SITE CONDITION REPORT
Form B2 – Question 5b

SARVAL LIMITED

May 2024

Document Reference SL/SCR_0524

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Report Reference Number:	SL_SCR/0524
Report Issue:	Final
Issued by:	Alica Thomas
Issue Date:	May 2024
Client Review Date:	September 2024

SITE CONDITION REPORT

Sarval Limited

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SUMMARY

This report has been compiled on behalf of Sarval Limited (part of the Saria Group) to meet the requirements of a Site Condition Report – as set out within the Guidance and Templates provided by the Environment Agency LIT 8001 Version 3.0 April 2013. This report is submitted as part of an application to the Environment Agency for a Permit to operate an Installation under the Environmental Permitting (England and Wales) Regulations 2016. The site is currently Regulated under a Part A(2) Permit by Gedling Borough Council – Permit reference GBC/EPR/A2/SAR/18.

The activities at the installation, under a previous company ownership, has a current Site Condition Report. This was previously submitted to the Local Authority as part of the existing Permit application. This report document will be referred to in some places of this report. To create this new SCR, up to date amendments are made using relevant information provided by the EA screening assessment (undertaken in August 2023); appropriate BGS, geology, hydrology and hydrogeological records of the site and the surrounding areas have been provided by the recommended sources of UK data (primarily Envirocheck and the Landmark information Group).

Records of the site have been reviewed along with the operational site records to describe the condition of the site and to identify any substance in, on or under the land that may constitute a pollution risk to the land. Pollution prevention measures have been identified and an assessment of pollution potential to land has been undertaken.

1. SITE DETAILS

The Application is made in support of a rendering activity which processes poultry and feather products. The process involves the removal of water and sterilisation of poultry and feather by-products to produce poultry meal, feather meal and poultry fat for use within the pet food industry.

This Site Condition Report ("SCR") has been prepared in accordance with the Environment Agency Site Condition Report – Guidance and Templates (H5 – version 3, April 2013) document.

Sarval Ltd currently operates the plant under Schedule 1, Part 2, Section 6.8, Part A(2)(a) of The Environmental Permitting (England and Wales) Regulations 2016 Permit.

