with relevant legislation, and with other requirements that the organisation subscribes to?		0
	☐ identifies, sets, monitors and reviews environmental objectives, independently of the permit?		0
2.2	Do you have an environmental policy and programme which is subject to audit by your company?		0
2.3	Are there annual reports on environmental performance, objectives and targets, future planned improvements and/or do you participate in local community liaison meetings?		0
			0
4	Within the past 5 years have you failed to meet an improvement condition set by the regulator in a Permit or Variation by the due date, without prior agreement? (minus 2 for each failure). ADD NUMBER OF FAILURES NOT Y OR N		0
Organisational Total:			15.0
Enforcement History (0 to -40% weighting) Please enter the number of times relevant enforcement actions have been pursued in connection with your site. Note: the timescales over which action remains relevant depends on the type of enforcement action and is contained in the questions below			
1	Number of Enforcement, Improvement, Works, Compliance or Restoration Notices issued in the past year by the Environment Agency under any legislation, by the Health and Safety Executive relevant to the COMAH Regulations or by local authorities under Part I of the Environmental Protection Act 1990 or relevant notice or Abatement Notices issued by local authorities or magistrates courts under Part III of the Environmental Protection Act 1990 (in all cases, other than any overturned on appeal by the Operator)	0	
2	Number of Formal Cautions, Enforcement Undertakings or Fixed Monetary Penalties issued by the Environment Agency in respect of offences under relevant legislation in the last 3 years.	0	
3	Number of Prohibition, Stop, Suspension or Revocation Notices issued by the Environment Agency under any legislation, by the HSE relevant to the COMAH Regulations or by local authorities under Part I of the Environmental Protection Act 1990, (other than any overturned on appeal by the Operator) in the last 3 years	0	
4	Number of Convictions on prosecutions brought by the regulator under any legislation, by the HSE relevant to the COMAH regulations or by local authorities (in respect of offences under Parts I or III of the Environmental Protection Act 1990) in last 5 years (or 10 years where a term of imprisonment was imposed on the Operator) (other than any overturned on appeal). Or number of any Variable Monetary Penalties issued.	0	
			0
Overall Operator Performance Score:			9.00
Band E= less than 2 D= 2 to 3.99, C= 4 to 5.99, B= 6 to 7.99 , A= 8 to 11			BAND= A



Operator Performance Summary	
Operations & Maintenance	2.0
Competence & Training	2.0
Emergency Planning	2.0
Organisation	3.0
Enforcement History	0.0
Overall Weighted Score	9.0

Complexity Bands	
...	
A01	EEE
A01-Closed	B
A02	EE
A02-Closed	B
A03	E
A03-Closed	B
A04	DD
A04-Closed	B
A04-Dredgings	B
A05	C
A05-Closed	A
A06	C
A06-Closed	A
A07	C
A07-Closed	A
A08	C
A08-Closed	A
A09	D
A10	B
A11	C
A12	D
A13 (non-haz)	B
A13 (haz)	C
A14	B
A15	A
A16 (non-haz)	A
A16a (haz)	D
A17	E
A18	D
A19	C
A19a	B
A20	C
A21	E
A22	C
A23	C
A24	B
A25	B
A26	n/a
A27	A
A29	B
L05	C
L05-Closed	A

2015/16

Charge Multipliers							
App	£171	Nor Var	£139	Full Surr	£125	Part Surr	£125
Subs	NA						

Converting Bands to Opra Score

Band	A	B	C	D	E	DD	EE	EEE
Complexity	4	10	35	50	65	100	130	195
Emissions	3	7	15	30	40			
Location	1	2	3	5	7			
Op Perf	2	4	7	10	14			
Compliance Rating	0.95	1	1.1	1.25	1.5	3		
Band	A	B	C	D	E	F		

EMS	Points
No	0
EMAS	20
ISO14001	15
Other Accredited	12
ISO 9001	8

Pre-Application Correspondence



Project: Wastesavers Newport Facility Re-Design
Meeting Title: Environmental Permit Pre-Application Discussion
Location: Wastesavers Resource Centre, Esperanto Way, Newport

Date: 24th April 2015

Time: 14:00

Attendees:

