

# **APPLICATION FOR AN ENVIRONMENTAL PERMIT**

**Site Condition Report** 

**Permali Gloucester Limited** 



Document status						
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### 1 INTRODUCTION

#### 1.1 Site Details

1.1.1 Site details are shown in Table 1.1 below:

Table 1.1 Site Details				
Name of the applicant	Permali Gloucester Ltd			
	Bristol Road			
A ativity address	Gloucester			
Activity address	Gloucestershire			
	GL1 5TT			
National grid reference	SO 82318 17113			
Site area (ha)	2.78ha			
<b>Document reference and dates</b> for Site Condition Report at permit application and surrender	230214 R JER9222 RN Permali Gloucester Ltd Site Condition Report			
Document references for site plans (including location and boundaries):	See site plans included in Appendix A to this SCR			

## 1.2 Background

- 1.2.1 Permali Ltd has, for a number of years, undertaken coating activities in relation to the production of ballistic materials for the Defence and Aerospace industries. The consolidation of business activities onto the Gloucester site means that the consumption of organic solvents and the polymerisation/co-polymerisation of unsaturated hydrocarbons in the production of both coating materials and coating activities will exceed the thresholds above which a Part A2 Environmental Permit is required, as prescribed under the Environmental Permitting (England and Wales) Regulations 2016.
- 1.2.2 The activities involve the use of organic solvents with potential emissions to air and associated potential for odour impacts.
- 1.2.3 The site, covering an area of approximately 11 hectares on the Western edge of Gloucester, comprises a large factory building with associated parking, security gatehouse and access onto Bristol Road in the north-eastern area of the site.
- 1.2.4 This Site Condition Report has been prepared to support the proposed application for an Environmental Permit in accordance with Environmental Permitting General Guidance Manual on Policy and Procedures for A2 and B Installations, Revised April 2012.
- 1.2.5 This report based on information and data available at the time of preparation of the report.

## 1.3 Key Objectives

- 1.3.1 The key objectives of this report are to:
  - To identify the Site Conditions at the site at the point application for the permit for the facility (baseline condition) such that they may be used as a point of reference to determine whether the site has been contaminated during the site's permitted operation in line with Environmental Permitting Regulations requirements; and
  - To provide conclusions on whether land quality has been impacted from historical activities.

## 2 APPLICATION SITE CONDITION REPORT

# 2.1 Application Phase

2.1.1 This section of the Site Report has been prepared in accordance with the Environment Agency Horizontal Guidance Note H5 and the General Guidance Manual: policy and procedures for A(2) and B installations. Where available, information on the known current condition of the operational area is provided.

## 2.2 Site Condition Report Summary

Table 2.1 Condition of the land at permit issue					
Environmental setting including: Topography Geology Hydrology Hydrogeology Surrounding land use Environmental Consents, Licences, Authorisations, Permits and Designations	Details of the environmental setting are provided in sections 2.3 to 2.7 of this Site Condition Report				
Pollution history including: Location, nature of incidents or direct discharges that may have affected soil or groundwater Historical land uses and associated contaminants Evidence of historic contamination, including, historical site investigations,	Any details regarding historical contamination at the site are provided in Section 3 of this Site Condition Report				
Baseline soil and groundwater reference data	Details regarding baseline soil and groundwater reference data at the site are provided in Section 4 of this Site Condition Report				
Supporting information	Permit Application Supporting Information				

## 2.3 Environmental Setting

- 2.3.1 The following sections detail the environmental setting of the site. The sources of desk study information utilised are listed below:
  - Publicly available datasets from the EA<sup>1</sup>
  - Information held by the British Geological Survey relating to geology and hydrogeology<sup>2</sup>.

#### **Sensitive Receptors**

## 2.4 Topography

- 2.4.1 The site is formed mainly of a large factory building with external areas for parking and therefore the topography of the site is uniform.
- 2.4.2 The site is situated at an altitude of 13 metres.

## 2.5 Geology

- 2.5.1 The British Geological Survey Geology of Britain Viewer<sup>3</sup> has been reviewed and it shows that the site is located on the following geology:
  - Bedrock geology: Blue Lias Formation and Charmouth Mudstone Formation Mudstone.
     Sedimentary bedrock formed between 209.5 and 182.7 million years ago during the Triassic and Jurassic periods.
  - Superficial deposits: Tidal Flat Deposits Clay, silt and sand. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period.

