

Application SCR evaluation template

Name of activity, address and NGR	<p>AMG Resources Limited Hartlepool Scrap Tin Recovery Facility Longhill Industrial Estate Hartlepool Cleveland TS25 1PA</p> <p>National Grid Reference 451230, 530820</p>
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Document reference of SCR	<p>EPR/LP3832ST/A001 – Application Site Condition Report submitted with ExCAL Document ES1575.02.KKE Application Site Condition Report for PPC Application LP3832ST, August 2005</p> <p>EPR/LP3832ST/S003 – Surrender Site Condition Report, ECL Document P181/R031 Surrender Site Condition Report, September 2015.</p>
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Supporting Documents	<p>Surrender – January 2016 (received 07/01/16) Applications Forms A, E2 and F for permit surrender; Opra profile spreadsheet; Surrender Site Condition Report – Hartlepool post consumer packaging recover facility; Decommissioning Plan; ECL Document P181/R024- September 2013. Email report (dated 02/11/2016) & analytical analysis (16-80513) – Further Investigation Data</p>
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1.0 Site details

Has the applicant provided the following information as required by the application SCR template?

Site plans showing site layout, drainage, surfacing, receptors, sources of emissions/releases and monitoring points

Yes reviewed and accepted at the permit determination.

- The site location is shown on ECL Drawing P181/HP.D1;
- The site boundary, site layout (including operational areas, drainage, electricity and gas) is shown on ExCAL Drawing 02-02-02-06.D1;
- The location of all storage tanks is shown on ECL Drawing P181.002;
- The location of raw materials, products and waste storage areas is shown on ExCAL Drawing P1575.D04;and
- The location of groundwater monitoring boreholes is shown on ExCAL Drawing 02-02-03-06.D03.Rev1.
- Surface water drainage for the site is shown on ExCAL Drawing ES1575.D02

2.0 Condition of the land at permit issue

(Receptor)

Has the applicant provided the following information as required by the application SCR template?

- a) Environmental setting including geology, hydrogeology and surface waters
- b) Pollution history including:
 - pollution incidents that may have affected land
 - historical land-uses and associated contaminants
 - visual/olfactory evidence of existing contamination
 - evidence of damage to existing pollution prevention measures

2.0 Condition of the land at permit issue

(Receptor)

Has the applicant provided the following information as required by the application SCR template?

- c) Evidence of historic contamination (i.e. historical site investigation, assessment, remediation and verification reports (where available))
- d) Has the applicant chosen to collect baseline reference data?

The geological sequence beneath the site was anticipated to be an unknown depth of made ground cover, superficial deposits of undifferentiated raised marine deposits on sand, silt and clay underlain by Sherwood sandstone group formation.

An intrusive site investigation was initially undertaken in September 2006, at the request of the applicant, to characterise substances identified as being present or potentially present in, on or under the ground in the Application Site Report which was submitted with the Permit Application (EPR/LP3832ST/A001).

Following the October 2006 intrusive investigation this confirmed that the bedrock in the area consist of Permo-Triassic sandstones (Bunter Sandstones and Keuper Marls). The Groundwater Vulnerability Map (GWV Sheet 5 Tyne and Tees) of the area indicates the rocks beneath the site are classed as Non Aquifer. The sole surface water feature is the North Sea, approximately 250 metres east of the site.

Data, relating to soil and groundwater, was collected from the site investigation and was reviewed following analysis. From the findings of the report a site protection and monitoring programme was then designed (report submitted to EA August 2006, ExCAL Report 02-02-02-06/KKE) and reviewed every two years in accordance with permit conditions. From the information gathered during the October 2006 site investigation it is clear that the AMG Resources site has a long industrial history which has inevitably led to some soil and groundwater contamination. The majority of the contamination involves materials not used or processed by AMG Resources and is from previous industries which have occupied sections of the site. The exceptions to this are the contamination of tin and total petroleum hydrocarbons (TPH). Nickel levels are also high which would be expected due to the TPH contamination.

The southern end of the site has elevated levels of lead, cadmium, copper, arsenic, zinc, sulphate and nickel. These areas lie adjacent to the landfill site. In general, the contamination is concentrated in discrete locations ('hotspots'). Some areas, in particular the section where the AMG works are situated, have high levels of tin contamination which may be directly attributed to the tin recovery process carried out by AMG Resources (and predecessors of AMG). An area occupied (or previously occupied) by oil storage tanks are contaminated by petroleum hydrocarbons. It may be concluded that the site occupied by AMG Resources is contaminated (by metals and oil) but that the majority of this is due to past industries not associated with the current use. The contamination has low leachability potential and should not, in theory, pose a risk to the environment.

3.0 Permitted activities

(Source)

Has the applicant provided the following information as required by the application SCR template?

**Response
(Specify what information is needed from the applicant, if any)**

- a) Permitted activities
- b) Non-permitted activities undertaken at the site

The permitted activities are listed in Section 2.2 A(1)(a) of the Environmental Permitting Regulations, namely Producing non-ferrous metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic activities. In the case of AMG Resources, this refers to the extraction of tin from secondary raw materials by electrolysis in sodium hydroxide. Full process descriptions are provided in ExCAL Report ES1575.02.

3.0(a) Environmental Risk Assessment

(Source)

The H1 environmental risk assessment should identify elements that could impact on land and waters, cross- referenced back to documents and plans provided as part of the wider permit application.

Yes reviewed and accepted at the permit determination.

3.0(b) Will the pollution prevention measures protect land and groundwater?

(Conceptual model)

Are the activities likely to result in pollution of land?

No. All bunds, storage tanks and associated pipe work are checked on a regular basis in accordance with the sites Environmental Management System. The site also implements a Site Protection Monitoring Programme. Groundwater monitoring is undertaken on a six monthly basis. All monitoring requirements are written into the sites Environmental Management System under the Environmental Monitoring and Measurement Procedure (EAP06).