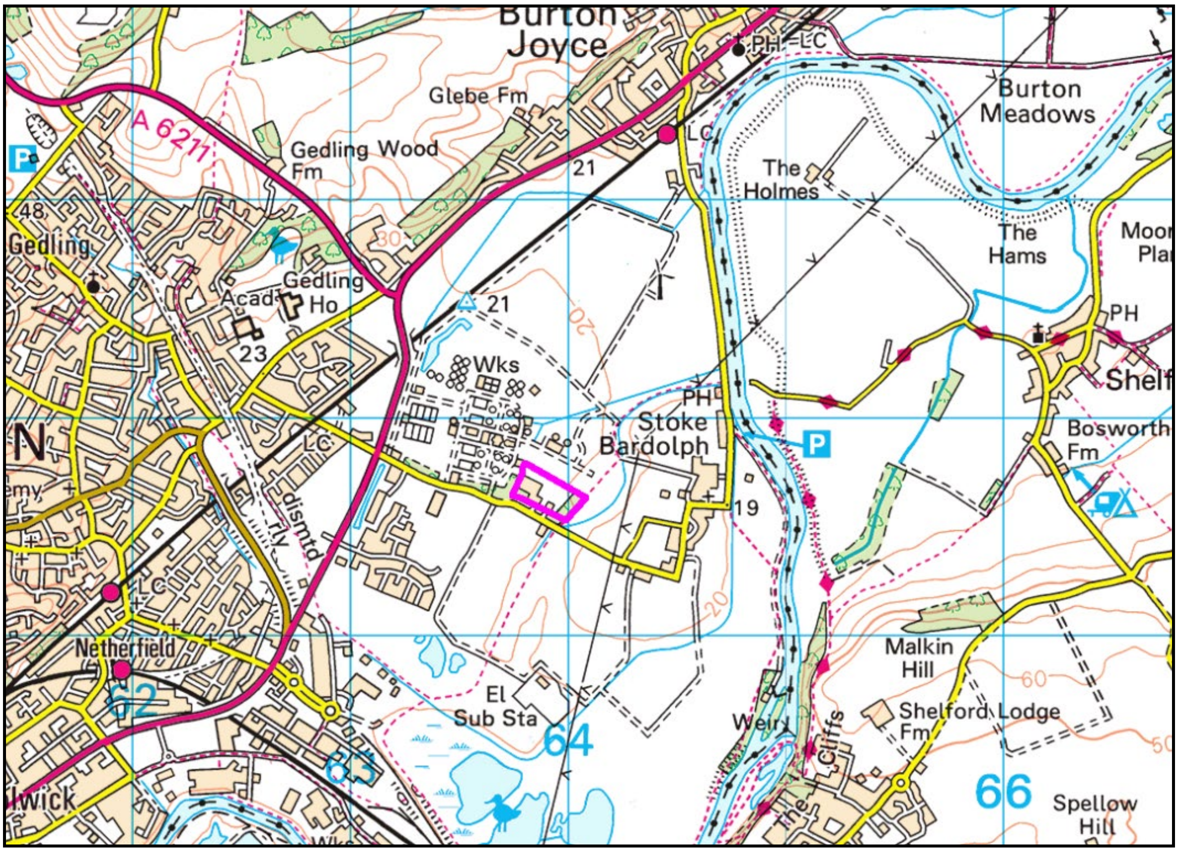
1.1 Site Location

Sarval Limited owns and operates the facility at Stoke Lane, Stoke Bardolph, Nottinghamshire. The site is situated approximately 700 metres to the village of Stoke Bardolph to the east of the installation boundary.

The Ouse Dyke is the closest EA watercourse which flows southeast and then loops to head northwest and discharge into the River Trent. The nearest main watercourse is the River Trent, circa 935m east/northeast. A smaller inland river ("ditch") runs immediately to the north west of the boundary.

To the west, the site is bounded by a Sewage Treatment Works operated by Severn Trent water plc. To the west of the works, approximately 600 metres from the installation boundary, there are playing fields, beyond which lie a railway line and the village of Burton Joyce. To the north of the site is the Stoke Bardolph biofuel anaerobic digestion plant. A new housing/commercial development is located southwest of the site. Agricultural fields surround the rest of the site and the area.

Figure(s) 1 – Site Location


Burton Joyce
Glebe Fm
Gedling Wood Fm
A 6211
21
PH
LC
Burton Meadows
The Holmes
The Hams
48
Gedling
Gedling Ho
23
30
Wks
21
20
PH
Stoke Bardolph
Bosworth Fm
N
LC
dismtd rly
19
Malkin Hill
Netherfield
62
63
64
El Sub Sta
Weir
Cliffs
Shelford Lodge Fm
66
Spellow Hill
60
50

1.2 Site Details

All of Sarval Limited Nottinghamshire relevant activities take place within the proposed Installation boundary (please see Appendix 1 of main supporting document for relevant location maps). For the purposes of describing relevant areas, the site is further split into site zones. These are shown in the drawing included as Appendix 3 of this document.

The site currently employs 38 staff and is operational 24 hours a day, 7 days a week.

The functions that take place at the site are poultry and feather rendering, into protein meal and fat for pet food. The stages comprise:

- Delivery and Inspection of raw materials in dedicated transport vehicles. Strict controls are in place for their time allowed on site, and time from arrival to processing.
- Raw materials transferred to storage hoppers and through size crushers for pumping to next stage.
- Drying process – undertaken in relevant area (provided with air capture and odour abatement) using drier rotor.
- Sterilised product are conveyed from driers to the press system. Material is sent through one of four presses where liquid (poultry fat) and solids (poultry meal) are separated.
- Poultry fat is filtered and settled in one of five settling tanks.
- Poultry meal is cooled and conveyed to storage silos prior to decanted into dedicated trailer or tote bags (sent to customer)
- Feather Process – from raw material hopper, the feathers are conveyed to hydrolisor for steam injection. Product is then conveyed to the drier system. Moisture is removed from the treated feather at this stage and any emission (steam with odour potentially) is sent to the Thermal Oxidizer (900oC) or condensed via dedicated condensers before treatment through the effluent treatment plant (“ETP”) and discharged to sewer.
- Sterilised feather product from driers is sieved and cooled and ground. This is conveyed to storage silos and decanted into dedicated trailers or tote bags and sent off site to the customer.
- Air from the buildings is extracted to various odour treatment plants across the installation. High strength odours extracted from process equipment (direct source and highest risk of odour source) are treated by a pre incinerator scrubber and steam boiler, or an acid dosed pre-scrubber tower fitted with secondary carbon filter.
- There is no refrigeration provided at the plant.
- Several hygiene and washing regiments are in place. Water is extracted at the installation via borehole.

- There are dedicated waste storage areas across the installation. Most of site dry waste (non-Animal By-Product) is stored within Zone 5.
- Vehicle washdown facilities are located in Zone 5.
- Several bulk liquid storage tanks are used at the installation. These are all presented within **Section 5.1.** of this document. The relevant zone of their location is noted. The arrangements for their protection and containment are further described and assessed in **Appendix 4a and 4b** of this document. All are overground, aside from one underground collection tank which forms the first part of the ETP.
- Chemicals are used and stored at the installation. Their location and arrangements are described as above.
- Site Drainage, and the arrangements for clean and process water, is show in the plan location in Appendix 2 of the supporting document SL_SID/0924.

2. CONDITION OF THE LAND AT PERMIT USE

2.1 Overview

The following sections detail the sources of desk study information used to describe the condition of the site, and more particularly, determine the potential for substances to be present in, on or under the land - associated with present and past uses of the site and its surrounding areas.

The following have been used as a source of the information.

- Landmark Information Group – Envirocheck © Report – 20th October 2023
- Environment Agency – Nature and Heritage Conservation Screening Report: Bespoke Installations.
- Natural England Website
- Joint Nature Conservation Committee
- Multi-agency Geographical Information for the countryside website
- Magic Maps
- Flood Risk assessment (undertaken by structural and engineering consultancy 2023)

2.2 Existing Investigations and Site Assessment Reports

A previous Site Condition Report was undertaken by MSE – Millenium Science & Engineering Limited in 2004. No intrusive investigation was undertaken specific to this assessment; however, the results of previous assessments and intrusive investigations to the south and north of the site were considered. These investigations (intrusive, by Geotechnical Engineering) were provided for Permit application in 2004. No further testing has been carried out within the installation boundary.

2.3 Discharge Consents, Licenses, Authorisations, Permits & Designations for the Site and Surrounding Area

- There is a Trade Effluent consent in place for the site, with Severn Trent – TE 266/2/9/EC.
- There is an extraction License in place for the site. Ref number is 03/28/64/0266.
- There are no waste management activities (other than storage, and some bulking for

recycling purposes) carried out at the site.

An Envirocheck© database search was requested from Landmark Information Group Ltd to provide records of any discharge consents, Environmental Permits and abstraction Licences within 1,000 metres of the site boundary. The Envirocheck© report is contained within Appendix 1 of this report. This report has facilitated the assessment of likely activities and processes in the surrounding area that could affect the site and of any likely processes and activities conducted on site that may affect nearby sensitive receptors.

A summary of the environmental consents, licences, authorisations and environmental permits in the surrounding area are presented in Table 2 below (some N/A rows are deleted for brevity).

