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# Tees CCPP Project

The Tees Combined Cycle Power Plant Project  
Land at the Wilton International Site, Teesside

## Volume 2 - Annex L

Regulations – 6(1)(b) and 8(1)

**Applicant:** Sembcorp Utilities UK  
**Date:** November 2017

Annex L

**CEMP**

**L1 INTRODUCTION TO CONSTRUCTION ENVIRONMENTAL  
MANAGEMENT PROGRAMME**

L1 Sembcorp Utilities (UK) Limited ('Sembcorp') plans to construct and operate a natural gas fired combined-cycle gas turbine (CCGT) generating station with an output capacity of up to 1,700 MWe ('the Project') on land within the Wilton International site, Teesside.

L2 This document presents a framework for the Construction Environmental Management Plan (CEMP). The detailed CEMP will be produced for the Project following the appointment of the EPC contractor in accordance with a Requirement of the development consent order (DCO).

L3 Potential impacts have been identified through the Environmental Impact Assessment (EIA) process and are reported in the Environmental Statement (ES). A range of 'standard' or best practice mitigation and construction management measures were accounted for in the assessments presented within the ES and it is assumed these will be implemented during construction of the Project. This framework CEMP demonstrates how these commitments in the ES will be implemented. It also sets out the monitoring and auditing activities designed to ensure that such mitigation measures are carried out and to demonstrate that they are effective.

L4 This document provides the likely structure of the CEMP, some preliminary information relevant to the CEMP, and indicates what additional information might be included under each sub-section within the final CEMP, which will be produced by the contractor selected to deliver the Proposed Development construction phase.

L5 The detailed CEMP will be produced in line with this framework document following receipt of development consent and would be agreed with Redcarr and Cleveland County Borough Council (RCBC) and the Environment Agency (EA) in advance of starting enabling works on Site. The need for a detailed CEMP to be produced in this manner is secured through Requirement no. 13 in Part 2 of Schedule 1 to the draft DCO (Application Document Ref. 2.1).

L6 This framework CEMP covers the principal construction activities envisaged at the time of DCO application. The final scope will be determined through consultation with RCBC and the EA and other relevant regulatory authorities.

L7 The purpose of the CEMP is:

- to provide a mechanism for ensuring that measures to mitigate potentially adverse environmental impacts are implemented;
- to ensure that standards of good construction practice are adopted throughout the Project;

- to provide a framework for mitigating impacts that may be unforeseen or unidentified until construction is underway;
- to provide assurance to third parties that their requirements with respect to environmental performance will be met; and
- to provide a framework for compliance auditing and inspection to enable Sembcorp to be assured that its aims with respect to environmental performance during construction are being met by the EPC contractor.

- L8 This Framework CEMP contains a strategic level of detail and is in draft form. It will be further developed prior to commencement of works on site in collaboration with the EPC contractor, who will have to demonstrate how it will comply with these requirements as part of the tendering process.
- L9 The CEMP will be iteratively developed as the Project proceeds through the detailed design and construction phases, to reflect the results of any discussions with regulators and consultees and to include details of the requirements imposed by permissions and consents obtained.
- L10 The key elements of the CEMP will include:
- an overview of the construction programme of the Project ;reduction of potential adverse impacts identified through the environmental impact process through finalised construction methods and other mitigation measures;
  - monitoring of effectiveness of mitigation measures;
  - corrective action procedure; and
  - links to other plans and procedures.
- L11 In summary, the CEMP will identify how commitments made and referred to in the ES will be translated into actions on Site and includes a schedule from implementing the actions through allocation of key roles and responsibilities.
- L12 The appointed contractor will be responsible for working in accordance with the environmental controls documented in the CEMP. The overall responsibility for implementation of the CEMP will lie with Sembcorp Utilities (UK) Limited.
- L13 The CEMP will be designed with the objective of compliance with the relevant environmental legislation and the mitigation measures set out within the ES. It should be read alongside any other environmental documents related to the construction phase and the ES submitted in support of the DCO application.
- L14 Any additional construction licences, permits or approvals that are required will be listed in the detailed CEMP, including any environmental information submitted in respect of them.

L2 CONSTRUCTION PROGRAMME

L15 The current expectation is that site preparation, construction and commissioning of the Project will take approximately 39 months if constructed in one phase, or will take place over two construction phases both of 39 months each.

L16 Allowing sufficient time to receive development consent and to discharge the DCO Requirements, it is anticipated that the earliest that site preparation and enabling works on Site for the Project would start is Q1 2019, with an expected operational start date of Q1 2022.

L17 Table L2.1 below provides an indicative construction programme.

Table L2.1 Indicative Construction Programme

	2019				2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Earthworks	■	■														
Main civil works			■	■	■	■	■	■	■	■						
Process works					■	■	■	■	■	■	■	■	■			
Gas connection									■	■	■	■				
Commissioning													■	■		

L18 Construction working hours will generally be Monday to Friday 07:00 to 19:00 and Saturday 08:00 to 18:00, however it is likely that some construction activities will be required to be 24 hours at certain times. These are principally construction activities that cannot be stopped, such as concrete slip forming. Where on-site works are to be conducted outside the core hours they will comply with the restrictions stated in this framework CEMP and any other restrictions agreed with the regulatory bodies. Construction noise limits have been identified for nearby noise sensitive receptors during evening and night-time periods. Thus, where on-site works are to be conducted outside the core hours they will comply with any restrictions agreed with RCBC, in particular regarding the control of noise and traffic. Compliance with these noise limits will ensure adverse effects are unlikely. Abnormal or emergency construction traffic movements may occur outside of normal working hours. In the event of these occurrences, specific noise mitigation measures will be put in place to reduce potential noise impacts at nearby noise sensitive receptors as set out below.

- L19 If any works are deemed urgently necessary in the interests of health or safety then they may occur outside the hours referred to above.
- L2.1 *PARKING PROVISION***
- L20 The location and size of parking provisions on Site, access/ egress routes/ gates, loading and unloading areas for plant and materials, storage areas, wheel washing facilities and construction traffic management measures will be set out in the final CEMP. It will also include a description of any laydown areas or contractor accommodation areas.
- L2.2 *OFF SITE DELIVERY ROUTES***
- L21 The CEMP will provide details of the designated routes for HGV movements and construction workers car movements, with reference to the Construction Traffic Management Plan (which has been prepared in accordance with draft DCO Requirement no. 15, and for which the framework is included in Annex I2, ES Volume 2I). It will also detail any measures designed to reduce travel during peak hours on the local road network, which modelling has identified to be 0730-0830 and 1630-1730.
- L2.3 *RECYCLING AND DISPOSING OF WASTE***
- L22 In order to minimise the waste generated on Project Site during site preparation and construction, the contractor will separate the main waste streams on Site, prior to them being taken to a waste facility for recycling or disposal.
- L23 A Site Waste Management Plan (SWMP) will be developed, which will specify the waste streams to be estimated and monitored and goals set with regards to the waste produced. A Framework SWMP is included within the Application, in Annex D4, ES Volume 2 (document 6.3.7). The SWMP will be finalised with specific measures to be implemented prior to the start of construction, in accordance with draft DCO Requirement no 14.
- L24 All waste to be removed from Site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.
- L2.4 *BEST PRACTICE MEASURES***
- L25 A Considerate Constructors Scheme (CCS) will be adopted to assist in reducing pollution and nuisance from the construction of the Project, by employing best practice measures which go beyond statutory compliance.

L2.5 *MANAGEMENT AND MITIGATION PLAN*

L26 This section of the framework CEMP sets out the mitigation and management measures to be included as a minimum in the CEMP. It also illustrates how the monitoring strategy will be set out and the responsible party identified for monitoring each mitigation/ enhancement measure.

*Table L2.2 Transport and Access*

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Increased traffic flows, including HGVs on the roads leading to the Site (A1053).	<p>The contractor will prepare a Construction Traffic Management Plan (CTMP) as required by requirement 15 in the draft DCO to identify a number of measures to control the routing and impact that HGVs will have on the local road network during construction. All construction HGVs will be required to arrive and depart the site either the A66 or A174. A programme of monitoring will be recommended to assess the effectiveness of the measures proposed.</p> <p>The CTMP will include measures to reduce the volume of construction staff and employee trips to the Site and the contractor will liaise with construction personnel for potential to implement staff minibuses and car sharing options.</p>	To be confirmed in detailed CTMP.	To be confirmed in detailed CTMP.

*Table L2.3 Noise and Vibration*

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Vibration due to construction activities causing annoyance at Noise Sensitive Receptors and damage to building structures. Evening and night-time noise effect due to construction activities at nearby noise sensitive receptors.	<p>Mitigation measures will be undertaken to mitigate noise. These will be included in the detailed CEMP and will include:</p> <ul style="list-style-type: none"> <li>specifying measures designed to minimise the noise impacts of construction activities as agreed in accordance with requirement no. 13 in the draft DCO;</li> <li>ensuring that modern plant is used, complying with the prevailing regulatory requirements. Selection of inherently quiet plant where possible;</li> <li>hydraulic techniques for breaking to be used in preference to percussive</li> </ul>	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	<p>techniques where practical;</p> <ul style="list-style-type: none"> <li>• impact piling to be restricted to the following times (unless required in an emergency), Monday to Friday 09:00 to 18:00, Saturday 09:00 to 13:00, no impact piling on Sunday or Bank Holidays pursuant to requirement no. 13 of the draft DCO.;</li> <li>• off-site pre-fabrication, where practical;</li> <li>• all plant and equipment being used for the works to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use;</li> <li>• all contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2) (BSI, 2014a and b), which should form a prerequisite of their appointment;</li> <li>• loading and unloading of vehicles, dismantling of site equipment such as scaffolding or moving equipment or materials around the Site to be conducted in such a manner as to minimise noise generation;</li> <li>• appropriate routing of construction traffic on public roads to minimise vehicle movements;</li> </ul> <p>procedure to be in place so that noise complaints are monitored, reported to the contractor and immediately investigated.</p>		

**Table L2.4 Water Resources and Flood Risk**

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
<p>Leakage or accidental spillage of building materials and potential pollutants used on Site, migrating to nearby surface watercourse of infiltrating to groundwater.</p> <p>Flood Risk</p>	<p>The contractor will comply with:</p> <ul style="list-style-type: none"> <li>• The Environment Agency's (EA) Pollution Prevention Guidelines (PPG) 1 General guide to the prevention of pollution;</li> <li>• PPG 2 Above ground oil storage tanks;</li> <li>• PPG 3 Use and design of oil separators in surface water drainage systems;</li> <li>• PPG 4 Treatment and disposal of sewage where no foul sewer is</li> </ul>	<p>To be confirmed in detailed CEMP.</p>	<p>To be confirmed in detailed CEMP.</p>



Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	<p>available;</p> <ul style="list-style-type: none"> <li>• PPG 5 Works and maintenance in or near water;</li> <li>• PPG 6 Working at construction and demolition sites;</li> <li>• PPG 7 Refuelling activities;</li> <li>• PPG 13 Vehicle washing and cleaning;</li> <li>• PPG 18 Managing fire water and major spillages; and</li> <li>• PPG 21 Pollution incident response planning.</li> </ul> <p>Measures to incorporate the EA PPG documents as listed above will include:</p> <ul style="list-style-type: none"> <li>• placing arisings and temporary stockpiles away from drainage systems, and directing surface water away from stockpiles to prevent erosion;</li> <li>• containment measures will be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils; all chemicals will be stored in accordance with their Control of Substances Hazardous to Health (COSHH) guidelines (Health and Safety Executive, 2002), whilst spill kits will be provided in areas of fuel/ oil storage;</li> <li>• an Emergency Spillage Plan will be produced, which site staff will be required to read and comply with;</li> <li>• the mixing and handling of materials will be undertaken in designated areas and away from surface water drains;</li> <li>• plant and machinery will be kept away from surface water bodies wherever possible and will have drip trays installed beneath oil tanks/ engines/ gearboxes and hydraulics, which will be checked and emptied regularly. Refuelling and delivery areas will be located away from surface water drains; and</li> <li>• exposed ground and stockpiles will be protected as appropriate and practicable to prevent windblown migration of potential contaminants. Water suppression will be used if there is a risk of fugitive dust emissions.</li> </ul> <p>Measures that will be considered for implementation for temporary drainage through the construction</p>		

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	<p>design and/or CEMP include:</p> <ul style="list-style-type: none"> <li>• installation of measures such as swales, silt fences and appropriately sized settlement tanks/ ponds to reduce sediment load;</li> <li>• the Floodline Warnings Direct service; and</li> </ul>		

Table L2.5 Ground Conditions

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Potential for risks to human health associated with waste generation, land contamination, airborne contamination and groundwater contamination.	<p>Good operational practices e.g. the use of Personal Protective Equipment (PPE) such as dust masks; ensure that all materials are suitable for their proposed use and will not result in an increase in contamination related risks; implement pollution control measures including:</p> <ul style="list-style-type: none"> <li>– all plant and machinery will be checked regularly and, where possible, the use of drip trays will be employed, should vehicles be parked on unsurfaced areas of the site;</li> <li>– an emergency spillage action plan will be produced and provisions made to contain any leak/spill</li> <li>– should any potentially contaminated ground, be encountered during construction, the contractor will be required to investigate the areas and assess the need for containment or disposal of the material. The contractor will also be required to assess whether any additional health and safety measures are required. Any such investigations will be required to be undertaken in consultation with the Environment Agency and other appropriate consultees. To further minimise the risks of contaminants being mobilised and contaminating other soils or water, construction workers will be briefed as to the possibility of the presence of such materials;</li> <li>– in the event that contamination is identified during construction works, appropriate remediation measures will be taken to protect</li> </ul>	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	<p>construction workers, future site users, water resources, structures and services pursuant to requirement 10 of the draft DCO;</p> <ul style="list-style-type: none"> <li>- the Contractor will be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water will be directed away from stockpiles to prevent erosion;</li> <li>- the risk to surface water and groundwater from run-off from any contaminated stockpiles during construction works will be further reduced by implementing suitable measures including sealing stockpiles to prevent rainwater infiltration. Alternatively bunding and/or temporary drainage systems will be put in place, designed in line with current good practice, following appropriate guidelines and obtaining all relevant licences including discharge consents;</li> <li>- any waters removed from excavations by dewatering will be discharged appropriately, subject to the relevant licences being obtained; and</li> <li>- the Contractor will implement a dust suppression/management system in order to control the potential risk from airborne contamination migrating offsite.</li> </ul>		

*Table L2.6 Ecology*

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
<p>Potential for obtrusive glare, upward light spill and light trespass to impact on ecology. Potential for spillages to enter watercourses and impact ecology. Dust deposition on sensitive ecological receptors.</p>	<p>Compliance with industry good practice and environmental protection legislation e.g. prevention of surface and ground water pollution, fugitive dust management, noise prevention or amelioration;</p> <p>Statement will be produced to guide the process;</p> <ul style="list-style-type: none"> <li>• to ensure legislative compliance in relation to nesting birds, all clearance of suitable vegetation/habitats during site preparation will be undertaken outside the breeding season (typically March-August inclusive)</li> </ul>	<p>To be confirmed in detailed CEMP.</p>	<p>To be confirmed in detailed CEMP.</p>

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	<p>for most species), where possible. In situations where this is not possible, an ecologist would check the working area for nests before works commence. If nests were discovered, appropriate mitigation would be implemented to ensure that they are not disturbed or destroyed before any works can commence in that area. This would include imposing exclusion zones between the works and nest(s) and suspending works within the area until any young had fledged. •</p> <ul style="list-style-type: none"> <li>• a Lighting Strategy will be prepared, setting out how lighting impacts on sensitive ecological receptors have been considered and addressed;</li> <li>• excavations deeper than 1 m will be covered overnight or a where not practicable a means of escape will be fitted;</li> <li>• Precautionary Working Method Statement (PWMS) will be implemented during construction works.</li> </ul>		

Table L2.7 Waste and Resources

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
<p>Potential to impact on sensitive receptors (humans, wildlife and controlled waters) if not stored and managed appropriately.</p>	<ul style="list-style-type: none"> <li>• All operational waste will be dealt with in accordance with the waste duty of care in Section 34 of the Environmental Protection Act 1990 (the Duty) and the Waste (England and Wales) Regulations 2011 and consigned via a registered waste carrier to treatment or disposal at a suitably licensed waste facility;</li> <li>• The contractor will prepare and implement a Site Waste Management Plan (SWMP);</li> <li>• As part of the SWMP, the contractor will segregate waste to be reduced, re-used and recycled where possible;</li> </ul> <p>To minimise impacts of waste on the surrounding environment, the following measures will be implemented:</p> <ul style="list-style-type: none"> <li>• damping down of surfaces during</li> </ul>	<p>To be confirmed in detailed SWMP</p>	<p>To be confirmed in detailed SWMP</p>

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	<p>spells of dry weather and brushing/ water spraying of heavily used hard surfaces/ access points across the Site as required;</p> <ul style="list-style-type: none"> <li>• off-site prefabrication, where practical, including the use of prefabricated structural elements, cladding units, mechanical and electrical risers and packaged plant rooms;</li> <li>• burning of waste or unwanted materials will not be permitted on Site;</li> <li>• all hazardous materials including chemicals, cleaning agents and solvent containing products to be properly sealed in sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas;</li> <li>• all construction workers will be required to use appropriate PPE whilst performing activities on-site;</li> <li>• any waste effluent will be tested and where necessary, disposed of at the correctly licensed facility by a licensed specialist contractor/s; and materials requiring removal from the Site will transported using licensed carriers and records will be kept detailing the types and quantities of waste moved, and the destinations of this waste, in accordance with the relevant regulations</li> </ul>		

*Table L2.8 Cultural Heritage*

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
No significant impacts	None proposed at this time.	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

*Table L2.9 Land Use and Socio-Economics*

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Loss of vegetation.	None proposed at this time.	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

**Table L2.10 Landscape and Visual Amenity**

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Increased visibility of construction activities.	Lighting will be designed to reduce unnecessary light spill outside of the Site boundary in accordance with a Lighting Strategy (to be prepared in accordance with draft DCO Requirement 5). Existing vegetation along the boundary of the Site will be retained and managed to ensure its continued presence to aid the screening of low level views into the Site.	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

**L2.6 COMPLEMENTARY PLANS AND PROCEDURES**

L27 In addition to the CEMP, a suite of complementary environmental plans and procedures for the construction phase will be developed in accordance with the draft DCO Requirements, including a SWMP, scheme for the control of construction noise and piling risk assessment. These plans and procedures will build on the principles and procedures set out in this framework CEMP and described in the ES, and will be cross referenced in the detailed CEMP.

**L2.7 IMPLEMENTATION AND OPERATION**

L28 The detailed CEMP will include an organogram showing team roles, names and responsibilities, training requirements, communication methods, document control and environmental emergency procedures. Draft requirement 13 requires a scheme for the notification of any significant construction impacts on local residents to be prepared and mechanisms established for effective communication.

**L2.8 CHECKING AND CORRECTIVE ACTION**

**L2.8.1 Monitoring**

L29 To meet the requirements of the CEMP, environmental monitoring of the Project and its impacts will be undertaken throughout the construction phase. In particular, the following requirements of the CEMP will be closely monitored:

- licences and approvals;
- dust and noise monitoring; and
- water pollution prevention.