



306-006-RP06

Construction Surface Water Management Plan

Land at The Leys and Ivy Farm, Yaxley, Suffolk

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0	FINAL	12.07.2023	Beverley Hunter	James Calvert

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1 Introduction

Haydn Evans Consulting Ltd (HEC) has been commissioned by Conrad Energy Ltd (hereafter referred to as the Client) to undertake a Construction Surface Water Management Plan (CSWMP) for the proposed '*Construction and operation of Synchronous Condensers with ancillary infrastructure, and associated works including access and landscaping*' located on Land at The Leys and Ivy Farm, Mellis Road, Yaxley, Suffolk IP21 4BT.

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The development has been granted Planning Permission by Mid Suffolk District Council under application reference DC/23/01494 dated 26th June 2023. This document has been produced to support the discharge of Condition 8 which states:

8. ACTION REQUIRED PRIOR TO COMMENCEMENT: CONSTRUCTION SURFACE WATER MANAGEMENT PLAN

No development above slab level shall commence until details of a Construction Surface Water Management Plan (CSWMP) detailing how surface water and storm water will be managed on the site during construction (including site clearance operations) is submitted to and agreed in writing by the Local Planning Authority. The CSWMP shall be implemented and thereafter managed and maintained in accordance with the approved plan for the duration of construction. The approved CSWMP shall include method statements, scaled and dimensioned plans and drawings detailing surface water management proposals to include:-

i. Temporary drainage systems

ii. Measures for managing pollution / water quality and protecting controlled waters and watercourses

iii. Measures for managing any on or offsite flood risk associated with construction

Reason: To ensure the development does not cause increased flood risk, or pollution of watercourses or groundwater <https://www.suffolk.gov.uk/roads-and-transport/flooding-and-drainage/guidance-on-development-and-flood-risk/constructionsurface-water-management-plan/>

The requirement for a CSWMP is based on the duty to ensure that the quality and quantity of surface water is managed throughout the construction process to mitigate impacts off-site.

This document should be read in conjunction with the Construction Management Plan (CMP) ref: 6148 version 2.0 dated 2023-04-04.

2 Site Details

2.1 Location

The site is located off Leys Lane, to the north of Yaxley in Suffolk on approximate Ordnance Survey (OS) grid reference 611914,274987 (see Figure 1).