Table 2 - Envirocheck© Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		1	4	28
Integrated Pollution Prevention And Control	pg 9			5	
Local Authority Integrated Pollution Prevention And Control	pg 11	1			
Local Authority Pollution Prevention and Controls	pg 11	1			
Nearest Surface Water Feature	pg 11	Yes			
Pollution Incidents to Controlled Waters	pg 11			2	7
Prosecutions Relating to Authorised Processes	pg 12			1	1
River Quality	pg 13				4
River Quality Biology Sampling Points	pg 13				1
River Quality Chemistry Sampling Points	pg 14				1
Water Abstractions	pg 14	2	6	12	36 (*35)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 37	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 37	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 37	Yes	n/a	n/a	n/a
Source Protection Zones	pg 38		1		
Extreme Flooding from Rivers or Sea without Defences	pg 38	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 38		Yes	n/a	n/a
Areas Benefiting from Flood Defences	pg 38		Yes	n/a	n/a
OS Water Network Lines	pg 38		16	27	59

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
Historical Landfill Sites	pg 50				1
Licensed Waste Management Facilities (Locations)	pg 50		1	1	
Local Authority Landfill Coverage	pg 50	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 50				1
Potentially Infilled Land (Non-Water)	pg 50				1
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 51	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 51	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry	pg 56				Yes
BGS Urban Soil Chemistry Averages	pg 57			Yes	
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 57	Yes	n/a	n/a	n/a
Mining Instability	pg 57	Yes	n/a	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 57	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 57	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 57	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 58	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 58	Yes		n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 59	2			4
Points of Interest - Manufacturing and Production	pg 59	2	1	1	4
Points of Interest - Public Infrastructure	pg 60		1	4	8
Points of Interest - Recreational and Environmental	pg 61				1

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 62	1			1
Nitrate Vulnerable Zones	pg 62	1	1		

Ecology & Heritage Data

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ecology					
Areas of Adopted Green Belt	pg 1	1			1
Nitrate Vulnerable Zones	pg 1	1	1		
Heritage					
Historic Battlefields					
Listed Buildings	pg 2				1
Scheduled Monuments					
World Heritage Sites					

2.4 Nature Conservation Designations

The above information does not show any sensitive areas (nature, heritage or protected sites) within 1000m of the installation boundary. The Environment Agency undertook a Conservation Screening report on behalf of Sarval Limited.

Details of the Conservation Designations for the relevant area search (within 10 kilometres of the site boundary), were identified through search EPR/CP3025SZ/P001, NGR SK6367 4186, undertaken on 19th July 2023. A copy of the full assessment, and associated maps are included in this document as Appendix 2.

The areas identified are:

- Local Nature Reserve (LNR) – within 2km of installation boundary.
    - Gedling House Meadow
    - Gedling House Woods
    - Netherfield Lagoons

- Local Wildlife Sites (LWS) – within 2km of installation boundary.
    - The Avenue Pool
    - Trent Bluff Scrub
    - Burton Joyce Grasslands Swallow Plantation
    - Crock Dumble river Trent: Burton Joyce to Lowdham

- Ancient Woodlands – within 2km of installation boundary.
    - Malkin Hill Wood.

The area upon which the installation is located, and the surrounding area(s) is newly adopted Green Belt area.

All above have been considered in any modelling or risk assessment undertaken as part of this Permit application.

2.5 Geology, Hydrological and Hydrogeology Data

Geological and Hydrogeological information for the site was obtained from

- Landmark Information Group – Envirocheck© Report – 20th October 2023. This includes Geological map extracts taken from the British Geological Survey Digital Geographical map of Great Britain at 1:50,000 Scale 4.

Geological mapping (British Geological Survey digital maps 1:50,000) indicates the site to be made

from:

- Made ground
- Pleistocene river gravel & alluvium
- Holme Pierreport Sand & Gravel
- Bedrock faults of Mudstone & Siltstone
- Upon an Bedrock Aquifer of:
    - Secondary designation – B
- Upon a Superficial Aquifer of:
    - Secondary designation – A

Made ground has been determined to a thickness of between 0.8 meters and 2.2 metres in land to the north of the main building. The made ground is described as fine to course gravel of brick and concrete with some clay and mottled black clay with occasional cobble-sized pockets of very dark brown/black clay.

The river gravel deposits are a depth of up to 6.6 metres below ground level and comprises dense brown sand with gravel. Up to 1.1 meters of firm red-brown silt with occasional medium gravel-sized pockets of grey clay underlying the river gravels may represent alluvial deposits or weathered Mercia Mudstone.

