



EPR Bespoke Installation Permit Application

SITE CONDITION REPORT


WKE (Middlesbrough) Ltd

Dawsons Wharf

Prepared by:
Sol Environment Ltd

Date:
October 2020

Project Issue Number:
SOL1908WKE01

VERSION CONTROL RECORD			
Contract/Proposal Number:		SOL1908WKE01	
Authors Name:		Emily Hingston	
Signature:			
Issue	Description of Status	Date	Reviewer Initials
0	First Submission to the Environment Agency	November 2020	SP

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INTRODUCTION

This Application Site Report has been prepared by Sol Environment Ltd on the behalf of WKE (Middlesbrough) Ltd (hereafter referred to as 'WKE') in support of a Bespoke Installation Permit Application under The Environmental Permitting (England and Wales) Regulations 2018 (as amended) for the proposed operation of a pellet manufacturing facility at North Sea Supply Base and Dawson's Wharf, Middlesbrough.

This document represents the Application Site Condition Report (ASCR) submitted as part of the Application package to the Environment Agency (EA) (Sol Environment Ref. SOL1908WKE01) and has relied on information supplied by the site and various third party information sources (See Section 2).

The material processing facility ('the Site') is located on land at North Sea Supply Base and Dawson's Wharf, Dawson's Wharf Industrial Estate, Riverside Park Road, Middlesbrough, TS2 1UT (Grid Reference: NZ 48928 21738).

The proposed activities meet the definition of a Part A(1) Installation as defined by Schedule 1 of the Environmental Permitting Regulations 2018 (as amended) and will be regulated as such by the Environment Agency.

The proposed waste processing and storage activities meets the description of an Installation as defined by **Section 5.4 'Disposal, recovery or a mix of disposal and recovery of non-hazardous waste' Part A(1)(b)(ii):**

- *'Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC—
(ii) Pre-treatment of waste for incineration or co-incineration.*

In addition, due to the use of heat within the driers the activity will also meet the definition of an additional Schedule 1 activity:

- **Section 5.5 'The Production of Fuel from Waste' Part A(1)(a)** *Making solid fuel (other than charcoal) from waste by any process involving the use of heat.*

In addition to the processing line, eight gas burners will be installed to provide heat for the driers and electricity for the site. The burners will meet the description of a Medium Combustion Plant in accordance with the Medium Combustion Plant Directive (Directive 2015/2193/EU) ('MCPD') as set out in Schedule 25A of The Environmental Permitting (England and Wales) Regulations 2018 (as amended).

This document has been prepared in accordance with the EA's Guidance Document H5 Site Condition Reports Guidance and Templates (Version 2.0, dated 04/08/08). This report provides baseline information in relation to the site.

1. Site Details

Name of the Applicant:	WKE (Middlesbrough) Ltd
Activity Address:	North Sea Supply Base and Dawson's Wharf, Riverside Park Road, Middlesbrough, TS2 1UT
National Grid Reference:	OS X (Eastings) 448928 OS Y (Northings) 521738

Document References:	EP Application Site Condition Report, WKE (Middlesbrough) Ltd Sol document reference and date: SOL1908WKE01
Annexes:	Annex A: Figures Annex B: Groundsure Report Annex C: Previous SCR Annex D: Conceptual Model

2. Condition of Land at Permit Issue

2.1 Environmental Setting

2.1.1 Site Location

The location of the subject Site is shown on Figure A1, Annex A, centered at approximate National Grid Reference OS X (Eastings) 448928; OS Y (Northings) 521738. The proposed site layout is shown in Figure A2.

The site is located at North Sea Supply Base and Dawson’s Wharf, Riverside Park Road, Middlesbrough, TS2 1UT.

The application site is located within the western area of the Dawson’s Wharf Industrial Estate with industrial units to the east, north and south east and Sarens UK Ltd storage yard to the west with Teesaurus public park beyond. The site is roughly rectangular in shape and extends in area to approximately 3 acres. The site is bounded to the north and east by A.V. Dawson warehouses, with Riverside Park Road to the south and a storage yard to the west. The River Tees is located beyond the warehousing to the north.

The site currently comprises a warehouse building and a recently laid impermeable concrete hard standing with a sealed drainage system. It is understood that the existing infrastructure will be demolished and a single industrial unit constructed to house all WKE activities.

