ENVIRONMENTAL PERMIT APPLICATION – SITE CONDITION REPORT

NATURAL UK LTD HEALTHCARE MANAGEMENT FACILITY, UNIT 3, CAPEL HENDRE INDUSTRIAL ESTATE, CAPEL HENDRE, AMMANFORD, CARMARTHENSHIRE, SA18 3SJ

Document Reference: NU1000/05/App1
October 2021

Project Quality Assurance
Information Sheet

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Report Status : Final

Report Reference : NU1000/05/App1

Report Date : October 2021

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Revision	Date	Amendment Details	Author	Reviewer

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ENVIRONMENTAL PERMIT VARIATION APPLICATION SITE CONDITION REPORT

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NU1000/06/03	Indicative Operational Layout
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1.0 SITE CONDITION REPORT CONTEXT:

Sirius Environmental Limited (Sirius) has been commissioned by Natural UK Limited to prepare and submit a Site Condition Report to support an Environmental Permit Variation Application for the Healthcare Management Facility, located on Capel Hendre Industrial Estate, Ammanford, Carmarthenshire. The relevant documentation is submitted in accordance with the Environmental Permitting (England and Wales) Regulations 2016 (referred to hereafter as the EP Regulations).

This Site Condition Report (SCR) has been compiled in accordance with the EP Regulations and with Horizontal Guidance Note 5, Site Condition Reports – Guidance and Templates. Information has been gathered based on a desk study review of publicly available information as well as a GroundSure SiteGuard Report, which was produced under reference SG-BAR-757518 and is dated 22 April 2013.

The purpose of the initial Site Condition Report is to provide a factual statement of the condition of the site at the time of the Environmental Permit Application. The Site Condition Report must describe the nature and distribution of potentially polluting substances in the ground and groundwater at the site prior to the commencement of operations under the Environmental Permit, and those handled during the course of activities on the site. The potentially polluting substances of interest are those which are to be handled at the site under the Permit.

The requirement for a Site Condition Report to support the variation application being made is due to the proposal to increase the permitted area as part of the overall changes, accounted for by an adjustment in the Environmental Permit Boundary.

2.0 SITE DETAILS	
Name of the applicant	Natural UK Limited
Activity address	Natural UK Ltd Healthcare Management Facility, Unit 3, Capel Hendre Industrial Estate, Ammanford, Carmarthenshire, SA18 3SJ
National grid reference	SN 59321 11017

Document reference and dates for Site Condition Report at permit application and surrender	This Site Condition Report (**Doc. Ref.: NU1000/05/App1**) has been prepared to support an Environmental Permit Variation Application for Natural UK Limited's Healthcare Management Facility at the Capel Hendre Industrial Estate, Ammanford, Carmarthenshire. The format of this report follows the H5 SCR Template (v2.0, 4th August 2008). The baseline conditions have been derived from desk study information and the results of a GroundSure SiteGuard Report (Doc Ref.: SG-BAR-757518, dated 22/04/2013). Whilst the GroundSure report was written in 2013, following the results of the desk study, it is considered that the GroundSure report is still relevant and represents an accurate depiction of baseline conditions for the site at the time of application (i.e., August 2021).

Document references for site plans (including location and boundaries)	**NU1000/06/01** – Site Location Plan **NU1000/06/02** – Site Boundaries Plan **NU1000/06/03** – Indicative Operational Layout **NU1000/06/04** – Sensitive Receptors Plan

