Paul Downing & Associates Ltd

H5 Site Condition Report for Western Power Distribution, Tremains Road, Bridgend, Wales, CF31 1TZ

Version 1.0

In support of Application REF: WPD Bridgend

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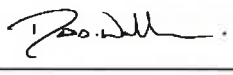
Author	David Walker	21 April 2016	
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Executive Summary

Paul Downing & Associates Ltd was commissioned to produce a site condition report (SCR) in support of a permit application on behalf of Western Power Distribution's Tremains Road, Bridgend, Wales, CF31 1TZ depot under the Environmental Permitting Regulations 2014.

The purpose was to identify the baseline conditions with regards to soil and groundwater contamination by carrying out a site visit, review of literature and additional relevant data and reports. The site walkover was carried out on 19 April 2016 by Paul Downing.

The Western Power Distribution Depot site is located on Tremains Road between Bridgend and Brackla, approximately 6km north east of the coastline and 29km south east of Swansea.

The area under assessment makes up approximately 0.03 Hectares of the entire site and consists of a self bunded secure steel 205L oil drum store situated on reinforced concrete hard standing. The surrounding land use is a mix of industrial, agricultural and residential housing.

The site has a foul and surface water drainage system in place and there are pollution mitigation measures such as spill kits, gulley pots and interceptor chambers on site. There is no dedicated drainage around the oil drum store however water collected on the hard standing passes into the surface water drains prior to entering the foul water system that discharges to foul sewer off site.

A review of the geology, hydrogeology, hydrology and environmental constraints was carried out.

The geology beneath the site consists of the Blue Lias Formation a shelly limestone. There is no superficial geology on site and the Blue Lias is classified as a Principal Aquifer.

There are several Ancient Woodland designations nearby and two Local Nature Reserves. The site history shows it remained undeveloped agricultural land until the 1960s and 1970s where it underwent development.

A source pathway receptor qualitative risk assessment was carried out based on the information collected and the current operations on site to understand any potentially complete SPR Linkages on site.

Two potential sources have been suggested for assessment and these were Historic/Legacy contamination in the sub surface and spills and loss of primary containment. Both of these potential SPRs and their associated linkages are considered low to medium risk due to the lack of nearby receptors or mitigation measures such as Environmental Management Plans, spill kits and PPE.

Recommendations have been made to mitigate any potential risks arising from land contamination beneath the site and catastrophic spills and leaks that may come into contact with construction workers in the future.

1 Introduction

1.1 Scope of Work

Paul Downing & Associates Ltd was commissioned to produce a site condition report (SCR) in support of a permit application on behalf of Western Power Distribution's Tremains Road, Bridgend, Wales, CF31 1TZ depot under the Environmental Permitting Regulations 2014.

The aim of this report was to identify the baseline conditions with regards to soil and groundwater contamination by carrying out a site visit, review of literature and additional relevant data and reports.

1.2 Background

Natural Resources Wales have requested that a permit application be submitted for the area of land identified in Figure 1, Annex A. The area of land under application is used for the storage of 205L oil drums in a steel, self bunding drum store.

The report has been written in accordance with Natural Resources Wales H5 guidance for producing a SCR and comprises a site walkover, review of previous reports, Groundsure data (GS2911368) and involved discussions with the Natural Resources Wales. This report has also been completed in accordance to BS 10175:2011 – "Investigation of Potentially Contaminated Sites", code of practice and CLR 11 – "Model Procedures for the Management of Contaminated Land".

The work undertaken for this SCR comprises:

- a site walkover assessment;
- a review of the historical land uses associated with the site to assess the potential for ground contamination;
- a review of the environmental setting to assess the sensitivity of the surrounding environment to contamination/pollution;
- consultation with the regulatory authorities to establish whether there are any significant environmental issues that may impact upon the site;
- a review of the "Groundsure" Site check report dated 19/04/2016 ref GS2911368; and
- A review of additional publically and commercially available reports and data sets.

The environmental risk assessment presented within this report has been prepared having regard to the source-pathway-receptor model introduced under Part IIA of the Environmental Protection Act 1990 and associated guidance on contaminated land published by the Department of Environment, Food and Rural Affairs. The methodology is essentially a qualitative assessment based on the identification and evaluation of potential 'source-pathway-receptor pollutant linkages'. On the basis of this risk assessment, consideration has been given to the potential for the site to be designated as 'contaminated land' (under the local authority contaminated land inspection strategy) as defined in Part IIA of the Environmental Protection Act 1990.