The nearest residential properties are on Port Clarence Road located approximately 500 m to the north on the other side of the River Tees.

Table 2.1 below provides information regarding the surrounding site.

Table 2.1 Site Setting	
Direction	Description
North	Immediate Vicinity: A.V.Dawson warehouse Within 500m: River Tees, Port Clarence Basin, Sewage Pumping Station Beyond 500m: High Clarence residential area, Billingham town, Haverton Hill, Allotment Gardens, Saltholme Nature Reserve, Saltholme Brine Reservoirs, Cowpen Marsh
North East	Immediate Vicinity: AV Dawson Dockside Within 500m: River Tees, High Clarence Residential Area, Community Farm Beyond 500m: Port Clarence, Saltholme Nature Reserve, Brine Fields, Oil Refinery, Chemical Works
East	Immediate Vicinity: A.V. Dawson Industrial Estate (including docks) Within 500m: Dawson’s Wharf Industrial Estate, River Tees, Works

	Beyond 500m: Port Clarence, Clarence Distillation Works
South East	<p>Immediate Vicinity: Riverside Park Road</p> <p>Within 500m: Middlesbrough Goods Yard, Riverside Park Industrial Estate, Railway</p> <p>Beyond 500m: A178, Trian Station, Railway, Police Station, A66, Middlesbrough Government offices, library, University of Teeside, Courthouse, Bus Station Grovehill Residential Area, Middlesbrough</p>
South	<p>Immediate Vicinity: Riverside Park Road</p> <p>Within 500m: Riverside Park Industrial Estate, Ayrton Works, Railway sidings</p> <p>Beyond 500m: Railway, A66, Gasholder Station, Industrial & Retail Park, Residential area of Newport,. Newport primary school, Middlesbrough</p>
South West	<p>Immediate Vicinity: Riverside Park Road</p> <p>Within 500m: Riverside Park Industrial Estate, Tirdent Business Centre</p> <p>Beyond 500m:Marsh Works, River Tees (Billingham Reach), Oil storage facility, works, Prison, North Tees Industrial Estate, Stockton on Tees</p>
West	<p>Immediate Vicinity: Sarens UK Ltd storage yard</p> <p>Within 500m: Teesaurus Park, Maritime Transport HGV storage, Disused land, Brighthouse Business Village</p> <p>Beyond 500m: River Tees, Works, A1046, Billingham Beck Country park, Residential areas of Stockton on Tees (Norton and Mount Pleasant)</p>
North West	<p>Immediate Vicinity: Sarens UK Ltd storage Yard</p> <p>Within 500m: River Tees, Slipways</p> <p>Beyond 500m: Cemetery, Works, Belasis Hall Technology Park, Charltons Pond Nature Reserve, Cowpen Lane Estate, Railway, Billingham</p>

2.1.2 Geology, Hydrogeology and Surface Waters

Desk-based research of the local geology, hydrogeology and surface waters has been carried out in order to establish the potential for migration of contamination onto or away from the Site, and to assess the surface water and groundwater sensitivity of the Site area. Information was obtained from a number of sources, namely:

- Environment Agency Flood Risk Map;
- Information provided by Groundsure EnviroInsight and GeoInsight Reports (Annex B).
- Information outlined within the A.V. Dawson Site condition Report produced in 2016 by Wiser Environment Ltd (Annex C);
- Geological maps produced by the British Geological Survey (BGS) and the BGS Geology of Britain Viewer (<http://maps.bgs.ac.uk/geologyviewer>).
- MAGIC <http://magic.defra.gov.uk>
- BGS Borehole Record Viewer (<http://www.bgs.ac.uk/data/boreholescans/home.html>)

Geology

Made Ground recorded as (undivided) artificial deposits are noted as being present across the site underlain by superficial deposits comprising Tidal Flat Deposits consisting of sand, silt and clay deposited in the quaternary. The BGS records the underlying bedrock as part of the Mercia Mudstone Group. This is described in the BGS lexicon as '*dominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite bearing units in some basinal areas. Thin bands of gypsum / anhydrite widespread; sandstones also present*'.

According to data issued by the National Radiological Protection Board (NRPB) in 2002 (now the Health Protection Agency), the site is located in an area that is in a lower probability radon area, as less than 1% of homes are above the action level. No radon protection measures would be considered necessary for building construction at the site.