## 2.6 Hydrology and Hydrogeology

- 2.6.1 The superficial and bedrock geology are designated as Secondary (undifferentiated) aquifer units and therefore represent a controlled water body. Approximately 10 m to the west of the Site is the Gloucester and Sharpness Canal which represents a potential off-site controlled water receptor.
- 2.6.2 There are four water network (OS MasterMap) records within 250m of the site. Two of these records are associated with the Gloucester and Sharpness Canal. 98m north of the site boundary is an inland river. A second inland river lies 224m west of the site. Both of these inland rivers contain water year-round (in normal circumstances).
- 2.6.3 The nearest Nitrate Vulnerable Zone (NVZ) is the North and South Streams in the Lydden Valley which is located approximately 100 metres to the south.
- 2.6.4 The site is not situated in a source protection zone.

<sup>&</sup>lt;sup>1</sup> https://environment.data.gov.uk/public-register/view/index

<sup>&</sup>lt;sup>2</sup> //mapapps.bgs.ac.uk/geologyofbritain/home.html

<sup>&</sup>lt;sup>3</sup> http://mapapps.bgs.ac.uk/geologyofbritain/home.html

## 2.7 Surrounding Land Use

- 2.7.1 Land to the immediate North and South of the site is given over to industrial and commercial uses. Immediately to the south of the site is Lilleshall Steel Services and to the North are units dedicated to a chauffeur service, a book shop and a vehicle repair shop. To the west of the site is the canal and, beyond that, is residential development. To the East lies Bristol Road with dense residential housing on the opposite side of Bristol Road from the Permali site.
- 2.7.2 The closest residential properties are located on the eastern boundary of the site with the Bristol Road. There are further residential properties approximately 0.07km to the west of the site located at Mainsail Lane on the opposite side of the Gloucester and Sharpness Canal.

# 2.8 Environmental Consents, Licences, Authorisations, Permits and Designations for the Site and Surrounding Areas

### **Water Discharges and Abstraction Licences**

- 2.8.1 There was a single licensed discharge to controlled water from the site under the Water Resources Act 1991. The licensed discharge (permit number S/20/22129/T) related to the release of cooling waters to the Gloucester and Sharpness Canal. The Permit was revoked on 19/02/2008.
- 2.8.2 A Trade Effluent Discharge Consent was issued by Severn Trent Water under the Water Industry Act 1991 for the discharge of trade effluent to the public sewer. This consent was formally surrendered on 14/09/2021. A copy of the surrender declaration is enclosed as Appendix E.
- 2.8.3 Trade effluent is currently collected in IBC's and stored securely prior to removal from site by a licenced waste carrier.
- 2.8.4 There is a single historic potable water abstraction within 2,000m of the site.

#### **Landfill Sites**

- 2.8.5 There are no active or recent landfills within 500m of the site.
- 2.8.6 There is a single known historical (closed) landfill site within 500m of the site.

#### **Waste / Permitted Sites**

- 2.8.7 There are three historical waste sites within 500m of the site.
- 2.8.8 There are eight licensed waste sites which are either active or recently closed within 500m of the site. This consists of three metal recycling sites, three special waste transfer stations and two household, commercial & industrial waste transfer stations.

## Statutory Designated / Sensitive Sites within 2km

- 2.8.9 The site is not within 2km of the following designations:
  - Site of Special Scientific Interest (SSSI)
  - Conserved wetland sites (Ramsar sites)
  - Special Areas of Conservation (SAC)
  - Special Protection Areas (SPA)

- National Nature Reserves (NNR)
- Designated Ancient Woodland
- Biosphere Reserves
- Forest Parks
- Marine Conservation Zones
- Green Belt
- Proposed Ramsar sites
- Possible Special Areas of Conservation (pSAC)
- Potential Special Protection Areas (pSPA)
- Nitrate Sensitive Areas
- Nitrate Vulnerable Zones
- 2.8.10 A 2km radius screening of designated ecological receptors has identified three local nature reserves (LNR) as follows:
  - Two Alney Island LNRs (1018m and 1124m to the north)
  - Robinswood Hill LNR (1908m to the southeast)
- 2.8.11 A 10km radius screening of designated ecological receptors has identified the following additional sites:

#### **Local Nature Reserves**

- Barnwood Arboretum
- Coopers Hill, Gloucester
- Hucclecote Meadows
- Green Farm Orchard
- Quedgeley Arboretum
- Saintbridge Balancing Pond