3.0 CONDITION OF THE LAND AT PERMIT ISSUE

Environmental setting including: • **Geology**	**Made Ground:** According to Landis Soilscapes map resource, the soil beneath the site has not been worked in any way and is loamy / clayey. The site is situated within an Industrial Estate which means that roadways and engineered operational areas (for storage/treatment/marshalling) have been constructed with impermeable materials such as tarmac. The overall site surfaces comprise an asphalted parking area, external areas are surfaced with a mixture of steel reinforced concrete, tarmac and limestone chippings and all internal operational areas are surfaced with high strength, steel reinforced concrete (at a minimum thickness of 200mm) which is impermeable and capable of withstanding the weight of bulk waste vehicles, mobile plant and processing machinery. Both the internal and external surfaces have been constructed with materials suitable for the prevention of pollution to groundwater and surface water drainage. **Geology:** The BGS database describes the bedrock geology as South Wales Middle Coal Measures Formation consisting of mudstone, siltstone and sandstone. There are no superficial deposits recorded for the area.
• **Hydrogeology**	**Hydrogeology:** The Bedrock geology comprises a Secondary 'A' Aquifer, which are described as being permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers. The site is not situated within a groundwater Source Protection Zone (SPZ) and is not within 500m of one. There are no records of active groundwater abstraction licences within 1km of the site. The site and the surrounding area are not situated within a groundwater Nitrate Vulnerable Zone or a groundwater Drinking Water Safeguard Zone. It is considered that the site is not in a sensitive location with respect to groundwater receptors.
• **Surface waters**	**Surface Waters:** The closest surface water features to the site are the Nant Arw and Ferrws Brook water courses, situated approximately 270m northeast and 440m south east of the site respectively. There are several drains located within 1km of the site.

	With regard to flood risk, the GroundSure report states that based on the National Flood Risk Assessment (NaFRA 2008), the Flood Rating (River and Coastal) is considered negligible. NaFRA data is based on a 50m grid system, with the flood rating at the centre of the grid calculated. The data considers the probability that the flood defences will overtop or breach, and the distance from the river or the sea. NaFRA data for the study site indicates the property, or part of it, has a Negligible (greater than 1 in 1000) chance of flooding in any given year. Natural Resources Wales (NRW) data has also been reviewed and is in line with the above. The areas surrounding the site are also of negligible flood risk from Rivers and the Sea. NRW flood map data also indicates that small areas of the site have a low risk of flooding from surface water and small watercourses (between 0.1% - 1% chance of flooding per year). The existing permitted site area is covered by impermeable asphalt and concrete. Both current and proposed site activities are to take place within an existing enclosed building on site with concrete floors and a sealed drainage system which discharges to foul sewer via a trade effluent discharge consent with the Statutory Undertaker. Shut-off valves are also present for use in the event of a spillage. The proposed area to be incorporated into the Permit is currently surfaced with a compacted stone hardstanding. Prior to any treatment operations being undertaken within the newly permitted area, an impermeable surface will be engineered in advance as part of ongoing site improvements. No surface water or potable water abstraction licences are noted to be within 500m of the site. There are currently no active licenced discharge consents situated within 250m of the site boundary.
Pollution history including: • **pollution incidents that may have affected land** • **historical land-uses and associated contaminants**	There are no records of pollution incidents having occurred at the site or within 500m of the site. Based on the historic Ordnance survey mapping and plans of the site dating from 1842 to 1952, it has been observed that the site location remained undeveloped and was used as agricultural land. The land on which the site is located was still undeveloped in 1969. The Capel Hendre Industrial Estate was constructed in the late 1970's. In the 1900's more residential dwellings were built along Hendre Road and Waterloo Road, both of which are to the north of the site. The closest residential dwelling to the site boundary is currently approximately 200m north, on Hendre Road. The GroundSure report lists potentially contaminative land uses within 250m from the site. These include an Old Coal Pit and Unspecified Heap located c.211m north-east of the site in 1878, an Unspecified Shaft and Old Coal Shaft situated 209m and 206m north-east of the site in 1905 and 1948 respectively. There was a drift mine located c.167m south-west of the site in 1982 and 1992. Records of an Unspecified Pit c.151m north of the site exist for 1965, 1982 and 1992. Records of Unspecified Ground Workings

