

SITE CONDITION REPORT

Protos Generation Plant

For full details, see H5 *SCR guide for applicants* v2.0 4 August 2008

COMPLETE SECTIONS 1-3 AND SUBMIT WITH APPLICATION

DURING THE LIFE OF THE PERMIT: MAINTAIN SECTIONS 4-7

AT SURRENDER: ADD NEW DOC REFERENCE IN 1.0; COMPLETE SECTIONS 8-10; & SUBMIT WITH YOUR SURRENDER APPLICATION.

1.0 SITE DETAILS	
Name of the applicant	Baker Street Generation Limited
Activity address	Land of Ash Road, Elton, CH2 4RX
National grid reference	SJ 46601 76109

Document reference and dates for Site Condition Report at permit application and surrender	<p>Application:</p> <ul style="list-style-type: none"> • Site Condition Report Protos v1 July 2023 • Appendix K Phase One Geoenvironmental Desk Study (Green Cat Geotechnical E5601-1326 v1 May 2023) • Appendix L Phase Two Geoenvironmental Report (Green Cat Geotechnical E506-1326 Final July 2023)
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Document references for site plans (including location and boundaries)	<p>Application:</p> <ul style="list-style-type: none"> • Appendix A Site Plan
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Note:

In Part A of the application form you must give us details of the site's location and provide us with a site plan. We need a detailed site plan (or plans) showing:

- Site location, the area covered by the site condition report, and the location and nature of the activities and/or waste facilities on the site.
- Locations of receptors, sources of emissions/releases, and monitoring points.
- Site drainage.
- Site surfacing.

If this information is not shown on the site plan required by Part A of the application form then you should submit the additional plan or plans with this site condition report.

2.0 Condition of the land at permit issue	
<p>Environmental setting including:</p> <ul style="list-style-type: none"> • geology • hydrogeology • surface waters 	<p>A review of available information has been conducted by Green Cat Geotechnical and presented in Section 3.4 of Appendix K Phase One Geoenvironmental Desk Study. A Groundsure report is contained within Appendix K.</p> <p>Geology</p> <p>The geological maps for the area indicate that the site is underlain by tidal flat deposits, so likely soft clays, silts and sands. With depth, the shallow tidal soils will be underlain by glacial till ("diamicton" – so likely "boulder clay"). The geological maps do not show any made ground on or near to the site. The presence of any peat is also not shown on the maps. However, given the location of the site in boggy/waterlogged ground it would not be entirely unexpected.</p> <p>Bedrock is indicated to belong to the Kinnerton Sandstone Formation, of early Triassic age, and would be expected to comprise predominantly fine to medium grained aeolian sandstones.</p>

The British Geological Survey holds the record of seventeen boreholes within 250m of the site. Four of these lie within 125m of the site, three to the south and one to the west. Those four boreholes closest to the site found generally a surface layer of clay, underlain by a band of peat of varying thickness between 0.2m and 2.5m. Beneath the peat, the boreholes found soft soils and glacial till (generally "boulder clay"), resting on sandstone bedrock at depths between 12.0m and 18.5m.

Mining and Worked Ground

The site does not lie within the Coal Authority reporting area. No underground mining would be expected beneath the site. The Groundsure report does show two areas of worked ground within 250m of the site. However, these appear to be former settlement ponds for the nearby Ince A Power Station and are not considered to have impacted the site in any way. Accordingly, the potential risks to the site from past mining and worked ground are considered to be negligible.

Hydrogeology

The Groundsure report indicates that the permeability of the superficial soils beneath the site is likely to vary between very low and moderate, most likely depending on the proportion of fine material within the soils. Beneath the tidal flat deposits, the underlying glacial clay is considered likely to be fairly impermeable. The permeability of the sandstone bedrock at the site is indicated to be high, with intergranular flow within the rock likely. Based on information from the Environment Agency, the Groundsure report indicates that the superficial soils at the site are designated as an undifferentiated Secondary Aquifer. This designation is given when it is not possible to define the aquifer as a Secondary A Aquifer (locally important, in some cases for supplying base flow to rivers) or Secondary B Aquifer (generally lower in permeability, but may yield water in some localised zones), as a result of the variable nature of the soils. The sandstones of the Kinnerton Formation are designated as a Principal Aquifer, with high intergranular permeability and thus a high level of water storage. Such aquifers may support water supplies and/or river base flow on a strategic scale.