Damien Downs (Natural Resources Wales)
Laura Dell (Natural Resources Wales)
Penny Goodwin (Wastesavers)
Ian Syms (Wastesavers)
Stephen Miller (Wastesavers)
Paul Jones (WRAP)
Katie Edwards-Williams (RPS Permitting) (CHAIR)
Amy Powell (RPS Permitting)

Distribution: All above plus Tim Perkins

-
- 1 Wastesavers Recycling works in partnership with Newport City Council to deliver recycling services. Wastesavers operate a weekly kerbside collection of paper, cans, plastic, glass, textiles, small domestic appliances and food waste. The site currently operates under exemptions, with an approximate through put of 15,000 tonnes per annum. The site currently has bulking and baling facilities as well as machinery to sort steel and aluminium cans.

The need to handle a greater amount of material, in order to meet Welsh Government targets and deal with an expanding housing stock has resulted in the purchase of some additional land neighbouring the current depot to provide additional parking, covered storage and improved circulation. The proposed increase in processing at the site means the activities can no longer be classed as exempt; a bespoke permit will be required. Following a review of SR 2008 No7 Wastesavers has confirmed the following waste codes will form part of the permit application;

Waste Code	Description
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 02	Wastes from electrical and electronic equipment
16 02 14	Discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	Components removed from discarded equipment other than those mentioned in 16 02 15
16 06	Batteries and accumulators
16 06 04	Alkaline batteries (except 16 06 03)



Waste Code	Description
16 06 05	Other batteries and accumulators
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	Paper and cardboard
19 12 02	Ferrous metal
19 12 03	Non-ferrous metal
19 12 04	Plastic and rubber
19 12 05	Glass
19 12 07	Wood other than that mentioned in 19 12 06
19 12 08	Textiles
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	Separately collected fractions (except 15 01)
20 01 01	Paper and cardboard
20 01 02	Glass
20 01 08	Biodegradable kitchen and canteen waste
20 01 10	Clothes
20 01 11	Textiles
20 01 34	Batteries and accumulators other than those mentioned in 20 01 33
20 01 36	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	Wood other than that mentioned in 20 01.37
20 01 39	Plastics
20 01 40	Metals
20 01 41	Wastes from chimney sweeping
20 02	Garden and park wastes (including cemetery waste)
20 02 01	Biodegradable waste
20 02 02	Soil and stones
20 03	Other municipal wastes



Waste Code	Description
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 03	Street-cleaning residues
20 03 07	Bulky waste

- 2 All waste stored at the site will be covered in a building. The only exception is glass. Glass will be uncovered and stored outside in a skip. The EMS for the site will include an accident management plan. DD recommended Wastesavers use TGN 7.01 as reference for the management of fire risk at the site.

AP1: AP to send Wastesavers “Reducing fire risk at sites storing combustible materials: Technical Guidance Note (TGN 7.01)”.

- 3 Wastesavers Stephen Miller is currently sitting the Certificate of Technical Competence (CoTC). There is a risk Wastesavers will not have a CoTC at the time of a permit being issued. DD confirmed the lack of CoTC will not be a barrier to obtaining a permit for the site. WRAP can provide CoTC cover as an interim measure if required.
- 4 Wastesavers plan to install an additional oil interceptor at the site, pre site drainage connecting to the local Dŵr Cymru Welsh Water Sewer.
- 5 Summary of the Environmental Management System to be supplied with permit application.
- 6 NRW is currently experiencing a permit determination delay. Current forecasts predict determination timeframes between 4-6 months from the duly made date, with an approximate duly making queue of 6 weeks.

AP2: DD to confirm current permit application queue size and provide pre-application reference number.

AP3: AP to complete Opra profile pre permit application submission, for review by DD.

- 7 Plan to submit permit application end of June.
- 8 H1 risk assessment will focus primarily on the risk to River Usk (Lower Usk)/Afon Wysg (Wysg Isaf) SSSI; the assessment will discuss the mitigation in place to protect the features of the SSSI.
- 9 DD confirmed minimal consideration is required for noise and odour. The site is low risk and within an industrial area, with no known complaints arising from odour or noise emissions.
- 10 DD confirmed the operation can go ahead prior to a permit being issued for the site. The local agreement is pending a review of the site's summary EMS.
- 11 WRAP confirmed site condition report was undertaken in 2003, depending on contents, may require updating for permit application submission.