The site is not located in area that might be affected by coal mining.

Shrink Swell

The maximum shrink swell hazard rating identified on the application site is very low.

Landslides

The maximum landslide hazard rating identified on the application site is very low.

Soluble Rocks

The maximum soluble rock hazard rating identified on the application site is negligible.

Compressible Ground

The maximum compressible ground hazard rating identified on the application site is very low.

Collapsible Rocks

The maximum collapsible rocks hazard rating identified on the application site is negligible.

Running Sands

The maximum running sand hazard rating identified on the application site is very low.

Hydrogeology

The Environment Agency classifies the superficial deposits underlying the site as a Secondary (undifferentiated) Aquifer and the bedrock geology as a Secondary 'B' Aquifer.

The site is not located within a Source Protection Zone (SPZ).

The groundwater vulnerability at the site is not classified.

The site is not located within a Nitrate Vulnerable Zone (NVZ).

There are no active groundwater abstraction licenses within 2 km of the site. There one historical groundwater abstraction recorded within 2 km of the site. This is located 1003 m to the southeast and is as follows:

- Middlesbrough Council (license number 1/25/04/183), from a single point abstracting water from the principal aquifer within the Sherwood Sandstone Formation for both a heat pump and drinking, cooking, sanitary, washing (small garden) – commercial/industrial and public services. Limited to 546 m³ per day (113,794 m³ per year). This license expired in March 2015.

The site is considered to be situated in an area of low sensitivity with respect to groundwater resources, despite its setting upon two aquifers. This is due to the lack of groundwater abstractions within 2km, it not being within a SPZ and the overlying Made Ground and superficial deposits being cohesive in nature.

Surface Water

The nearest surface water feature is the River Tees located approximately 50 m to the north of the site.

There is no available EA data on river quality regarding the River Tees, however the EA data regarding river quality classifies the water within Billingham Beck, located 1.3 km west and flowing into the River Tees as having a chemical quality grade B (good) as of 2009.

There is one identified active surface water abstraction recorded within 2 km of the site. This is as follows:

- Royal Society for the Protection of Birds (license number NE/025/0001/008), from a single point source, namely Holme Fleet at Satholme Reserve, for transfer between sources. No information is provided on volumes.

The site is not located within a Nitrate Vulnerable Zone (NVZ).

The Environment Agency's flood risk map indicates that the site lies within Flood Zone 1; an area where there is a low risk of flooding from rivers and the sea. This is land assessed as having a chance of flooding of less than 1 in 1000 (0.1%) each year. However, land approximately 80 m north east is within an EA Flood Zone 2 (annual probability of 0.1 – 1%) with regards to tidal flooding and Flood Zone 3 (annual probability of 1 – 10%) with regards to fluvial flooding.

The site is considered to be in area of high sensitivity in regard to surface water due to the proximity of the River Tees.

2.1.3 Designated Sites

Environment Agency H1 and H5 guidance states that the potential impacts of the site should be assessed for the following habitat sites within 10km of the Installation:

- Special Areas of Conservations (SACs) and candidate SACs (cSACs) designated under the EC Habitats Directive;
- Special Protection Areas (SPAs) and potential SPAs designated under the EC Birds Directive; and
- Ramsar Sites designated under the Convention of Wetlands of International Importance.

It is also stated that within 2km of the Source:

- Sites of Special Scientific Interest (SSSI) established by the 1981 Wildlife and Countryside Act;
- National Nature Reserves (NNR);
- Local Nature Reserves (LNR);
- Local Wildlife Sites (LWS), County Wildlife Sites (CWS) and potential wildlife sites (PWS);
- Sites of Importance for Nature Conservation (SINC); and
- Ancient Woodland.

Information from the Multi Agency Geographic Information for the Countryside (MAGIC) website (<http://magic.defra.gov.uk/>) has been used to obtain the above information.

The designated sites relevant to this study are presented in Table 2.2 overleaf.

Table 2.2 Location of Sensitive Habitat Receptors		
Distance & Direction	Receptor	Status
50 m north	Teesmouth and Cleaveland Coast	SSSI
714 m north	Salthome Nature Reserve	RSPB Nature Reserve
1.1 km north east	Teesmouth and Cleaveland Coast	SPA and Ramsar

The site is not located within an Air Quality Management Area.