The river gravels are considered by the Environment Agency to be a minor aquifer, with variable permeability and intermediate to high leaching potential. At the last intrusive investigation, groundwater was encountered at depths ranging from 2.8 metres to 3.0 metres below ground level. It is likely that the groundwater flow will be to the north-east, towards and in the direction of flow of the River Trent.

The superficial deposits are classified as a secondary B aquifer (Landmark Information Group Bedrock Aquifer Designation, Superficial Aquifer Designation and Groundwater Vulnerability map 1:100,000) and the underlying solid geology is classified as a secondary aquifer. The site is not located within a safeguard zone or a groundwater source protection zone (SPZ).

Groundwater vulnerability is recorded as High Vulnerability – secondary aquifer.

BGS Flood GFS Data records the site with the potential for Groundwater Flooding to occur.

The soil beneath the site is recorded as (mg/kg):

- Arsenic <15
- Cadmium 2.2 - 3
- Lead 100-200
- Nickel 30 - 45

The site is located within a surface Nitrate Vulnerable Zone

2.6 Operational Records, Emergency Response Records and Land Pollution Incident Records in the Site vicinity

Operational records from the site have been reviewed and a visual inspection made of the site during site reconnaissance visits on 21st and 22nd September 2023. Another visit was undertaken in March 2024. The visit and inspection were undertaken by Alica Thomas of Green Sustain UK Ltd. Subsequent interviews with relevant Sarval members have taken place to ensure no changes have been made since the site visit(s).

There are no records of pollution incidents at the site since it was bought by the company. There is no visual evidence of pollution incidents/history. Referencing the information recorded by Landmark, there are no Contaminated Land Register Entries and Notices or Substantiated Pollution Incidents entries upon the relevant register. This is information relating to the site and the immediate surrounding areas.

The detailed Envirocheck© Report is presented as **Appendix A** of this report (emailed separately).

It is stated by site that there are no records of any spills or discrepancies in stock control of potentially polluting substances identified.

2.7 Historical Land Use

A review of historical maps has been undertaken through Landmark surveys. The maps are appended. A summary of details is provided below:

- Maps dating from 1883 up to and including 1955, the location of the site is shown as being open farmland. The group of dwellings, Top Row to the south of the site is present from the 1883 map. On the 1955 map, the field to the west of the site is undeveloped, but to the west of that structures are shown presumed to be the early development of the sewage treatment works.
- On the map of 1967, the site is developed, as are the sewage treatment works immediately to the west. The buildings and boundary occupy the extent of the current facility application boundary.
- On the 1983 edition, the buildings have been extended. Further buildings have been constructed to the east, the current location of the site offices and garage.
- On the 2000 edition, the main building has been changed slightly to the configuration similar to that present today. The sewage treatment works have been extended to the north west.
- In the latest map, 2023, there has been some development to the residential dwelling to the south of the site, across the lane (Stoke lane), and maybe some agricultural buildings. The significant difference in this map is the development of the whole of the site to the north of the boundary by the operations of a biofuel anaerobic digestion plant situated within.

2.8 Further Flood Risk information

A full flood risk assessment has been undertaken (May 2023) by a specialist structural and engineering consultancy. These findings are included in Appendix 5 of this document. A summary of findings state the risk from:

Groundwater
From BGS data the bedrock geology is noted as Triassic rocks (undifferentiated) - mudstone, siltstone and sandstone with superficial deposits of Alluvium (clay, silt, sand and gravel) and river terrace deposits. BGS borehole data shows slightly clayey, silty, gravelly sand and gravel, with river gravel starting around 20mAOD down, continuing down beyond 5m deep.

Land
Figure 5 - Surface Water Flood Extent
Low Risk (0.1% (1 in 1000yr) - 1% (1 in 100yr) chance of flooding): - No flooding noted.
Medium Risk (1% (1 in 100yr) – 3.3% (1 in 30yr) chance of flooding): - No flooding noted.
High Risk (greater than 3.3% (1 in 30yr) chance of flooding): - No flooding noted.
It is considered that the recommended FFL is suitable and that there is low to no risk of surface water flooding.

