TEESWORKS

DORMAN POINT ENVIRONMENTAL STATEMENT

VOLUME 2: CHAPTER 0 MITIGATION AND MONITORING

DECEMBER 2020

Dorman Point, South Tees

Volume 2: Environmental Statement (December 2020)

Chapter O: Mitigation and Monitoring

Lichfields
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Contents

O1.0 Introduction

O1.1 The Environmental Statement ('ES') has identified a series of mitigation and ongoing monitoring and/or management measures which are designed to limit or remove any significant adverse environmental effects of the proposed development.

O1.2 Schedule 4, Part 7 of the Town and Country Planning (Environmental Impact Assessment) ('EIA') Regulations 2017 (as amended) ('2017 EIA Regulations (as amended)') (Ref 1) requires an ES to provide:

"A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example preparation of a post-project analysis)."

O1.3 The Planning Practice Guidance ('PPG') confirms that *"mitigation measures proposed in an Environmental Statement are designed to* ***limit or remove any significant adverse environmental effects*** *of a development. Local planning authorities will need to consider carefully how mitigation measures proposed in an Environmental Statement are to be secured"* [ref. Paragraph 051 Ref ID: 4-051-20170728].

O1.4 In accordance with Regulation 26(3) of the 2017 EIA Regulations (as amended), the PPG further states that *"where it is considered appropriate that monitoring measures are attached to a planning permission, this can be achieved through the use of existing mechanisms such as planning conditions and planning obligations."* [ref. Paragraph 051 Ref ID: 4-051-20170728].

O1.5 The ES has identified primary/embedded, secondary/additional and tertiary mitigation and monitoring relevant to the proposed development. The 'IEMA Environmental Impact Assessment Guide to Shaping Quality Development' Report (November 2015) (Ref 2) provides definitions of the three types of mitigation as follows, which have been used as a basis for categorising mitigation within this ES:

"Primary mitigation is an intrinsic part of the project design – it should be described in the design evolution narrative and included within the project description. For example, reducing the height of a development to reduce visual impact.

Secondary mitigation requires further activity in order to achieve the anticipated outcome – typically, these will be described within the topic chapters of the ES, but often are secured through planning conditions and/or management plans. For example, description of certain lighting limits that will be subject to submission of a detailed lighting layout as a condition of approval.

Tertiary mitigation will be required regardless of any EIA assessment, as it is imposed, for example, as a result of legislative requirements and/or standard sectoral practices. For example, considerate contractors practices that manage activities which have potential nuisance effects".

O1.6 The primary and tertiary mitigation and monitoring for the proposed development are set out in Chapter B. The secondary mitigation measures are set out in Section 6.0 of each technical chapter of the ES.

O1.7 Consideration has also been given in Chapter N as to the possibility of significant adverse impacts arising from either synergistic or cumulative effects and whether there is a requirement for further secondary mitigation to address these effects. Chapter N concludes that there are no synergistic effects and therefore no associated secondary mitigation. Chapter N does conclude

that there will be some significant adverse and beneficial cumulative effects, when the proposed development is considered alongside other cumulative schemes. It therefore identifies that there will be a need for further secondary mitigation, and this is discussed in Section O2.0 below.

O1.8 This chapter summarises all mitigation measures proposed throughout the ES for ease of reference, along with the mechanism(s) for securing these. It should be used to assist Redcar and Cleveland Borough Council ('RCBC') in forming their reasoned conclusion of the proposed development.

About the Author

O1.9 This ES has been coordinated by Katie Brown, Heather Overhead and Melissa Wilson all Senior Planners at Lichfields. Katie is a Practitioner Member of the Institute of Environmental Management and Assessment ('IEMA') and has 3 years' experience in co-ordinating EIAs for a range of major development projects across the United Kingdom ('UK'). Heather is working towards her EIA Practitioner membership of IEMA and has 1 year of experience in EIA projects. Melissa is working towards her EIA Practitioner membership of IEMA and has 2 years of experience in EIA projects. Their coordination role included the production of this chapter of the ES, with input from the wider technical project team.

O1.10 Kate McGill, Associate Director at Lichfields, and Practitioner Member of IEMA, has reviewed this chapter in accordance with the EIA Regulation requirements. Kate has over 10 years of experience of co-ordinating EIAs for a range of development projects.