The proposed operation has no environmental emissions to land or controlled waters and minimal emission to atmosphere and therefore it is the conclusion of this assessment that there will be no direct or indirect effects on any of the statutory sites described above.

2.2 Pollution History

2.2.1 Environmental Database Records

The following information has been obtained from a search of a publicly available database of environmental information (Groundsure Report, provided in Annex B).

The database contains records of information from public registers held by environmental regulatory authorities and can be used to assess the site's sensitivity, the potential for neighbouring activities to pose a risk to the site and to determine whether specific records of pollution relate to the subject site.

Pollution Incidents

There are eight recorded List 2 Pollution Incidents within 500 m of the site. These are summarised in the table below.

Table 2.3 Recorded Pollution Incidents within 500m of the Site			
Distance and Direction	Details	Pollutant	Impact
253 m W	Date: 9 th November 2001 Identification: 42025	Inert Materials and Wastes – construction and demolition materials and wastes	Water: Category 4 (No Impact) Land: Category 3 (Minor) Air: Category 4 (No Impact)
289 m NW	Date: 26 th March 2002 Identification: 66716	General Biodegradable Materials and Wastes	Water: Category 4 (No Impact) Land: Category 3 (Minor) Air: Category 4 (No Impact)
296 m NW	Date: 8 th April 2002 Identification: 69726	Specific Waste Materials - Tyres	Water: Category 4 (No Impact) Land: Category 3 (Minor) Air: Category 4 (No Impact)

318 m NW	Date: 22 nd April 2002 Identification: 73754	Specific Waste Materials - Tyres	Water: Category 4 (No Impact) Land: Category 3 (Minor) Air: Category 4 (No Impact)
325 m NW	Date: 24 th September 2002 Identification: 110199	Specific Waste Materials - Tyres	Water: Category 4 (No Impact) Land: Category 3 (Minor) Air: Category 3 (Minor)
363 m NW	Date: 31 st July 2001 Identification: 20536	General Biodegradable Materials and Wastes	Water: Category 4 (No Impact) Land: Category 3 (Minor) Air: Category 4 (No Impact)
374 m NE	Date: 20 th February 2014 Identification: 1210322	Specific Waste Materials – Contamination Construction & Demolition Material & Waste	Water: Category 4 (No Impact) Land: Category 2 (Significant) Air: Category 4 (No Impact)
467 m SE	Date: 11 th November 2003 Identification: 200899	General Biodegradable Materials and Wastes	Water: Category 4 (No Impact) Land: Category 3 (Minor) Air: Category 4 (No Impact)

Potentially Contaminative Industrial Sites

There are 24 potentially contaminative industrial sites within 250m of the application, the details of those within 150m are shown in Table 2.4 below.

Table 2.4 Potentially Contaminative Industrial Sites within 250m of the Site

Company	Distance and Direction	Activity	Category
Tank	73 m south	Tanks (Generic)	Industrial Features
Tank	76 m south	Tanks (Generic)	Industrial Features
Outfall	95 m north east	Waste Storage, Processing and Disposal	Infrastructure and Facilities
Mercedes Benz Ltd	103 m south west	Vehicle Repair, Testing and Services	Repair and Servicing
Works	104 m south east	Unspecified Works or Factories	Industrial Features
Scanman UK Ltd	106 m west	Office and Shop Equipment	Industrial Products
Electricity Station	Sub 127 m south east	Electrical Features	Infrastructure and Facilities

Landfills

There are 12 historical landfill sites recorded within 1.5 km of the site. One of which is onsite and was licensed to Borough Engineer & Surveyor (0700/CLE/058) from 18th January 1978 to 25th May 1993 for inert, industrial and commercial materials. In addition, there are 5 other waste sites identified within 500m of the site, and 54 Environment Agency licensed waste sites within 1.5 km of the site. Those within 500m are outlined below.

