

Application SCR evaluation template

Name of activity, address and NGR	<p>Aylesford Newspaper CHP Site. Newsprint House, Bellingham Way, Aylesford, Kent, ME20 7DL.</p> <p>National Grid Reference of the approximate centre of the CHP site is TQ 7135 5956.</p> <p>Environmental Permit Reference EPR/WP3634RR. Surrender of Environmental Permit Reference EPR/WP3634RR/S002.</p>
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Document reference of application SCR	IPPC Site Condition Report – Energy Site for Aylesford Newsprint Services Limited. Phase 1a and Phase 1b.
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Date and version of application SCR	August 2002, JER2014 - Revision A.
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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.

The Operator provided a series of Environmental Reports and drawings at the time the original application was made. These reports and drawings provided by the Operator were reviewed and accepted by the Environment Agency at the application stage.

2.0 Condition of the land at permit issue

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.
- 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 site is located approximately 1km to the north-east of Larkfield near Maidstone in Kent. The site has an approximate area of 4,200m² and is relatively flat with ground levels typically between 4m and 5mAOD. The site is bounded by Aylesford Newsprint paper mill to the west and south and at the time of permitting, SCA Packaging site bounded the north. Railway lines form the eastern boundary.

The geological sequence at the site is as follows:
Made Ground, Alluvium, River Terrace Deposits, Folkestone Beds, Sandgate Beds and Hythe Beds.

The EA classified the River Gravels, Folkestone Beds and Hythe Beds as major aquifers and consequently they were considered sensitive receptors with respect to impact from contamination. The River Gravels are in hydraulic continuity with the underlying Folkestone Beds and the two strata were considered to be the same aquifer in this respect. The River Terrace Deposits are highly permeable and the groundwater is likely to be tidally influenced near the river. However, this aquifer is likely to become more brackish with proximity to the River Medway and of poor quality for many abstraction purposes.

Groundwater flow direction is likely to be eastwards towards the River Medway. Local flow directions may have been modified by industrial groundwater abstractions up gradient of the site and the presence of historical drainage features. The Hythe Beds are known to be highly productive and able to support large

2.0 Condition of the land at permit issue

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

abstractions for public water supply and other purposes. The site is within a Source Protection Zone. The northern area of the site was recorded as being within an Inner Protection Zone and the south of the site is within a Total Catchment Protection Zone. The River Medway flows south to north 250m to the east of the site and is tidal for approximately 2km upstream of the site. Ditton/Mill Stream flows eastwards toward the River Medway 500m to the south of the site.

The site comprised agricultural land until 1933. Aylesford Paper Mill was first built in 1938 and included tanks, travelling crane and a pipe bridge. A railway ran parallel to the site. The site was extended to the north in 1948. Between 1963 and 1973 several cylindrical and square tanks were located on site.

A number of site investigations have been undertaken at the site. The intrusive investigation carried out in May 2002 concluded that Areas 3, 5 and 6 had soils contaminated by hydrocarbons of a similar chemical composition to materials that were likely to be used during the operation of the site (slightly elevated DRO concentrations were identified in soils in Borehole WSE1 (DRO 1611mg/kg), WSE2 (DRO 1714mg/kg), WSE10 (DRO 1246mg/kg), WSE11 (DRO 1661mg/kg)) and that Areas 1, 2, 4 and 6 (water treatment plant area, western side of the CHP area, railway spur, and railway spur/pipe bridge) had groundwater contaminated by hydrocarbons of a similar chemical composition to materials that were likely to be used during the operation of the site (slightly elevated concentrations of various determinands were identified in groundwater in boreholes WSE2 (visual and olfactory evidence of hydrocarbons), WSE6 (PRO 73µg/l), WSE7 (Ammoniacal-N 1.7ppm and lube oil 272µg/l), WSE9 (DRO 343mg/kg)).

3.0 Permitted activities

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

Section 1.1 A(1) (a) - burning any fuel in an appliance with a rated thermal input of 50 megawatts or more comprising:

- one gas or oil fired gas turbine as a combined heat and power plant
- restricted operation of one gas fired open cycle gas turbine to directly generate electricity for export to the National Grid
- one Heat Recovery Steam Generator (HRSG)
- one steam turbine
- two condensers
- two starting diesel engines
- two auxiliary boilers.