Sewers
No Risk

Ouse Dyke
The Ouse Dyke is the closest EA watercourse which flows southeast and then loops around to head northwest and discharge into the River Trent. The dyke is circa 830m away at the closest point to the site. Given the distance to the site any ensuing flood water is unlikely to affect the site. Although unlikely to flood, any flooding from the Ouse Dyke would be over agricultural fields and towards the River Trent, which represents a natural low point in the landscape. The dyke has raised embankments and natural high ground along its length. The north/west embankments are higher than the south/east side defences/high ground, hence the south/east would overtop before the north/west side, directing any flood water away from the site.

Overall Probability of Flooding
According to the Environment Agency the site is located within Flood Zone 2: land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%)

The report undertaken in 2023 stated that the water level in the River Trent will increase due to climate change. The SFRA model considers flooding based on the increase due to climate change and no flooding is predicted to affect the site (see Appendix D of flood risk assessment).

There is a residual risk that culverted sections or trash screens may become blocked, but flooding should be localised. The site is not considered to be at significant risk of flooding from local watercourses or from local drains and sewers.

Note - In lieu of the increased risk presented by climate change to the River Trent, a Climate Change risk assessment has been undertaken and is included as Appendix 5 of the Environmental Risk Assessment document ref SL_RA/0824. A Climate Change Adaption plan has been created from the findings of the assessment (included).

3 PERMITTED ACTIVITIES

3.1 Section is Taken from H5 Template

Environmental Application form B3 – Table 1a. The relevant activities that will be undertaken at the site are described. In support of these activity description, and to account for all risks identified within this report, and the potential sensitive receptors identified, a full Risk Assessment has been undertaken.

All relevant substances used, produced, and stored at the installation that could pollute the soil and groundwater in the event of an accident are listed in Section 5.1. of this report. They are further considered with full containment and prevention methods in place, in Appendix 4 of this report.

All accident scenarios required for the application process are further described within the Risk Assessment included within this application.

3.0 Permitted activities	
Permitted activities	• Section 6.8. A(1) (c) - Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day. • Section 6.8. A(2) (a) - Disposal of or recycling animal waste by rendering at a plant exceeding 10 t/day. • Section 5.4. A(1) (a) (ii) Recovery or disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day.
Non-permitted activities undertaken.	Please refer to Permit Application form(s) for all supporting and ancillary activities at the installation.
Document references for: • Plan showing activity layout; and • Environmental risk assessment.	Appendix 3 of this document. Environmental Risk Assessment – to incorporate all receptors described in this Report – SL/RA_0824 Climate Change risk assessment – Climate Change Adaption Plan (Appendix 5 to above).

4 CHANGES TO THE ACTIVITY

4.1 Changes to Activity Boundary or Permitted Activities

This section will be kept up to date for the life of the Environmental Permit. It is understood that this section is not required at Permit application stage.

Since operation, Saraval Limited has not made any changes to the boundary of the installation.

5 MEASURES TO PROTECT LAND

5.1 Introduction

Site reconnaissance visits were undertaken on 21st and 22nd September 2023 by Alica Thomas of Green Sustain UK Ltd in the presence of Senior Management and specialist relevant members of the team (i.e. ETP operator, service engineering responsible for maintaining visual records of bund arrangements). All measures in place to protect land were identified and assessed.

Site operational layout plans, including the location and nature of drainage is included in Appendix 1 and 2 of the main Supporting Document.

Relevant bulk storage tanks and raw materials and waste storage areas are listed in the table below (Table 5.1). An assessment of their pollution prevention measures/protection to land arrangements, is presented in Appendix 4 of this document.

To aid referencing each tanks and their contents, in relation to the site and relevant risks (i.e. drainage, bunds) the site is split into five zones. This zoning drawing is presented in Appendix 3 of this document. The table below lists all storage tanks at the installation. Their location and arrangements will dictate which will be further assessed for risk. The tank(s) is listed by:

- Zone (area)
- Name of tank, and what identifying purpose/contents.
- Material (liquid or solid)
- Its hazard potential
- Volume
- Containment (bunded?)
- Size of bund
- Is tank sufficiently of low risk to screen out at this stage?

