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Document 3.1 – ES Volume 2

Appendix 2.1: Draft Construction Environmental Management Plan (CEMP) for WKN

Wheelabrator Kemsley (K3 Generating Station) and Wheelabrator Kemsley North (WKN)
Waste to Energy Facility DCO

May 2020 - Deadline 4 Version - Tracked

PINS ref: EN010083



APPENDIX 2.1:

**CONSTRUCTION ENVIRONMENTAL
MANAGEMENT PLAN FOR WKN ON
BEHALF OF WHEELABRATOR
TECHNOLOGIES**

Date: ~~September~~ May 20192020

Our Ref: OXF 11303

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1 Introduction

1.1 Introduction

- 1.1.1 Wheelabrator Technologies Inc. (“the Applicant”) has made an application to the Secretary of State for Business, Energy and Industrial Strategy (SoS) for a Development Consent Order (DCO) for a new waste-to-energy facility on adjacent land called Wheelabrator Kemsley North (‘WKN’).
- 1.1.2 The WKN Proposed Development will comprise a single-line facility capable of processing 390,000 tonnes of waste per annum, with a generating capacity of up to 42MW.
- 1.1.3 The DCO application is supported by an Environmental Statement (ES) and technical reports which consider the potentially significant environmental effects from the construction, operation and decommissioning of the WKN Proposed Development. This document comprises the Construction Environmental Management Plan (CEMP).

1.2 Site Location and Description

- 1.2.1 The WKN site is located approximately 0.8 km east of Kemsley, a residential suburb of Sittingbourne, Kent. Surrounding land uses include Kemsley Paper Mill to the west and the Sustainable Energy Plant (hereafter referred to as K3) to the immediate south. To the west of the WKN site is The Swale tidal water body.
- 1.2.2 The WKN site is currently being used by the Applicant as a laydown and parking area for the construction of the adjacent K3 facility. It has been cleared of vegetation and laid to concrete or hardcore with a perimeter fence.
- 1.2.3 The nearest statutorily designated ecological site to the WKN site is the Swale Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI) which lies approximately 100 m east of the WKN site. Milton Creek Local Wildlife Site (LWS) is less than 550 m and the Castle Rough Scheduled Monument is approximately 650 m to the south west.

1.3 Purpose and Scope of the CEMP

- 1.3.1 The CEMP is the key environmental management tool during the construction process. It ensures that environmental issues associated with the construction of the WKN Proposed Development are appropriately identified, assessed, planned for and addressed in line with the requirements of the plan.
- 1.3.2 It provides the management measures to minimise the environmental impacts from the construction phase of the WKN Proposed Development and details how monitoring will be used to ensure that agreed environmental procedures are adhered to.

- 1.3.3 For the purposes of this document, the CEMP focuses on the site of the WKN Proposed Development and covers all the environmental impacts within the site boundary related to the construction of the WKN.

1.4 Status of the CEMP

- 1.4.1 This CEMP draws upon relevant environmental information and supporting studies contained within the ES and the DCO application. The CEMP is a live document that will be updated to include any new commitments agreed during the Examination of the project and during detailed design and further consultation with key stakeholders.
- 1.4.2 The requirements of the CEMP do not remove or overwrite the legal duties, responsibilities and obligations of the principal contractor and other parties in accordance with legislation.

1.5 Structure of the CEMP

- 1.5.1 The structure of the CEMP is as follows:

- Implementation of the CEMP;
- General Requirements;
- Environmental Aspects Register;
- Environmental Control Plans;
- Emergency Response Procedures;
- Training; and
- Monitoring Plan.

1.6 Other Construction Documents

- 1.6.1 The CEMP will should be read alongside the ES and the following construction documents that will be developed and implemented prior to the commencement of the works as consented by the DCO:
- Environmental Risk Register;
 - Emergency Response Plan;
 - Construction Traffic Management Plan;
 - Site Waste Management Plan;
 - Contamination and Remediation Plan;
 - Ecological Mitigation and Management Plan; and

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- Monitoring Plan.

2 Implementation of the CEMP

2.1 Implementation of the CEMP

2.1.1 The CEMP will be updated during the duration of the project to include any environmental commitments or measures agreed during and after the Examination process. It would also be updated to reflect detailed design information including construction methodologies and techniques, which would be used to develop detailed method statements for undertaking construction activities.

2.1.2 All sub-contractors will be required to provide evidence (specifically risk assessments and method statements), to show how they will control environmental risks that may arise from undertaking their works. The risk assessments and method statements will be in line with the approach and measures of this draft CEMP.

2.1.3 The CEMP will be incorporated into the contracts of the principal contractors for the works at WKN authorised by the DCO. All principal contractors will be required to observe the relevant provisions of the CEMP and provide evidence on how they will ensure its requirements are implemented.