Directly associated activities were treatment of water, distillate fuel oil storage and use, and transfer of water treatment plant effluent and surface water runoff to effluent treatment plant (at the paper mill site). Above ground tanks were used to hold/store boiler blown down water, ammonia, distillate fuel oil, phosphate and condensate. Below ground structures included oil sumps, interceptors, caustic tank and sulphuric acid bunds.

Aylesford Newsprint Ltd applied for a permit to operate a Part A1 installation (CHP Plant and associated water treatment plant and the storage and use of distillate fuel oil and transfer of effluent to the effluent treatment plant on the main ANL paper making site) under the Pollution Prevention and Control (PPC) Regulations 2000 in February 2001 and this was determined in 2003 with the grant of Environmental Permit BJ7344IP. Prior to this the site was regulated under an IPC permit reference AA2941 which was issued in April 1992.

3.0(a) Environmental Risk Assessment

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.

The Environment Agency reviewed the Operator's environmental risk assessment including the potential for environmental impact from emissions to air. The environmental risk assessment was reviewed at the time of the original permit determination and accepted as satisfactory.

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

Are the activities likely to result in pollution of land?

It was concluded that there was little likelihood of pollution arising from the operation of the installation provided that it was operated and maintained correctly. There were no direct discharges of hazardous substances or non-hazardous pollutants to groundwater from the site. To ensure the continued effectiveness of pollution prevention measures to protect the land the Operator was required to implement and operate under a Site Protection and Monitoring Programme.

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?

The Environmental Management System included operational procedures covering all aspects of the generation process and associated activities. Site procedures were regularly reviewed and audited as well as a schedule of maintenance and inspection which included planned shutdowns.

Application SCR decision summary	Tick relevant decision
Sufficient information has been supplied to describe the condition of the site at permit issue	Yes.
Pollution of land and water is unlikely	Yes.
Date and name of reviewer:	Liz Ebbs 03/11/2016

Operational phase SCR evaluation template

4.0 Changes to the activities	
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) "Hazardous pollutants" used or produced.	
<p>There have been no changes to the permitted installation boundary or to the permitted activities during the lifetime of this permit. Dangerous and/or hazardous substances used on site included but weren't limited to distillate fuel oil, caustic soda, sulphuric acid, sodium hydroxide, ammonia, phosphate, transformer oils and lubrication oils.</p>	

5.0 Measures taken to protect land	
Has the applicant provided evidence from records collated during the lifetime of the permit, to show that the pollution prevention measures have worked?	
<p>Systems in place at the installation to protect land included:</p> <ul style="list-style-type: none"> ➤ Environmental Management System accredited to the ISO:14001:2004 included policies and procedures for all potentially harmful activities on site ➤ Planned Preventative Measures and Maintenance Programme ➤ Integrated Health & Safety Management System for recording any environmental incidents ➤ monthly internal environmental reports produced by an independent Environmental Scientist including regular site wide monitoring of groundwater and final effluent ➤ Metso Distributed Control System to notify operators of any faults with the plant ➤ specified operational procedures ➤ inspection, testing and maintenance programme in accordance with infrastructure manufacturers recommendations ➤ inspection, testing and maintenance programme to comply with Health and Safety Regulations. <p>Raw material inventories and environmental records on site show no evidence of historical loss of raw materials at the site during operations and decommissioning. These include transfer notes, incident records, inspections, monitoring, notifications and a chemical inventory. Environmental monitoring of the facility during the operational and decommissioning phases have supported the position that there have been no deterioration of site conditions during the lifetime of the permit. Environmental monitoring and reporting have been conducted throughout the operation of the facility and in line with the environmental permit conditions. Fuel Delivery Procedures were based on Oil Storage Regulations best practice, Spill Procedures in place and all hazardous substances were provided with appropriate containment measures within buildings.</p> <p>Site inspections were carried out on the chemical storage areas to ensure that all containers were stored in the contained area and to monitor any visible spillages. All chemicals were assessed for hazardous properties. This allowed the site to ensure that all non-hazardous and hazardous wastes were segregated and stored separately. Flammable and/or explosive chemicals were stored in appropriate containers and isolated from ignition sources.</p> <p>In order to prevent any spillages entering the River Medway water was collected into a dedicated drainage system that was fed to the on-site effluent treatment plant. Consequently any waters entering the drainage system in the energy site would have been treated before they were discharged into the River Medway. A site drainage survey was undertaken in 1999 to determine the robustness of the current site drainage. Results of the survey indicated that no significant leaks were detected that required remedial works.</p>	