#### **National Nature Reserve**

• Cotswold Commons and Beechwoods

#### **Ramsar Sites**

Walmore Common

#### **Sites of Special Scientific Interest**

- Badgeworth SSSI
- Coombe Hill Canal SSSI
- Robin's Wood Hill Quarry SSSI
- Cotswold Commons and Beechwoods SSSI
- Edge Common SSSI
- Range Farm Fields SSSI
- Crickley Hill and Barrow Wake SSSI
- Haresfield Beacon SSSI

- Hucclecote Meadows SSSI
- Wainlode Cliff SSSI
- Innsworth Meadow SSSI
- Walmore Common SSSI
- Ashleworth Ham SSSI

#### **Special Areas of Conservation**

Cotswold Beechwoods

#### **Special Protection Areas**

Walmore Common

#### Mining

- 2.8.12 British Pits database show that there are two records of surface mineral working. These are both at High Orchard Slate and Marble Works, Gloucester, Gloucestershire. This operation is now ceased.
- 2.8.13 There are no records on coal mining, non-coal mining, mining cavities, underground workings, JPB mining areas, brine areas, gypsum area, tin mining, or clay mining within 1000m of the site

#### **COMAH**

2.8.14 There are two COMAH sites recorded within 500m of the site. These are both at the Contract Chemical (Gloucester) Ltd site at Contract Chemical (Gloucester) Ltd, 249 Bristol Road, Gloucester, GL2 5BX.

#### Radon

2.8.15 The estimated percentage of dwellings exceeding the Radon Action Level is less than 1%. Therefore, no radon protection measures are required.

## 3 SITE HISTORY

## 3.1 General Site History

- 3.1.1 A Groundsure report, included as Appendix D to this report, identified that there are 25 historical industrial land use records for the site, including sawmills and joinery works, timber yards, wharfs, and railway sidings.
- 3.1.2 Operations at the site include use as a Baltic Wharf (1884-1936), timber yard (1884-1956), sawmill and joinery works (1902), an electrical insulation works (1965 1992).
- 3.1.3 There are also historical tanks identified at the site between 1965 and 1991.
- 3.1.4 An on-site electricity substation was identified between 1984-1991.
- 3.1.5 No historical petrol station or garages were identified.
- 3.1.6 There was a single historical military land use identified on site circa World War 1 which is associated with National Sawmill, sawing timber.

#### 3.2 Evidence of Historic Contamination

#### Structural Soils 1998

- 3.2.1 A ground investigation was undertaken by Structural Soils Limited in 1998. This comprised drilling of 22 exploratory sampling locations to a maximum depth of 4 metres below ground level (mbGL) and installation of 7 ground gas and groundwater monitoring wells across the whole site.
- 3.2.2 The Structural Soils Limited report in 1998 indicated Made Ground to depths of up to 3 mbGL (comprising gravel over sand or clay with brick and ash) underlain by Superficial Deposits indicated to be Alluvium in majority of locations at depths of 1 mbGL to 4 mbGL with a base layer of Lower Lias Clay at all locations. Shallow groundwater of 0.75 m to 1.5 m depth was only encountered in the locations in the northwest of the site (area of tanks).
- 3.2.3 In the northwest corner of the site, where the boiler house and "scrap oil" tank are located, elevated diesel oil and Polycyclic Aromatic Hydrocarbon (PAH) was identified in groundwater at locations WS8 and WS9 and elevated PAH at locations WS1, WS10 and WS11. Light non-aqueous phase liquid (LNAPL) was also identified at WS8, and elevated boron and slightly elevated selenium in the area. Away from the tanks, concentrations were generally low.
- 3.2.4 The elevated diesel oil corresponds with a known fuel leakage adjacent to the boiler house's southern edge.

#### Structural Soils 1999

- 3.2.5 Structural Soils carried out a second investigation in 1999 to further delineate the extent of contamination in the northwest of the site.
- 3.2.6 This investigation involved drilling a further 13 window sampling exploratory locations to a maximum depth of 3 mbGL, revealing Made Ground comprising up to 2.4 mbGL of sandy clay with gravel of brick, concrete and limestone underlain by locally peaty or sandy clay of Alluvium of 2 m to 3 m thickness to the base depth of each hole. Groundwater was present at shallow depths of between 0.75 m and 1.10 m depth with LNAPL above groundwater at WS11a.
- 3.2.7 Elevated concentrations of mineral oil, diesel and PAH were again recorded.
- 3.2.8 A remediation plan was proposed which recommended the removal of approximately 1,800 m<sup>3</sup> of soil.

