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Tees CCPP Project

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

Volume 1 - Chapter 17

Regulations – 6(1)(b) and 8(1)

Applicant: Sembcorp Utilities UK
Date: November 2017

CONTENTS

17 SUMMARY OF MITIGATION MEASURES

1.1 INTRODUCTION

In order to demonstrate that all necessary controls and mitigation have been identified and secured, a tabulated summary of mitigation measures for the Tees CCPP Project (the Project) has been prepared (see *Table 17.1*). The mitigation summary table:

- provides an audit trail of the controls and mitigation measures on which the Environmental Statement and related assessment documents rely to avoid, minimise, reduce and/or offset significant effects of the project; and

- sets out the way in which the measures have been, or will be, translated into clear and enforceable controls, either via DCO Requirements or other consent regimes.

Table 17.1 includes a topic by topic summary of the mitigation measures identified. Full details can be found in the respective ES chapters. Appropriate provisions to secure these measures have been made in the draft DCO (Document 2.1), meaning that any consent granted for the Project will include suitable mitigation of significant environmental effects.

1.2 CONSTRUCTION ENVIRONMENTAL MANAGEMENT

In advance of construction, a CEMP will be finalised. The main purpose of the CEMP will be:

- to provide a mechanism for ensuring that measures to mitigate potentially adverse environmental and socio-economic effects are implemented;

- to ensure that standards of good construction practice are adopted throughout the construction of 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 and the commitments made in the ES 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 are being met.

The CEMP will be developed as the Project proceeds through the detailed design and pre-construction phases, in conjunction with the appointed construction contractors, and in consultation with relevant bodies such as the R&CBC, Environment Agency and Natural England. The CEMP will reflect any conditions, requirements and obligations contained in the consent, including those set out in the DCO submitted as part of this application.

A Draft CEMP is provided in *Annex L* addressing a range of matters including:

- transport and access;
- air quality;
- noise and vibration;
- water resource and flood risk;
- ground conditions;
- ecology;
- waste and resources;
- cultural heritage;
- land use, agriculture and socio-economics; and
- landscape and visual amenity.

1.3 CEMP REVIEW

Under Scenario Two, construction activity could commence in up to approximately eight years time. It is recognised that environmental standards and legislation that currently apply to the Project may change during this period. Sembcorp will undertake regular reviews of the Project and emerging standards, guidance and legislation to ensure that good industry practice is being followed. The review process will be iterative and ongoing, so that new information is identified at an early stage and incorporated into the respective management plans.

Table 17.1 Mitigation Summary Table

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
Chapter 5: Project Description and Alternatives						
1.	Volume 1, Chapter 5, Section 5.8.7	Contract requirements will include establishment of relevant procedures for scheduling arrival of abnormal loads to the site through discussions with the relevant local authorities, including identification of suitable routes, temporary protection to carriageway surfaces (if necessary), statutory undertakers' plant and equipment.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
2.	Volume 1, Chapter 5, Section 5.8.7	Loads of between 20 and 40 tonnes will be restricted to outside the general peak periods as far as possible when using the Strategic and Local Road networks in the area.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
3.	Volume 1, Chapter 5, Section 5.8.7	Specified routes using the main road network will be agreed with haulage firms servicing the Wilton site. The agreed routes will be written into contracts.	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP') 8. Highway accesses
4.	Volume 1, Chapter 5, Section 5.9.2	The EPC contractor will prepare and maintain a health and safety policy, and manage the health and safety of employees and others affected by works within its site. The contractor, in accordance with Sembcorp requirements, will also develop an accident and incident reporting procedure.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
5.	Volume 1, Chapter 5, Section 5.9.2	Sembcorp will ensure that the EPC contractor develops a project safety document for the application under the Construction (Design and Management) Regulations 2015 (CDM), within and outside of the site's operational boundaries.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
6.	Volume 1, Chapter	The EPC contractor will be required to prepare and maintain a site accident and emergency plan for each phase of construction, noting that the plan	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	5, Section 5.9.2	should be a live document and will be amended as the development proceeds				31. Accident and emergency response
7.	Volume 1, Chapter 5, Section 5.9.2	The performance of the EPC contractor will be monitored on a regular basis against the health and safety plans in order to highlight any deviations or exceptions, recovery plans and areas of concern.	Construction	Sembcorp	CEMP	13.Construction environment management plan ('CEMP')
8.	Volume 1, Chapter 5, Section 5.9.2	The EPC contractor will carry out HAZOP (1) studies of key plant systems.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
9.	Volume 1, Chapter 5, Section 5.9.2	The EPC contractor will be required to implement a health, safety and environmental (HSE) management plan. This plan will identify the mitigation measures and management procedures to adequately control the health, safety and environmental impacts. Mitigation measures committed to in the ES, identified in the DCO and any consent conditions will be included in the HSE management plan.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
Chapter 6: Contaminated Land, Water Resources And Flood Risk						
10.	Volume 1, Chapter 6, Section 6.4.2	Where possible, and in the interests of sustainability, it is proposed to re-use the soils on site during the construction of the power station. In the event that soils are removed from site it is proposed to seek opportunities to re-use the soils off site, with disposal to landfill being an option of last resort.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
11.	Volume	Identification and appropriate procedures to	Construction	Main Works	CEMP	10.Contaminated land and

