The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Regulation 5(2)(e)

OUTLINE

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

The Proposed Palm Paper CCGT 3 Order

King’s Lynn, Norfolk

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Outline Construction Environmental Management Plan (CEMP)

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1 INTRODUCTION

1.1 Overview

1.1.1 Palm Paper Limited (the Applicant) is making an application for a Development Consent Order (DCO) to the Secretary of State for Energy and Climate Change (Secretary of State). The DCO will authorise the Applicant to construct and operate a new Combined Cycle Gas Turbine (CCGT) generating station in King’s Lynn, Norfolk. The Proposed Development will be a Nationally Significant Infrastructure Project (NSIP) as defined by the Planning Act 2008 (PA 2008).

1.1.2 As part of the application an Environmental Statement (ES) (Document 5.1) has been produced, describing and assessing the effects of the construction and operation of the Proposed Development on the environment.

1.1.3 This document provides an outline from which a final Construction Environmental Management Plan (CEMP) will be developed to avoid, minimise or mitigate any construction effects on the environment and the surrounding community.

1.1.4 A requirement (Requirement 10) is attached to the DCO, by which the Applicant must submit the final CEMP, based on this outline CEMP for approval by the relevant planning authority prior to commencement of construction.

1.2 Purpose and Scope of the Document

1.2.1 It is vital that construction impacts are considered in the ES as these impacts can often be worse than those during the operational phase and as such need to be given due consideration and attention. The construction impacts for each discipline are assessed in each individual technical Chapter of the ES. Details are not repeated in this Chapter, but additional information is provided where appropriate. The information contained in this Outline CEMP provides detail on the proposed construction phasing and a summary of the construction impacts explained in each technical Chapter of the ES.

1.2.2 The Outline CEMP has been developed to provide the management framework needed for the planning and implementation of construction activities in accordance with environmental commitments identified in the ES and in legisatory requirements. It aims at reducing the risk of adverse impacts of construction activities on sensitive environmental resources and to minimise disturbance to local residents. This includes ensuring that the mitigation measures described in the Environmental Statement are implemented, to ensure continued monitoring of the construction phase and to ensure the involvement of interested and affected parties in a meaningful way.

1.2.3 Moreover, the purpose of the Outline CEMP is to set environmental targets for the Contractor and reasonable standards against which the Contractor’s performance in this regard can be measured during construction.
1.3 Legislation and Best Practice

1.3.1 A vast amount of environmental and other legislation is applicable to major construction projects. Relevant environmental legislation pertaining to the project is listed below. The Contractor is required to comply with this legislation for all phases of the project.

1.3.2 There are many Codes, Standards, Regulations and Acts of Parliament which cover environmental and related matters. These are referred to where applicable in this Outline CEMP. Notwithstanding these references, compliance with this Outline CEMP will not absolve the Contractor from compliance with all legislative requirements applicable at the time of the construction activities. Wherever this Outline CEMP makes reference to Legislation, Standards or Codes it will be the Contractor’s responsibility to ensure that the current versions are used at all times.

1.3.3 The following list is intended to serve as a guideline only for the Contractor and should not be considered exhaustive. It would be updated by the Project Manager, the Contractor and their Environmental Managers following the Tender Stage.

1.3.4 The main pieces of legislation that may affect the project are:

- Environmental Permitting Regulations 2010;
- Town and Country Planning Act 1990;
- Environmental Protection Act, 1990;
- Environmental Protection (Duty of Care) Regulations, 1991;
- Pollution Prevention and Control Act 1999
- Hazardous Waste Regulations 2005;
- Noise and Statutory Nuisance Act, 1993;
- Clean Air Act, 1993;
- Wildlife and Countryside Act, 1981 (as amended);
- Ancient Monuments and Archaeological Areas Act 1979;
- Control of Pollution Act 1974;
- National Heritage Acts;

1.3.5 The developer and construction contractor will ensure that measures are put in place to comply with all legislation. Legislation provides a minimum standard to adhere to. The construction programme will look, wherever possible, to set an example of best practice, for example with regards to recycling of materials, oil and chemical storage, and maintenance of plant and equipment.
2 ENVIRONMENTAL MANAGEMENT ROLES AND RESPONSIBILITIES OF STAFF

2.1 The Project Team

2.1.1 Formal responsibilities are necessary to ensure that key procedures are executed. Specific responsibilities of the Project and Construction Team’s environmental management during the construction phase are shown below in Table 1.

Table 1: Environmental Organisation Chart

2.1.2 Descriptions of individual environmental management responsibilities are described in the following paragraphs.

Key Contacts

2.1.3 In conjunction with the project organisation chart in Table 1, a list of key contacts would be prepared. This includes contacts within the Client’s and the Contractor’s organisations (‘the Project Team’), local authorities and key regulatory bodies. Those responsible for the project, implementation of the CEMP and on-site procedures during the construction phase will also be identified.

2.1.4 At this stage a preliminary template of a list has been included in Appendix 1. It will be completed once a contractor has been assigned. The list will be updated regularly and made readily available to all project management personnel.
2.2 Palm Paper

Project Manager

2.2.1 It is the ultimate responsibility of the Project Manager to ensure that adequate resources are made available to the Project Team so that the CEMP is effectively implemented during the construction phase. The Project Manager would confirm the commitment of the Project Team to ensure that all environmental aspects are managed in accordance with relevant legislative and contractual requirements, and environmental commitments detailed in the CEMP.

Client Environmental Manager (ClientEM)

2.2.2 A Client Environmental Manager (ClientEM) will be assigned to the project, to ensure that the guidance documented in this Outline CEMP and the detailed CEMP is effectively implemented. He would report to the Project Manager and would be responsible for monitoring the performance of the project against statutory requirements and the agreed environmental standards. The Environmental Manager is also responsible for the following:

- monitoring compliance of construction activities with the CEMP, environmental legislation, and licences.
- checking prior to the commencement of any construction phase of the project that the proposed mitigation measures are consistent with the CEMP, the ES and the Planning Permission, and are current best environmental practice;
- reviewing and updating the CEMP and specialist procedures and identify any areas for improvement.
- reviewing method statements for environmental aspects and advise of any suggested improvements prior to work starting.
- monitoring construction activities to ensure that identified and appropriate control measures are effective and in compliance with the CEMP.
- acting as a main point of contact between the Main Contractor and the Client’s Project Team on environmental issues.
- liaising with the Local Planning Authority to ensure coordination of environmental mitigation and monitoring procedures.
- seeking advice from a variety of experts who have the relevant specialist knowledge of issues including landscape, water quality, noise, ecology air quality (dust), as well as liaising with the archaeologist and landscape architect;
- providing such advice as is required by the Project Manager on environmental issues;
- taking all reasonable steps to ensure integration of the mitigation measures being implemented;
- undertaking regular site visits to audit compliance with agreed Contractor’s working practices, pollution prevention measures, planning conditions and to provide advice to the Contractor;
- reviewing environmental incident response procedures;
- acting as a point of contact for environmental issues on site.
• acting as an interface between the Project Team, the Contractors Environmental Manager, Statutory Consultees e.g. Environment Agency (EA), Non-Statutory Environmental Bodies and other interest groups.

• attending site progress meetings as necessary, as well as, where required, meetings with interested parties to provide a focus for any environmental concerns;

• requesting that working practices are varied to help protect the environment and that works are suspended whilst an environmental issue is investigated, if necessary;

• in the event of an environmental incident, responding quickly, liaising with the relevant authorities, providing recommendations on remediation where necessary and following up implementation of remediation and future prevention;

• assisting, where necessary, in obtaining licenses and be aware of the conditions of any licence in place;

• recording in writing any advice given on site and keeping a written record of any liaison with Statutory Consultees regarding environmental issues;

• ensuring that the Project Team are advised of progress and environmental performance, via progress reports, site progress meetings, updates, meeting minutes etc;

• convening environmental team meetings and meetings of external consultees;

• management of the environmental monitoring programme, including noise and dust

• Revision of routine reports.