This report has been produced solely for H5 SCR purposes of supporting a permit Application for Western Power Distribution. Paul Downing & Associates Ltd is not liable for any other use of its contents other than those listed in this report nor for use by any other 3rd party than Western Power Distribution. A statement of limitations is presented at the end of this report.

2 Site Setting

2.1 Site Location

The Western Power Distribution Depot site is located on Tremains Road between Bridgend and Brackla, approximately 6km north east of the coastline and 29km south east of Swansea.

It is located at National Grid Reference: (SS) 291058 179717.

The area under consideration is the oil drum store located on the site boundary east of the main depot building.

Figure 1 in Annex A shows the outline of the area under assessment.

The site is typically flat and covered with hard standing, the area under application makes up approximately 0.03 Hectares of the entire Western Power Distribution site at Bridgend.

2.2 Surrounding Land Use

The current surrounding land use is a mix of domestic housing, commercial and industrial units. There is a railway line located west of the site and some wooded areas with green spaces in proximity.

Surrounding industries within 250m of the site include:

- Container and storage, transport and delivery;
- Vehicle repair, testing and servicing;
- Electrical features, infrastructure and facilities;
- Construction and tool hire services; and
- Petrol and fuel stations.

2.3 Site Layout - Operations and Infrastructure

The following observations were made during the site walkover carried out on 19 April 2016.

The 205L oil drum store is located on the eastern boundary and underlain with reinforced concrete hard standing, there was no staining identified in the area of the drum store. The store was in good condition and is secure and self bunded with 205L oil drums being stored on pallets within the container. The oil drum store shown in Photo 1 in Annex B.

The site has foul and surface water drainage with roof water constituting the majority of surface water runoff. The foul water system consists of Acco channels, gulley pots, full retention and bypass interceptors prior to discharging off site to foul sewer. The drum store lies on hard standing and although it does not have dedicated drainage there is a surface water/storm water drainage channel that connects to the foul water drainage system.

The drawing presented in Annex A Figure 2 shows the layout of the site and drainage system incorporated.

Spill kits were present on site at the time of the visit and the Bridgend Depot Drainage Plan is shown in Figure 2 Annex A.

3 Site History

The site is located under the Bridgend County Borough Council Planning Authority[1] and a review of planning applications and historical maps of the site are described below and presented in Annex C.

3.1 Planning History

Thirty planning applications have been identified for the postcode CF31 1TZ. The table below shows the most recent ten applications dating back to 2013. The table of all 30 results is presented in Annex C.

Table 3.1 Planning History based on Postcode CF31 1TZ

Reference	Location	Proposal
A/15/17/ADV	SINCLAIR VOLKSWAGEN TREMAINS ROAD BRIDGEND CF31 1TZ	NEW SIGNAGE TO REPLACE EXISTING SIGNS
A/15/13/ADV	BRIDGEND SERVICE STATION TREMAINS ROAD BRIDGEND CF31 1TZ	VARIOUS ILLUMINATED & NON-ILLUMINATED FASCIA SIGNS AND ILLUMINATED POLE SIGN
P/14/581/FUL	1-19 TREMAINS ROAD BRIDGEND CF31 1TZ	INSTALL WOODEN FENCING AROUND FLATS, NEW HARDSTANDING TO SITE CONTAINER, RENEW EXT TARMC & INSTALL PATHWAY
P/14/389/BCB	CELTIC COURT TREMAINS ROAD BRIDGEND CF31 1TZ	INTERNAL & EXTERNAL REFURB OF EXISTING OFFICE BUILDING TO INCLUDE TWO STOREY EXTENSION FOR STAIRCASE & LIFT
P/13/836/RLX	LAND AT JCT TREMAINS RD/BRACKA ST BRIDGEND CF31 1TZ	RELAX CONDITIONS 2 & 5 OF P/13/204/FUL RELATING TO HIGHWAYS
P/13/722/RLX	TREMAINS COURT TREMAINS ROAD BRIDGEND CF31 1TZ	RELAX OF CONDITION OF P/08/817/FUL TO EXTEND IMPLEMENTATION DATE FOR FURTHER 3 YEARS
P/13/642/FUL	YORK HOUSE TREMAINS ROAD BRIDGEND CF31 1TZ	INSTALLATION OF CCTV
P/13/410/FUL	2 TREMAINS ROAD BRIDGEND CF31 1TZ	SINGLE STOREY REAR EXTENSION TO PROVIDE EN-SUITE SHOWER ROOM WITH NEW EXTERNAL RAMPED ACCESS
A/13/33/ADV	LAND AT TREMAINS ROAD BRIDGEND CF31 1TZ	FOUR NEW NON-ILLUMINATED FASCIA SIGNS
P/13/111/BCB	CELTIC COURT TREMAINS ROAD BRIDGEND CF31 1TZ	CHANGE OF USE TO INCLUDE CLASS D1