(1) Hazard and Operability Studies (HAZOP) are a structured and systematic examination of a planned or existing process or operation in order to identify and evaluate problems that may represent risks to personnel or equipment, or prevent efficient operation

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	1, Chapter 6, Section 6.4.2	address the risks of contaminated land during excavation.		Contractor		groundwater 13.Construction environment management plan ('CEMP')
12.	Volume 1, Chapter 6, Section 6.4.2	Use of Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
13.	Volume 1, Chapter 6, Section 6.4.2	Handling and storage of potentially hazardous waste soils excavated in accordance with Technical Guidance and best working practices.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
14.	Volume 1, Chapter 6, Section 6.4.2	Dust suppression using industry-standard techniques such as covering soil heaps, misting exposed soils, vehicle and wheel washes.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
15.	Volume 1, Chapter 6, Section 6.4.2	Storage of potentially hazardous waste soils excavated in accordance with Technical Guidance and best working practices.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ("CEMP"'CEMP')
16.	Volume 1, Chapter 6, Section 6.4.2	Use of construction bunds, temporary site drainage and sediment traps, as required.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
17.	Volume 1, Chapter 6, Section 6.4.2	Dust management on site.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
18.	Volume	Ensure discharge of all construction site surface	Construction	Main Works	CEMP	13.Construction

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	1, Chapter 6, Section 6.4.2	water drainage to the Wilton International site drainage system.		Contractor		environment management plan ('CEMP')
19.	Volume 1, Chapter 6, Section 6.4.2	Water quality monitoring programme during construction phase.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
20.	Volume 1, Chapter 6, Section 6.4.2	Foundation Works Risk Assessment in reference to EA guidance will be completed by the EPC prior to the works commencing and will be submitted to the regulators for approval prior to the works commencing	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
21.	Volume 1, Chapter 6, Section 6.4.2	Minimise potential to create pathways via appropriate design	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
22.	Volume 1, Chapter 6, Section 6.4.2	Ensure that all de-watered excavations are discharged into the Wilton International drainage network as per the anticipated detail presented in the CEMP.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
23.	Volume 1, Chapter 6, Section 6.4.2	Monitoring and containment / treatment programme for all water discharges and / or sediment laden runoff.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
24.	Volume 1, Chapter 6, Section 6.4.2	Monitoring programme for groundwater.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
25.	Volume	Rapid spill response planning and training and the	Construction	Main Works	CEMP	13.Construction

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	1, Chapter 6, Section 6.4.2	implementation of a CEMP.		Contractor		environment management plan ('CEMP')
26.	Volume 1, Chapter 6, Section 6.4.2	Ensure no large increase in areas of hardstanding.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
27.	Volume 1, Chapter 6, Section 6.4.2	Use of SUDs where appropriate.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
28.	Volume 1, Chapter 6, Section 6.6.2	Materials moved onto and around the Project site will be minimised through careful design of the Project and the construction schedule, together with the completion of a Materials Management Plan (MMP). The MMP will be completed by a consultant working on behalf of the EPC. It will then be submitted and approved by an independent Appropriately Qualified Person prior to the works commencing.	Construction	Main Works Contractor	CEMP MMP	13.Construction environment management plan ('CEMP')
29.	Volume 1, Chapter 6, Section 6.6.2	If external fill material is used during site earthworks and surfacing activities, then it will be validated prior to use and tracked from origin.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
30.	Volume 1, Chapter 6, Section 6.6.2	The removal from site of materials during construction will be minimised through adopting the principles of re-use on site where appropriate and a balanced cut and fill approach.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
31.	Volume 1,	The disposal of waste, including any surplus spoil, will be managed so far as is reasonably practicable	Construction	Main Works Contractor	CEMP MMP	13.Construction environment management