Environmental Specialists

2.2.3 The Client would employ a team of experts to support the Project Team on specific environmental issues as and when required.

2.2.4 Their role would be to undertake the detailed mitigation design within their specialist field, oversee its implementation, maintenance and monitoring throughout the construction period up to the end of the maintenance period.

2.3 Construction Contractor

2.3.1 The contractor, as the developer’s agent on site, is bound to the CEMP conditions through his/her contract with the developer, and is responsible for ensuring that she/he adheres to all the conditions of the CEMP. The contractor must thoroughly familiarise him/herself with the CEMP requirements before coming onto site and must request clarification on any aspect of these documents, should they be unclear. The contractor must ensure that he/she has provided sufficient budget for complying with all CEMP conditions at the tender stage.

2.3.2 The contractor must comply with all orders (whether verbal or written) given by both the Project Manager and the Client Environmental Manager.
2.3.3 Responsibilities of the Construction Contractor include:

- submitting obligatory Methods Statements for each construction phase for approval by the Environmental Manager before any work is undertaken;
- ensuring compliance with permissions, licenses and approvals;
- seeking advice from appropriately qualified environmental specialists / engineers who is familiar with the requirements of the Environmental Protection Act 1994 and associated Environmental Protection Policies;
- implementing environmental protection measures as described in the approved CEMP;
- briefing all sub-contractors on the requirements of the CEMP;
- providing copies of the CEMP to each subcontractor with responsibilities under the plan;
- ensuring the full and complete implementation of the CEMP by subcontractors;
- ensuring that requirements of the CEMP are complied with by subcontractors;
- auditing and reporting subcontractors implementation of the CEMP and adherence to the requirements of the assessment study and their quality systems;
- establishing monitoring programs to test performance criteria and standards;
- monitoring and reporting on the performance of environmental protection measures in accordance with the requirements of the CEMP;
- convening environmental team meetings and meetings of external consultees.

2.3.4 A Contractor Organisational Chart including key contacts will be provided by the contractor after award of tender.

**Contract Manager**

2.3.5 The Contract Manager as a named individual from the Main Contractor would have overall day-to-day responsibility for Health and Safety, Environmental and Quality performance throughout the construction period. S/he would ensure that appropriate resources are made available, and any necessary environmental controls or mitigation measures are implemented. The Contract Manager would report to the Project Manager and the Client Environmental Manager.

**Contractors Environmental Manager**

2.3.6 The Environmental Manager would report to the Contract Manager and would be responsible for coordinating and managing all the environmental activities during the construction phase. The Contractors Environmental Manager would carry out the following duties:

- liaison with the Clients Environmental Manager;
• liaison with the Local Planning Authority to ensure coordination of environmental mitigation and monitoring procedures;
• facilitate environmental training and inductions to the workforce, as required;
• identify environmental competence requirements for all staff working on the Project and facilitate environmental training and inductions to personnel as required;
• review and approving method statements for environmental aspects prior to work starting;
• monitor construction activities and performance to ensure that identified and appropriate control measures are being effective and ensure compliance with the CEMP;
• act as a point of contact between the regulatory authorities and the Project on environmental issues;
• in conjunction with the environmental specialists, overall monitoring of the programme for environmental works, and provision of status reports as necessary;
• provision of advice and liaison with the construction teams to ensure that environmental risks are identified and appropriate controls are developed and included within method statements and risk assessments;
• provide advice on environmental audit of subcontractors and suppliers;
• submitting regular reports which will document all incidents that have occurred during the period before regular environmental site meetings;
• maintaining a public complaints register;
• attending environmental team meetings and meetings of external consultees.

Site Waste Manager

2.3.7 The Site Waste Manager would report to the Contract Manager and would be responsible for overall waste management issues arising from the project. These would include:

• Implementation and monitoring of waste minimization, segregation and safe disposal measures;
• Dissemination of waste reduction and waste management procedures to all relevant personnel on site.

Sub Contractors Environmental Representatives

2.3.8 Each Sub Contractor appointed by the Main Contractor would be required to appoint an Environmental Representative who would be responsible for:

• ensuring that environmental considerations are included in Risk Assessments, Method Statements and work instructions;
• carrying out regular environmental inspections of the site, initiating actions and completing environmental inspection reports;
- acting as a main point of contact between the Sub Contractor and Main Contractor on environmental issues;
- ensuring that safe environmental work practices are adopted.

2.4 Environmental Acceptance of Completion of Construction

2.4.1 Environmental Management staff should participate in the inspection of completed construction phases to ensure that the mitigation measures have been completed as related to environmental requirements.

2.4.2 Where possible, final payment to the construction contractor should be withheld until the Client Environmental Manager certifies concurrence with mitigation measures described in the CEMP.
3 KEY CONSTRUCTION ACTIVITIES AND PROGRAMME / CONSTRUCTION DETAILS AND METHODOLOGY

3.1 Introduction

3.1.1 This section provides an overview of the main project details and construction methodologies that will be used during the construction process. It therefore provides the specific information on which this construction environmental management plan has been prepared, based on environmental elements identified in the Environmental Statement and additional environmental considerations.

3.1.2 All construction activities will take place within the Application Site Boundary as shown in Document No. 2.1 and 2.2. This includes all land required to construct and operate the proposed development. All site works will be undertaken in compliance with the CEMP.

3.2 Overview of the Proposed Project

3.2.1 The information contained in this document provides an overall description of the envisaged plant and its operation, based on the experience gained by Palm Paper of their CCGT installations in Germany. The final configuration of the CCGT plant is not expected to be materially different from that described in this document and can be described as a credible “worst case” for undertaking the environmental assessment.

3.2.2 The detailed design, construction and commissioning of the CCGT plant will be carried out by an experienced contractor after development consent has been granted and contracts placed with the equipment suppliers. Dimensions given below therefore are regarded as maxima and height dimensions in particular may be reduced depending on the outcome of the planning process and depending on the equipment of the contractor selected.

3.2.3 The new development would be constructed within the Palm Paper premises at the existing paper mill complex. There is sufficient space for the new CCGT to be built whilst the paper mill remains fully operational.

3.2.4 The general layout and the design details of the development are illustrated in Document 2.1 and 2.2. The Site Layout Plan (Document No. 2.2) shows the locations of temporary compounds and facilities. There will be no temporary storage of materials, machinery or other equipment outside the Application Site Boundary.

3.2.5 After award of tender the Main Contractor will provide a revised and detailed plan of the construction compound (Works No. 2) and an updated construction phasing plan.

3.2.6 The main plant dimensions are displayed in Document 2.8. The total area of the Application Site is 1 ha approximately and it is expected that the area occupied by the plant's buildings will be approximately 3000m².
3.2.7 The main enclosures are expected to be approximately 55m long x 33m wide, with a roof height varying between 15m and 25m high. Some staircases and technical equipment on the roof will be several metres higher.

3.2.8 A pipe bridge will connect the CCGT building with the paper machine building. The bridge will be constructed as steel structure covered with trapezoidal metal sheets and will carry pipes and cables for electricity, steam, condensate, etc.). The pipe bridge may be accessed for maintenance works and allows employees to access the existing sprinkler tank roof where the new condensers for the CCGT will be located.

3.2.9 The structural form of buildings will be made of pre-cast concrete façade panels. From 1m above ground up to the top the building will have a trapezoidal sheet metal cladding. Cladding will be similarly coloured as the cladding of the existing mill. The façade between ground level and +1m will be mainly made of exposed curtain panels or brickwork with an exposed surface.