6.0 Pollution incidents that may have impacted on land and their remediation

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)?

There was a ground investigation undertaken and reported on in August 2002, September 2002 and June 2003 regarding delineation of hydrocarbon contamination at the site. This was related to bio-degraded diesel identified during the baseline ground investigation for the original IPPC application. It was considered to have originated from a distilled fuel oil spill during 1995.

The small number of spillages that have occurred have been contained within operational buildings and/or the site drainage system and/or interceptors. All spills/leaks were cleared up within the hardstanding/sealed drainage areas with no release to the environment. These were recorded through the IHSM system in line with the Environmental Management System.

There is one record of a moderate leak having occurred from the lube oil tank due to a swagelock fitting failing in September 2008. This caused a slow depletion of oil from the main lube oil header (approximately 5,000l) into a blind sump and catchment pit and was contained within the CHP site without entering the drainage system.

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?

Phase 1a and Phase 1b site investigations were conducted in 2002 in order to establish the condition of the land on site at permit issue in support of the original IPPC permit application.

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?

Given the high sensitivity of the site (Source Protection Zone 1) an intrusive investigation was necessary to accurately compare the site to the initial site condition report and comprised a shallow investigation in the areas of concern identified in the Initial Site Condition Report for direct comparison. Despite the good operational practice on site unidentified leaks may still have occurred from buried drainage pipes, sumps or tanks and an investigation to quantify the condition of the site is justified and is in line with the Industrial Emissions Directive reporting requirements. Aylesford Newsprint Ltd commissioned RPS to produce the following reports:

- a Site Closure Plan dated July 2016 (JER6554)
- a Site Closure (Chemicals Management) Plan dated December 2015 (JER6554) to detail the programme and associated controls and procedure to oversee the decommissioning of the permitted activities and restoration to a satisfactory state with particular reference to chemicals management.
- a site closure plan for the CHP plant dated April 2012 (JER2014).

Following the closure of the Aylesford Newsprint Ltd site in February 2015:

- all plant closed, washed down and decommissioned
- all pipelines and drains jetted
- all fuel oil removed from site with all bulk fuel oil removed by either the supplier or by a licensed and approved waste contractor. Suitable storage of oil prior to removal or disposal. Paperwork retained
- all chemicals removed from site with all bulk chemicals removed by either the supplier or by a waste contractor. Suitable storage of chemicals prior to removal or disposal. Paperwork retained
- all wastes removed. Paperwork retained including waste returns and waste consignment notes for hazardous waste.

Small amounts of residual chemicals and oils which remained in the tanks and pipework were risk assessed to determine whether they could be processed with wash waters in the tank and processed via the Effluent Treatment Plant. These chemicals were mixed with clean wash water before being treated through the Effluent Treatment Plant. Some chemicals were identified as being harmful to the environment and these were not discharged. These chemicals were transferred to IBCs and removed by waste contractors. The concentrations of residual chemicals processed were calculated to ensure that the relevant ecotoxicity limit was not exceeded and a monitoring strategy implemented to ensure that no limits were exceeded with regards to the effluent discharge throughout the decommissioning phase.

There was one incident during the removal of chemicals from the site which was isolated and cleared up within the hardstanding/sealed drainage areas with no release to the environment. Pollution risks have been removed with the exception of lubrication oil which remains in the:

- gas turbines approximately 6,500l each
- gas compressors approximately 2,500l each
- steam turbine approximately 10,000l.

