

Land North of Wynyard Park, Stockton-on-Tees

Construction Environment Management Plan

April 2021



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Introduction

This document has been developed to support the Wynyard Distribution Centre development on land North of Wynyard Park, Stockton-on-Tees

Context

The Construction Environmental Management Plan (CEMP) will form part of the ISG management system required to deliver the project. The CEMP will form part of the project Sustainability Plan and associated documents to manage sustainability, environmental and social value requirements on the project, in line with ISG's ISO14001 certified management system.

Project Details

Project Description

The project description is;

Erection of a class B8 storage and distribution unit with ancillary offices, parking, servicing, landscaping and formation of new access roads plus associated ancillary works.

The primary aim of this Construction Environment Management Plan (CEMP) is intended to provide certainty and details of how the possible construction effects and impacts of the proposed development will be mitigated and minimised. It covers a range of environmental topics of varying relevance to different stages of the construction process, and on different local community and ecological interests.

This report includes the proposed construction vehicle routing strategy, indicative details concerning the type of construction vehicles required to serve the Site daily, and operating procedures to be employed at the Site to help mitigate the impact of development on the local highway network. Clear routes and procedures are outlined that will be adhered to at all times as a means of limiting the effect of construction.

It addresses the practical considerations of construction, including the proposed construction methodology and anticipated timescales, and more importantly assesses the impact of construction on the local community giving consideration to issues such as traffic congestion, air quality impacts associated with dust and vehicle emissions, noise, hours of operation and site security.

Site Location

The proposed site is located adjacent to the intersection of the A19 and A689 to the north of Wynyard Business Park, Stockton-on-Tees, approximately 5 miles northwest of Middlesbrough. The site is accessed from Chapel Lane North off the A689 and A19.



Noise & Vibration Mitigation

Hours of Working

The applicant is seeking to secure extended construction hours for the implementation of proposed development,

In accordance with Government advice issued in the Secretary of State for the Ministry of Housing, Communities and Local Government's Ministerial Statement on 13th May 2020 the applicant is seeking to secure extended construction hours. The guidance sets out the Government's recognition that the construction industry needs to be able to adapt its normal practices in order to operate safely in line with the new COVID-19 Secure guidelines. Extended construction working hours would facilitate safe working where social distancing can be challenging. The extended construction hours would enable the development to be undertaken in a manner that protects employees by allowing

social distancing requirements to be maintained and will also allow employees to travel outside of peak times on public transport.

Proposed hours of work on site will be:

- Monday – Friday: 07:00 – 21.00
- Saturdays 08:00 – 17:00
- Sunday & Bank Holidays: No audible / intrusive works
- Deliveries will be targeted out of these hours where feasible.
- Concrete finishing works will also continue beyond these hours

Machinery & Plant

Noise

Prior to taking site possession ISG shall engage with the Supply Chain including Design Team to explore and agree a construction methodology that mitigates noise far as reasonably practicable.

Plant and Equipment selection that impacts noise levels will be continuously addressed throughout the construction works.

Various activities carried out on site have the potential to create noise of potential relevance to nearby residents or communities. Initial construction activities that will require noise monitoring / control include:

- Earth works
- Stockpiling
- Groundworks
- Piling
- Steelwork erection
- Concreting
- Construction deliveries
- Construction traffic
- Cutting & Sawing

Specific measures to be adopted to reduce / avoid noise include:

- Use of super silenced plant where feasible.
- Use of well-maintained modern plant which complies with the latest noise emission requirements as defined by BS 5228 standards.
- Reducing the need to adopt percussive and vibrating machinery.
- Piles to be broken down using non-percussive techniques.
- Toolbox talks and site inductions.
- Site speed limit to be limited to 5mph
- Noise emissions limits for equipment brought to site.
- Indirect method of controlling noise e.g. screening where appropriate
- Administrative and legislative control
- Control working hours
- Control of delivery areas and times

Background Noise Level Surveys will be conducted with regular monitoring to be established.