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	Chapter 6, Section 6.6.2	to maximise the environmental and development benefits from the use of surplus material and reduce any adverse environmental effects of disposal in accordance with the relevant waste management regulations eg Environmental Permitting Regulations 2016 and Waste (England and Wales) Regulations 2011, the CL:aire Code of Practice Definition of Waste and the Site Water Management Plan (SWMP)			SWMP	plan ('CEMP') 14. Waste management during construction phase
32.	Volume 1, Chapter 6, Section 6.6.2	The potential to create pathways for contaminants to travel to the underlying groundwater will be minimised through appropriate design of pilings. Planning and preparing for piling works will follow a separate pre-construction Foundation Works Risk Assessment, and the construction activities will be undertaken in reference to EA guidance, specifically "*Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention*". This will be completed by the EPC and submitted to the regulators for approval prior to the works commencing	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
33.	Volume 1, Chapter 6, Section 6.6.2	If contamination that has not been previously identified is encountered on the Project site, no further activity at that location would take place which could disturb that contaminated material until a site investigation has been carried out and appropriate mitigation identified. Moreover, the safety officer (or similar) will ensure that a workers 'safety information sheet' is prominently displayed in rest/mess rooms and wash rooms covering such matters as hygiene, work practices and clothing requirements.	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP') 10.Contaminated land and groundwater
34.	Volume 1, Chapter	In the unlikely scenario that unforeseen contamination is found on the Project site, and requires remediation, risk assessments and a	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP')

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	6, Section 6.6.2	remediation strategy would be used to outline elimination of the contaminated materials. These would be agreed with the regulators before the works commenced.				10.Contaminated land and groundwater
35.	Volume 1, Chapter 6, Section 6.6.2	In the unlikely event that soil gas is identified as a risk requiring vapour / gas mitigation measures, monitoring would be carried out and the necessary gas mitigation measures would be applied. Additional investigation will be completed to assess the potential for soil gas resulting from soil and groundwater contamination.	Construction	Main Works Contractor	DCO	10.Contaminated land and groundwater
36.	Volume 1, Chapter 6, Section 6.6.2	All dewatering activities during excavation and foundation works will include monitoring of water discharges or sediment laden runoff, and will where appropriate be treated prior to discharge to the Wilton Site drainage system. All discharged water will transit through a temporary sedimentation tankwith in the drainage system to remove particulates prior to discharge into the River Tees as per the Wilton Site Environmental Permit.	Construction	Main Works Contractor	CEMP	13.Construction environment management plan ('CEMP')
37.	Volume 1, Chapter 6, Section 6.6.2	Performance of the construction temporary drainage network, including foul drainage provisions, will be monitored regularly for water quality prior to discharge.	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP')
38.	Volume 1, Chapter 6, Section 6.6.2	In the event of accidental spills involving hydrocarbons, contaminated water will be isolated at the closest intermediate point of intervention and appropriately treated on site prior to disposal or removed off-site for appropriate treatment and disposal. Treatment will likely comprise absorbent materials and capture of the contaminated water prior to determining the method of treatment, which could include off site disposal for large spills.	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP') 10.Contaminated land and groundwater
39.	Volume	At the pre-construction stage, a SWMP will be	Construction	Main Works	Site Waste	13.Construction

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	1, Chapter 6, Section 6.6.2	developed in accordance with relevant non-statutory guidance from the Department for Environment Food and Rural Affairs (DEFRA, 2008) eg pb13530 Waste Hierarchy Guidance (2011) and Non-statutory guidance for site waste management plans (2008), the Waste Resources Action Programme (WRAP) and in consultation with RCBC. The plan will identify: • responsibilities for waste management in accordance with the 'Duty of care'; • the waste category and quantities of materials generated; • measures to minimise waste generation; • opportunities for recycling and/or re-use; • proposed treatment and disposal routes; and • licensing requirements.		Contractor	Management Plan CEMP DCO	environment management plan ('CEMP') 14.Waste management during construction phase
40.	Volume 1, Chapter 6, Section 6.6.2	The SWMP will also include an audit programme to be undertaken to demonstrate compliance with statutory requirements.	Construction	Main Works Contractor	Site Waste Management Plan CEMP DCO	13.Construction environment management plan ('CEMP') 14.Waste management during construction phase
41.	Volume 1,	Provision will be made within the SWMP for a suitable environmental specialist to identify any	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	Chapter 6, Section 6.6.2	'Hazardous Waste' as defined in The Hazardous Waste (England and Wales) Regulations 2005 (as amended) so that it can be suitably managed and disposed of during works.				plan ('CEMP') 14.Waste management during construction phase
42.	Volume 1, Chapter 6, Section 6.6.2	The re-use of soil and crushed concrete shall be managed on site based on a site specific Materials Management Plan (MMP) as developed based on the principles presented in the The Definition of Waste Code of Practice (DoWCoP) authored by CL:AIRE.	Construction	Main Works Contractor	MMP CEMP	13.Construction environment management plan ('CEMP') 14.Waste management during construction phase
43.	Volume 1, Chapter 6, Section 6.6.2	Appropriate precautions will be taken if materials containing asbestos are encountered. The contractor will observe the exposure limits and measurement methods for asbestos, set out in the Control of Asbestos Regulations 2012.	Construction	Main Works Contractor	Asbestos Management Plan CEMP DCO	13.Construction environment management plan ('CEMP') 14.Waste management during construction phase
44.	Volume 1, Chapter 6, Section 6.6.2	At the pre-construction stage a separate Sediment Control Plan (SCP) will be designed and followed by contractors throughout the construction process. This will outline the routine working and emergency procedures for the control and mitigation of erosion and dust generation during excavations and soil handling, such as stockpiling soil away from watercourses and undertaking earthworks during dry weather conditions where possible (see *Chapter 9: Air Quality*).	Construction	Main Works Contractor	Sediment Control Plan	13.Construction environment management plan ('CEMP')
45.	Volume 1, Chapter	The Project will be constructed in accordance with best working practices and measures to protect the water environment and will be in accordance with	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP')