3.2.10 Floors within the buildings will be reinforced concrete. Roofs will be constructed of reinforced concrete roof slabs and will be flat or shallow pitched.

3.2.11 The area where the condensers are located will be approximately 16m long x 13m wide. Supporting structures for the condensers will be made as steel structure on the existing concrete roof slab of the sprinklers.

3.2.12 An exhaust stack would be about 4.0m diameter with a discharge approximately 80m above ground. The stack will be fabricated from painted insulated carbon steel.

3.2.13 Following receipt of Development Consent and an Environmental Permit, award of the construction contract and the detailed design stage, the construction period for the proposed plant is anticipated to be up to 18 months duration including commissioning.

3.3 Construction Phasing Programme

3.3.1 An indicative construction phasing programme is presented as Appendix 2. As part of the engineering design work, a more detailed programme for the construction phase of the development will be determined. However this will depend upon a number of factors including ground preparation works and also the delivery time of the gas turbine set.

3.3.2 The construction workforce peak is anticipated to be 50 personnel, however average numbers would be of the order of 20 to 30. Information on construction traffic is provided in chapter 13 of the ES.

3.3.3 Standard construction techniques as previously used for buildings, roads and pavements, lighting, utility services and telecommunications will be adopted. The full details on site construction are currently not available but would be provided as part of the final project design, depending on the equipment of the contractor selected.

3.3.4 Typical construction activities include:

- Site preparation: Prior to the levelling of the site, top soil will be stripped and removed from the site. Excavations will be required to construct foundations, trenches, buried services and basement structures, and to create temporary
construction facilities and working areas. On completion of the construction phase the laydown area will be returned to an appropriate state.

- **Foundation piling**: It will be necessary to undertake piling for the foundations where the HRSG, gas turbine, steam turbine, and generators will be located due to the heavy loading and the tight tolerance on settlement.

- **Civil engineering works**: Will be required to create further foundations, buildings, services, roads etc.

- **Steel erection**: Of structural steel frameworks.

- **Mechanical plant**: Plant and equipment will be located on foundations in the main construction areas, using a range of cranes and mobile plant and also includes the on-site assembly of any tanks, pipework and storage vessels.

- **Electrical and Control**: Electrical equipment, and control and instrumentation systems will be installed once the building enclosure has been completed.

### 3.3.5 For excavation works several excavators and dump trucks will be in operation. After the main excavation works boring machines for pile foundations will be on site for a period of approximately 4 weeks. During the construction phase several cranes and mobile cranes will be in operation. Mobile cranes will be mainly used for erection of pre-cast elements and steel structures. Trucks with trailers will transport heavy pre-cast elements to the site.

### 3.3.6 The main enclosures are expected to be approximately 55m long x 34m wide and between 15m and 25m high. Some staircases and technical equipment on the roof will be several metres higher. The structural form of buildings will be made of pre-cast concrete façade panels. From 1m above ground up to the top, the building will have a trapezoidal sheet metal cladding. Cladding will be similarly coloured as the cladding of the existing mill. The façade between ground level and +1m will be mainly made of concrete sandwich panels with an exposed surface. The highest item of the plant would be an exhaust stack with a diameter of about 4.0m and a discharge approximately 80m above ground. The stack will be fabricated from painted insulated carbon steel.

### 3.3.7 The sheet metal façade will be erected with scaffoldings or mobile lifting platforms. All materials required to construct the buildings will be delivered to the site by truck. Within the construction compounds there will be offices for site supervisors, social facilities (toilets, etc.) and a storage area for containers with construction materials and equipment. The overall duration of the construction phase is anticipated to last approximately 18 months.

### 3.3.8 Palm Paper has considerable experience of CCGT plant construction projects, and has successfully completed two similar plants in Germany. A dedicated project management team of experienced Palm Paper employees will oversee the construction of the CCGT plant to ensure that all works are being carried out in a safe, efficient and proper manner. The project team will ensure that all works take place in accordance with the requirements of any consent or permit granted to Palm Paper for the development.

### 3.3.9 It should be noted that all construction materials will be delivered to the site by truck. Raw materials would be sourced where possible from local approved existing
suppliers and would be of a quality acceptable to appropriate legislation and codes of practice.

3.4 Register of Environmental Impacts

3.4.1 The Contractor would be responsible for producing and maintaining a register of Environmental Impacts. This Register will be used to inform the environmental procedures and provide a tool for construction teams when preparing construction method statements or field briefings. This register will also comprise the various risks identified in the ES.

3.4.2 Risks will be identified under the following general headings:

- Air Quality & Emissions;
- Noise & Vibration;
- Landscape and Visual Impacts;
- Ecology;
- Geology & Soils;
- Flood Risk and Drainage;
- Archaeology / Cultural Heritage; and
- Combined Effects.

3.5 Method Statements

3.5.1 Method statements would be completed on behalf of the Main Contractor or Sub-Contractor by trained engineers or other appropriate experienced personnel, in consultation with on-site environmental staff and, where necessary, environmental specialists. Their production would include a review of the environmental risks and commitments, as identified in this CEMP and risk assessment, so that appropriate control measures are developed and included within the construction process.

3.5.2 Method statements would be reviewed by the Clients Environmental Manager, the Main or Sub Contractor’s appointed environmental manager and, where necessary, by an appropriate environmental specialist. Where necessary, method statements would be submitted to authorities as appropriate. Method statements would contain as a minimum:

- location of the activity and access / egress arrangements
- work to be undertaken and methods of construction
- plant and materials to be used
- labour and supervision requirements
- health, safety and environmental considerations
- any permit or consent requirements
3.6 Risk assessments

3.6.1 If requested by the relevant planning authority, certain activities undertaken on site would be subject to a specific environmental risk assessment. Risk assessments would be undertaken by trained staff following an approved procedure which would:

- identify the significant environmental impacts that can be anticipated.
- assess the risks from these impacts.
- identify the control measures to be taken and re-calculate the risk.
- report where an inappropriate level of residual risk is identified so that action can be taken through design changes, re-scheduling of work or alternative methods of working in order to reduce the risk to an acceptable level.

3.6.2 The results of risk assessments, and their residual risks are only considered acceptable if: the severity of outcome is reduced to the lowest practical level; the number of risk exposures are minimised; all reasonably practical mitigating measures have been taken and the residual risk rating is reduced to a minimum.

3.6.3 The findings of the risk assessment and in particular the necessary controls would be explained to all operatives before the commencement of the relevant tasks.
4 CONTROL OF CONSTRUCTION PROCESSES AND ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES

4.1.1 This section includes specific mitigation measures that are based on mitigation measures identified in the Environmental Statement (ES). These measures are designed to minimise the impacts on the local environment during the construction phase of the development.

4.1.2 Additional measures and approaches that will have to be agreed with the relevant Authority during the consultation process have also been included.

4.2 Training, Awareness and Competence of Employees

4.2.1 The raising of environmental awareness is viewed as a crucial element in the appreciation and implementation of the CEMP.

4.2.2 As a consequence, prior to commencing work on site, the Contractor would ensure that all personnel engaged in activities that may have an impact on the environment are competent to carry out their duties or, where necessary, arrange for suitable training to be undertaken.

4.2.3 If required, the level of staff knowledge will be raised through the provision of training, which may be in the form of formal training courses, personal tuition, environmental toolbox talks, or other training methods as applicable. This will help ensure that site personnel are fully aware of the key environmental issues of the site and the management procedures that have been set in place to mitigate impacts. All training required would be completed before commencement of the associated construction activities.

4.2.4 The Project Team will have access to a full suite of environmental guidance notes such as guidance from the Environment Agency. These are intended to provide site staff with the necessary additional information to be able to competently manage environmental issues.

