APPENDIX 7 - UPDATED FRAMEWORK CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN ('CEMP')

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5A FRAMEWORK CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Introduction

5A.1 This document presents a framework for the Construction Environmental Management Plan (CEMP). The detailed CEMP will be produced for the Proposed Development following the appointment of the contractor in accordance with a Requirement of the DCO.

5A.2 Potential impacts have been identified through the Environmental Impact Assessment (EIA) process and are reported in the Environmental Statement (ES) Volume I. 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.

5A.3 This document provides the likely structure of the 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.

5A.4 The detailed CEMP will be produced in line with this framework document following receipt of planning consent and would be agreed with SDC in advance of starting enabling works on Site. The need for a detailed CEMP to be produced in this manner is secured through a Requirement in Schedule 2 to the draft DCO (Application Document Ref. 2.1).

5A.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 SDC and other relevant regulatory authorities. The key elements of the 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.

5A.6 In summary, the CEMP will identify how commitments made in the EIA will be translated into actions on Site and includes a schedule from implementing the actions through allocation of key roles and responsibilities.

5A.7 The appointed contractor will 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 EPL.

5A.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 DCO application.

5A.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.

Construction Programme

5A.10 The current expectation is that site preparation, construction and commissioning of the Proposed Development will take approximately 40 months.

5A.11 Allowing sufficient time to receive planning 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 2019, with an expected operational start date of Q2 2022.

5A.12 Table 5A.1 below provides an indicative construction programme.

Table 5A. 1 Indicative Construction Programme

	2019				2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Demolition of ancillary structures	■	■														
Earthworks	■	■														
Main civil works			■	■	■	■	■	■	■	■						
Process works					■	■	■	■	■	■	■	■	■			
Gas connection/ AGI construction									■	■	■	■				
Commissioning													■	■		

5A.13 Construction working hours will generally be Monday to Friday 07:00 to 19:00 and Saturday 07:00 to 13:00, 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. Construction noise limits have been identified for nearby noise sensitive receptors during evening and night-time periods. Thus, where on-site works are to be conducted outside the core hours they will comply with any restrictions agreed with the planning authorities, in particular regarding the control of noise and traffic. Compliance with these noise limits will ensure adverse effects are unlikely. Abnormal or emergency construction traffic movements may occur outside of normal working hours. In the event of these occurrences, specific noise mitigation measures will be put in place to reduce potential noise impacts at nearby noise sensitive receptors as set out below.

Parking Provisions and Off Site Facilities

5A.14 The location and size of parking provisions 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. It will also include a description of any laydown areas or contractor accommodation areas.

Off Site Delivery Routes

5A.15 The CEMP will provide details of the designated routes for HGV movements and worked car movements, with reference to the Construction Traffic Management Plan and Construction Workers Travel Plan (which will also be prepared in accordance with DCO Requirements, and for which frameworks are included in Appendix 14A, ES Volume III). It will also detail any measures designed to reduce travel during peak hours on the local road network, which junction modelling has identified to be 0700-0800 and 1700-1800.

Recycling and Disposing of Waste

5A.16 In order to control the waste generated on Site during site preparation and construction, the contractor will separate the main waste streams on Site, prior to them being taken to a waste facility for recycling or disposal.

5A.17 A Site Waste Management Plan (SWMP) will be developed, which 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.

5A.18 All waste to be removed from Site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

Best Practice Measures

5A.19 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.