Table 2.5 Waste Sites within 500m of the Site

Company / Location	Distance and Direction	Permit Number	Activity	Status
Peat Edward, Unit 9d Bowes Road, Riverside Industrial Estate, Middlesbrough, TS2 1LU	175 m SW	EPR/FB3139RJ WML 103909	Vehicle Depollution Facility <5,000 tpa	Issued: 01/05/2012
John Davey (Motor Supplies) Ltd, Mickleton Road, Riverside Park Ind. Est. Middlesbrough, TS2 1RQ	452 m W	EPR/DP3493ND WML 68644	In-house storage facility <7,500 tpa	Issued: 04/06/1990 Expired: 01/05/1994
Robinson Group Limited, Depot Road, Middlesbrough, TS2 1JA	467 m SE	EPR/XP3496ZH WML 66030	Metal Recycling Site (Mixed MRS's) <25,000 tpa	Issued: 31/03/2000 Modified: 11/12/2009
European Metal Recycling Ltd, Land at Depot Road, Middlesbrough, TS2 1LT	469 m SE	EPR/VP3196ZS/V2 WML 66172	Metal Recycling Site (Mixed MRS's) 23,000 tpa	Issued: 19/07/2005 Modified: 11/12/2009
Roadstone Solutions Limited	482 m NE	EPR/HB3130DV WML 104248	Inert & Excavation WTS with treatment <250,000 tpa	Issued: 24/07/2013
Shire Aggregates Bulk Ltd	482 m NE	EPR/CB3806GZ WML 104248	Inert & Excavation WTS with treatment <250,000 tpa	Issued: 24/07/2013 Effective: 08/05/2015 TRANSFERRED

Discharge Consents

There are no Red List Discharge Consents located within a 500m search radius of the Site. There are 13 Licensed Discharge Consents within 500 m of the site. Those that are active are outlined below.

Table 2.6 Active Licensed Discharge Consents within 500m of the Site

Address & Permit Number	Effluent Type	Distance and Direction	Receiving Water	Status
Furness PS Outfall, Stockton Permit: QR.25/04/1543	Sewage discharges – sewer storm overflow - water company	284 m NE	Unknown	Effective Issued: 04/01/1999
Port Clarence West PS Outfall, Stockton Permit: QR.25/04/1542	Sewage discharges – pumping station - water company	500 m E	Unknown	Effective Issued: 04/01/1999

Authorised or Permitted Processes

There are no records of Part A(1) and IPPC Authorised Activities located within 500 m of the site within the 2016 Groundsure Data. It is noted that the site has recently (2019) been surrendered from within the boundary of the A.V. Dawson Part A(1) Permit (EPR Ref: DB3506MN). The area was utilised for the storage of up to 250,000 tpa of RDF, SRF and loose wood material prior to export offsite.

There are four Part A(2) and Part B Activities and enforcements within 500m. These are outlined below.

Table 2.7 Part A(2) & Part B Activities and Enforcements within 500m of the Site

Operator & Address	Permit Type	Distance and Direction	Process	Status
Edmond & Milburn Car Sprayers, Startforth Rd, Middlesbrough, TS2 1PT	Part B	101 m SW	Car Sprayers	Current
Bulkhaul Ltd, Brignell Rd, Riverside Park Industrial Estate, Middlesbrough, TS2 1PS	Part B	320 m SW	Acid Pickling Plant	Current
Leo Pharmaceutics Ltd, Riverside Park Ind Est, Middlesbrough, TS2 1RQ	Part B	348 m W	Pet Food / rendering / animals / plant Treatment process	Historical
Fleetspray Ltd, Middlesbrough Wharf, TS2 1DN	Part B	497 m SE	Vehicle re-spray	Historical

In addition, there is one List 1 Dangerous Substances Inventory Site recorded 424 m south east at Dtba Ltd for discharge of mercury to the Tees Estuary. This is recorded as Not Active. There is also one recorded active List 2 Dangerous Substance Inventory Site located 237 m north of the site. This is named as NewList2 Water Site 30 and is authorised for Toluene to the River Tees.

2.2.2 Historical Land Uses

Available historic maps for the site have been reviewed to determine if there is the potential for contamination to be present on Site associated with the Sites historical uses.

A summary of the historical development of the Site and surroundings is included below:

- 1885: The site is undeveloped land on the banks of the River Tees.
- 1899: The Acklam Iron Works and Linthorpe Iron Works have been developed to the south. The site itself is crisscrossed with railway lines and sidings between the wharf and the iron works. A slag heap is present on land to the west with the North Eastern Steelworks beyond and to the east is a reservoir.
- 1915 - 1938: The iron works have expanded northwards with the coke ovens now on the north western area of the site. The slag heap to the west has now been developed as a Tar Macadam

Works. Further Engineering Works have been developed to the south east beyond Linthorpe Iron Works.