4.2.5 The CEMP will be part of the terms of reference for all contractors and sub-contractors. All contractors and sub-contractors would have to give some assurance that they understand the CEMP and that they will undertake to comply with the conditions therein. All senior and supervisory staff members shall familiarise themselves with the full contents of the CEMP. They shall know and understand the specifications of the CEMP and shall be able to assist other staff members in matters relating to the CEMP.

4.3 Supervision of Construction Activities

4.3.1 All construction and installation activities including those carried out by subcontractors and suppliers would be supervised, or regularly checked through the completion of site inspections by the Contractors Environmental Manager, to ensure that requirements identified in this CEMP have been implemented. The frequency
and extent of this supervision would vary according to the degree of competence displayed by the workforce and the level of risk to the environment.

4.4 **Inspections by the Environmental Team**

4.4.1 Environmental deliverables required by the CEMP would be subject to regular independent inspections by either the Environmental Manager or the relevant environmental specialists. These inspections would be used to confirm that:

- works are being undertaken in compliance with the project plans, procedures and method statements;
- agreed protection or mitigation measures are in place, prior to or during the implementation of construction activities;
- construction works have been completed in accordance with the design and commitments made during the statutory process;
- works comply with statutory, planning consent, and all contract requirements;
- remedial action has been taken, as necessary;

4.4.2 The Contract Manager will prepare weekly and monthly reports on compliance with the CEMP as part of the weekly programme report. The report will be a summary of the regular inspection reports and the Site Manager's observations. The proposed report forms can be found in Appendix 3.

4.5 **Inspection of Other Construction Impacts**

4.5.1 The appointed environmental representatives (see section 2) would carry out routine inspections of their respective construction activities and areas, to verify that the requirements of the CEMP are being implemented effectively. These inspections would utilise this CEMP as guidance, with necessary actions being recorded and raised at progress meetings. Subsequent inspections would commence with a review of all outstanding actions from previous inspection reports to verify that they have been completed.

4.6 **Environmental Monitoring**

4.6.1 At this stage it is likely that monitoring of dust would be carried out if necessary.

4.6.2 Noise monitoring would take place as described in section 4.25.

4.6.3 The Client Environmental Manager would maintain a register of all monitoring results.

4.7 **Non-Compliance Procedures and Environmental Incidents**

4.7.1 Given the nature of the works and the environmental sensitivity of the site it is possible, although unlikely, that environmental incidents could occur. Such incidents could include:
4.7.2 The Project Team will establish procedures for responding to environmental incidents. In the event of an environmental incident an Environmental Incidents Register will detail:

- date the environmental incident occurred;
- description of the environmental incident situation;
- impact of the environmental incidents;
- description of the elements of the environment subject to impacts caused by environmental incidents (receptors);
- actions to be implemented in response to environmental incident;
- responsibility for undertaking actions; and
- time frame for implementing actions.

4.7.3 The Contractor Environmental Manager is responsible for ensuring site staff has been fully briefed on how to respond to emergency environmental incidents.

4.7.4 All incidents and accidents would be recorded on a specified form (included Appendix 4), reported to the Project Manager and the Client Environmental Manager. All incidents would be subject to a full investigation resulting in a report detailing the remedial measures taken and the root cause analysis to prevent recurrence. The Contractor Environmental Manager would instigate an appropriate change in procedures where necessary.

4.7.5 All incidents occurring within the construction site must be immediately reported to the Client Environmental Manager and the Project Manager in order for them to notify the appropriate parties as required, including the nominated clean-up contractor, the Environment Agency, and other relevant local authorities.

**Spillages**

4.7.6 A spill response plan, which all staff are made aware of, will be implemented in the event of an environmental incident. This plan will take into account any Client specific requirements. The appropriate incident response equipment will be available next to particularly sensitive activities (e.g. overpumping) or areas of a site (such as fuel storage areas).

4.7.7 A supply of spill containment and treatment equipment and materials will be available near storage areas of hazardous materials at all times in sufficient quantities to deal with small-scale spillages and all staff will be aware of where this equipment is stored.

4.7.8 An incident of pollution at the construction site will be contained using equipment stored within the sensitive area, mopped up quickly using pads and granules and
removed from the area for safe storage prior to permanent removal from site. Any contaminated ground will be removed immediately and stored outside the sensitive area for testing and removal from site.

4.7.9 All incidents occurring within the Site must be immediately reported to the Client’s Environmental Manager and the Project Manager in order for them to notify the nominated clean-up contractor. The incident will be recorded and the Environmental Manager will conduct an investigation into the cause and effect of the incident, recommending an appropriate change in procedures where necessary.

4.8 Complaints Register

4.8.1 It is important that members of the public or interested parties are able to make complaints regarding the construction of the scheme. Complaints provide a valuable feedback mechanism helping to minimise potential impacts on sensitive features and allowing construction practices to be refined and improved.

4.8.2 All complaints received will be investigated and a response (even if pending further investigation) is to be given to the complainant as soon as reasonably practicable.

4.8.3 The Contractor will maintain a separate register for noise and vibration complaints, together with any remedial actions taken and responses given. The Complaints Register will be available for scrutiny by local authorities if required.

4.8.4 All employees of the main civil contractor and sub-contractors will be trained to report any feedback (be it complaints and or praise) from site visitors, neighbouring property owners or the surrounding community to the Contractor Manager’s Office.

4.9 Communications with the Public

4.9.1 A signboard would be placed at the entrance of the access road informing the public of the construction activities taking place.

4.9.2 The Project Team will communicate proactively with any local residents / businesses and other members of the public that may be affected by construction activities and regularly liaise with the Local Authority. This is particularly important in the event that construction work outside of the standard site working hours is necessary. Responsibilities for such communication will also be agreed within the Project Team depending.

4.9.3 A form for recording Public Feedback can be found in Appendix 5.

4.10 Control of non-conformance

4.10.1 Non-conforming activities, processes or products would initiate a Non-Conformance Report, which would identify the nature of the problem, the proposed corrective action, action taken to prevent recurrence of the problem and verification that the agreed actions have been carried out. All non-conformances identified and the corrective action taken would be summarised in a monthly report.
4.10.2 Should the Contractor be in breach of any of the specifications contained in the CEMP, the Project Manager shall, in writing, instruct the Contractor responsible for the incident of non-compliance regarding corrective and/or remedial action required, and specify a timeframe for implementation of these actions. The Contractor shall be responsible and shall bear the cost of any delays, corrective or remedial actions required as a result of non-compliance with the specifications and clauses of the CEMP.

4.11 Internal Communication and Co-ordination

4.11.1 Regular communication will be maintained between representatives at all levels of the contract to ensure that everyone is fully aware of project environmental issues. Communication methods will include inductions, toolbox talks, briefings, letters/memos and review meetings.

4.11.2 Internal project communications would mainly be via two processes:

- biweekly team meetings.
- a monthly Project Environmental Review.

Team meetings

4.11.3 Biweekly team meetings attended by the Client EM and the Contractor EM would be held by the construction team to review performance and co-ordinate short-term planning of forthcoming activities if necessary. Environmental management representatives would use these meetings to report on the findings of their inspections together with any systematic or recurring issues. Actions from these meetings would be recorded via minutes and reviewed by the Contract Manager.

Monthly Project Environmental Review

4.11.4 Environmental issues would be primarily discussed at a monthly Project Environmental Review, chaired by the Contract Manager and attended by the Contractors EM, the Clients EM, relevant sub contractors environmental representatives and, when necessary, environment specialists and representatives from statutory consultees.

4.11.5 The Project Environmental Review would

- consider past performance from inspections, audit reports and monitoring data.
- plan actions required to mitigate forthcoming risks.
- disseminate best practice.