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	6, Section 6.6.2	those measures set out in relevant EA Pollution Prevention Advice and Guidance (PPG) notes.				10.Contaminated land and groundwater
46.	Volume 1, Chapter 6, Section 6.6.2	The final CEMP will be developed in consultation with the EA, RCBC and the EPC contractor. It will include mitigation measures for avoiding spills and leaks of materials used during the construction process, such as fuels, oil and lubricants. The final CEMP will include provision for a temporary drainage system to deal with surface water runoff within the construction area, and ensure that it is discharged to the existing Wilton Site drainage system.	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP') 10.Contaminated land and groundwater
47.	Volume 1, Chapter 6, Section 6.4.3	Storage and handling of process chemicals to be undertaken in properly surfaced and bunded areas.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
48.	Volume 1, Chapter 6, Section 6.4.3	Rapid spill response planning and training.	Operation	Main Works Contractor Sembcorp	CEMP DCO	16. Surface and foul water drainage – operational
49.	Volume 1, Chapter 6, Section 6.4.3	Water monitoring plan during operation.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
50.	Volume 1, Chapter 6, Section 6.4.3	Surface water management system in place including use of SUDS where appropriate.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
51.	Volume 1,	Bunds, where required and likely to be limited to only a few locations, will provide 110% of stored	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational

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	Chapter 6, Section 6.4.3	volume and constructed with impermeable materials.				
52.	Volume 1, Chapter 6, Section 6.4.3	All process water will be discharged to the existing Wilton International Site drainage system, through which it will be monitored through the Environmental Permit before discharge into the River Tees.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
53.	Volume 1, Chapter 6, Section 6.4.3	Separate foul water management system including interceptors and treatment where required.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
54.	Volume 1, Chapter 6, Section 6.4.3	Regular monitoring of water discharges integrated as part of the data control system (DCS).	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
55.	Volume 1, Chapter 6, Section 6.4.3	Volumes of chemicals stored on site will be limited.	Operation	Sembcorp	Environmental Permit	
56.	Volume 1, Chapter 6, Section 6.4.3	All of the operational site area and chemical stores will be designed to drain into the Wilton Site drainage system.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
57.	Volume 1, Chapter 6, Section 6.4.3	The area of hardstanding / impermeable surfaces will not be increased.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
58.	Volume 1,	The Wilton Site drainage system will undergo regular inspections and maintenance to ensure	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	Chapter 6, Section 6.4.3	effective operation.				
59.	Volume 1, Chapter 6, Section 6.6.3	The process water required for, and liquid effluents resulting from, the Project will be managed by the existing Wilton Site drainage system, and monitored under the existing Environmental Permit for the wider Wilton site. Operational effluents including oil-contaminated, chemically-contaminated, drainage from storage areas and cooling-water effluents will not be discharged to the Wilton Site drainage system before being monitored and discharged.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
60.	Volume 1, Chapter 6, Section 6.6.3	Surface water runoff, processing and waste water discharges to the Wilton Site drainage system will be to the acceptable standards as agreed in the Environmental Permit with the EA and prior to any temporary or operational discharges. Data from the continuous and regular monitoring of water discharges will be integrated into the Project's DCS, with relevant control-room alarms. Operational staff will have access to environmental information and be trained in the understanding of regulatory limits and the measures necessary to comply with them. Historical records will be maintained in accordance with the terms of the permit.	Operation	Sembcorp	DCO and Permit	16. Surface and foul water drainage – operational
61.	Volume 1, Chapter 6, Section 6.6.3	In terms of surface water runoff management, the Project will utilise the existing Wilton International Site drainage system. This system will ensure that there is no change in the surface water discharge regime as a result of the Project and that all surface waters are monitored and tested before being discharged through the existing infrastructure.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational
62.	Volume 1,	All areas where potentially polluting substances will be stored and used will be designed with	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	Chapter 6, Section 6.6.3	appropriate bunding to industry standards. Bunds will provide 110% of stored liquid volumes and be constructed of impermeable materials. In the unlikely event of an oil or chemical spill into the bund system, the oil would be pumped out for re-use if possible, or disposed of in an environmentally acceptable manner; such as delivery to an appropriately licensed waste recovery / disposal facility.				
63.	Volume 1, Chapter 6, Section 6.6.3	Management procedures for waste transport off the Project site will be in place, and regularly audited.	Operation	Sembcorp	DCO	19. Waste management during operational phase
64.	Volume 1, Chapter 6, Section 6.6.3	Emergency and contingency plans will be developed to safeguard operational activity, Site users and quality of surface water.	Operation	Sembcorp	DCO	16. Surface and foul water drainage – operational 31. Accident and emergency response
65.	Volume 1, Chapter 6, Section 6.6.3	The operation of the combustion plant will be controlled under a new Environmental Permit, subject to further discussion with the EA. The Project will be operated in accordance with best working practices and measures to protect the land and water environment and will be in accordance with those set out in relevant EA Pollution Prevention Advice and Guidance (PPG) notes.	Operation	Sembcorp	Environmental Permit	N/A
66.	Volume 1, Chapter 6, Section 6.4.4	Identification and appropriate procedures to address the risks of contaminated land during excavation.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
67.	Volume 1, Chapter	Use of PPE and RPE.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning

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	6, Section 6.4.3					
68.	Volume 1, Chapter 6, Section 6.4.3	Handling and storage of potentially hazardous waste soils excavated in accordance with Technical Guidance and best working practices.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
69.	Volume 1, Chapter 6, Section 6.4.3	Handling and storage of potentially hazardous waste soils and pit dewatering, excavated in accordance with Technical Guidance WM3.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
70.	Volume 1, Chapter 6, Section 6.4.3	Development and implementation of decommissioning plan (DP).	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
71.	Volume 1, Chapter 6, Section 6.4.3	Dust suppression using industry-standard techniques such as covering spoil heaps, misting exposed soils, vehicle and wheel washes.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
72.	Volume 1, Chapter 6, Section 6.4.3	Storage and handling of fuels to be undertaken in properly surfaced and bunded areas.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
73.	Volume 1, Chapter 6, Section 6.4.3	Use of temporary bunds, site drainage and sediment traps, as required.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
74.	Volume 1, Chapter	Rapid spill response planning and training and the implementation of the CEMP.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning

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	6, Section 6.4.3					
75.	Volume 1, Chapter 6, Section 6.4.3	Use of sediment traps, as required.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
76.	Volume 1, Chapter 6, Section 6.4.3	Water quality monitoring programme during the decommissioning phase.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
77.	Volume 1, Chapter 6, Section 6.4.3	Handling and storage of potentially hazardous waste soils excavated in accordance with Technical Guidance and best working practices.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
78.	Volume 1, Chapter 6, Section 6.4.3	Water Monitoring Programme.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
79.	Volume 1, Chapter 6, Section 6.4.3	Minimise potential to create pathways via appropriate design.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
80.	Volume 1, Chapter 6, Section 6.4.3	Surface water and groundwater monitoring plan during decommissioning phase.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
81.	Volume 1, Chapter	Flood prevention measures to be designed including surface water management on the Site.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning

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	6, Section 6.4.3					
82.	Volume 1, Chapter 6, Section 6.6.4	Site investigations will be undertaken before decommissioning to assess the potential for contamination from the operational phase. If the potential for contamination exists, no material will be moved until the risks of that contamination have been assessed and can be appropriately managed.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
83.	Volume 1, Chapter 6, Section 6.6.4	A Site Waste Management Plan will include decommissioning activities. The plan will identify: • responsibilities for waste management; • the waste category and quantities of materials generated; • measures to minimise waste generation; • opportunities for recycling and/or re-use; • proposed treatment and disposal routes; and • licensing requirements.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
84.	Volume 1, Chapter 6, Section 6.6.4	The Site Waste Management Plan will also include an audit programme to be undertaken to demonstrate compliance with statutory requirements.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
85.	Volume 1, Chapter 6, Section 6.6.4	Provision will be made for a suitable environmental specialist to identify any 'Hazardous Waste ' as defined in The Hazardous Waste (England and Wales) Regulations 2005 (as amended) so that it can be suitably managed and disposed of during works.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
86.	Volume 1, Chapter 6, Section 6.6.4	The movement of materials on site will be minimised through careful design of the Project Site and the decommissioning schedule. This should be completed in line with a bespoke Materials Management Plan.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
87.	Volume 1,	Fill material for site earthworks activities (filling excavations, levelling etc.) will be sourced from on-	Decommissioning	Main Works Contractor	DCO	25. Decommissioning

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	Chapter 6, Section 6.6.4	site wherever possible.				
88.	Volume 1, Chapter 6, Section 6.6.4	The disposal of waste will be managed so far as is reasonably practicable to maximise the environmental and development benefits from the use of surplus material and reduce any adverse environmental effects of disposal.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
89.	Volume 1, Chapter 6, Section 6.6.4	Minimising the potential to create pathways for contaminants to travel to underlying groundwater through appropriate decommissioning of pilings.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
90.	Volume 1, Chapter 6, Section 6.6.4	A temporary site emergency response and contingency plan will be developed in consultation with the EA, RCBC and the EPC contactor. The plan will include measures for safety of people working on the Project site (in respect to flood risk and water quality issues) during the decommissioning phase.	Decommissioning	Main Works Contractor	DCO	25. Decommissioning
91.	Volume 1, Chapter 6, Section 6.6.4	The Project will be decommissioned in accordance with best working practices and measures to protect the land and water environment and will be in accordance with those set out in relevant EA PPG notes. Furthermore, the decommissioning phase will be designed to be in full compliance with technical guidance and best practices documents relevant to other Health and Safety legislation that will apply throughout any works on the Project site at the decommissioning phase.	Decommissioning	Main Works Contractor	DCO & Permit?	25. Decommissioning
Chapter 7: Air Quality						
92.	Volume 1, Chapter 7, Section	Dust mitigation measures from the following guidance document for 'High Risk' sits will be adopted: *IAQM (2014) Guidance on the assessment of dust from demolition and construction*.	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP')

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	7.4.8					
93.	Volume 1, Chapter 7, Section 7.4.8	Use of a turbine that meets future BAT NO_x emissions of 30 mg/Nm^3.	Operation	Main Works Contractor	DCO & Permit?	27. Approved details
94.	Volume 1, Chapter 7, Section 7.4.8	Appropriate stack height to ensure sufficient dispersion.	Operation	Main Works Contractor	DCO	4. Detailed Design
Chapter 8: Noise and Vibration						
95.	Volume 1, Chapter 8, Section 8.4.7	Use of models of compressors, generators and pumps fitted with properly lined and sealed acoustic covers or enclosures, which will be kept closed whenever the machines are in use.	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')
96.	Volume 1, Chapter 8, Section 8.4.7	Fitting of mufflers or silencers of the type recommended by manufacturers.	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')
97.	Volume 1, Chapter 8, Section 8.4.7	Shutting down of machines in intermittent periods between work, or throttling down to a minimum.	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')
98.	Volume 1, Chapter 8, Section 8.4.7	Housing of stationary noise emitting equipment which is required to run continuously in suitable acoustic enclosures.	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')
99.	Volume 1, Chapter	Maintenance of plant in good working condition to minimise extraneous noises arising from mechanical vibration	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	8, Section 8.4.7					
100.	Volume 1, Chapter 8, Section 8.4.7	Siting noisy plant and equipment as far away as possible from noise sensitive receptors, and use of barriers (eg site huts, acoustic sheds or partitions) to reduce the level of construction noise at receptors wherever possible.	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')
101.	Volume 1, Chapter 8, Section 8.4.7	The construction work will also be limited to the weekday daytimes and Saturday morning except in specific circumstances.	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')
102.	Volume 1, Chapter 8, Section 8.4.7	The existing 6m high noise wall will be retained and serve provide some screening to construction activities at Lazenby. A sound wall to the west of the construction site will be reinstated thereby providing mitigation to Gangetown	Construction	Main Works Contractor	DCO	27. Approved details
103.	Volume 1, Chapter 8, Section 8.4.7	Layout was chosen to put cooling towers as far away from residents at Lazenby as possible.	Operation	Sembcorp	DCO	4. Detailed Design 27. Approved details 20. Control of noise during operational phase
104.	Volume 1, Chapter 8, Section 8.4.7	Gas turbines will be inside buildings and will be within enclosures (typically constructed with 100mm min thick insulation panels).	Operation	Sembcorp	DCO	27. Approved details 20. Control of noise during operational phase
105.	Volume 1, Chapter	The wall of the HRSG building has been assumed to be acoustically upgraded cladding material.	Operation	Sembcorp	DCO	27. Approved details 20. Control of noise during

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	8, Section 8.4.7					operational phase
106.	Volume 1, Chapter 8, Section 8.4.7	Hybrid cooling towers were chosen because they are quieter than air coolers.	Operation	Sembcorp	DCO	27. Approved details 20. Control of noise during operational phase
107.	Volume 1, Chapter 8, Section 8.4.7	A new noise wall (6 m high) has been included in the design along the western boundary of the site in addition to the existing noise wall on the southern Project site boundary.	Operation	Sembcorp	DCO	27. Approved details 20. Control of noise during operational phase
108.	Volume 1, Chapter 8, Section 8.4.7	Existing 6 m noise wall to be retained between the project and Lazenby.	Operation	Sembcorp	DCO	27. Approved details 20. Control of noise during operational phase
109.	Volume 1, Chapter 8, Section 8.4.7	If any audible tonal noise is observed during testing and/or commissioning it will be analysed to identify the cause and corrective measures will be applied. For example it might be necessary to optimise 'delta pressure' on a valve, add or optimise an additional silencer, acoustic insulation, screening or acoustic enclosure on the source responsible. This approach is typical to the 'commissioning stage' of developments such as this and again would be secured by guarantees entered into by the EPC contractor.	Operation	Sembcorp	DCO	27. Approved details 20. Control of noise during operational phase
Chapter 9: Ecology And Nature Conservation						
110.	Volume 1, Chapter 9, Section	A draft CEMP has been prepared and will be developed to include standard mitigation and good practice in relation to advice on construction with regards to nesting birds and mammals.	Construction	Main Works Contractor	DCO CEMP	13.Construction environment management plan ('CEMP')

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	9.5.4					
Chapter 10:Traffic And Transport						
111.	Volume 1, Chapter 10, Section 10.5.5	A Construction Traffic Management Plan will be provided for the Project Site at the appropriate time by the construction contractor. This is likely to include measures such as: • agreed traffic routing; • staff parking arrangements; • hours of operation, including any restriction to deliveries; • wheel washing and dust control; • provision of advisory/advance signage to direct construction vehicles from the Strategic Road Network; • information to contractors about routing,; • membership of any contractors scheme, such as "Considerate Constructors"; • contact details for Sembcorp for any problems to be reported.	Construction	Main Works Contractor	CTMP DCO	15. Traffic management and travel plan during construction phase 13.Construction environment management plan ('CEMP')
112.	Volume 1, Chapter 10, Section 10.5.5	The CTMP will assist in reducing the impact of the Project on the SRN, as well as ensuring that the contractors are aware of their responsibilities and any constraints upon their travel.	Construction	Main Works Contractor	CTMP DCO	15. Traffic management and travel plan during construction phase 13.Construction environment management plan ('CEMP')
113.	Volume 1, Chapter 10, Section	When the abnormal indivisible loads (AILs) are to be transported to the site, an abnormal loads movement application will be made to HE, by either the contractor or the haulier as appropriate. Temporary road closures may need to be put in	Construction	Main Works Contractor	CTMP DCO	15. Traffic management and travel plan during construction phase 13.Construction

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	10.5.5	place on local roads along the haulage route, and Sembcorp will ensure that local residents (and businesses) are kept informed about these closures and movements. Street furniture, such as lighting columns or telegraph poles, may need to be removed temporarily, and alterations to kerb lines may be required to accommodate the swept paths of the required oversized vehicles.				environment management plan ('CEMP')
Chapter 11: Landscape And Visual						
114.	Volume 1, Chapter 11, Section 11.5.1	Limiting land clearance and occupation to the minimum necessary for the works.	Construction	Main Works Contractor	CEMP DCO	10. Landscaping 13.Construction environment management plan ('CEMP')
115.	Volume 1, Chapter 11, Section 11.5.1	Restricting construction site lighting outside normal working hours as far as practicable to the minimum required for safety and security.	Construction	Main Works Contractor	DCO Lighting Strategy	5. External Lighting
116.	Volume 1, Chapter 11, Section 11.5.1	Maintenance of tidy and contained site compounds.	Construction	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP')
117.	Volume 1, Chapter 11, Section 11.5.2	Building components will be carefully sited/arranged within the Project Site and will be designed with a choice of appropriate colours and materials so that the Project blends into the wider industrial landscape.	Operation	Sembcorp	DCO	4. Detailed Design
118.	Volume 1,	Outdoor lighting will only be permitted where lighting schemes represent a minimum level	Operation	Sembcorp	DCO Lighting Strategy	5. External lighting

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	Chapter 11, Section 11.5.2	required for security/operational purposes and designed to minimise glare.				
Chapter 13: Socio-Economic Characteristics						
119.	Volume 1, Chapter 13, Section 13.4.6	Sembcorp has an established approach to engagement with local suppliers and creating a strong local supply chain. This will be developed further to help local companies win contracts associated with the Project, build skills and capabilities and grow local businesses to bring sustainable long term benefits to its local area.	Construction Operation Decommissioning	Sembcorp	DCO	29. Employment and Skills plan
120.	Volume 1, Chapter 13, Section 13.4.6	Sembcorp will seek to facilitate apprenticeship and graduate opportunities associated with the Project during the construction, operational and decommissioning phases. This will contribute to development of engineering skills and promoting employment.	Construction Operation Decommissioning	Sembcorp	DCO	29. Employment and Skills plan
121.	Volume 1, Chapter 13, Section 13.4.6	A draft CEMP has been produced (Annex M1) and a Traffic Management Plan (TMP)will be produced for the Project, including traffic management, noise and air quality procedures. This will avoid or minimise disruption to the local community. The CEMP details the communications plan and complaints mechanism.	Construction Operation Decommissioning	Main Works Contractor	CEMP DCO	13.Construction environment management plan ('CEMP')
122.	Volume 1, Chapter 13, Section 13.4.6	Prior to the works commencing the EPC contractor will determine appropriate emergency access routes and site security, including fencing, will be installed on site during construction and decommissioning. Construction and decommissioning activities will be managed in accordance with the regulations and guidelines in force at the time.	Construction Operation Decommissioning	Main Works Contractor Sembcorp	CEMP DCO	6. Fencing and other means of enclosure 31. Accident and emergency response
123.	Volume 1, Chapter	During operation, Sembcorp will develop a site safety plan to regulate site activities to achieve a high safety standard. This will include regular	Operation Decommissioning	Sembcorp	DCO	30. Safety

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	13, Section 13.4.6	training and safety inspections.				
Chapter 14: Health						
124.	Volume 1, Chapter 14, Section 14.15.1	A community complaints procedure will be established and advertised widely, including the steps that will be taken once a complaint is received and the timescale in which a response and resolution can be expected.	Construction	Main Works Contractor Sembcorp	CEMP DCO	13.Construction environment management plan ('CEMP')
125.	Volume 1, Chapter 14, Section 14.15.1	Information regarding construction activities will be communicated throughout the construction period to the most local communities via channels such as community meetings and the Project website.	Construction	Main Works Contractor Sembcorp	CEMP DCO	13.Construction environment management plan ('CEMP')
126.	Volume 1, Chapter 14, Section 14.15.1	The Project will ensure the construction site area is secure and not vulnerable to trespass through adequate fencing and if appropriate the use of security guards.	Construction Construction	Main Works Contractor	CEMP DCO	6. Fencing and other means of enclosure
127.	Volume 1, Chapter 14, Section 14.15.1	Implement a Traffic Management Plan, which is critical in minimising Road Traffic Accidents during construction.	Construction	Main Works Contractor	CEMP DCO	15. Traffic management and travel plan during construction phase 13.Construction environment management plan ('CEMP')
128.	Volume 1, Chapter 14, Section	Police and emergency services will be informed of any issues related to site safety and access.	Operation	Sembcorp	DCO	30. Safety

Item	Source	Mitigation or Measure to prevent, reduce, offset and minimise impacts	Project Stage	Who	Securing Mechanism	DCO Reference
	14.15.2					
129.	Volume 1, Chapter 14, Section 14.15.2	Local employment and procurement will be encouraged. If feasible, and available, local suppliers will be used for goods and services. Jobs created by the scheme will also be advertised and made available in the local area initially.	Operation	Sembcorp	DCO	29. Employment and Skills plan
Volume 2: EPA Statement						
130.	Volume 2, EPA Statement	Lighting design will be undertaken for both construction and operation by a professional design engineer, in compliance with guidance issued by the Institution of Lighting Engineers Guidance notes for the reduction of obtrusive light (Institute of Lighting Engineers - GN01: 2011) (Guidance Notes for the Reduction Obtrusive Light 2005) and the publication by Department for Communities and Local Government (DCLG) Lighting in the Countryside: Towards Good Practice.	Construction Operation	Sembcorp	DCO Lighting Strategy	5. External lighting