2.2 Environmental Policy and Objectives

2.2.1 The construction of WKN Proposed Development will be managed in accordance with the Applicant's environmental policy.

2.2.2 The overriding environmental objectives for the construction of the WKN Proposed Development are:

- Mitigate environmental hazards and risks through the planning and risk assessment process;
- Avoid, or if not practicable, reduce and control, environmental hazards and risks;
- Support the application of Best Available Techniques (BAT) throughout construction;
- Communicate all hazards, risks and controls;
- Comply with all relevant legal and regulatory requirements; and
- Always monitor and establish opportunities to improve environmental performance.

2.3 Roles and Responsibilities

2.3.1 Whilst the key roles of the construction project team will not be assigned until post consent, the environmental roles required to implement the CEMP include the following:

Site Environmental/Compliance Manager

2.3.2 The Site Environmental/Compliance Manager will be responsible for the following:

- Ensuring compliance with the CEMP, procedures and legislation;
- Compiling and reporting on sustainable construction objectives at progress meetings;
- Managing specialist environmental subcontractors and service providers;
- Ensuring that environmental issues are covered during all induction training sessions;
- Reporting to Project Managers on all environmental incidents;
- Ensuring environmental quality standards are adhered to and monitoring compliance during construction works; and
- Ensuring that liaison with the environmental regulators is maintained as appropriate.

Environmental Co-ordinator

2.3.3 The Environmental Co-ordinator will be responsible for the interface between the environmental specialists and engineers including the following:

- Coordinating and attending necessary meetings and consultations relating to environmental and sustainable construction aspects of the work;
- Ensure that the commitments from statutory procedures, including the Examination process, are included in the CEMP and detailed environmental design;
- Report on site environmental monitoring; and
- Maintain the CEMP document and management systems as working documents undertaking reviews and updates as necessary; and obtaining the relevant licences and consents.

Environmental Clerk of Works

2.3.4 The Clerk of Works will be the site representative and will be responsible for overseeing construction activities to ensure all environmental commitments are met and compliance with the conditions of all licences and permits.

Environmental Specialists

2.3.5 Suitably qualified and experienced environmental specialists will be appointed to undertake watching briefs during the construction and assist the project team with specific issues as they arise during the project.

3 General Requirements

3.1 Programme

3.1.1 The site preparation and construction programme for the WKN Proposed Development is anticipated to take approximately 40 months. This will comprise the following key stages:

- Civil engineering works (month 0-40) – the physical works associated with constructing the facility;
- Process works (month 12-40) – mechanical and electrical installation, fit out and commissioning of the plant; and
- Commissioning of the facility (month 30 – 40).

3.2 Working Hours

3.2.1 Normal construction activities for the WKN Proposed Development will take place between 07:00 and 19:00 hours Monday to Friday inclusive and 07:00 and 16:00 hours Saturday and Sunday with no construction activities to take place on Bank or Public Holidays. In certain circumstances, specific works may need to be completed outside the normal working hours (for example, construction using the concrete slip-forming method, construction using constant pour methods for concrete laying). In the case where 'out of hours' or unsociable working is required, agreement will be sought from the Local Planning Authority and local residents will be informed.

3.2.2 Internal process works relating to mechanical and/or electrical equipment installation may also be undertaken outside the normal construction working hours set out in paragraph 3.2.1.

3.2.3 HGV deliveries to the WKN site during the construction period will be spread across the normal construction working hours and will be timed, where possible, to avoid the peak traffic flow periods (i.e. from 08:00 to 09:00 and 17:00 to 18:00). HGV deliveries of construction plant and materials will be required to follow the designated routes via Barge Way to the construction laydown area.

3.3 Lighting

3.3.1 External lighting of the WKN site during construction will be designed and positioned to:

- Provide the necessary lighting for safe working;
- Minimise light spillage or pollution; and
- Avoid disturbance to occupiers of buildings and to wildlife.

3.3.2 Lighting during construction will take into account the requirements of British Standard EN12464-2:2014 Lighting - Lighting of Work Places, Outdoor Works.

Lighting units will be designed to minimise illumination outside the construction works area. Further details regarding construction lighting will be developed post consent.

3.4 Site Layout

3.4.1 During the construction of the WKN Proposed Development the following facilities will be provided:

- (1) a construction laydown area and associated access;
- (2) temporary construction site offices;
- (3) canteen, welfare, and related support facilities;
- (4) parking of construction vehicles plant and machinery or for the vehicles of construction workers;
- (5) open and covered storage of construction materials and equipment; and
- (6) workshops for pre-fabrication, assembly and testing of equipment.

3.4.2 The location of the laydown area (Work no. 6) consists of an area of cleared ground contiguous to the north east corner of the WKN site.

3.4.3 Numbers 1 to 5 will be limited to the construction laydown area (Work no. 6) and 6 to the WKN Site as required (Work no. 2).