Selection and use of equipment will, as far as reasonably practicable, seek to control and limit noise and vibration levels associated with construction activities.

This will be achieved by observing the following:

- Plant and equipment liable to create noise and/or vibration whilst in operation is, as far as reasonably practicable, located away from sensitive receptors.
- All plant, equipment and noise control measures applied are maintained in good and efficient working order and operated such that noise emissions are minimised as far as reasonably practicable.
- Where reasonably practicable, fixed items of construction equipment will be electrically powered in preference to being diesel driven;
- Vehicles and mechanical equipment utilised on site for any activity associated with the construction works will be fitted with effective exhaust silencers and maintained in good working order with sustained efficient performance and operated in a manner such that noise emissions are controlled and limited as far as reasonably practicable.
- Plant in intermittent use are shut down or throttled down to a minimum during periods when not in use.
- All Plant Operators shall undertake a daily inspection of the Plant or equipment prior to use with a recorded weekly inspection.
- All Contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2), 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 and where practical to be conducted away from sensitive receptors.
- Careful consideration will be given to planning construction traffic haul routes within the Site and along local roads close to existing sensitive receptors, so as to minimise reversing movements and to minimise the number of construction vehicles during peak traffic flows on local roads.

Task specific noise activities shall be included within the risk assessments provided by each respective Sub Contractor as reviewed by ISG Site Manager and where necessary additional noise assessments shall be undertaken. Noise complaints will be reported to ISG and immediately investigated.

ISG is required to prevent or reduce risks to health and safety from exposure to noise at work, including:

- Assess the risks to all employees from noise at work.
- Take action to reduce the noise exposure that produces those risks.
- Provide all employees with hearing protection should it not be possible to reduce the noise exposure enough by using alternative methods.
- Ensure the legal limits on noise exposure are not exceeded.
- Toolbox talks, site inductions and training to all Operatives.
- Carry out health surveillance where there is a risk to health.

Machinery / Plant Location

Whilst medium sized machinery will be required to carry out external works to all areas of the site all other machinery and plant will be limited to either working within the building footprint or within 20 meters of the building perimeter.

Construction Activity	Construction Traffic	Machinery / Plant Location
Site Establishment	Welfare cabins, plant, fencing, barriers, hoarding	Site Compound
Cut & Fill	Backfilling, levelling, topsoil	All Areas
Piling & Groundworks	Plant, spoil, rebar, steel, drainage	All Areas
Steel frame erection	Crane, MEWPs, steel	Building footprint & 20m from building
Concrete Slabs	Concrete wagons, pump	Building footprint & 20m from building
Roof Works	Crane, MEWPs, roof materials	Building footprint & 20m from building
Façade Works	Crane, MEWPs, façade panels	20m from building

Each of the above trades are not expected to create a sound level at the boundary that will exceed an action level of 75dB.

Whilst planning the construction activity ISG shall consider the time of day the works are to be undertaken which will form part of the Task Specific Method Statement & Risk Assessment.

Vibration

All works involving noise / vibration will be avoided or minimised, where possible eradicated by design and the use of controlled mechanical equipment.

Site specific measures to be adopted by ISG to reduce vibration include:

- Risk Assessment and mitigation plans.
- Use of super silenced plant where feasible.
- Use of well-maintained modern plant.
- Effective vibration monitoring to be implemented.
- Reducing the need to adopt percussive and vibrating machinery.

Task specific vibration activities shall be included within the risk assessments provided by each respective Sub Contractor as reviewed by ISG Site Manager and where necessary.