This is in order to prevent the plant seizing up whilst being mothballed and achieving a state of 'dead and dark' as detailed in the Site Closure Plan. Once a demolition date has been agreed the above described lubrication oil will be removed by a suitably qualified recycling contractor.

9.0 Reference data and remediation (where relevant)

Has the applicant provided details of any surrender reference data that they have collected and any remediation that they have undertaken? (Reference data for soils must meet the requirements of policy 307_03 Chemical test data on contaminated soils – quantification requirements). If the surrender reference data shows that the condition of the land has changed as a result of the permitted activities, the applicant will need to undertake remediation to return the condition of the land back to that at permit issue. You should not require remediation of historic contamination or contamination arising from non-permitted activities as part of the permit surrender.

A site closure site investigation was requested by the Environment Agency in the areas of concern formerly identified in the initial site condition report (2002) and subsequent Hydrocarbon Delineation Investigation for the Energy Site and the CHP Hydrocarbon Ground Investigation and Risk Assessment. This was required to provide soil and groundwater quality data from locations comparable with the data published in the initial site condition report in 2002 and from locations in areas of changed use in order to assess any impact from the operation of the site on the local environment and to support the surrender application.

The Phase 1a Desk Study report for the Paper Process Site was used as a basis for the design of a Phase 1b intrusive investigation in order to complete a Site Condition Report. The Phase 1b investigation included drilling 8 No. boreholes and testing of soil and groundwater samples in order to identify existing contamination of a similar nature to substances that may have been used on site in the future. The Phase 1b investigation identified four soil contaminant source (hydrocarbons) of a similar chemical composition to materials that were likely to be used during the operation of the site.

The contaminants identified were hydrocarbons in Area 3 (biodegraded diesel was identified in soils in Borehole WSE1), hydrocarbons in Area 5 (diesel / lube oil (Borehole WSE11) and biodegraded diesel / PAHs / kerosene / lube oils (Borehole WSE10) and hydrocarbons in Area 6 (biodegraded diesel was identified in soils, and probably groundwater in Borehole WSE2). The Phase 1b investigation also identified groundwater contamination of similar chemical composition to materials that were likely to be used during the operation of the site. Floating free phase hydrocarbons were not identified. The groundwater contaminants were recorded to be hydrocarbons in Area 1 (DRO in Borehole WSE6), hydrocarbons and ammoniacal nitrogen in Area 2 (ammoniacal nitrogen and lube oil in Borehole WSE7), hydrocarbons in Area 4 (biodegraded diesel and possible lube oil in Borehole WSE9) and hydrocarbons in Area 6 (visual and olfactory evidence of hydrocarbons in groundwater in Borehole WSE2). The contamination associated with Borehole WSE2 was being remediated at the time of the 2002 investigation.

Results of the investigation confirmed that there has been no discernible impact on the local environment during the lifetime of the environmental permit.

10.0a and 10b Statement of site condition

Has the applicant provided a statement, backed up with evidence, confirming that the permitted activities have ceased, decommissioning works are complete and that pollution risk has been removed and that the land and waters at the site are in a satisfactory state?

A Site Condition Report was produced by RPS in 2002 to support the IPPC permit application for the site and the environmental records and results of ongoing monitoring throughout the operational stage of the site have been compared against this baseline report to ascertain the condition of the land at present and are detailed further in the Site Condition Report 2016.

During pre-application discussions regarding the surrender of Environmental Permit EPR/BJ7344IP, the Environment Agency were supplied with a copy of a Ground Investigation Report produced by RPS, dated July 2016 for the Combined Heat and Power facility at the Aylesford Newsprint site. This report was also submitted with this permit surrender of EPR/WP3634RR/S002. The report presents the findings of an intrusive investigation undertaken to characterise the condition of the site for the future permit surrender. A comparison is made between the results of soil and groundwater analysis and those of a similar investigation undertaken at the time the permit was issued.

The concentrations of various substances found in the 2016 investigation are deemed to be of a similar magnitude to the initial site investigation and consequently the report concludes that activities undertaken during the lifetime of the Environmental Permit have not resulted in any apparent impact on the local environment.