#### **RPS Report 2000**

- 3.2.9 Following on from these investigations a ground investigation and assessment was undertaken by RPS in Autumn 1999 to determine the potential risk this contamination posed to both human health and the offsite surface water receptor (Gloucester and Sharpness Canal) beyond the western site boundary. The conclusions of this investigation are as follows:
  - Air monitoring did not identify any contaminants of concern above detection limit indicating that there is no significant risk of organic vapour migration into buildings creating a human health, fire risk or explosive hazard.
  - Shallow Made Ground contained visual evidence of hydrocarbon contamination which appeared to be restricted in vertical migration by lower permeability silty clay.
  - Shallow ground comprised fine sand with some organic matter including peaty horizons;
  - Groundwater monitoring identified diesel range organics (DRO) concentrations of 1.241 mg/l in monitoring well MW1 and 0.873 mg/l in monitoring well MW3 in the area of the reported diesel fuel leak. Outside the main source area and in canal on western edge of the site, concentrations were significantly lower. There was no LNAPL, PAH or VOC detected above laboratory limit of detection (LOD) at the locations.
  - There was some evidence from field data and inorganic analysis for the presence of biological degradation processes at the site and anaerobic groundwater conditions.
  - Contaminant calculations undertaken using site specific data (including hydraulic conductivity)
    and contaminant specific parameters (including half-life, retardation factor, contaminant
    velocity) have suggested that the potential movement of dissolved phase diesel
    contamination is limited. A tentative estimate of travel time of 32 years was suggested from
    the point source to the canal of which are approximately 35 m apart.

## 3.3 Baseline Soil and Groundwater Investigations

- 3.3.1 It is known that a historic leak from a "scrap oil" tank has resulted in contamination of the ground with a range of hydrocarbons in the northwest corner of the Permali site. It is believed that the leak occurred over a period of time in excess of 25 years ago from a bund housing the tank that was compromised.
- 3.3.2 No records of the incident have been located by Permali so the nature and volumes of the materials that escaped containment are unknown. Likewise, no records of exist relating to any incident prior to the first ground investigation in 1998.
- 3.3.3 The scrap oil tank has been decommissioned, drained and infilled.
- 3.3.4 RPS was commissioned by Permali to undertake a review of available information and undertake groundwater monitoring and assessment of existing boreholes at the site. This was undertaken in 2020. The monitoring undertaken identified that there was no reduction in hydrocarbon contamination in the boreholes in the north-western site area with high PAH also encountered, and lubrication oil in the borehole at the north-western corner of the main factory building adjacent to a "scrap oil" tank.
- 3.3.5 The key findings were:
  - Liaison with site staff indicated that there was no record of any reportable pollution incidents since the previous investigations undertaken in 2000.
  - Elevated petroleum hydrocarbon contamination has been identified in the recent and historical monitoring. The breakdown is largely aromatic carbon banding further north, becoming largely aliphatic carbon ranges further to the south.

- Concentrations of PAH are highly elevated on the north-western boundary (RPS-BH2) with concentrations elevated but at a lower level to the south.
- LNAPL was identified at location adjacent to the main factory (RPS-BH3) next to a 'scrap oil' tank comprising lubrication oil which was also present in the dissolved phase of groundwater.
   This suggests a separate source to the diesel leak in the boiler house area.
- The canal showed very low hydrocarbon concentrations with PAH and speciated petroleum hydrocarbon concentrations not exceeding the laboratory limit of detection.
- 3.3.6 An outline conceptual site model (CSM) was produced which suggests a very low potential risk to the canal from contamination on site, and a low risk to site users from on-site soil and groundwater contamination.
- 3.3.7 Further ground investigation involving the drilling of a number of boreholes and installation of monitoring wells was recommended to allow a more thorough assessment of the ground and groundwater contamination status, and to allow a better understanding of the potential risk to the canal from on-site contamination.
- 3.3.8 Continued periodic sampling is being carried out by RPS on a quarterly basis to identify trends in levels of contamination and to detect any migration of pollution into the Gloucester and Sharpness Canal.
- 3.3.9 A copy of the most recent RPS groundwater and surface water monitoring report from Q4 2022 is appended to this site condition report, along with the historic ground investigation reports, as Appendix B.