3.4.4 Works to the lay down access road (Work no. 5) may be required to facilitate the safe movement of construction vehicles.

3.4.5 Within the construction laydown area, dedicated areas will be provided for the storage of oils and chemicals and waste generated during the construction process.

3.5 Fencing and Site Security

3.5.1 Fencing and/or hoarding will be provided around the perimeter of the WKN site to prevent unauthorised entry. Fencing will also be provided in the construction laydown area in the form of a 2.5 m high close-board wooden fence to provide visual screening of the laydown from both the reedbed to the west and the intertidal area to the east. Suitable fencing may also be needed around the oil/chemical storage area. The type of fencing will be selected to suit the location and purpose.

3.5.2 The perimeter fencing/hoarding will be maintained in a tidy condition and will be fit for purpose.

3.5.3 Access to the WKN site will be limited to specified entry points and all personnel and deliveries entering and exiting the site will be recorded for security and health and safety purposes.

3.6 Good Housekeeping

3.6.1 A good housekeeping policy will be applied to the construction areas at all times. As far as reasonably practicable, ~~a number of principles will be applied—the following principles will be applied, including the following:~~

- All working areas will be kept in a clean and tidy condition;
- Adequate welfare facilities will be provided for construction staff;
- Smoking areas at site offices/compounds or work sites will be equipped with containers for smoking wastes;
- Wheel and body washing facilities will be located at exit points from the construction site and will be cleaned frequently;
- Open fires will be prohibited at all times;
- All necessary measures will be taken to minimise the risk of fire and the principal contractor will comply with the requirements of the local fire authority;
- Waste from the construction areas will be stored securely to prevent wind blow; and
- Waste (particularly food waste) will be removed from the welfare facilities at frequent intervals.

3.7 Permits and Consents

3.7.1 The Applicant will ensure that the all relevant permits, licences and consents are in place prior to the commencement of the works as consented by the DCO, e.g. permits to discharge to the Swale.

3.8 Communication and Complaints Procedure

3.8.1 The Applicant will develop a communication procedure for the WKN Proposed Development. Occupiers of nearby properties and the relevant planning authorities will be informed in advance of works taking place (in particular those affecting local roads and Public Rights of Way (PRoW)) including the nature and duration of the works. The means of notification will be confirmed as the procedure is developed post consent.

3.8.2 A helpline will be set up at the start of the construction process to respond to enquiries, concerns or complaints. A website will also be established to provide information on the WKN Proposed Development, which is regularly updated with details on overall progress and forthcoming works.

3.8.3 A complaints procedure will be implemented during the construction process: all calls will be logged and the responses will be recorded. Complaints will be investigated and where required, mitigation will be implemented.

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- 3.8.4 The helpline number and website address will be clearly displayed on site notice and display boards around the WKN site.

4 Environmental Aspects Register

4.1 Purpose

4.1.1 Table 4.1 provides a draft outline Environmental Aspects register. The register identifies sensitive receptors and the potential impacts or key issues of the construction of the WKN Proposed Development. Further information on these receptors and the impacts is provided under the relevant topic heading of the ES. Commitments and agreements to mitigate these impacts are set out in the ES and are discussed in the Environmental Control plans within this CEMP. The register will be updated prior to construction and will provide a tool for the principal contractors when preparing their method statements.

Table 4.1: Outline Environmental Aspects Register

Topic	Sensitive Receptors	Potential Impact
Traffic and Transport	Local businesses and residents	Increased traffic flows from construction traffic (including abnormal loads) leading to driver delay and increased risk of accidents.
Air Quality	Local businesses and residents	Dust deposition from the following activities: Site preparation; Bulk excavations; Internal site traffic movement on unmade haul roads; and Soil, aggregate and material handling and storage
Noise and Vibration	Local residents Kemsley Primary School Saxon Shore PRoW	The activities for which there is the greatest potential for significant noise effects to occur are: Site preparations and ground excavations; Driving pre-cast concrete piles; 24-hour concrete pours for foundations (including night-time works); and General building construction.
Ground Conditions	Human health (construction workers and off site workers), groundwater within Lambeth Group/Thanet Formation and Chalk, and associated surface water receptors (The Swale)	Mobilisation of contaminants by construction activities, shallow excavations and piling.
Water Environment	Tidal and fluvial flood risk – The Swale Water quality - drainage networks, Milton Creek, unnamed ditches and ponds.	Increase in temporary flood risk to surrounding area by temporary increase in in less permeable areas on the WKN site. Accumulation of standing water and accidental discharges of untreated runoff. Removal/disruption to on-site drainage network.
Ecology and Nature Conservation	Designated sites (Swale SSSI, SPA and Ramsar, Swale MCZ, Elmley	Temporary and permanent loss of natural/semi-natural habitat including habitats that support species of