It is the ISG policy that all employees who operate equipment that generates vibrations likely to cause hand arm vibration must comply with the recording system, including:

- All tasks carried out using power tools with a vibration level of below 2.5m/s² need not be included in this procedure unless they are used in the same day as other power tools with a vibration level above 2.5m/s².
- Before the task is carried out it will be established that there is not an alternative method of carrying out the task without exposure or with a reduced exposure to HAV.
- The vibration level of the equipment to be used should be ascertained from the user manual, the hirer or Manufacturer. If no information is available, then the piece of equipment should not be used and an alternative selected.
- The vibration level should then be entered (in ms²) into the relevant box of the electronic calculation form, this will give the maximum exposure time for the equipment. Alternatively, the maximum exposure time can be calculated using the ready reckoner contained within the database and entered onto the handwritten HAV permit form.
- The permit is then signed and issued.
- When the work with the tool is complete the trigger time (time the tool was actually activated) should be recorded in the exposure time box and the electronic calculator for will automatically calculate the operative's exposure. In the case of the handwritten form again refer to the ready reckoner to calculate exposure.

- In the event of a second tool being used on the same day the same process should be adopted using the next line on the permit form. The electronic form will calculate the allowable time based on previous exposure.

Standards of Compliance

Reasonable measures will be taken to avoid significant increases in noise and vibration during the construction phase of the development. Any construction works on site will be carried out in accordance with British Standard 5228:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites.

Dust Mitigation

Overview

Due to the nature of the proposed construction activities carried out on site there is a limited potential to create dust nuisance, however dust suppression will be undertaken throughout the construction works. Initial construction activities that will require dust suppression include:

- Earthworks
- Groundworks associated with creation of new hard standings and associated drainage
- Construction traffic / deliveries

The majority of the construction works likely to generate dust comprise of cut and fill operations, foundations, drainage and hardstanding works for steel frame construction and cladding and roofing works for which components are manufactured off site and erected using a mobile crane, significant amounts of dust will not be generated. It is intended to have the building envelope enclosed prior to any internal works

The application of good housekeeping measures which will include regular cleaning, vacuum equipment on small plant and wetting down, where appropriate, will avoid dust break out from the building. The measures noted above particularly wetting down and sheeting of materials stockpiles will control dust generation.

The following mitigation measures will be adopted, where practicable, to reduce and manage dust and other emissions from site activities and minimise disruption or nuisance to neighbouring occupiers:

A) Pre-project planning & effective management, including:

- Method statements to include processes for controlling dust.
- Setting of speed limits at maximum 5mph.
- Preventative measures such as those detailed below.

B) Site preparation and construction, including:

- Keeping fencing, barriers, scaffolding and screening clean
- Construction areas to be clean and regularly swept to prevent the build-up of dust.
- Vacuum plant to be used with all dust generating equipment.

C) Haulage routes, vehicles and plant, including:

- Unnecessary vehicle movements and manoeuvring will be avoided
- Location of plant and vehicles away from sensitive areas, or housed in closed environments where possible

- Use of vehicles and plant with low emission levels
- Regular maintenance of engines, plant, maintenance of pumps and bowser jets
- Use of jet wash wheel-washes
- Use of enclosed and sheeted lorries
- Prevention of unnecessary engine idling
- Avoid heating with open flame burners
- Using water sprays, sand or Hessian to reduce vapour emissions
- Use of particle control measures on all machinery which can generate dust.

D) Materials handling, storage, stockpiles, spillage and disposal, including:

- Use of handling methods to minimise dust generation
- Keeping handling areas clean and free of dust
- Damping down with water when loading materials onto vehicles, onto conveyors and into chutes and skips;
- Storage of fine dry materials in enclosures or given adequate protection from wind, by sheeting;
- Ensure that skips are securely covered;
- Ensure methods and equipment are in place for immediate clean-up of accidental spillages of dusty or potentially dusty materials
- Use wet handling methods for cleaning up spillages of cement powder; and
- No burning of waste wood or other materials on site

Dust Monitoring Measures

The Department of Air Quality Management has produced the following document - Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites and has been referred in selecting the below monitoring measures. Monitoring will provide data that can be used to ensure that mitigation levels are working.