Personnel responsible for sampling, maintenance and inspection will be trained in environmental monitoring to an appropriate level to ensure compliance with the quality assurance and quality control plan.

Environmental Assurance Training, in accordance with the sites Environmental Management System, will be given to all staff who will be undertaking and monitoring. It is the responsibility of the Site Manager to ensure that all staff are competent.

The existing inspection, testing and maintenance of pollution prevention infrastructure programme meets the following objectives

- *to monitor the effectiveness of infrastructure and management procedures and provide a warning of loss of containment.*
- *defensive monitoring of a sensitive receptor (e.g. monitoring up-gradient of a borehole)*
- *to assist at Permit Surrender by: -*
 1. *determining the movement of pollutants onto or off the site of an installation.*
 2. *determining the movement of pollutants within a site.*
 3. *providing data on long term trends.*

For dangerous and/or hazardous substances only, are the pollution prevention measures for the relevant activities to a standard that is likely to prevent pollution of land?

Yes.

Application SCR decision summary

Tick relevant decision

Sufficient information has been supplied to describe the condition of the site at permit issue

Y

Pollution of land and water is unlikely;

Y

Historical contamination is present- advise operator that collection of background data may be appropriate

Y

Date and name of reviewer: M J Derbyshire (04/03/2016)

Operational phase SCR evaluation template

Sections 4.0 to 7.0 may be completed annually in line with normal record checks.

4.0 Changes to the activities (Source)	
Have there been any changes to the following during the operation of the site?	Response (Specify what information is needed from the applicant, if any)
a) Activity boundaries b) Permitted activities c) "Dangerous substances" used or produced	
<i>There have been no changes to the activity boundary or permitted activities since the permit application.</i>	

5.0 Measures taken to protect land To be completed by EM/PPC officers (Pathway)
Has the applicant provided evidence from records collated during the lifetime of the permit, to show that the pollution prevention measures have worked?
<i>Permit conditions, monitoring and infrastructure control.</i>

6.0 Pollution incidents that may have impacted on land and their remediation To be completed by EM/PPC officers (Sources)
Has the applicant provided evidence to show that any pollution incidents which have taken place during the life of the permit and which may have impacted on land or water have been investigated and remediated (where necessary)?
<i>No known pollution incidents have occurred since the permit was issued.</i>

7.0 Soil gas and water quality monitoring (where relevant)
Where soil gas and/or water quality monitoring has been undertaken, does this demonstrate that there has been no change in the condition of the land? Has any change that has occurred been investigated and remediated?
<i>n/a</i>

Surrender SCR Evaluation Template

8.0 Decommissioning and removal of pollution risk

Has the applicant demonstrated that decommissioning works have been undertaken and that all pollution risks associated with the site have been removed? Has any contamination of land that has occurred during these activities been investigated and remediated?

The site ceased operations in December 2013 and was decommissioned over the following months. All decommissioning operations had ceased by May 2014 and the site was sold in October 2014. It was decided in April 2015 that AMG would apply to surrender the permit. Further to discussion with the EA, an intrusive investigation was required as part of the surrender application as the soil and groundwater had been sampled when the permit was applied for.

The intrusive investigation was undertaken in August 2015 and demonstrated that in general contamination levels across the site have decreased since the 2006 site investigation. It can therefore be concluded that the condition of the soil and groundwater has not deteriorated since permit issue and consequently no further action is required.

Decommissioning of the site was undertaken in accordance with the Site Decommissioning Plan (ECL Document P181/R024- September 2013).

The site Decommissioning Plan for the Hartlepool site can be divided into ten key steps:

Step 1: staged safe shut down of all production processes;

Step 2: maintenance of safe chemical storage conditions;

Step 3: prepare inventory of all hazardous materials stored on site;

Step 4: transfer of documentation to management team supervising the demolition/decommissioning procedure;

Step 5: sale and transportation of all finished products from site;

Step 6: safe emptying of all storage tanks, disconnection and return of all gas cylinders; flushing and decontamination of all tanks, pipework and process equipment;

Step 7: dismantling and sale of process equipment;

Step 8: survey of site structures and buildings;

Step 9: demolition of designated buildings;

Step 10: make safe any historically contaminated ground or surface water and soil.

9.0 Reference data and remediation

Has the applicant provided details of any surrender reference data that they have collected and any remediation that they have undertaken?

The scope of the intrusive investigation, together with the location of the window samples and trial pits was agreed locally with the EA. In addition it was also confirmed by the Groundwater and Contaminated Land team that if the boreholes and window samples are dry (which most of them were) sampling/monitoring data collected when the site had been closed and all equipment removed from site could be used in the surrender application. It should also be noted that decommissioning activities had already commenced on site, and were ongoing, when the intrusive investigation commenced. A number of the boreholes could not be found, and also a number of window sample locations were moved slightly due to health and safety reasons.

AMG Resources have concluded that the site is slightly contaminated (by metals and oil) but as the levels of these contaminants have, in the majority of cases, reduced over the nine years that AMG have held the permit, AMG have not caused any further contamination of the land, and consequently that land is in a satisfactory state.

30/11/2016 update: There is a slight generally site wide increase in total TPH from shallow groundwater. There appears to be no obvious source for this, with it not associated with a poorly constructed bund previously noted on site that was taken out of service. Additional SI was undertaken to help show no gross contamination or source associated with the bund.

Surrender SCR decision summary	Tick relevant decision
Sufficient information has been supplied to show that pollution risk has been removed and that the site is in a satisfactory state – accept the application to surrender the permit; or	✓
Date and name of reviewer John Collins 30/11/2016	