Management and Mitigation Plan

5A.20 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 5A. 2 Transport and Access

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Increased traffic flows, including HGVs on the roads leading to the Site (the A19 and Wand Lane), as well as along West Lane, Fox Lane and Millfield Road associated with the Proposed Gas Connection construction. Severance and intimidation associated with increased construction traffic and abnormal loads.	• Implement a Construction Worker Travel Plan (CWTP) to reduce the volume of construction staff and employee trips to the Site; • the contractor will liaise with construction personnel for potential to implement staff minibuses and car sharing options; and • the contractor will prepare a Construction Traffic Management Plan to identify a number of measures to control the routing and impact that HGVs will have on the local road network during construction. All construction HGVs will be required to arrive and depart the site towards the M62 avoiding the village of Chapel Haddlesey and Burn (with the exception of a small number accessing the northern parts of the Proposed Gas Connection construction area). A programme of monitoring will be recommended to assess the effectiveness of the measures proposed.	To be confirmed in detailed CEMP and CWTP.	To be confirmed in detailed CEMP.

Table 5A. 3 Air Quality

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Increased NO_2 and PM_{10} from on-site demolition and construction vehicle/plant emissions Increased particulates and deposited dust from soil and spoil movements and handling.	Appropriate standard and best practice control measures will be includes in the detailed CEMP, which may include: • application of good practice techniques; • avoid roughening of concrete surfaces; • store sand and aggregates in bunded areas; • use water suppression and regular cleaning to minimise mud on road; • cover vehicles leaving the site; • employ wheel wash systems at site exits; • restrict unmade road access; • use water suppression to control dust during demolition activities; • avoid blasting where possible during demolition (use mechanical/ manual techniques where possible); and • prohibit open fires on Site. Best practice will also be employed for the siting and operation of non-road mobile machinery, to control associated emissions, including: • location of machinery and dust causing activities away from sensitive receptors where possible;	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP.

	• minimise vehicle and plant idling; and • minimise operating time outside of normal working hours/ daylight hours.		

Table 5A. 4 Noise and Vibration

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Vibration due to construction activities causing annoyance at Noise Sensitive Receptors and damage to building structures. Evening and night-time noise effect due to construction activities at nearby noise sensitive receptors. Potential for abnormal night-time construction traffic on the A19 and Wand Lane.	Mitigation measures will be undertaken to mitigate noise. These will be included in the detailed CEMP and will include: • abiding by agreed construction noise limits at nearby NSRs, which will be agreed in accordance with a requirement in the DCO; • ensuring that all processes are in place to minimise noise before works begin and ensuring that BPM are being achieved throughout the construction programme, including the use of localized screening around significant noise producing plant and activities; • 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 to percussive techniques where practical; • use of lower noise piling (such as rotary bored or hydraulic jacking) rather than the driven piling techniques (if required), where possible, for works within the Proposed Power Plant Site and cooling water abstraction point; • cofferdam piling at the cooling water abstracting point to extend above the top of the abstraction structure to provide acoustic screening during concrete breaking out for nearby NSRs;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	• off-site pre-fabrication, where practical; 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; • all contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2) (BSI, 2014a and b), which should form a prerequisite of 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; • appropriate routing of construction traffic on public roads and along access tracks, including group transfer of site staff along the pipeline route to minimise vehicle movements; • consultation with SDC and local residents to advise of potential noisy works that are due to take place; and • noise complaints should be monitored, reported to the contractor and immediately investigated.		

Table 5A. 5 Water Resources and Flood Risk

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Leakage or accidental spillage of building materials and potential pollutants used on Site, migrating to nearby surface watercourse of infiltrating to groundwater. Flood Risk	The contractor will comply with: • Pollution Prevention Guidelines (PPG) 1 General guide to the prevention of pollution; • PPG 2 Above ground oil storage tanks; • PPG 3 Use and design of oil separators in surface water drainage systems; • PPG 4 Treatment and disposal of sewage where no foul sewer is available; • PPG 5 Works and maintenance in or near water; • PPG 6 Working at construction and demolition sites; • PPG 7 Refuelling activities; • PPG 13 Vehicle washing and cleaning; • PPG 18 Managing fire water and major spillages; and • PPG 21 Pollution incident response planning. Measures to incorporate the EA PPG documents as listed above will include: • placing arisings and temporary stockpiles outside of the Flood Zone 3 flood extent and away from drainage systems, and directing surface water away from stockpiles to prevent erosion;	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	• 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 (Health and Safety Executive, 2002), whilst spill kits will be provided in areas of fuel/ oil storage; • an Emergency Spillage Plan will be produced, which site staff will 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 will be kept away from surface water bodies wherever 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 will be located away from surface water drains; and • exposed ground and stockpiles will be protected as appropriate and practicable to prevent windblown migration of potential contaminants. Water suppression will be used if there is a risk of fugitive dust emissions. Measures that will be considered for implementation for temporary drainage through the construction design and/or CEMP include: • installation of measures such as swales, silt fences and appropriately sized settlement tanks/ ponds to reduce sediment load;		