## 4 PERMITTED ACTIVITIES

Table 2.2 Permitted activities				
Permitted activities	Details regarding permitted activities on the proposed site are provided below.			
Non-permitted activities undertaken	N/A			
Document references for:  plan showing activity layout; and environmental risk assessment.	Appendix A - Site Plans to this SCR. Appendix C - Environmental Risk Assessment to the permit application			

## 4.1 Description of Permitted Activities

- 4.1.1 The activities to be carried out at the site are prescribed for control as a Part A(2) and a Part B activity, according to the descriptions below, and will, therefore, be permitted as a Part A (2) installation under the Environmental Permitting (England and Wales) Regulations 2016<sup>4</sup>:
  - Section 4.1 Organic chemicals Part B
     (c) Any activity for the polymerisation or co-polymerisation of any pre-formulated resin or pre-formulated gel coat which contains any unsaturated hydrocarbon, where the activity is likely to involve, in any 12-month period, the polymerisation or co-polymerisation of 100 or more tonnes of unsaturated hydrocarbon.
  - Section 6.4 Coating activities, printing and textile treatments Part A2

     (a) Unless falling within Part A (1) of this Section, surface treating substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, in plant with a consumption capacity of more than 150kg or more per hour than 200 tonnes per year.
- 4.1.2 In addition to the main activity, the following directly associated activities (DAAs) will be carried out at the site:
  - Pressing, machining and spray painting of products.
  - Surface water discharge of clean uncontaminated site surface water from roofs, paths and roads.
  - Raw materials storage.
  - Waste storage.
- 4.1.3 The permitted activities at the site involve the polymerisation/co-polymerisation of unsaturated hydrocarbons in the production of coating materials (resins) and the impregnation of woven glass fibre cloths and tissue using pre-formulated resins and subsequent conversion to a composite laminate material
- 4.1.4 The key process stages comprise:
  - Mixing and formulation of the resin.
  - Coating/impregnation of the fibre textile.
  - Drying and "B-staging" of coated textiles.
  - Hydraulic pressing of coated (B-staged) materials to form a densified laminate structure.
  - · Machining, and
  - Painting of machined parts.

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<sup>4</sup> https://www.legislation.gov.uk/uksi/2016/1154/contents/made

# 5 SUBSTANCES USED, PRODUCED OR RELEASED

- 5.1.1 A full list of raw materials used in the on-site activities, including the quantities held in stock, is presented in Appendix C to this SCR.
- 5.1.2 The raw materials can be divided into the following general categories:
  - Resins, curing agents, hardeners used in the manufacturing process, for example epoxy resin, cresylic resin, phenolic resin
  - Coating products used in the spray booths, for example primer, epoxy topcoat. These may also be resins
  - Organic solvent used as cleaning, thinning and release agents, for example acetone, Industrial denatured alcohol (IDA), methylated spirits
  - Fillers and additives required for specific resin applications, for example glass spheres, graphite, nitrile rubber, PTFE powder
  - White diesel
  - Hydraulic oil
- 5.1.3 The risk of ground contamination from on-site activities during the operational phase of the Environmental Permit will be minimised by:
  - Appropriate storage and handling of raw and waste materials.
  - Storage of hazardous chemicals in dedicated, bunded storage areas with impermeable flooring.
  - Storage of flammable materials in flammables stores
  - Appropriate spill procedures and spill containment kits.
  - Training of operatives.

## 6 SITE SPECIFIC POLLUTION POSSIBILITY

- 6.1.1 The full list of raw materials was filtered to remove materials delivered, stored and used as solids, non-hazardous material and raw materials used infrequently or in small annual quantities (under one tonne per annum)
- 6.1.2 Each of the hazardous substances identified as significant are reviewed in this section to determine the site-specific pollution possibility based on factors such as storage arrangements.
- 6.1.3 <u>Table 6-1 Table 6-1</u> shows the site-specific pollution possibility for each of the previously identified hazardous substances.

