



# Connah's Quay Low Carbon Power

## Environmental Statement Volume IV Appendix 4-A: Operation and Maintenance Mitigation Register

Planning Inspectorate Reference: EN010166

Document Reference: EN010166/APP/6.4

Planning Act 2008 (as amended)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)

Revision 00

August 2025

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## Table of Contents

1. Introduction .....	1
References .....	8

## Tables

Table 1: Operation/Maintenance Mitigation Register .....	2
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# 1. Introduction

- 1.1.1 As part of the preparation of the Environmental Statement (ES) for the Connah's Quay Combined Cycle Gas Turbine (CCGT) with Carbon Capture Plant (CCP) (hereafter referred to as the Proposed Development), this Operation and Maintenance Mitigation Register has been developed. **Table 1** outlines all of the currently identified environmental commitments and mitigation measures relevant to the operation (including maintenance) of the Proposed Development. This **Operation and Maintenance Mitigation Register (EN010166/APP/6.4)** does not provide commentary on design commitments as these are included within **Design Principles Document (EN010166/APP/7.8)**.
- 1.1.2 An Operational and Maintenance Environmental Management Plan (OMEMP) must be produced in accordance Requirement 14 of the **Draft Development Consent Order (DCO) (EN010166/APP/3.1)** and must be approved by Flintshire County Council prior to the commencement of operation of the Proposed Development. Requirement 14 of the **Draft DCO (EN010166/APP/3.1)** requires that the OMEMP produced is in general accordance with this **Operation and Maintenance Mitigation Register (EN010166/APP/6.4)**. The OMEMP must be developed having regard to the final approved version(s) of the Landscape and Ecology Management Plan(s) which themselves must be in general accordance with the **Outline Landscape and Ecology Management Plan (LEMP) (EN010166/APP/6.9)** and the **Lighting Strategy (EN010166/APP/7.22)**.
- 1.1.3 The Proposed Development would be subject to other consents and licences, as detailed in the **Consents and Agreements Position Statement (EN010166/APP/3.3)**. These permits / licences and their subsequent requirements are not replicated in **Table 1**, unless a specific assumption has been made in Volume II of the **ES (EN010166/APP/6.2)**. The **Consents and Agreements Position Statement (EN010166/APP/3.3)** sets out the requirement of, and timescales for, each relevant consent / licence / permit for the Proposed Development.
- 1.1.4 Measures relating to the ongoing management of habitat creation within the Order limits are included within the **Outline LEMP (EN010166/APP/6.9)** and are not reproduced in this register to avoid duplication of requirements. In a similar manner the **Outline LEMP (EN010166/APP/6.9)** provides cross references to the this **Operation and Maintenance Mitigation Register (EN010166/APP/6.4)** as required.
- 1.1.5 **Table 1** provides the unique commitment reference from the **Commitments Register (EN010166/APP/6.10)**, along with a written description of each identified commitment.

**Table 1: Operation / Maintenance Mitigation Register**

<b>Commitment Reference</b>	<b>Commitment</b>
General - 8	For any planned outages an Environmental Management Plan would be prepared that would consider best practice measures to minimise any potential environmental effects. This would include consideration of measures to control noise and dust during the works but also the need for any ecological surveys, precautionary methods of work and pollution control measures.
General - 12	In the operational phase it is assumed that the proposed intake and outfall infrastructure would be kept clear through the use of a compressed air blasting system or by back flush, and (if required) a jet washing system which would be incorporated into the design. The air blast and jet washing activities would only take place on a falling tide to return the silt removed to the estuary sediment budget. Should these options not be sufficient to maintain clean flow through the screen, screens would be removed and replaced by spare screens for mechanical cleaning on land may be required. Should it be required that screens be removed, these would be undertaken in accordance with the methodology for replacement of the existing eel screens as detailed in <b>Chapter 5: Construction Programme and Management (EN010166/APP/6.2.5)</b> of the ES.
General - 13	Routine maintenance will be planned and scheduled via the maintenance management system with major outages occurring approximately once every four years (per unit) depending on the nature of plant operations in that period. The contractors will access the Proposed Development via the Access to the Main Development Area from Kelsterton Road. Maintenance laydown facilities will be included within the indicative layout for the Connah's Quay Low Carbon power (CQLCP) Abated Generating Station, Maintenance Laydown Area, and within the extent of the existing Connah's Quay Power Station.
General - 14	It is expected that the programme of inspection and maintenance of the CO <sub>2</sub> pipelines from the Proposed CO <sub>2</sub> AGI and Liverpool Bay CCS Limited's Flint AGI would align with HyNet CO <sub>2</sub> Pipeline Project's routine programme of inspection and maintenance and in accordance with best practice and regulatory requirements. For further details, please see Table 4-2 of <b>Chapter 4: The Proposed Development (EN010166/APP/6.2.4)</b> .
General - 15	Any additional lighting (beyond the final lighting design) that may be required for maintenance purposes will be produced by temporary-use lighting which may be included as part of the proposals that are installed for and to the minimum specifications necessary for the required task, or consist of mobile task lighting that can be used as needed and removed once required tasks are complete. Any lighting will be sited or screened in such a way as to reduce