- 12 PD confirmed WRAP's future aspiration for the site to take nappies. DD confirmed the addition of a nappy waste code can be included at a later date. The addition of the code constitutes a simple administrative variation, with no associated cost.

Summary

NRW view the proposed operation as low risk, with no concerns regarding the permitting of the proposed activity.

Amy Powell

From: Downes, Damien <Damien.Downes@cyfoethnaturiolcymru.gov.uk>
Sent: 08 June 2015 14:40
To: Amy Powell
Subject: RE: Wastesavers Pre-Application Meeting

Hi Amy

Apologies for the delay, I have been on paternity leave for just over 2 weeks,

The profile looks fine – please proceed.

Kind regards

Damien

Damien Downes

Swyddog Amgylchedd/Environment Officer
Cyfoeth Naturiol Cymru/Natural Resources Wales
Ffôn/Tel: 03000653476

Gwefan / Website:
www.cyfoethnaturiolcymru.gov.uk / www.naturalresourceswales.gov.uk

Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.

Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

From: Amy Powell [mailto:Amy.Powell@rpsgroup.com]
Sent: 04 June 2015 11:28
To: Downes, Damien
Subject: Wastesavers Pre-Application Meeting

Hi Damien,

Have you been able to take a look at the attached?

Best Regards,

Amy

Amy Powell
Senior Consultant - Cardiff - SW Environment Team
Cardiff - P&D SW Environment Team, Park House, Greyfriars Road,
Cardiff, CF10 3AF.
United Kingdom
Tel: +44 (0)29 2066 8662
Fax: +44 (0)29 2066 8622
Email: Amy.Powell@rpsgroup.com
www: www.rpsgroup.com

From: Amy Powell
Sent: 27 May 2015 14:41

To: 'Downes, Damien'
Cc: Katie Williams
Subject: FW: Wastesavers Pre-Application Meeting

Hi Damien,

Hope you had a good bank holiday weekend?

Please see the attached Opra Scoring Profile for Wastesavers Newport. I have used a classification score of A15, following the discussion surrounding MRF. Please can you review and let me know if you foresee any problems/issues with the attached calculations? The Opra profile will be supplied with the main permit application.

Best Regards,

Amy Powell
Senior Consultant - Cardiff - SW Environment Team
Cardiff - P&D SW Environment Team, Park House, Greyfriars Road,
Cardiff, CF10 3AF.
United Kingdom
Tel: +44 (0)29 2066 8662
Fax: +44 (0)29 2066 8622
Email: Amy.Powell@rpsgroup.com
www: www.rpsgroup.com

From: Downes, Damien [<mailto:Damien.Downes@cyfoethnaturiolcymru.gov.uk>]
Sent: 27 April 2015 10:22
To: Katie Williams
Cc: Amy Powell; Penny Goodwin; Dell, Laura
Subject: RE: Wastesavers Pre-Application Meeting

Good morning all

It was good to meet with you on Friday, I thought it was very productive.

I will be liaising with our permitting team this week, in the mean time I have a couple of points I would like to raise.

Could I have a definitive list of waste streams with codes for the proposed bespoke permit application please. I have been reviewing the plans and it is my opinion that the proposed permit should be designed around the SR 2008 No14 (attached), with the additional waste codes.

Penny, I'm sure this something you are familiar with but I just thought it best we make a note of the Materials Recycling Regulatory Guidance and TEEP.

If you would like a further conversation around this please let me know.

<https://www.naturalresourceswales.gov.uk/waste/separate-collection-requirement/?lang=en>

<https://www.naturalresourceswales.gov.uk/waste/material-facilities-regulatory-guidance/?lang=en>

I'll email the permit reference asap as soon as I get one issued.

Kind Regards

Damien Downes

Swyddog Amgylchedd/Environment Officer
Cyfoeth Naturiol Cymru/Natural Resources Wales
Ffôn/Tel: 03000653476

Gwefan / Website:

www.cyfoethnaturiolcymru.gov.uk / www.naturalresourceswales.gov.uk

Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.

Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

From: Amy Powell [<mailto:Amy.Powell@rpsgroup.com>]

Sent: 24 April 2015 08:01

To: Downes, Damien

Cc: Katie Williams

Subject: Wastesavers Pre-Application Meeting

Hi Damien,

Please see the attached agenda for this afternoon's meeting.