There are records of three planning applications for the Western Power Distribution Site and these relate to the permanent retention of four existing portable buildings, replacement of a fence and the erection of a vehicle jet wash facility.

There were no land contamination conditions associated with these applications however an informative was added to the decision notices that required any unidentified or unforeseen contamination discovered during the works should be reported to the Local Authority.

[1] http://www1.bridgend.gov.uk/services/planning/

3.2 Historical Mapping

Historical maps have been collated dating back to 1878 and these are presented in Annex C.

Based on the historical maps a summary of the site's key development over time is given in Table 2.1:

Table 2.1: Summary of key developments shown in historical maps

Date	*Key Features*
1878	The site lies on rural land and is surrounded by agricultural fields. There is a limekiln and reservoir belonging to the Bridgend Gas and Water Company is shown approximately 200m west of the site. There are disused quarries and current quarries located north of the site. The railway is also present west of the site and there is an industrial area north west identified as Ogmore Engine Works. Bridgend appears developed with housing and industrial features.
1897	No significant changes have occurred on site. The Coity Branch of the Vale of Glamorgan Railway has been constructed east of the site running north south and there are associated tanks identified on the map. A quarry is now identified 150m north of the site.
1914/1919	The quarries north of the site have expanded and are now inter-connected with tramways with further quarry development east and south east of the site. There have been no significant developments on site.
1950	There has been significant expansion of the quarries north and west of the site. There are new field boundaries dissecting the site that remains unchanged.
1964	No significant changes on site. There are some new buildings located along the eastern boundary of the site and a garage is identified approximately 80m west of the site.
1969	A County Council Yard is identified less than 100m west.
1974	There has been significant development on site and surrounding. There is a residential housing estate located east of the site along with the former Coity branch railway line. On site there are tracks and buildings and Tremains Road is now present.
1979	The County Council Yard identified in 1969 is now occupied by the Water Board.
1985/1987	No significant changes. The areas adjoining the site to the west is labelled as a Depot.
1993	The site is shown in its current layout with large buildings located west and east of the site and

The site remained agricultural land and undeveloped until the 1960s and 1970s that saw widespread development of housing and industrial units in the area.

3.3 Potentially Contaminative Land Uses

There are 21 records of potentially contaminative current land uses and industrial processes within 250m of the site. Within 100m of the site these refer to container and storage industrial facilities, electrical features and infrastructure, vehicle testing and servicing facilities and tanks.

There are 243 records of potentially contaminative historical land uses identified within 500m. These are presented in Annex D and Section 1.1 of Groundsure Report GS2911368. The historical contaminative uses are based on the historical mapping presented in Annex C and include commercial and industrial depots and railway sidings.

Due to the historical quarrying observed in the historical mapping there are several areas of potentially infilled land identified within 500m, these are shown in Figure X Annex A.

4 Environmental Setting

4.1 Geology

The geology has been determined from the British Geological Survey Map App[2] and the Groundsure Report, Annex D, which is derived from the BGS 1:50,000 Digital Geological Map of Great Britain.

[2] http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

The geology on site is made up of the Blue Lias Formation. The marginal Facies consisting of Shell and Limestone is a sedimentary bedrock formed approximately 190 to 197 million years ago in the Jurassic Period.

The Limestone formed in warm shallow seas with carbonate deposited on platforms, shelves and on slope areas. Where fluctuating sea levels occurred some sediments were washed off the land and deposited as mud interbedded with the carbonates.

There are no superficial deposits identified on site.

A nearby site investigation carried out on behalf of Ogwr Borough Council in April 1979 using standard shell and auger techniques describes the Blue Lias Formation as *'weathered grey limestone.'*

4.2 Hydrology & Surface Water Features

There is one Detailed River Network recorded within 500m of the site. This relates to a culvert located 493m north west of the site, no further information is presented in the Groundsure Report Annex D.

