

SITE CONDITION REPORT

1.0 Site Details	
Name of the Applicant	Hendy Recycling
Activity Address	School Road Miskin Pontyclun Mid Glamorgan CF72 8PG
National Grid Reference	ST 05417 81022
Document Reference and Dates for Site Condition Report at Permit Application and Surrender	June 2012: Version 1
Document References for Site Plans (including location and boundaries)	CE-HN-0488-DW01 Site Location Plan – Environmental Permit CE-HN-0488-DW02 Site Layout Plan – Environmental Permit Figure SCR 1 – Flood Maps Figure SCR 2 – Geology Maps Figure SCR 3 – Groundwater Maps Figure SCR 4 – Sensitive Land Uses Figure SCR 5 – Site Sensitivity Figure SCR 6 – Historic Maps

2.0 Condition of the land at permit issue	
Environmental setting	

Proposal

Tarmac limited (**the Applicant**) are looking to continue treating waste at Hendy Recycling (**the Site**) in accordance with the Environmental Permitting (England and Wales) (Amendment) Regulations 2012.

The Site has previously been operated in accordance with a Standard Rules Permit SR2009No6 for inert and excavation waste transfer station with treatment EPR FB3633RD. The applicant is looking to extend the permitted area. Increasing the permitted area reduces the distance between the Permit Boundary and the Ely Valley SSSI to less than 500m, thus, this Permit will need to be varied to a Bespoke Permit and a Site Condition Report is required.

The site will continue to be operated as an inert and excavation waste transfer station with treatment and will continue to accept construction and demolition wastes. The current Standard Rules Permit allows 250,000 tonnes of waste to be treated per annum, however, this capacity will not be required and it is proposed that the maximum annual tonnage will be 99,999 tonnes per annum.

The location of the treatment facility is outlined on Drawing No. CE-HN-0488-DW02.

The Site and Surrounding Area

The Site lies approximately 6.5km northwest of the city of Cardiff and approximately 1.7km to the South of the town of Talbot Green in the county of Rhondda Cynon Taf. The Site is bounded to the west by the A4119 trunk road from Junction 34 of the M4.

The Site is bordered to the south and west by woodland and arable land. The village of Miskin and Hendy are located <0.5km to the west and northwest of the Site. The ruins of a monastery, Alltygawrddu are located approximately 50m to the southeast of the Site. The site is accessed via School Road which connects, via the A4119, to Junction 34 of the M4.

The Site is located in close proximity to a number of water bodies in the area including the River Ely to the south and various lakes and ponds, generally associated with disused or restored quarries. A number of surface water drains are within 500m, the closest is from a spring and is approximately 250m from the Permit Variation Boundary. Sections of the Valley of Ely are a designated SSSI.

The Site is currently an active quarry, inert landfill and transfer / treatment operations are undertaken in the designated area, refer to Drawing No. CE-HN-0488-DW02. The site infrastructure currently employed on site includes a weighbridge, site office, fuel store, wheel wash, fencing and gates, this will all remain in place.

Hydrology

Surface Water / Rivers

There is one river within 500m of the Permit Variation Boundary. The closest river is the River Ely which runs approximately 315m south of the Permit Variation Boundary. This river has a River Quality GQA Grade A and has a flow less than 5 cumecs.

Various surface water drains bordering arable land are also located within 500m of the Permit Variation Boundary, the closest of which is approximately 250m southeast of the Permit Variation Boundary see Drawing No. CE-HN-0488-DW02.

Lake and Ponds

Various ponds and water bodies are located within 1km of the Permit Variation Boundary, the majority of which are associated with restored or disused quarries.

Flood Risk

Based on the results of an Envirocheck report and the Environment Agency's flood mapping, the Site does not lie in an area at risk from flooding, see Figure SCR 1 Flood Maps.

Geology

The Envirocheck report indicates that the majority of the underlying bedrock primarily in the central-western side of the Site comprises of the Barry Harbour Limestone Formation laid in the Courceyan period. The underlying bedrock on the eastern section of the Site is generally Friars Point Limestone Formation of Chadian-Courceyan age, refer to Figure SCR 2 Geology Maps.

According to the Envirocheck report no superficial geology is located within the proposed Permit Variation Boundary, see Figure SCR 2 Geology Maps. Although the superficial geology directly surrounding the majority of the Site is primarily Glaciolacustrine Deposits of a clay and silt rock type from the Pleistocene age.

There is evidence of two faults within the Permit Boundary; one more extensive fault dissects the eastern portion of the Site and another less extensive fault is evident on the southern boundary of the Site.

The Envirocheck report does not indicate any areas of made or worked ground within the Permit Variation Boundary. However, there is evidence of made/worked ground to the north of the permitted area, refer to Figure SCR 2 Geology Maps.