# 6.2 Site Specific Pollution Possibility

Table 6-1 Substance Inventory and Assessment of Actual Pollution Risk

Substance	Nature	Amount stored on site	management/control measures	Purpose	Actual Pollution Risk
Epoxy Resin	Liquid	3300	240 kg drums are stored within the resin compound or an internal bunded mixing room while in use	Impregnation	Very Low – due to storage and handling arrangements
Phenolic Resin	Liquid	31500 kg	1,000kg IBC and 215 kg drums are stored within the resin compound or an internal bunded mixing room while in use	Impregnation	Very Low – due to storage and handling arrangements
Cresylic resin	Liquid	2400 kg	1,000kg IBCs are stored within the resin compound or an internal bunded mixing room while in use	Impregnation	Very Low – due to storage and handling arrangements
Araldite	Liquid	6200 kg	200 kg drums are stored within the resin compound or an internal bunded mixing room while in use	Impregnation	Very Low – due to storage and handling arrangements
Melamine resin	Liquid	1200 kg	1,000kg IBCs are stored within the resin compound or an internal bunded mixing room while in use	Impregnation	Very Low – due to storage and handling arrangements
Polyester resin	Liquid	6600 kg	IBCs stored within flammables stores	Impregnation	Very Low – due to storage and handling arrangements
Epoxy curing agent	Liquid	1800 kg	Drums are stored within the resin compound or an internal bunded mixing room while in use	Impregnation	Very Low – due to storage and handling arrangements

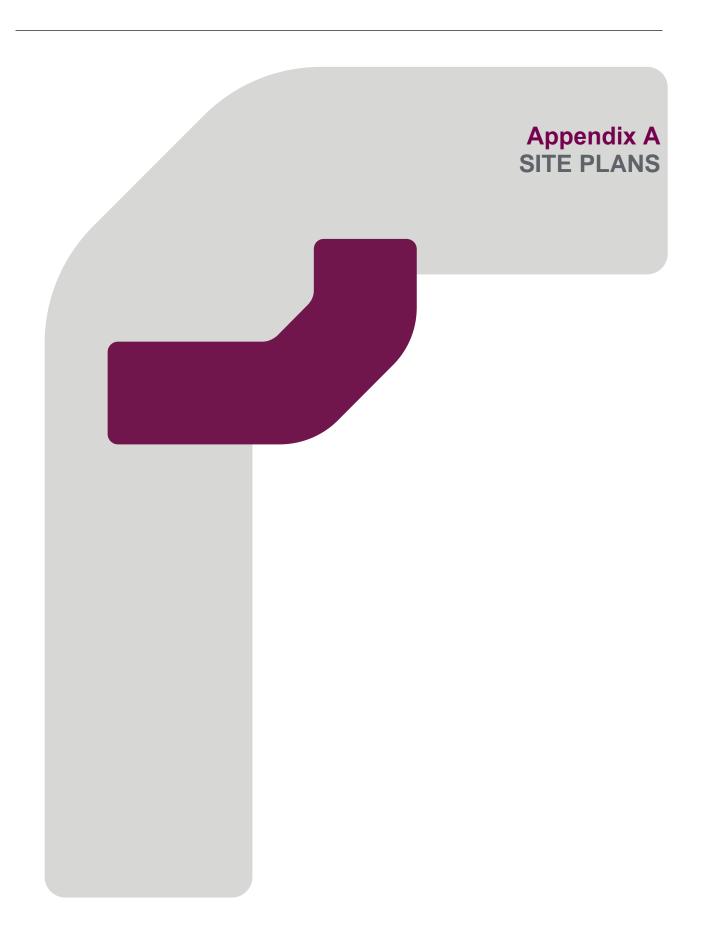
Substance	Nature	Amount stored on site	management/control measures	Purpose	Actual Pollution Risk	
Industrial Denatured Alcohol (IDA)	Liquid	9000 kg	165 kg drums held in the resin compound	Resin formulation Equipment Cleaning		
2- Methoxyethanol (Cellosolve)	Liquid	8900 kg	Drums held in the resin compound	Resin formulation	Very Low – due to storage arrangements	
Acetone	Liquid	3130 kg	165 kg drums held in the resin compound	Resin formulation Equipment Cleaning		
Industrial Methylated Spirits	Liquid	2,500kg	170kg drums stored within the resin compound	Cleaning equipment	Very Low – due to storage arrangements	
DiMethyl Formamide (DMF)	Liquid	800 kg	200 kg drums stored within the resin compound	Resin formulation	Very Low – due to storage arrangements	
Hyperlast EMH 85A Prepolymer	Liquid	400 kg	Drums stored within the resin compound	Painting / coating	Very Low – due to storage arrangements	
White diesel	Liquid	280 litres	280 litre drum stored within the resin compound	Fuelling the sprinkler system	Very Low – due to storage arrangements	
Hydraulic oil	Liquid	8000 litres	IBCs, 280 litre drums or 20 litre pails stored within the resin compound		Very Low – due to storage arrangements	

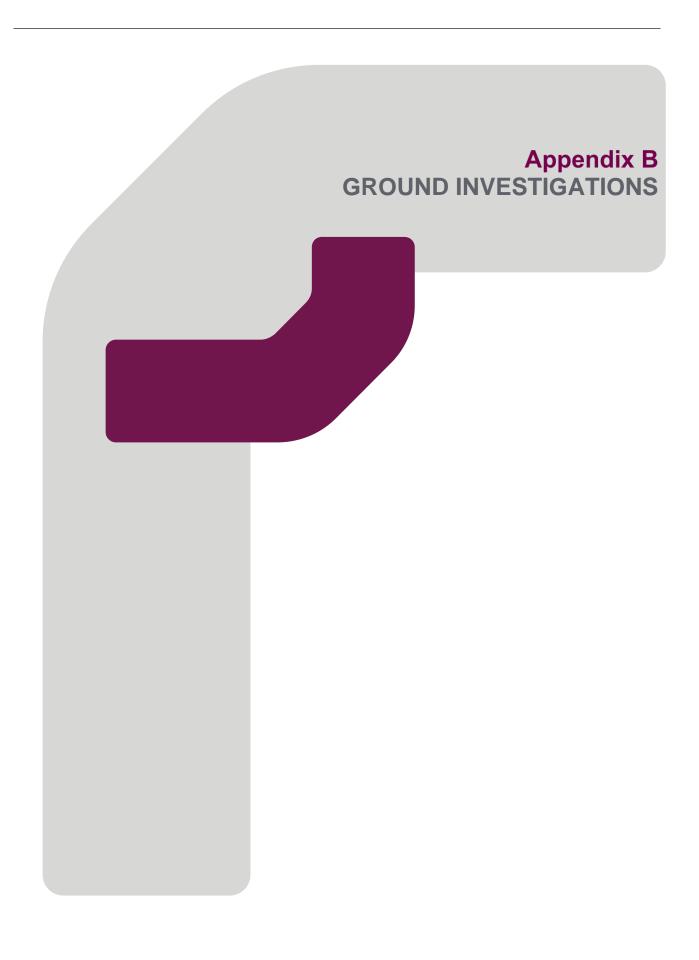
## 7 CONCLUSIONS

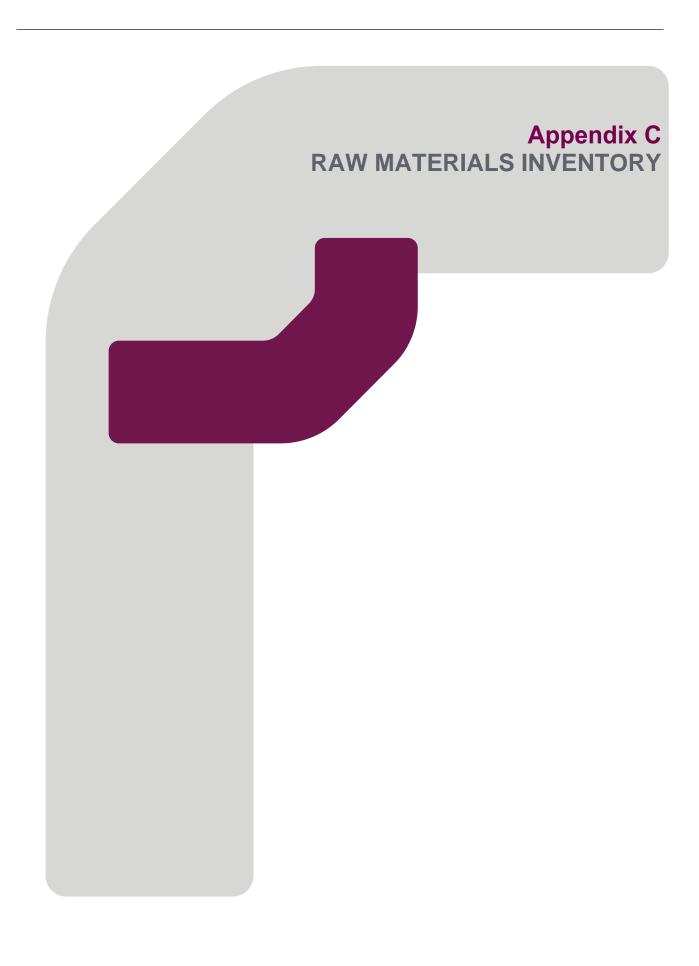
- 7.1.1 A review of ground investigation reports has been carried out to identify the Site Conditions at the point of application for the permit for the facility (baseline condition).
- 7.1.2 Ground investigations have concluded that there are elevated levels of the following contaminants resulting from historic releases to ground of fuel and lubricating oil in the Northwest of the site in the vicinity of the boiler house and former "scrap oil" tank:
  - hydrocarbon contamination
  - diesel oil
  - polycyclic aromatic hydrocarbon (PAH)
  - light non-aqueous phase liquid (LNAPL)
  - boron
  - selenium
  - mineral oil
  - lubrication oil
- 7.1.3 The risk from these contaminants to human health is deemed to be low. Likewise, the risk to the Gloucester and Sharpness Canal is currently deemed to be low. However, a programme of further sampling is being carried out to monitor the movement of the plume and to detect any contamination of the Gloucester and Sharpness Canal.
- 7.1.4 Hazardous substances have been identified in the following materials used on site:
  - Resins, curing agents, hardeners used in the manufacturing process
  - Coating products used in the spray booths
  - Organic solvent used as cleaning, thinning and release agents
  - White diesel
  - Hydraulic oil
- 7.1.5 The risk to soil, groundwater and surface water will be minimised through a variety of measures and controls delivered through design and operational protocols for the facility. These include:
  - Impermeable surfaces and sealed drainage for internal storage areas
  - Externally stored materials are kept within bunded areas and/or sealed containers to prevent fugitive emissions to ground
  - Management systems and procedures will ensure risks to the environment are minimised and appropriately controlled. This will include a spillage procedure to ensure that any risk from spillages is minimised and are cleaned up as soon as a spill is detected. Emergency spill kits will be available across the site
- 7.1.6 The assessment of site-specific pollution potential concluded that hazardous substances used, produced, or emitted on the facility represent a low risk to soil, groundwater and surface water receptors on the site.
- 7.1.7 The "scrap oil" tank has been decommissioned, drained and in-filled.
- 7.1.8 No specific solvents were included in the ground investigation analysis suite and therefore a baseline concentration cannot be provided.
- 7.1.9 There are no records of incidents that may have released solvents to the ground over the last 25 years, i.e., since the first ground investigation by Structural Soils Ltd in 1998.