Visual Monitoring. An inspection for visible dust emissions in the vicinity of the site boundary (internal and external) on each boundary face will be conducted at least once every working day. The results of this inspection will be clearly recorded. There are obvious visual signs that a site will be operating at an increased risk of dust release. These signs will be related to Weather (i.e. dry periods with higher wind speeds) and Site operations (i.e. activities with increased potential for dust release).

When it is clear these conditions are occurring, the nominated representative will increase the frequency of visual assessments of dust release and monitoring of any visible surface soiling. This is particularly the case if the prevailing wind is in a direction towards sensitive receptors.

Optical Analysers. Analysers will be deployed at the site boundary on each boundary face during high risk activities such as demolition and ground works. Real-time monitoring provides information on effectiveness of mitigation measures. They will be used to identify any periods of unexpectedly high levels of dust. If these occurrences are identified work will be stopped and the root cause of the increase can be investigated and evaluated. If the method or phasing of the works needs to be revised as a result, then that will be the chosen course of action.

Travel & Highway Impact Mitigation

Protection for Footpaths Surrounding the Site

A dilapidation survey of the adjacent roads will be conducted prior to any works commencing on site. The safety of the public and protection of pedestrians will be ensured at all times. There are no public rights of way across the site. Management of works will be in line with any agreed mitigation strategies to ensure public safety.

Double height (1.8m) stockproof fencing will be erected to the boundary of the site, including the access roadway to the north and west passing through Whinny Moor Plantation, with boarded hoarding to the site entrance. Site access being controlled by dedicated Security (24/7) positioned at the entrance gate. Signage will be erected to ensure adequate warning / information regarding the health and safety of the public.

Red / white vehicles barriers will be installed to the site entrance / bell mouth to prevent damage to kerbs.

All traffic and pedestrian management routes are detailed on the Traffic Management Plan and necessary signage will be displayed as agreed with the Local Planning Authority, and/or Local Highways Authority, and Highways England.

The site shall provide separate entrance and exit gateways for pedestrians to vehicles.

Firm and level pedestrian walkways that provide a direct route to the Welfare Compound will be provided for all Visitors.

ISG Security will be notified of any Visitors who will be escorted to the welfare compound.

Access / Egress

This section considers access and egress from the proposed site and identifies principles to be considered to minimise impact to adjacent public highways

Existing Environment & Access & Egress

The site is easily accessible off the A19 via the A689 and Wynyard Avenue with all site access during construction through Wynyard Business Park. A new secondary access roadway will be constructed linking onto Glenarm Road to the west, but this is solely for secondary/emergency access post construction. At no time will deliveries or construction traffic be utilising Hanzard Drive and Glenarm Road.

All site access and egress routes together with signage demonstrating safe access to the site taking cognisance of the surrounding land use and adjacent buildings are considered and consider the following;

- Staff and visitor parking arrangements - No vehicles will be allowed to park on the approach roads to the site. The site gateman will patrol the approach roads twice daily to check that no vehicles associated with the site are parked on the approach roads.
- Arrangements and timing of deliveries to the site will be carefully planned to ensure highways are kept clear.
- Arrangements for the removal of waste.
- Vehicle and plant and equipment movement - An adequate turning area will be provided within the site to ensure that no vehicle reverse out of the entrances of the site

- Pedestrian Routes - Separate and dedicated pedestrian access routes and walkways will be provided around the site in order to provide safe access for site operatives and others around the site.
- Pay due regard to the existing vehicular and pedestrian routes especially at the roundabout junction between Monks Way East and Brickyard Lane
- All site Signage requirements.
- Banksman requirements for the co-ordination of movements into, around and off the site.
- Traffic plan drawings.
- Detailed methodology and designs will be submitted for approval prior to works commencing in a CTMP.



Traffic Management Plan

The following procedures / arrangements for will apply for temporary traffic routes on site for the duration of the construction works

- All traffic and pedestrian routes will be clearly separated from each other by designated walkways, signage and suitable barriers.
- Road crossing points will be clearly identified.
- Vehicles will be subject to a 5mph speed limit.
- All delivery vehicles will sign in and security will notify the respective contractor of their presence before releasing it onto site.

