Environmental Statement: Volume III

Appendix 4A Framework Construction Environmental Management Plan

VPI Immingham OCGT Project

Document Ref: 6.4.3
PINS Ref: EN010097

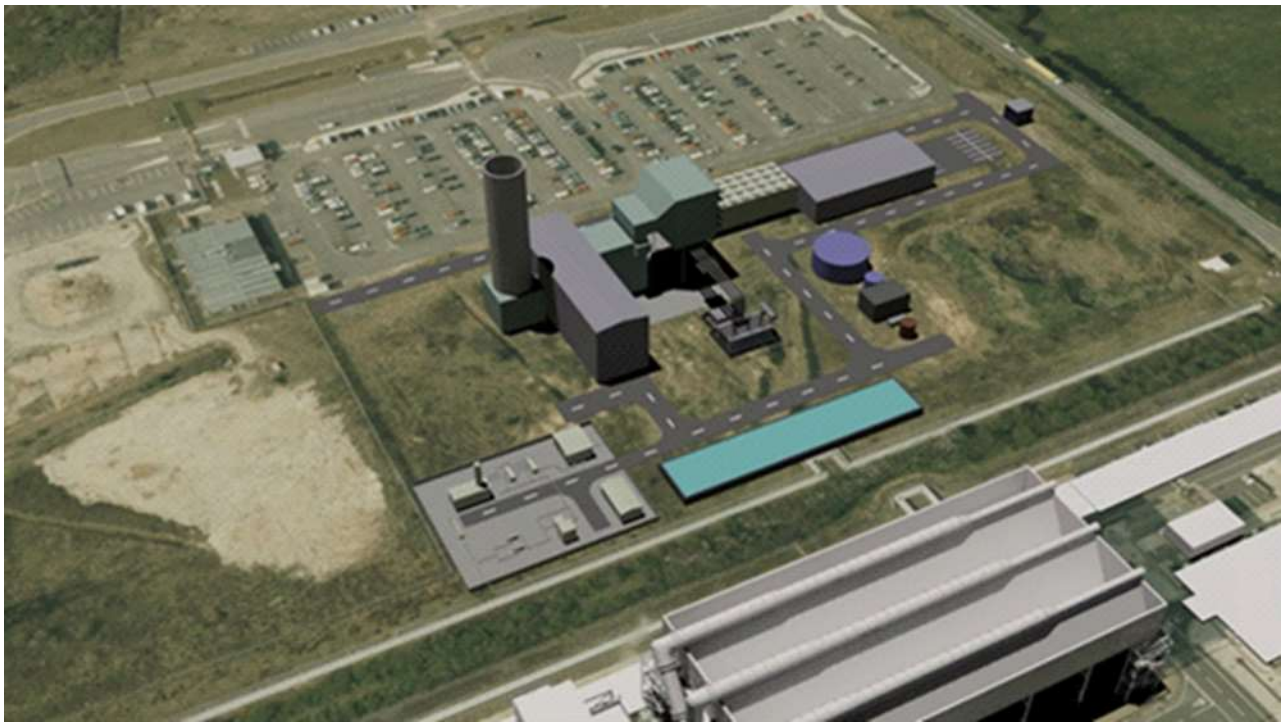
The Immingham Open Cycle Gas Turbine Order

Land to the north of and in the vicinity of the VPI Immingham Power Station, Rosper Road, South Killingholme, Lincolnshire, DN40 3DZ

Environmental Statement Volume III Appendix 4A: Framework Construction Environmental Management Plan

The Planning Act 2008

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



Applicant: VPI Immingham B Ltd

Date: April 2019

DOCUMENT HISTORY

Document Ref	**6.4.3**		
Revision	0		
Author	Harriet Thomlinson		
Signed	HT	**Date**	April 2019
Approved By	Richard Lowe		
Signed	RL	**Date**	April 2019
Document Owner	AECOM		

GLOSSARY

Abbreviation	Description
BAT	Best Available Techniques
BEMP	Biodiversity Enhancement and Management Plan
BPEO	Best Practicable Environmental Option
BPM	Best Practice Measures
BS	British Standard
CCGT	Combined Cycle Gas Turbine
CCS	Considerate Constructors Scheme
CD&E	Construction, demolition and excavation
CEMP	Construction Environmental Management Plan
CHP	Combined Heat and Power
CIfA	Chartered Institute for Archaeologists
COSHH	Control of Substances Hazardous to Health
CTMP	Construction Traffic Management Plan
CWTP	Construction Worker Travel Plan
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
EA	Environment Agency
EIA	Environmental Impact Assessment
ES	Environmental Statement
HEMP	Handover Environmental Management Plan
HGV	Heavy Goods Vehicle
KPI	Key Performance Indicator
LAA	Local Aggregate Assessment
m	Metre
NELC	North East Lincolnshire Council
NELIDB	North East Lindsey Internal Drainage Board
NLC	North Lincolnshire Council
NO2	Nitrogen Dioxide
NPPF	National Planning Policy Framework
NRMM	Non Road Mobile Machinery
NSR	Noise Sensitive Receptor
OCGT	Open Cycle Gas Turbine
PM10	Concentration of particles that are less than 10 µm.
PPS	Planning Policy Statement
PWMS	Precautionary Working Method Statement

Abbreviation	Description
SEA	Strategic Environmental Assessment
SWMP	Site Waste Management Plan
WRAP	Waste and Resources Action Programme

CONTENTS

1.0 INTRODUCTION 2
2.0 CONSTRUCTION PROGRAMME 5
3.0 PARKING PROVISION AND OFF SITE FACILITIES 6
4.0 RECYCLING AND DISPOSING OF WASTE 7
5.0 BEST PRACTICE MEASURES 8
6.0 MANAGEMENT AND MITIGATION PLAN 1
7.0 COMPLEMENTARY PLANS AND PROCEDURES 26
8.0 IMPLEMENTATION AND OPERATION 27
ANNEX A – FRAMEWORK SITE WASTE MANAGEMENT PLAN

TABLES

Table 5A.1: Indicative Construction Programme 5
Table 4A.2 Air Quality 2
Table 4A.3 Traffic and Transport 4
Table 5A.4 Noise and Vibration 7
Table 5A.5 Ecology 10
Table 5A.6 Lighting Impact 13
Table 5A.7 Ground Conditions and Hydrogeology 15
Table 5A.8 Surface Water, Flood Risk and Drainage 18
Table 5A.9 Cultural Heritage 24
Table 5A.10 Sustainability and Climate Change and Socio-Economics 25

1.0 INTRODUCTION

1.1 Overview

1.1.1 This Framework Construction Environmental Management Plant (CEMP, Application Document Ref: 6.4.3) has been prepared on behalf of VPI Immingham B Ltd ('VPIB' or the 'Applicant'). It forms part of the application (the 'Application') for a Development Consent Order (a 'DCO') submitted to the Secretary of State (the 'SoS') for Business, Energy and Industrial Strategy under section 37 of the Planning Act 2008' (the 'PA 2008').