The Environment Agency believe the report presents sufficient information to demonstrate to a reasonable degree of accuracy that the permitted activities at this site are not the source of elevated concentrations of contaminants of concern. Based on the findings of this report and given the comprehensive records of compliance procedures and groundwater monitoring outlined in the SPMP the Environment Agency have no objections to the surrender of this permit. The Environment Agency support the 'low risk' surrender fee as a demonstration of appropriate fee abatement in this case. This was confirmed in an email to the Applicant on 09 May 2016 and was also included with the surrender Application as Appendix 15 to the site condition report (Ref: JER6554, dated May 2016).

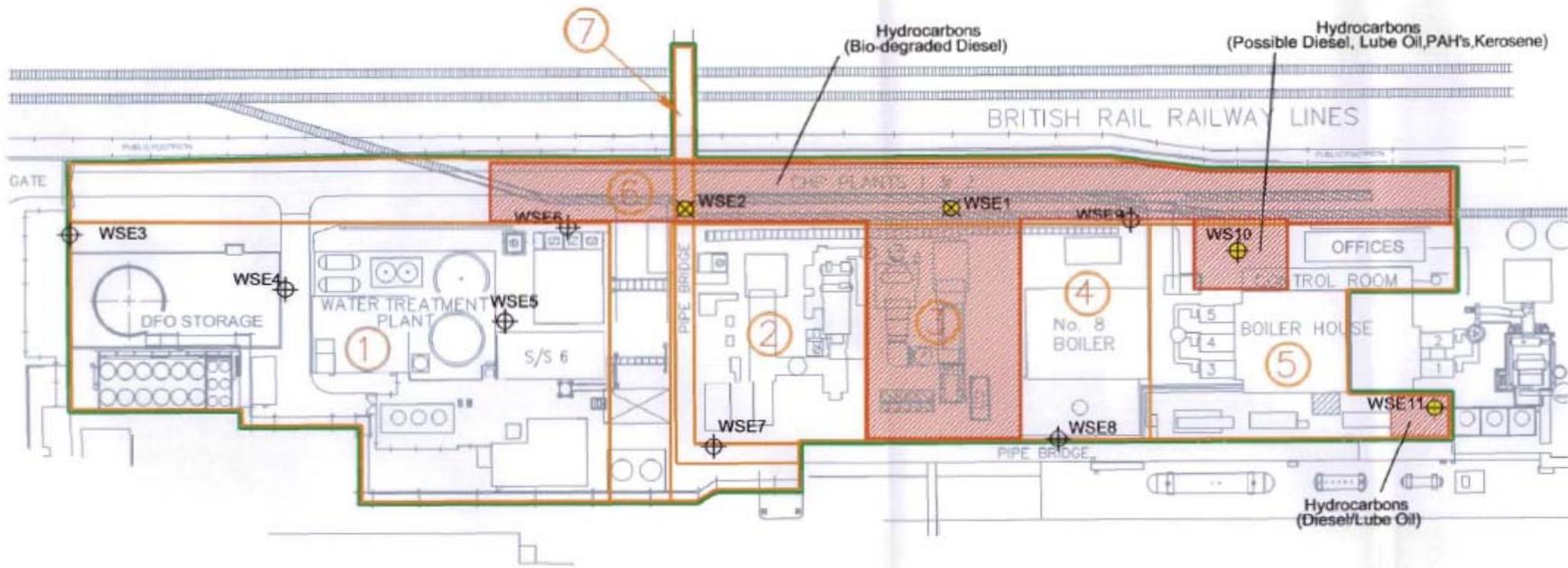
It should be noted that the documents submitted in support of a surrender do not negate the requirement for further investigations through any future planning application on this site which will need to address contamination present due to historic activities in this area.

It should also be noted that there is still a potential risk from the lubrication oils on site within the gas turbines, gas compressors and steam turbine approximately totalling 28,000l. If any spillages occur during the decommissioning of infrastructure or otherwise then further investigation and risk assessment maybe required in accordance with the Environmental Permitting Regulations. The Environment Agency would expect any demolition and decommissioning to be undertaken in a strictly controlled manner to ensure that contaminants are not exposed and releases allowed to air, land or controlled waters, which could cause pollution, harm or nuisance.

The Environment Agency confirms that the permitted installation has been returned to a satisfactory state.

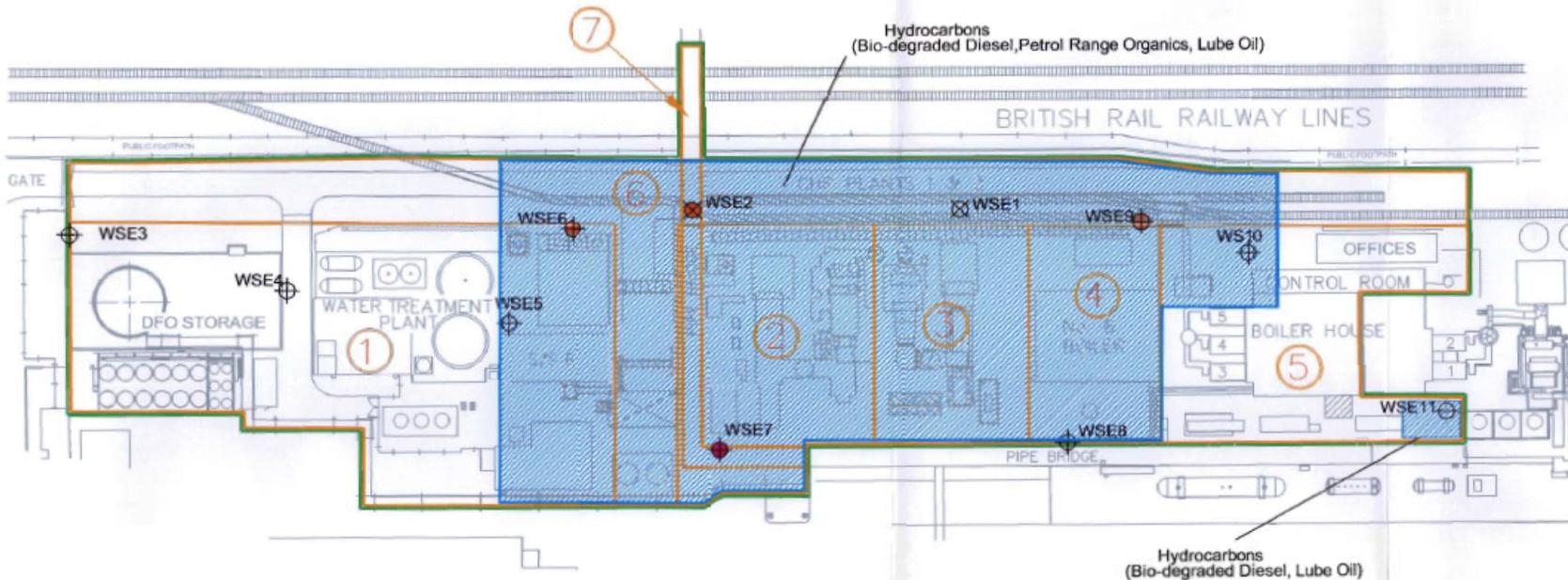
Surrender SCR decision summary	Tick relevant decision
Sufficient information has been supplied to show that pollution risk has been removed and that the site is in a satisfactory state – accept the application to surrender the permit; or	X
Date and name of reviewers: Liz Ebbs (NPS) – 03 November 2016. Kirsty Hobbs (NPS) – 15 November 2016. Tommy Lowden (GWCL) – 13 July 2016, 17 October 2016.	

EXISTING SOIL CONTAMINATION



- Key**
- WSE3 Borehole
 - WSE2 Borehole with Hydrocarbon Contamination
 - Areas with significant risk of historical soil contamination by substances of a similar type to those currently used.

EXISTING GROUNDWATER CONTAMINATION



- Key**
- WSE3 Borehole
 - WSE2 Borehole with Groundwater Contaminated by Hydrocarbons
 - WSE7 Borehole with Groundwater Contaminated by Hydrocarbons & Ammonial Nitrogen
 - Areas with significant risk of historical groundwater contamination by substances of a similar type to those currently used.