- All delivery drivers will be advised of site issues on arrival including all pedestrian routes, crossing points, etc.
- All traffic on site will be checked for cleanliness prior to leaving the site and if required, wheels will be cleaned before entering the public roads.

The following procedures / arrangements for will apply for pedestrian routes on site:

- All traffic and pedestrian routes will be clearly separated from each other by designated walkways and suitable barriers.
- Road crossing points will be clearly identified.

48 Hour Delivery Notice

All Sub-Contractors will be responsible for providing 48-hour notice of any delivery to site to allow ISG to maintain control and coordinate construction traffic accordingly. The Pre-Contract Award and Pre-Start Meetings are the primary means of communicating the Delivery Procedure however, the Delivery procedure will also be communicated through other means, including:

- Weekly Sub Contractor Meetings
- HS&E Construction Management Plan
- HS&E Site Induction

The Delivery Procedure and Traffic Management Plan will be included within all Subcontract Orders and forms part of the Pre-Start Meeting, held two weeks prior to each Sub Contractor commencing works.

A register to log the names and times of all persons entering and exiting the site is located at the site entrance cabin.

Plant, Fuelling Station & Spill Kit

A dedicated individual will be delegated by the Project Manager to take overall responsibility to ensure that the environment is fully protected from any contamination. This will include the following:

- Ensuring all diesel tanks are double bunded and kept locked at all times.
- All items of plant are parked in a designated area for re-fuelling with drip trays sufficient for the task in place.
- A fire call point will be established at the re-fuelling point with Co2, Foam and Water Extinguishers available.
- A register of all spill kits will be maintained in the Project Office and their locations will be clearly marked on a site plan.

Public Highway Maintenance

Prevention of dirt, mud and debris on site and on the surrounding roads will be managed by:

- Regular inspections and monitoring - The Project Manager, along with ISG site staff to agree appropriate road cleaning measures as necessary dependent on the climatic conditions.
- Reducing the number of vehicles leaving the site through adopting sustainable construction techniques which maximise the volume of suitable recoverable materials.
- Minimising the amount of mud generated on site by grading and maintaining site haul roads.
- Sheeting up of all lorries before leaving the site to prevent spillages of mud and debris. Having a road sweeper to clean and maintain the surrounding roads and footpaths and the site entrance weekly or at a greater frequency as site conditions dictate.

- We will continue our ZERO complaint record with regards to the cleanliness of the public highway throughout the delivery.

Wheel Washing Facilities

A wheel cleaning procedure will be used in order to mitigate the amount of mud that could potentially be deposited on the highways by vehicles exiting the construction site.

Local drainage will be provided inside the site boundary to avoid discharge of water onto the highway and settling of silts prior to discharge to the local sewer. In any event our traffic marshal will be responsible for ensuring vehicles are checked prior to leaving the site area.

ISG will also carry out mechanical road sweeping of the roads around daily / as and when required for the duration of the works.

The proposed wheel cleaning procedure will consist of:

- Before leaving the site, vehicles will be inspected for any heavy deposits left on wheels.
- Following inspection, wheels will be cleaned prior to leaving if required
- Vehicles will be permitted to leave site following approval of the site representative that the above steps have been completed to a satisfactory standard.
- Site traffic will be marshalled onto the highway with priority to road traffic
- ISG shall monitor the site boundary and adjacent roads daily to ensure that both pedestrian and vehicular access routes are kept clear, clean and maintained at all time

Artificial Lighting

Whilst ISG has a Health & Safety obligation to provide artificial lighting on site ISG understand the need to carefully consider artificial lighting as part of development, including the impact on:

- Road Users
- Residents
- Neighbours
- Nearby species & Ecosystems, including protected species (Bats)

The implementation of any artificial lighting during the construction phase will be used and located to ensure no impacts (i.e. glare) on motorists on adjacent roads. All temporary lighting will be fluorescent fittings directed directly into site and avoiding off-site areas and habitats.