Topic	Sensitive Receptors	Potential Impact
	National Nature Reserve, Milton Creek Local Wildlife Site), protected species (reptiles, breeding schedule 1 birds) and Annual Beard-Grass	conservation importance; temporary disturbance to wildlife (noise, light, human activity); accidental release of pollution from the WKN site and spread of invasive species.
Cultural Heritage	Undesignated archaeology	Damage or destruction of features during site clearance, topsoil strip, geotechnical investigations, piling and earthworks.
Climate Change	Global atmospheric mass of the relevant GHGs and consequent warming potential, expressed in CO ₂ equivalents.	GHG emissions from the operation of the WKN development

5 Environmental Control Plans

5.1.1 This section provides details of individual environmental control plans which will be updated prior to the start of construction and used by the principal contractors to develop activity specific risk assessment and method statements.

5.2 Traffic and Transport

5.2.1 A Construction Traffic Management Plan (CTMP) will be prepared and agreed with Highway Officers prior to construction commencing and the works will be undertaken in accordance with this. A draft CTMP has been included in Appendix 4.2 of the Environmental Statement and will form the basis for the detailed CTMP that will be prepared post consent. The CTMP will be a management tool that contractors will follow to minimise the impact of construction vehicles. It will be regularly monitored and reviewed on an ongoing basis to seek to further reduce impacts where possible.

5.2.2 The CTMP will include measures to manage construction vehicles at the WKN site and will include details such as:

- Programme and total timescale for the project, each major phase of the construction and the anticipated start date;
- Days and hours of site construction works;
- Vehicular access routes to and from the WKN site;
- Details on the number, type, size and weight of vehicles accessing the WKN site;
- Details of how contractors, delivery companies and visitors will be made aware of the access route;
- Measures to ensure route compliance;
- Site plan showing where materials, skips and plant will be stored along with loading / unloading / laydown areas;
- Demonstration that vehicles can access the WKN site and turn to exit in a forward direction;
- Contingency details on where delivery vehicles will wait to load/unload in the event they are unable to access the WKN site;
- Details on vehicle wheel wash facilities be provided, if required;
- Details on the arrangements for co-ordinating and controlling delivery vehicles;
- Details on the arrangements for supervising, controlling and monitoring vehicle movements to/from the WKN site;

- Details on the arrangements to ensure that the loading/collection areas are clear of vehicles and materials before the next HGV arrives;
- Details on any specific arrangements for contractor car sharing / minibus / collection / drop-off arrangements to and from the WKN site;
- Details on the arrangements for contractor parking on the WKN site;
- Details on monitoring and review;
- Details on how complaints from local residents and businesses, etc. will be dealt with, reported and acted upon;
- Details on the transport requirements for abnormal indivisible loads;
- A detailed swept path analysis of abnormal indivisible loads;
- Details of any measures to accommodate abnormal indivisible loads along the access route along with the management measures to be adopted; and
- Details of any road condition surveys.

5.3 Air quality

5.3.1 Mitigatory measures to be implemented, as recommended within IAQM dust guidance, will include the following:~~The following mitigatory measures will be implemented, as recommended within the IAQM dust guidance;~~

- The project will commit to the considerate contractors scheme;
- Dust generation will be minimised wherever appropriate (e.g. cutting rather than breaking), damping down when conditions require;
- The site layout would be planned so that machinery and dust causing activities are located away from receptors, as far as is possible;
- Site runoff of water or mud will be avoided;
- There should be no idling vehicles and vehicle engines will be switched off when not in use;
- Enclosed chutes and conveyors and covered skips will be used as well as vehicles carrying material to be sheeted as required;
- Bonfires and burning of waste materials will be avoided;
- The name and contact details of person(s) accountable for air quality and dust issues would be displayed on the site boundary. This may be the environment manager/engineer or the site manager;
- The head or regional office contact information will be displayed;

- All dust and air quality complaints will be recorded, and the cause(s) identified, appropriate measures would be taken to reduce emissions in a timely manner, and record the measures taken.
- The complaints log will be available to the local authority when asked;
- Any exceptional incidents that cause dust and/or air emissions, either on- or off-site would be recorded, and the action taken to resolve the situation will be documented in the log book;
- A Dust Management Plan will be developed and implemented;
- Regular site inspections will be carried out to monitor compliance with a Dust Management Plan, record inspection results, and make an inspection log available to the local authority when asked.

5.4 Noise and Vibration

5.4.1 Construction works will be undertaken in accordance with the best practicable means (as defined in Section 72 of the Control of Pollution Act 1974), to minimise noise and vibration effects. Noise control measures will be consistent with the recommendations of the current BS 5228 'Code of Practice for Noise and Vibration Control on Construction and Open Sites' – Part 1: Noise and Part 2 – Vibration.