4.12 Revision and Review of the CEMP

4.12.1 The relevance of CEMP elements will be routinely reviewed by the Client EM and the Contractor EM. This review will focus on the need for the type and level of monitoring and the appropriateness of management measures, monitoring methods and reporting systems.
4.12.2 If not amended by specific elements of this CEMP, it is proposed that during works the Environmental Managers will meet regularly to review available reports of monitoring and routine site inspections. This arrangement is not intended to limit the right of any authorised agency representative from conducting site inspections.

4.12.3 If the CEMP requires updating, the new information will be supplied to all registered copyholders and an acknowledgement slip (Appendix 6) sent to ensure copies are current. Updates will only be circulated once the Project Manager and the Local Planning Authority have approved the updated plan.

4.12.4 However, any revisions must comply with all the requirements of the Development Consent Order granted in respect to this project and must be acceptable under the Conditions of Contract. All significant revisions to the highlighted sections of the CEMP must be authorised by the relevant planning authority and implemented by the DCO Holder.

4.13 Site Establishment and Construction Site Layout Plan

Site establishment

4.13.1 Site establishment would take place in an orderly manner and all amenities would be installed before the main workforce move onto site.

4.13.2 A method statement would be provided by the Contractor after award of tender that includes the layout of the construction site, management of ablution facilities and wastewater management. The Contractor shall supply a wastewater management system that will comply with legal requirements and be acceptable to the relevant planning authority.

Construction Site Layout Plan

4.13.3 After award of tender the Contractor will develop a detailed Construction Site Layout Plan indicating the intended use of the site, and will include:

- site access during construction (including all entry and exit points);
- all material and equipment storage areas (including storage areas for hazardous substances such as fuel and cement);
- construction offices and other structures (if required);
- security requirements (including temporary and permanent fencing and lighting) and accommodation for security staff;
- areas where material is to be stockpiled (including construction materials and topsoil);
- solid waste collection facilities;
- temporary construction phase stormwater control measures;
- provision of temporary ablution facilities for construction personnel.
4.13.4 The construction area would be clearly demarcated on the site plan, and all other areas must be considered no-go areas for the construction personnel.

4.13.5 The construction site layout plan would be made available to the Project Manager for written approval. Throughout the period of construction, only the approved areas on the construction site layout plan would be used for the storage of construction material, topsoil, machinery, equipment and establishment of site offices.

4.14 Fire Prevention

4.14.1 All necessary measures will be taken to minimise the risk of fire and the Contractor will comply with the requirements of the local fire authority and the Health and Safety regulations.

4.14.2 To reduce the risk of fire occurring within the Site:

- All enclosed working areas will be non-smoking. Specific areas within the worksites will be designated as smoking areas and will be equipped with containers for smoking waste. These will not be located at the boundary of working areas adjacent to neighbouring land.
- Open fires will be prohibited at all times.
- A sprinkler system would be installed at the appropriate stage of the construction phase.

4.14.3 Fire prevention facilities must be present and easily accessible at all storage facilities. Fire fighting equipment is to be present on site at all times as per the Health and Safety regulations.

4.15 Materials Handling, Use and Storage

4.15.1 During materials handling and storage the following measures will be employed by the Contractor:

- only designated areas would be used for the handling or storage of construction materials;
- delivery drivers would be appropriately supervised by an individual familiar with all procedures and restrictions on site. This is of particular importance during off and on-loading of materials;
- all dust-generating materials transported to and from site would be covered by tarp;
- stockpiles would be dampened to minimise the potential for dust generation;
- stockpiles would be kept to the minimum practicable height (generally 2m) and use gentle slopes;
- stockpile surfaces would be compacted, if necessary;
- storage time of materials on site would be minimised
4.16 Storage of Hazardous Substances

4.16.1 The Contractor will make provisions to ensure that all potential contaminants stored on the construction site are controlled in accordance with the Control of Substances Hazardous to Health (COSHH) Regulations 1999, PPGs, and are properly isolated and bunded and that no oil or other contaminants are allowed to reach watercourses or groundwater, including aquifers.

4.16.2 As a consequence storage locations for such materials would be positioned at least 50 m away from watercourses and agreed with the relevant planning authority.

4.16.3 All surface water or other contaminated water which accumulates in the bund will be removed by manually controlled positive lift pumps and not by means of a gravity drain. This water will be removed from site and discharged into a public sewer in consultation with the relevant authorities.

4.16.4 Spill response kits containing equipment appropriate to the quantity and types of materials present on site will be available in the event of a fuel spillage and personnel will be trained in their use (See section 4.6 for actions after spills).

4.16.5 Storage areas would be clearly signed and would be regularly monitored for spills. Any leaking containers will be repaired or removed from site.

4.16.6 A register will be kept on all hazardous substances and be available for inspection at all times. All hazardous substances used on site would be handled in accordance with the manufacturer’s specifications and legal requirements.

4.16.7 The Contract Manager would identify and maintain a register of all activities that involve the handling of potentially hazardous substances, as well as devise and supervise the implementation of protocols for the handling of these substances. This will include all fuels, oils, lubricants and grease.

4.16.8 The Contractor must ensure continuous compliance with all the above conditions under the monitoring of the Environmental Managers (in compliance with Environment Agency regulations).

4.17 Workshop and Equipment Storage Areas

4.17.1 Where possible and practical all maintenance of vehicles and equipment will take place in the workshop area. During servicing of vehicles or equipment, a suitable drip tray will be used to prevent spills onto the soil, especially where emergency repairs are effected outside the workshop area. Leaking equipment shall be repaired immediately or be removed from site to facilitate repair. Workshop areas will be monitored for oil and fuel spills and such spills shall be cleaned and re-mediated to the satisfaction of the Environmental Managers (see section 4.6 for actions after spills).

4.18 Health and Safety

4.18.1 Safety is of paramount importance on all construction sites. The following sections highlight a number of safety aspects but these are by no means comprehensive. It is
the Contractor’s responsibility to ensure full compliance with all applicable health and safety legislation.

**Health and Safety at Work Etc. Act 1974**

4.18.2 All site work will be carried out under the provisions of the Act, and to the satisfaction of the local HSE officer. The Health and Safety manager will ensure compliance with all health and safety legislation.

**Emergency Contacts and Procedures**

4.18.3 The Contractor will appoint a suitably qualified Health and Safety Officer. The Contractor will prepare and maintain an Emergency Contact Procedure for each work site which will be displayed prominently at each site. These Procedures will be followed in any site emergency.

4.18.4 The procedures will contain emergency phone numbers and the method of notifying Local Authorities for action by the Contractor and the Developer. Copies of the Procedures will be issued to the Local Authorities, community councils, the Fire Brigade, the Police, the Ambulance Service and the relevant statutory authorities.

4.18.5 Emergency telephone numbers for the Contractor’s key personnel will also be included for the developer’s use in an emergency.

4.18.6 Health and Safety briefings will be made to all staff before they enter the site initially with regular updates and awareness-raising.

**Contaminated Materials (Special Precautions)**

4.18.7 For those sites at which contaminated material is encountered, the Contractor’s Health and Safety Officer will ensure that a Workers’ Safety Information Sheet is prominently displayed in rest/mess rooms and wash rooms covering hygiene, work practices, clothing requirements etc.

4.18.8 General provisions concerning disposal of contaminated materials are described in Section 4.21.

**Health and Safety Plan**

4.18.9 Prior to commencement of construction works the Contractor will be required to produce a Health and Safety Plan (HASP) to protect his employees during the works they shall undertake.

4.18.10 This will highlight the presence of potential risks to ensure that the contractor is aware of the requirements for Personal Protective Equipment.

4.18.11 This CEMP shall be considered when preparing the HASP. Work practices required by the CEMP are not intended to compromise health and safety in any way. The HASP will be approved by the Project Manager prior to the contractor commencing works.