Commitment Reference	Commitment
	illumination on adjoining sensitive habitats to minimise effects on receptors sensitive to light impacts in accordance with the principles identified in the <b>Lighting Strategy (EN010166/APP/7.22)</b> .
General - 16	External lighting shall be further reduced to only critical lighting from 23:00 to 05:00 hours, where lighting not required for safety or security is dimmed or turned off to reduce the impact of obtrusive lighting on the local environment (i.e. 23:00 hrs as per recommendation from the ILP GN01/21 (Ref 1) and 05:00 hrs as per the usual recommendation from local authorities and the Planning Practice Guidance (PPG) (Ref 2)).
General – 30	The Proposed Development will be designed to ensure the protection and retention of all veteran trees located within the Order limits.
General - 35	As required, practices to reduce traffic associated with staff travel during outages would be specified in a worker travel plan for operation or similar management plan.
General - 36	Above-ground assets in the Water Connection Corridor would be visually inspected with a recurrence aligned with the requirements of supplier equipment.
General - 37	No maintenance dredging would be carried out to the Water Connection Corridor, in line with existing operation (in which silt is extracted from cooling water on land only).
Noise and Vibration (NV) - 2	Provision of a package of sound insulation to nearby NSRs may also be considered, as a last resort, where other measures are unlikely to be adequate
NV -12	The Proposed Development will be operated in line with appropriate standards, and the operator will implement and maintain an Environment Management System (EMS) which will be attested to ISO 14001 (or any equivalent standard in force at the time). The EMS will outline requirements and procedures required so that the Proposed Development is operated to the appropriate standard.

Commitment Reference	Commitment
Terrestrial and Aquatic Ecology (TE) - 38	The Proposed Development includes a specific Maintenance Laydown Area within the operational design which would be used to support the habitat management requirements. In addition, this area would be used during outages to ensure that there is no encroachment of laydown areas on to habitats created in accordance with the <b>Outline LEMP (EN010166/APP/6.9)</b>
TAE - 39	Upon the end of management arrangements detailed within the Conservation Areas Management Plan for the exiting Connah's Quay Power Station, an updated Conservation Areas Management Plan would be prepared and submitted to FCC and NRW for approval prior to the commencement of operation. This updated Conservation Areas Management Plan would be reviewed and updated at a frequency to be agreed with FCC and NRW and would remain in place until the point of the completion of the decommissioning of the CQLCP Abated Generating Station, unless otherwise agreed with FCC and NRW.
Marine Ecology (ME) - 2	A Biosecurity Risk Assessment ( <b>Appendix 12-E: Marine Biosecurity Risk Assessment (EN010166/APP/6.4)</b> ) and the <b>Marine Invasive Non-Native Species Outline Management Plan (Appendix 12-F: Marine Invasive Non-Native Species Outline Management Plan (EN010166/APP/6.4))</b> have been prepared to prevent the introduction and / or spread of marine INNS. These are relevant to future maintenance works within the Water Connection Corridor.
ME - 3	The OMEMP will include a Pollution Prevention Plan, including an emergency spill plan.
Water Environment and Flood Risk (WEFR) - 2	The currently permitted abstraction and discharge parameters in relation to cooling water will be maintained throughout the life of the Proposed Development. Abstraction will be intermittent and limited to no more than three hours abstraction per tide around high water (one hour before and two hours after).
WEFR - 3	Purge discharge would be consistent with the existing site operation, with no more than three hours commencing on the ebb tide one hour after high water.
WEFR - 11	There will be continual of monitoring of groundwater levels after construction of the Proposed Development has completed. The frequency of this monitoring is to be agreed with Natural Resources Wales (NRW).

Commitment Reference	Commitment
WEFR - 30	The cooling water discharge will be consistent with the operation of the existing Connah's Quay Power Station in terms of temperature and water quality, as detailed within the existing Environmental Permit limits. The operation of the Proposed Development would accord with any future Environmental Permit granted by NRW.
WEFR - 31	Process wastewater will be collected for transfer off-site or treated to meet environmental quality standards for ammonia and other substances in an on-site wastewater treatment plant, prior to discharge to the River Dee.
WEFR - 32	Sewage would be treated at a new system on site, with treated black and grey water ((i.e. non-cooling and non-process wastewater)) either discharged to the River Dee with main cooling water purge discharge or to be removed by specialist contractor.
WEFR - 33	Where any substance could pose a risk to the environment through an uncontrolled release (e.g. through entry to surface water drains), the substance will be stored within appropriate containment facilities including impermeable concrete surfaces, isolated drainage areas and appropriately designed and sized bunds.
WEFR - 34	Chemical storage will be regulated by NRW through an Environmental Permit. Where storage of hazardous materials, individually or in-combination, exceeds the relevant thresholds for Hazardous Substance Consent (Ref 3) or the Control of Major Accident Hazard (COMAH) Regulations (Ref 4), separate permissions would be sought from the Health and Safety Executive (HSE) and the local planning authority as appropriate for their storage.
WEFR - 35	A site Emergency Response Plan will be in place for dealing with emergency situations involving loss of containment of hazardous substances.
WEFR - 36	As required by Requirement 6 of the <b>Draft DCO (EN010166/APP/3.1)</b> , and in accordance with <b>Appendix 13-D: Outline Surface Water Drainage Strategy</b> , a Surface Water Management and Maintenance Plan (SWMMP) would be prepared to set out the requirements for access and frequency for maintaining drainage infrastructure on site. The maintenance regime will be fully implemented throughout the lifetime of the Proposed Development.
WEFR - 37	As required by Requirement 8 of the <b>Draft DCO (EN010166/APP/3.1)</b> , a Flood Emergency Response Plan will be developed to ensure the safety of the Main Development Area is maintained in the event of a flood.
WEFR - 38	A Water Quality Risk Assessment for discharges to the River Dee will be undertaken if this option is taken forward, once details of effluent quality are available.