5.4.2 Best Practicable Means will include but not limited to the following:

- The selection of quieter alternative methods, plant and/or equipment where reasonably practicable;
- The use of site hoardings, enclosures, portable screens and/or screening noisier items of plant where reasonably practicable;
- Maintaining and operating all vehicles, plant and equipment in an appropriate manner to ensure that extraneous noise from mechanical vibration is kept to a minimum;
- Plant and equipment will be turned off when not in use – no idling; and
- Locating areas for material storage and handling as far away from residential properties as possible.

5.4.3 Construction works will be undertaken in accordance with the construction hours set out in Section 3.2.

5.5 Ground Conditions

5.5.1 Measures, including those set out below, will be implemented to manage the risks to the environment during the construction phase~~The measures set out below will be implemented to manage the risks to the environment during the construction phase:~~

- Stockpiling of contaminated materials will be avoided where practicable. Where it is necessary, stockpiles will be located on areas of hard-standing or plastic sheeting to prevent contaminants infiltrating into the underlying ground;
- The implementation of dust suppression measures during construction to minimise nuisance dust emissions during the works;
- Any necessary licences will be obtained for the storage, treatment and disposal of waste;
- Where significant unforeseen contamination is identified e.g. hydrocarbons, fibrous asbestos, during the course of the work, work will be stopped and further investigation will be undertaken to establish the nature and level of contamination and the risks posed to human health and controlled waters. Where remediation is required, on-site treatment, including bioremediation will be carried out wherever practicable;
- Suitable management and control of shallow groundwater during excavation works to minimise the potential for the spread of contamination contained within the water;
- Storage of hazardous materials, including fuel, during the construction phase will be in accordance with industry best practice e.g. storage in bunded areas, to minimise the potential for spills / leakages to impact soil and groundwater; and
- The implementation of suitable measures in line with the Construction Design Management Regulations (2015) will manage any risks posed to human health, particularly with regard to asbestos. These measures should include the provision of suitable Personal Protective Equipment (PPE) and welfare facilities. Where appropriate, other measures to manage risks to human health from the presence of asbestos will be implemented and should include dust suppression measures and air monitoring.

5.5.2 A piling risk assessment will be undertaken to determine the most suitable piling technique to be implemented, to minimise the potential for the downward migration of contamination within the Made Ground into the Secondary A aquifers (Lambeth Group and Thanet Formation).

5.6 Water Environment

5.6.1 Potential impacts to the water environment will be avoided where practicable through implementation of a number of industry standard mitigation measures and careful consideration of the drainage design and construction techniques. Standard construction measures such as those set out below, would reduce any potential adverse impacts associated with the WKN Proposed Development through the careful consideration of the hydrological environment, construction techniques and materials.

Standard construction mitigation measures to be adopted during the construction of the WKN Proposed Development
<p>Construction and Future Decommissioning</p> <p><u>Best practice measures</u></p> <p>All construction work would be undertaken in accordance with the Construction Method Statement and good practice documentation including:</p> <ul style="list-style-type: none"> • CIRIA – SuDS Manual; • Prevent surface water being affected during earthwork operations. No discharge to surface watercourses will occur without permission from the EA (SuDS Manual); • Environment Agency, Pollution Prevention Guidance Note 6 (PPG6): Pollution Prevention Guidelines – Working at Construction and Demolition Sites ; • Environment Agency, Pollution Prevention Guidance Note 5 (PPG5): – Working in, near or liable to affect watercourses; • CIRIA (C741) Environmental good practice on site guide; • Prevent surface water being affected during earthwork operations. No discharge to surface watercourses will occur without permission from the EA (SuDS Manual); • Wheel washers and dust suppression measures to be used as appropriate to prevent the migration of pollutants (SuDS Manual); <p>Regular cleaning of roads of any construction waste and dirt to be carried out (SuDS Manual); and</p> <ul style="list-style-type: none"> • A construction method statement to be submitted for approval by the responsible authority (SuDS Manual).
<p><u>Water Quality monitoring</u></p> <p>Water quality monitoring will be carried out throughout the construction phase to ensure no discharge of pollutants or increase in suspended sediments occurs.</p> <p><u>Pollution prevention measures</u></p> <p>Refuelling of machinery would be undertaken within designated areas where spillages can be easily contained. Machinery would be routinely checked to ensure it is in good working condition.</p> <p>Any tanks and associated pipe work containing substances included in List 1 of the Groundwater Directive would be double skinned and be provided with intermediate leak detection equipment.</p> <p>The following specific mitigation measures for the protection of surface water during construction activities would be implemented:</p> <ul style="list-style-type: none"> • Management of construction works to comply with the necessary standards and consent conditions as identified by the EA; • A briefing highlighting the importance of water quality, the location of watercourses and pollution prevention included within the site induction; • Areas with prevalent run-off to be identified and drainage actively managed, e.g. through bunding and/or temporary drainage; • Areas at risk of spillage, such as vehicle maintenance areas and hazardous substance stores (including fuel, oils and chemicals) to be bunded and carefully sited to minimise the risk of hazardous substances entering the drainage system or the local watercourses. Additionally, the bunded areas will have impermeable bases to limit the potential for migration of contaminants into groundwater following any leakage/spillage. Bunds used to store fuel, oil etc. to have a 110% capacity; • Disturbance to areas close to watercourses reduced to the minimum necessary for the work; • Excavated material to be placed in such a way as to avoid any disturbance of areas near to the banks of watercourses and any spillage into the watercourses; • Construction materials to be managed in such a way as to effectively minimise the risk posed to the aquatic environment;