O2.0 Mitigation and Monitoring

O2.1 As set out in Chapter B of this ES, the iterative process of EIA has resulted in the incorporation of a range of 'built-in' mitigation measures into the design of the proposed development. These are aspects of the design which have been specifically included in the scheme design and are assumptions on which the assessment and resultant additional mitigation have been based.

O2.2 Table O2.1 and Table O2.2 set out the primary and tertiary and secondary mitigation and monitoring measures respectively proposed throughout the technical chapters of the ES and set out within Chapter B. The tables also set out the means by which the mitigation can be secured, including whether there will be a requirement to submit a mitigation and or monitoring documents or adhere to an issue-specific condition and clarifies responsibility for implementing the proposed mitigation and monitoring.

O2.3 In considering how best to secure the mitigation and monitoring measures, consideration has been given to paragraph 56 of the National Planning Policy Framework (Ref 3). This states that: *"Planning conditions must only be sought where they meet all of the following tests:*

a *Necessary to make the development acceptable in planning terms;*

b *Directly related to the development; and*

c *Fairly and reasonably related in scale and kind to the development".*

O2.4 It is also noted that required monitoring measures can also be attached via planning conditions or planning obligations, as long as any provisions used are clear and precise and ensure clarity for all parties concerned.

Table O2.1 Summary of Primary/Tertiary Mitigation

Summary of Identified Primary/Tertiary Mitigation	Means of Securing	Responsibility
During Construction		
Implementation of a Framework Construction Environmental Management Plan ('CEMP') which sets details on a range of matters including: a. Best practice site works principles; b. Relevant risk assessment method statements ('RAMS'); c. Details on requirements for supporting documents including; Construction Logistics Plan ('CLP'), Construction Traffic Management Plan (see below), Dust Management plan ('DMP'), Construction Stage Surface Water Management Plan;, Health and Safety Plan ('HSP'); d. Removal of trees, scrub and wetland habitat or grassland; and e. Measures to prevent the spread of invasive non-native plant species. Full details of the site-wide CEMP principles can be viewed in paragraphs B7.31- B7.32 in Chapter B of the ES.	Framework CEMP submitted with the application. The following will be secured by way of a Planning Condition: 1. RAMS; 2. Construction Logistics Plan; 3. Dust Management Plan; 4. Health and Safety Plan; 5. Construction Stage Surface Water Management Plan.	Applicant/ Principal Contractor
Implementation of a Construction Traffic Management Plan ('CTMP') as part of the CEMP.	CTMP submitted as part of the CEMP or separately and	Applicant and Principal

Summary of Identified Primary/Tertiary Mitigation	Means of Securing	Responsibility
	secured via Planning Condition.	Contractor.
Further site and ground investigation surveys will be undertaken in order to identify the need, or otherwise, for additional survey work and/or remediation work. This stage of work will include, if necessary, the submission of details to divert Holme Beck and Knitting Wife Beck.	Ground Investigation Survey - Secured via Planning Condition.	Applicant and Principal Contractor.
All temporary construction works will be designed to meet engineering and health and safety standards.	Outwith planning/ accordance with health and safety legislation	Applicant and Principal Contractor.
The site is to be cut and fill neutral, ensuring the reuse of suitable excavated materials generated on site is maximised.	Planning Condition.	Applicant and Principal Contractor.
Protective fencing to be erected around land not being developed.	Fencing details to be secured via Planning Condition.	Applicant and Principal Contractor.
Setting up of construction compounds and waste, fuel and storage areas ahead of construction work commencing. Materials for active phase of development only to be stored onsite.	Planning Condition.	Applicant and Principal Contractor.
Hazardous and non-hazardous waste to be sent to the Highfield landfill site.	Planning Condition Or legal obligation.	Applicant and Principal Contractor.
A Piling Risk Assessment is to be prepared for each phase of the development.	Piling Risk Assessment secured via Planning Condition.	Applicant and Principal Contractor.
Construction will be phased.	A phasing condition will be attached to the grant of any planning permission and should the phasing of the development change, this will need to be agreed in writing with RCBC	Applicant and Principal Contractor.
The scheme will seek to be British Research Establishment Environmental Assessment Method ('BREEAM') 'Very Good'. The sustainability credentials of the scheme will be agreed at reserved matters stage of the planning process, however those considered to be embedded during construction include: a. Contractors will use local suppliers, or sourcing materials from the Teesworks areas and they will be required to implement a Site Waste Management Plan (SWMP) which will be monitored throughout the construction period; and, b. All building materials and products will be sourced, where practical from suppliers who manufacture with certified environmental management systems and timber will be Forest Stewardship Council ('FSC') certified, where possible.	BREEAM Very Good Rating requirement to be secured via Planning Condition. Specific information also included within the SWMP (also to be secured via Planning Condition).	Applicant and Principal Contractor.