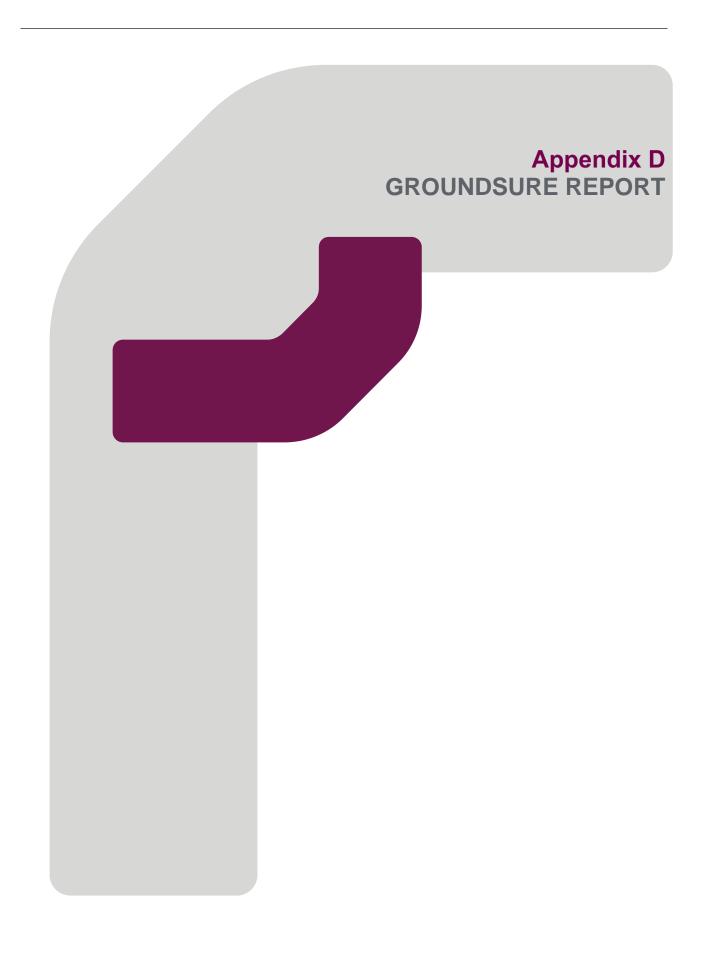
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# PERMALI GLOUCESTER LTD - SITE CONDITION REPORT

2023-02-24

**JER9222** 

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