4.18.12 A copy of the HASP will be compiled on a central register held by the Contract Manager.

**Health and Safety File**
4.18.13 The Health and Safety File would be submitted by the Principal Contractor to a programme to be agreed with the CDM co-ordinator. Given the relatively straightforward nature of the works, it is anticipated that the Health and Safety File would be available within four weeks of project completion.

4.18.14 The Health and Safety File would include information about all of the following topics, where they may be relevant to the health and safety of any future construction work. The level of detail to be provided would be proportional to the likely risks involved.

- Details of the project - Brief description of the work carried out;
- Residual hazards and how they have been dealt with;
- Key structural principles incorporated in the design of the structure (e.g. bracing, sources of substantial stored energy, including pre and post-tensioned members) and safe working loads for floors and roofs, particularly where these may preclude scaffolding or heavy machinery there;
- Any hazards associated with materials used (for example hazardous substances, lead paint, coatings that should not be burnt off);
- Information regarding the removal or dismantling of installed plant and equipment (for example lifting arrangements);
- Health and safety information about equipment provided for cleaning and maintaining the structure;
- The nature, location and marking of significant services, including fire fighting services;
- Information and as-built drawings of the structure, its plant and equipment (e.g. the means of safe access to and from service voids, fire doors and compartmentation).

4.19 Security

4.19.1 The Contractor and any Sub-Contractors will be responsible for the security of their equipment and any other items brought onto the site.

4.19.2 Adequate security will be exercised by the Contractor to protect the public and prevent unauthorised entry to or exit from the site. Site security measures would include that the contractor would ensure that the construction site is guarded 24 hours a day, 7 days a week during the entire construction period (until the gas turbine power station is put in to operation). The access area is already equipped with an access control system (e.g. turnstile with card reader, porter). The construction site lies within the fenced in paper mill site which is equipped with CCTV.
4.20 Site Housekeeping

4.20.1 A ‘good housekeeping’ policy will be applied at all times. This will include the following measures:

- rubbish will be removed at frequent intervals and the site kept clean and tidy;
- all enclosed working areas will be non-smoking. Specific areas within the worksites will be designated as smoking areas and will be equipped with containers for smoking waste. These will not be located at the boundary of working areas adjacent to neighbouring land;
- any waste susceptible to spreading by wind or liable to cause litter will be stored in enclosed containers;
- where required the construction site will be screened by the Contractor to ensure that there is no unacceptable visual intrusion in the area of the site;
- the Contractor will regularly inspect all working areas to ensure compliance;
- a nominated representative of the Client may carry out inspections of the site at any time without prior notice of time and place of the inspections.

4.21 Site Environmental Standards

4.21.1 These would be agreed with the Client’s Environmental Manager and would detail the minimum measures that should be achieved for general operations that would fall outside the risk assessment/method statement procedure designed to cover the majority of construction activities. They would cover issues such as storage of materials, management of waste, water pollution, noise and vibration, and water pollution control. The standards would be printed on A3 posters, placed on site notice boards and used as a briefing tool on site.

4.22 Waste Minimisation and Management

4.22.1 A variety of different materials will be used for construction of the development. The project also involves removal of existing buildings and services which will produce waste materials.

4.22.2 A key requirement for the contractor would be to manage waste production throughout the construction period. Sustainability is likely to be one of the selection criteria for suitable contractors for the project. Waste management will comply with Waste Management Regulations 1994 and Duty of Care Regulations 1991, and will be finalised in consultation with the Environment Agency (EA).

4.22.3 The key to minimising the production of waste is to implement the waste hierarchy of Reduce, Reuse, Recycle, Dispose. Reducing the amount of materials used also has the effect of minimising use of natural resources and reducing costs. Careful management and phasing of the development will ensure that this is the case.
4.22.4 Waste material including concrete, stone, tiles, wood, glass, wiring, plumbing, paint containers, other than that which can be recycled and re-used on site, will be gradually removed from site to be disposed safely by an agreed Waste Operator. Excavated material that cannot be reused, as backfill in the works will be disposed of off-site.

4.22.5 The aim will be for re-use on site in order to minimise traffic movements, but surplus quantities are inevitable. Possible licensed disposal sites will be identified by the Contractor after award of tender.

4.22.6 The Contractor will comply with approved guidance and procedures in the identification, handling, storage, recovery and disposal of waste.

4.22.7 Method Statements prior to demolition and construction activities for the site would be prepared by the contractor to identify waste types likely to be generated and procedures to be employed in their handling, transportation and disposal.

4.22.8 A waste management plan will be produced by the contractor in line with “Waste Management – A Duty of Care" (DoE 1991”). Reference would need to be made to the document Site Waste Management Plans: Guidance for Construction Contractors and Clients: Voluntary Code of Practice (DTI, 2004).

4.22.9 The Contractor will be required to employ the following specific waste management measures:

- appointment of a Site Waste Manager
- all necessary parties would retain Duty of Care transfer notes or special waste consignment notes as appropriate;
- records of waste disposal will be maintained by the Contractor and kept on file;
- domestic wastes from individuals would be sorted in approved containers before haulage to safe disposal by agreed Waste Operators;
- all waste would be separated, stored and contained securely and labelled;
- suitable licensed waste contractor(s) would be employed and their licence would be audited;
- the waste management scheme and activities would be monitor and audited periodically;
- waste disposal would be minimised through good housekeeping;
- checking all delivered products for accuracy, defects and breakages on arrival and returning them rather than retaining them on site for later disposal;
- construction materials will be stored in a safe location where they will not be damaged, which can cause unnecessary waste.;
- stockpiling re-useable waste such as timber skids, pallets and drums at a suitable location for salvage;
- all waste chemicals and other toxic materials would be stored and collected for safe transport to locations approved by regulatory authorities;
• contaminated soils (if any) shall be managed according to their concentration, leachability and area affected and disposed of in consultation with relevant environmental protection authorities.

• managing hazardous wastes in accordance with all relevant regulatory requirements;

• any soil contamination would be managed to prevent health risks to work personnel and the community in general.

• waste volumes will be registered including details of the type of waste collected, amounts, and where it was disposed.

4.23 Water Resources

4.23.1 The drainage network is already in place and this will enable containment and control of discharges and management of accidental spillages.

4.23.2 Waste water would be discharged to the existing effluent treatment plant of the paper mill.

4.23.3 To prevent any hazardous or contaminated run-off All polluting materials stored on site would be located on a bunded impermeable base. All refuelling activities to be carried out on a bunded impermeable base. All plant services to be carried out with drip tray fitted. All spillages would be dealt with immediately with emergency spillage kits kept on site. Site-specific procedures for spillage events would be developed (see section 4.14 to 4.16).

County Wildlife Site Reedbeds

Potential detrimental impacts to the CWS reedbeds will be managed through the control of the disposal of waste-water, waste materials as well as air emissions and noise.

4.24 Air Quality (Dust and Odour Control)

Dust

4.24.1 The dust emitting activities respond well to appropriate dust control measures and any adverse effects can be greatly reduced or eliminated.

4.24.2 A construction objective will be to ensure there are no nuisance dust emissions from the construction site. To achieve this, action will be taken to avoid the circumstance that leads to the generation of the dust nuisance.

4.24.3 As appropriate, mitigation measures will include:

• Site roads and work areas would be swept and sprayed with water in prolonged spells of dry weather;

• adherence to speed limits for all vehicles;

• stabilisation of disturbed areas as soon as possible after disturbance, through the introduction of vegetation
ensuring that surfaces are constructed to their final design requirement as quickly as practicable
wheel washing facilities would be provided and maintained in use at all times during the construction period
any complaints or claims emanating from the lack of dust control will be attended to immediately by the Contractor.
materials, which arise from the preparation of the site, should be stockpiled and where possible used for the redevelopment process, thus reducing the number of off-site vehicles movements required to bring such material onto the site.
accumulation of dust on and off-site would be monitored regularly, if needed corrective actions would be undertaken;
all access roads (e.g. Poplar Avenue and High Road) should be inspected for accumulations of dust and mud; all such depositions would be removed as soon as possible after they have been identified;
handling areas should be maintained in a clean condition.