Summary of Identified Primary/Tertiary Mitigation	Means of Securing	Responsibility
Detailed Remediation Design to be in accordance with and led by the Outline Remediation Strategy, already prepared by Arcadis (see Appendix H4 of the ES)	Secured via Planning Condition.	Applicant and Principal Contractor.
During Operation		
The Parameters Plan provides for the following: 1. Maximum development area is 57.8ha; 2. Maximum development height across the site is 46.8m Above Ordnance Datum ('AOD'); 3. Maximum building height is 36m above the prevailing ground levels; 4. Finished Floor Levels to be a minimum of 8.00m AOD; and 5. A minimum of three access points into the site; for the purposes of this EIA, it is assumed that the main access point will be from the recently approved new Eston Road Roundabout. The Parameters Plan submitted to accompany this EIA (at Appendix B3) shows the indicative location of four access points to the site.	Detailed within Planning Condition.	Applicant
The overall scheme can deliver up to 139,353 sqm of B2 (General Industry) and B8 (Storage or Distribution) uses of floorspace, of which a maximum of 10% of the floorspace can be used for offices	Planning Condition.	Applicant
Buildings within the site will meet BREEAM 'Very Good' standard	Planning Condition.	Applicant
A Framework Travel Plan ('FTP') and specific Occupier Travel Plans ('OTP') will be prepared to support and promote sustainable modes of travel in accordance with South Tees Development Corporation's ('STDC') emerging transport strategy. A dedicated bus service will be provided to connect the local towns of Middlesbrough and Redcar to the development site.	FTP/OTP to be implemented and secured via Planning Condition/Planning Obligation.	Applicant and future Occupiers.
Junctions and internal road to be designed and constructed in accordance with RCBC Guidance.	Planning Condition.	Applicant
To comply with Control of Major Accident Hazards ('COMAH') and Health and Safety Executive ('HSE') guidance, where necessary, the levels of occupancy of buildings will be restricted and stand-off distances from hazardous installations, pipes etc will be imposed.	Planning Condition/Planning Obligation.	Applicant / RCBC

Table O2.2 summary of Secondary Mitigation

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
During Construction			
Transport	No mitigation measures are required during construction above those set out within the CEMP and CTMP	N/A	N/A
Biodiversity and Ecology	No mitigation is proposed to address the loss of on-site habitats at this stage and therefore the effects on Dingy Skipper Butterfly, Odonata, Open Mosaic Habitat and Ruderal/ Ephemeral habitat remain significant. Detail is provided in section D9 'Compensation, Enhancement and Monitoring' of this ES as to the compensatory measures that will be taken forward through the forthcoming South Tees Regeneration Master Plan Environment and Biodiversity Strategy to offset any habitat lost through development of the Teesworks area, including through the proposed development.	N/A Planning Condition.	N/A Applicant/ RCBC
Noise and Vibration	No mitigation required, other than a Risk Assessment is required to identify the probability of noise and vibration from any piling or compaction activities and construction traffic. This will determine the need for any periodic or continuous noise or vibration monitoring.	Noise and vibration Piling Risk Assessment secured via Planning Condition- as set out in Table O2.1 above.	Applicant/ Principal Contractor
Air Quality	No mitigation measures are required during construction. Once details on the scheme are known, the assessment of construction traffic will identify the need for any specific mitigation measures.	N/A	N/A
Water Management and Flooding	A site-specific Drainage Strategy will inform the details of the CEMP/Construction Stage Surface Water Management Plan. Appropriate measures to be agreed with the Council to manage localised depressions on site, which results in areas of pluvial flooding at high rainfall events until the ground surface is constructed.	Drainage Strategy secured via Planning Condition	Applicant and Principal Contractor.
	The timing of excavation and replacement of ground materials shall be sensitive to avoiding poor weather conditions.	Planning Condition	Applicant and Principal Contractor.