The Environment Agency indicates that the superficial soils and bedrock at the site are generally productive aquifers. The superficial soils are indicated to be of medium vulnerability and bedrock is indicated to be of low vulnerability.

Any nearby active groundwater abstractions appear to be well off to the west of the site, related to the Stanlow Oil Refinery. The site does not lie within a source protection zone. Shallow groundwater movement at the site is most likely to be to the north, towards the Mersey estuary.

Hydrology

There are a number of drainage ditches running through the area and indeed on the site itself. Most of these appear to run from north to south or from south to north, or a little west of that, and drain into the stream just to the north of the site. That stream flows into the Holepool Gutter, around 1km east of the site, ultimately reaching the Mersey estuary off to the north-east.

There are no active surface water abstractions within 2km of the site.

The Groundsure report indicates that the site lies on a Zone 3 floodplain. The report also indicates that the site could be at risk from surface water or groundwater flooding. However, a detailed consideration of the risk to the site from flooding was outside the scope of this report.

	<p>Radon</p> <p>The Groundsure report indicates that the site does not lie in an area where radon concentrations in more than 1 per cent of properties are above the Action Level. On that basis, no radon protection measures should be necessary.</p>
<p>Pollution history including:</p> <ul style="list-style-type: none"> • pollution incidents that may have affected land • historical land-uses and associated contaminants • any visual/olfactory evidence of existing contamination • evidence of damage to pollution prevention measures 	<p>Please refer to section 3.3 in Appendix K Phase One Geoenvironmental Desk Study for a full history of the site.</p> <p>In summary, although there has been significant development and redevelopment in the area surrounding the site from the 1960's until now, the site itself appears never to have been developed. It would seem to have lain only as fields or as a single field from publication of the earliest OS maps to the present day.</p> <p>Nearby historical development to note include:</p> <ul style="list-style-type: none"> • Ince A Power Station was commissioned and opened in 1957, burning coal that was brought to the site by rail from the East Midlands coalfields. However, the plant is understood to have been closed and demolished in the mid 1980's, with the exception of one of the cooling towers which stood until 1999. The site of Ince A now lies vacant. • Ince B Power Station was an oil-fired power station, which lay on a site to the west of Ince A. Opened in 1984, the power station was supplied by oil from the nearby Stanlow Oil Refinery or by ship from the Manchester Ship Canal. The plant was closed in 1997 and had been demolished entirely by 1999. The site is now occupied by a large glass factory (Encirc). • Originally built as an ammonia plant by Shell in the mid 1960's, fertilisers have been produced in the plant to the north of the site since 1969. Now operated by CF Fertilisers, as of 2022, the plant has been earmarked for closure.
<p>Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)</p>	<p>Essentially, the desk study identified the only source of potential contamination on the site would be from any made ground that had been deposited on the site during construction of the road to the south or a railway siding (now dismantled) to the east. The nature of any such contamination would depend on the source of the soils, but could include contamination by metals, hydrocarbons (including PAHs), acids and alkalis and potentially asbestos.</p> <p>Although unlikely given the topography of the site, if any made ground was of significant thickness, then hazardous ground gases (carbon dioxide and methane) could also be generated. Hazardous ground gases could also be generated by the natural soils beneath the site.</p>
<p>Baseline soil and groundwater reference data</p>	<p>Baseline soil and groundwater reference data has been undertaken by Green Cat Geotechnical and the results are presented within Appendix L Phase Two Geoenvironmental Report.</p>
<p>Supporting information</p>	<ul style="list-style-type: none"> • <i>Source information identifying environmental setting and pollution incidents</i> • <i>Historical Ordnance Survey plans:</i> • <i>Site reconnaissance</i> • <i>Historical investigation / assessment / remediation / verification reports</i> • <i>Baseline soil and groundwater reference data</i> <p>All supporting information is contained within the following reports:</p> <ul style="list-style-type: none"> • Appendix K Phase One Geoenvironmental Desk Study (Green Cat Geotechnical E5601-1326 v1 May 2023), including Groundsure report appended to Appendix K.