The River Ogmore is present 610m north west of the site and has biological data relating to sampling that took place between 2005 and 2009. The results are graded from A ('Very Good') to F ('Bad') and the biological water quality for the River Ogmore is rated from C to B. Biological quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive.

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad') and the River Ogmore is classified as a Grade A river.

There are no surface water abstractions located within 2000m of the site. The River Networks Map is shown in Figure 4 Annex A.

4.3 Hydrogeology

The bedrock geology is classified as a Principal Aquifer consisting of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale.

The soil vulnerability is classified as a Major Aquifer with a high leaching potential, this designation is given for soils in urban areas and restored mineral workings, they are therefore assumed to be highly permeable in the absence of site-specific information.

There is one potable licensed groundwater abstraction 1579 south east of the site (21/58/44/21055) at the Bridgend Industrial Estate. It is licensed to abstract 1181960m^3/annum or 4205.05m^3/day. There are no source protection zones within 500m of the site.

Depth to groundwater below the site is not known and flow direction will be heavily influenced by hydrology (River Ogmore), geological structures and topography. Historical maps identify springs in the region where geological boundaries exist however further details are not available.

4.4 Flood Risk

Surface Water Flooding

The site is not present in any Natural Resources Wales designated Flood Zones 2 or 3. The closest Flood Zones are in relation to the River Ogmore and the Zone 2 and 3 are located approximately 400m west of the site.

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

The RoFRAS score for the site is 'Very Low.'

Groundwater Flooding

The British Geological Survey (BGS) has identified areas susceptible to clear water groundwater flooding within 50m of the site. It has a 'Limited Potential' that means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area. This designation has a low confidence rating therefore the results should be treated with caution.

4.5 Environmental Sensitivity

There are forty nine designated Ancient Woodlands located within 2000m of the site. The closest is an unnamed woodland 906m north west of the site. Two of these woodlands are also designated as Local Nature Reserves:

- Tremains Wood, 955m east; and
- Craig-Y-Parciau Woodland, 1207m west.

None of the following environmentally sensitive designations exist within 2000m of the site:

- Site of Specific Scientific Interest (SSSI);
- Special Area of Conservation (SAC);
- Area of Outstanding Natural Beauty (AONB);
- National Nature Reserves (NNRs);
- National Parks;
- Special Protection Areas (SPAs);
- RAMSARs;
- Environmentally Sensitive Areas (ESAs);
- Nitrate Sensitive Areas (NSAs);
- World Heritage Sites; or
- Greenbelt.

The designations that are present are shown in Annex A, Figure 5 and presented in Annex D.

5 Regulatory Setting

The site is currently used for storage of oil in 205L steel drums in a secure self bunded steel drum store.

5.1 Environmental Permits

There are no records of IPC, IPPC or other formal authorisations registered within 500m of the site and no enforcements are registered with this site.

Five Part B Activities are registered between 103m and 464m from the site. These are made up from four service stations and one dry cleaner and further details are presented in Annex D Section 2.1.6.

5.2 Discharge Consents & Industrial Processes

There are no records of licensed discharge consents or authorised industrial processes within 500m of the site.

5.3 Landfill and Waste Licences

There are three records held by Natural Resources Wales of historic landfill sites within 1500m:

- Penybanc Tremains, 25m north west relating to a backfilled former quarry identified in the historical maps. The site operated between 1960 and 1974 accepting inert, industrial, household and commercial waste;
- Waunsil Avenue, Reference 6, 6915/0006 that operated between 1985 and 1988 accepting inert, industrial and household waste 197m east of the site; and
- Tremains Road located 1146m south east dated December 1960, no further information is available for this site.

Five waste licences are registered within 2000m however all are beyond 1000m from the site. These include two surrendered (2012) End of Life Vehicle Facility licences, two clinical waste transfer stations surrendered in 2002 and an ELV Facility licensed in 2004 under EPR: WP3498FW/A001 1320m north east of the site.

The waste sites are shown in Figure 6.

5.4 Records of Pollution Incidents & Contaminated Land

Pollution incidents are recorded by Natural Resources Wales on the National Incident Recording System (NIRS) and given a category rating based on their severity of impact caused to water, land and air.