• **any visual/olfactory evidence of existing contamination** • **evidence of damage to pollution prevention measures**	located between 145-146m north of the site exist for 1905, 1913 and 1948. Historic Ordnance Survey maps and plans published in 1879, 1898, 1913, 1950 and 1960 show the presence of a Quarry and Old Quarry approximately 300m to the north of the site area, as well as numerous old coal shafts and Rhôs Colliery c.>400m north-east of the site. The earliest maps/plans indicate that the area surrounding the site was largely agricultural, interspersed with dwellings and roads. The presence of the Colliery and numerous coal shafts may have resulted in the release of contaminants in the area such as arsenic, copper and lead. These often increase acidity in local water courses and groundwater as well as in soils. That being said, the 2013 GroundSure report concluded that the site and its immediate surroundings were not subject to land or water pollution. Additionally, it was reported that the site was not on or near landfills and is not close to incinerators or chimneys with high emission rates of potential pollutants. There is no visual or olfactory evidence of existing contamination on site. Areas that are not paved have healthy vegetation growth and no malodourous emissions have been reported within the curtilage of the current ownership. Businesses within the local vicinity are commercial, rather than industrial, therefore the likelihood for previous contaminative fugitive emissions is low. Furthermore, Natural UK's Healthcare Management Facility is highly unlikely to pollute the surrounding environment as all treatment operations are conducted within an enclosed building with roller shutter doors which only open for access and egress and the building is on impermeable concrete with a sealed drainage system. Therefore, emissions to air and water are fully controlled.
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	The GroundSure report states that there were no List 2 Environment Agency Recorded Pollution Incidents within 250m of the study site. Additionally, there were no sites within 250m of the site that were held under the Local Authority's information under Section 78R of the Environmental Protection Act 1990. Owing to the fact that the site was only developed in the late 1970's, was previously undeveloped land, and any subsequent development consists of commercial premises upon impermeable surfaces, there is no historic contamination at the site and no investigations or remediation measures have been considered as required.
Baseline soil and groundwater reference data	The groundwater underlying the site is a Secondary A Aquifer designation and is of the South Wales Middle Coal Measures Formation. Site specific groundwater data is not available. The Natural Resources Wales (NRW) Interactive Map Viewer[1] for

[1] Natural Resources Wales Interactive Map Viewer: Geocortex Viewer for HTML5

	Groundwater Vulnerability Map shows that the groundwater in the area is of medium vulnerability. The site is not situated within a Groundwater Source Protection Zone (SPZ) or a Groundwater Safeguard Zone. Owing to the impermeable site surfaces and sealed drainage system, the site poses very little potential risk to groundwater, therefore, baseline testing is not required. Furthermore, maintanence and inspection procedures at the site will ensure the sealed drainage system and impermeable surfaces remain effective. The Landis Soilscapes map data indicates that the soil beneath the site comprises slowly permeable, seasonally wet acid loamy and clayey soils (soil scape 17). This soil has impeded drainage, low fertility and also typically drains to stream network.
Summary	The areas surrounding the site have a long and established rural and agricultural history. The site comprises natural ground, which is loamy and clayey, although made ground is situated off site to the east and consists of restored soils mostly from quarry and opencast spoil. The bedrock geology underlying the local environment is South Wales Middle Coal Measures Formation and there are no superficial Quaternary/Recent deposits recorded for the area. Although historically the majority of the area surrounding the site has been agricultural, owing to the quarry, coal shafts and Rhôs Colliery situated >300m north and north-east of the site, there is a historical risk of potential pollution to the local environment associated with these activities. This may include the presence of heavy metals and increased acidity in local surface water, groundwater and soil. In terms of the site itself, there is a negligible pollution risk from the permitted activities as the treatment activities take place within an enclosed building on an impermeable surface with a sealed drainage system which discharges to foul sewer. The proposed treatment activity to be added to the site will also take place within an enclosed building with the appropriate engineered containment infrastructure. This will ensure there is adequate protection from potential contamination associated with the permitted activities. These containment systems will be appropriately maintained throughout the operational lifetime of the facility, with details of any maintenance requirements logged as appropriate. All wastes will be fully characterised prior to acceptance at the facility, with appropriate compliance/verification tests carried out by the operator. The Environmental Risk Assessments and Emergency Incident and Response Management Plan prepared for the facility conclude that with the implementation of appropriate mitigation measures, the site poses very little risk to environmental and human health and safety. Going forward, records of all environmental incidents on and off site which are likely to have an impact on the condition of the land will be maintained for the life of the Permit, with appropriate investigations implemented to determine the extent of any such incidents.