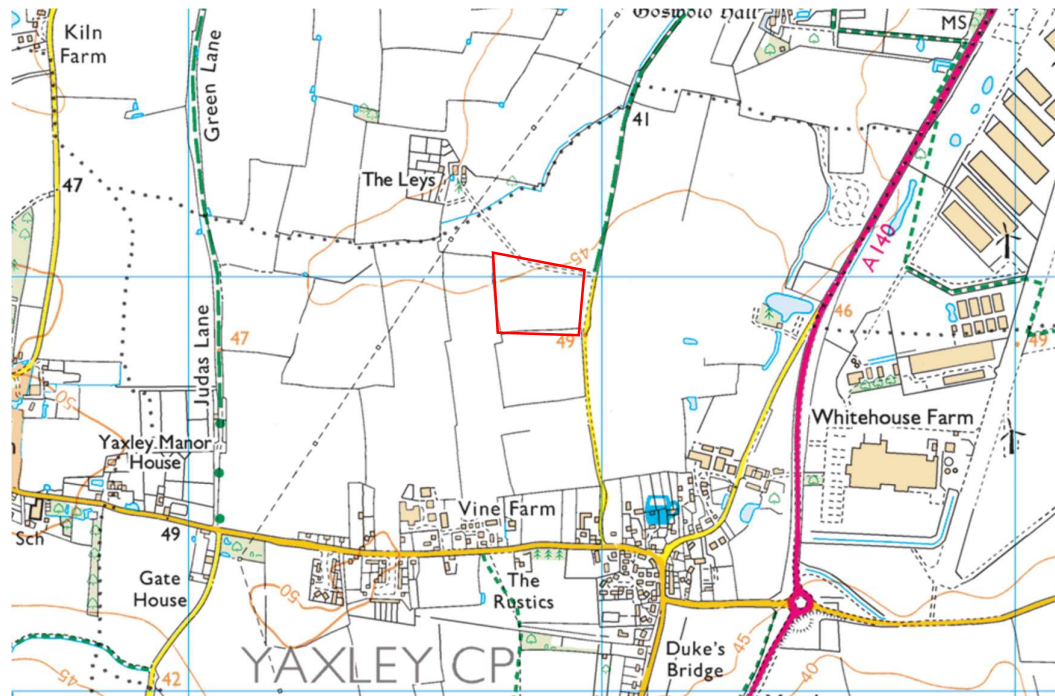


Figure 1: Site location map

2.2 Proposed Development

The proposed development comprises the construction and operation of Synchronous Condensers with ancillary infrastructure and landscaping.

During construction, all site traffic shall access the site via a dedicated access route from the northbound A140, constructed for the neighbouring National Grid substation site. Following construction, the site access route will be reinstated to its previous agricultural state.

2.3 Construction Duration

The duration of construction works is expected to be approximately 16 months (refer to the CMP for further information).

3 Roles & Responsibilities

The Principal Contractor is responsible for the day-to-day management and coordination of the site, along with any Health and Safety/Risk Assessment requirements.

The Principal Contractor will be provided with a copy of this document and is responsible for ensuring that sub-contractors adhere to the content.

The key roles and responsibilities for the scheme (Site Manager etc.) will be provided upon start of construction and will be listed below:

Role	Contact	Company Name & Address	Contact No. & Email	Key Responsibilities
Principal Contractor				Ensuring resource and policies / procedures are in place.
Site Manager				Day-to-day running of site. Ensuring all policies / procedures are followed.

Table 1 - Key Roles and Responsibilities

4 Flood Risk Controls

During the construction phase of the development, several key risks have been identified in relation to flood risk which require management strategies/method statements to ensure that risks are adequately minimised.

- Increased surface water runoff rates from the site during extreme rainfall events.
- The potential for pollutants from construction material to run-off onto adjacent land, particularly during heavy rainfall.
- Run-off from exposed ground and materials.
- Plant washing areas.
- Fuel and chemical storage/refuelling areas.

5 Managing Surface Water During Construction

The management of surface water during the construction process can be achieved by either of the three options listed below. The option used for this scheme has been ticked.

- Option 1 - Build, use and remediate permanent surface water drainage system.
- Option 2 - Install, use and remove a temporary surface water drainage system.
- Option 3 - Utilise existing system with pollution control measures (brownfield sites only).

5.1 Construction Surface Water Drainage System Design

The initial construction phase will not involve the introduction of impermeable surfaces and therefore limited surface water run-off will be generated by the site. Construction of the surface water drainage system should be undertaken prior to any major earthworks and impermeable surfacing/buildings being completed.

All surface water drainage downstream of the final surface water manhole should be constructed first to allow surface water run-off to be captured and attenuated early in the construction period. Due to the topography of the site, surface water would naturally flow towards the attenuation basin. Once the road drainage is constructed, inlet protection should be installed to trap sediment on site. Hay bales should be placed in front of the inlet and outlet headwalls to the attenuation basin to provide additional treatment prior to discharge to the filter drain (via the Hydrobrake); this is to prevent excessive build-up of silt in the filter drain.

The storage/parking area for use during construction should be within the site boundary as outlined in the CMP. It is suggested that this area is close to the site entrance.

5.2 Construction Management, Maintenance & Remediation

Soil stripping will be undertaken sparingly and with care.

To prevent construction related materials (excess silt etc.) reaching the watercourse, the use of silt curtains, blankets, wattles and fences will be utilised upstream of the attenuation basin.

It is proposed that hay bales are provided in front of the basin inlet and outlet to provide additional treatment to surface water run-off reaching the attenuation basin.

Maintenance of the surface water drainage should be initiated as soon as constructed, in line with the permanent maintenance regime for the site.

The surface water drainage system should be utilised fully as soon as constructed.

The surface water drainage system is to be thoroughly cleaned and rehabilitation works carried out to restore them to their design condition prior to completion. Once the permanent facilities have been demonstrated to work as envisaged, sediment control measures can be dismantled.