There have been no recorded List 1 or 2 pollution incidents within 500m of the site or sites determined as Contaminated Land under the Part 2A Contaminated Land Regulations part of the Environmental Protection Act 1990.

5.5 Petroleum Licences

There are records of two petrol filling stations located within 500m of the site:

- Bridgend Service Station, an obsolete station 129m west of the site; and
- Tremains Road Service Station, currently operating 16m south of the site.

5.6 Mining

There is no evidence of coal mining activities within 75m of the site or any sub surface non coal mining activities within 50m of the site.

6 Environmental Risk Assessment

6.1 Risk Assessment Framework

The following environmental risk assessment has been prepared having regard to the source-pathway-receptor model introduced under Part IIA of the Environmental Protection Act 1990 and associated guidance on contaminated land published by the Department of Environment, Food and Rural Affairs.

The methodology is essentially a qualitative assessment based on the identification and evaluation of potential 'source-pathway-receptor pollutant linkages'.

An Environmental Risk Assessment involves assessing the likely probability and consequence of a Pollutant Linkage existing and determining a consequent level of risk. A pollutant linkage will only be present where the sources pathways and receptors are all present. For a risk to exist all three of the following components must be present:

- Source of contamination;
- Pathway for the contaminant to move from source to receptor; and
- Receptor that could be affected by the contaminant.

The following sections identify the potential sources, pathways and receptors present on site and assess the potential linkages.

6.2 Potential Sources

The following table identifies the potential sources of contaminants on the site and qualitatively assesses their significance on a scale of 1 (Low) to 5 (High) versus the likelihood on a scale of 1 (Unlikely) to 3 (Very likely).

The risk score is the product of the significance and likelihood has been categorised as follows:

1-4 = Low Potential Risk

5-10 = Medium Potential Risk

11-15 = High Potential Risk

Table 6.1: Potential Sources On Site

ID	*Potential Source*	*Potential Significance (1 Low 5 High)*	*Likelihood (1 Unlikely 3 Very Likely)*	*Risk Score*
1	Unidentified Historic/Legacy contamination in the sub surface	3	2	6
2	Leaky drums over time	2	2	4
3	Catastrophic spills of chemicals/solvents/hydrocarbon fuels and loss of primary containment	2	2	4

The potential sources are considered low to medium risk based on the site's known history and the current operations for storing 205L oil drums in a self bunded secure store on hard standing.

6.3 Potential Pathways

The following table identifies the potential pathways that exist on site.

Table 6.2: Potential Pathways On Site

ID	Potential Pathways
1	Vertical leaching through the soils
2	Aquifer flow
3	Dermal contact and ingestion during excavation without PPE
4	Inhalation during excavation/wind blown
5	Drainage channels and utility trenches

6.4 Potential Receptors

The following table identifies the potential receptors that have been identified on site and in the surrounding area.

Table 6.3: Potential Receptors

ID	Potential Receptors
1	Site employees at surface
2	Construction workers (excavation crews)
3	Groundwater beneath the site

6.5 Potentially Complete SPR Linkages

By combining the information in the source pathway receptor tables the potentially complete linkages have been assessed and are shown in Table 6.4. There are a total of nine potentially complete linkages, this is considered conservative as no significant impacts have been identified or observed on the site.

Table 6.4: Review of all SPR Linkages identified on site

	Potential Receptors			
Potential Sources		***Site employees at surface***	***Construction workers (excavation crews)***	***Nearby Groundwater***
	Unidentified Historic/Legacy contamination in the sub surface	Inhalation	Inhalation, ingestion, dermal contact	Vertical leaching and migration through strata to groundwater
	Leaky drums and tanks holding transformer oils. Transformers and network equipment leaking/residual oils	Inhalation, ingestion, dermal contact	Inhalation, ingestion, dermal contact	Permeable hard standing, vertical leaching and migration through strata to groundwater
	Catastrophic spills of chemicals/solvents/hydrocarbon fuels and loss of primary containment	Inhalation, ingestion, dermal contact	Inhalation, ingestion, dermal contact	Permeable hard standing, vertical leaching and migration through strata to groundwater

Table 6.5: Summary of potentially complete SPR Linkages and rationale for risk rating identified on site

