Demolition of the 3 Cooling Towers and Chimney at the former Richborough Power Station

Environmental Statement
Non-Technical Summary

Prepared for BFL Management Limited
August 2011
Demolition of the 3 Cooling Towers and Chimney at the former Richborough Power Station

Environmental Statement Non-Technical Summary

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Issued By: URS Scott Wilson Ltd
St. George’s House
5 St. George’s Road
Wimbledon
SW19 4DR

Tel: 0208 944 3300

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<td>Principal Consultant</td>
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Preface

This document comprises a Non-Technical Summary of the Environmental Statement that has been prepared in support of a detailed Planning Application for the demolition of the three cooling towers and one chimney at the site of the former Richborough Power Station, site compound and associated works.

The Environmental Statement comprises the following documents:

- The Non-Technical Summary (this document);
- Environmental Statement - Volume I Main Report; and
- Environmental Statement - Volume II Technical Appendices.

In addition to the above, the Environmental Statement is accompanied by a planning application documents including: cover letter; forms and schedule; and planning application drawings.

Further copies of these reports, or further information on the proposed demolition, can be obtained from:

Peter Bovill
Montagu Evans
6-12 Clarges Street
London
W1J 8HB

Web: http://www.richboroughenergypark.co.uk/

Copies of the full Environmental Statement and Technical Appendices can be purchased as a hard copy for £250 (ES £100, Technical Appendices £150). Electronic copies on CD are available for a fee of £5.

The Environmental Statement can be viewed by the public during normal office hours at the offices of the Planning Department of either Thanet District Council or Dover District Council, at:

Thanet District Council,
Planning Department,
PO Box 9
Cecil Street
Margate
Kent CT9 1XZ

or

Dover District Council,
White Cliffs Business Park,
Dover,
Kent CT16 3PJ

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Non-Technical Summary

1. Introduction
1.1 Overview
1. This Non-Technical Summary relates to a detailed planning application made by BFL Management Limited (the ‘Applicant’) for the demolition of three cooling towers and one chimney, site compound and associated works (the ‘Proposed Demolition’) at the former Richborough Power Station site on Ramsgate Road, Sandwich, CT13 9NL (the “Application Site”).

2. There has already been extensive demolition of buildings on the former Richborough Power Station site, prior to 2000 and in 2007 and 2011. Most recently an application for prior notification was approved by Thanet District Council (TDC) on 4th August 2011 (Reference DM/TH/11/0404) and Dover District Council (DDC) on 11th August 2011 (Reference DOV/11/00616), allowing the demolition of 16 smaller buildings on the site.

3. The demolition of the smaller structures does not form part of this detailed planning application and was currently under way at the time of submission of this planning application.

1.2 The Site
1. The former Richborough Power Station site is located in northeast Kent, approximately 4 kilometres (km) to the southwest of Ramsgate, 3.5 km north of Sandwich and 1.6 km inland from the east Kent coastline. A site location plan is shown in Figure NTS-1.

2. The Application Site and Proposed Demolition works comprise an area of approximately 6.4 hectares (ha), within the former Richborough Power Station site (which has a total of approximately 28.88 ha), as shown in Figure NTS-2.

3. The Application Site is bounded by the A256 Thanet to Sandwich Road to the east and former turbine hall to the south (beyond which is a 132 kV substation), the River Stour to the west, and by the Sandwich Bay to Hacklinge Marshes Site of Special Scientific Interest (SSSI) to the north and northeast.

4. Vehicular access is achieved via the A256.

5. The Application Site crosses the administrative boundary between TDC and DDC.

1.3 The EIA Process
1. URS Scott Wilson Ltd (URS) was commissioned by the Applicant to undertake an Environmental Impact Assessment (EIA) in line with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. The results of this process are presented in an Environmental Statement (ES) and accompanying Technical Appendices.

2. This document, known as the Non-Technical Summary (NTS), provides an overview of the findings of the EIA. It has been prepared for a general audience, including parties close to, or potentially affected by the Proposed Demolition.