Hydrogeology

Aquifer Classification

Taken from the EA's website and Envirocheck report the vulnerability of groundwater underlying/surrounding the Site has the following groundwater classifications:

The aquifer underlying the Site is a Principal Aquifer. According to the EA this type of aquifer has layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer, see Figure SCR 3 Groundwater Maps.

The Envirocheck report indicates that there is no superficial geology at the Site and therefore there is no evidence of a superficial aquifer at the Site, see Figure SCR 3 Groundwater Maps.

Source Protection Zones

The EA's website and Envirocheck report show that the Site does not lie within a Source Protection Zone and there is no evidence of a Source Protection Zone within at least 1km from the proposed Permit Variation Boundary, see Figure SCR 3 Groundwater Maps.

Groundwater Abstractions

The following licensed abstractions have been identified within a 1km radius of the Site, as detailed in Table CE-HN0488-RP01-T1 below:

Table CE-HN-0488-RP01-T1: Groundwater Abstractions

Licence Holder	Licence Number	Abstraction / Source	Distance from Permit Variation Boundary (Compass Direction)
Tarmac Limited	21/57/31/0010	Mineral Products: Mineral Washing / Groundwater	0m
Maxibrite Ltd	21/57/31/0043	Mineral Products: Process Water / Surface	582m(N)

Discharge Consents

There is currently a variety of licensed discharge consent within a 1km radius of the Site as detailed in Table CE-HN0488-RP01-T2 below:

CE-HN0488-RP01-T2: Discharge Consent

Licence Holder / Location	Licence Number	Discharge Type	Receiving Water	Distance from Permit Variation Boundary (Compass Direction)
Mitchells & Butlers	AN0023901	Sewage Discharges – Final/Treated Effluent - Not Water Company	Stream	197m (NE)
Tarmac Heavy Building Materials Uk Ltd	AN0282701 01	Trade Effluent	Groundwater	217m (N)
Hood F	An0009401	Unspecified	Ely River Trib	309m (SE)
Vehicle Inspectorate	AN0246301	Sewage Discharges – Final/Treated Effluent - Not Water Company	The Mwyndy Brook	390m (NE)
Evan G Jones (Builders) Ltd	Af4018801	Unspecified	Nant Brofiscin	460m (NE)
Tk Developments Ltd	An0409601	Sewage Discharges - Final/Treated Effluent - Not Water Company	Ground Waters Via Soakaway	530m (E)
Mason Industrial Roofing Ltd	AN0242301	Unspecified	The Mwyndy Brook	545m (N)
Dwr Cymru Cyfyngedig	AN0225601	Sewage Discharges - Pumping Station - Water Company	River Ely	573m (W)
Maxibrite Ltd	AN0224901	Sewage Discharges - Final/Treated Effluent - Not Water Company	Mwyndy Brook-Culverted Section	639m (N)
Dwr Cymru Cyfyngedig	AN0009801	Sewage Discharges - Final/Treated Effluent - Water Company	Ely	647m (W)
Dwr Cymru Cyfyngedig	AN0010001	Public Sewage: Storm Sewage Overflow	River Ely	886m (W)

A number of consents have previously been withdrawn or expired and have not therefore been included in the table above.

Nitrate Vulnerable Zone

The Site does not lie within in a Nitrate Vulnerable Zone.

Protected Sites

We have identified one protected Site within 500m of the Site boundary called Ely Valley. Ely Valley is a designated Site of Special Scientific Interest (SSSI) and was assigned this status in January 1959.

Ely Valley is well known for its population of monkshood (*Aconitum anglicum*). This rare plant has a population alongside several miles of the River Ely.

There are no other identified RAMSAR, SAC, SPA or SSSI's within 500m or 1km of the Permit Variation Boundary see Figure SCR 4 Sensitive Land Uses.

Pollution History

Pollution Incidents that may have affected the Land

Based on the results of the Envirocheck® report no reported pollution incidents have occurred within the Permit Variation Boundary although various pollution incidents have occurred within 1 km of the Permit Variation Boundary as detailed in Table CE- HN-0488-RP01-T3 and Figure SCR 5 Site Sensitivity.

CE-HN0488-RP01-T3: Pollution Incidents to Controlled Waters

Incident Date	Pollutant	Category	Distance from Permit Variation Boundary (Compass Direction)
26th April 1996	Mud/Clay/Soil	Category 3 - Minor Incident	357m (W)
17th July 1996	Oils - Diesel (Including Agricultural)	Category 3 - Minor Incident	396m (SW)
3rd May 1997	Unknown	Category 3 - Minor Incident	399m (SW)
19th July 1996	Unknown	Category 3 - Minor Incident	485m (SW)
9th June 1997	Crude Sewage	Category 3 - Minor Incident	953m (NW)

The Environment Agency also keep a record of any reported pollution incidents that they receive. Each reported incident is then designated either as a major (category 1) or a significant (category 2) incident. According to the Environment Agency's records two pollution incidents have occurred within 1km of the Site boundary and are outlined below:

- On 24 June 2009 there was a significant (category 2) impact to air, incident No. 690623, NGR ST055817
- On 17 February 2010 there was a significant (category 2) impact to water, incident no. 754065, NGR ST055818

Due to the distance from the Site and date of the above incidents, they have not been considered further as part of this Permit application.