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	Placement of oil-water interceptors at outfalls from the site		
	Groundwater monitoring would determine whether the potential for mobilisation of contaminants is likely, prior to groundworks activities such as excavation.		
Ground Conditions and Remediation	An extended or new Remediation Strategy shall be prepared for approval with the LPA, following further ground investigations relating to ground underneath existing buildings and structures.	Planning Condition	Applicant and Principal Contractor.
	A detailed remediation strategy for each phase shall be prepared and agreed with the LPA. The detailed remediation strategy should be in accordance with the outline strategy.	Planning Condition	Applicant and Principal Contractor.
	A strategy for dealing with Unforeseen Contamination shall be agreed with the LPA. In the event that contamination is encountered at any time when carrying out the remediation and reclamation works that was not previously identified, an investigation and a risk assessment will be undertaken and where remediation is considered necessary a remediation scheme will be prepared and agreed with the relevant authorities. Areas of the site are currently inaccessible e.g. beneath building footprints, beneath sumps, tanks and pipe work which require investigation during the earthworks contract. If any contamination is identified this should be assessed and will require remediation/removal. Most notably in this regard is the TRLS building. Where unanticipated contamination is encountered within excavated material that is similar to that encountered elsewhere within the site, then the process set out below will be followed: 1 Sampling for, and undertaking chemical analysis; 2 Assessment of chemical data; and, 3 Sentencing for remediation and/or processing, as necessary.	Contamination investigations, Risk Assessment and remediation and recording scheme (if required) secured via a Planning Condition.	Applicant and Principal Contractor.

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	Where identified environmental contamination extends below 2.5m bgl, any requirement for deeper excavation works will be assessed on a case specific basis following consultation with stakeholders. The location of any such unanticipated contamination encountered will be recorded, including the results of chemical testing, the volumes sentenced for treatment by remediation, the validation data showing compliance with the relevant remediation objectives and the location of the area of use of the remediated material within the development platform.		
	A Materials Management Plan ('MMP') shall be prepared in accordance with Contaminated Land: Applications in Real Environments ('CL:AIRE') guidance 'Definition of Waste: Development Industry Code of Practice' ('DoWCoP') and authorised by a Qualified Person registered with CL:AIRE. As part of the plan the records of all materials movements on-site and off-site will be kept by the Reclamation / Earthworks Contractor in paper and electronic format for a minimum period of 2 years following completion of the works and production of the Validation / Verification Report. To allow auditing of the Materials Management Plan; data will be stored electronically in a specifically designed database on site.	MMP secured via Planning Condition.	Applicant and Principal Contractor and/or Reclamation / earthworks contractor
	Additional ground gas monitoring at greater density is recommended prior to any specific redevelopment to determine the risk from ground gases on the site.	Planning Condition.	Applicant and Principal Contractor.
	Further mitigation activities such as Detailed Risk Assessment or site mitigations to reduce the unexploded ordnance ('UXO') risk on the site to As Low As is Reasonably Practicable ('ALARP')	UXO Risk Assessment secured via a Planning Condition.	Applicant and Principal Contractor.
	Implementation of asbestos removal best practice should asbestos be encountered during groundworks. In the event that suspected materials are observed associated with excavations, sampling will be undertaken to confirm the asbestos type and quantification. Where asbestos containing materials ('ACM') has to be removed to facilitate removal of structures	Planning Condition.	Applicant and Principal Contractor.

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	it shall be separately stockpiled and covered to control potential dust generation. Soils containing asbestos will not be subject to mechanical screening where free fibres have been detected or are suspected. All soils containing gross asbestos will be managed by maintaining mist sprays to keep the soils wet whilst handled and covered when stockpiled. In the event that materials are impacted with visible fragments of ACM, the ACM materials shall be handpicked by a suitably licenced asbestos contractor with additional control measures implemented based on the sampling results. Where soils containing contaminate of concern ('CoC') in excess of the reuse criteria and, due to the presence of asbestos cannot be safely handled or successfully treated, they will be disposed of offsite. Where concentrations are below the reuse threshold soils may be reused as infill to excavation voids at depths below 0.6m of final ground level. Asbestos should be presumed to be within all Made Ground deposits, and therefore will need to be included in the piling risk assessment should piles be proposed.		
	If non-aqueous phase liquid ('NAPL') is encountered on the groundwater during excavation works, its recovery will be required prior to groundwater discharge. Recovery will continue until no visible NAPL is observed or further recovery is not reasonably practicable (evidenced by diminishing recovery quantities i.e., base of asymptotic curve). Where there is evidence of the presence of NAPL in the unsaturated zone, excavations will be extended to expose the groundwater table and identify if it is impacted by the above material and if groundwater treatment is required.	Planning Condition.	Applicant and Principal Contractor.
	During the remediation and reclamation works perched water in the Made Ground materials could contain elevated concentrations, in comparison to applicable discharge consent criteria or Environmental Quality Standards ('EQS') of various metals and there is therefore a requirement for its collection and treatment prior to discharge.	Planning Condition / Environmental Permitting.	Applicant and Principal Contractor.