- 1950 - 1955: No onsite change, the site has coke ovens over the north and west and railway sidings to the south and east. The Acklam Iron Works, North Eastern Steelworks and Linthorpe Iron Works have amalgamated and are now known as Acklam Iron and Steel Works. The Tar Macadam Works has expanded whilst the Linthorpe Iron Works has shrunk in size.
- 1963 - 1973: All development onsite has been demolished. The Steel and Iron Works have also been demolished and the Tar Macadam Works is no longer present with the land returned to a Slag Heap.
- 1984 - 2014: A warehouse building has been constructed onsite which appears to be part of a dock yard with further warehouses and works to the east and a storage yard to the west. Riverside Park Road and Industrial Estate have been developed to the south. Beyond the storage yard to the west the slag heap has been developed into a park with a number of paths and a statue present.

From 2016, the site was used intermittently by A.V. Dawson Limited to store up to 250,000 tpa of RDF, SRF and waste wood prior to export overseas.

A number of potentially contaminative land uses have been identified both on and around the site. These specifically include the below:

Table 2.8: Potentially Contaminative Land Uses	
Activity	Contaminants
Onsite	
Iron Works including coke ovens and railway sidings	Various contaminants including heavy metals, organic and inorganics
Waste Storage (RDF/SRF/Woodchip)	Various contaminants including heavy metals, organic and inorganics
Offsite	
Iron & Steel Works	Various contaminants including heavy metals, organic and inorganics
Tar & Macadam Works and Slag Heap	Various contaminants including hydrocarbons, heavy metals, organic and inorganics
Other industries on the industrial estate including storage of toxic substances, fertilizer, metal recycling, coal storage, waste activities and fire test facility	Various contaminants including heavy metals, organic and inorganics

2.2.3 Site Reconnaissance

Visual/Olfactory Evidence of Existing Contamination

All areas of the site have been subject to a visual inspection at the time of this application by Sol Environment Ltd. This was undertaken on the 27th February 2019 with the storage area empty and the warehouse in use by Ledwoods Ltd – a steel fabricator.

All aspects of the installation boundary have been inspected.

Concrete hardstanding around the site was observed to be in good condition, particularly in the storage area.

Operations within the building were not closely observed but storage of chemicals / drums etc was noted to be in line with good practice and good housekeeping was clearly employed by the company leasing the site.

Apart from the above, at the time of the site walkover, there was no sign of any potentially contaminative uses.

2.3 Evidence of Historic Contamination

2.3.1 Previous Site Investigation – Application Site

The previous SCR undertaken in 2016 by A.V.Dawson (provided in Annex C) summarises one intrusive ground investigation undertaken onsite by Gibb Northern in September 1995. This was limited in extent to the western corner of the site and identified a ‘hotspot’ of soil contamination. The extent and composition of the contamination is not detailed. However, due to the site history and extent of Made Ground observed across the site, it can be assumed that contamination comprising mainly hydrocarbons and heavy metals may be randomly spread within the shallow soils across the site.

Following acquisition of the site by A.V.Dawson in 1998, it is known that a 150 mm concrete with BRC mesh top and mesh top and bottom was laid. This impermeable surface will have broken any potential pathway from contaminants kept onsite to the shallow soils and underlying groundwater and prevented any further contamination of the site from recent activities.

2.4 Supporting Information

- Figures detailing the location, boundary and layouts of the Installation are shown in Annex A.
- EnviroInsight, GeoInsight and MapInsight Groundsure Reports are provided within Annex B.

- The Previous Site Condition Report is provided in Annex C.
- A Conceptual Model of the site is shown in Annex D.

3. Permitted Activities

3.1 Proposed Activities Undertaken at the Installation

3.1.1 Description of the New Process

WKE (Middlesbrough) Ltd is making an application for a bespoke installation permit under The Environmental Permitting (England and Wales) (Amendment) Regulations 2018 in order to operate a material processing facility producing a pellet fuel for use within the cement industry at their site within the North Sea Supply Base and Dawsons Wharf, Middlesbrough.

The site has recently been surrendered from A.V. Dawsons permit (EPR/DB3506MN) under which it was used for the operation of a waste transfer station, limited to the acceptance and storage of 250,000 tpa of Refuse Derived Fuel (RDF), solid refuse fuel (SRF) and loose wood materials prior to their transfer for recovery and disposal overseas.