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	• cut-off ditches or geotextile silt-fences, installed around excavations, exposed ground and stockpiles to prevent uncontrolled release of sediments from the Proposed Development; • site access points will be regularly cleaned to prevent build-up of dust and mud; • a valve to isolate the settlement tank/ponds in the event of a polluted discharge; • oil interceptors to be installed (notably the outflow from the settlement pond/ tank) to reduce the potential risk for contamination of groundwater and surface water; and • all potentially polluted waters (including washdown areas, stockpiles and other areas of risk for water pollution) to have separate drainage and to be tinkered away from the Site. The following measures will be implemented to prevent an increase in flood risk during the construction works: • the installation and subsequent removal of temporary cofferdams required to enable construction works at the cooling water abstraction and discharge points will be completed during the lower flow summer period. • topsoil and other construction materials will be stored outside of the 1 in 100 year functional floodplain extent and only moved to the temporary works areas immediately prior to use;		

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	• connectivity will be maintained between the floodplain and the River Aire, with no changes in ground levels within the floodplain; • the construction laydown area site office and supervisor will be notified of any potential flood occurring by use of the Floodline Warnings Direct service; and • 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 the 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 minimise impacts on water quality during the use of temporary cofferdams, pre-construction sediment contamination testing and use of silt curtains will be applied.		

Table 5A. 6 Ground Conditions

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Potential for risks to human health associated with waste generation, land contamination, airborne contamination and groundwater contamination. Potential risks of explosion if explosive gases were to accumulate in excavations.	• Good operational practices e.g. the use of Personal Protective Equipment (PPE) such as dust masks; • ensure that all material is suitable for its proposed use and will not result in an increase in contamination related risks; • implement pollution control measures including: – 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; – an emergency spillage action plan will be produced and provisions made to contain any leak/spill – should any potentially contaminated ground, including isolated 'hotspots' of contamination be encountered during construction, the contractor will be required to investigate the areas and assess the need for containment or disposal of the material. The contractor will also be required to assess whether any additional health and safety measures are required. Any such investigations will be required to be undertaken in consultation with the Environment Agency and other appropriate consultees. To further minimise the risks of contaminants being mobilised and contaminating other soils or water, construction workers will be briefed as to the possibility of the presence of such materials;	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
	– in the event that contamination is identified during construction works, appropriate remediation measures will be taken to protect construction workers, future site users, water resources, structures and services; – the Contractor will be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water will be directed away from stockpiles to prevent erosion; – the risk to surface water and groundwater from run-off from any contaminated stockpiles during construction works will be further reduced by implementing suitable measures including sealing stockpiles to prevent rainwater infiltration. Alternatively bunding and/or temporary drainage systems will be put in place, designed in line with current good practice, following appropriate guidelines and obtaining all relevant licences including discharge consents; – any waters removed from excavations by dewatering will be discharged appropriately, subject to the relevant licences being obtained; and – the Contractor will implement a dust suppression/management system in order to control the potential risk from airborne contamination migrating off-site to adjacent sites, specifically the adjacent agricultural land, surrounding villages and the River Aire.		