5.3 Required Consents

The Principal Contractor is responsible for site cleanliness and ensuring that no debris enters the watercourses near the site.

All hazardous materials and waste will be stored away from the watercourse.

Discharge to the ditch is via a protruding pipe outfall. This method of connection does not require land drainage consent as it does not obstruct the flow of water.

5.4 Pollution, Water Quality and Emergency Control Measures

Consideration for the management of pollution control and water quality of the surface water needs to be undertaken during the construction process.

- Plant and wheel washing areas should be close to the site entrance and run-off from these areas should be captured and tanked; this will require removal from site via a tanker to prevent contamination of the underlying soils and the downstream watercourse.
- An impermeable membrane filled with stone to form bunded area should be provided if any fuels or liquid pollutants are to be stored on site.
- Spill kits will be located where main plant is in operation to reduce the pollution risk in the event of a spillage.
- The attenuation basin should be regularly inspected for signs of pollution entering the surface water drainage system. Any signs of pollution will be dealt with immediately and effectively to prevent pollution of downstream watercourses.
- The Principal Contractor is responsible for ensuring that pollution incidents are kept to a minimum. Any incidents should be reported to the relevant authorities.

6 Flood Warnings & Weather Alerts

6.1 Flood Alerts & Warnings

Flood alerts and warnings provide a notification for the risk of flooding from rivers or the sea. As the site is located in Flood Zone 1, no flood alerts or warnings are available for the site.

6.2 Weather Alerts

Weather alerts provide notification for the risk of flooding from surface water.

It is recommended that the Principal Contractor/Site Manager is signed up to the Met Office weather warning system, which can be found at:

<http://www.metoffice.gov.uk/public/weather/warnings>.

Alert Level	Definition	Action	Responsibility
Yellow: Be Aware	<p>Yellow warnings can be issued for a range of weather situations. Many are issued when it is likely that the weather will cause some low-level impacts, including some disruption to travel in a few places.</p> <p>Other yellow warnings are issued when the weather could bring much more severe impacts to many people but the certainty of those impacts occurring is much lower.</p> <p>It is important to read the content of yellow warnings to determine which weather situation is being covered by the yellow warning.</p>	<p>Monitor weather warning updates.</p> <p>Make all site operatives aware of any danger in continuing to work.</p> <p>Consider travel/delivery disruptions.</p>	Site Manager
Amber: Be Prepared	<p>There is an increased likelihood of impacts from severe weather, which could potentially disrupt your work plans. This means there is the possibility of travel delays, road and rail closures, power cuts and the potential risk to life and property.</p>	<p>Monitor weather warning updates.</p> <p>Make all site operatives aware of any danger in continuing to work.</p> <p>Consider travel/delivery disruptions.</p>	Site Manager
Red: Take Action	<p>Dangerous weather is expected and, if you haven't already done so, you should take action now to keep yourself and your works force safe from the impact of the severe weather. It is very likely that there will be a risk to life, with substantial disruption to travel, energy supplies and possibly widespread damage to property and infrastructure.</p> <p>Travel should be avoided where possible, and the advice of the emergency services and local authorities should be followed.</p>	<p>Make all site operatives aware of any danger in continuing to work.</p> <p>The site should be evacuated, made safe and closed.</p> <p>Monitor weather warning updates.</p> <p>Consider travel/delivery disruptions.</p>	Site Manager

7 Legislation & Guidance

Legislative and general guidance can be found from the following sources:

The Water Environment (England and Wales) Regulation 2009
Land Drainage Act 1991
SEPA Engineering in the Water Environment Good Practice Guide Temporary Construction Methods
Control of Water Pollution from Construction Sites - Guide to Good Practice (SP156)
Control of Water Pollution from Construction Sites - Guidance for Consultants and Contractors (C532)
Control of Water Pollution from Linear Construction Projects - Technical Guidance (C648)
Control of Water Pollution from Linear Construction Projects - Site Guide (C649)
Environmental Good Practice - Site Guide (C650)
The SUDS Manual (C753)
BS 8582: Code of practice for surface water management for development sites



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