3. The ES has considered the potential impact of the Proposed Demolition on its neighbours, the local environment and the wider area surrounding the site. Beneficial and adverse, short and long-term impacts have been considered. Mitigation measures to either eliminate or reduce any potential adverse impacts have been incorporated into the approach for the Proposed Demolition.

4. The ES has highlighted ‘residual’ impacts, i.e. those which remain following the incorporation of identified mitigation measures. The significance of residual impacts has been evaluated with reference to definitive standards, accepted criteria and legislation, where available. Impacts have been classified as being adverse, negligible or beneficial in significance and either minor, moderate or major in magnitude.

5. The ES comprises:
   - Non-Technical Summary (this document) - An overview of the findings of the ES.
   - Environmental Statement, Volume I Forms the main body of the ES detailing the results of environmental
investigations, potential impacts arising and proposed mitigation measures; and

- Environmental Statement, Volume II - Technical Appendices - Provides a number of supplementary technical reports that are referred to and summarised in Volume I.

2. Assessment of Alternatives

1. The EIA has considered the ‘do nothing’ alternative, the use of alternative sites, methods, layouts, timings and waste disposal.

2. For the ‘do nothing’ option, the site would remain in its current state. The site is currently environmentally ‘neutral’, and there is no active pollution of the environment, nor is there any contribution to environmental benefits.

3. The proposed development comprises the demolition of existing former power station structures; the assessment of alternative sites is therefore not relevant to these proposals.

4. The three cooling towers will be demolished by removing two slots in the shell by explosives to create a rotational collapse in the desired direction. The structures are considered unsuitable for demolition by basting, wrecking ball or hydraulic equipment as this would lead to an unacceptable health and safety risk to site staff, (and, in the case of blasting, greater noise, vibration and dust emissions).

5. Subject to planning permission, the demolition is anticipated to take place in early 2012. This time of year is considered the most appropriate as it falls outside the breeding birds and bat season. The exact date and time will be agreed with the relevant authorities following submission of the detailed planning application.

3. Project Description

1. The Proposed Demolition will include the demolition of the three cooling towers and chimney and associated temporary works.

2. An indicative layout of the Proposed Demolition works is presented in Figure NTS-2.

3. Initial preparation work on the cooling towers and chimney was undertaken between 9th May 2011 and 10th June 2011, including the soft stripping and removal of all asbestos in these structures. The structures were stripped of all plant in 2000 and only the concrete shells currently remain.

4. Below the three cooling towers are water ponds containing rainwater that will need to be pumped out prior to demolition of these structures, and subsequently discharged to the River Stour or to the ground onsite (and allowed to soakaway) under a discharge consent from the Environment Agency.

5. Once the three cooling towers and the chimney have been prepared they will be charged with a predetermined quantity of explosives.

6. The demolition event itself will be a single day, with the cooling towers to be detonated in sequence with a three second interval between each structures falling. Following the successful detonation of all the cooling towers the chimney will be detonated five-six seconds later.

7. There will be an exclusion zone which will be patrolled by the Police and contractor sentries, all having direct radio linkage to a central controlled point. The explosive engineer at the firing point will be in direct radio communication with the control point ensuring the countdown can be stopped within a matter of seconds at any time up to the point of detonation.

8. It is anticipated that a small section of the A256 adjacent to the Application Site will need to be shut for a short period of time (several hours) in order to prevent vehicles and personnel from entering the exclusion zone.

9. A temporary diversion route will be put in place during this period, which will be agreed with the local Highways authorities and the Police prior to commencing site works. Early consultation with Kent County Council’s Highways Department indicates that the temporary diversion would utilise the A2 and A299 as an alternative route between Ramsgate and Dover.
10. It is estimated that approximately 17,000 tonnes of waste debris material will be generated from the demolition of the three cooling towers and chimney and an additional 8,000 tonnes of material through the demolition of the 16 smaller buildings (under prior notification).