Table 5A. 7 Ecology

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Potential for obtrusive glare, upward light spill and light trespass to impact on ecology. Potential for spillages to enter watercourses and impact ecology. Dust deposition on sensitive ecological receptors. Transfer of invasive species.	• Compliance with industry good practice and environmental protection legislation e.g. prevention of surface and ground water pollution, fugitive dust management, noise prevention or amelioration; • measures to comply with relevant legislation regarding fish welfare will be implemented prior to and during the draw-down of the lagoon, as well as during any necessary de-watering operations in the River Aire, during construction. Health checks will be completed on fish in the lagoon, where necessary, and an appropriate receptor site will be sourced, subject to satisfactory health of the fish; • the installation and subsequent removal of temporary cofferdams required to enable construction works at the cooling water abstraction and discharge points will be completed outside of the main salmonid migratory period (October to December inclusive) to minimise potential impacts on migrating fish; • appropriate silt control measures (silt curtains) will be used during the installation and removal of temporary cofferdams in the River Aire, and during works within Ings and Tethering Drain and Hensall Dyke; • measures will be put in place at construction compounds on Ings and Tetherings Drain to prevent obstructing the movement of otters along the drain at night; • where the construction of the Proposed Cooling Water and Gas Connection corridors affect hedgerows or trees, their removal will be minimised as far as possible. Retained	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

	hedgerows and trees will be protected by clearly defined root protection areas to prevent damage/ compaction of roots by plant and other machinery. The two sections of hedgerow that must be removed will be replanted upon completion of construction works; • precautionary working methods to avoid accidental killing or injury of grass snakes will be implemented during construction of the Proposed Gas Connection and Proposed Cooling Water Connections. These include initial clearance of potentially suitable vegetation down to a height of 30 cm, followed by dismantling of any suitable features, such as log piles, tree stumps) under ecological supervision. Vegetation will be cleared to ground level once no risk of grass snake presence remains. Vegetation within working areas will be kept short during construction to discourage grass snakes from entering the Site. A Precautionary Working Method Statement will be produced to guide the process; • to ensure legislative compliance in relation to nesting birds, all clearance of suitable vegetation during site preparation will be undertaken outside the breeding season (typically March-August inclusive for most species), where possible. In situations where this is not possible, an ecologist would check the working area for nests before works commence. If nests were discovered, appropriate mitigation would be implemented to ensure that they are not disturbed or destroyed before any works can commence in that area. This would include imposing exclusion zones between the works and nest(s) and suspending vegetation clearance works within the area until any young had fledged. • all habitats subject to temporary disturbance for the Proposed Development will be appropriately reinstated, and given the affected habitat is primarily arable farmland this can be delivered with certainty of success;		

	• a Lighting Strategy will be prepared, setting out how lighting impacts on sensitive ecological receptors have been considered and addressed; • excavations deeper than 1 m will be covered overnight or a where not practicable a means of escape will be fitted; • Precautionary Working Method Statement (PWMS) implemented during construction works; • a pre-construction badger survey will be completed and protection zones will be established around any identified badger setts where possible; • precautionary pre-construction check for water vole will be undertaken for all sections of watercourses within the Site; • legal requirements will be complied with, including the preparation of a Fish Management Plan; and • an invasive species management plan (ISMP) will be prepared to set out the measures that will be necessary during construction to prevent the spread of invasive plants identified within the Site.		