Odour
4.24.4 There will be no construction activity that has the potential to release any significant malodorous substances. Thus no specific mitigation measures are required.

4.25 Noise and Working Hours / Deliveries
4.25.1 In accordance with Requirement 13 of the DCO construction activities must not take place other than between 07:00 and 19:00 hours on weekdays and 07:00 and 16:00 hours on Saturdays, excluding public holidays, unless otherwise agreed in writing by the relevant planning authority.
4.25.2 In the event that public complaints and noise measurements indicate that noise levels have significantly risen at sensitive receptors, the Contractor would take all reasonably practicable mitigation measures to reduce the noise impact and / or prevent recurrence e.g. change the method of working, use mobile noise barriers.
4.25.3 On completion of the enclosure (being roof, walls, windows and doors) of each building, construction work within that building may take place outside of the above hours provided that doors and windows remain closed during construction activities.
4.25.4 The Contractor will maintain records of time worked and the deliveries received or dispatched to show compliance. The Contractor will have a general duty to take all practicable measures to minimise nuisance from noise and vibrations.
4.25.5 Without prejudice to other legal and contractual requirements, the Contractor will comply with the following mitigation measures:
- Principles of the “Best Practicable Means”, as defined in the Control of Pollution Act (1974), would be used to reduce noise and vibration.
• Construction activity outside permitted working hours will be restricted to the enclosure (being roof, walls, windows and doors) of each building; construction work within that building would take place outside of the above hours provided that doors and windows remain closed during construction activities.

• Noisy plant or equipment will be sited as far away as is practicable from noise sensitive receptors.

• Plant will be used in an appropriate manner to minimise noise emissions including regular maintenance of the plant.

• Construction Contractors will adhere to the codes of practice for construction working and piling set out in BS 5228 ‘Noise Control on Construction and Open Sites’ insofar as these are reasonably practicable and applicable to the construction works.

• Vehicles and mechanical plant used for the purpose of the works would be fitted with effective exhaust silencers and would be maintained in efficient working order. All plant would comply with relevant EU/UK noise limits applicable to that equipment or is no noisier than would be expected from the noise levels quoted in BS 5228:1997.

• Care would be taken when loading or unloading vehicles or dismantling scaffolding or moving materials, etc. to reduce impact noise. All operatives undertaking such activities should be instructed on the importance of handling the scaffolding to reduce noise to a minimum.

• Deliveries would be programmed to arrive during daytime hours only, if practical.

• Care would be taken when unloading vehicles to minimise noise. Delivery vehicles should be routed so as to minimise disturbance to local residents (see section 4.27).

• Machines in intermittent use would be shut down in the intervening periods between work or throttled down to a minimum.

4.26 Vibrations

4.26.1 Construction activities will be carried out in such a way that vibrations arising will not cause significant damage to adjacent structures. The Contractor will comply with recommendations and guidance obtained from BS7385-Evaluation and Measurement of Vibration in Building- Part 2.

4.26.2 Due to the large distance to the nearest residential properties (approx. 650 m) it is unlikely that the measured ground vibrations will exceed a peak particle velocity of 1mm per second at any occupied property and 3mm per second at any other property in any orthogonal direction.

4.26.3 Compliance with these limits will not absolve the Contractor from a duty of care and wider contractual responsibilities.
4.27 **Construction Traffic Access Routes**

4.27.1 Construction traffic management procedures would be adopted. These management procedures will be agreed in advance with the relevant planning authority. The CEMP will include a description of the ‘Construction Traffic Access Route’.

4.27.2 Both the Main Contractor and all subcontractors would be required to ensure that construction traffic would be restricted to approved access route.

4.27.3 In addition it must be ensured that a backlog of traffic does not develop at the access points during peak hours, through the implementation of an efficient and effective access control systems.

4.28 **Archaeology**

4.28.1 The developer will afford access at all reasonable times to any archaeologist nominated by the relevant planning authority, and will allow him to observe the excavations and record items of interest and finds.

4.28.2 The Contractor would ensure that Site Staff are aware of archaeological issues. Should any archaeological artefacts be exposed during excavation, work on the area where the artefacts were found, would cease immediately and the Project Manager would be notified as soon as possible. The Project Manager would then inform the Local Planning Authority.

4.28.3 Upon receipt of such notification, the Project Manager will arrange for the excavation to be examined by an archaeologist as soon as possible. Under no circumstances will archaeological artefacts be removed, destroyed or interfered. Any archaeological sites exposed during construction activities may not be disturbed prior to authorization by the Local Planning Authority.

4.28.4 An archaeologist will then take the necessary action so that construction can continue.

4.29 **Flood Risk**

4.29.1 The on-site sewers and the retention basin are designed to the current standards and in line with good practice.

4.29.2 Floor levels and the site drainage strategy should be designed to work together in order that the risk of on-site flooding as a result of site runoff is minimised.

4.29.3 The Flood Risk assessment recommends the finished floor levels to be no lower than 5.0m AOD.

4.29.4 A conceptual drainage scheme for the provision and implementation of surface water drainage was submitted as Document 2.7.

4.29.5 The works/scheme will be constructed and completed in accordance with the approved plans/specification at such time(s) as may be specified in the approved scheme.
4.30 Landscape and Visual Amenity, Site Rehabilitation

The Contractor will take all necessary measures to minimise and avoid creating visual impacts during construction. The Contractor will ensure the following measures to minimise impacts are implemented:

- unnecessary vegetation removal will be avoided;
- materials and machinery will be stored tidily during the works in order to minimise impacts on views;
- portable machinery will be stored behind hoardings in compounds or covered over when not in use;
- lighting of compounds and works sites will be restricted to agreed working hours and those which are necessary for security;
- public roads providing access to construction site will be maintained free of dust and mud;
- the Contractor will clear and clean all working areas and accesses as work proceeds and when no longer required for the works;
- on completion of the project, the Contractor would remove all structures, equipment, surplus soil and materials, waste, notice boards and temporary fences used during the construction operation with minimum damage to the surrounding area;
- in accordance with Requirement 6 and 7 of the DCO all open areas will be restored to such a condition as displayed in the Landscaping Plan (Document 2.15).

4.31 Land Contamination / Remediation

In the event of contaminated material being found, appropriate measures would be put in place to either isolate and remediate this material in situ, or to remove it from site.
5 SITE DOCUMENTATION

5.1.1 The standard Palm Paper site documentation will be used to keep records on site. All documents will be kept on site and be available for monitoring and auditing purposes. Site inspections may require access to this documentation for environmental auditing purposes.

5.1.2 Copies of all environmental documentation relevant to the works will be filed on site, and made available for internal inspection, including:

- Construction Environmental Management Plan (CEMP).
- Access negotiations (if necessary) and physical access plan.
- Complaints register.
- Site daily dairy.
- Records of any remediation / rehabilitation activities, if necessary
- Reports to the Project Manager
- Register of all environmental incidents and actions taken
- Any written communication with the Environmental authorities or consultees
- Waste transfer notes
- Hazardous waste consignment notes
- Records of all hazardous materials used on site
- Monitoring data (e.g. dust, noise)
- Consents and licences obtained
- Records/reports of surveys and inspections
- Environmental risk assessments
- Method statements
- Environmental Statement
- Environmental training records (inductions, etc.)