It will be necessary from a health and safety issue to provide external lighting to the site office and welfare compound and to light the access route from the construction site to the compound to provide safe access and egress to the site. Any temporary site lighting will be positioned to prevent light pollution to adjoining properties.

General circulation lighting and task lighting for construction operations will be within the building profile and will be provided primarily by fluorescent tube lighting. The implementation of any artificial lighting during the construction phase of the development will have no impact of glare to motorists on adjacent roads and to the Network Rail asset.

The permanent lighting scheme will be designed to minimise light spill onto the plantation and be downwardly directional to minimise potential disturbance on bats and other nocturnal species. All new lighting should meet the current environmental standards of good practice in order to reduce potential light pollution and use the lowest intensity possible for its purpose.

Site Compound

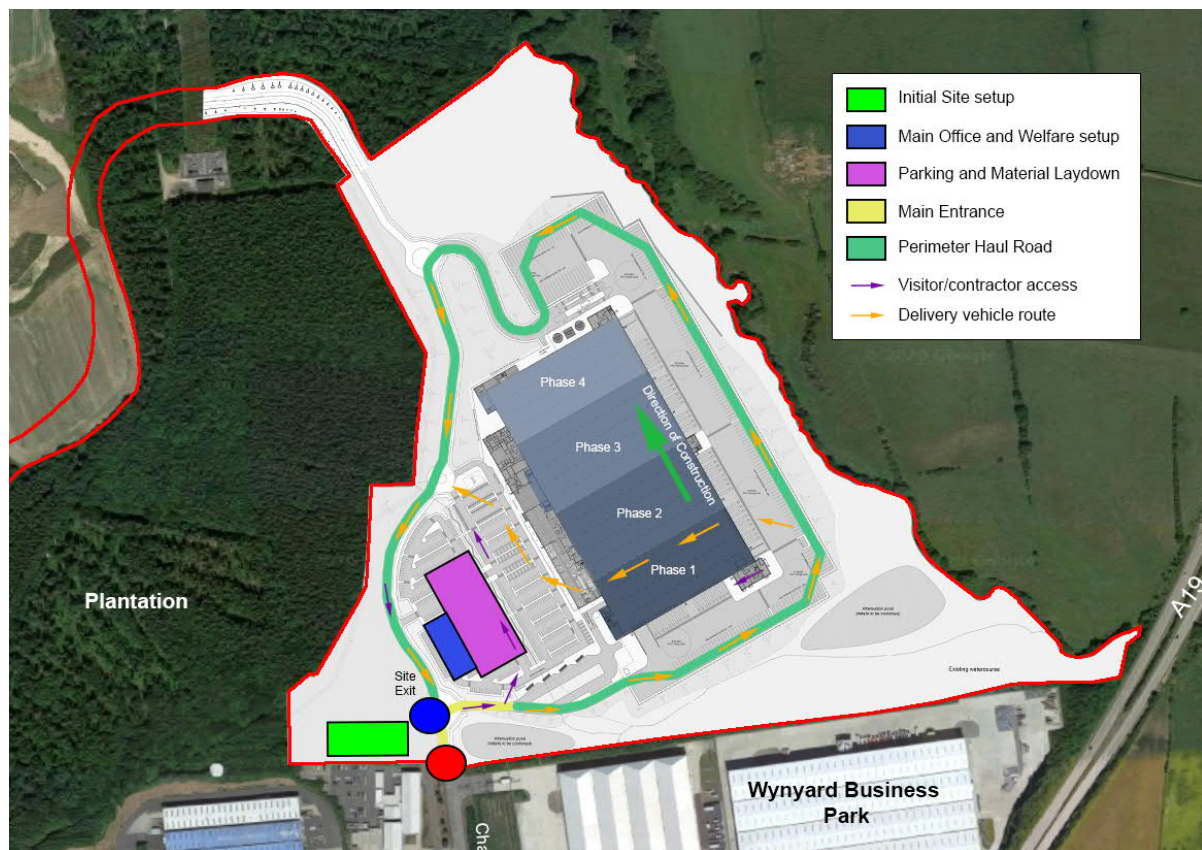
The ISG intention is to accelerate the external works and lay tarmac to the permanent site access roads, car parks, Welfare Compound and storage areas as quickly as possible.