Table 5A. 8 Waste and Resources

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
Potential to impact on sensitive receptors (humans, wildlife and controlled waters) if not stored and managed appropriately.	• All operational waste will be dealt with in accordance with the waste duty of care in Section 34 of the Environmental Protection Act 1990 (the Duty) and the 2011 Regulations and consigned via a registered waste carrier to treatment or disposal at a suitably licensed waste facility; • The contractor will prepare and implement a Site Waste Management Plan (SWMP) in accordance with the framework set out in Appendix A of this report; • As part of the SWMP, the contractor will segregate waste to be reduced, re-used and recycled where possible; • Earthworks will be balanced so that quantities of 'cut' material match quantities of 'fill' material so there is not expected to be significant quantities of surplus excavation waste from the site; To minimise impacts of waste on the surrounding environment, the following measures will be implemented: • damping down of surfaces during spells of dry weather and brushing/ water spraying of heavily used hard surfaces/ access points across the Site as required; • off-site prefabrication, where practical, including the use of prefabricated structural elements, cladding units, mechanical and electrical risers and packaged plant rooms; • burning of waste or unwanted materials will not be permitted on Site; • all hazardous materials including chemicals, cleaning agents and solvent containing products to be properly sealed in	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements	Responsibility
	sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas; • all demolition and construction workers will be required to use appropriate PPE whilst performing activities on-site; • any waste effluent will be tested and where necessary, disposed of at the correctly licensed facility by a licensed specialist contractor/s; and • materials requiring removal from the Site will transported using licensed carriers and records will be kept detailing the types and quantities of waste moved, and the destinations of this waste, in accordance with the relevant regulations		

Table 5A. **9 Cultural Heritage**

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Potential for impact upon previously unknown buried heritage assets. Loss of non-designated heritage asset. Loss of archaeological deposits.	• A staged program of archaeological investigation is to be carried out prior to construction and this will entail detailed mitigation. Mitigation measures will be discussed and agreed with North Yorkshire County Council archaeologist, and approved by the local planning authority in accordance with a DCO Requirement.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Table 5A. 10 Land Use, Agriculture and Socio-Economics

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Disruption to users of two Public Rights of Way during construction of Proposed Cooling Water and Gas Connections. Temporary loss of agricultural land. Loss of trees and other vegetation. Impacts on soil.	• Appropriate measures to mitigate temporary impacts on users of Public Rights of Way affected during the construction phase. • A Landscape and Biodiversity Strategy will be implemented. • Agricultural soils will be managed, preserved, retained and reinstated in accordance with Department for Environment, Food and Rural Affairs (Defra) guidance.	To be confirmed in detailed CEMP.	To be confirmed in detailed CEMP.

Table 5A. 11 Landscape and Visual Amenity

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements	Responsibility
Loss of existing landscape features and visibility of new landscape features. Temporary disturbance to agricultural fields. Increased visibility of construction and operation activities.	• Lighting will be designed to reduce unnecessary light spill outside of the Site boundary in accordance with the Lighting Strategy (to be prepared in accordance with a DCO Requirement). • Existing vegetation along the boundary of the Site will be retained and managed to ensure its continued presence to aid the screening of low level views into the Site. • A Landscape and Biodiversity Strategy will be prepared in accordance with a DCO Requirement, including measures required at the construction stage to mitigate impacts on landscape and visual receptors.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP.

Complementary Plans and Procedures

5A.21 In addition to the CEMP, a suite of complementary environmental plans and procedures for the construction phase will be developed in accordance with draft DCO Requirements, including a SWMP, scheme for the control of construction noise and piling risk assessment. These plans and procedures will build on the principles and procedures set out in this framework CEMP and described in the ES, and will be cross referenced in the detailed CEMP.

Implementation and Operation

5A.22 The detailed CEMP will include an organogram showing team roles, names and responsibilities, training requirements, communication methods, document control and environmental emergency procedures.

Checking and Corrective Action

Monitoring

5A.23 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

5A.24 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 and report any deviations from the CEMP in a log book, along with the action taken and general conditions at the time. The Applicant 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 Selby District Council and other regulatory agencies such as the Environment Agency.

5A.25 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.

5A.26 The Environmental Manager/ 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

5A.27 The Environmental Manager/ Project Manager will retain records of environmental monitoring and implementation of the CEMO. 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.

5A.28 The CEMP will be updated as necessary, with a full review as required (at least quarterly) throughout the construction period.

5A.29 A brief report will be produced and submitted to SDC 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

5A.30 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 2007; and
- The Environmental Damage (Prevention and Remediation) Regulations 2009.