11. Ash residue from the chimney is likely to be classified as hazardous waste, and once demolished (following confirmation from analysis) would require disposal at an appropriately classified landfill. Uncontaminated concrete material will undergo crushing to 75 mm, and then stockpiled for re-use for filling voids and as part of a future energy park located onsite (subject to a separate planning application to follow later in 2011).

12. In the event that permission for the proposed energy park is not forthcoming or refused, this material may need to be removed from site in order to avoid the site becoming designated as a landfill.

13. It is anticipated that the workforce will constitute between 4-12 workers on any given day, where post demolition works will be in operation six days per week from 07:30 until 17:00 Monday to Friday and 07.30 to 14:00 on Saturday.

14. In total, it is anticipated it will take 21 weeks between commencing site preparation works and clearing the site. Of this, 8 weeks is required prior to the date of detonation to pump out the rain water from beneath the three cooling towers, prepare the structures, erect protections, and charge the structures. Following the demolition of the cooling towers and chimney a further 13 weeks are expected to be required to analyse the waste material, segregate materials, and process and stockpile the arisings.

4. Potential Environmental Impacts

4.1 Ecology

1. An ecological impact assessment has been undertaken by establishing the current ecological baseline conditions within the Application Site, and subsequently assessing the significance of potential impacts of demolition.

2. The assessment includes a desk based review of secondary data and Extended Phase 1 Habitat survey to record the nature and extent of vegetation and habitats within and adjacent to the site. Detailed surveys carried out on site for flora and fauna include the following:
   - Reptile survey;
   - Winter and breeding bird (including vantage point);
   - National Vegetation Classification;
   - Bat (inspection, emergence and return);
   - Water vole and otter;
   - Great crested newt (presence/absence);
   - Peregrine falcon; and
   - Terrestrial invertebrates.

3. In order to mitigate potential impacts a number of measures have been proposed, which are as follows:
   - The demolition is scheduled for early 2012, outside the breeding bird and bat seasons to minimise impacts on these species;
   - In the event that the target date for demolition needs to be delayed, the ledge that supported the nesting pair of peregrine during 2010 and 2011 will be made unsuitable for nesting prior to the end of January 2012;
   - Air guns will be placed at the foot of the four structures and will be set to go off hourly for one day prior to the Proposed Demolition date in order to ensure that the Proposed Demolition work does not result in the killing or injury of peregrine falcons that could be roosting on the structures proposed for demolition;
   - Peregrine falcon and kestrel nests will been installed onsite to mitigate loss of habitat; and
• In order to mitigate loss of habitat for stock doves, five owl boxes (which are suitable for stock doves) will be installed.

4. Following implementation of the mitigation measures outlined above, the residual impacts are either negligible or temporary minor adverse. The minor adverse impacts relate to disturbance to birds and the deposition of debris within Sandwich Bay to Hacklinge Marshes SSSI and Ash Level and South Richborough Pasture Woods Local Wildlife Site.

4.2 Ground Conditions, Hydrology and Hydrogeology

1. An assessment of the impact of the Proposed Demolition on the existing ground conditions, hydrology and hydrogeology was undertaken of the surrounding area.

2. Consideration of impacts associated with potentially contaminated soils was made in the context of existing site conditions, during demolition works and once the demolition is complete.

3. In addition to ground conditions, the assessment also identifies key water resources sensitivities, and identifies the direct and indirect impacts of the Proposed Demolition on these resources, in particular the potential effect of the contaminated chimney lining on these receptors.

4. Following a review of the baseline conditions for the site, including the soil contamination data and chimney sample data from previous investigations, no significant risks to identified receptors is anticipated. The main contaminants of concern were not considered to pose significant risks to the River Stour or human health.

5. It has been estimated that there will be 36,000 litres of water used to suppress dust during a 2 hour period on the day of demolition. This runoff will be prevented from entering the River Stour and allowed to drain naturally into the ground onsite.