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	Where perched water encountered during the progress of the earthworks contains concentrations of determinands that would breach any consent/permit for discharge then the water shall be subject to pre-treatment. It is envisaged that an on-site treatment plant may be required to ensure that the concentrations of key determinands in the effluent discharge are within consented discharge limits.		
	Excavated materials identified by laboratory analysis as chemically unsuitable for direct reuse will be stockpiled for treatment. Stockpile and treatment areas will be required to be placed on impermeable surfaces with covers and suitable drainage to collect and dispose of waters. Validation testing of these areas will be undertaken to prove the land quality pre- and post-remediation.	Planning Condition.	Applicant and Principal Contractor.
	Excavated material will be consigned to landfill within the existing adjacent Highfield Landfill. The remediation strategy [Arcadis 2020 Appendix H4] sets remediation / reuse criteria for materials to be used within the capping layer of the development. The strategy has been developed with the intention to minimise off-site disposal of materials.	Planning Condition (Adherence to existing remediation strategy- see above).	Applicant and Principal Contractor.
Socio-Economic	No mitigation measures are required during construction. Notwithstanding the above, STDC is committed to working with Redcar & Cleveland Borough Council, where possible, to deliver training and apprenticeship schemes during the construction phase. It is anticipated that this will help to maximise the extent to which the beneficial effects of the development proposals are captured within the Area of Impact ('AOI').	N/A Potential Planning Obligation	N/A Applicant / RCBC
Climate Change	The following opportunities are to be identified as proposed development proposals for the site continue to be developed: 1 Further design iteration to reduce the absolute quantities of construction materials through efficient design and use materials with a lower carbon intensity where possible. 2 Specification to reduce the embodied	Implemented through the application of wider sustainability principles to the proposed development as part of the CTMP and MMP,	Applicant

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	carbon of building materials and components e.g. through cement replacement and preferences for readily available products with higher recycled content. 3 Maximised use of offsite construction for efficiency of material use and reduced construction waste. 4 Challenges during procurement to encourage supply chains to provide products and materials with high recycled content. 5 Application of circular economy principals to maximise the quantity of recycled and reused materials. 6 Preference for materials and components that are locally sourced to minimise transportation distances 7 Use of lower emissions vehicles for transporting materials to site where possible 8 Construction Traffic management plan to minimise the number of journeys required. 9 Use of electrical plant over fossil fuelled construction plant. 10 Offsite construction/manufacturing for energy efficient assembly and minimising site installation processes.	BREEAM Very Good all secured by way of a planning condition.	
Below Ground Heritage	Archaeological investigation and recording will be undertaken prior to and during remediation and site preparation works. This will comprise a watching brief during all ground operations with focused evaluation / excavation of features identified in the area of the blast furnaces. A written scheme of investigation ('WSI') will be prepared for the wider site (an existing WSI has been prepared for the blast furnaces and immediate environs as detailed in Appendix K2 of this EIA).	WSI secured via a Planning Condition	Applicant.
Landscape and Visual Impact	The following mitigation measures are proposed during the construction phase of the development: 1 Installation of suitable site hoarding, for example a 2.4, timber site hoarding with a plastic wrap incorporating appropriate	Planning Condition	Applicant.

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	graphics; 2 Careful siting and management of materials stockpiles to reduce prominence on site by limiting the height and volume of material stored on site; and 3 Sensitive siting of site welfare and other temporary structures within the site compound.		
Waste and Materials Management	Generation of the scheme (and zone) specific architecture associated with the re-use of site-won materials and generation of earthworks wastes.	Planning Condition	Applicant / Principal Contractor
	Develop mechanisms to re-use site won materials through the use of: 1 Utilising site-won materials generated during the development from earthworks; 2 Reviewing opportunities to utilise excavated materials from other developments in proximity, using a Materials Management Plan under DoW CoP.	Planning Condition and through MMP	Applicant / Principal Contractor
	Develop a CWMP. Full details of the measures and targets to be included are in paragraph M6.3 - M6.6 of this ES.	CWMP secured via a Planning Condition	Applicant / Principal Contractor
	Sustainable management of wastes requiring treatment and/ or off-site disposal to minimize waste going to landfill and demonstrate end-of-waste.	Planning Condition	Applicant / Principal Contractor
	The use of secondary aggregates and recycled materials will be sought out where possible, with a target of 30% of construction materials required for the proposed development for each phase to be recycled and/or secondary, unless otherwise agreed in writing.	Planning Condition	Applicant / Principal Contractor
During Operation			

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
Transport	The following mitigation measures are proposed: 1 Occupier Travel Plan for each of the end occupiers at the development site; 2 Wider travel planning measures, to reduce development traffic, encourage sustainable travel and the decarbonisation of the transport network (for example ensuring footway and cycleway connections are provided, providing secure cycle parking, providing staff up to date information on public transport services and walking/cycling provisions, promotions such as National Travel Awareness day and a 'Walking Buddy' Scheme, promoting car sharing, and consolidating servicing trips and deliveries); 3 A review of traffic signals to see if junctions can be optimised (at the A66 / Eston Road junction and the A66 / Normanby Road signalised crossroads); and 4 Potential junction improvements for the A66 / Tees Dock Road Roundabout and Greystones Roundabout. In addition to the above, and whilst a commitment cannot be made at this stage of the planning process, once adopted the emerging STDC Transport Strategy may provide an opportunity to further reduce the impacts of the proposed development on the sensitive receptors.	OTP secured via Planning condition or Obligation. Potential Planning Obligation/Condition	Applicant. Applicant / RCBC
Biodiversity and Ecology	No effects on habitats and species are anticipated during operation therefore no further mitigation is proposed.	N/A	N/A
Noise and Vibration	Building services plant is envisaged to be placed at roof level. The specification of plant machinery with low noise emission and properly attenuated supply and extract terminations. The use of enclosures, local screening, mufflers and silencers should also be used as appropriate.	Planning Condition requiring submission of details of plant and accordance with noise guidance.	Applicant

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	The following mitigation of on-site activities will help to ensure the noise emissions are minimised in accordance with noise guidance - Noisy plant or equipment shall be situated as far as possible from any noise sensitive buildings. - Plant shall be maintained in good working order so that extraneous noise is kept to a minimum; and - An appropriate speed limit will be implemented for on-site vehicle movements, i.e. 10mph. Operational noise would therefore be kept at or below the existing ambient noise levels, preventing any significant effects of noise.	Planning Condition	Applicant
Air Quality	There are no significant effects predicted as a result of the operational phase of the development on air quality and therefore no mitigation measures are required.	N/A	N/A
Water Management and Flooding	The following documents will be prepared: - A detailed Flood Risk Assessment ('FRA') and Drainage Impact Assessment ('DIA') with drainage strategy (for both foul and surface water); - Surface Water Management Plan ('SuWMP'); and - A Water Framework Directive ('WFD') Assessment. A detailed FRA and Drainage Impact Assessment with drainage strategy for foul and surface water will be prepared for each phase of the proposed development. The drainage strategy shall: - include consideration of design features to remove silt and other suspended solids, as well as capture any spills/oil and grease, prior to discharge. The large extent of low permeability surface proposed for the site will 'cap' underlying contaminated land. - not include infiltration SuDS such as soakaways, in order to limit mobilisation of contamination. - set out how to accommodate any groundwater input to the culverts that are present at the site;	FRA and Drainage Impact Assessment, SuWMP and WFD Assessment secured via Planning Condition / Environmental Permitting	Applicant

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	- protect any harvested rainwater for re-use so that it is not contaminated; - Accord with: o Construction Industry Research and Information Association ('CIRIA') The Sustainable Drainage Systems ('SuDS') Manual C753; o Sewers for Adoption; o Local Authority SuDS Officer Organisation Practice Guidance o Tees Valley Local Authorities Local Standards of Sustainable Drainage - Where reasonably practicable the runoff rate from the site shall be reduced as far as possible in line with drainage guidance (noted in Section 6.4 a) in light of the large extent of low permeability surfaces - take account of climate change projections (additional rainfall and surface water flows) and comply with current best practice. - Be based on Hydraulic modelling; - Ensure that drainage channels and/or networks and storage features will be lined with a geomembrane to prevent connection of surface water with contaminated ground material. Implementation of the SuWMP for each phase of the proposed development will improve the management of water compared to the baseline conditions, whilst also taking into account potential changes in rainfall from climate change. Changes to the water courses will be applied and signed off via the Environmental Permit process. Once the site design is available, a WFD Assessment shall be undertaken for the entire site and then for each phase of the development the WFD Assessment should be updated.		