Tank list is presented in Table 5.1 below:

5.2 Hardstanding and Bunds

The site is predominantly covered in concrete hardstanding. Exception to this is an area set to grass to the south of the fat settlement tanks (tanks 1 to 3). These details are included and described in Table 4a (Appendix 4) of this document.

The external hardstanding is in reasonable repair across the site, with some exceptions on main road throughfare areas, which are identified and placed into a continual upgrade programme. Any cracking or failure of ground surfacing is accounted for in the bulk storage assessment(s) in Appendix 4. However, any potential release of potentially polluting liquid materials would not rely on concrete or tarmac as containment – as individual provisions are made. These containment considerations are made to the transport of any smaller liquid containers too (bunded transport).

5.3 Surface Water Features

There are no open surface water bodies on site. An inland river/ ditch runs immediately adjacent to the northwestern boundary. It is highly likely that groundwater beneath the site is in hydraulic continuity with the ditch and the River Trent.

5.4 Site Drainage

The site has connections to foul and process water discharge routes. Process effluent is discharge to sewerage undertaker under a trade effluent agreement. This effluent is treated by the onsite effluent treatment plant ("ETP") prior to discharge. All water used in internal processing areas, and most areas of the external areas of the site are included in the drainage network discharged to the ETP.

Some clean/nonproduction areas of the site have surface water drainage channels. This system, along with some clean roof areas (rainwater runoff) are discharged to a soakaway, located to the east of the site. The drainage plan showing process and clean surface water drainage arrangements is included in Appendix 2 of the main supporting document.

6 ASSESSMENT OF LAND POLLUTION

6.1 Assessment of the Likelihood of Pollution/Pollution Incidents

The site has undertaken an assessment of the likelihood of a pollution incident from the activities undertaken on site. The results of the assessment are documented through:

- Compiling pollution risk assessment – Aspects Register ENV-R002
- Risk Assessment for spillage/pollution event from bulk storage. Findings described:
  - Table 5.1 of this document.
  - Assessment of accidents – Table 5 of Environmental Risk Assessment (SL/RA_0824)
  - Assessment of Bulk Storage and their protection methods – Table 4a and 4b of this SCR. Appendix 4.
- Investigations of previous intrusive investigations
- Interview with long time members of Sarval Limited, to create assessment of site protection for Appendix 4 of this document.

(It is noted that the accident identification process addresses all potential releases to the environment, whilst the focus of a SCR is identifying potential current or previous land, ground or groundwater contamination. The holistic site review ensured all practices were investigated. Evidence of historical practices/areas of operation that may have changed; were assessed also). The Risk Assessment included with this application included assessment of risk* from:

- Fire (and associated firewater containment)
- Flood
- Overfill of tanks
- Loss of mains electricity
- Storage of liquid materials
- Loss of waste storage/hazardous waste storage
- Mass release of effluent collection tanks
- Accidental release to ground from contaminated surface water
- Vandalism
- Loss of materials through transporting around site (installation).

*scenario(s) included here to present risk relevant to SCR.

6.2 Site Zoning

In accordance with EA guidance on appropriate pollution risk assessment methodology; the site has been allocated relevant 'zones'. These zones are referred to in Table 5.1 to describe accurately the location and relevant risk pertinent to that area.

The zones are referred to for an overview of preventative measures below.

6.3 Preventative Measures

The relevant preventative measures are described in Appendix 4.

Zone 1 comprises the land between the main production building and the eastern boundary in which the odour control systems and associated chemical storage tanks are located. The area is paved with concrete hardstanding, although this is, in parts, in poor repair and is kerbed. There is evidence of spills from scrubbing plant 2 to the ground.

Zone 2 comprises the southern western area of the site, including the cooling towers, fuel storage tanks fat settlement tanks, boilers and effluent tanks. Although concrete hardstanding is provided, discharging through the site effluent treatment system, some tanks are not fully bunded and there is evidence of spillage of fats to the grassed area at the southern margin.