Source	Pathway	Receptor	Risk	Rationale
Unidentified Historic/Legacy contamination in the sub surface	Inhalation of vapours	Site Workers Construction Workers	Low/Medium	There is the potential for unaccounted legacy contamination in the subsurface. By using the correct PPE and EMS this potentially medium risk should be mitigated.
	Dermal contact and ingestion	Construction Worker	Low/Medium	There is the potential for unaccounted legacy contamination in the subsurface. By using the correct PPE and EMS this potentially medium risk should be mitigated.
	Vertical leaching through soil profile	Nearby Groundwater	Low/Medium	The vertical seepage pathway is cutoff by the engineered hard standing therefore leachate production is limited.
Spills, leaks and loss of primary containment – cumulative effects/Catastrophic spills.	Inhalation of vapours	Site Workers Construction Workers	Low	There may be occasions when chemicals/hydrocarbons are brought onto site and a loss of containment may occur. With a robust incident response and management system in place including the use of the correct PPE the risk is considered low.
	Dermal contact and ingestion	Construction Workers	Low	Loss of containment of chemicals/hydrocarbons and the cumulative effect of small-scale drips and leaks over time may result in an impacted soil. With a robust incident response and management system in place including the use of the correct PPE the risk is considered low.
	Vertical leaching through soil profile	Nearby Groundwater	Low	By having competent hard standing and an incident management plan in place this risk can be minimised. With a robust incident response and management system in place including the use of the correct PPE and spill kits the risk is considered low.

7 Conclusion & Recommendations

7.1 Conclusions

Overall the site would be given a classification of Low risk based on the existing processes on site. There is the potential for unaccounted legacy contamination in the subsurface therefore potential linkages associated with this are considered Low/Medium.

The site remained agricultural land and undeveloped until the 1960s and 1970s that saw widespread development of housing and industrial units in the area.

There is the potential for soils beneath the existing hard standing to be impacted by previous land uses however without records showing soil quality or intrusive sampling and analysis this risk cannot be quantified.

By implementing the correct environmental management systems on site the potential impacts associated with continued operation would not be considered significant and unlikely to pose a threat to the existing site condition.

7.2 Recommendations

The following recommendations have been made to enable the potential impacts of a completed SPR linkage to be reduced and in some cases eliminated.

1. *Personal protective equipment (PPE) and due care and attention during excavation or earthworks* - To reduce the potential for dermal contact, ingestion and/or inhalation of potential contaminants all site workers involved in excavation of soils should wear the correct PPE as a precaution. Dust suppression could also be employed as an additional protective system including surface runoff management.
2. *Hard Standing* - Undertake regular inspections of the hard standing. Areas showing signs of wear and tear should be repaired and joints sealed as soon as feasibly possible. The hard standing provides a level of environmental protection in the event of a spill and also minimises infiltration of precipitation, therefore, reducing the risk of mobilising any existing contamination in the sub surface; and
3. *Pollution Prevention Management Systems* - A pollution management system should be put in place (if not already existing) to ensure staff on site are able to manage a potentially environmentally damaging incident as well as adopting best practice when handling potentially contaminating materials. This includes using drip trays/secondary bunds and on-site spill kits.

8 Statement of Limitations

This report was prepared in accordance with the scope of work outlined within this report and is subject to the applicable cost, time and other constraints. Paul Downing & Associates Ltd performed the services on behalf of the Client in a manner consistent with the normal level of care and expertise exercised by members of the environmental profession. No warranties, expressed or implied, are made.

Except as otherwise stated, Paul Downing & Associates Ltd's assessment is limited strictly to identifying the specified environmental conditions associated with the subject Site and does not evaluate structural or geotechnical conditions of any part of the Site (including any buildings, equipment or infrastructure).

All conclusions and recommendations made in the report are the professional opinions of the Paul Downing & Associates Ltd personnel involved with the project and, while normal checking of the accuracy of data has been conducted, Paul Downing & Associates Ltd assumes no responsibility or liability for errors in data obtained from such sources, regulatory agencies or any other external sources, nor from occurrences outside the scope of this project.

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This report does not constitute legal advice.

9 Annexes

ANNEX A Figures

Figure 1 Site Boundary and Location

Figure 2 Bridgend Environmental Management Map

Figure 3 Potentially Infilled Land

Figure 4 Surface Water Features

Figure 5 Environmental Designations

Figure 6 Landfill and Waste Sites

ANNEX B Photolog

ANNEX C Planning Applications & Historical Maps

ANNEX D Groundsure Report