(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 new 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 now fully incorporated in Planning Policy Statement 10: Planning for Sustainable Waste Management (PPS10) (Department for Communities and Local Government (DCLG), 2011)) (which replaced Planning Policy Guidance 10 (PPG10): Planning and Waste Management and the previous version of PPS10 published by DCLG in 2005) as objectives to be delivered through Regional Spatial Strategies and waste local plans. The requirement for a Best Practicable Environmental Option (BPEO) appraisal has been replaced in PPS10 with a requirement for Strategic Environmental Assessment (SEA)/ Sustainability Appraisal (SA) to be undertaken for planning strategies and for it to be demonstrated that planned facilities represent the application of Best Available Techniques (BAT).

National Planning Policy Framework (NPPF) 2012 (DCLG, 2012) sets out the Government's objectives in order to help achieve sustainable development. Many Planning Policy Statements have been replaced following the introduction of the (NPPF), however the framework does not include specific waste policies as these will be published as part of the National Waste Management Plan for England, and as such the Planning Policy for Waste (PPS10) is still therefore applicable.

PPS10 also states 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 of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.

Table A.1: Principles of Waste Management – Definitions

Principal	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.
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

Principal	Description
	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 full assessment of alternative options 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 Yorkshire County Council is the waste disposal authority for the Site. North Yorkshire County Council, City of York Council and the North York Moors National Park Authority are producing a minerals and waste joint plan which will cover the period up to 31 December 2030. Work on the minerals and waste joint plan started in May 2013 and is anticipated to be adopted by November 2017.

With respect to waste generation from non-waste developments, the following relevant policy applies:

"Policy D11: Sustainable design, construction and operation of development

Part 2)

Proposals for new built development should demonstrate how the development would be designed, constructed and operated in order to:

i) Minimise waste generated during construction of the development, and incorporate measures to encourage or facilitate the re-use and recovery of any waste generated during construction of the development;

iii) Use sustainable construction materials where practicable, including use of alternatives to primary land-won aggregate."

North Yorkshire Waste Local Plan (Adopted 2006)

The North Yorkshire Waste Local Plan (North Yorkshire County Council, 2006) provides detailed policies and proposals that will guide waste related development in the County of North Yorkshire, outside the Yorkshire Dales and North York Moors National Parks, and the City of York.

The plan was due to expire on 17 May 2009, however some policies have been 'saved' until the policies being developed in the minerals and waste development framework supersede them.

The 'saved' policies will continue to form part of the statutory development plan and provide the local policy framework for development control decisions until they are replaced by ones in the North Yorkshire Minerals and Waste Plan.

The majority of saved policies relate to development of waste management facilities and hence are not relevant to the Proposed Development. Relevant saved policies include:

"Policy 5/1 Waste Minimisation

Proposals for major development should include a statement identifying the waste implications of the development and measures taken to minimise and manage the waste generated. Permission will not be granted where this has not been adequately addressed.

Policy 5/8 Temporary Recycling Facilities for the Recycling of Construction and Demolition Wastes

Proposals for the location of temporary facilities on or close to construction and demolition sites for the recovery, separation and where appropriate processing of waste materials generated by the on-site construction or demolition works will be permitted provided that:-

a) the facilities are removed on completion of the construction and demolition project; and

b) the highway network and site access can satisfactorily accommodate the traffic generated; and

c) the proposal will not have an unacceptable impact on local amenity or the environment."

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.