Zone 3 comprises the area to the north of the main production building, including scrubbers 1 and 3, the vehicle washdown area and cooling plant. The ground surface is laid to concrete hardstanding, although not kerbed at the northern edge, where the land is rough ground to the site boundary. Odour abatement chemicals are also stored in this area, adjacent to scrubber tanks 1 and 3. On the western boundary, the cooling fans are located. This area is laid to concrete hardstanding, kerbed, and falling to a drain discharging to foul sewer.

Zone 4 comprises the main production building. The entire area is covered. All areas are provided with concrete flooring and all drain to the foul system, which is discharged through the effluent treatment system. The flooring and drains appear in reasonable repair.

Zone 5 Comprises the support activities located to the south/East of the site. This area comprises vehicle wash, support vehicle fuelling, non-APB waste storage and incoming raw materials including chemicals (taken to the chemical storage compound).

6.4 Land Pollution History

There have been no records of any significant pollution event, and the nature of activities and materials stored upon the site, and the extent of concrete/tarmac surfacing, it is believed that no significant potential sources of contamination have historically taken place on the site, or within the immediate surroundings. Maps of historic land-use for the site can be viewed.

6.5 Findings

Considerations of the previous SCR, a visual inspection of relevant areas, research of the pollution or contamination history of the site, and the presence of extensive ground cover of concrete, tarmac or hardstanding concludes that further intrusive investigations are not required.

7 MONITORING & DECOMISSIONING

7.1 Soil, Gas and Water Quality Monitoring

The previous management of the installation had some limited investigations carried out by Geotechnical Engineering Limited. This formed part of the Permit application in 2004. No further investigations have been undertaken during the life of the current Environmental Permit.

In the previous application; it was stated (in reference to the investigations undertaken by Geotechnical Engineering Limited) : *The suite of analytical determinants chosen in the investigations was a broad suite typically chosen for the identification of contaminated land. Of those determinants, only sulphate which may be present as a result of the escape of sulphuric acid was found in significant concentrations, although it must be recognised that this is typically found in significant concentrations in made ground containing demolition wastes. Total petroleum hydrocarbons were found at concentrations of approximately 500 mg/kg in soil samples, although this may reflect the made ground constituents rather than surface spillage.*

Gas monitoring was carried out in the two boreholes on one occasion only after the investigation. Maximum concentrations of 46.65 and 15.2% were recoded. The maximum concentration of carbon dioxide recorded was 1.1%. Gas flow rates reported were negative or negligible, indicative of little movement of soil gas.

There are no planned additions for any soil, gas or water monitoring. Relevant information will be utilised in the site Risk Assessment.

7.2 Decommissioning and Removal of Pollution Risk

Not relevant at Application Stage. Section presented here to update through the life of the Permit.

8 REFERENCE DATA AND REMEDIATION (where relevant)

8.1 Data Collected

Not relevant at Application Stage. Section presented here to update through the life of the Permit.

It has not been necessary to collet land and/or groundwater data for this Permit application.

9 STATEMENT OF SITE CONDITION

Groundwater and surface water are assessed to be at very low risk of contamination, originating from historical or current site activities.

As described in the evidence presented; no significant potential sources of contamination have been identified on the site or in the immediate surrounding area.

It is understood that in the event of surrender of the Environmental Permit, or, permitted activities at the installation are no longer carried out, the operator will be required to demonstrate the land is in a satisfactory condition, and all pollution risks have been removed (using information gathered in Sections 3 to 7) and decommissioning has been completed.

APPENDIX 1

Envirocheck © Information

(attached separately in email attachment).

APPENDIX 2

Environment Agency Screening Assessment
(Nature and Heritage Conservation Screening Report)

APPENDIX 3

Site Zoning Plan

APPENDIX 4

Table 4a – Bulk Storage and Containment Measures (including all risks and controls)

Table 4b – Bulk Containment; Further assessment of Controls

APPENDIX 5

Flood Risk Assessment

May 2023