Best Regards,

Amy

Amy Powell

Senior Consultant - Cardiff - SW Environment Team

Cardiff - P&D SW Environment Team, Park House, Greyfriars Road,
Cardiff, CF10 3AF.

United Kingdom

Tel: +44 (0)29 2066 8662

Fax: +44 (0)29 2066 8622

Email: Amy.Powell@rpsgroup.com

www: www.rpsgroup.com

From: Katie Williams

Sent: 14 April 2015 14:09

To: Downes, Damien

Cc: Amy Powell

Subject: RE: Wastesavers Pre-Application Meeting

Hi Damien,

Just to confirm next Friday (24th) at 2pm on site in Newport is agreed and we will see you then.

I will be accompanied by Ian Syms and Penny Goodwin of Wastesavers and my colleague Amy Powell.

Best Regards,

Katie

From: Downes, Damien [<mailto:Damien.Downes@cyfoethnaturiolcymru.gov.uk>]

Sent: 13 April 2015 11:02

To: Katie Williams

Subject: RE: Wastesavers Pre-Application Meeting

Hi Katie,

Next Friday is good, but I am also quite flexible during the week (20th 24th) – please suggest a date.

Best regards

Damien

Damien Downes

Swyddog Amgylchedd/Environment Officer
Cyfoeth Naturiol Cymru/Natural Resources Wales
Ffôn/Tel: 03000653476

Gwefan / Website:

www.cyfoethnaturiolcymru.gov.uk / www.naturalresourceswales.gov.uk

Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.

Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

From: Katie Williams [<mailto:Katie.Williams@rpsgroup.com>]

Sent: 13 April 2015 10:54

To: Downes, Damien

Subject: RE: Wastesavers Pre-Application Meeting

Hi Damien,

Thank you for your prompt response!

Unfortunately I can't make this Friday - would next Friday be any good, at 2pm?

I will need to confirm with the site but hopefully that should be OK.

Thank you,

Best Regards,

Katie

From: Downes, Damien [Damien.Downes@cyfoethnaturiolcymru.gov.uk]

Sent: 13 April 2015 10:45

To: Katie Williams

Subject: RE: Wastesavers Pre-Application Meeting

Good morning Katie, yes I'm your man.

Friday is good with me, happy to do 2pm on site at the Newport Wastesavers facility.

Best Regards

Damien

Damien Downes

Swyddog Amgylchedd/Environment Officer
Cyfoeth Naturiol Cymru/Natural Resources Wales
Ffôn/Tel: 03000653476

Gwefan / Website:

www.cyfoethnaturiolcymru.gov.uk / www.naturalresourceswales.gov.uk

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Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

From: Katie Williams [<mailto:Katie.Williams@rpsgroup.com>]
Sent: 13 April 2015 10:17
To: Downes, Damien
Subject: Wastesavers Pre-Application Meeting

Good Morning Damien,

I have been passed your contact details by Penny Goodwin at Newport Wastesavers and I believe you recently visited the site.

RPS are working with Wastesavers with regards to the redesign of the site and are now in a position that we would wish to move forward with a pre-application meeting for the Environmental Permit for the new facility.

Would you be the appropriate contact at NRW with regards to arranging the meeting and if so do you have any preferred dates in the next few weeks? We are pretty flexible in terms of locations (site / NRW Offices) but my preference would be to hold the meeting on a Monday, Tuesday or Friday if possible please.

Penny Goodwin and Ian Syms from Wastesavers will also be attending the meeting.

Best Regards,

Katie

Katie Edwards-Williams BSc (Hons) MSc (Hons) FGS
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Email: Katie.Williams@rpsgroup.com
www: www.rpsgroup.com

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Standard Operating Procedure erbside Collection

	STANDARD OPERATING PROCEDURE Kerbside Collection	WRL/SOP 004
		Authorised: P. Goodwin
		Date: 12/02/15
		Type: Policy

Scope

Kerbside recycling provides an alternative to landfill by providing a collection service that segregates recyclables at the kerbside from boxes provided. Collectors sort from the boxes and place the various recyclables into purposely designed stillages on the vehicles which eliminate the need for M.R.F plants.