- All plant machinery and vehicles to be maintained in a good condition to reduce the risk of fuel leaks;
- Drainage works to be constructed to relevant statutory guidance and approved via the LLFA prior to the commencement of construction; and
- Consultation with the EA to be ongoing throughout the construction period to promote best practice and to implement proposed mitigation measures.

Water Quality/Flood Risk Mitigation

- 5.6.2 Temporary drainage mitigation techniques including, but not limited to, run-off interceptor channels would be installed prior to the construction of the formal drainage to ensure that discharges from the WKN Proposed Development are controlled in quality and volume. This may include the use of settling tanks and/or ponds to remove sediment; temporary interceptors; and hydraulic brakes.
- 5.6.3 Once construction of the WKN Proposed Development commences, the hardstanding areas will drain eastwards into the storage pond that will be the first element of the scheme constructed. It will ensure that settling pond capabilities are available from the start of the works, and to provide tidal inundation protection to the construction site
- 5.6.4 Further mitigation would be incorporated into the construction of the WKN Proposed Development as set out in the table below.

<p>Surface Water Management Strategy</p> <p>The WKN Proposed Development would result in the construction of low permeability surfacing, increasing the rate of surface water run-off from the WKN Site. A surface water management plan would be present which will ensure that any increase in surface water run-off would be handled on-site and a run-off rate to the surrounding water environment (Swale Estuary) is maintained at the agreed upon rate. This would highlight potential contaminants and suspended sediment originating from the WKN Site, which may affect the receiving watercourse. Monitoring would be carried out during the construction phase and continue throughout the lifetime of the WKN Proposed Development.</p> <p>Flood Management Plan</p> <p>A flood management plan including flood evacuation measures, will be developed post consent for the construction phases of the WKN Proposed Development with staff training provided to ensure in the event of the plan to be activated, staff are aware of the procedures upon receipt of the flood warning, together with evacuation routes. The flood evacuation plan would be practised regularly.</p>

5.7 Ecology and Nature Conservation

- 5.7.1 Mitigation for the construction phase will follow the principles outlined in the Ecology Mitigation and Enhancement Strategy (Appendix 11.4 of the Environmental Statement).

Drainage

- 5.7.2 Works on site will follow the best practice guidelines with respect to the management of surface water. The following activities/items will be located more than 20 m from the site boundary perimeter: refuelling and maintenance of machines, oil storage tanks, chemical or fuel storage and on site concrete batching plants (if utilised).

Dust Mitigation

- 5.7.3 Standard, best practice dust-suppression methods (see section 4.3: Air Quality) will be used throughout construction of the WKN Proposed Development, thereby avoiding any impacts as a result of dust settlement on habitats and species.

Piling Mitigation

- 5.7.4 In order to avoid impacts to the birds using the intertidal area and marsh harrier using the reedbed to the north, impact piling will be undertaken during the following periods:

- No impact piling between April and August, inclusive;
- No impact piling between the months January and February inclusive.
- Limited impact piling is permissible between the months of November and December provided that any impact piling activity does not accrue to more than a total of 10 days consecutively or otherwise.

- 5.7.5 Impact piling is permissible unrestricted outside of these time periods. All other methods of piling using non-impact methods can be used without restriction.

Reedbed

- 5.7.6 A 1 ha reedbed along with circa 0.6 ha of tussocky grassland and 250 m of new ditch has already been established at Hartey Fen on the Isle of Sheppey to provide alternative breeding habitat for Marsh Harrier during construction as well as enhanced water vole and reptile habitat.

- 5.7.65.7.7 To avoid any activity disturbance related to human activity during construction (including potential rubbish entering the reedbed), a 2.4m closed-boarded wooden fence will be erected around the proposed construction laydown area.

Lighting mitigation

- 5.7.75.7.8 Lighting strategies for both construction and operation will be developed to follow all good-practice to minimise lighting impacts such that lighting levels at the site boundary will be no more than 1 lux (bright moonlight).

Breeding birds

5.7.85.7.9 Any habitat removal should be undertaken outside of the breeding bird season (March – September inclusive), however, if this is not possible, then the vegetation to be removed should first be checked for birds' nests by a suitably qualified ecologist. If any nests are present, they should be left in-situ with a 5m buffer, until such a time that the chicks have fledged (usually six weeks).