1.1.2 VPIB is seeking development consent for the construction, operation and maintenance of a new gas-fired electricity generating station with a gross output capacity of up to 299 megawatts ('MW'), including electrical and gas supply connections, and other associated development (the 'Proposed Development'). The Proposed Development is located primarily on land (the 'Site') to the north of the existing VPI Immingham Power Station, Rosper Road, South Killingholme, North Lincolnshire, DN40 3DZ.

1.1.3 A DCO is required for the Proposed Development as it falls within the definition and thresholds for a 'Nationally Significant Infrastructure Project' (a 'NSIP') under section 14(1)(a) and sections 15(1) and 15(2) of the PA 2008. The DCO, if made by the SoS, would be known as the 'VPI Immingham OCGT Order' (the 'Order').

1.2 VPI Immingham LLP and VPIB

1.2.1 VPI Immingham LLP ('VPI LLP') owns and operates the existing VPI Immingham Power Station, one of the largest combined heat and power ('CHP') plants in Europe, capable of generating 1,240 MW (about 2.5% of UK peak electricity demand) and up to 930 tonnes of steam per hour (hereafter referred to as the 'Existing VPI CHP Plant'). The steam is used by nearby oil refineries to turn crude oil into products, such as gasoline. The land comprising the Existing VPI CHP Plant is hereafter referred to as the 'Existing VPI CHP Plant Site'.

1.2.2 VPI LLP is a wholly owned subsidiary of the Vitol Group ('Vitol'), founded in 1966 in Rotterdam, the Netherlands. Since then Vitol has grown significantly to become a major participant in world commodity markets and is now the world's largest independent energy trader. Its trading portfolio includes crude oil, oil products, liquid petroleum gas, liquid natural gas, natural gas, coal, electricity, agricultural products, metals and carbon emissions. Vitol trades with all the major national oil companies, the integrated oil majors and independent refiners and traders. For further information on VPI LLP and Vitol please visit:

https://www.vpi-i.com/

1.2.3 VPIB has been formed as a separate entity for the purposes of developing and operating the Proposed Development.

1.3 The Site

1.3.1 The Site is primarily located on land immediately to the north of the Existing VPI CHP Plant Site, as previously stated. Immingham Dock is located approximately 1.5 kilometres ('km') to the south east of the Site at its closest point. The Humber ports

facility is located approximately 500 metres ('m') north and the Humber Refinery is located approximately 500m to the south.

1.3.2 The villages of South Killingholme and North Killingholme are located approximately 1.4 km and 1.6 km to the west of the Site respectively, and the town of Immingham is located approximately 1.8 km to the south east. The nearest residential property comprises a single house off Marsh Lane, located approximately 325 m to the east of the Site.

1.3.3 The Site comprises the following main parts:

- OCGT Power Station Site;
- Access Site;
- Temporary Construction and Laydown Site;
- Gas Connection Site;
- Electrical Connection Site; and
- Utilities and Services Connections Site.

1.3.4 The Site is located entirely within the boundary of the administrative area of North Lincolnshire Council ('NLC'), a unitary authority. The different parts of the Site are illustrated in the Works Plans (Application Document Ref: 4.3).

1.4 Framework CEMP

1.4.1 This document represents a framework for CEMP. The detailed (or final) CEMP will be produced for the Proposed Development following the appointment of the contractor in accordance with a requirement of the DCO. (A draft DCO is included with this Application (Application Document Ref: 2.1).

1.4.2 Potential impacts have been identified through the Environmental Impact Assessment (EIA) process and are reported in the Environmental Statement (ES) Volume I (Application Document Ref: 6.2). A range of 'standard' or best practice mitigation and construction management measures were accounted for in the assessments presented within the ES and it is assumed these will be implemented during construction of the Proposed Development. This framework CEMP demonstrates how these commitments in the ES will be implemented. It also sets out the monitoring and auditing activities designed to demonstrate that such mitigation measures are carried out and that they are effective.

1.4.3 This document provides the likely structure of the detailed CEMP, some preliminary information relevant to the CEMP, and indicates what additional information might be included under each sub-section within the final CEMP, which will be produced by the contractor selected to deliver the Proposed Development construction phase.

1.4.4 The detailed CEMP will be produced in line with this framework document following receipt of development consent and would be agreed with North Lincolnshire Council (NLC) in advance of starting enabling works on the Site.

1.4.5 This framework CEMP covers the principal construction activities envisaged at the time of DCO application. The final scope will be determined through consultation with NLC

and other relevant regulatory authorities. The key elements of the detailed CEMP will include:

- An overview of the Proposed Development and associated construction programme;
- Prior assessment of environmental impacts (through the EIA);
- Reduction of potential adverse impacts through design and other mitigation measures;
- Monitoring of effectiveness of mitigation measures;
- Corrective action procedure; and
- Links to other complementary plans and procedures.

1.4.6 In summary, the detailed CEMP will identify how commitments made in the EIA will be translated into actions on Site and includes a schedule setting out how actions will be implemented and allocation of key roles and responsibilities.

1.4.7 The appointed contractor will also be responsible for working in accordance with the environmental controls documented in the CEMP. The overall responsibility for implementation of the CEMP will lie with the Applicant.

1.4.8 The CEMP will be designed with the objective of compliance with the relevant environmental legislation and the mitigation measures set out within the ES. It should be read alongside any other environmental documents related to the construction phase and the ES submitted in support of the Application.

1.4.9 Any additional construction licences, permits or approvals that are required will be listed in the detailed CEMP, including any environmental information submitted in respect of them.