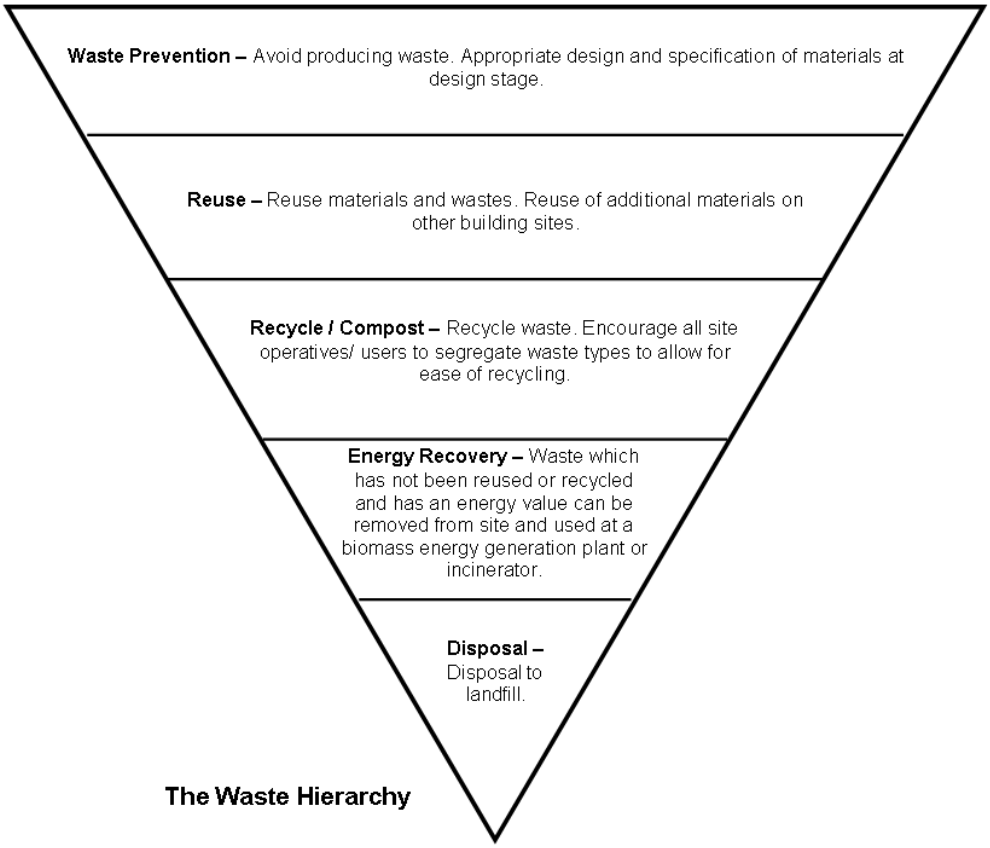
Waste elimination will start as early as possible and the contractor and their design team will work in conjunction to design and plan waste minimisation at various stages of the Development.

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



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The general waste types which are anticipated to be generated during construction of the Proposed Development are detailed below. Actions pertaining to waste minimisation which will be considered for implementation during the construction of the Proposed Development are also described; these will be confirmed in the construction phase SWMP. Where individual waste types have not been identified, these will be assessed at the appropriate stage.

Estimations for the volume of potential construction waste are included within Chapter 17: Waste Management of the Environmental Statement (Application Document Ref. No. 6.2) and reproduced as Table A.2 below.

Table A.2: Estimated types and quantities of construction waste

Waste type	Average percentage composition	Estimated tonnes
Bricks	10%	770
Tiles and ceramics	0%	10
Concrete	44%	3,520
Inert	26%	2,090
Insulation	0%	30
Metals	3%	210
Packaging	2%	140
Gypsum	1%	80
Binders	0%	Less than 10
Plastics	0%	20
Timber	2%	170
Floor coverings (soft)	0%	Less than 10
Electrical and electronic equipment	0%	0
Furniture	0%	Less than 10
Canteen/office/adhoc	1%	50
Liquids	0%	-
Oils	0%	-
Asphalt and tar	2%	180
Hazardous	1%	60
Other	0%	-
Mixed	8%	670
TOTAL	100%	8,000

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

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

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

North Yorkshire County Council (2006) *North Yorkshire Waste Local Plan*

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