6. Sampling and testing of the demolition material will be undertaken in order to classify the waste and dispose of it accordingly.

7. Materials generated from the demolition that are to be re-used on site are likely to require a number of processes to render them suitable for use. This would include concrete crushing, screening and sieving of the fine fractions of demolition material, and stockpiling prior to re-use.

8. Once all demolition waste has been removed/re-used, collection of shallow soil samples will be undertaken to determine that levels of surface contamination are not significantly different from those recorded prior to demolition.

9. Following implementation if mitigation measures outlined in the ES, the residual impact of the Proposed Demolition on ground conditions is considered to be negligible. The discharge of the rainwater in the base of the cooling towers is expected to lead to a minor adverse impact if discharged to the River Stour, although this is not considered significant. It is also considered that the removal of any contaminated demolition materials would prevent future impacts to ground conditions, therefore leading to a moderate beneficial and permanent impact.

4.3 Air Quality and Dust

1. An air quality modelling exercise was undertaken to assess the impacts associated with airborne dust generated during the demolition of the three cooling towers and chimney, in addition to emissions from additional road traffic movements and site plant attributed to the Proposed Demolition.

2. In order to mitigate potential impacts a number of measures have been proposed to reduced vehicle emissions and dust deposition.

3. A summary of the key mitigation measures are outlined below:
   • Vehicle and site plant emissions would be minimised or rendered harmless through compliance with national emission standards; and the regular maintenance of vehicle engines;
   • Demolition dust will be controlled through the application of a high level dust suppression system, effective
vehicle cleaning and wheel washing on leaving site and damping down of haul routes; and covered loads when entering/exiting the site; and

- The Proposed Demolition is scheduled for early 2012, when vegetation is dormant and therefore less sensitive to dust deposition.

4. Impacts from road traffic emissions, site plant and explosion emissions and airborne dust are all predicted to be negligible. Dust deposition on vegetation and nuisance to members of the public is predicted to be minor adverse, although contamination of this dust is predicted to be negligible.

4.4 Noise and Vibration

1. An assessment of potential noise and vibration impacts associated with the Proposed Demolition works. In particular, it considers the noise and vibration impacts from the explosive demolition, noise and vibration impacts from general site clearance works, and increases in road traffic noise levels due to additional traffic.

2. Following a review of the baseline conditions for the site, the potential impacts were considered by way of a desk-based assessment, noise monitoring, noise modelling, and calculations to inform the noise and vibration study.

3. In order to reduce potential noise impacts a number of measures have been proposed, in particular:
   - Noisy plant or equipment shall be situated as far as possible from noise sensitive receptors with the use of effective exhaust silencers; and
   - Plant shall be maintained in good working order and noise emitting machinery.

4. Following implementation of the outlined mitigation measures, and taking into account the short time period of the demolition works, the impacts from the potential noise and vibration associated with the demolition are not expected to lead to any significant adverse impacts on human or ecological receptors.

4.5 Waste

1. An assessment has been undertaken of the waste management requirements for the Proposed Demolition of the three cooling towers and chimney under legislation and the relevant planning policy framework at the national, regional and local levels.

2. In particular, the assessment outlines the relevant waste management objectives and targets for the Proposed Demolition, as well as the main waste streams that will be produced. It also notes how the Proposed Demolition has taken into account sustainable methods for waste management at all stages, where relevant. Key activities with regard to waste management will be included in a Site Waste Management Plan (SWMP).

3. The principal aim during demolition will be to reduce the amount of waste generated and exported from the site. This approach complies with the waste hierarchy whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary. The waste material from the demolition will be screened and segregated into individual waste streams. In order to maximise the potential for segregation and the recycling of materials during the demolition phase, adequate facilities for segregation, on-site storage and collection will be provided. This area will be located on hard standing (to minimise potential infiltration of contaminants into the ground) and will be clearly labelled and accessible.