Procedure

Checks

- Before commencing your round it is the responsibility of the vehicle driver to complete a vehicle safety check. **See Vehicle Check Procedure WRL/SOP/014.**
- Any faults found which could be detrimental to the safe operation of the vehicle should be reported to the operations manager immediately.
- Any large pools of oil or fuel identified under the vehicle must be contained following the **Spillage Procedure WRL/ENV/01** and then report immediately to management for defect rectification
- If fuel is required the fuel card is located in the rack inside the operations office. Only use the card which corresponds with the vehicle registration you are driving.
- This card is to be returned at the earliest opportunity together with the purchase receipt.

Additional information

- Issued to you before leaving site is a check list containing food bag deliveries and assisted lifts.
- Assisted lifts are for members of the general public who are frail or disabled. An assisted lift requires you to pick up and replace the recycling box in a designated place requested by the occupant. The sheet provided to you during each round indicates the street name and number of the assisted lift. Again this sheet should be ticked as confirmation of collection and returned to the operations office at the end of each shift.

Collection

- Care should be taken in planning your collection round avoiding schools during start finish times and known rush hour, rat run routes. These are indicated on the route risk assessment dedicated to the vehicle assigned to those rounds. The folder is to be kept in the vehicle cab.
- Where your round requires collection on busy main roads, you must only work on the kerbside. **Do not** cross busy main roads to collect boxes. **Do not** expose yourself to oncoming traffic on busy two way carriages. **A list of such roads can be found in your cab info file for reference.**

	STANDARD OPERATING PROCEDURE Kerbside Collection	WRL/SOP 004
		Authorised: P. Goodwin
		Date: 12/02/15
		Type: Policy

- On reaching your collection start point, apply your warning beacons and where possible park the vehicle in a location where you cause minimum disruption to other road users.
- Open the stillage hatches and commence collection.
- On reaching the recycling boxes, lift the lid off the blue box containing paper and textiles, and place neatly on the floor. This will act as a visual reference as to the location of the box on return. Proceed to the vehicle and hang the box on the hooks located beneath the stillages. Proceed to empty the contents in the designated stillage.



Note: Plastic bags must be emptied of their contents and the bag placed in the plastic cage.

Tip paper into stillage using both hands

- Place the empty blue box on top of the lid and proceed to empty the green box.
- Hang the box on the hooks provided, this will take the weight of the box and also free your hands for sorting.
- Stand towards the back of the vehicle first as both the glass and plastic compartments are next to each other. Proceed to place the plastic and glass into their designated compartments until only cans remain



Note: Use extreme caution when placing the glass in the stillage, as glass fragments can rebound out of the cage. Drop the bottles into the stillage, never throw the glass.

- The remaining cans can be emptied directly into the cans compartment.
- Return the green box and place inside the blue, this provides weight to the box and prevents wind blowing the boxes down the street.
- Any recyclables dropped during this process must be picked up before continuing with the next box. Small pieces of glass must be swept up using a pan and brush located in the cab of the vehicle.
- Move the vehicle down the street or road so that you have un-emptied boxes behind and in front of you.



Note: You will have to close the compartments of the vehicle and wear seat belts during spells of driving in excess of 50 meters.

	STANDARD OPERATING PROCEDURE Kerbside Collection	WRL/SOP 004
		Authorised: P. Goodwin
		Date: 12/02/15
		Type: Policy

Never overfill compartments. Overfull compartments cause both litter and hazards from recyclables falling out.

- In the event of not being able to gain access to a particular area. Contact the Operations Manager for guidance.
- Continue collecting until your vehicle compartments are full.
- Once your vehicle has reached the point where it requires emptying, turn off your beacons and return to the depot.
- If you are close to completing your round but have no more space on your vehicle, you can contact the Pod leader using the cab phone and request assistance or an empty vehicle to be brought to your location so you can continue to collect.

Please Note: During the round, it will become necessary to reverse the vehicle. At this time you must use the help of your assistant. Please see Reversing Assistant.

- Additional storage can be utilised in the use of flexible containers, which can be suspended from the rear of the vehicle. If this additional storage is required, you must ensure that you do not obstruct the rear lights and that the container can be closed to prevent littering or causing hazards to other road users with flying debris. **The bag must be removed and stowed safely before driving for any prolonged periods of more than 50 metres.**
- Any textiles, mobile phones, ink or toner cartridges, small WEEE you receive are to be placed in plastic bags provided and stored in the textile compartment.

At the depot

- On returning to the depot drive onto the weighbridge and stop. Apply the handbrake and ensure vehicle is out of gear.
- Swipe the weighbridge sensor located on your key ring which will activate the green light. This light indicates that the sensor has recorded your weight. If the light does not turn green seek assistance from the weighbridge office.



Periodically throughout the day you will be contacted by the Operations Manager on the progress of your collections. It will be requested from time to time that you assist another round who may be experiencing high volumes of materials or some other difficulty. Conversely you can contact the depot if you yourself are experiencing difficulties.

Advice Notes / Tags to Customers

The company has three box tags and a sticker that can be used in the event of items being left or entire boxes bags rejected. These tags are colour coded for the operator to recognise.

	STANDARD OPERATING PROCEDURE Kerbside Collection	WRL/SOP 004
		Authorised: P. Goodwin
		Date: 12/02/15
		Type: Policy

Yellow tags are used if items that are not recycled by us and are left; items such as Tetra.
Blue tags are used when entire boxes are left due to hazardous content and a sticker placed on bags if contaminated or mixed.

Typical reasons for rejection.

- Syringes
- Food wastes
- Nappies

Customer Advice

In the event of customers seeking advice for which you do not have the information advise customers to contact Wastesavers reception on 01633 281281.

Incidents

In the event of an incident occurring follow protocol as laid out in the **Incident Procedure (NWL 011)**

Conflict

There are times of the day where inevitably we cause congestion or refuse to empty a resident's box due to contamination. This may cause distress to the members of the public effected by our actions and may cause confrontation.

In the likelihood of such an event, avoid escalation by informing the aggrieved person that you are merely carrying out a Wastesavers instruction and any complaint should be made to the company on 01633 281281.

If aggressive or abusive behaviour towards you or your crewmember persists then leave the vicinity and inform Management. A decision will be made on how to progress with the round and an incidents report will be completed.

Associated documents

[Reversing Assistant](#)

[Vehicle checks](#)

[Incident Procedure](#)

[Spillage procedure](#)

Cab information file

	STANDARD OPERATING PROCEDURE Kerbside Collection	WRL/SOP 004
		Authorised: P. Goodwin
		Date: 12/02/15
		Type: Policy

Plastic items we request for Recycling

- All types of plastic bottles
- Food trays
- Yogurt pots
- General food packaging



	STANDARD OPERATING PROCEDURE Kerbside Collection	WRL/SOP 004
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Items that are not to be collected under any circumstances

- Plastic toys
- Ridged plastic of any sort
- CD's, DVDs, Video
- Plant pots



Odour Management Plan



ENVIRONMENTAL MANAGEMENT SYSTEM

ODOUR MANAGEMENT PLAN

EMS/Odour
Authorised: P. Goodwin
Date: 7-8-15
Version: 2
Location: CEO PC

Purpose of the plan

The purpose of this document is to consider the potential of creating odour pollution from our process. To measure the intensity and offensiveness of that odour; whether odour exceeds the boundary of the facility and the controls in place that demonstrate the companies effectiveness of managing and controlling odour levels that are likely to cause pollution outside the site.

Responsibility

The CEO holds overall responsibility for this policy and procedure and delegates operational responsibility for implementation of this policy and procedure to the Recycling and Health and Safety Manager and the Yard Manager. All site operatives are responsible for carrying out this procedure.

The company has consulted the H4 guidance notes when compiling this OMP and has used the FIDOR acronym to help take into account factors that determine the degree of odour pollution.

There are two main sources for potential odour pollution on site which are:

1. Handling and storage of domestic food waste
2. Pumping liquid from in floor conveyor pits

The following will take each potential in turn and will outline the controls and procedures in place to minimise they're potential for odour pollution.

1. Food waste
 - Food waste is collected from the residents of Newport on a weekly basis on a one pass stillage vehicle. This food waste is contained within a compostable bag. (See WRL 004)
 - The kerbside collection vehicles then bring the food back to the depot where the stillages are unloaded into a bulk container (See WRL005)
 - During this process any food spilled on the floor is immediately picked up and placed into the bulk container (See WRL033)
 - The bulk container is covered with its tarpaulin when not in use to help containment. (See WRL 025).
 - Where the material is contained within a building the roller shutter doors are closed where possible to prevent odour release.
2. Pumping

Periodically the in floor conveyor pits fill with liquid, predominantly rain water, and require emptying. The company GD Environmental are employed to pump, contain and dispose of this liquid on our behalf. (See WRL026) To minimise the effect of odour during this process the warehouse roller shutter doors are closed to help containment.



ENVIRONMENTAL MANAGEMENT SYSTEM

ODOUR MANAGEMENT PLAN

EMS/Odour
Authorised: P. Goodwin
Date: 7-8-15
Version: 2
Location: CEO PC

The following procedures help us ensure that the controls currently in place are adequate in preventing odour pollution outside our boundary.

Frequency of detection: The Company recognises that employees can become sensitised to odours on site which will reduce their ability to recognise offensive odour. To this end an odour complaint form is used to record any instances where internal or external bodies recognise a bad odour whilst entering or in the vicinity of the premises. These complaints will be logged and used to monitor frequency, cause and remedial actions taken.

Intensity as perceived: This information will come from the odour complaints form and the description of what the odour smells like.

Duration of exposure: Wastesavers recognise that the perceived intensity of an odour diminishes rapidly with constant exposure. To this end we will not rely on our neighbours to identify odours but will instead periodically consult with visitors and record the findings on the complaints form.

Offensiveness: We believe that the odours produced by our process fall into the category of moderately offensive due to the aerobic conditions, age of the food and containment.

Receptor sensitivity: Wastesavers is located on an industrial site. The storage of food waste is contained in a bulk container located at the northern end of the facility which is the furthest point from our neighbours. The bulk container has a maximum capacity of 26 tonnes and this is taken from site and replaced with an empty container daily.

Consideration for the transportation from site of this material is considered in (WRL 026)

The company is currently seeking planning permission to build a barn to house the bulk container inside and behind a roller shutter door.

After considering the materials likely to cause odour pollution, the amount stored and duration of that storage it is our opinion that in the three levels of odour outlined in the guidance notes H4, the site falls under the category of 'no odour beyond the boundary or likely to be'.

Complaints

Wastesavers have a complaints procedure and accompanying Environmental Complaints Report form. Wastesavers will respond to all environmental complaints quickly and effectively as defined in the complaints procedure.



ENVIRONMENTAL MANAGEMENT SYSTEM
ODOUR MANAGEMENT PLAN

EMS/Odour

Authorised: P. Goodwin

Date: 7-8-15

Version: 2

Location: CEO PC

Review

This plan and all our documents will be reviewed on an annual basis or after any significant change in service provision in line with our Control of Documents Procedure.

Related documents

WRL 004 Kerbside collections

WRL 005 kerbside unloading

WRL 025 Bulk trailer sheeting

WRL 026 Site rules

WRL 033 Spillage procedure

RISK 026 Food waste handling & storage

Site Environmental complaint report form

Complaints procedure

Control of Documents Procedure

EMS Index

	Wastesavers EMS index	Ref no EMS INDEX
		Authorised: Penny Goodwin
		Date: 28/08/2015
		Version: 1
		Location: CEO PC

Environmental Policy and Programme

Policy 001 Environmental Policy

The Environmental Policy Manual of Wastesavers

Management System

Accident Management Plan

Communication and Management of EMS

Communications Meetings (minutes)

Continuing Improvement Plan

Correspondence with NRW

Legal and Licensing information

Legislation Register

Pod Leaders Meetings (Minutes)

Training

Wastesavers Environmental Management Chart

Site Operating Procedures

Environmental Risk Assessments

Fire

Site Information Esperanto Way

Site Information Phoenix Park

Spillage Procedure and Training

Work instructions

Accident/Incident investigations

COSHH

Fire risk assessments

Maintenance schedules

Kerbside operations procedures

Operational risk assessments

Forms - operations

Checking

Accidents and Incidents

Audit and Checking

Collections monitoring procedures
Inspections – audits
Complaints and feedback forms

Supporting documentation

Drainage plan
Environmental risk assessment form
Floor plan (fire)
Policy and procedure template
Risk assessment template
Site map of NP19 ORD