(cyfoethnaturiolcymru.gov.uk) [Accessed January 2021]

4.0 PERMITTED ACTIVITIES

Permitted activities	The site currently holds an Environmental Permit (EPR/DB3231RX) for a clinical waste transfer station with treatment and authorises the receipt of clinical and healthcare waste for storage, treatment and repackaging at the site, followed by transfer off site. Waste inputs may consist of source-segregated non-hazardous and hazardous clinical and healthcare wastes. Treatment operations are currently limited to manual and/or mechanical sorting separation, washing, screening, bailing, shredding, crushing, compaction and palletisation of permitted wastes for the purposes of recovery or disposal. Mechanical treatment may include the use of bespoke equipment to wash and shred waste to aid physical separation and recovery. The activities are carried out within a building with an impermeable surface with a sealed drainage system which discharges to foul sewer via a trade effluent discharge consent with the Statutory Undertaker. The permit does not allow any point source emissions into surface waters or groundwater except clean surface water from roofs or from areas of the site that are not being used in connection with storing and/or treating waste. There are no monitoring or reporting requirements at the site. Natural UK Ltd now wish the vary the Environmental Permit for their Healthcare Management Facility. The operator seeks to add a waste sterilisation process to treat infectious clinical waste (waste code 18 01 03*). The proposed waste treatment process will utilize an established technology, which will comprise of a relatively small, compact self-contained unit which will have a maximum capacity of 5 tonnes per day (approximately 5 bins per hour) if running constantly 24/7. The plant will be situated in an enclosed building within the current Environmental Permit Boundary. The clinical waste will be brought to site in wheely bins and weighed electronically. The bins will be lifted mechanically, and the contents will be tipped into a sealed loading hopper where it will then enter a hydraulic press and subsequently be shredded. The waste will then be mixed in a sub-shredder hopper, at this point the waste may be dampened down with water. The waste will then be disinfected via microwave treatment before entering the holding hopper where temperatures will be held at 100°C for one hour (via electronic heating). The waste will be left to cool in the holding hopper and then pass through the exit screw, after which it will be compacted and baled and used as solid recovery fuel (SRF) in energy from waste applications. The condensed liquid that results from the dampening of waste will be collected and fed back into the system, therefore, there will be no effluent to discharge. This treatment process will provide Level 3 Disinfection to the clinical wastes. The air from the hoppers will be cleansed prior to release to the atmosphere via Hepa Filters. Additionally, the operator would like to add EWC waste code 19 08 01 (sewage screenings) to the list of permitted wastes. This waste will undergo treatment at the existing non-hazardous treatment plant at the site, currently used for absorbent hygiene products (AHP's), such as nappies. The screenings will be delivered to the site in an

	enclosed skip and will be stored within the skip internally. The waste will be unloaded from the skip via a loading shovel / grab inside the building. This waste will then be loaded onto the conveyor, shredded to <40mm and washed in a friction washer. Following this, the waste will be squeeze dried in a compaction screw. The washing process will be repeated 3 times and the waste will be chlorinated. The output material will then be fiberized in a granulator and milled to form fibre pellets. The resulting pellets will be placed into a sealed container for transfer off site to an appropriate facility. It should be noted that the storage, treatment, loading and unloading of this waste will be carried out within the building on site on an impermeable surface with a sealed drainage system. Despite the addition of this waste code, it is not proposed to alter the current permitted waste tonnages for storage or treatment. As part of this variation, the current permit boundary is proposed to be extended to include the area currently owned by the operator and situated adjacent to the north-east of the current permit boundary. This is shown in **Drawing No. NU1000/06/01**. This will be utilised for non-waste storage and will be subject to further engineering (e.g. impermeable surfacing, sealed drainage, buildings etc) should treatment operations eventually expand into this area. External operations will solely consist of the unloading and loading of waste upon its arrival/departure from the proposed site.
Non-permitted activities undertaken	Ancillary operations to support daily running of the proposed site, including: • A Weighbridge; • Container Storage and vehicle park; • The operation of site offices and welfare facilities; • Staff Car Parking; and • Discharges from site offices to Foul Water Sewer.
Document references for: • **plan showing activity layout; and** • **environmental risk assessment.**	**NU1000/06/03** – Indicative Operational Layout **NC-001-014** – Environmental Risk Assessment **EP-09** – Emergency and Incident Response Management Plan