	<ul style="list-style-type: none"> Appendix L Phase Two Geoenvironmental Report (Green Cat Geotechnical E506-1326 Final July 2023).
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3.0 Permitted activities	
Permitted activities	Section 1.1 Part A(1)(a) of The Environmental Permitting (England and Wales) Regulations 2010 ('The EPR Regs'): <i>Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.</i>
Non-permitted activities undertaken	<ul style="list-style-type: none"> Management of surface water drainage Storage of lubricating oil
Document references for: <ul style="list-style-type: none"> plan showing activity layout; and environmental risk assessment. 	<ul style="list-style-type: none"> Appendix A Site Plan Appendix I Environmental Risk Assessment

Note:

In Part B of the application form you must tell us about the activities that you will undertake at the site. You must also give us an environmental risk assessment. This risk assessment must be based on our guidance (*Environmental Risk Assessment - EPR H1*) or use an equivalent approach.

It is essential that you identify in your environmental risk assessment all the substances used and produced that could pollute the soil or groundwater if there were an accident, or if measures to protect land fail.

These include substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) regulations and also raw materials, fuels, intermediates, products, wastes and effluents.

If your submitted environmental risk assessment does not adequately address the risks to soil and groundwater we may need to request further information from you or even refuse your permit application.

4.0 Changes to the activity	
Have there been any changes to the activity boundary?	If yes, provide a plan showing the changes to the activity boundary.
Have there been any changes to the permitted activities?	If yes, provide a description of the changes to the permitted activities
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	If yes, list of them
Checklist of supporting information	<ul style="list-style-type: none"> • Plan showing any changes to the boundary (where relevant) • Description of the changes to the permitted activities (where relevant) • List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)

5.0 Measures taken to protect land	
Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.	
Checklist of supporting information	<ul style="list-style-type: none"> • Inspection records and summary of findings of inspections for all pollution prevention measures • Records of maintenance, repair and replacement of pollution prevention measures

6.0 Pollution incidents that may have had an impact on land, and their remediation	
Summarise any pollution incidents that may have damaged the land. Describe how you investigated and remedied each one. If you can't, you need to collect land and /or groundwater reference data to assess whether the land has deteriorated while you've been there.	
Checklist of supporting information	<ul style="list-style-type: none"> • Records of pollution incidents that may have impacted on land • Records of their investigation and remediation

7.0 Soil gas and water quality monitoring (where undertaken)

Provide details of any soil gas and/or water monitoring you did. Include a summary of the findings. Say whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how you investigated and remedied this.

Checklist of supporting information	<ul style="list-style-type: none">• Description of soil gas and/or water monitoring undertaken• Monitoring results (including graphs)
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8.0 Decommissioning and removal of pollution risk

Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.

Checklist of supporting information	<ul style="list-style-type: none">• Site closure plan• List of potential sources of pollution risk• Investigation and remediation reports (where relevant)
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9.0 Reference data and remediation (where relevant)

Say whether you had to collect land and/or groundwater data. Or say that you didn't need to because the information from sections 3, 4, 5 and 6 of the Surrender Site Condition Report shows that the land has not deteriorated.

If you did collect land and/or groundwater reference data, summarise what this entailed, and what your data found. Say whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a "satisfactory state". If it isn't, summarise what you did to remedy this. Confirm that the land is now in a "satisfactory state" at surrender.

Checklist of supporting information	<ul style="list-style-type: none">• Land and/or groundwater data collected at application (if collected)• Land and/or groundwater data collected at surrender (where needed)• Assessment of satisfactory state• Remediation and verification reports (where undertaken)
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10.0 Statement of site condition

Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that:

- the permitted activities have stopped
- decommissioning is complete, and the pollution risk has been removed
- the land is in a satisfactory condition.