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	Infrastructure on or under the site that does not have the required capacity will be required to be replaced / improved to meet guidance and planning requirements.		
	It is anticipated that there may be additional discharges to the Tees required (in addition to the outfall to the Tees from the Lackenby Channel). At present it is not yet known if there is a flap on the outfall to control the tidal influences, however it is anticipated that discharges to the Tees will be regulated under an environmental permit.	Environmental Permitting	Applicant
	Holme Beck is an Ordinary Watercourse, therefore proposed discharge rates (if any) must be agreed with the Lead Local Flood Authority ('LLFA') and if required confirmation obtained for capacity of discharge to Northumbrian Water systems. This will be dealt with at the Reserved Matters stage of the planning process once the detailed design of the scheme is known.	Planning Condition / Environmental Permitting	Applicant
Ground Conditions and Remediation	The operational phase has been scoped out in relation to ground conditions and remediation as such there are no mitigation measures required.	N/A	N/A
Socio-Economic	No mitigation measures are required during operation. However, STDC is committed to working with Redcar & Cleveland Borough Council to deliver training and apprenticeship schemes, where possible, during the operational phase. Through the launch of the Teesworks Skills Academy – a hub set up to coordinate training and recruitment for employees across the Teesworks area – it is anticipated that this will help to maximise the extent to which the beneficial effects of the development proposals are captured within the AOI.	N/A Potential Planning Obligation	N/A Applicant / RCBC
Climate Change	Detailed design of buildings and facilities should adopt whole life assessments for the main building materials and systems to understand full impacts and replacement cycles. Maintenance plans should be informed by a Life Cycle Costing exercise.	Planning Condition	Applicant and Future Occupiers
	Development and Implementation of an Operational Energy Strategy that includes the	Planning Condition/Obl	Applicant and Future

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	installation of low and zero carbon technologies to provide lower carbon energy to the proposed development. Construction of energy efficient buildings to minimise energy demand. Ongoing engagement with the energy supply company to promote future transitions to low and zero carbon heat/power sources. Encouraging procurement of energy efficient equipment within the proposed development. Development of a comprehensive suite of transport measures to reduce reliance on cars by staff, and to encourage active and low carbon transport choices.	igation	Occupiers (RBCB)
Below Ground Heritage	No mitigation or monitoring is required during the operational phase of the development	N/A	N/A
Landscape and Visual Impact	Buildings to be articulated in a way which reduces visual scale and massing. Buildings to be stepped down to site boundaries to reduce the perception of massing in local and mid-range views and site layouts to present legible blocks of development with appropriate breaks to reduce visual impact. Building colour and cladding to be appropriate to surrounding colour palette, and help break up the visual massing, avoiding overly reflective materials. Use of colour gradation in the largest buildings to reduce the perception of height and massing in mid and long-range views. Buildings on individual plots to have a sensitive and complementary palette of materials and cladding to enable the development to be read as separate blocks in mid to long-range views.	Planning Condition	Applicant
Waste and Materials Management	An Operational Waste Management Plan ('OWMP') shall be prepared and approved by the Council for each phase of the proposed development. This OWMP should consider the whole process of waste management including storage, collection, waste transport, treatment and disposal and include the following mitigation: - Provision of adequate internal storage space and containers for office units;	OWMP secured via a Planning Condition	Applicant

Environmental Topic	Summary of Secondary Mitigation	Means of Securing	Responsibility
	- Residual and recyclable office wastes to be stored and collected separately via provision of clearly marked and/or colour-coded bins aligned with the local authority's guidance and infrastructure; - Provision of recycling facilities within the proposed development (i.e. card compactors, woodchippers/ pelletizers, etc.); and - Provision of education and awareness to end-users on recycling and waste reduction. The OWMP should include recycling targets in line with The Tees Valley Joint Waste Management Strategy 2020-2035 which states that the region has in place a 60% recycling target for municipal solid waste ('MSW') and commercial and industrial ('C&I') wastes by 2030.		

O2.8 Chapter N of the ES considered the requirement for additional mitigation to address any synergistic or cumulative effects. It was noted that a detailed site wide energy strategy shall be developed and that there are ongoing discussions regarding other potential transport mitigation measures.

O2.9 The technical chapters of this ES have not identified the need for monitory contributions to be secured via S106 Agreement. This will be agreed with RCBC during the determination of the planning application.

O2.10 The assessment in each technical chapter is based on the outline development parameters set out within Chapter B of this ES and based on professional experience and industry standard. Where assumptions have been made, further assessments may be necessary once the detailed scheme is known.

O3.0 Summary & Conclusions

O3.1 This ES sets out the finding of an EIA of proposals for up to 139,353 sqm of general industrial and storage or distribution facilities floorspace, with ancillary office accommodation, parking and associated works.

O3.2 The ES has assessed the potential for the effects in relation to the following environmental matters:

1 Transport;

2 Biodiversity and Ecology;

3 Noise and Vibration;

4 Air Quality;

5 Water Management and Flooding;

6 Ground Conditions and Remediation;

7 Socio-Economic;

8 Climate Change;

9 Below Ground Heritage;

10 Landscape and Visual Impact; and,

11 Waste and Materials Management.

O3.3 The ES has also considered the possibility of impacts arising from either synergistic or cumulative effects. This chapter summarises the range of mitigation and monitoring measures have been identified throughout the ES.

O3.4 These measures are largely capable of being enforced through planning conditions, either as part of management documents as standalone conditions or obligations or other non-financial obligations.

O3.5 There will be limited residual **Significant Adverse** effects on the environment in relation to Biodiversity, Transport and Landscape and Visual effects and **Significant Beneficial** Socio-Economic effects. All other environmental effects assessed in Chapters C to M are considered to be Not Significant.

O3.6 This ES has been based on high level development parameters for the outline scheme. During the detailed design stage and the reserved matters process, environmental considerations will be revisited as required by the 2017 EIA Regulations, and where necessary, updated as part of future submission to RCBC.

04.0 Abbreviations & Definitions

1 ACM – Asbestos Containing Material
2 ALARP – As Low As is Reasonably Practicable
3 AOD – Above Ordnance Datum
4 AOI – Area of Impact
5 BREEAM – British Research Establishment Environmental Assessment Method
6 CEMP – Construction Environmental Management Plan
7 C&I – Commercial and Industrial
8 CIRIA – Construction Industry Research and Information Association
9 CL:AIRE – Contaminated Land: Applications in Real Environments
10 CLP - Construction Logistics Plan
11 CoC – Contaminant of Concern
12 COMAH – Control of Major Accident Hazards
13 CTMP – Construction Traffic Management Plan
14 CWMP - Construction Waste Management Plan
15 DIA – Drainage Impact Assessment
16 DMP - Dust Management Plan
17 DoWCoP – Definition of Waste: Development Industry Code of Practice
18 EIA - Environmental Impact Assessment
19 ES - Environmental Statement
20 EQS – Environmental Quality Standards
21 FRA – Flood Risk Assessment
22 FSC – Forest Stewardship Council
23 FTP – Framework Travel Plan
24 HSE – Health and Safety Executive
25 HSP - Health and Safety Plan
26 IEMA – Institute of Environmental Management and Assessment
27 LLFA – Lead Local Flood Authority
28 MMP – Materials Management Plan
29 MSW – Municipal Solid Waste
30 NAPL – Non-aqueous Phase Liquid
31 OTP – Occupier Travel Plans
32 OWMP – Operation Waste Management Plan
33 PPG – Planning Practice Guidance
34 RAMS – Risk Assessment Method Statement
35 RCBC – Redcar and Cleveland Borough Council

36 STDC – South Tees Development Corporation
37 SuDS – Sustainable Drainage Systems
38 SWMP - Site Waste Management Plan
39 SuWMP - Surface Water Management Plan
40 UK – United Kingdom
41 UXO – Unexploded Ordnance
42 WFD – Water Framework Directive
43 WSI – Written Scheme of Investigation

05.0 References

1 Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended by the Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018, which be viewed at: https://www.legislation.gov.uk/uksi/2017/571/contents/made and https://www.legislation.gov.uk/uksi/2018/695/made

2 IEMA Environmental Impact Assessment Guide to Shaping Quality Development' Report (November 2015), which can be viewed at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwje-JzLoI7sAhU2VBUIHY6uBHIQFjABegQIAhAB&url=https%3A%2F%2Fwww.iema.net%2Fdownload-document%2F7018&usg=AOvVaw3LuxaxpYUJFEt19H60B7Zh

3 National Planning Policy Framework (February 2019), which can be viewed at: https://www.gov.uk/government/publications/national-planning-policy-framework--2