Reptiles

5.7.95.7.10 Common lizards and slow worms were found during the autumn 2018 surveys, within the area which is to be used as the construction laydown area / laydown access. In order to avoid killing/injuring reptiles during site clearance, the population of reptiles will be temporarily moved out of the construction zone into the surrounding retained habitat, via a two-stage, sensitive strim, prior to construction works beginning on site. A final destructive search of potential shelter locations (such as rubble piles) will also be undertaken. These works are described below:

- Clearance will be undertaken at a time of the year when amphibians and reptiles are active (March to October) and during suitable weather conditions for them to be mobile (reasonably warm, no rain).
- Vegetation will be hand strimmed under the supervision of an ecological clerk of works (ECOW) to an initial height of 15 cm. It will be strimmed directionally, towards retained habitat. A second cut will be made to ground level at least 24 hours later to enable animals time to move away from the works area.
- Following the strimming, a destructive search will take place; this will be performed under the guidance and watching brief of an experienced ecologist, who will be present to capture any amphibians disturbed by the process, as mentioned above.
- The area will be surrounded with suitable reptile fencing to discourage re-entry of any reptiles once they have moved out of the area.

5.7.105.7.11 On completion of the construction phase, the laydown area will be re-instated to the grassland / scrub mosaic which was present pre-construction. The reptile fence will then be removed (under the supervision of an ecologist) and any reptiles allowed to re-colonise the area.

5.8 Cultural Heritage

5.8.1 A programme of archaeological fieldwork in the form of trial trenching in the first instance, further to investigate and to record any surviving archaeological remains which may be affected by the WKN Proposed Development and Works No. 3 - 7, will be undertaken post consent.

- 5.8.2 Should archaeological remains be identified during this trial trenching an appropriate programme of archaeological works will be developed to ensure that their physical loss would be offset through their preservation by record.

5.9 Waste

- 5.9.1 Prior to commencement of construction works, a Site Waste Management Plan will be produced. This would predict all waste streams to be produced including volumes expected and to identify the waste management action proposed for each different waste type in line with the waste hierarchy.
- 5.9.2 The disposal of solid waste, including surplus spoil, would be managed to maximise the environmental and developmental benefits from the use of surplus material and to minimise any adverse effects of disposal. In general, the principles of the waste management hierarchy, reduce-reuse-recycle would be applied.
- 5.9.3 Potential waste arising from excavation would be sampled and analysed to determine the waste classification required to establish relevant waste streams, suitability for reuse/recycle and disposal/storage requirements.
- 5.9.4 Excavation works would be carried out in such a way to enable effective segregation of clean materials for reuse on site wherever practicable. It is anticipated that 'clean' concrete would be crushed for reuse for backfilling and other purposes, or would be sent offsite for recycling or recovery with disposal only as a final resort. Material would only be re-used on site in accordance with the Environmental Permitting Regulations or appropriate approved Code of Practice e.g. Contaminated Land: Application in Real Environments (CL:AIRE).

6 Emergency Response Procedures

6.1 Emergency Response Plan

6.1.1 A Pollution Incident Emergency Response Plan will be developed post consent. The Response Plan will set out the procedures to be followed and measures to be implemented in the event of a pollution incident. These incidents may be the result of:

- Delivery and use of materials;
- Spillages of oils or chemicals;
- Discharge of silty water and other pollutants to watercourses;
- Flooding event; and
- Fire (emission to air) and failure to contain firewater runoff.

6.1.2 The Response Plan will contain the following key information:

- External and internal list containing 24 hour contact details for organisations that may need to be involved during or after an incident;
- Chemical and waste inventory comprising an up-to-date record of all substances stored on the site and the location of drums, tanks, IBCs etc used for storing potentially polluting chemicals;
- Pollution prevention equipment inventory and a plan of its location;
- Site plan showing access routes and meeting points for emergency services; watercourses located on or near the site, site drainage; and storage areas for raw materials and wastes.

6.1.3 All relevant staff will be trained in how and when to contact the emergency services and other organisations identified in the Response Plan.

6.1.4 A copy of the Response Plan will be kept at the main site office.

7 Training

- 7.1.1 The principal contractor will ensure that contractors employ an appropriately qualified and experienced workforce. The principal contractor will also be responsible for identifying the training needs of their personnel to enable appropriate training to be provided.
- 7.1.2 Site-specific environmental matters will be included in the main induction and will be given to all personal entering the site. The induction will include the key environmental issues identified for the WKN Proposed Development including the sensitivity of the surrounding designated habitats and the local residents and businesses.
- 7.1.3 All construction staff will receive structured training on the requirements of the CEMP and the associated environmental control plans. The training will emphasise the methods and working practices that must be employed to protect the environment, including emergency procedures for reporting and dealing with environmental incidents.
- 7.1.4 Tool Box Talks and environmental alerts will be given on key topics arising during the construction phase. Weekly construction meetings will be the main forum to review the performance against objectives and highlight areas of concern as well as plan future environmental requirements. Instructions regarding environmental issues that require immediate action will be conveyed verbally, followed up in writing when applicable.