The Installation will comprise:

- Construction of a single industrial unit (the existing building will be demolished) which will house a Reception Hall, Storage Area and Processing Area;
- The installation and operation of a material processing plant including two driers within the newly constructed Building (the existing building will be demolished);
- Installation of gas burners to provide the heat required by the driers which meet the definition of a listed Medium Combustion Plant Activity; and
- Allow the pelleting line to process approximately 302,400 tonnes of waste per annum.

The activities will meet the definition of an 'Installation' by virtue of Schedule 1:

- **Section 5.4 'Disposal, recovery or a mix of disposal and recovery of non-hazardous waste' Part A(1)(b)(ii)** *Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC—*
(ii) Pre-treatment of waste for incineration or co-incineration

In addition, due to the use of heat within the driers the activity will also meet the definition of an additional Schedule 1 activity:

- **Section 5.5 ‘The Production of Fuel from Waste’ Part A(1)(a) *Making solid fuel (other than charcoal) from waste by any process involving the use of heat.***

The proposed gas burners will meet the description of a Medium Combustion Plant in accordance with the Medium Combustion Plant Directive (Directive 2015/2193/EU) (‘MCPD’) as set out in Schedule 25A of The Environmental Permitting (England and Wales) Regulations 2018 (as amended). However, will be excluded from the requirements of the Directive due to using combustion gases to directly heat the material.

The process will be permitted by the Environment Agency as a Part A(1) Installation and will be operated in accordance with the Environmental Permitting (England and Wales) (Amendment) Regulations 2018.

3.1.2 Substances Used at the Installation

Table 3.1: Chemical and Hazardous Materials Summary

Material	Nature of storage	Location	Fate
Mixed C&I SRF	Waste received for processing Approx. 302,400 tonnes per annum	All storage and processing will be undertaken internally within the building	Materials are processed to produce a fuel pellet for use as a fuel in the cement industry
Oils, Grease, Lubricants	Small quantities (<10 m ³ per annum) stored within internal bunded caged area	Internal	Consumed within plant All waste oils disposed off site to appropriately qualified contractor.
Natural Gas	N/A -mains gas	N/A	Consumed within burners
Diesel	5,000 litre Self bunded tank	External	Consumed within mobile plant

Waste

The facility will not inherently produce significant quantities of waste due to the strict specification for accepted SRF. Domestic wastes and welfare facilities will be appropriately segregated for offsite recycling or disposal. The table below outlines expected annual quantities of product / waste produced by the installation.

Table 3.2: Product / Waste Summary

Waste	EWC Code	Approx. Quant (tonnes/yr)	Source	R / D Code	Environmental Fate
Fuel Pellets	N/A	190,000	Processing Line	R1 (Recovery as energy)	Used as fuel in the cement industry
Off Specification Pellets	19 12 12	<1	Processing Line	R1 (Recovery as energy)	Used as fuel but classified as waste
Ferrous and Non-ferrous Metals	10 01 15	<1	Processing Line	R5 (Off site recycling)	Exported off site for further processing
Reject Materials	Various	<1	Processing Line	R5 (Off site recycling) D1 (disposal)	Exported off site for further processing / disposal

3.1.3 Drainage Systems

There are no process effluents produced from the site’s activities. The entire site is located on impermeable concrete hardstanding. There is no external storage of wastes. All operations take place internally within the building, which is curbed and self-bunded.

Internal drainage within the waste storage building is limited to a dedicated vehicle washing area located within the Reception Hall. This area has a separate sealed drainage system which discharges via interceptor to foul sewer under consent [pending] and is fitted with an automated penstock valve to isolate the system in the unlikely event of a fire.

Uncontaminated surface water run-off (e.g. from roofs) discharges via a separate surface water drainage system including silt traps and a sump to the River Tees.

Any spillages, leaks or incidents arising onsite will be effectively contained and captured in accordance with the sites spill response procedure, utilising spill kits which will be strategically located around the site. Any spillages / leaks etc. would be of small volume and be non-hazardous in their nature.

In the event of a fire, any contaminated firewater would be captured within the buildings prior to transport offsite for appropriate disposal.

Hardstanding

The site is located entirely on good quality concrete hardstanding constructed for purpose.