Historical Land Uses and Associated Contaminants

The historical maps for the site have been reviewed as part of this Permit application document, provided as part of the Envirocheck report, see Figure SCR 6 Historic Maps. The plans date back to 1885 and show that the area was used for agricultural farmland and a quarry until present; see Table CE-HN-0488-RP01-T4 below:

Table CE-HN0488-RP01-T4: Sequence of Historical Activities on Site

Land Use Chronology	Timescales
No information available	Prior to 1876
The majority of the Site is agricultural land with a small cluster of mixed woodland in the centre. Primarily the Site is directly surrounded by agricultural land with rough pasture to the south. On the eastern boundary of the Site is a dwelling labelled Allt-y-cawri. Southeast of the Site is the ruins of St Cawrdaf's monastery. To the northeast of the Site approximately 100m is a dwelling named Ysgaw-ddu, opposite is an old quarry. Circa. 500m to the east of the Site is college dwelling and further southeast are gwendoline cottages. A number of springs are within 1km of the Permit Variation Boundary the closest is circa 400m to the south of the Site. A footpath runs adjacent to the southern boundary of the Site. Within 250m of the proposed Permit boundary there is evidence of two limekilns, located to the west and south of the Site. To the northeast, north and northwest of the Site there are a series of connecting roads. Circa. 350m northeast of the Site is the Great Western Railway line and Mwyndy village. Approximately 500m southwest of the Site is the village of Miskin, the river Ely and a further Great Western Railway line. Over 500m to the northwest is Hendy, a hamlet.	1876-1885
As above. Mission Church, residential properties (Bron-y-gan) and a school have been developed circa. 200m to the west/northwest of the Site. The limekiln to the south is no longer labelled and the limekiln to the west is now 'old quarry'. Circa. 300m north of the Site is a new extensive quarry with a tramway connecting to a quarry to the west of the Site. To the northeast of the Site approximately 500m is an iron ore works (disused). Circa 200m east of the Site is Llangoed Church.	1900
As above. The iron ore works (disused) now contain brickworks, shafts, limekilns and a separate tramway is also indicated. Bron-y-gan is now 'school house' and Mission Church is now 'Church Room'.	1919-1921
As above and a quarry is evident within the northern/central section of the Site and extends beyond the Permit Variation Boundary in a northerly direction. Circa 250m west of the Site are allotment gardens. The railway to the northeast is now dismantled. The quarry that was adjacent to Ysgaw-ddu is now restored to a pond and woodland.	1941 - 1951
Map contains insufficient coverage.	1953
As above although the quarry within the Permit Variation Boundary (Cornelly Park Quarry) has extended in a southerly and easterly direction. The iron ore works to the northeast of the Site are now restored. Circa. 300m south of the Site is Glyn Park cricket ground. Residential properties have been developed to the north of Miskin village along with a sewage works, adjacent to the railway line. Circa. 1km to the west of the Site is Cefnyrhendy.	1964 - 1965
As above. The Quarry on Site has extended further is now called 'Hendy Quarry' a series of tips and conveyors are also labelled to the north of the Permit Variation Boundary. The village of Miskin and Cefnyrhendy have expanded further.	1974-1975
As above the road (A4119) to the east of the Site has been developed and the embankments have increased. A new roundabout connecting to the M4 has been installed over 500m from the southern boundary of the Site.	1980-1984
As above, a conveyor is located to the north of the Site. Miskin village has expanded further in an easterly direction. A vehicle training centre has been erected approximately 250m northeast of the Site off School Road (B4264).	1990-1993
As above. A series of lakes/lagoons are evident on Site. A roundabout on School Road is located to the northwest of the Site. Residential properties have been developed in Hendy, Miskin, Cefnyrhendy and to the north of Hendy.	2006
As above. Hendy Quarry is labelled at the Site, only one lagoon is present, located in the centre of the Site.	2011

Based on the nature of the previous land uses, as detailed above, contamination from previous agricultural and quarrying activities may have occurred. Potential pollution from agricultural and quarrying activities may include spillages of diesel or lubricating oils and the application of fertilisers / pesticides etc.

No other activities of previous land-uses shown on the Envirocheck report are likely to have resulted in pollution on Site.

Evidence of damage to pollution prevention measures

N/A no pollution prevention measures installed.

Evidence of Historic Contamination

No historical site investigation assessment, remediation and verification reports exist for proposed Site.

As the Site is currently operated as a limestone quarry and inert landfill, the majority of the ground has already been disturbed however no visual or olfactory evidence of contamination has been identified within the area.

Baseline Reference Data

Environmental monitoring has been carried out at the Site since 2004.

Table CE-HN-0488-RP01-T5 below details environmental monitoring currently being undertaken at the Site in accordance with Environmental Permit Reference BT1088ID:

Table CE-HN-0488-RP01-T5: Environmental Monitoring

Emission Point Ref. & Location	Parameter	Limit (including unit)	Monitoring Frequency	Reference Period	Source	Monitoring Standard or Method	
Discharge							
Discharge to soakaway at NGR ST 0538 8136	Volume	750m ³ /day	Daily	Spot sample	Discharge from the quarry	Monitoring to be carried out in accordance with the EA Document LFTGN02 'Guidance on Monitoring of Landfill, Leachate, Groundwater and Surface Water' unless otherwise agreed in writing with the EA	
	Rate of discharge	25litres/second	Weekly				
	Suspended solids	100mg/l	Quarterly				
	Mineral oil	5mg/litre	Quarterly				
	pH	6-9	Quarterly				
Groundwater							
Down gradient Boreholes PZ7-08 PZ8-08	Chloride	150mg/l	Spot sample	Monthly at least until July 2010 – note more than quarterly thereafter unless agreed in writing with the EA	N/A		
	Ammonical nitrogen	0.5mg/l					
	Sulphate	200mg/l					
	Nickel	0.2mg/l					
	Cadmium	<1µg/l					
	Napthalene	<10µg/l					
Landfill Gas							
All Landfill Gas Monitoring Points	Methane	1.0%v/v	Quarterly unless otherwise agreed in writing with the Agency				
	Carbon dioxide	1.5%v/v					
	Oxygen	No limit					
	Atmospheric Pressure	No limit					
	Differential Pressure	No limit					
	Temperature	No limit					
	Metrological data	No limit					

As the majority of the land has been disturbed during extraction works on Site and the remaining areas will change following extraction, no baseline reference data has been provided for the soils on site.

3.0 Permitted Activities

Permitted Activities

The applicant is looking to treat inert waste by sorting, separating, screening and crushing at the Site. The proposed waste activities are specified in the table below:

Table CE-HN-0488-RP01-T6: Permitted Activities

Description of Activities	Limits of Activities
D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced) R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) D14: Repackaging prior to submission to any of the operations numbered D1 to 13 D9: Physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12 R3: Recycling/reclamation of organic substances which are not used as solvents R5: Recycling/reclamation of other inorganic materials	Treatment consisting only of manual sorting, separation, screening or crushing of waste into different components for disposal or recovery.

Waste Materials

Waste primarily arising from Construction and Demolition type projects in accordance with the list of waste types will be accepted for the treatment by sorting, separation, screening and crushing. However there is no requirement for the wastes accepted for treatment to be strictly inert type wastes as classified in the Landfill Directive.

Waste Acceptance

The main requirement for controlling all wastes received at the Site is to ensure that on inspection and prior to offloading the wastes meet the conditions of the Permit and any non-conforming wastes are either excluded or dealt with in an appropriate manner.

Waste will arrive at the existing site office/weighbridge for verification and compliance checking before acceptance. All waste received at the Site will be in accordance with the legal requirements including but not limited to the Environmental Permitting and Duty of Care Regulations.

Loads received at the site which contain large amounts of contrary material will either be rejected at the site office prior to unloading or vehicles depositing large amounts of contrary material will be re-loaded and issued with a record stating why, when and from which contract the waste was provided. This record will be held on site for the EA to inspect.

No wastes shall be accepted if they do not conform with the list of acceptable waste types as stated in the Permit or by their physical nature are consisting solely or mainly of dusts, powders or loose fibres or in a form which is either sludge or liquid.

Substances

Due to the nature of the proposed activities on Site and the requirement for operational plant and equipment, there will be a need for diesel and lubricating oils etc to be used and stored on Site. Storage facilities for fuel oils and lubricants will be shared with the quarrying / landfilling operation. Fuel oil storage tanks are located on Site as part of the current site infrastructure in accordance with Pollution Prevention Guidelines (PPG) 2: Above ground oil storage tanks and Control of Pollution (Oil Storage) (England) Regulations 2001.

The fuel storage tanks will be loaded and unloaded in accordance with documented filling and emptying procedures and any spillages will be dealt with as per the Sites 'spillage' procedure.

The operational procedures on Site form part of the sites Environmental Management System.

No substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) Regulations will be used at the installation for the operation of the facility.

Non-permitted activities undertaken at the installation	Quarrying activities
Document References	N/A