The Great Grid Upgrade

Grimsby to Walpole

Preliminary Environmental Information Report

Volume 3 Part A Introduction and Overview

Chapter 5 Project Description

Appendices

June 2025

Contents

Grimsby to Walpole
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5A. Preliminary Code of Construction Practice

nationalgrid

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5A. Preliminary Code of Construction Practice

5A.1 Introduction

Overview

5A.1.1 The Grimsby to Walpole Project (the Project) is being developed by National Grid Electricity Transmission plc (National Grid) to increase the ability of the transmission system to transfer power from the Midlands to the south. The objective of the Project is to reinforce the electricity transmission system to help deliver the UK Government's Net Zero targets. The Project forms part of a major programme of reinforcement of the electricity transmission system to accommodate major increases in north south power flows, helping take power generated from low carbon sources (especially from offshore wind) to areas of consumer demand across the UK.

5A.1.2 The Project comprises the following components:

i. approximately 140 km of new 400 kV overhead transmission line;

ii. a new 400 kV substation to be built in the vicinity of the existing Grimsby West 400 kV Substation in North East Lincolnshire (to be referred to as the New Grimsby West Substation). The existing substation will be decommissioned, in full, or part;

iii. two new 400 kV Lincolnshire Connection substations located south west of Mablethorpe in East Lindsey (to be referred to as Lincolnshire Connection Substation A and Lincolnshire Connection Substation B);

iv. up to two new 400 kV substations in the vicinity of the Spalding Tee-Point in South Holland District (to be referred to as Weston Marsh Substation A and Weston Marsh Substation B);

v. a new 400 kV substation in proximity to the existing Walpole Substation west of the village of Walpole St Andrew and north of the town of Wisbech, in King's Lynn and West Norfolk District in King's Lynn (herein after referred to as Walpole B Substation); and

vi. replacement of short sections of existing 400 kV overhead line and local changes to the lower voltage distribution networks to facilitate the construction of the new overhead line and substations.

5A.1.3 In addition, third party utilities diversions and/or modifications may also be required to facilitate the construction of the Project. Further details would be included within the Environmental Statement (ES).

5A.1.4 The Project has been divided into seven Sections (from north to south) refer to **PEI Report Volume 2 Part A Figure 1.1 Draft Order Limits.**

i. Section 1- New Grimsby West Substation;

ii. Section 2- New Grimsby West Substation to New Lincolnshire Connection Substation A;

iii. Section 3- New Lincolnshire Connection Substation A and B;

iv. Section 4- New Lincolnshire Connection Substation B to Refined Weston Marsh Substation Siting Zone;

v. Section 5- Refined Weston Marsh Substation Siting Zone;

vi. Section 6- Refined Weston Marsh Substation Siting Zone to New Walpole B Substation; and

vii. Section 7- New Walpole B Substation.

5A.2 Purpose of the Code of Construction Practice

5A.2.1 This is the Preliminary Code of Construction Practice (CoCP) for the Project which has been produced to support the Preliminary Environmental Information (PEI) Report. It has been produced to further develop control and management measures that will be undertaken during construction of the Project and the decommissioning (full or in part) of the existing Grimsby West Substation if the Development Consent Order (DCO) is confirmed. The CoCP aims to ensure that adverse effects from the construction phase of the Project, on the environment and local communities, are minimised and controlled appropriately.

5A.2.2 It will be updated as the Project evolves to include additional measures identified through the engineering design, the Environmental Impact Assessment (EIA) process and from engagement with stakeholders. A Final CoCP will be submitted as an appendix to the ES as part of the application for development consent. Submission of the Final CoCP and compliance with the approved Final CoCP will be secured by way of a requirement in the DCO.

5A.2.3 It is assumed that measures in the Final CoCP will be in place before undertaking the assessment. This will enable the assessment to be proportionate and focused on the likely significant effects that would be material to the decision. This is in accordance with The Institute of Environmental Management and Assessment's (2016) guidance document, Delivering Quality Development.

5A.2.4 The Project will be delivered in compliance with all relevant legislation, consents and permits. Any statutory requirements listed in this document and industry good practice guidance which has informed each part of the document are not to be seen as exhaustive.

5A.2.5 National Grid will put in place robust procedures to audit and inspect the Project, including its supply chain of contractors, to make sure the control measures set out in the Final CoCP are adopted when constructing the Project. The Final CoCP will apply to all areas of the Project delivered pursuant to the DCO, during construction.

5A.3 Preparation of the CoCP

5A.3.1 This section describes the three stage iterative approach to developing the CoCP from the initial outline through to the Final CoCP the Main Works Contractor will implement throughout the construction of the Project.

Stage 1: Initial Outline CoCP

5A.3.2 The initial outline Code of Construction Practice (CoCP) for the Project was produced to support the EIA Scoping Report which was submitted in August 2024. It set out control and management measures that would be undertaken during construction of the Project if the DCO is confirmed.

Stage 2: Preliminary CoCP (Preliminary Environmental Information (PEI) Report)

5A.3.3 This document is the Preliminary CoCP and is being prepared in parallel with the preliminary design, based on known project information. This Preliminary CoCP includes control and management measures which have been identified through the preliminary technical assessments reported in the PEI Report.

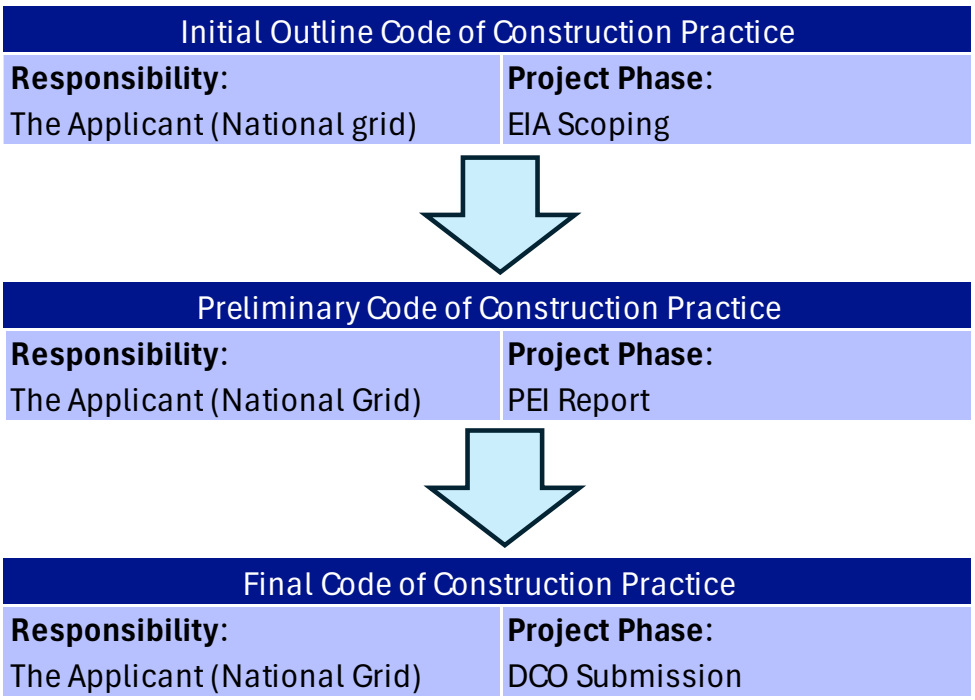
Stage 3: Final CoCP (ES)

5A.3.4 The Preliminary CoCP will be updated to form the Final CoCP which will be submitted to support the DCO application and will be adhered to throughout construction by the Main Works contactor(s). The Final CoCP will be supported by required outline or draft Environmental Control Plans (ECPs). The Outline or draft ECPs will be likely be the subject of discussion in the examination of the DCO application and may be updated in the course of examination.

5A.3.5 The ECPs will be developed by the Main Works Contractor(s) prior to the commencement of construction into Final Control Plans.

5A.3.6 The mitigation measures and environmental commitments within the Final CoCP will be presented with reference to relevant Project Sections, ensuring that commitments and controls are reported in relation to their specific locations.

Image 5A.1 Code of Construction Practice Process



5A.4 Construction Schedule

5A.4.1 Should consent be granted in 2027, it is anticipated that access and construction of the Project would commence in 2029, starting with enabling works including, site clearance activities, the installation of construction compounds and access roads. It is expected the main construction works would continue through to 2033.

5A.4.2 While the phasing of the programme is yet to be confirmed, further information will be contained in the Final CoCP, as previously noted.

5A.5 Roles and Responsibilities

Early Contractor Involvement

5A.5.1 The Project will benefit from the Great Grid Partnership which has been established by National Grid to assist in delivering the new electricity network infrastructure required for an initial nine Accelerated Strategic Transmission Investment (ASTI) projects. The partnership will provide supply chain cooperation from major contractors and consultants with a focus on network design and construction. This will provide the Project with early involvement of construction contractors during the pre-application stage, bringing forward specialist contractor knowledge and expertise to inform design and production of key project deliverables such as the Construction Environmental Management Plan (CEMP).

Environmental Management Systems

5A.5.2 National Grid will implement management processes and briefings so that the works are carried out in accordance with current legislation and guidance at the time of construction. This will be achieved by application of well-established work processes that apply the recognised British Standard (BS) EN ISO 14001:2015 or equivalent.

5A.5.3 The Main Works Contractor(s) will have an Environmental Policy that is certified to the requirements of ISO 14001 or equivalent, through their internal Business Management System procedures. The policy statement will be displayed on the site notice boards, publicised to all site staff and operatives, and made available to interested parties upon request.

Project responsibilities

5A.5.4 A management structure that includes an organisational chart encompassing all staff roles responsible for environmental work will be included within the Final CoCP. This will set out the respective roles and responsibilities about the environment and identify the nominated Construction Environmental Manager(s). Illustrative key roles and responsibilities are set out in **Table 5A.1**.

Table 5A.1 Illustrative key roles and responsibilities for the Project

Role	Organisation	Responsibilities
Environmental Adviser(s)	Main Works Contractor(s)	The Environmental Adviser(s) will be responsible for the maintenance of all environmental plans and registers, including monitoring that the environmental

Role	Organisation	Responsibilities
		measures and mitigations are implemented on-site and as recorded within the CoCP. They will be the main point of contact for all environmental matters on the Project. They will develop good working relationships with external stakeholders such as the Environment Agency (EA), Natural England, and the relevant planning authorities. They will also draft and submit applications for necessary permits and secondary consents on behalf of the Project, track the progress, provide updates, and communicate approvals.
Environmental Clerk of Works (EnvCoWs)	Main Works Contractor(s)	The EnvCoWs will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required mitigation measures. The EnvCoWs will be supported by appropriate technical specialist advisors depending on the location and potential effects.
Ecological Clerk of Works (ECoWs)	Main Works Contractor(s)	The ECoWs will monitor the works to ensure compliance with any licenses, permits and consents obtained to avoid effects on protected species and habitats, along with ensuring compliance with environmental legislation. The ECoWs will oversee ecological pre-construction surveys and will also manage ecological operatives engaged in ecological mitigation activities, such as undertaking ecological watching briefs and translocation of protected species.
Project Manager		The Project Manager will be responsible and accountable for the delivery of the Project.
Arboricultural Clerk of Works (ACoWs)	Main Works Contractor(s)	The ACoWs will monitor works conducted by a suitably qualified and experienced arborist to/within proximity to high grade trees, including trees under Tree Preservation Orders and veteran trees, to ensure relevant control measures are in place to protect these trees.
Works Supervisor(s)	Main Works Contractor(s)	The Works Supervisor(s) will be responsible for delivering the works in accordance with the requirements of the CoCP and implementing good environmental practices required by the Environmental Manager(s). They are responsible for managing operatives, plant, and their areas of work in accordance with the principles of good environmental practice.
Agricultural Liaison Officer	Main Works Contractor(s)	The Agricultural Liaison Officer will have an agricultural background and experience of working with utility companies. They will provide a single point of contact for both the Main Works Contractor(s) and the landowner/occupier of the land. They will be responsible for coordinating site access in line with pre-

Role	Organisation	Responsibilities
		agreed timescales, help facilitate the dialogue between the Main Works Contractor(s) and the landowner/occupier as necessary and will be the first point of contact for any issues escalated by the landowner/occupier or the Main Works Contractor(s). They will be responsible for witnessing and agreeing all land condition surveys conducted by the Main Works Contractor(s).
Technical specialist advisors	Main Works Contractor(s)	These will have the relevant experience to supervise the relevant aspects of the works, which might include an arboriculturist, land contamination specialist, soil specialist, ecologist, or archaeologist.

5A.5.5 As previously stated, this section will be further developed within the Final CoCP to include the following:

i. project organograms and contact details of the key staff;

ii. lines of communication and reporting;

iii. approaches for engagement with the community and stakeholders;

iv. emergency procedures; and

v. specific organisational commitments.

5A.6 Control and Management Measures

5A.6.1 Control and management measures have been identified that would reduce impacts from the Project on the environment (**Table 5A.3**). These are generally measures that would normally be implemented on a well run construction site but also include a number of good practice measures that have been identified through the scoping work to support a proportionate assessment. They also include effective measures that have typically been employed on other projects and National Grid projects. Control and management measures in **Table 5A.3** have been assigned a reference number, for example (GG01). This is for ease of cross-reference. The contractor(s) will be expected to demonstrate compliance with these measures during construction.

5A.6.2 The Final CoCP, once certified by the Secretary of State, will be issued to Main Works Contractor(s), and fed into the relevant contracts for the Grimsby to Walpole construction works. The Main Works contractor(s) will prepare detailed management plans to explain how the management measures provided in the Final CoCP will be implemented and monitored.

5A.6.3 ECPs will be prepared to accompany the Final CoCP, and they will be implemented during the construction of the Project. The ECPs will detail further topic specific environmental measures to avoid, reduce or compensate for any detrimental effects on the environment for example the Materials and Waste Management Plan (MWMP) which details how waste materials will be managed efficiently during construction.

5A.6.4 These documents will be included in the application and will be approved as part of the consent. Compliance with the ECPs will be secured through the DCO. The anticipated ECPs are described in **Table 5A.2.**

Table 5A.2 Environmental control plans

Plan	Description
CEMP	To detail how to mitigate and manage the identified environmental impacts during the construction of the Project. To provide a protocol for dealing with any unexpected contamination.
Landscape Ecological Management Plan (LEMP)	To detail how habitats will be managed and maintained during post completion of construction for five-year aftercare period.
Biodiversity Management Plan	To detail measures to mitigate any threats the Project may cause to biodiversity. It will include measures that aim to conserve, restore and enhance biodiversity.
Noise and Vibration Management Plan	To detail and outline strategies to control and reduce the impact of noise and vibration caused by the construction of the Project.
Pollution Prevention Plan	To detail measures aiming to reduce or prevent pollution caused by the construction of the Project.
MWMP	To detail how waste materials will be managed efficiently and disposed of legally during the construction of the Project.
Construction Traffic Management Plan (CTMP)	To detail the environmental and traffic control measures which may be implemented in relation to the traffic generated during the construction phase for the Project. The CTMP will include but not be limited to: • measures to reduce route and journey mileage to and from and around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions; • measures for the maintenance and upkeep of the public highway; • identification of access routes for emergency vehicles; • measures to reduce safety risks through construction vehicle and driver quality standards; and • measures to manage abnormal loads.
Public Rights of Way Management Plan (PRoWMP)	To detail management measures for all Public Rights of Ways (PRoWS) and open access land affected by the Project.
Overarching Written Scheme of Investigation (OWSI)	To detail required measures to mitigate direct adverse impacts to the historic environment.
Soil Management Plan (SMP)	To detail management measures to minimise adverse effects on the soil resource.

Plan	Description
	The SMP, will include, but not be limited to the following: details of the soil resources present; • roles and responsibilities (and required competencies and training); • how topsoil and subsoil will be stripped and stockpiled; • suitable conditions for when handling soil will be undertaken, for example avoiding handling of waterlogged soil; • indicative soil storage locations; • how soil stockpiles will be designed taking into consideration site conditions and the nature/composition of the soil; • specific measures for managing sensitive soils; • suitable protective surfacing where soil stripping can be avoided, based on sensitivity of the environment and proposed works; • approach to reinstating soil that has been compacted, where required; and • details of measures required for soil restoration; and requirements for monitoring.
Foundation Works Risk Assessment (FWRA)	To assess risks associated with foundation construction and detail mitigation strategies to reduce these risks.
Carbon Efficiency Plan	To detail management measures to reduce carbon emissions associated with the construction and operation of the Project. The Carbon Efficiency Plan will include the following: • proposed measures to reduce significant sources of construction energy use (fuel/electricity) and associated emissions; • the approach to securing energy from renewable and/or zero or low emission sources; • the approach to energy and carbon dioxide reporting from relevant site activities including construction activities and the transportation of materials and waste; and • consideration of the procurement, maintenance and use of energy and carbon efficient construction plant.
Dust Management Plan (DMP)	To detail management measures to minimise and prevent dust emissions generated from the construction and operation of the Project. The DMP, will include, but not be limited to the following: • communications to include display of the name and contact details of person(s) accountable for air quality and dust issues on the site boundary;

Plan	Description
	• site management measures to include recording of all dust and air quality complaints, identify causes and take measures to reduce emissions in a timely manner, and record the measures taken; • preparation and management of the site; • monitoring and inspections to include evolving evaluation of Project phases as required and practicable; and • construction operations.
Drainage Management Plan (DrMP)	To detail management measures to ensure any discharges to watercourses during construction are uncontaminated and limited to greenfield rates.
Emergency Action Plan	To outline procedures to be implemented in case of unplanned events, including but not limited to site flooding and pollution incidents.
Biosecurity Management Plan	To detail measures to prevent the spread of pests and diseases.

Table 5A.3 Control and management measures

Ref	Control and management measures
General project commitments	
GG01	The Project will be compliant with all relevant legislation, consents and permits.
GG02	The Project will be designed to comply with existing National Grid standards and the guidelines and policies detailed in NPS-EN5 including the International Commission on Non-Ionizing Radiation Protection guidelines for electric and magnetic fields (EMFs) and associated precautionary policy.
GG03	Suitably experienced Environmental Advisers will be appointed for the duration of the construction phase. In addition, qualified and experienced EnvCoW(s) will be available during the construction phase to advise, supervise and report on the delivery of the mitigation methods and controls outlined in the Management Plans. The EnvCoW(s) will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required good practice and mitigation measures. The EnvCoW(s) will be supported as necessary by appropriate specialists, including ecologists and arboriculturists, soils and land drainage experts.
GG04	Construction workers will undergo training to increase their awareness of environmental issues as applicable to their role on the Project. Topics will include where appropriate: • pollution prevention and pollution incident response; • dust management and control measures; • location and protection of sensitive environmental sites and features; • adherence to protected environmental areas around sensitive features;

Ref	Control and management measures
	• working hours and noise and vibration reduction measures; • working with potentially contaminated materials; • waste management and storage; • flood risk response actions; • agreed traffic routes, access points, etc.; • soil management; and • drainage management.
Pre-Commencement	
GG05	A record of condition will be carried out (photographic and descriptive) of the working areas that may be affected by the construction activities, prior to works commencing. This record will be available for comparison following reinstatement after the works have been completed to ensure that the standard of reinstatement at least meets that recorded in the pre-condition survey.
Construction	
GG06	A CEMP, a LEMP, a MWMP, a CTMP, Emergency Action Plan, PRoWMP, OWSI, Biodiversity Management Plan, Noise and Vibration Management Plan, Pollution Prevention Plan, Foundation Works Risk Assessment, Carbon efficiency Plan, DMP, DrMP along with a SMP will be produced prior to construction. These are collectively referred to as 'the environmental control Plans.'
GG07	The CEMP will set out site specific measures and construction methodologies to avoid or reduce potential effects of the Project on the environment during construction. The contractor(s) shall undertake regular site inspections to check conformance to the Management Plans.
GG08	Land used temporarily will be reinstated where practicable to its pre-construction condition (including Agricultural Land Classification (ALC) grade) and use. Hedgerows, fences, and walls (including associated earthworks and boundary features) will be reinstated to a similar style and quality to those that were removed, in consultation with the landowner.
GG09	Where sensitive features such as ancient woodland and protected habitats are to be retained within or immediately adjacent to the Order Limits, an appropriate protective area will be established using appropriate fencing and signage and will be inspected, repaired, and replaced as necessary. The protective areas will be shown on the Retention and Reinstatement Plans contained within the LEMP.
Construction site setup	
GG10	The name and contact details for the Project will be displayed at the entrance to all compounds. This will include an emergency number.
GG11	Any activity carried out or equipment located within a construction compound that may produce a noticeable nuisance, including but not limited to dust, noise,

Ref	Control and management measures
	vibration and lighting, will be located away from sensitive receptors such as residential properties or ecological sites where practicable.
GG12	Appropriate site layout and housekeeping measures will be implemented by the contractor(s) at all construction sites. This will include but not be limited to: preventing pests and vermin control and treating any infestation promptly, including arrangements for the proper storage and disposal of waste produced on-site; • inspecting and collecting any waste or litter found on-site; • locating or designing site offices and welfare facilities to limit the overlooking of residential properties; • locating designated smoking/vaping areas to avoid nuisance to neighbours; • managing staff/vehicles entering or leaving site, especially at the beginning and end of the working day; and • managing potential off-site contractor and visitor parking.
GG13	Vehicles will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. Electric, or other low carbon plant and equipment should be used where available and where practicable.
GG14	Materials and equipment will not be moved or handled unnecessarily. When loading and unloading materials from vehicles, including excavated materials, drop heights will be limited.
GG15	Fuels, oils and chemicals will be stored responsibly, away from sensitive water receptors. Where practicable, they will be stored >15 m from watercourses, ponds and groundwater dependent terrestrial ecosystems. Where it is not practicable to maintain a >15 m distance, additional measures will be identified. All refuelling, oiling and greasing of construction plant and equipment will take place above drip trays or other suitable controls and also away from drains as far as is reasonably practicable. Vehicles and plant will not be left unattended during refuelling. Appropriate spill kits will be made easily accessible for these activities. Potentially hazardous materials used during construction will be safely and securely stored including use of secondary containment where appropriate. Stored flammable liquids such as diesel will be protected either by double walled tanks or stored in a bunded area with a capacity of 110 per cent of the maximum stored volume. Spill kits will be located nearby.
GG16	Runoff across the site will be controlled through a variety of methods including header drains, buffer zones around watercourses, on-site ditches, silt traps and bunding. There will be no intentional discharge of site runoff to ditches, watercourses, drains or sewers without appropriate treatment and agreement of the appropriate authority (except in the case of an emergency).
GG17	Wash down of vehicles and equipment will take place in designated areas within construction compounds. Wash water will be prevented from passing untreated into watercourses and groundwater. Appropriate measures will include use of sediment traps, daily checks and ongoing monitoring.

Ref	Control and management measures
GG18	Wheel washing facilities will be provided at each main compound, where appropriate. Road sweepers will be deployed on public roads where necessary to prevent excessive dust or mud deposits.
GG19	Earthworks and stockpiled soil will be managed as per the SMP.
GG20	Bonfires and the burning of waste material will be prohibited.
GG21	A MWMP will be developed prior to construction. The MWMP shall include but not be limited to: • waste forecasts; • identification of recovery routes; and • actual waste figures once work has begun. Consideration will be given to the guidance in the Code of Practice developed by Contaminated Land: Applications in Real Environments (CLAIRE) "A Definition of Waste: Development Industry Code of Practice (DoWCoP)". Dedicated waste management areas will be designed to sufficiently accommodate the types and volumes of waste produced and to reduce the environmental risk of storing waste on-site (covered, secured and away from drainage). The control of earthworks and the movement of excavated materials (including any re-use of excavated materials) will be achieved under appropriate Environmental Permits, exemptions or the DoWCoP.
GG22	An Emergency Action Plan will be developed for the construction phase which will outline procedures to be implemented in case of unplanned events, including but not limited to site flooding and pollution incidents.
GG23	Stone pads or similar will be installed in areas where heavy equipment, such as cranes and piling rigs, are to be used. The stone pads will provide stable working areas and will reduce disturbance to the ground. The stone pad area will be stripped of the topsoil, which will be stored and reinstated in accordance with the SMP.
GG24	Working areas will be appropriately fenced. The type of fencing installed will depend on the area to be fenced and will take into consideration the level of security required in relation to the surrounding land and public access, rural or urban environment and arable or stock farming. For some locations the fence used may also serve to provide acoustic and visual screening of the work sites and reduce the potential for disturbance of users in the surrounding areas. Fencing will be regularly inspected and maintained and removed as part of the demobilisation unless otherwise specified.
GG25	Members of the community and local businesses will be kept informed regularly of the works through active community liaison and groups with local membership. This will include notification of noisy activities, heavy traffic periods and start and end dates of key phasing. A contact number will be provided which members of the public can use to raise any concerns or complaints about the Project. All construction related complaints will be logged in a complaints register, together with a record of the responses given and actions taken.

Ref	Control and management measures
GG26	If peaty soils are disturbed during construction of the Project, reinstatement would be required following construction to ensure the peat is returned to its previous health.
Landscape and Visual	
LV01	The contractor(s) will retain vegetation where practicable. Where vegetation is lost and trees cannot be replaced in situ due to the restrictions associated with land rights required for operational safety, native shrub planting approved by National Grid will be used as a replacement, in accordance with the outline vegetation reinstatement plans included within the LEMP. Replacement vegetation will be planted as close by as practicable and will complement landscape character and be sympathetic to the local habitat type in order to provide a high biodiversity value.
LV02	The contractor(s) will apply the relevant protective principles set out in BS 5837:2012: Trees in relation to design, demolition, and construction. This will be applied to trees within the Order Limits which will be preserved through the construction phase, and to trees outside of the Order Limits where such measures do not hinder or prevent the use of the relevant working width for construction. An ACoW will ensure the suitability of tree protection before and during the construction phase. All works to high grade trees, including trees under Tree Preservation Orders and veteran trees, will be undertaken, or supervised by a suitably qualified arboriculturist.
Aftercare	
LV03	A five-year aftercare period will be established for all reinstatement and mitigation planting, details of which will be set out in the LEMP.
Lighting	
LV04	Construction lighting will be of the lowest luminosity necessary to safely perform tasks. Lighting will be directional and minimised where possible.
Ecology and Biodiversity	
B01	The contractor(s) will comply with relevant protected species legislation. Appropriate licences will be obtained where necessary from Natural England for all works affecting protected species as identified by the ES and through pre-construction surveys. All applicable works will be undertaken in accordance with the relevant requirements and conditions set out in those licences.
B02	In the event that vegetation or any other feature with the potential to support breeding birds is required to be removed during the main breeding bird season (01 March to 31 August) or, in the case of Schedule 1 birds (e.g. barn owl), is likely to be disturbed, then works will be undertaken in the presence of an EnvCoW(s). Appropriate protection measures will be put in place should active nests be found. These will include exclusion zones around active nests until chicks fledge or nests become inactive as determined by monitoring by the EnvCoW(s). Active nests of wild birds are protected at all times and therefore the same measures will be put in place if an active nest is identified at any time of year.

Ref	Control and management measures
B03	Where there will be a risk of animal entrapment, a means of escape will be installed into all excavations left open overnight.
B04	To control the spread of invasive weeds in accordance with the Wildlife and Countryside Act 1981, any plant or machinery that has been used in areas contaminated with invasive species (both terrestrial and aquatic), such as Japanese knotweed and Himalayan balsam, will be thoroughly cleaned. Water used to clean vehicles, when necessary, will be discharged or emptied into the contaminated area to prevent the spread of the plant (through plant propagules, e.g. seeds, rhizomes, fragments). The area will be cordoned off to prevent any inadvertent spreading. Any plant material or soil contaminated with plant propagules if removed from a site is classified as controlled waste and will be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with Section 34 of the Environmental Protection Act 1990. Further detail will be set out in a Biosecurity Management Plan.
B05	Subject to the location and scale of impact, suitable habitat for common reptiles will be subject to two-stage habitat manipulation that will take place between mid-March and mid-October. Firstly, vegetation will be cut to approximately 150 mm (with the arisings removed) under the supervision of an ECoW and the site left for a minimum of two days to allow reptiles to naturally disperse from the area. Secondly, vegetation will be cleared down to ground level under the supervision of an ECoW. Vegetation will be cleared using appropriate equipment based on the type of vegetation to be removed, the area affected, and the risk of mortality or injuring reptiles. Construction works could commence immediately after completion of the second stage. Reptile hibernacula will be retained and protected during construction where practicable. If unavoidable, the removal of vegetation and groundworks at hibernacula will be timed to avoid the hibernation season (late October to early March). Replacement hibernacula and refugia will be provided prior to clearance of any suitable habitat.
B06	Alternative roost structures (bat boxes) will be installed, prior to felling of trees with bat roost potential (with landowner consent), on retained trees within the Order Limits or areas outside of the Order Limits agreed with landowners. Unless specified otherwise by the provisions of any protected species licence for bats, two boxes will be provided for each tree to be felled where Potential Roost Features (PRF) on that tree are classified as PRF-I bat roost potential. Five boxes will be provided for each tree with PRF-M bat roost potential to be felled.
B07	Alternative barn owl breeding sites (barn owl boxes) will be installed, prior to removal of nesting sites, (with landowner consent) on retained trees or poles within the Order Limits or areas outside of the Order Limits agreed with landowners.
B08	Where the works require the crossing or removal of hedgerows, the gap will be reduced to a width required for safe working. Where hedge removals are necessary, ‘dead hedging’ should be used, where practicable, in the interim periods to retain connectivity during construction. Dead hedging can comprise vegetation arisings or artificial provision, such as willow screening panels or

Ref	Control and management measures
	Heras fencing covered in camouflage netting. New hedgerow planting will contain native, woody species of local provenance.
B09	Habitat translocation or any species translocation (if required) that is not covered by protected species licences will be undertaken in accordance with a strict method statement. The method statement will be specific to the habitat type or species affected and will detail the appropriate construction methods, timing, management, receptor site preparation and post construction habitat management and monitoring. The receptor site will be clearly identified and prepared in advance of translocation.
B10	Where any in channel watercourse works are required, works will be completed outside of fish spawning season (16 March to 16 June inclusive) and fish migratory seasons (species specific, dependant on the waterbody) subject to likely fish presence confirmed through pre-construction fish surveys.
B11	Where works require dewatering of waterbodies known to contain fish, fish removal and relocation will be required (which will require appropriate permits such as an FR2 licence from the EA).
B12	A method statement to ensure works within watercourse crossings include suitable measures to allow the passage of otters, water vole and fish throughout construction (i.e., during fluctuating water levels).
B13	In the first instance reasonable avoidance measures will be incorporated to avoid impacting known otter holts/couches, badger setts and/or trees identified as having bat roosting potential and suitable buffer zones implemented.
Historic Environment	
H01	Known heritage assets and locations known archaeological interest will have been identified by a programme of desk-based assessment and field evaluation prior to construction. Wherever possible identified heritage assets and archaeological remains will be avoided by the Project design. Where avoidance has not been possible, archaeological mitigation measures comprising the preservation of archaeological remains, or a programme of archaeological investigation will be implemented. Areas of archaeological preservation, or where archaeological work is planned, will be demarcated using appropriate fencing and signage to prevent unintentional damage. The fencing and condition of the areas will be inspected, repaired, and replaced as necessary. The areas of archaeological preservation or investigation will be identified on plans within the OWSI and CEMP.
H02	Where a previously unknown heritage asset is discovered, or a known heritage asset proves to be more significant than foreseen at the time of application, the Project will inform the relevant authorities and will agree a solution that protects the significance of the new discovery, so far as is practicable, within the Project parameters.
H03	An outline process for dealing with the unexpected discovery of archaeological remains including human remains and treasure during construction will be set out in the OWSI and detailed CEMP.

Ref	Control and management measures
H04	Where practicable, the Project will maintain elements within the historic landscape such as vegetation and hedgerows (including re-instating hedgerows and fences).
Water Environment and Flood Risk	
W01	All works affecting watercourses or within the relevant permitting stand-off distance from the top of bank or landward toe of a flood defence on main rivers and Internal Drainage Board (IDB) maintained watercourses will be in accordance with a method approved under consents issued under the Environmental Permitting Regulations 2016, Land Drainage Act 1991, IDB Byelaws (where relevant) or the protective provisions of the DCO for the benefit of the EA, Lead Local Flood Authorities (LLFAs) and IDBs . Where possible, a stand-off distance from the top of bank of all watercourses/waterbodies will be established (with the exception of crossings and where existing field access roads are already located adjacent to watercourses are to be utilised). To align with EA and IDB consenting requirements, it is proposed that this will be: 16 m for tidal main rivers; 8 m for non-tidal main rivers; and 9 m for IDB-maintained watercourses. No statutory stand-off distances are specified for ordinary watercourses, but any works liable to cause an obstruction to flow would be subject to consent under the Land Drainage Act 1991. Appropriate stand-off distances should also be implemented where Project construction activities coincide with water supply and sewerage infrastructure. These are to be agreed on a case-by-case basis. For any instances where the stand-off distances stated above cannot be achieved between construction works and watercourses, these works would be subject to the appropriate consent by the relevant drainage authority (Flood Risk Activity Permit (FRAP) for main rivers, Ordinary Watercourse Consent (OWC) for ordinary watercourses).
W02	For open cut watercourse crossings and installation of vehicle crossing points, good practice measures will include but not be limited to, where practicable: • reducing the working width for open cut crossings of a main or ordinary watercourse whilst still providing safe working; • installation of a pollution boom downstream of open cut works; • the use and maintenance of temporary lagoons, tanks, bunds, silt fences or silt screens as required; • have spill kits and straw bales readily available at all crossing points for downstream emergency use in the event of a pollution incident; • the use of all static plant such as pumps in appropriately sized spill trays; • prevent refuelling of any plant or vehicle within 15 m of a watercourse; • prevent storing of soil stockpiles within 15 m of a main river; • inspect all plant prior to work adjacent to watercourses for leaks of fuel or hydraulic fluids; and • reinstating the riparian vegetation and natural bed of the watercourse, using the material removed when appropriate, on completion of the works and compacting as necessary. If additional material is required, appropriately sized material of similar composition will be used.

Ref	Control and management measures
W03	Riverbank and in-channel vegetation will be retained where not directly affected by installation works. Natural substrate will be provided through temporary watercourse crossings culverts.
W04	Where watercourses are to be crossed by construction traffic, measures to be applied include the use of temporary culverts or temporary spanned bridges. Once the temporary culvert is installed, the area above the temporary culvert will be backfilled and construction mats placed over the backfilled area to permit the passage of plant, equipment, materials, and people. Temporary culverts will be sized to reflect the span width and the estimated flow characteristics of the watercourse under peak flow conditions and kept free from debris. Where used, temporary bridges will be designed specifically to consider the span length and the weight and size of plant and equipment that will cross the bridge. Specific detailed designs for each watercourse crossing, consistent with these design principles, will be prepared by the construction contractor. These will be subject to the appropriate consent by the relevant drainage authority (Flood Risk Activities Permit from the EA for main rivers, Ordinary Watercourse Consent from the Lead Local Flood Authority or Internal Drainage Board for ordinary watercourses).
W05	The contractor(s) will comply with all relevant consent conditions or DCO provisions regarding de-watering and other discharge activities. This will particularly be with regard not only to volumes and discharge rates, but also to water quality (particularly suspended solids, pH and hydrcarbons) and will include discharges to land, water bodies or third-party drains/sewers.
W06	The Project will incorporate appropriate surface water drainage measures into its final design for the haul roads, access tracks, works compounds and laydown areas so that they do not lead to a significant increase in flood risk. Access roads (and working areas) in the floodplain are to be as close to ground level as possible (a slight raised surface, relative to the adjacent land, is often required to allow for drainage). This is to minimise the loss of floodplain storage volumes associated with raised structures such as raised access roads, working areas and associated topsoil stockpiles. Cross drainage would be provided as necessary at topographic low points. Stockpiles would be located outside of the floodplain as far as reasonably practicable. Approaches to bridges and culverts in Flood Zones would minimise ramping up to the bridge deck so as not to impede flood flow conveyance.
W07	The contractor(s) will subscribe to the EA's Floodline service, which provides advance warning of potential local flooding events, and subscribe to the Met Office's Weather Warnings email alerts system and any other relevant flood warning information. The contractor(s) will implement a suitable flood risk action plan, which would form part of the Emergency Action Plan, and will include appropriate evacuation procedures should a flood occur or be forecast.
W08	Active private water supplies will be identified with landowners through the landowner discussions. Appropriate measures would be considered during construction to prevent any water quality deterioration from pollution. In the event of a landowner or tenant reporting that installation activities have affected their private water supplies, an initial response will be provided within

Ref	Control and management measures
	24 hours. Where the installation works have affected a private water supply, an alternative water supply will be provided, as appropriate.
W09	In the event of a significant spill during construction, all relevant landowners/tenants will be contacted within 24 hours, within 250 m of the spill, to determine if there are any private water supplies that might be affected; an assessment of the likelihood of groundwater contamination reaching identified private water supplies will be undertaken, and where a private water supply is judged likely to be affected, an alternative water supply will be provided, as appropriate.
W10	Severance of existing land drainage routes, including agricultural field drainage systems would be managed during construction through provision of temporary alternative drainage routes, and these drainage systems would be permanently reinstated to ensure their existing function is maintained.
W11	Appropriate control of runoff from working areas will be achieved through implementation of a DrMP for the construction phase. The DrMP will use sustainable urban drainage systems (SuDS) principles, promoting infiltration of runoff wherever possible and specifying appropriate treatment and attenuation storage to ensure any discharges to watercourses are uncontaminated and limited to greenfield rates. The DrMP will cover all aspects of construction works and temporary infrastructure. Drainage measures will be phased to be completed before the commencement of earthwork operations, in a specific area, and will be retained until the drainage system of the completed Project is fully operational, or site restoration works are completed. This will include the temporary diversion of existing agricultural drainage around working areas, if required, followed by reinstatement on completion of works. At this stage of the design process, preliminary work has already been done to identify runoff treatment and attenuation requirements for temporary access tracks and working areas associated with overhead line construction, including defining potential locations of water treatment areas and discharge outfalls. Further work is required to develop drainage strategies for substations, considering arrangements for both construction and operational phases of the Project, which will be reported as part of the ES chapter and FWRA in submission with the DCO application.
Geology and Hydrogeology	
GH01	Intrusive ground investigations and assessment will be undertaken prior to construction which will inform appropriate geotechnical design in relation to the site/structure specific ground conditions including ground instability/adverse ground conditions.
GH02	Construction methods such as appropriate piling techniques will be required to minimise the risk of mixing of aquifer bodies through the creation of new pathways. This includes the provision of a FWRA, which would be undertaken once the proposed foundation solutions are known, in accordance with EA guidance ‘Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination’.

Ref	Control and management measures
GH03	Appropriate training of construction and maintenance workers in the handling and use of potentially hazardous substances and the associated risks.
GH04	All use and storage of chemicals to be undertaken in accordance with The Control of Pollution (Oil Storage) Regulations 2001 and EA guidance 'Protect groundwater and prevent groundwater pollution'.
GH05	Any temporary dewatering activities during construction will be undertaken in accordance with EA guidance, and if required, an Abstraction Licence and Environmental Permit (for the discharge) and will be limited to the depth and time required to facilitate construction activities.
GH06	General good practice contamination avoidance and waste management procedures for construction sites (e.g. regular vehicle checks, use of spill kits, correct waste storage and disposal).
GH07	If required (e.g. for maintenance during the operational phase), herbicides to be used in accordance with relevant Department for Environment, Food and Rural Affairs (Defra) guidance.
GH08	Application of salt grit (for example, to prevent access tracks freezing) to comply with recommended rates in CIRIA 648 'Control of water pollution from linear construction projects (C648)', with control of run-off during any application in Source Protection Zones (SPZs).
GH09	At any trenchless crossings where horizontal directional drilling is required, a pre-construction Hydrogeological Risk Assessment will be carried out to inform the detailed design of the crossing and ensure that this does not present an unacceptable environmental risk. This will include the provision of a drilling fluid breakout management plan. The nature and scope of control or remediation measures will be agreed with the EA, as appropriate.
GH10	Vehicle parking, fuel storage, de-icer storage, rock salt storage, and washout/cleaning of ready-mix concrete vehicles and equipment will be sited outside of SPZ I (inner catchment) wherever possible.
GH11	A protocol for dealing with any unexpected contamination will be included in the CEMP.
Agriculture and Soils	
AS01	Where land is being returned to agricultural use, the appropriate soil conditions (for example through the replacement of stripped layers and the removal of any compaction) will be recreated. This will be achieved to a depth of 1.2 m (or the maximum natural soil depth if this is shallower).
AS02	The intention is to maintain access where possible; this may have to be done using localised diversions/restrictions. Although not envisaged at this stage it may be that temporarily access isn't maintained but, in all instances, those impacted will be consulted on the proposals. This may require signed diversions or temporary restrictions to access. The means of access to affected properties, facilities and land parcels will be communicated to affected parties during the pre-construction period. With any changes communicated in advance of the change being implemented. Where field-to-field access points require alteration

Ref	Control and management measures
	as a result of construction, alternative field access will be provided in consultation with the landowner/occupier.
AS03	Existing water supplies for livestock will be identified pre-construction. Where supplies will be lost or access compromised by construction works, temporary alternative supplies will be provided. Water supplies will be reinstated following construction.
AS04	A scheme of pre-construction land drainage will be designed with the intent of maintaining the efficiency of the existing land drainage system and to assist in maintaining the integrity of the working area during construction. The Project may include a system of 'cut-off' drains which feed into a new header drain and the Project will also take into account surface water runoff measures.
AS05	Should animal bones be discovered during construction, which may indicate a potential burial site, works will cease, and advice will be sought from the Animal Health Regional Office on how to proceed, relevant to the origin and age of the materials found.
AS06	All movement of plant and vehicles between fields will cease in the event of a notification by Defra of a disease outbreak in the vicinity of the site that requires the cessation of activities. Advice will be sought from Defra in order to develop suitable working methods required to reduce the biosecurity risk associated with the continuation of works.
AS07	Stone pads or alternatives such as soil stabilisation will be installed in areas where heavy equipment, such as cranes and piling rigs, and access routes are to be used. The stone pads will provide stable working areas and will reduce disturbance to the ground. The stone pad area will be stripped of the topsoil, which will be stored and reinstated in accordance with the soil management measures.
AS08	Soil management measures will be set out in the SMP. The SMP, will include, but not be limited to the following: • details of the soil resources present; • roles and responsibilities (and required competencies and training); • how topsoil and subsoil will be stripped and stockpiled; • suitable conditions for when handling soil will be undertaken, for example avoiding handling of waterlogged soil; • indicative soil storage locations; • how soil stockpiles will be designed taking into consideration site conditions and the nature/composition of the soil; • specific measures for managing sensitive soils; • suitable protective surfacing where soil stripping can be avoided, based on sensitivity of the environment and proposed works; • approach to reinstating soil that has been compacted, where required; • details of measures required for soil restoration; and • requirements for monitoring.

Ref	Control and management measures
Traffic and Movement	
TT01	The contractor(s) will implement a monitoring and reporting system to check compliance with the measures set out within the CTMP.
TT02	All affected PRoWs will be identified, and any potential permanent or temporary closures detailed in the DCO. All designated PRoWs crossing the working area will be managed with access only closed for periods while construction activities occur. Any required diversions will be clearly marked at both ends with signage explaining the diversion, the duration of the diversion and a contact number for any concerns and will be subject to a PRoWMP. PRoWs crossing the working areas will be managed in discussion with the relevant local authorities and potential temporary closures applied for discussed with the relevant local authority. Access disruption would be reduced as reasonably practicable while construction activities occur.
TT03	The CTMP will set out measures to reduce route and journey mileage to and from and around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions. It will also provide suitable control for the means of access and egress to the public highway and set out measures for the maintenance and upkeep of the public highway. The plan will also identify access for emergency vehicles. It will also set out measures to reduce safety risks through construction vehicle and driver quality standards and measures to manage abnormal loads.
Noise and Vibration	
NV01	Construction working will be undertaken within the agreed working hours set out within the DCO unless the works are under an exception to the set working hours in which case they will be carried out in a manner that minimises noise and vibration at all times. Best practicable means to reduce construction noise will be set out within the CEMP.
NV02	Best Practicable Means measures, as defined by The Control of Pollution Act 1974 and detailed in BS 5228-1:2009+A1:2014 Code of practice for Noise and Vibration control on construction and open sites – Part 1: Noise, and Part 2: Vibration, will be identified within the CoCP and may include consideration of construction plant and methods, siting semi-static equipment as far as reasonably practicable away from sensitive areas, screening, enclosures, and temporal restrictions.
NV03	The contractor will conduct detailed construction noise and vibration assessments to determine whether there are likely to be any new or different significant adverse effects at noise and vibration sensitive receptors (NSR) and therefore whether additional measures, including site-specific best practicable means (BPM), may be required.
Air Quality	
AQ01	Dust management measures will be set out in the DMP as part of the CEMP. This will be specific to particular phases of the Project. The DMP, will include, but not be limited to the following:

Ref	Control and management measures
	• communications to include display of the name and contact details of person(s) accountable for air quality and dust issues on the site boundary; • daily on-site and off-site inspections will be undertaken by the Contractor(s), where receptors are nearby, to monitor dust. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of the site boundary, with cleaning to be provided if necessary. The frequency of site inspections will be increased by the person accountable for air quality and dust issues on-site when activities with a high potential to produce dust are being carried out, during prolonged dry or windy conditions or in response to complaints or an incident resulting in dust emissions. Inspection results will be recorded, and an inspection log made available to the local authority upon request; • site management will document all dust and air quality complaints, identify causes and take measures to reduce emissions in a timely manner, and record the measures taken; • preparation and management of the site ensuring that machinery and dust causing activities are located as far as possible away from receptors, screens/barriers are erected around dusty activities/materials and are at least as high as any stockpiles, use wet methods to keep site fencing, barriers and scaffolding clean, remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on-site where they must be covered, seeded, or fence stockpiles used to prevent wind whipping; • monitoring and inspections to include evolving evaluation of Project phases as required and practicable; and • construction operations will only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, for example, suitable local exhaust ventilation systems. Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. Use enclosed chutes and conveyors and covered skips. Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. Ensure equipment is readily available on-site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
AQ02	The contractor will ensure that the inside of buildings will be ‘soft stripped’ prior to demolition (retaining walls and windows in the rest of building, where possible, to provide a screen against dust). Sufficient effective water suppression will be used during demolition operations. The use of explosive blasting will be avoided where possible, using appropriate manual or mechanical alternatives.
AQ03	During construction, bulk cement and other fine powder materials are to be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. Sand and other aggregates are stored in bunding areas and not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate

Ref	Control and management measures
	control measures to reduce dust are in place. For smaller supplies of fine powder materials, bags are to be sealed after use and stored appropriately. Scabbing (roughening of concrete surfaces) will be avoided if possible.
AQ04	The contractor is to inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
AQ05	To minimise the impact from trackout, on-site activities will: • impose and signpost a maximum speed limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures, subject to the approval of the nominated undertaker and in agreement with the local authority, where appropriate); • use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use; • avoid dry sweeping of large areas; • ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; • inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable; • record all inspections of haul routes and any subsequent action in a site log book; • install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned; • implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable); • ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and • access gates to be located at least 10 m from receptors where possible.
AQ06	Dust pollution from earthworks activities will be limited through the use of the following measures, as appropriate: • topsoil will be stripped as close as reasonably practicable to the period of excavation or other earthworks activities to avoid risks associated with run-off or dust generation; • hessian, mulches, or tackifiers will be used where it is not possible to re-vegetate or cover with topsoil as soon as practicable; • materials will be compacted after deposition, with the exception of topsoil and subsoil on land to be restored for agriculture, forestry, landscaping and wildlife habitats; • cover will only be removed in small areas during work and not all at once; and

Ref	Control and management measures
	• soil spreading, seeding, planting or sealing of completed earthworks will be undertaken as soon as reasonably practicable following completion of the earthworks.
AQ07	Operating vehicle/machinery will follow the below: • construction vehicles will be required to meet Euro VI emissions standards which reduce NO_X and PM_{10} emissions; • all Non-Road Mobile Machinery (NRMM) with an engine power rating of 37 kW to 560 kW will be required to meet Euro Stage IV standards as a minimum; • avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable to limit emissions from plant and NRMM; • low and zero emission vehicles will be used where possible for site use; • produce a Construction Logistics Plan to manage the sustainability of goods and materials; • implement a Construction Workforce Travel plan to support and encourage sustainable travel; • ensure all vehicles switch off engines when stationary - no idling vehicles; and • all vehicles, plant and NRMM will be regularly inspected, serviced and maintained.
Climate Change	
CC01	The Main Works Contractor will develop and implement a Carbon Efficiency Plan as part of their Environmental Management System, to manage carbon emissions from construction activities. This will contain: • proposed measures to reduce significant sources of construction energy use (fuel/electricity) and associated emissions; • the approach to securing energy from renewable and/or zero or low emission sources; • the approach to energy and carbon dioxide reporting from relevant site activities including construction activities and the transportation of materials and waste; and • consideration of the procurement, maintenance and use of energy and carbon efficient construction plant.
CC02	Mitigation measures set out within the Carbon Efficiency Plan will include: • a commitment to reduce Greenhouse Gas (GHG) emissions as far as reasonably practical by implementing low carbon and/or reduced resource consumption solutions (including technologies, materials and products) to minimise resource consumption during the construction, operation, and at end of life; • the design of the Project should minimise the requirement for energy consuming operational equipment such as lighting as far as reasonably

Ref	Control and management measures
	practicable. Where lighting cannot be avoided it will be of the lowest luminosity necessary to safely perform tasks; • the specification of materials with fewer embodied GHG emissions within the Main Works Contractor's contracts (e.g. where practical, sustainable materials (materials with a higher recycled content) and locally sourced materials should be selected), including where feasible, design for end of component reuse; • use of renewable/zero or low carbon energy sources for construction vehicles, plant and machinery where reasonably practicable, e.g. electric vehicles and plant; • efficient use of construction plant and machinery, i.e. using appropriately sized plant and machinery, and switching off when not in use; • fuel use monitoring; • employing low carbon construction techniques as far as reasonably practicable; • plant and machinery to be kept in good working order to maintain power efficiency; • sufficient training for operatives to use machinery and plant efficiently; • using appropriate size generators for plant and any temporary buildings etc.; • nominating named individuals with responsibility for minimising energy use on-site; • commitments to recycle/reuse demolition waste wherever reasonably practicable; • commitments to reduce water use and disposal; • provision of suitable thermal insulation for site accommodation to minimise energy demand for heating; • early connection to grid electricity to reduce use of mobile diesel energy generation, where reasonably practicable; • efficient transportation of construction materials and waste transport, with the aim to use electric vehicles wherever practicable; • sourcing construction materials from local suppliers where practicable to reduce transport emissions; • promotion and provision of modes of sustainable transport for construction workers; • material excavated during construction should be processed for use in the works wherever practicable, to reduce the amount of material disposed of off-site as well as imported from other sources; • the Project design should carefully consider the use of appropriate tree and shrub species to reduce associated maintenance operations; and • once operational, asset data should be managed, maintained and monitored to ensure the Project design is operating as intended. Corrective action to be taken where necessary.

Ref	Control and management measures
CC03	The contractor will pay due consideration to the impacts of extreme weather events and related conditions during construction. Measures will include, for example: • health and safety plans to prevent worker exhaustion due to heat supportive measures for working in high temperatures might include the provision of sunblock, sun hats and lightweight clothing, refreshment breaks and cooled water supply; • temporary buildings designed with measures to cool summertime overheating; • safety measures to mitigate against issues caused by high winds such as increase dust or damage to structures/construction plant.
CC04	The contractor should use a short to medium range weather forecasting service from the Met Office, or other approved meteorological data and weather forecast provider, to inform short to medium term programme management, environmental control and impact mitigation measures e.g. health and safety plans to include supportive measures for working in extreme high or low temperatures. The contractor's Environmental Adviser will consider all measures deemed necessary and appropriate to manage severe weather events and should as a minimum cover training of personnel and prevention and monitoring arrangements to manage severe weather events. As appropriate, construction method statements should also consider severe weather events where risks have been identified
CC05	An early warning system for wildfire detection and evacuation procedures for construction workers should be implemented alongside fire safety measures such as clearance of vegetation around temporary structures (where appropriate), access to fire extinguishing equipment, and evacuation protocols developed.

5B. Indicative Pylon Schedules

nationalgrid

Contents

5B. Indicative Pylon Schedules

5B.1 Introduction

5B.1.1 This appendix provides a preliminary summary of the number and type of indicative pylons within each Section of the Grimsby to Walpole Project (the Project). Pylons are identified by a simplistic reference number. The first letters of this code (GL, LB, LW, SW) refers to different new overhead line routes, which are broken down based upon the different substations which these routes connect to. 4KG and 4ZM refers to the existing overhead line routes which the project is interacting with. **PEI Report Volume 2 Part B Sections 1-7 Figure 1.3 Permanent and Operational Features** illustrate the pylon locations. The numerical identifier denotes which specific pylon of each overhead line route the data is referring to.

5B.2 Proposed Overhead Line Indicative Pylon Schedule

Table 5B.1 Indicative pylon schedule

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
Section 1: New Grimsby West Substation				
GL1	New	Gantry	12.41	N/A
GL2	New	Gantry	12.41	N/A
GL3	New	Terminal	49.25	55.25
Section 2: New Grimsby West Substation to New Lincolnshire Connection Substation A				
GL4	New	Suspension	50.84	56.84
GL5	New	Tension	51.74	57.74
GL6	New	Suspension	53.84	59.84
GL7	New	Tension	49.09	55.09
GL8	New	Suspension	50.84	56.84
GL9	New	Suspension	56.84	62.84

[1] Height Above Ground Level: The height from the top of ground to the lowest bolt hole on the foundation stub, the point at which the lattice steelwork is affixed, is assumed to be approximately 250mm and is added to the total pylon height. All measurements are approximate.

[2] LoD: Limit of Deviation

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
GL10	New	Tension	57.74	63.74
GL11	New	Suspension	59.84	65.84
GL12	New	Suspension	53.84	59.84
GL13	New	Suspension	50.84	56.84
GL14	New	Tension	49.09	55.09
GL15	New	Suspension	50.84	56.84
GL16	New	Tension	51.74	57.74
GL17	New	Tension	51.74	57.74
GL18	New	Suspension (low height)	45.25	51.25
GL19	New	Suspension	39.98	45.98
GL20	New	Suspension (low height)	39.25	45.25
GL21	New	Suspension	42.98	48.98
GL22	New	Suspension (low height)	45.25	51.25
GL23	New	Suspension (low height)	42.25	48.25
GL24	New	Suspension	39.98	45.98
GL25	New	Suspension (low height)	39.25	45.25
GL26	New	Suspension (low height)	39.25	45.25
GL27	New	Suspension	45.98	51.98
GL28	New	Suspension	45.98	51.98
GL29	New	Suspension (low height)	39.25	45.25
GL30	New	Suspension	39.98	45.98
GL31	New	Suspension	42.98	48.98
GL32	New	Suspension	42.98	48.98
GL33	New	Suspension	39.98	45.98
GL34	New	Suspension (low height)	39.25	45.25
GL35	New	Suspension	39.98	45.98
GL36	New	Suspension (low height)	39.25	45.25
GL37	New	Tension	54.74	60.74

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
GL38	New	Suspension	56.84	62.84
GL39	New	Tension	51.74	57.74
GL40	New	Suspension	50.84	56.84
GL41	New	Suspension	50.84	56.84
GL42	New	Suspension	50.84	56.84
GL43	New	Suspension	53.84	59.84
GL44	New	Suspension	53.84	59.84
GL45	New	Tension	49.09	55.09
GL46	New	Suspension	56.84	62.84
GL47	New	Suspension	56.84	62.84
GL48	New	Tension	51.74	57.74
GL49	New	Suspension	50.84	56.84
GL50	New	Suspension	56.84	62.84
GL51	New	Suspension	50.84	56.84
GL52	New	Suspension	53.84	59.84
GL53	New	Tension	54.74	60.74
GL54	New	Suspension	56.84	62.84
GL55	New	Suspension	53.84	59.84
GL56	New	Tension	51.74	57.74
GL57	New	Suspension	50.84	56.84
GL58	New	Suspension	53.84	59.84
GL59	New	Suspension	53.84	59.84
GL60	New	Tension	46.09	52.09
GL61	New	Suspension	50.84	56.84
GL62	New	Suspension	53.84	59.84
GL63	New	Suspension	53.84	59.84
GL64	New	Suspension	53.84	59.84
GL65	New	Suspension	50.84	56.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
GL66	New	Tension	51.74	57.74
GL67	New	Suspension	53.84	59.84
GL68	New	Suspension	50.84	56.84
GL69	New	Tension	51.74	57.74
GL70	New	Suspension	53.84	59.84
GL71	New	Suspension	50.84	56.84
GL72	New	Suspension	53.84	59.84
GL73	New	Tension	51.74	57.74
GL74	New	Suspension	50.84	56.84
GL75	New	Suspension	53.84	59.84
GL76	New	Suspension	56.84	62.84
GL77	New	Suspension	50.84	56.84
GL78	New	Tension	49.09	55.09
GL79	New	Suspension	53.84	59.84
GL80	New	Tension	52.09	58.09
GL81	New	Suspension	53.84	59.84
GL82	New	Suspension	53.84	59.84
GL83	New	Suspension	53.84	59.84
GL84	New	Suspension	53.84	59.84
GL85	New	Suspension	50.84	56.84
GL86	New	Tension	51.74	57.74
GL87	New	Suspension	50.84	56.84
GL88	New	Suspension	53.84	59.84
GL89	New	Suspension	56.84	62.84
GL90	New	Suspension	53.84	59.84
GL91	New	Tension	46.09	52.09
GL92	New	Suspension	50.84	56.84
GL93	New	Suspension	53.84	59.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
GL94	New	Suspension	56.84	62.84
GL95	New	Tension	51.74	57.74
GL96	New	Suspension	50.84	56.84
GL97	New	Suspension	50.84	56.84
GL98	New	Tension	49.09	55.09
GL99	New	Tension	49.09	55.09
GL100	New	Suspension	53.84	59.84
GL101	New	Suspension	50.84	56.84
GL102	New	Suspension	53.84	59.84
GL103	New	Suspension	53.84	59.84
GL104	New	Suspension	53.84	59.84
GL105	New	Suspension	56.84	62.84
GL106	New	Terminal	49.09	55.09
GL107	New	Suspension	53.84	59.84
GL108	New	Suspension	50.84	56.84
GL109	New	Tension	51.74	57.74
GL110	New	Suspension	53.84	59.84
GL111	New	Tension	51.74	57.74
GL112	New	Suspension	53.84	59.84
GL113	New	Suspension	50.84	56.84
GL114	New	Suspension	53.84	59.84
GL115	New	Suspension	50.84	56.84
GL116	New	Suspension	50.84	56.84
GL117	New	Tension	51.74	57.74
GL118	New	Suspension	50.84	56.84
Section 3: New Lincolnshire Connection Substations A and B				
GL119	New	Terminal	58.25	64.25
GL120	New	Terminal	49.25	55.25

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
GL121	New	Gantry	12.41	18.41
GL122	New	Terminal	52.25	58.25
GL123	New	Gantry	12.41	N/A
LB1	New	Gantry	12.41	N/A
LB2	New	Terminal	52.25	58.25
LB3	New	Suspension	53.84	59.84
LB4	New	Gantry	12.41	18.41
LB5	New	Terminal	52.25	58.25
LB6	New	Terminal	58.25	64.25
LB7	New	Suspension	56.84	62.84
LB8	New	Tension	51.74	57.74
LB9	New	Suspension	56.84	62.84
LB10	New	Suspension	59.84	65.84
LB11	New	Suspension	56.84	62.84
LB12	New	Suspension	53.84	59.84
LB13	New	Tension	51.74	57.74
LB14	New	Tension	48.74	54.74
LB15	New	Suspension	53.84	59.84
LB16	New	Suspension	56.84	62.84
LB17	New	Terminal	58.25	64.25
LB18	New	Terminal	49.25	55.25
LB19	New	Gantry	12.41	18.41
LB20	New	Terminal	49.25	55.25
LB21	New	Gantry	12.41	N/A
LW1	New	Gantry	12.41	N/A
LW2	New	Terminal	49.25	55.25
LW3	New	Gantry	12.41	18.41
LW4	New	Terminal	49.25	55.25

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
Section 4: New Lincolnshire Connection Substation B to Refined Weston Marsh Siting Zone				
LW5	New	Terminal	58.25	64.25
LW6	New	Suspension	56.84	62.84
LW7	New	Suspension	56.84	62.84
LW8	New	Tension	54.74	60.74
LW9	New	Suspension	56.84	62.84
LW10	New	Suspension	53.84	59.84
LW11	New	Suspension	53.84	59.84
LW12	New	Tension	51.73	57.74
LW13	New	Suspension	50.84	56.84
LW14	New	Suspension	53.84	59.84
LW15	New	Suspension	53.84	59.84
LW16	New	Tension	51.74	57.74
LW17	New	Suspension	53.84	59.84
LW18	New	Suspension	50.84	56.84
LW19	New	Suspension	53.84	59.84
LW20	New	Tension	51.74	57.74
LW21	New	Suspension	50.84	56.84
LW22	New	Suspension	53.84	59.84
LW23	New	Tension	51.74	57.74
LW24	New	Suspension	53.84	59.84
LW25	New	Suspension	53.84	59.84
LW26	New	Suspension	56.84	62.84
LW27	New	Tension	54.74	60.74
LW28	New	Suspension	56.84	62.84
LW29	New	Suspension	56.84	62.84
LW30	New	Tension	51.74	57.74
LW31	New	Suspension	53.84	59.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
LW32	New	Suspension	50.84	56.84
LW33	New	Suspension	56.84	62.84
LW34	New	Suspension	53.84	59.84
LW35	New	Tension	51.74	57.74
LW36	New	Suspension	53.84	59.84
LW37	New	Suspension	56.84	62.84
LW38	New	Tension	54.74	60.74
LW39	New	Tension	52.09	58.09
LW40	New	Suspension	53.84	59.84
LW41	New	Tension	52.25	58.25
LW42	New	Suspension	56.84	62.84
LW43	New	Suspension	53.84	59.84
LW44	New	Suspension	53.84	59.84
LW45	New	Tension	51.74	57.74
LW46	New	Suspension	53.84	59.84
LW47	New	Suspension	53.84	59.84
LW48	New	Suspension	53.84	59.84
LW49	New	Suspension	59.84	65.84
LW50	New	Tension	52.09	58.09
LW51	New	Suspension	56.84	62.84
LW52	New	Suspension	50.84	56.84
LW53	New	Suspension	53.84	59.84
LW54	New	Suspension	53.84	59.84
LW55	New	Tension	51.74	57.74
LW56	New	Suspension	53.84	59.84
LW57	New	Suspension	50.84	5684
LW58	New	Tension	54.74	60.74
LW59	New	Suspension	53.84	59.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
LW60	New	Suspension	56.84	62.84
LW61	New	Tension	60.74	66.74
LW62	New	Suspension	59.84	65.84
LW63	New	Suspension	59.84	65.84
LW64	New	Tension	55.09	61.09
LW65	New	Suspension	62.84	68.84
LW66	New	Tension	55.25	61.25
LW67	New	Suspension	53.84	59.84
LW68	New	Suspension	50.84	56.84
LW69	New	Suspension	53.84	59.84
LW70	New	Tension	55.09	61.09
LW71	New	Suspension	56.84	62.84
LW72	New	Suspension	53.84	59.84
LW73	New	Suspension	53.84	59.84
LW74	New	Suspension	53.84	59.84
LW75	New	Suspension	56.84	62.84
LW76	New	Tension	58.09	64.09
LW77	New	Tension	60.74	66.74
LW78	New	Suspension	53.84	59.84
LW79	New	Suspension	53.84	59.84
LW80	New	Tension	51.74	57.74
LW81	New	Suspension	56.84	62.84
LW82	New	Suspension	53.84	59.84
LW83	New	Suspension	53.84	59.84
LW84	New	Suspension	56.84	62.84
LW85	New	Tension	54.74	60.74
LW86	New	Suspension	50.84	56.84
LW87	New	Suspension	53.84	59.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
LW88	New	Suspension	50.84	56.84
LW89	New	Tension	49.25	55.25
LW90	New	Suspension	53.84	59.84
LW91	New	Suspension	65.84	71.84
LW92	New	Suspension	53.84	59.84
LW93	New	Suspension	53.84	59.84
LW94	New	Suspension	53.84	59.84
LW95	New	Tension	54.74	60.74
LW96	New	Suspension	53.84	59.84
LW97	New	Suspension	53.84	59.84
LW98	New	Suspension	53.84	59.84
LW99	New	Tension	52.09	58.09
LW100	New	Suspension	50.84	56.84
LW101	New	Suspension	50.84	56.84
LW102	New	Suspension	50.84	56.84
LW103	New	Suspension	56.84	62.84
LW104	New	Tension	54.74	60.74
LW105	New	Suspension	50.84	56.84
LW106	New	Suspension	53.84	59.84
LW108	New	Suspension	50.84	56.84
LW109	New	Suspension	56.84	62.09
LW110	New	Tension	54.74	60.74
LW111	New	Suspension	53.84	59.84
LW112	New	Suspension	50.84	56.84
LW113	New	Suspension	50.84	56.84
LW114	New	Suspension	50.84	56.84
LW115	New	Suspension	56.84	62.84
LW116	New	Tension	51.74	57.74

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
LW117	New	Suspension	50.84	56.84
LW118	New	Suspension	50.84	56.84
LW119	New	Suspension	50.84	56.84
LW120	New	Suspension	56.84	62.84
LW121	New	Tension	54.74	60.74
LW122	New	Suspension	56.84	62.84
LW123	New	Suspension	50.84	56.84
LW124	New	Suspension	53.84	59.84
LW125	New	Suspension	53.84	59.84
LW126	New	Suspension	59.84	65.84
LW127	New	Tension	55.09	61.09
LW128	New	Suspension	56.84	62.84
LW129	New	Suspension	53.84	59.84
LW130	New	Tension	48.74	54.74
LW131	New	Suspension	53.84	59.84
LW132	New	Suspension	50.84	56.84
LW133	New	Suspension	56.84	62.84
LW134	New	Tension	54.74	60.74
LW135	New	Suspension	56.84	62.84
LW136	New	Suspension	56.84	62.84
LW137	New	Suspension	56.84	62.84
LW138	New	Tension	49.09	55.09
LW139	New	Suspension	50.84	56.84
LW140	New	Suspension	53.84	59.84
LW141	New	Suspension	56.84	62.09
LW142	New	Suspension	56.84	62.09
LW143	New	Suspension	50.84	56.84
LW144	New	Tension	48.74	64.74

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
LW145	New	Suspension	50.84	56.84
LW146	New	Suspension	53.84	59.84
LW147	New	Suspension	59.84	65.84
LW148	New	Suspension	53.84	59.84
LW149	New	Suspension	53.84	59.84
LW150	New	Tension	51.74	57.74
LW151	New	Suspension	59.84	65.84
LW152	New	Suspension	68.84	74.84
LW153	New	Suspension	65.84	71.84
LW154	New	Suspension	65.84	71.84
LW155	New	Suspension	62.84	68.84
LW156	New	Tension	60.74	66.74
LW157	New	Suspension	59.84	65.84
LW158	New	Suspension	50.84	56.84
LW159	New	Suspension	50.84	56.84
LW160	New	Tension	57.74	64.74
LW161	New	Suspension	50.84	56.84
LW162	New	Suspension	56.84	62.84
LW163	New	Suspension	53.84	59.84
LW164	New	Suspension	56.84	62.84
LW165	New	Tension	49.09	55.09
LW166	New	Suspension	53.84	59.84
LW167	New	Suspension	53.84	59.84
LW168	New	Suspension	53.84	59.84
LW169	New	Tension	51.74	57.74
LW170	New	Suspension	53.84	59.84
LW171	New	Suspension	53.84	59.84
LW172	New	Tension	51.74	57.74

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
LW173	New	Suspension	53.84	59.84
LW174	New	Suspension	53.84	59.84
LW175	New	Tension	52.25	58.25
LW176	New	Suspension	53.84	59.84
LW177	New	Suspension	53.84	59.84
LW178	New	Suspension	53.84	59.84
LW179	New	Tension	51.74	57.74
LW180	New	Suspension	53.84	59.84
LW181	New	Suspension	53.84	59.84
LW182	New	Tension	51.74	57.74
LW183	New	Suspension	56.84	62.84
LW184	New	Suspension	53.84	59.84
LW185	New	Suspension	56.84	62.84
LW186	New	Suspension	53.84	59.84
LW187	New	Tension	49.09	65.09
LW188	New	Suspension	56.84	62.09
LW189	New	Suspension	53.84	59.84
LW190	New	Tension	51.74	57.74
LW191	New	Suspension	53.84	59.84
LW192	New	Suspension	59.84	65.84
LW193	New	Tension	52.09	58.09
LW194	New	Suspension	56.84	62.84
LW195	New	Suspension	62.84	66.84
LW196	New	Suspension	59.84	65.84
LW197	New	Suspension	59.84	65.84
LW198	New	Suspension	59.84	65.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
LW199	New	Tension[3]	54.74[3]	60.74[3]
Section 6: Refined Weston Marsh Siting Zone to New Walpole B Substation				
SW1	New	Tension[3]	54.74[3]	60.74[3]
SW2	New	Suspension	53.84	59.84
SW3	New	Tension	58.09	64.09
SW4	New	Suspension	56.84	62.84
SW5	New	Suspension	53.84	59.84
SW6	New	Tension	46.09	52.09
SW7	New	Suspension	50.84	56.84
SW8	New	Suspension	56.84	62.84
SW9	New	Suspension	50.84	56.84
SW10	New	Tension	49.09	55.09
SW11	New	Suspension	56.84	62.84
SW12	New	Suspension	59.84	65.84
SW13	New	Suspension	56.84	62.84
SW14	New	Tension	54.74	60.74
SW15	New	Suspension	59.84	65.84
SW16	New	Suspension	59.84	65.84
SW17	New	Suspension	56.84	62.84
SW18	New	Suspension	56.84	62.84
SW19	New	Tension	55.25	61.25
SW20	New	Suspension	56.84	62.84
SW21	New	Suspension	53.84	59.84
SW22	New	Suspension	56.84	62.84
SW23	New	Tension	52.25	58.25

[3] Note that this design information is subject to change given that these pylons are located at the connection points with Section 5, for which further design work is being undertaken. Tension pylons are therefore assumed, to provide flexibility regarding the ongoing design of the connections within the Section 5 Refined Weston Marsh Substation Siting Zone.

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
SW24	New	Suspension	62.84	68.84
SW25	New	Suspension	53.84	59.84
SW26	New	Tension	54.74	60.74
SW27	New	Suspension	56.84	62.84
SW28	New	Suspension	56.84	62.84
SW29	New	Tension	52.09	58.09
SW30	New	Suspension	59.84	65.84
SW31	New	Suspension	56.84	62.84
SW32	New	Suspension	53.84	59.84
SW33	New	Tension	54.74	60.74
SW34	New	Suspension	53.84	59.84
SW35	New	Suspension	53.84	59.84
SW36	New	Tension	52.09	58.09
SW37	New	Suspension	50.84	56.84
SW38	New	Suspension	50.84	56.84
SW39	New	Tension	52.09	58.09
SW40	New	Suspension	53.84	59.84
SW41	New	Suspension	53.84	59.84
SW42	New	Suspension	56.84	62.84
SW43	New	Suspension	56.84	62.84
SW44	New	Tension	52.09	58.09
SW45	New	Suspension	59.84	65.84
SW46	New	Suspension	59.84	65.84
SW47	New	Tension	55.09	61.09
SW48	New	Suspension	56.84	62.84
SW49	New	Suspension	62.84	68.84
SW50	New	Suspension	56.84	62.84
SW51	New	Suspension	56.84	62.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
SW52	New	Suspension	53.84	59.84
SW53	New	Tension	52.09	58.09
SW54	New	Suspension	56.84	62.84
SW55	New	Suspension	53.84	59.84
SW56	New	Suspension	56.84	62.84
SW57	New	Suspension	53.84	59.84
SW58	New	Tension	51.74	57.74
SW59	New	Suspension	53.84	59.84
SW60	New	Suspension	56.84	62.84
SW61	New	Suspension	59.84	65.84
SW62	New	Tension	54.74	60.74
SW63	New	Suspension	56.84	62.84
SW64	New	Suspension	53.84	59.84
SW65	New	Tension	51.74	57.74
SW66	New	Suspension	56.84	62.84
SW67	New	Suspension	53.84	59.84
SW68	New	Suspension	53.84	59.84
SW69	New	Suspension	56.84	62.84
SW70	New	Tension	54.74	60.74
SW71	New	Suspension	56.84	62.84
SW72	New	Tension	54.74	60.74
SW73	New	Suspension	90.84	110.84
SW74	New	Suspension	90.84	110.84
SW75	New	Tension	49.09	55.09
SW76	New	Suspension	53.84	59.84
SW77	New	Tension	51.74	57.74
SW78	New	Suspension	50.84	56.84
SW79	New	Suspension	53.84	59.84

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level[1] (m)	Indicative pylon height above ground level including LoD[2] (m)
SW80	New	Suspension	53.84	59.84
SW81	New	Tension	51.74	57.74
Section 7 New Walpole B Substation				
SW82	New	Suspension	56.84	62.84
SW83	New	Terminal	52.25	58.25
SW84	New	Gantry	12.41	N/A
SW85	New	Gantry	12.41	N/A

5B.3 4KG Overhead Line Indicative Pylon Schedule

Table 5B.2 4KG indicative pylon schedule

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level (m)	Indicative pylon height above ground level including LoD[4] (m)
Section 1: New Grimsby West Substation				
4KG149	Existing	Suspension	51.09	N/A
4KG150	Existing	Suspension	51.09	N/A
4KG151	Existing (to be dismantled)	Suspension	51.09	N/A
4KG151-N	New	Terminal	48.99	54.99
4KG152	Existing	Suspension	51.09	N/A
4KG153	Existing (to be dismantled)	Suspension	51.09	N/A
4KG153-N	New	Terminal	46.34	52.34
4KG154	New	Terminal	51.99	57.99
4KG155	Existing (to be dismantled)	Terminal	51.48	N/A
4KG156	Existing (to be dismantled)	Terminal	49.5	N/A
4KG157	Existing (to be dismantled)	Suspension	14.73	N/A
4KG158	Existing (to be dismantled)	Suspension	14.73	N/A
4KG151-T	Existing	Terminal	48.99	N/A
4KG152-T	Existing	Terminal	48.99	N/A
4KG153-T	Existing	Suspension	51.09	N/A
4KG154-T	Existing	Suspension	51.09	N/A
4KG155-T	Existing	Terminal	46.34	N/A
4KG154-N	New	Terminal	58.5	64.5
4KG155-N	New	Gantry	12.41	N/A
4KG156-N	New	Gantry	12.41	N/A

[4] LoD: Limit of Deviation

5B.4 4ZM Overhead Line Indicative Pylon Schedule

Table 5B.3 4ZM indicative pylon schedule

Pylon number	New/ existing	Indicative pylon type	Indicative pylon height above ground level (m)	Indicative pylon height above ground level including LoD[5] (m)
Section 7: New Walpole B Substation				
4ZM328	Existing	Suspension	53.59	N/A
4ZM329	Existing	Suspension	53.59	N/A
4ZM330	Existing (to be dismantled)	Suspension	56.63	N/A
4ZM330-N	New	Terminal	49.5	55.5
4ZM330-T	Existing	Tension	51.99	N/A
4ZM331	Existing (to be dismantled)	Tension	51.99	N/A
4ZM331-N	New	Gantry	14.73	TBC
4ZM331-T	Existing	Tension	52.13	N/A
4ZM332	Existing	Suspension	56.63	N/A
4ZM332-N	New	Suspension	54.09	60.09
4ZM333	Existing	Suspension	56.63	N/A
4ZM333-N	New	Terminal	55.5	61.5
4ZM334-N	New	Gantry	14.73	N/A
4ZM335-N	New	Gantry	14.73	N/A
4ZM336-N	New	Gantry	14.73	N/A
4ZM337-N	New	Terminal	49.5	55.5

[5] LoD: Limit of Deviation

5C. Indicative Bridge and Culvert Schedule

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Contents

5C. Indicative Bridge and Culvert Schedule

5C.1 Introduction

5C.1.1 This Appendix provides a preliminary summary of the number and type of assumed watercourse crossings associated with access within each Section of the Grimsby to Walpole Project (the Project), and the watercourse type that they are associated with. Crossings are identified by a simplistic reference number. The first letters of this code (GL, LB, LW, SW) refers to different new overhead line routes or substation which the crossings are associated with. Overhead line routes are broken down based upon the different substations which they connect to, as illustrated on **PEI Report Volume 2 Part B Sections 1-7 Figure 1.3 Permanent and Operational Features**. The use of WCX denotes watercourse crossing, and the numerical identifier indicates the total number of crossings which are associated with each section of overhead line or for each substation.

5C.1.2 The information presented is indicative. The details of any permanent diversions of those watercourses (mapped field drains) which the proposed substations directly interact with are subject to ongoing design. This element will be provided within the ES.

5C.2 Indicative Watercourse Crossing Schedule – Overhead Line Routes

Table 5C.1 Indicative watercourse crossing schedule – overhead line routes

Crossing reference	Watercourse type	Crossing Type	Proposed duration
Section 1 New Grimsby West Substation			
GL-WCX-1	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-2	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-3	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-4	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-5	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
Section 2 New Grimsby West Substation to New Lincolnshire Connection Substation A			
GL-WCX-6	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-7	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-8	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-9	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-10	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-11	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-12	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-13	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-14	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-15	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-16	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-17	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-19	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-20	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-21	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-22	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-23	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-24	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
GL-WCX-25	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-26	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-27	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-29	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-30A	WFD Watercourse	Single Span Bridge	Temporary
GL-WCX-30B	Mapped Watercourse	Assumed Closed Culvert	Temporary
GL-WCX-32	Statutory Main River	Single Span Bridge	Temporary
GL-WCX-35	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-36	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-37	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-38	Statutory Main River	Single Span Bridge	Temporary
GL-WCX-39	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-40	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-41	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-42	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-43	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-44	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-45	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-46	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
GL-WCX-47	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-48	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-49	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-50	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-51	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-52	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-53	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-54	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-55	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-56	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-57	WFD Watercourse	Assumed Closed Culvert	Temporary
GL-WCX-58	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-59	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-60	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-61	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-62	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-63	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-64	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-65	Statutory Main River	Single Span Bridge	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
GL-WCX-66	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-67	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-68	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-69	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-70	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-71	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-72	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-73	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-74	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-75	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-76	Statutory Main River	Single Span Bridge	Temporary
GL-WCX-77	Mapped Watercourse	Assumed Closed Culvert	Temporary
GL-WCX-78	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-79	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-81	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-82	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-83	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-84	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-85	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
GL-WCX-86	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-87	Statutory Main River	Single Span Bridge	Temporary
GL-WCX-88	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-89	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-90	Mapped Field Drain	Assumed Closed Culvert	Temporary
GL-WCX-91	Mapped Field Drain	Assumed Closed Culvert	Temporary
Section 3 New Lincolnshire Connection Substations A and B			
GL-WCX-92	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-1	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-2	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-3	Statutory Main River	Single Span Bridge	Temporary
LB-WCX-4	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-5	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-6	Mapped Watercourse	Assumed Closed Culvert	Temporary
LB-WCX-7	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-8	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-9	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-10	Mapped Field Drain	Assumed Closed Culvert	Temporary
LB-WCX-11	Statutory Main River/WFD Watercourse	Single Span Bridge	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LB-WCX-12	Mapped Field Drain	Assumed Closed Culvert	Temporary
Section 4 New Lincolnshire Connection Substation B to Refined Weston Marsh Substation Siting Zone			
LW-WCX-1	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-2	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-3	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-4	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-5	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-6	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-7	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-8	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-9	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-10	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-11	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-12	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-13	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-14	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-15	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-16	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-17	WFD Watercourse	Single Span Bridge	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-19	Mapped Watercourse	Assumed Closed Culvert	Temporary
LW-WCX-20	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-21	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-22	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-23	Statutory Main River	Single Span Bridge	Temporary
LW-WCX-24	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-25	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-25A	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-26	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-27	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-28	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-29	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-30	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-31	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-32	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-33	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-34	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-35	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-36	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-37	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-38	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-39	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-42	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-43	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-46	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-47	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-48	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-49	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-50	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-51	WFD Watercourse	Single Span Bridge	Temporary
LW-WCX-52	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-53	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-54	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-55	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-56	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-57	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-58	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-59	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-60	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-61	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-62	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-63	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-64	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-65	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-66	Statutory Main River	Single Span Bridge	Temporary
LW-WCX-67	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-68	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-69	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-70	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-71	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-72	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-73	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-74	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-75	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-76	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-77	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-78	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-79	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-80	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-81	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-84	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-86	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-87	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-88	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-89	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-90	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-91	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-92	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-93	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-94	Mapped Watercourse	Assumed Closed Culvert	Temporary
LW-WCX-95	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-96	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-97	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-98	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-99	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-100	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-101	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-102	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-103	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-104	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-105	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-106	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-107	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-108	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-109	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-110	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-111	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-113	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-114	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-115	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-117	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-118	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-119	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-120	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-121	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-122	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-123	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-124	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-125	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-126	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-127	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-128	Statutory Main River	Single Span Bridge	Temporary
LW-WCX-129	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-131	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-132	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-133	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-134	Statutory Main River	Single Span Bridge	Temporary
LW-WCX-135	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-136	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-137	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-138	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-139	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-140	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-141	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-143	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-144	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-146	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-149	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-150	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-151	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-152	Navigable Watercourse	Single Span Bridge	Temporary
LW-WCX-153	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-154	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-155	Mapped Watercourse	Assumed Closed Culvert	Temporary
LW-WCX-157	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-158	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-160	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-161	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-162	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-163	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-164	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-165	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-166	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-167	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-168	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-169	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-171	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-172	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-173	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-176	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-177	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-178	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-180	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-181	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-182	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-184	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-185	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-186	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-187	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-188	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-189	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-190	Mapped Watercourse	Assumed Closed Culvert	Temporary
LW-WCX-193	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-194	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-195	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-196	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-196A	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-197	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-198	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-199	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-200	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-201	WFD Watercourse	Single Span Bridge	Temporary
LW-WCX-202	Mapped Watercourse	Assumed Closed Culvert	Temporary
LW-WCX-203	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-204	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-205	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-206	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-207	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-208	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-209	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-210	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-211	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-212	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-213	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-214	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-215	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-216	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-217	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-219	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-220	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-221	Mapped Watercourse	Assumed Closed Culvert	Temporary
LW-WCX-222	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-223	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-224	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-225	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-226	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-227	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-228	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-229	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-230	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-231	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-232	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-233	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-234	Mapped Watercourse	Assumed Closed Culvert	Temporary
LW-WCX-235	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-236	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-237	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-238	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-240	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-241	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-242	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-243	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-245	Mapped Field Drain	Assumed Closed Culvert	Temporary
LW-WCX-247	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
LW-WCX-248	Mapped Field Drain	Assumed Closed Culvert	Temporary
Section 6: Refined Weston Marsh Substation Siting Zone to New Walpole B Substation			
SW-WCX-1	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-2	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-3	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-4	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-5	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-6	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-7	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-8	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-9	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-10	Mapped Watercourse	Assumed Closed Culvert	Temporary
SW-WCX-11	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-12	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-13	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-14	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-15	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-16	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-17	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
SW-WCX-18	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-19	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-20	Mapped Watercourse	Assumed Closed Culvert	Temporary
SW-WCX-21	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-22	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-23	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-24	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-25	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-26	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-27	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-28	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-29	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-30	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-31	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-32	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-33	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-34	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-35	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
SW-WCX-36	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-37	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-38	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-39	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-40	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-41	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-42	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-43	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-44	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-45	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-46	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-47	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-48	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-49	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-50	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-51	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-52	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-53	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
SW-WCX-54	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-55	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-56	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-57	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-58	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-59	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-60	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-61	Mapped Watercourse	Assumed Closed Culvert	Temporary
SW-WCX-62	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-63	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-64	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-65	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-66	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-67	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-68	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-69	Mapped Watercourse	Assumed Closed Culvert	Temporary
SW-WCX-70	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-71	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
SW-WCX-72	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-73	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-74	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-75	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-76	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-77	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-78	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-79	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-80	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-81	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-82	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-83	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-84	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-85	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-86	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-87	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-88	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-89	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
SW-WCX-90	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-91	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-92	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-93	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-94	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-95	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-96	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-97	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-98	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-99	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-100	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-101	Mapped Watercourse	Assumed Closed Culvert	Temporary
SW-WCX-102	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-103	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-104	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-105	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-106	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-107	Mapped Field Drain	Assumed Closed Culvert	Temporary

Crossing reference	Watercourse type	Crossing Type	Proposed duration
SW-WCX-108	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-109	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-110	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-111	Mapped Watercourse	Assumed Closed Culvert	Temporary
SW-WCX-112	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-113	Mapped Field Drain	Assumed Closed Culvert	Temporary
Section 7: New Walpole B Substation			
SW-WCX-114	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-115	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-116	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-117	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-118	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-119	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-120	Mapped Field Drain	Assumed Closed Culvert	Temporary
SW-WCX-121	Mapped Field Drain	Assumed Closed Culvert	Temporary

5C.3 Indicative Watercourse Crossing Schedule – Substations

Table 5C.2 Indicative watercourse crossing schedule - substations

Crossing reference	Watercourse type	Crossing Type	Proposed duration
Section 1 New Grimsby West Substation			
GWS-WCX-01	Mapped Field Drain	Assumed Closed Culvert	Permanent
Section 3 New Lincolnshire Connection Substations A and B			
LCSA-WCX-01	Mapped Field Drain	Assumed Closed Culvert	Permanent
Section 7 New Walpole B Substation			
WBS-WCX-01	Mapped Field Drain	Assumed Closed Culvert	Permanent

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