5. Non-Key Issues

1. The Scoping Report highlighted a number of non-key environmental and socio-economic issues that did not require further assessment, as follows;

   - **Traffic and Transport.** It is anticipated that there will only be up to 3 heavy goods vehicle (HGV) arriving and leaving the site daily during peak activity, and up
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1. Proposed Demolition works on local wildlife sites, birdlife or human residents. A series of alerts would be sounded using an air horn during the 5 minutes preceding the detonation, which should assist in moving avian species from the immediate vicinity and remind nearby residents that the detonation is imminent.

2. Considerable dust emissions may also arise from the demolition of the four structures, depending on the meteorological conditions on the day of detonation. This is expected to lead to minor adverse impacts at nearby residential dwellings, and because of the early 2012 blow down (to avoid the breeding bird season) nearby habitat sites such as the Sandwich Bay to Hacklinge Marshes SSSI will be largely dormant and therefore unlikely to be significantly affected by dust deposition.

3. Following the blow down event, processing of the materials is expected to lead to negligible or minor adverse impacts to the environment and members of public, which are not considered significant. The removal of potentially contaminated material from the chimney lining from the site is considered a moderate beneficial and therefore significant impact.

4. Although not part of this detailed planning application the Proposed Demolition works would provide a major opportunity for the redevelopment of this brownfield site, as recognised by Kent County Council in its local planning documents. The Applicant has aspirations to submit a planning application for an energy park later in 2011, including a waste to energy plant and recycling facility. The “do nothing” scenario would prevent the opportunity for this site being used for generating renewable electricity.

5. In addition, National Grid plans to develop a 1,000 megawatt (MW) high-voltage electric transmission interconnector between Richborough and Belgium. This development is considered to be a Nationally Significant Infrastructure Project (NSIP) and will be subject to a future separate planning application under the Planning Act 2008 (to be determined by the Infrastructure Planning

6. Cumulatives, Residual Impacts and Conclusions

1. A Demolition Method Statement (DMS) has been prepared and is presented in Volume II of the ES. An Environmental Management Plan (EMP), Site Waste Management Plan (SWMP), and Dust Management Plan (DMP) will also be produced following receipt of planning permission to provide further detail on the mitigation measures presented in this ES, and which will be agreed with TDC and DDC prior to commencement of site preparation works.

2. Taking into account that the demolition event is temporary and will be over within a matter of seconds, it is not considered that a significant impact would occur due to the

- **Landscape and Visual.** TDC agreed that the three cooling towers do not display special architectural or historic interest and are entirely standard in design and history and do not significantly contribute to the industrial heritage at a national or local scale.

- **Archaeology and Cultural Heritage.** Given that the method of demolition will be by controlled explosion the potential for disturbing any below ground remains is considered low. In addition, the structures to be demolished are not a nationally designated (protected) heritage assets and the site does not lie within a Conservation Area or an Area of Archaeological Potential; and

- **Socio-Economics.** The Proposed Demolition works will create temporary direct and indirect employment opportunities locally, and this is likely to lead to a positive socio-economic impact in the local area. The impact will be short-term however and therefore it was not considered that socio-economics needed to be considered as part of the EIA.

6. In addition, National Grid plans to develop a 1,000 megawatt (MW) high-voltage electric transmission interconnector between Richborough and Belgium. This development is considered to be a Nationally Significant Infrastructure Project (NSIP) and will be subject to a future separate planning application under the Planning Act 2008 (to be determined by the Infrastructure Planning
Commission). National Grid’s proposals are likely to involve the reuse of the former turbine hall on the former Richborough Power Station site, which is immediately south of the Application Site, and part of the site currently taken up by the three cooling towers and chimney. The “do nothing” option is likely to jeopardise this NSIP.

7. In conclusion, the Proposed Demolition works adheres with national, regional and local planning policy and would allow the future redevelopment of the site and the successful delivery of a NSIP.