Commitment Reference	Commitment
Geology and Ground Conditions (GaGC) - 18	Operational materials, including chemicals, fuels and oils (acetylene, lubricating oils, distillate fuels, or other fuels), would be stored at the Proposed Development. In common with other modern infrastructure development, secondary containment appropriate to the level of risk would be included in the detailed design
GaGC - 19	Good housekeeping and management practices (such as operating an accredited EMS, which would detail procedures for chemical storage, spill response, pollution incident response etc.) will be adopted and adhered to through the operational lifetime to minimise impacts to soil and groundwater.
Climate Change (CC) - 16	As part of a wider Winter Service Plan (contained within the OMEMP) a section would be prepared on freeze prevention for pipes, and snow and de-icing procedures for access roads during construction and operation. Doing so would help prevent disruption and avoid possible health and safety incidences.
CC - 17	During detailed design for both construction and operation, consider the installation of a water pump for the areas with critical infrastructure to increase the sites surface water drainage capacity.
CC - 18	A fire management plan and an early warning and detection system will be developed and maintained.
CC - 20	An EMS will be implemented and certified to ISO 14001
CC - 21	The undertaker will ensure that there are sufficient numbers of employees within the operational facility with specialist fire prevention training.
CC - 22	All outdoor workers will have access to indoor facilities, air conditioning, breaks in shaded areas and water breaks.
CC - 23	Outdoor and nonessential work will cease if working conditions are too dangerous and could result in injury to workers and damage to equipment.
CC - 24	The frequency and magnitude of the impact of extreme temperatures over time will be monitored, and (if required) further cooling mechanisms will be incorporated into plant upgrades and increased maintenance requirements will be implemented.
CC - 25	More durable, heat-resistant materials will be selected in upgrades (including future maintenance work).

Commitment Reference	Commitment
CC - 27	Measures will be in place to ensure workers would avoid any hazards that may increase the risk of being struck by lightning, including open spaces, tall objects, water, open wiring, metal fencing, and other metal objects.
CC - 29	To reduce emissions associated with operational worker commuting, sustainable forms of travel would be promoted by provision of cycle storage areas
Major Accidents and Disasters (MA&D) - 11	The Proposed Development would be operated in line with appropriate standards, whilst the undertaker would implement and maintain an EMS which would be certified to British Standard (BS) International Standards Organization (ISO) 14001:2015+A1:2024. The EMS would outline the requirements and procedures needed to ensure that the Proposed Development is operating to the appropriate standard.
MA&D - 13	Due to the inventory of dangerous substances which would be added to the site as a result of the Proposed Development, the Proposed Development may require Hazardous Substances Consent and cause the existing power plant to become a COMAH regulated facility. A calculation will be performed to confirm the COMAH status of the facility and, if applicable, whether this would be at the Lower or Upper-Tier requirements. If COMAH is applicable, the appropriate COMAH notifications would be submitted to the Competent Authority (CA) which comprises the HSE and NRW.
Arboriculture - 4	The Proposed Development will ensure the protection and retention of all veteran trees located within the Order limits through the implementation of tree protection measures during any maintenance during operation.

## References

- Ref 1. Chartered Institute of Building Services Engineers, Society of Light and Lighting (SLL) (2021) SLL LG21 Lighting Guide 21 Protecting the Night-Time Environment,.
- Ref 2. Planning Practice Guidance (PPG), 2021. [Online]. Available: <https://www.gov.uk/government/collections/planning-practice-guidance>. (Accessed 05/03/2025)
- Ref 3. Planning (Hazardous Substances) Regulations 2015 (SI 2015/627). London: HMSO [Online]. Available at: <https://www.legislation.gov.uk/uksi/2015/627/contents/made> (Accessed 26/06/2025)
- Ref 4. Control of Major Accident Hazards Regulations 2015 (SI 2015/483). London: HMSO [Online]. Available at: <https://www.legislation.gov.uk/uksi/2015/483/contents/made> (Accessed 26/06/2025)

