

ENVIRONMENTAL MANAGEMENT SYSTEM Summary

Submitted on Behalf of **Associated British Ports**

Site Name: **Roath Dock Cardiff**

Environmental Permit Number: TBC

Prepared By:

Beyond Waste Ltd



Beyond Waste

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1 GENERIC RISK ASSESSMENT (SR2011NO4 RELATING TO WOODCHIP ACTIVITY ONLY)

Generic risk assessment for draft standard rules set number SR2011No4 v2.0

Standard Facility:	Waste Operation: Treatment of waste wood for recovery
Location:	Applies to all potential locations.
Location of environmentally sensitive sites (km / m):	Greater than 500m (see below)
Risk assessment carried out by:	Environment Agency
Date:	25-Jun-12

The scope of the permit and associated rules is defined by the following risk criteria:

- Parameter 1 Permitted activities - The storage of waste (R13) treatment of waste wood for recovery (R3).
- Parameter 2 Permitted waste types - Non Hazardous as listed in rules other than waste consisting solely or mainly of dusts, powders or loose fibres or waste in liquid form
- Parameter 3 Quantity of waste accepted at the facility: <75,000 tonnes per annum.
- Parameter 4 Waste shall be stored and treated on an impermeable surface with sealed drainage system when located within groundwater source protection zones 1 or 2. Outside groundwater source protection zones 1 and 2 wastes shall be stored and treated on an impermeable surface with sealed drainage system or hardstanding.
- Parameter 5 The only point source discharges to controlled waters or groundwater, are surface water from the roofs of buildings and from areas of the facility not used for the storage or treatment of wastes.
- Parameter 6 The activities shall not be carried out within 500m of a European Site (candidate or Special Area of Conservation, proposed or Special Protection Area or Ramsar site) or a Site of Special Scientific Interest (SSSI).
- Parameter 7 The activities must be 10 metres from any watercourse and must not be within 50 metres of any well, spring or borehole used for the supply of water for human consumption. This must include private water supplies;
- Parameter 8 The activities shall not be carried out within 250 metres of the presence of great crested newts, where it is linked to the breeding ponds of the newts by good habitat; 50 metres of a site that has relevant species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity or 50 metres of a National Nature Reserve (NNR), Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.

Abbreviations: SR - Standard Rule

Data and information				Judgement				Action (by permitting)	
Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population	Releases of particulate matter (dusts) and micro-organisms (bioaerosols).	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Medium	Medium	Medium	Permitted waste types are non hazardous and do not include dusts, powders or loose fibres (with the exception of sawdust) and have a low potential to produce bioaerosols, but the treatment activities will produce particulate matter so a medium magnitude risk is estimated. The permitted level of throughput and potential size of the facility means there is potential for exposure if anyone is living or working close to the site (apart from the operator and employees).	SR - Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. SR (if required) - emissions management plan.	Low
Local human population	As above	Nuisance - dust on cars, clothing etc.	Air transport then deposition	High	Low	Medium	As above. Local residents often sensitive to dust.	As above	Low
Local human population, livestock and wildlife.	Litter	Nuisance, loss of amenity and harm to animal health	Air transport then deposition	Low	Low	Low	Local residents often sensitive to litter, however permitted waste types have low litter potential.	As above. Appropriate measures could include clearing litter arising from the activities from affected areas outside the site.	Very low

Local human population	Waste, litter and mud on local roads	Nuisance, loss of amenity, road traffic accidents.	Vehicles entering and leaving site.	Medium	Medium	Medium	Road safety, local residents often sensitive to mud on roads.	As above. Appropriate measures could include clearing waste, litter and mud arising from the activities from affected areas outside the site.	Low
Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation.	Low	Low	Low	Local residents often sensitive to odour, however permitted waste types have low odour potential.	SR - emissions shall be free from odour SR (if required) - odour management plan.	Very low
Local human population	Noise and vibration	Nuisance, loss of sleep.	Noise through the air and vibration through the ground.	Medium	Medium	Medium	Local residents often sensitive to noise and vibration	SR - emissions shall be free from noise and vibration SR (if required) - noise and vibration management plan.	Low
Local human population	Scavenging animals and scavenging birds	Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity.	Air transport and over land	Low	Medium	Low	Permitted wastes unlikely to attract scavenging animals and birds but may become nesting / breeding sites.	SR - Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. SR (if required) - emissions management plan.	Very low
Local human population	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport and over land	Low	Medium	Low	Permitted waste types unlikely to attract pests.	As above	Very low
Local human population and local environment	Flooding of site	If waste is washed off site it may contaminate buildings / gardens / natural habitats downstream.	Flood waters	Low	Low	Low	Permitted waste types are non-hazardous so any waste washed off site will add to the volume of the local post-flood clean up workload, rather than the hazard.	SR - requires a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (will include flood risk management).	Very low
Local human population and / or livestock after gaining unauthorised access to the waste operation	All on-site hazards: wastes; machinery and vehicles.	Bodily injury	Direct physical contact	Medium	Low	Low	Permitted waste types are non-hazardous therefore only a low magnitude risk is estimated	SR - activities shall be managed and operated in accordance with a management system (will include site security measures to prevent unauthorised access).	Low
Local human population and local environment.	Arson and / or vandalism causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters or arsonists/vandals. Pollution of water or land.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	Medium	Medium	Medium	Permitted waste types do include flammable materials so a medium magnitude risk is estimated. Wastes should be stored in accordance with Environment Agency Pollution Prevention Guidance (PPG29) on Safe Storage - Combustible materials, prevent and control fire.	SR - requires a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (will include fire and spillages).	Low
Local human population and local environment	Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff or fire fighters. Pollution of water or land.	As above.	Medium	Medium	Medium	As above.	As above (excluding comments on access to waste). Permitted activities do not include the burning of waste.	Low

All surface waters close to and downstream of site.	Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste e.g. containing suspended solids.	Acute effects: oxygen depletion, fish kill and algal blooms	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Low	Low	Low	Permitted waste types do not include sludges or liquids so only a medium magnitude risk is estimated. No point source emissions to water are permitted, but there is potential for contaminated rainwater run-off from wastes stored outside buildings especially during heavy rain.	SR - All liquids shall be provided with secondary containment ... (applies to non-wastes such as fuels). Run-off restricted by SR - Emissions of substances not controlled by emission limits , with appropriate measures.	Very low
All surface waters close to and downstream of site.	As above	Chronic effects: deterioration of water quality	As above. Indirect run-off via the soil layer	Low	Low	Low	Waste types are non-hazardous so harm is likely to be temporary and reversible.	As above	Very low
Abstraction from watercourse downstream of facility (for agricultural or potable use).	As above	Acute effects, closure of abstraction intakes.	Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.	Low	Low	Low	Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contaminated run-off.	As above. Also the activities must be 10 metres from any watercourse and must not be within 50 metres of any well, spring or borehole used for the supply of water for human consumption. This must include private water	Very low
Groundwater	As above	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater then extraction at borehole.	Low	Low	Low	Permitted wastes unlikely to contaminate groundwater.	As above	Very low
Local human population	Contaminated waters used for recreational purposes	Harm to human health - skin damage or gastro-intestinal illness.	Direct contact or ingestion	Low	Medium	Low	Unlikely to occur, but might restrict recreational use.	SR - Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. SR (if required) - emissions management plan.	Very low
Protected sites - European sites and SSSIs	Any	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Medium	Medium	Medium	Waste operations may cause harm to and deterioration of nature conservation sites.	SR - Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. At 500 metres or above, the potential hazards from the permitted activities pose a low risk to the broad sensitivity of species and habitats groups. The standard permit only applies at this distance or more. It is also a requirement of SR. The activities shall not be carried out within 250 metres of the presence of great crested newts, where it is linked to the breeding ponds of the	Low

Notes: Red triangle indicates comment containing supporting information
Yellow columns contain drop down menus that allow automatic evaluation of risk in green column

2 ENVIRONMENTAL SITE SPECIFIC RISK ASSESSMENT

Table 1 Environmental impacts plan and controls – ABP Cardiff

Site Activity: Biomass & RDF Export Facility

The key pieces of environmental legislation affecting this sector are:

(Add as many as apply to your site activities – ensure that this list is kept up to date and covers all applicable legislation)

- The Environmental Permitting (England and Wales) Regulations 2010.
- Groundwater regulations 1998, SI 2746
- Water Resources Act 1991, as amended.
- Environmental Protection Act 1990
- Control of Pollution (Oil Storage) (England) Regulations 2001, SI 2954

Process / Activity/Equipment	Emissions to Air (including dust)	Emissions to Water	Energy Usage	Waste Disposal	Land Contamination	Nuisance (i.e. noise or odour)	Resource Consumption
Processes / Activities / Equipment at the site:							
Receipt of Biomass	M	L	L	L	L	L	M
Storage of Biomass	M	L	L	L	M	L	L
Loading of Biomass	M	L	L	L	L	L	M
Surface Water Drainage	L	L	L	L	L	L	L
Fire Prevention	H	M	L	M	L	L	L
Odour Control	M	L	L	L	L	M	L
Dust Control	M	L	L	L-	-L	M	M

List all the processes / activities / equipment at the site in these columns.

Then put an (H) high impact, or (M) medium impact, or (L) low impact in the box next to the process / activity / equipment if it can result in an environmental impact listed under normal or abnormal operation.

3 ENVIRONMENTAL IMPACTS CONTROLS

Table 2A. Emissions to Air [A]						
Process / Activity / Equipment on Site	Potential Impact	Is impact controlled by equipment?	Is equipment included on maintenance checklist?	Is impact controlled by a procedure?	Person using the procedure received training?	Comments
Dust from product delivery	Potential for local air quality issues from dust. Also, a cause for complaints	Yes - Dust Suppression	Yes	Yes	Yes	Deliveries will be supervised; Wind conditions will be monitored and if likely to give rise to emissions unloading may be delayed.
Dust from the storage of waste material	As above from drying of material	Yes - Dust Suppression	Yes	Yes	Yes	Ongoing stockpile monitoring.
Dust from loading of material	As above	Yes - Dust Suppression	Yes	Yes	Yes	Crane drivers advised of need to ensure drop height to hold minimised Wind conditions will be monitored and if likely to give rise to emissions loading may be delayed
Fire (abnormal)	Smoke that may give rise to nuisance and detriment to amenity	Yes - water spray	Yes	Yes	Yes	Stacks to be sized and positioned to minimise risk. Also to be temperature probed regularly.
Odour	Potential for local air quality issues from odour due to RDF storage.	N/A	Yes	Yes	Yes	Odour Management is addressed within the Odour Management Plan. No adverse odour anticipated as material is dry

Table 2B. Energy Usage						
Diesel used in delivering vehicles, machines and ship	The impacts associated with diesel use are well documented (for example, air emissions) There is little scope to reduce these impacts other than advice to drivers about good practice around revving of engines.	Yes (on vehicles)	Yes	N/A	Yes	Delivering vehicles are not responsibility of operator. Machinery will be maintained by APB.
Table 2C. Emissions to Water [W]						
Process / Activity / Equipment on Site	Potential Impact	Is impact controlled by equipment?	Is equipment included on maintenance checklist?	Is impact controlled by a procedure?	Person using the procedure received training?	Comments
Surface water run-off from concrete hard standing	Under normal conditions surface water run-off should be uncontaminated. However, if contamination occurs by accident, it has the potential to cause water pollution to the dock water if there is a site drain failure.	Yes - interceptor isolates site drains	Yes	Yes - potentially polluting fluids not stored onsite	Yes	The accidental contamination case is considered in Accident / Incident Management Plan
Fire water Run-off (abnormal)	Under normal conditions fire water run-off should be uncontaminated. However, if contamination occurs by accident, it has the potential to cause water pollution to the dock water if there is a site drain failure.	Yes – interceptor isolates site drains	Yes	Yes Regular Inspection of surfacing and interceptor maintenance	Yes	The accidental contamination by Firewater runoff is considered in the Fire Plan.

Table 2D. Waste Disposal [D]						
Process / Activity / Equipment on Site	Potential Impact	Is impact controlled by equipment?	Is equipment included on maintenance checklist?	Is impact controlled by a procedure?	Person using the procedure received training?	Comments
Contaminated surface water run off/ fire water run	Contaminants entering the adjacent dock waters.	Yes- interceptor and emergency isolation	Yes	Yes	Yes	Interceptor sludge disposed of through a licensed contractor
Table 2E. Nuisance (e.g. Noise, Odour) [N]						
Process / Activity / Equipment on Site	Potential Impact	Is impact controlled by equipment?	Is equipment included on maintenance checklist?	Is impact controlled by a procedure?	Person using the procedure received training?	Comments
Dust from site activities	Section III of the Environmental Protection Act 1990, dust can be classified as a statutory nuisance	Yes- Dust suppression	Yes	Yes- Dust Monitoring Plan		The Dust Suppression System will be activated as and when it is required. Dust Management is considered within the Dust Management Plan
Odour from site activities	Section III of the Environmental Protection Act 1990, odour can be classified as a statutory nuisance	No	N/A	Yes - waste inspection and Odour Monitoring Plan	Yes	Odour Management is considered within the Odour Management Plan. No adverse odour anticipated as material is dry

Table 2F. Resource Consumption (not energy) [R]						
Process / Activity / Equipment on Site	Potential Impact	Is impact controlled by equipment ?	Is equipment included on maintenance checklist?	Is impact controlled by a procedure ?	Person using the procedure received training?	Comments
Use of hydraulic oil for wheeled loading & crane	Harm to human health or escape to the local environment. Management of hazardous substances according to COSHH and Hazardous Waste Regulations	Yes	Yes	Yes	Yes	
Use of water	Inefficient use results in natural resource depletion	Yes	Yes	Yes	Yes	Collected surface water to be used for dust suppression
Table 2G. Land Contamination (e.g. storage of hazardous substances) [L]						
Process / Activity / Equipment on Site	Potential Impact	Is impact controlled by equipment?	Is equipment included on maintenance checklist?	Is impact controlled by a procedure?	Person using the procedure received training?	Comments
Storage of Biomass	Chemicals could leach out of stockpile and can cause harm to the underlying soil, and could leach into groundwater.	Yes - impermeable surface	Yes-inspected	Yes – reporting & corrective action	Yes	RDF stored on an impermeable surface. Woodchip stored on hard standing.

4 GENERAL WASTE MANAGEMENT

Table 3. General Waste Management					
Waste Produced at Site (<i>with EWC, if known</i>)	Where does the waste go?	Can it go to recovery / recycling/reuse?	Is it being stored correctly on site? ie securely to prevent escape	Are Duty of Care requirements being met? ie correctly described & receiving site authorised	Comments
Woodchip	Recovery operation	Yes- Recovery operation	Yes – Checked on	Yes – Checked on	
RDF	Recovery operation	Yes- Recovery operation	Yes – Checked on	Yes – Checked on	

Table 4. List of Procedures (list procedures identified in Table 2A to 2G above, and any other procedures you have in addition)					
Procedure Name	What process / activity / equipment does it relate to?	Where is the procedure kept?	Version Number	When was the procedure last reviewed?	Comments
Operational Procedures	Delivery of Waste Material	Site office	1.0	Generated June 2015	
As above	Storage of Waste Material	Site office	1.0	Generated June 2015	
As above	Loading of Waste Material	Site office	1.0	Generated June 2015	
Dust Management Plan	Dust Management	Site office	1.0	Generated June 2015	
Odour Management Plan	Odour Management	Site Office	1.0	Generated June 2015	
Incident Response Plan	Emergency Procedures	Site office	1.0	Generated June 2015	
Fire Plan	Fire Prevention Procedures	Site office	1.0	Generated June 2015	

5 MAINTENANCE CHECKLIST

Item requiring maintenance	How often? Every: (tick the appropriate box)						Where are maintenance instructions?	Who is responsible?
	Day	Week	Month	Year	2 years	5 years		
Check the interceptor levels		✓					Site Office	
Check drains and drainage channels for blockages.		✓					Site Office	
Clean up spills on surfaced areas	✓						Site Office	
Check state of fences and gates – (to avoid vandals or children getting in and, for example, setting fire).		✓					Site Office	
Inspect the drains for potential leaks, cracks, holes and blockages.			✓				Site Office	
Clean site surfaces to prevent 'track-out'.		✓					Site Office	
Maintenance check on crane				✓			Site office	
Maintenance check on wheeled Loader				✓			Site Office	
Check integrity of surfaces		✓					Site Office	

6 MAINTENANCE RECORD

6.1 Site infrastructure that requires maintenance as detailed in Section 5 will be recorded using this record form. Records will be kept in the site office.

Item: Example Inspect site surfaces		Due: Weekly
<i>Completed on</i>	<i>Completed by</i>	<i>Comments</i>

7 ACCIDENT/INCIDENT PLAN

Possible Accident / Incident	What would the environment harm be?	How do we reduce the chances of it happening?	What to do if it happens
Spillages			
Spillage during transfer, sorting, and loading of wastes.	Contamination of land, drains, groundwater and watercourses.	Inspect and validate all in-coming wastes. Train the staff	Follow the spill response procedure. It describes what to do in the event of a spill and where the spill kit is kept.
Spillages during refuelling of plant and equipment.		Plant and equipment will be refuelled in designated areas with impermeable surface and will use drip trays and spill materials.	
Slow seepage of liquids from imported materials. Slow seepage can be less noticeable than ‘spills’.		Incoming materials will only be stored on impermeable surfaces that are drained to sealed drain	
		Maintenance of up to date drainage plan.	
Fire			
Fire	Smoke and pollution, Firewater causes contamination of land, groundwater and watercourses.	Separation of combustible materials and ignition sources. Containment of fire water. No smoking policy & signage. Maintain tidy site and manage stockpile size. Fire training and emergency drills. Procedure for contractors doing 'hot work' on site including training and permit to work. Ongoing monitoring of stack temperature & rotation	Fire procedure describing what to do in the event of a fire, including details about fire alarms, exit routes and muster points, responsible personnel such as a fire warden and the location and use of emergency fire equipment such as extinguishers, hoses, sand bags and drain covers.
Failure of Plant or Equipment			
Leakages; due to faulty pipe work, of moving plant	Contamination of land, drains, groundwater and watercourses.	Daily visual inspection and completion of weekly inspection checklist record. Preventative maintenance regime.	Spill response procedure as described above.

Possible Accident / Incident	What would the environment harm be?	How do we reduce the chances of it happening?	What to do if it happens
Flood			
Due to ingress of watercourse floodwater, blocked drains, burst water main, use of fire water.	Contamination of watercourses with fire and flood water.	Maintenance of drains. Interceptor isolation to contain water	Fire procedure favours isolation of pile and drag out over application of water to douse. Flood procedure describes what to do in the event of a flood warning to isolate/protect materials onsite. .
Failure of Services			
Due to failure of water supply.	Flooding or lack of water to suppress dust or douse fire .	Provision of standby facilities in form of pump. Maintenance of up to date plans showing location of water and other utility services if applicable.	Water supply failure procedure describing what to in the event of supply failure use of standby pump etc. Flood and fire procedure as described above.
Failure of Containment			
Failure of drainage containment facilities.	Contamination of land, drains, groundwater and watercourses.	Inspection and Integrity testing of drains	Spill response procedure as described above.
Vandalism			
Unauthorised entry and tampering or malicious damage to property, plant and equipment.	Contamination of land, drains, groundwater and watercourses.	Secure gate and perimeter fence. Site entrance supervised 24/7.	Incident response procedure as described above.

8 NON-CONFORMANCE RECORD FORM

Date and time non-conformance identified	
What happened, what was it about and what permit condition does it relate to?	
What caused it? i.e. what happened that should not have happened OR what didn't happen that should have?	
What has been done to make sure that it does not happen again?	
Has the site EMS been reviewed in light of the incident and have any changes to operations and procedures been rolled out in response? Include dates.	
Was there any significant pollution – for example: oil entering a surface water drain. If so what?	
If there was then you must notify the Natural Resources Wales on 0800 807060 ASAP. Have you done so?	Yes/No/not applicable Time: Date: NRW. Incident number:
Print name and sign	

9 STAFF RESPONSIBILITIES

[illegible]

10 DELEGATION OF RESPONSIBILITIES

Name of employee to be absent	
Job title/role to be filled during absence	
Department	
Absence type e.g. maternity leave.	
Name of employee covering absences role	
Parts of permit employee is responsible for	
Any other responsibilities the employee will be covering.	
Length of time cover will be for.	
Any training required to enable employee to cover the role effectively and competently.	

11 REGISTRATION OF LEGAL AND OTHER REQUIREMENTS

Legislation/code of practice	Applicable to which process/product	Where is a copy held?	Person responsible for compliance
Environmental Permit TBC	Site operations	Copy of permit held site office	Regional Operations Manager Craig Christoforato
Environmental Permitting Regulations 2010	Site operations	Copy of EMS detailing requirements in site office	Regional Operations Manager Craig Christoforato