Tanks and Bunds

All storage tanks will be installed with secondary containment and be designed to comply with the following standards and guidance requirements:

- Environment Agency Pollution Prevention Guideline Note 2: Above Ground Oil Tanks (PPG2);
- Environment Agency Pollution Prevention Guideline Note 11: Preventing Pollution on Industrial Sites (PPG11);
- Environment Agency Pollution Prevention Guideline Note 26: Pollution Prevention in the Storage and Handling Drums and Intermediate Bulk Containers (IBC's);
- CIRIA C958: Chemical Storage Tank Systems – Good Practice; and
- CIRIA 738: Design of Containment Systems for the Prevention of Water Pollution from Industrial Sites.

3.1.4 Potential for Fugitive Releases to Soil, Groundwater and Surface Water

The materials and substances used at the site are not considered to have significant potential to cause ground or groundwater contamination under general storage or operating procedures.

The following measures have been incorporated into the design of the new activity to protect groundwater and soil from installation substances:

- All processing and waste storage operations take place internally;
- Emergency Spill kits will be provided throughout the site and strategically placed in locations;
- All aspects of the facility will be located on impermeable concrete slabs;
- There will be no subsurface infrastructure used for the storage or transfer of hazardous waste; and
- The drainage system has the ability to be isolated prior to discharge.

When constructed and operated in the manner described above the proposed operations will not introduce any sub surface or potentially polluting activities to the site.

Due to the protection measures mentioned above, the risk to soil and groundwater from the development is considered to be **LOW** as summarised in the Conceptual Site Model below. In the unlikely event that any of the above measures fail, due to all activities being carried out on impermeable hard standing, there would be no impact to soil, groundwater and surface water.

Table 3.3 Conceptual Site Model

Contaminant Source	Contaminants of Concern	Receptor	Exposure Pathway Present?	Likelihood of Risk
Historical soil contamination within Made Ground generally associated with historical coke	Heavy metals, PAH, TPH, inorganics	Construction Workers	Yes – Use of control measures during construction work including appropriate PPE will minimise potential exposure to contaminants	Low – construction work consists largely of above ground works and concrete laying and will not involve excavations to depth

ovens and railway sidings		Future Site Users	No – Hard standing covers the whole of the site	Very Low
		Groundwater	Yes – However, leaching of contaminants within soils by infiltrating rainfall will be minimal due to presence of hardstanding. In addition, variable nature of the geology including less permeable silts, clays and mudstones should minimise contaminant migration to the deep groundwater.	Low
		Surface Water	No – The entire site is covered by hard standing thereby preventing dissolution of contaminants into surface water run-off	Very Low
Future substances stored, used and generated onsite from use as a pellet manufacturing facility	Waste leachate, heavy metals, TPH, PAH, inorganics	Future Site Users	Yes – Workers at the plant may come into contact with potentially hazardous materials (namely fuels), however internal management systems will be place to mitigate any risks	Low
		Soil & Groundwater	No – All materials onsite shall be stored and processed on hardstanding. There is no storage of fuels, oils or chemicals on site. Refuelling of machinery will take place offsite. Site drainage has the ability to be isolated in the event of any spillages / need to fire water containment.	Low
		Surface Water (River Tees)	Yes – due to the proximity of the the River Tees. However storage of SRF internally will prevent infiltration of rainwater into wastes and prevent creation of leachate. In addition, sealed drainage systems will prevent surface run-off entering the River Tees.	Low

In addition, the site will operate a comprehensive maintenance and management system which is described in Section 2 of the main application document. The environmental management system will be designed to meet the requirements of the Environmental Permitting Regulations and associated pollution prevention guidance.

The management system includes visual inspections of:

- All storage areas, processing areas and hard standing will be physically inspected to detect any signs of deterioration, leaks or spillage. Any corrective action required is reported to and implemented by the Site Manager; and
- Equipment in all process areas as part of the company's planned/predictive maintenance programme.

Based on this assessment, the potential for the new activity to impact on soil and groundwater underlying the installation is considered to be low.

Non-permitted activities undertaken at the Installation	Not applicable
Plan showing activity layout	Refer to Figure A2, Annex A
Environmental Risk Assessment	See attached Main Application Document SOL1908WKE01.

Annex A – Figures

Annex B – Groundsure Report

Annex C – Previous Site Condition Report

Annex D – Conceptual Model