2.0 CONSTRUCTION PROGRAMME

2.1.1 The current expectation is that site preparation, construction and commissioning of the Proposed Development will take approximately 24 months.

2.1.2 Allowing sufficient time to receive development consent and to discharge the DCO Requirements, it is anticipated that the earliest that site preparation and enabling works on Site for the Proposed Development would start is Q1 2021, with an expected commissioning start date of Q4 2022.

2.1.3 Table 5A.1 below provides an indicative construction programme.

Table 5A.1: Indicative Construction Programme

	2021				2022			
	1	2	3	4	1	2	3	4
OCGT Site Preparation								
Main civil works								
Plant installation								
Gas and electrical connections								
Commissioning								

2.1.4 Construction working hours will generally be Monday to Friday 07:00 to 19:00 and Saturday 08:00 to 18:00, however, it is likely that some construction activities will be required to be 24 hours at certain times. This is principally construction activities that cannot be stopped, such as concrete slip forming. Where on-site works are to be conducted outside the core hours they will comply with the restrictions stated in this framework CEMP and any other restrictions agreed with the planning authorities.

2.1.5 Construction noise limits have been identified for nearby noise sensitive receptors during evening and night-time periods (see Chapter 8: Noise and Vibration, ES Volume I, Application Document Ref. 6.2). Thus, where on-site works are to be conducted outside the core hours they will comply with these noise limits with the planning authority, in particular regarding the movement of traffic. Compliance with these noise limits will ensure adverse effects are unlikely.

2.1.6 Abnormal or emergency construction traffic movements may occur outside of normal working hours. In the event of these occurrences, specific noise mitigation measures may be required to reduce potential noise impacts at nearby noise sensitive receptors as set out below.

3.0 PARKING PROVISION AND OFF SITE FACILITIES

3.1.1 The location and size of parking provision on Site, access/ egress routes/ gates, loading and unloading areas for plant and materials, storage areas, wheel washing facilities and construction traffic management measures will be set out in the detailed CEMP, based on the Work Areas shown on the Works Plans (Application Document Ref 4.3). It will also include a description of any laydown areas or contractor accommodation areas.

4.0 RECYCLING AND DISPOSING OF WASTE

4.1.1 Waste arisings from the Existing VPI CHP Plant are managed in accordance with the Environmental Management System Procedure for the Management of Controlled Waste (Hazardous & Non-Hazardous).

4.1.2 Due to the size of the Proposed Development, waste arisings are anticipated to be very minor in nature from the operational power plant and would be managed by adopting the procedures already in place. Construction wastes are not expected to be significant and will be managed through a Site Waste Management Plan (SWMP), which) will be developed and will specify the waste streams to be estimated and monitored and goals set with regards to the waste produced. A Framework SWMP is included in Annex A of this report. The SWMP will be finalised with specific measures to be implemented prior to the start of construction, in accordance with a DCO Requirement.

4.1.3 Any spoil arising from the site clearance and preparation work is envisaged to be retained on site for beneficial use. Therefore, significant effects from waste are not anticipated.

4.1.4 All waste to be removed from Site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

5.0 BEST PRACTICE MEASURES

5.1.1 The Considerate Constructors Scheme (CCS) will be adopted to assist in reducing pollution and nuisance from the Proposed Development, by employing best practice measures which go beyond statutory compliance.

6.0 MANAGEMENT AND MITIGATION PLAN

6.1.1 This section of the framework CEMP sets out the mitigation and management measures to be included as a minimum in the CEMP. It also illustrates how the monitoring strategy will be set out and the responsible party identified for each mitigation/ enhancement measures or monitoring requirement.

Table 4A.2 Air Quality

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Increased particulates and deposited dust from soil and spoil movements and handling. Increased NO_2 and PM_{10} impacting human health.	The construction of the Proposed Development will be controlled in accordance with industry best practice, through measures including: Adoption of the Considerate Constructors Scheme (CCS) to assist in reducing pollution and nuisance from the Proposed Development; Avoidance of mechanical roughening or grinding of concrete surfaces; Storage of sand and aggregates in bunded areas and storage of cement powder and fine materials in silos; Use of water suppression and regular cleaning to minimise mud on roads; Covering vehicles leaving the construction site that are carrying waste materials or spoil; Employment of wheel wash systems at site exits;	To be confirmed in detailed CEMP.	Appointed Contractor.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	Restriction of unmade road access; Use of water suppression to control dust during earth moving activities; Control of storage of top soil or spoil during construction earthworks; and Prohibition of open fires on Site. Good practice will also be employed for the siting and operation of no road mobile machinery (NRMM) to control associated emissions, including: Minimise vehicle and plant idling; Locate static plant away from sensitive boundaries or receptors, in particular by retaining any existing landscaping embankment around the Site; and Minimise operating time outside of normal working hours/ daylight hours.	To be confirmed in detailed CEMP	Appointed Contractor.

Table 4A.3 Traffic and Transport

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Increased traffic flows, including HGVs on the roads leading to the Site and along with roads associated with the Proposed Gas Connection construction.	to employees during construction. Appropriate facilities will be provided on the site for the safe storage of cycles; Local bus connections to the Site will be identified and communicated to all construction employees; The Applicant will liaise with construction personnel to consider the potential to implement staff minibuses and car sharing options; The requirement for any HGV arriving or departing the Proposed Power Plant Site and other parts of the Site to travel to/from the south along Rosper Road to Humber Road. HGV routing plan will be communicated to all drivers during their induction; and Development of a local signage strategy to ensure that construction vehicles unable to park on Site do not park on the public highway in the vicinity of the Site, clear and appropriate signage will be required on Rosper Road. The signage will indicate no parking is permitted on the road and the potential penalties for those who do.	To be confirmed in detailed CEMP	Appointed Contractor

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	A number of traffic management measures will be implemented to minimise any traffic increases, these include: • The implementation of a Construction Traffic Management Plan (CTMP) and Construction Worker Travel Plan (CWTP). Frameworks for both these documents are included with the Application (Appendices 7B and 7C, ES Volume III). • the requirement for any HGV arriving or departing the Proposed Power Plant Site and other parts of the Site to travel to/from the south along Rosper Road to Humber Road; • HGV routing plan communicated to all drivers during their induction; • Local signage strategy; • Limiting construction delivery hours to 07:00-19:00; and	To be confirmed in detailed CEMP	Appointed Contractor

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	• Management of abnormal load deliveries. Pedestrian and cycle access routes to/from the Site will be identified and communicated		

Table 5A.4 Noise and Vibration

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Day time, evening and night-time noise effect due to construction activities at nearby noise sensitive receptors. Potential for abnormal night time construction traffic. Potential for vibration impacts upon surrounding buildings	Measures to mitigate noise will be implemented during the construction phase of the Proposed Development including, but not limited to: Abiding by construction noise limits at the identified NSR and monitoring of baseline and ongoing noise levels during construction; Ensuring that all processes are in place to minimise noise before works begin and ensuring that 'Best Practicable Means' (BPM) are being achieved throughout the construction programme, including the use of localised screening around significant noise producing plant and activities where appropriate; Consultation with North Lincolnshire Council and local residents to advise of potential noisy works that are due to take place; and Recording process for noise complaints and reporting to the contractor for immediate investigation. The Considerate Constructors Scheme will be adopted.	To be confirmed in detailed CEMP	Appointed Contractor

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	Ensuring that modern plant is used, complying with the latest European noise emission requirements. Selection of inherently quiet plant where possible; Hydraulic techniques for breaking to be used in preference for percussive techniques where practical; Use of lower noise piling (such as rotary bored or hydraulic jacking) rather than driven piling techniques (if required), where possible; All plant and equipment being used for the works to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use; Ensuring contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2), which should form a prerequisite for their appointment; Loading and unloading of vehicles, dismantling of site equipment such as scaffolding or moving equipment or materials around the Site to be conducted in such a manner as to minimise noise generation;	To be confirmed in detailed CEMP	Appointed Contractor

Table 5A.5 Ecology

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Habitat loss. Increased levels of disturbance (noise, vibration, lighting). Dust deposition on sensitive ecological receptors. Potential changes in air quality as a result of dust deposition. Potential changes in surface water quality (with sediment or contaminants) arising from surface water run-off from within the Site Potential effects on species.	Precautionary measures would be implemented to prevent trapping wildlife in construction excavations; Any excavations deeper than 1m would be covered or fenced overnight; Construction temporary lighting would be arranged so that glare is minimised outside the construction site; All clearance of suitable vegetation during site preparation would be undertaken outside the breeding bird season (typically March-August inclusive for most species). If this is not possible, an ecologist would check the working area for nests before works commence; If nests were discovered, exclusion zones would be imposed between the works and nest(s) and suspending vegetation clearance works within the area until any young had fledged;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	A precautionary pre-construction survey of the drainage ditch will be undertaken for water vole and otter at least 3 months prior to the commencement of works; Species-rich wildflower grassland will be created in undeveloped areas of the Site to mitigate for the loss of terrestrial invertebrate habitat; Log pile refuges will be created in undeveloped parts of the Site to create ecological niches for reptiles, amphibians and terrestrial invertebrates; Bird nest boxes will be installed where appropriate ; Native trees and berry-bearing shrubs will be planted to provide nesting opportunities and sources of food; and A Precautionary Working Method Statement (PWMS) would be prepared prior to the commencement of	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	works. A Biodiversity Enhancement and Management Plan (BEMP) will be prepared and agreed with the local planning authority prior to the commencement of the works. The BEMP will include details on: Protected species mitigation; The location and planting specifications for habitat enhancements; The location and construction specifications for log pile refuges and bird nest boxes; Long-term management of the habitats; Any post-construction protected species monitoring (if required); and Timetables and responsibilities for undertaking the above tasks.	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Table 5A.6 Lighting Impact

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
potential obtrusive light effects towards surrounding receptors Increased visibility of construction activities. Loss of existing landscape features and visibility of newly introduced features.	The following impact avoidance measures will either be incorporated into the design or are standard construction methods: • Suitable materials will be used, where possible, in the construction of structures to reduce reflection and glare and to assist with breaking up the massing of the buildings and structures; • The selection of finishes for the buildings and other infrastructure will be informed by the finishes of the adjacent developments and will be developed in consultation with North Lincolnshire Council to minimise visual impact; • Hedge and tree planting in the periphery of the Site would assist in reducing visibility from visual receptors; and • Lighting required during construction will be	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	designed to reduce unnecessary light spill outside of the Site boundary.		

Table 5A.7 Ground Conditions and Hydrogeology

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Potential risks for human health associated with waste generation, land contamination, airborne contamination and groundwater contamination.	The contractor(s) will be required to minimise adverse land contamination effects on sensitive receptors by implementing good operational practices (e.g. employing suitable surface water drainage control). Construction workers will be protected from contact with hazardous materials through use of personal protective equipment, hygiene facilities and the implementation of dust control where necessary; Health and safety measures will be assessed under the Control of Substances Hazardous to Health (COSHH) Regulations 2002; The contractor(s) will ensure all material is suitable for its proposed use; Any material moved onto or off the site will need to comply with a Materials Management Plan; An emergency spillage action plan will be produced and provisions made to contain any leak/spill;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	All plant and machinery will be checked regularly and, where possible, the use of drip trays will be employed, should vehicles be parked on unsurfaced areas of the site; The contractor(s) will be required to investigate any potentially contaminated ground, including any 'hotspots' of contamination encountered and then to assesses whether there is a need for containment or disposal of any contaminated material; The contractor(s) will brief construction workers as to the possibility of the presence of contaminants; Stockpiles will be bunded and/or temporary drainage systems will be put in place, following guidelines and obtaining relevant licences and consents; Waste arisings and temporary stockpiles will be placed away from watercourses and drainage systems, whilst surface water will be directed away from stockpiles;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	Any waters removed from excavations by dewatering will be appropriately discharged, according to the relevant permit being obtained; and A dust management system will be implemented in order to control the potential risk from any airborne contamination migrating off-site.	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Table 5A.8 Surface Water, Flood Risk and Drainage

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Impacts on water quality due to deposition or spillage of soils, sediments, oils, fuels or other construction chemicals, or through mobilisation of contamination or through uncontrolled site run off. Increased flood risk. Impact on recreational activity.	The construction laydown area site office supervisor will be notified of any potential flood occurring by use of Floodline Warnings Direct service. The Contractor will be required to produce a Flood Risk Management Action Plan/ Method Statement which will provide details of the response to an impending flood and include: A 24 hour availability and ability to mobilise staff in the event of a flood warning; The removal of all plant, machinery and material capable of being mobilised in a flood for the duration of any holiday close down period; Details of evacuation and site closedown procedures; and Arrangements for removing any potentially hazardous material and anything capable of becoming entrained in floodwaters from the temporary works area.	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	Contractors will comply with relevant guidance during construction, including, but not limited to, Environment Agency and Defra guidance, and IDB byelaws; Piling design and construction works will be completed following preparation of a piling risk assessment, in accordance with Environment Agency (EA) guidance; Site personnel will be made fully aware of the potential impact to water resources associated with the proposed construction works and procedures to be followed in the event of an accidental pollution event occurring; Plans to deal with accidental pollution will be drawn up and agreed with the Environment Agency and North East Lindsey IDB (NELIDB), prior to works commencing; Plans for the discharge and/or disposal of potentially contaminated water will be agreed in advance with the Environment Agency, NLC and NELIDB; Arisings and temporary stockpiles will be placed away from drainage systems, and surface water will be directed away from temporary stockpiles to prevent erosion;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	If areas located within Flood Zone 3 are to be utilised for the storage of construction materials, then a permit will be obtained from the EA; Containment measures will be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils; All chemicals will be stored in accordance with their Control of Substances Hazardous to Health (COSHH) guidelines, whilst spill kits would be provided in areas of fuel/ oil storage; An Emergency Spillage Plan will be produced, which site staff would have read and understood; The mixing and handling of materials will be undertaken in designated areas and away from surface water drains; Plant and machinery would be kept away from surface water bodies where possible and will have drip trays installed beneath oil tanks/engines/gearboxes and hydraulics, which will be checked and emptied regularly. Refuelling and delivery areas would be located away from surface water drains;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	Exposed ground and stockpiles will be protected as appropriate and practicable to prevent windblown migration of potential contaminants; and Water suppression will be used if there is a risk of fugitive dust emissions; All foul water from any site compound (including temporary toilets) will either be tankered away to an appropriate disposal facility by a licensed waste disposal contractor or treated on site in a septic tank; Any potentially contaminated water will be tested, and if it is not of suitable quality, agreed disposal procedures will be followed; Construction drainage details will be developed in consultation with the Environment Agency; Pre-construction sediment contamination testing will be undertaken prior to works commencing. If material is considered to be contaminated, it will be disposed of in a licensed facility; All waters removed from excavations by dewatering will be discharged appropriately, in accordance with the relevance licenses being obtained;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	No discharges from any wheel wash will be permitted to discharge into any surface water system without appropriate prior treatment. Temporary drainage facilities will be provided during the construction phase to ensure controlled discharge of surface water runoff. The contractor will be required to ensure that runoff from the Site does not cause pollution or flooding. Measures that will be considered include: Installation of measures such as swales, silt fences and appropriately sized tanks/ponds to reduce sediment load; Cut-off ditches or geotextile silt-fences, installed around excavations, exposed ground and stockpiles to prevent uncontrolled release of sediments from the Site; Site access points will be regularly cleaned to prevent build-up of dust and mud; A valve will be installed to isolate the settlement tank/ponds in the event of a polluted discharge;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	All potentially polluted waters (including washdown areas, stockpiles and other areas of risk for water pollution) to have separate drainage and to be tankered away from the Site; and If monitoring demonstrates unsatisfactory levels of solids or other pollutants, measures will be implemented to control suspended solids or other polluted discharge to watercourses. Measures will also be incorporated to prevent an increase in flood risk during the construction works, including: If areas within Flood Zone 2 are to be utilised for the storage of construction materials, then a permit will be obtained from the EA;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Table 5A.9 Cultural Heritage

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Potential for impact upon settings of heritage assets. Potential for impact upon non-designated heritage assets. Potential for impact upon previously unknown buried heritage assets.	The likely adverse effects arising from the construction of the Proposed Development can be mitigated by a programme of archaeological work, consisting of a strip, map and record within the areas of ground disturbance within the Proposed Development boundary. Any archaeological remains identified during the strip, map and record will be excavated and/or recorded in line with a Written Scheme of Investigation to be agreed with the North Lincolnshire Historic Environment Officer. All works will be undertaken in line with guidance from the CIfA.	To be confirmed in the detailed CEMP.	To be confirmed in the detailed CEMP.

Table 5A.10 Sustainability and Climate Change and Socio-Economics

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Greenhouse Gas emissions do not comply with UK carbon budgets Impacts on local labour market Impacts on local economy.	Minimise the use of natural resources, and unnecessary materials, suitable infrastructure already associated with the Site should be re-used where possible; Flood and pollution prevention measures will be implemented, as outlined in the table above.	To be confirmed in the detailed CEMP.	To be confirmed in the detailed CEMP.

7.0 COMPLEMENTARY PLANS AND PROCEDURES

7.1.1 In addition to the CEMP, a suite of complementary environmental plans and procedures for the construction phase will be developed in accordance with the requirements of the draft DCO, including a SWMP, and piling risk assessment. These plans and procedures will build on principles and procedures set out in this framework CEMP and described in the ES, and will be cross referenced in the detailed CEMP.

8.0 IMPLEMENTATION AND OPERATION

8.1.1 The detailed CEMP will include an organogram showing team roles, names and responsibilities, training requirements, communication methods, document control and environmental procedures.

8.2 Checking and Corrective Action

Monitoring

8.2.1 To meet the requirement of the CEMP, environmental monitoring of the project and its impacts will be undertaken throughout the construction phase. In particular, the following requirements of the CEMP will be closely monitored:

- Licences and approvals;
- Dust and noise monitoring;
- Water pollution prevention; and
- Vegetation protection.

8.2.2 As part of the monitoring process the contractor will allocate a designated Environmental Site Officer(s), who will be present on Site throughout the construction process and when new activities are commencing. The Environmental Site Officer will observe site activities, report any deviations from the CEMP in a log book, along with the action taken and general conditions at the time. The Applicant/operator will be informed of any deviations from the CEMP as soon as possible following identification of such issues. The Environmental Site Officer would also act as day-to-day contact with NLC and other regulatory agencies such as the Environment Agency.

8.2.3 During construction, the Environmental Site Officer will conduct daily walkover surveys to ensure all requirements of the CEMP are being met. Action from these surveys will be documented on an Environmental Action Schedule, discussed with the Site Foreman for programming requirements and issued weekly for actioning.

8.2.4 The Environmental Site Officer / Project Manager will arrange regular formal inspections to ensure the requirements of the CEMP are being met. After completion of the works, the Environmental Site Officer will conduct a final review.

Records

8.2.5 The Environmental Manager/ Project Manager will retain records of environmental monitoring and implementation of the CEMP. This will allow provision of evidence that the CEMP is being implemented effectively. These records will include:

- Environmental Action Schedule;
- Licences and approvals;
- Results of inspections by Environmental Manager/ Project Manager;
- Other environmental surveys and investigations; and

- Environmental equipment test records.

8.2.6 The CEMP will be updated as necessary, with a full review as required (at least quarterly) throughout the construction period.

8.2.7 A brief report will be produced and submitted to North Lincolnshire Council at the end of each key activity shown in the construction programme, and following completion of commissioning. This will summarise the monitoring process, observed deviations from the CEMP and the corrective actions taken.

Management Review

8.2.8 The CEMP will be signed off on completion of the construction works and will form the basis of the Handover Environmental Management Plan (HEMP

.

Annex A – Framework site waste management plan

Introduction

This Framework Site Waste Management Plan (SWMP) provides an outline waste management strategy for the construction phase of the Proposed Development, considering likely waste arising from construction based activities such as earthworks, and addresses how it will be managed through reduction, separation, control and disposal.

This Framework SWMP does not replace the requirement for the completion of a construction stage SWMP. The Framework SWMP presents the approach that would be adopted as a minimum throughout the construction of the Proposed Development and forms a framework for the approach of the construction stage SWMP.

Waste Management Legislation and Policy Context

Relevant waste legislation will be complied with during construction of the Proposed Development. Waste legislation (principally originating from European Directives), includes but is not limited to:

- Control of Pollution (Amendment) Act 1989;
- Environmental Protection (Duty of Care) Regulations 1991;
- Controlled Waste Regulations 1992;
- Environment Act 1995;
- The Hazardous Waste (England and Wales) Regulations 2005;
- The Environmental Permitting (England and Wales) Regulations 2016;
- The Environmental Damage (Prevention and Remediation) Regulations 2009; and
- The Waste (England and Wales) Regulations 2011 (as amended).

(Note that this list includes base legislative references only – a number of regulations have also been amended).

National Planning Policy

In England, waste management strategies and principles are set out in a number of documents.

Waste Strategy 2000 (subsequently built upon by the Waste Strategy for England (Defra, 2007)) introduced newly underlying principles of sustainable waste management, some key aspects of which are outlined in Table A.1 below.

The waste management principles of the waste hierarchy are incorporated in the National Planning Policy for Waste (Department for Communities and Local Government, (DCLG), 2014)) (which replaced Planning Policy Statement 10: Planning for Sustainable Waste Management (PPS10) (DCLG, 2011) as objectives to be delivered through waste local plans.

National Planning Policy Framework (NPPF) 2012 (Revised 2018) sets out the Government's objectives in order to help achieve sustainable development. The framework does not include specific waste policies as these have been published as part of the National Waste Management Plan for England, and as such the National Planning Policy for Waste is still therefore applicable.

The National Planning Policy for Waste outlines that applicants should set out the arrangements that are proposed for managing any waste produced and prepare a SWMP. The arrangements described and defined within the SWMP should include information on the proposed waste recovery and disposal system for all waste generated by the Proposed Development, and an assessment of the impact of the waste arising from the Proposed Development on the capacity of waste management facilities to deal with other waste arising in the area.

The Applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal.

Applicants should propose an effective system for managing hazardous and non-hazardous waste arising from the construction of the Proposed Development.

Applicants should demonstrate

- Any such waste will be properly managed, both on Site and off-site;
- The waste from the Proposed Development can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and
- Adequate steps have been taken to minimise the volume of waste arisings, and the volume of waste arisings sent to disposal, except where that is the best overall outcome.

Table A.1: Principles of Waste Management – Definitions

Principle	Description
Waste Hierarchy	A theoretical framework used as a guide to the waste management options that should be considered when assessing BAT.
Waste as a Resource	Certain wastes can be directly used or separated/ processed for use as a replacement for raw materials, saving resources and potentially reducing energy use or other impacts associated with virgin resource extraction and transport.
Proximity Principle	Waste should generally be managed as close as possible to its place of production, to minimise environmental impact that arises through transportation.

Principle	Description
Best Practicable Environmental Option (BPEO) (Superseded by SEA/SA)	Defined by the Royal Commission on Environmental Pollution (1988) as 'the outcome of a systematic and consultative decision making procedure which emphasises the protection and conservation of the environment across land, air and water'. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefits, as a whole, at acceptable cost, in both the short term and the long term. SA is designed to ensure compliance with SEA and as such includes for requirements on environmental decision making such as an opportunity for the public to express their opinion on draft plans (community involvement), take into account significant environmental effects including those on human health, material assets and climatic factors and a report on assessment of alternative options considered and reasons why alternatives have been assessed and why others have not.

Policy Relating to Specific Waste Types

In regards to Construction, Demolition and Excavation (CD&E) Waste the EU Waste Directive (European Commission, 2008) has set a recovery target of 70% of construction and demolition waste by 2020.

Waste and Resources Action Programme (WRAP) have published key benchmark figures for target setting which identify the typical volumes of CD&E waste produced under Baseline Practice and the volume which can be expected following Good Practice.

Figures from 2009/2010 (WRAP, 2010) indicate that under a Baseline Practice scenario, which assumes that no attempt is made to secure a higher recovery rate, waste recovery is typically 50%. However, following Good Practice waste recovery is typically at a much higher rate of 70% to 80% which meets with the target as detailed within the EU Waste Directive.

It should be the aim of the Proposed Development to ensure that good practice CD&E waste recovery targets of 70% to 80% are achieved as a minimum in relation to waste produced at the Site.

Local Planning Policy

North Lincolnshire Council (NLC) is responsible for minerals and waste planning for the area in which the Site is located.

The North Lincolnshire Core Strategy was adopted in June 2011. Policy CS20 relates to sustainable waste management.

"The Council will promote sustainable waste management by:

- Requiring Site Waste Management Plans for future major developments to minimise waste;
- Requiring the integration of facilties for waste minimisation, re-use, recycling and composting, in association with the planning, construction and occupation of new development;
- Providing guidance on minimising potential social, environmental and economic impacts that are likely to arise in the development of waste infrastructure; and
- Establishing a planning policy framework that identifirs suitable locations for waste management.

The North Lincolnshire Minerals and Waste Development Plan Document: Humber Area Local Aggregate Assessment (October 2017) The requirement to produce an annual Local Aggregate Assessment (LAA) was introduced through the publication of the National Planning Policy Framework in March 2012.

The North Lincolnshire Local Plan (adopted 2003) outlines that its; *"purpose is to inform interested parties of waste management issues and to set out policies and proposals for waste management activities. An important element of the Local Plan is to identify policies for managing waste within the area which draw the right balance between the protection of the environment and the provision and maintenance of sufficient capacity to deal with the waste produced."*

The Waste Position Statement for Yorkshire and Humber (Yorkshire and Humber Waste Authorities, 2016) has been produced jointly by all seventeen Waste Planning Authorities in the Yorkshire and Humber area to help ensure appropriate coordination in planning for waste. In particular, it helps demonstrate the scale and range of waste infrastructure, as well as the extent to which movements of waste within and across the Yorkshire and Humberside boundary play a role in the management of waste. The position statement also provides data on waste arisings and methods of management within the region.

Approach to Waste Management

The Applicant is committed to delivering a development that is sustainable in regards to matters relating to waste management, and will comply with the relevant statutory requirements (as detailed above), which are underpinned at a national level by PPS 10. This requirement will be passed onto the selected construction contractor.

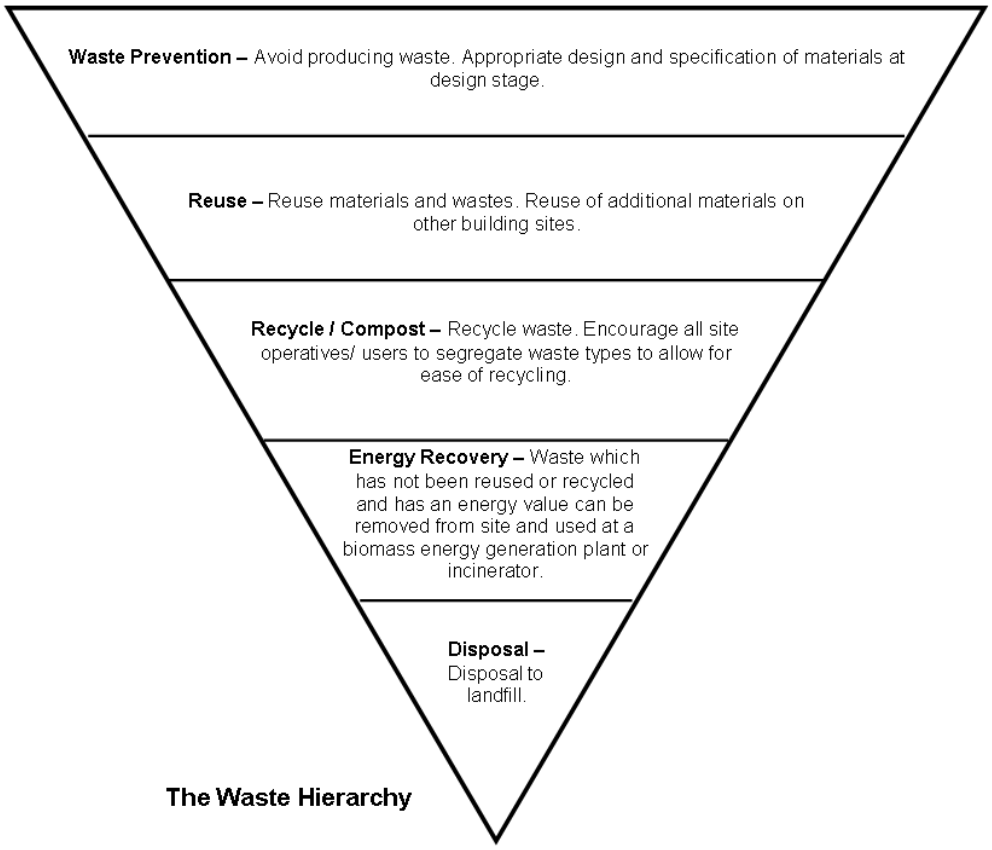
Waste elimination will start as early as possible and the contractor and their design team will work in conjunction to design and plan waste minimisation at various stages of the Development.

In addition, an effective construction phase SWMP will be prepared which will identify, formalise and communicate waste management good site practice and responsibilities during the construction phase for the Proposed Development.

The proposed construction phase SWMP will identify the types and quantities of waste anticipated to be generated, along with the definition of suitable disposal routes. The plan will also include details as to how material reuse and recycling options would be maximised. The plan will be maintained as a live document to be updated and monitored by the contractor, in order to demonstrate compliance with the Waste Duty of Care and other relevant regulations.

The proposed SWMP would be compiled around the principles of the Waste Hierarchy, examples of which are illustrated in Figure A.1 below.

Figure A.1: The Waste Hierarchy



Waste Types and Actions

Various waste types are anticipated to be generated during construction of the Proposed Development. Actions pertaining to waste minimisation which will be considered for implementation during the construction of the Proposed Development are described below; these will be confirmed in the construction phase SWMP.

Waste Minimisation Actions and Mitigation

During the construction phase of the Proposed Development the contractor will be required to develop and implement a construction phase SWMP, incorporating the recommendations and requirements within this framework SWMP. Waste minimisation actions relating to Site generated waste that are anticipated to be implemented include:

Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;

- Implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
- attention to material quantity requirements to avoid over-ordering and generation of waste materials;

- Re-use of materials wherever feasible, e.g. re-use of excavated soil for landscaping and concrete crushing and re-use;
- Segregation of waste at source where practical; and
- Re-use and recycling of materials off-site where re-use on site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re-use or re-processing).

Additional Actions for Dealing with Waste

In addition to the waste management measures as detailed in the 'Approach to Waste Management' section above, there are actions that would be introduced as part of the construction SWMP which would contribute to the general reduction of waste generation at the Proposed Development Site – these may include:

- Appointment of an environmental co-ordinator who will hold overall responsibility for waste management. The role includes co-ordinating all waste or environmental issues on Site from waste data to identifying training needs. Sites with an environmental co-ordinator tend to perform better in managing waste;
- Accurate record keeping of waste types, volumes and disposal routes and destinations;
- Staff awareness training to ensure all personnel know the correct procedures on Site for waste segregation, disposal and the identity of the waste champion and actively promote recycling on Site through clear signage (during construction and for commercial and educational facilities);
- Setting of targets/ Key Performance Indicators (KPIs) for waste recycling and reduction; and
- Establishing a good management structure which would allow prompt decision making relating to improvements in waste management and recycling initiatives.

Indicative Roles and Responsibilities

Personnel at all levels have a role in managing materials and waste correctly, however typical roles and responsibilities that may be defined as part of both the construction and operational phase SWMPs (not an exhaustive list) are summarised below.

Site Manager

- Responsible for ensuring a system is implemented that identifies and manages the waste being produced;
- Implements a waste plan as a 'live' document, identifying an appropriate strategy and KPIs; and
- Co-ordinates waste management on Site.
- Site Waste Management Representative
- Co-ordinates the identification of materials for re-use or recycling and identify opportunities for waste reduction;

- Staff training;
- Ensures that all waste storage containers are accurately labelled to show all site workers where to deposit specific materials; and
- Liaises with the management team to ensure the appropriate management of incoming materials, the establishing of waste management contracts, and the provision of receptacles.

All Site Personnel

- Reduction of materials ordered to reduce the amount of waste produced;
- Correct handling and storage of materials to prevent damage and wastage;
- Co-ordinate with the site team the reuse or recycling of materials for alternative usage where possible;
- Correct handling of waste materials by containment, separation and storage;
- Labelling of waste storage containers to show where to deposit specific materials;
- Ensure containers are stored safely and securely; and
- Disposal of waste to appropriate site with correct documentation completed.

The SWMP will define and assign the responsibilities of personnel at the Site.

Audit Monitoring and Review

To be most effective, it is important that the SWMP (is a live document, which is continually reviewed and updated. Waste will be monitored routinely. Monitoring of waste and waste management plans ensures that waste minimisation obligations, as detailed within the SWMP are being met and helps to identify opportunities for improvements and potential cost reductions.

The following is not an exhaustive list and represents typical activities undertaken at each stage.

Waste Monitoring (undertaken quarterly as a minimum)

- Update the SWMP at regular intervals to illustrate changes in the development as required by the current SWMP Regulations, such as waste types, volumes, sub-contractors and changes in personnel and to drive continual improvement in promoting management of wastes as high up the waste hierarchy as possible;
- Ensure all legislation and regulations are being met and that the waste management strategy is being implemented appropriately, monitored through regular site inspections;
- Completion of monthly logs detailing the volume of materials brought onto Site and the volume of waste generated including the type and the route of disposal/recovery; and

- Collation of monthly data into a quarterly report detailing all waste movements and submitted to the site manager to be utilised during the annual waste audit and waste review.

Waste Audit (undertaken annually as a minimum)

- Collate / review baseline information. This will include, for example, reviews of:
- Operations/ staffing levels, composition, waste monitoring reports and quantity of waste generated;
- Current waste management procedures;
- Existing activities including, for example, key roles and responsibilities; and
- An estimation of waste volumes including a comparison from previous and projected years (where appropriate).

The results of the waste audit will be used to inform the waste review.

Waste Review (undertaken annually as a minimum)

- A waste review should be undertaken following the completion of a waste audit and the completion of regular waste monitoring. The review will provide an opportunity to consider the suitability of the management strategies that are in place in relation to relevant regulations and best practice procedures, and identify areas for improvement, lessons to be learnt and improved cost saving and sustainability; and
- The review will consider monthly, quarterly and annual reports, compare waste related data that has been collected and include guidance and proposals to drive continual improvement.

The monitoring procedures detailed above will be undertaken as a minimum and defined within the SWMP.

Conclusion and Summary

This framework SWMP presents the approach that would be implemented at the Proposed Development during its construction.

This plan illustrates and seeks to guide the contractor and the Applicant to:

- Recognise that the SWMP will underpin the approach to waste management for the Proposed Development;
- Define indicative roles and responsibilities within the organisations to ensure those responsible for waste management are aware of the remit.
- Demonstrate that key waste legislation would be met and local and regional drivers would be fulfilled including reviewing procedures should waste legislation and guidance be amended or updated in future;
- Demonstrate that the construction phase would minimise waste in accordance with best practice via the implementation of a construction phase SWMP;

- Develop a proactive and coordinated approach to sustainable waste management, reuse and recycling that will be encouraged and implemented at the Site through a number of recycling initiatives to divert as much recyclable waste as possible from landfill; and
- Record and audit waste movement through, in and out of the Proposed Development as appropriate.

Where individual waste types have not been identified within this framework SWMP, these will be assessed at the appropriate stage.

In Table A.3 below is a summary of the potential wastes which are likely to be generated from the Proposed Development and proposed management processes to reduce negative impacts.

Table A.3: Waste Estimations

Waste Type	Main Management Process
Soil arisings	Reuse on Site where appropriate, remediate where necessary.
Concrete, masonry and aggregates	Crush and reuse investigate potential for off-site use
Metals	Recycle via appropriate waste carrier
Paper and cardboard	Segregate and recycle via appropriate waste carrier
Sanitary waste	Remove by specialist waste contractor
Plastics and glass	Recycle via appropriate waste carrier

References:

Department for Communities and Local Government (2011) *Planning Policy Statement 10: Planning for Sustainable Waste Management (PPS 10)*

Department for Environment, Food and Rural Affairs (2007) *Waste Strategy for England*

Department for Communities and Local Government (2012) *National Planning Policy Framework*

North Lincolnshire Council (2011) *Core Strategy*

North Lincolnshire Council (2016) *North Lincolnshire Materials and Waste Development Plan Document: Humber Local Aggregate Assessment*

North Lincolnshire (2003) *Local Plan*

North Yorkshire County Council (2016) *Yorkshire and Humber Waste Position Statement*

WRAP (2010) *The Construction Commitments: Halving Waste to Landfill; Benchmarks for target-setting*