8 Monitoring Plan

8.1.1 A monitoring plan will be developed post consent to monitor the performance of environmental mitigation and measures implemented during construction. The plan will be based on the monitoring principles set out in the ES and will reflect all mitigation requirements as set out in the ES, licences/consents and commitments from the Examination process.

8.1.2 The objective of the monitoring would be to:

- Determine if the environmental measures have achieved or are achieving their intended purpose;
- Identify any successes, failures or weaknesses in the implementation of those measures;
- Identify remedial measures required to achieve the environmental requirements; and
- To ensure that the agreed environmental commitments as set out within the CEMP are being implemented.

8.2 Inspections

8.2.1 Monitoring of site operations with respect to environmental protection will be carried out on a day-to-day basis by site management. Weekly environmental inspections will be carried out and recoded by site construction staff on a rota basis. Health and safety, environmental and quality managers will also carry out regular inspections and audits. Any environmental investigations required will be carried out by the Site Environmental/Compliance Manager.

8.2.2 An environmental audit will be conducted within an agreed timeframe following commission and on a regular basis thereafter. The audit will encompass the whole suite of environmental management requirements. Where issues are identified during the audit, they will be categorised as either:

- Major (breach of legislation);
- Minor non-conformance (breach of environmental policy or procedures); or
- Action (observation)

8.2.3 Corrective actions to close out the non-conformances will be recorded. Procedures will be reviewed to minimise the risk of further non-compliances.

9 Environmental Records

9.1.1 All environmental documents and records will be maintained and stored within the Applicant's data management system. Hardcopies of key environmental documentation will be maintained on site in their most current version. These will include:

- Development Consent Order;
- Environmental Statement;
- Environmental Risk Register;
- Construction Environmental Management Plan;
- Emergency Response Plan;
- Construction Traffic Management Plan;
- Site Waste Management Plan (and Waste Transfer Notes);
- All environmental permits and consents
- Contamination and Remediation Plan;
- Ecological Mitigation and Management Plan; and
- Monitoring Plan.

9.1.2 With the exception of the DCO and the Environmental Statement, these documents will be regularly reviewed and updated in consultation with statutory authorities where necessary. Review reports and monitoring data will be periodically submitted to appropriate consultees.

Annex 1 – Legislative Framework

Ecology and Nature Conservation

- Wildlife and Countryside Act (WCA) 1981 (as amended);
- Conservation of Habitats and Species Regulations 2017 (referred to as The Habitat Regulations);
- Countryside and Rights of Way Act (CRoW) Act 2000 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006; and
- Marine and Coastal Access Act (MCAA) 2009.

Water Environment

- English/UK Legislation · Coast Protection Act 1949 [Ref 10.2]; · Environment Act 1995;
- · Environmental Damage and Liability (Prevention and Remediation) Regulations 2015;
- · Environmental Protection (Duty of Care) Regulations 1991 (as amended 2003) [Ref 10.5]; · Floods and Water Management Act 2010 [Ref 10.6]; · Land Drainage Act 1991;
- · The Environmental Permitting (England and Wales) Regulations 2010 (as amended 2016);
- The Groundwater (Water Framework Directive) (England) Direction 2016;
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 [Ref 10.10]; and · Water Resources Act 1991;

Cultural Heritage

- Planning (Listed Buildings and Conservation Areas) Act (1990);
- Ancient Monuments and Archaeological Areas Act (1979);
- National Heritage Act (1983)

Ground Conditions

- Part IIA of the Environmental Protection Act (EPA) 1990 (as amended);
- Contaminated Land (England) Regulations 2006 (as amended 2012);

- Environmental Permitting (England and Wales) Regulations 2016 (as amended);
- Environment Act (1995);
- Groundwater Regulations (1998);
- Groundwater (England and Wales) Regulations (2009);
- Water Resources Act (1991);
- Water Act (2003);
- Groundwater Regulations (1998), which transpose the EC Groundwater Directive 80/68/EC into UK law;
- Water Environment (Water Framework Directive) (England and Wales) Regulations (2003), which transpose the Water Directive 200/60/EC into UK law;
- Waste Framework Directive (2008) as transposed via Waste (England and Wales) Regulations 2011;
- Landfill (England and Wales) Regulations (2002); and
- Hazardous Waste (England and Wales) Regulations (2005).

Air Quality

- Industrial Emissions Directive (2010/75/EU)
- Ambient Air Quality Directive (2008/50/EC)
- Air Quality Standards (England) Regulations 2010