5.1.3 This documentation will be kept with the CEMP, and will be made available for scrutiny if so requested by the Project Manager or a representative of the relevant planning authority.
6 CONCLUSIONS AND RECOMMENDATIONS

6.1.1 The CEMP will ensure that the best environmental practice is achieved throughout the development and that all sensitive environmental and residential receptors are protected as far as possible.

6.1.2 The Construction Environmental Management Plan must be used as an on-site reference document during all phases of this development, and auditing must take place in order to determine compliance with the CEMP. Parties responsible for transgression of the CEMP must be held responsible for any rehabilitation that may need to be undertaken. Parties responsible for environmental degradation through irresponsible behaviour / negligence must receive penalties.

6.1.3 Provided this development is mitigated, as per the CEMP, it is anticipated that most of the negative environmental impacts of construction can be mitigated. The appointed environmental managers will need to monitor the site throughout construction to ensure that the required environmental controls are in place and working effectively.
7 APPENDICES
Appendix 1

Key Contacts - Template
<table>
<thead>
<tr>
<th>FUNCTION / POSITION / RESPONSIBILITY</th>
<th>NAME</th>
<th>ADDRESS</th>
<th>PHONE NO.</th>
<th>E-MAIL</th>
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<tbody>
<tr>
<td>Project Manager</td>
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<td>Client Environmental Manager</td>
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<tr>
<td>Contractor</td>
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</tr>
<tr>
<td>Contract Manager</td>
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<tr>
<td>Contractors Environmental Manager</td>
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<tr>
<td>Site Waste Manager</td>
<td></td>
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</tr>
<tr>
<td>Environmental Specialist (Ecologist)</td>
<td></td>
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<tr>
<td>Subcontractor 1 (Name of Company)</td>
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<tr>
<td>Subcontractor 2 (Name of Company)</td>
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<tr>
<td>Archaeologist</td>
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</tr>
</tbody>
</table>
Appendix 2

Construction Phasing Programme
Appendix 3-1   Construction Phasing Programme
**Project:** CGT PP 3  
- Combined Cycle Gas Turbine -  
- Palm Paper, King’s Lynn -

**Subject:** Construction Phasing Program  
- Key Dates -

**Date:** 10th October 2013 - Dol - A

| Duration | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| weeks     |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| start     |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| finish    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |

### 1 Civil Works
- **1.1 Site clearance and preparation works**
  - Start: 6 01 07
- **1.2 Piling**
  - Start: 4 06 09
- **1.3 Plant Foundation and trench works**
  - Start: 12 09 20
- **1.4 Waste Heat Boiler Hall**
  - Start: 24 17 40
- **1.5 Gas Turbine Hall**
  - Start: 20 23 43
- **1.6 Steam Turbine Hall**
  - Start: 18 26 44
- **1.7 Auxiliary Facilities Building**
  - Start: 16 14 49
- **1.8 Transformer Boxes**
  - Start: 16 17 33
- **1.9 Pipe/Cable Bridges**
  - Start: 20 14 33
- **1.10 Technical building installation**
  - Start: 24 29 52
- **1.11 Landscaping and Site finishing**
  - Start: 4 80 84

### 2 Installation Engineering Systems
- **2.1 Waste Heat Boiler**
  - Start: 30 27 56
- **2.2 Gas Turbine**
  - Start: 12 43 54
- **2.3 Steam Turbine**
  - Start: 10 47 56
- **2.4 Auxiliary Facilities**
  - Start: 24 36 59
- **2.5 Pipeworks**
  - Start: 24 29 62
- **2.6 Electrical Installation**
  - Start: 30 34 63
- **2.7 Control Technology**
  - Start: 20 45 64

### 3 Commissioning
- **3.1 Auxiliary Facilities**
  - Start: 16 58 73
- **3.2 Main Facilities**
  - Start: 18 61 80
- **3.3 CGT operational**
  - Start: 1 80 80
## Appendix 3

Proposed Report Form for Environmental Inspections
# Daily / Weekly / Monthly Inspection Form

*To be tailored to approved CEMP*

<table>
<thead>
<tr>
<th>Date:</th>
<th>Inspected by:</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Weather Conditions:</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>CEMP Plan No</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Environmental Incident</th>
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<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Public Complaints</th>
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## General Site Management

<table>
<thead>
<tr>
<th>Complies tick if yes</th>
</tr>
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<tbody>
<tr>
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</tbody>
</table>

- Fire Prevention
- Material Handling, Use and Storage
- Storage of Hazardous Substances
- Workshop and Equipment Storage Area
- Security
- Housekeeping
- Waste Minimisation and Management
- Dust (Monitoring results)
- Noise (Monitoring results)
- Working Hours and Deliveries
- Construction Traffic Access Routes (Complaints)

**Comments on non compliance:**

## Site Specific

<table>
<thead>
<tr>
<th>Water Resources</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Ecology</th>
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<table>
<thead>
<tr>
<th>Archaeology</th>
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<table>
<thead>
<tr>
<th>Flood Risk</th>
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<thead>
<tr>
<th>Landscape and Visual Amenity</th>
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</tbody>
</table>

**Comments on non compliance:**
Appendix 4

Environmental Incident Classification Reporting Schedule and Reporting Form
<table>
<thead>
<tr>
<th>Classification</th>
<th>Severity</th>
<th>Example</th>
<th>Reportable</th>
</tr>
</thead>
</table>
| 1              | Prosecution | - Section 60 (noise) or Section 80 (nuisance) notice as a result of work  
- Prohibition of work activities (EA, NE, LA)  
- Anti-pollution works notice | Yes |
| 2              | Enforcement Notice | - Spillage of oil entering water course  
- Destruction of protected species / flora habitat  
- Inappropriate treatment of invasive plants  
- Discovery of fly tipping of site materials | Yes |
| 3              | Incident leading to external damage, severe local damage | - Spillage of oil entering water course  
- Destruction of protected species / flora habitat  
- Inappropriate treatment of invasive plants  
- Discovery of fly tipping of site materials | Yes |
| 4              | Complaint / visit of EHO, EA, NE, LA officer as a result of a complaint | - Noise, pollution in watercourses, species damage, dust etc | Yes |
| 5              | Complaint from neighbours etc | - Noise, dust dirt on mud or roads | Site only |
| 6              | Minor localised damage | - Spillage of oil  
- Accidental disturbance of protected species | Site only |

<table>
<thead>
<tr>
<th>Location</th>
<th>Incident (what, how, when, why)</th>
<th>Classification 1-4</th>
<th>Action Taken/ Further Action Required</th>
<th>EA /NE/ LA notified (time/date/ref name or number)</th>
</tr>
</thead>
</table>


Appendix 5

Form for Recording Public Feedback
PUBLIC FEEDBACK RECORD

1  DETAILS OF FEEDBACK

<table>
<thead>
<tr>
<th>Date Received:</th>
<th>Received by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means by which received:</td>
<td>Phone / Fax / Letter / Personal / Email</td>
</tr>
<tr>
<td>Name:</td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
<tr>
<td>Nature of Feedback:</td>
<td></td>
</tr>
</tbody>
</table>

2  ACTION TAKEN

| Details of Action Required/Who by: | |
| Date Action(s) to be Completed (must include follow-up if a complaint) | |
| Action Completed (signature/Date) | |
| Record of any Response by Complainant: | |
Appendix 6

Form for Acknowledgement Slip
CONTRACTORS LTD PROJECT

CCGT PP3 King’s Lynn

SUB-CONTRACTOR’S ACKNOWLEDGEMENT FORM

I acknowledge that I have read the CEMP dated ........................................
...........................................................................................................................
........................................................................................................................... and understand our/my responsibilities in respect of this plan.

Where applicable

In particular, we shall ensure the following:

...........................................................................................................................
...........................................................................................................................
...........................................................................................................................
...........................................................................................................................
...........................................................................................................................

_______________________      __________________

Signature:          Date: