

## Application SCR evaluation template

Name of activity, address and NGR	Kingsnorth Power Station Hoo PO Box 15 Rochester Kent ME3 9LD  Centre of the site is at NG Ref. TQ 8115 7203
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Document reference of application SCR	Partial Surrender Application for Kingsnorth Power Station 09/12/2019  Ground Investigation Interpretative Report Kingsnorth Power Station On Behalf of E.ON UK Limited Date: May 2014 Ref: JER5486  JER5981 RPS Validation report for Coal Stock 131017
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Date and version of application SCR	N/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

NA. This is an application for Surrender

### 2.0 Condition of the land at permit issue

To be completed by GWCL officers  
(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
- 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?

Condition of Land at the Point of Permit Issue

The environmental setting is taken from permit application originally submitted in 2005, there was no requirement to collect land or groundwater data as part of the permit application process. However, there were several historic ground investigations used to produce the original site application report, the information from these investigations is not repeated in the surrender application

Geology and Hydrogeology

The geological sequence underlying the site, as determined by previous borehole surveys, is detailed in the BGS report and is summarised as follows:

- Made Ground (top of sequence), up to 5.2m thick.
- Alluvium, up to 7.0m thick.
- River Terrace deposits, up to 9.6m thick.
- London Clay (base of sequence), up to 17m thick.

The London Clay is underlain by various stratigraphic units including the Oldhaven Formation, Lambeth

## 2.0 Condition of the land at permit issue

To be completed by GWCL officers  
(Receptor)

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

Group and Thanet Formation. These collectively may attain a thickness of over 30m and comprise interbedded silts, sands and clays. This sequence is in turn underlain by the Chalk. The drift strata and London Clay underlying Kingsnorth Power Station are classified as Non- Aquifers. The nearest groundwater source protection zones are approximately 5km from the site, on the southern side of the estuary, associated with the Chalk Major Aquifer.

The Chalk Major Aquifer also supplies process water to Kingsnorth power station via a network of abstraction boreholes located to the north of the power station on the Hoo Peninsula. Perched groundwater within the superficial deposits, the River Terrace deposits underlying the Alluvium, is likely to be in hydraulic continuity with the Medway Estuary. Groundwater flow within the superficial deposits could be anticipated in a general southerly direction towards the Medway, subject to tidal influences.

#### Surface Waters

The nearest surface water features is the River Medway to the south and Damhead Creek to the north. The areas surrounding site drain into artificial channels and then into either the River Medway or Damhead Creek. The Site is defined as a Flood Zone 3 by the Environment Agency.

#### Coastal Waters

The majority of the Site is located on a peninsular which forms part of the mainland north of the River Medway. The eastern area of the Site is on a spit of land which protrudes into the Medway estuary. The cooling water for the station was taken via the inlet located on the northern bank of the Medway Estuary (south of Zone 1), was then used within the plant and then pumped to the outflow at Damhead Creek.

## 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

- A1. S1.1 A(1)(a)(i) burning fuel in an appliance with thermal input of 50MWth or more (Keeping)
- A2. S5.4 A(1)(b)(iii), Treatment of non-hazardous slags and ashes (removing from permit)
- A3. Fuel Storage (Removing)
- A4. Discharge of site drainage (Keeping)
- A5. Water treatment (Removing)
- A6. The generation and export of electricity (Removing)
- A7. Use of water from River Medway (Removing)
- A8. Waste Operation – deposit and treatment on land (Keeping)

### 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.

The site EMS includes a site protection and monitoring plan (SPMP). The SPMP was implemented and updated throughout the lifetime of Kingsnorth power station and this included during the period or decommissioning.

The Kingsnorth SPMP took a risk-based approach to ground pollution management. Bund and tank inspections were carried out throughout the life of the power station, these comprised of both investigations and assessments by consultants, and visual checks by site operations staff.

Given that:

- the areas of the site included in this surrender did not contain bunds or tanks,
- The two jetties did not have storage of materials other than small volumes of oils that would be in gearboxes and motors associated with the equipment that was used for unloading coal and oil.
- The coal conveyor that moved coal from the Long Reach Jetty to the site was only used for the transport of coal and not storage.
- The remaining coal in the coal yard was left at the end of operations was removed and contamination was removed during these works. This was confirmed by an RPS “Kingsnorth Coal Storage Area Remediation Baseline Sampling” dated 29/10/13 ref. JER 5981.

We consider there was a low risk of contamination of the areas of site being surrendered

### 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

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?

See above 3.0(a)

Application SCR decision summary	Tick relevant decision
Sufficient information has been supplied to describe the condition of the site at permit issue	NA
Information is missing- the following information must be obtained from the applicant.	NA
Pollution of land and water is unlikely; or	NA
Pollution of land and water is likely	NA
Historical contamination is present- advise operator that collection of background data may be appropriate	NA
Date and name of reviewer:	N/A

## 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	
<p>The Environmental permit for Kingsnorth Power Station was issued in March 2007. Kingsnorth ceased operation in December 2012. From December 2012 through to December 2018 the site went through a period of decommissioning and demolition. The site is now being prepared for redevelopment, Uniper are now applying for a partial surrender for some areas of the site as well as reducing the number of listed activities.</p> <p>The Applicant wishes to surrender parts of the installation and amend the installation boundary accordingly as follows:</p> <p><b>Zone 1 – Main Plant Area – employees carpark, security gate house and grass area.</b>            The surrender application includes the areas used for carparking by station staff, the DC Link building and a grassed area to the South of the site that was not used during the operation of the power station. There were no operational activities in these areas that could have resulted in contamination of ground or ground water.</p> <p><b>Zone 2 – Coal Stockyard</b>            The remaining coal that was left at the end of operations was removed and contamination would have been removed during these works. This was confirmed by the verification report completed following removal of the remaining coal stock (see JER5981 RPS Validation report for Coal Stock 131017).</p> <p><b>Zone 5 –National Grid Substations</b>            This area is controlled by National Grid. Uniper UK Limited (formerly E.ON UK) have not undertaken any operations in zone 5 since the environmental permit was issued. There is no history of incidents that may have caused pollution to land in this area.</p> <p><b>Zone 6 – Western Storage Area</b>            This zone was only used for limited storage and employee recreational facilities (tennis courts, social club). There were no operational activities in this area, the contamination that was identified in this area is most likely as a result of it being used as a storage compound during the construction of the power station.</p> <p><b>Zone 8 – Temporary waste storage area and historic on-site landfill</b>            The only operations in this area since the permit was issued was the concrete based temporary storage of waste and the pipe bridge across Damhead Creek that held the pipelines from Kingsnorth to Grain. There was a landfill in this area from the late sixties early seventies and the ground investigations have confirmed the presence of materials associated with the landfill and no impacts from the temporary storage of waste on hard standing.</p> <p><b>Zone 10 – Long Reach Jetty</b>            All potential polluting materials (coal, oil) have been removed as part of the demolition works. There is some infrastructure remaining on the jetty, but structures do not need to be removed to enable surrender to take place.</p> <p><b>Zone 11 – Oakham Ness Jetty</b></p>	

#### 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)

As with long reach jetty all potential polluting materials have been removed along with the associated pipework and reception equipment used to offload oil.

#### 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?

The areas of the site included in this surrender did not contain bunds or tanks, these were areas previous used for recreation, laydown for the original construction of the site, car parking and grassed areas.

The two jetties did not have storage of materials other than small volumes of oils that would be in gearboxes and motors associated with the equipment that was used for unloading coal and oil. The coal conveyor that moved coal from the Long Reach Jetty to the site was only used for the transport of coal and not storage.

Coal Stockyard. The remaining coal that was left at the end of operations was removed and contamination would have been removed during these works. This was confirmed by the verification report completed following removal of the remaining coal stock (see JER5981 RPS Validation report for Coal Stock 131017)

#### 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)?

There were reportable incidents at Kingsnorth during the permit lifetime, however only one is relevant with regards to the type and location of the incident:

2012 (identified in 2013) Failure of containment from station transformer located on the East side of the turbine hall. This incident was identified as part of the RPS ground investigation and is subject to the remediation strategy agreed with the Environment Agency. This area is not part of this surrender application for the main plant area.

On cessation of operations Kingsnorth Power Station went through a detailed and comprehensive decommissioning program. All potentially polluting materials were removed as far as possible and there would have been small remnants of material remaining within tanks and pipes that could not be removed during this operation. The demolition contractor removed any residual material prior to the demolition of tanks and removal of pipelines to ensure there were no environmental incidents that could have led to land contamination. There were no incidents that resulted in contamination of ground and ground water.

#### 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?

The ground investigation carried out by RPS have identified those areas where contamination occurred under permit or in the case of the tank farm gross contamination that occurred prior to the permit being issued. Uniper have agreed with the EA a remediation strategy that takes into consideration those areas. These areas are not included in this surrender application.

The investigations carried out by RPS have in some cases identified possible land contamination in the areas included in this surrender application, however, the contamination is historic and did not occur under permit or is not of a significant nature that would require remediation

## Surrender SCR Evaluation Template

If you haven't already completed previous sections 4.0 to 7.0, do so now before assessing the surrender.

### 8.0 Decommissioning and removal of pollution risk

To be completed by EM/PPC officers

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?

During Demolition Uniper employed a contractor that was accredited to ISO14001, the potential impacts of the demolition works were managed through this EMS and through a number of management plans. Furthermore, the demolition contractor was managed by Uniper, under the ISO14001 management accreditation held by Uniper Technologies. Day to operations were overseen by Uniper Technologies personnel with frequent audits and interaction with the Uniper Central Environment Team and the Grain Power Station Environment Manager.

#### Decommissioning and Removal of Pollution Risk

On cessation of operations Kingsnorth Power Station went through a detailed and comprehensive decommissioning program. All potentially polluting materials were removed as far as possible and there would have been small remnants of material remaining within tanks and pipes that could not be removed during this operation. The demolition contractor removed any residual material prior to the demolition of tanks and removal of pipelines to ensure there were no environmental incidents that could have led to land contamination.

There were no incidents that resulted in contamination of ground and ground water.

### 9.0 Reference data and remediation (where relevant)

To be completed by GWCL officers

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

(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.

### 10.0a Statement of site condition

To be completed by EM/PPC officers

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?

Based upon the assessment carried out by RPS there has been no contamination associated with the Kingsnorth power station operations, decommissioning and demolition, in the areas subject to this partial surrender, during the period the permit has been in force. The management system controls that were in place during the operations, decommissioning and demolition ensured that risks were appropriately controlled.

The assessments carried out by RPS have identified all the areas of contamination that has occurred under permit. The EA has been provided with the reports from RPS and there have been a number of meetings to discuss and agree the remediation strategy for Kingsnorth. This work will be carried out in due course and these areas will be subject to a subsequent surrender application.

**10.0b Statement of site condition**

To be completed by GWCL officers

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?

Yes, in relation to land plots identified under this partial surrender  
Plots still requiring remediation should not be included in surrender, unless materials meet pre-permit historic activity exemption.

<b>Surrender SCR decision summary</b> To be completed by GWCL officers and returned to NPS	<b>Tick relevant decision</b>
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	Yes
Insufficient information has been supplied to show that pollution risk has been removed or that the site is in a satisfactory state – do not accept the application to surrender the permit. The following information must to be obtained from the applicant before the permit is determined:	
Date and name of reviewer	JDA 03.06.2020