As part of the Cut & Fill works, we will lay and compact hardstanding to the Site Entrance / Exit to reduce the potential for mud to be tracked onto the road and dust. Segregating the on-site traffic from the delivery vehicles will reduce this further.

The site compound will be located on the south western side of the proposed development, this will enable all visitor access whether by vehicle or foot to be from established safe networks with direct access to Wynyard Avenue and out onto the A19. The compound will be segregated from the remainder of the site to ensure control of access to work areas.

Our site compound will have access to toilets and facilities for washing, changing, eating and rest in accordance with Schedule 2 of the Construction (Design and Management) Regulations 2015 (CDM 2015). In addition, offices and meeting rooms, storage and off highway parking will be included.

All site facilities will be covered by the procedures we have implemented across our sites to maximise safety under Covid-19.



Car Parking

Parking of any vehicle associated with the Project must take account of the requirements of surrounding buildings / businesses whose needs will take priority.

Should any Sub-Contractor decide to park illegally or in a way that causes a nuisance to neighbours, ISG will not hesitate to remove that Sub-Contractor from the site

It will be discussed with our suppliers so that use of alternative transport, rather than private cars, is maximised subject to relevant Covid guidance.

Biodiversity Impacts

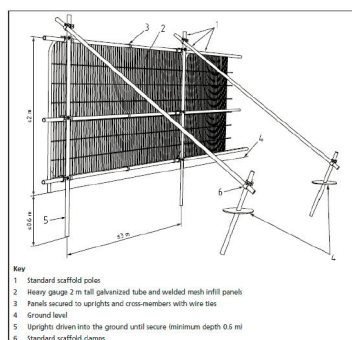
Biodiversity Impacts

Naturally Wild Consultants have been commissioned to provide ecological advice regarding the proposed development of the site to the north of Wynyard Park and have prepared the Ecology and Nature Conservation chapter of the supplementary ES. It provides an assessment of potential impacts to protected and notable species and habitats resulting from the proposed development and addresses how these may be mitigated and compensated for.

The contents of the assessment of the proposals and creation of appropriate mitigation measures to outline the avoidance, mitigation and compensation measures to be incorporated into the proposed development in order to mitigate against the significant impacts resulting from the project as a whole have been incorporated into this CEMP.

Standard measures will be included to mitigate against typical impacts such as noise, vibration, dust deposition, light spill, and pollution. Specific considerations in relation to minimising significant ecological impacts would include the avoidance of night work during construction in order to minimise disturbance to nocturnal wildlife, implementation of a sensitive lighting scheme, both during and post-works, and appropriate protection of trees and shrubs to be retained, via the use of appropriate fencing and Root Protection Areas.

Appropriate protection, in the form of barrier fencing will be installed prior to any construction / site preparation works commencing to protect retained trees and hedgerows as identified in the Arboricultural Assessment. An example of high intensity fencing is shown below and this will be the default level of protection where trees and hedgerows are to be retained. All Tree Protection measures will be as per guidance set out in BS 5837 (2012) Trees in Relation to Design, Demolition and Construction – Recommendations and in accordance with an approved Arboricultural Method Statement and Tree Protection Plan approved by the LPA via the imposition of planning conditions to an approval. The AMS and TPP will detail the precise means of protection. These measures will safeguard retained trees and hedgerows and minimise incidental damage and disturbance to the habitats and the species they support. These measures will be effective prior to all construction activities / site preparation work commencing.



Green Infrastructure will be created as part of the development, with a Landscape Strategy produced to outline this. Due to the permanent loss of woodland and hedgerow habitat during the construction phase, this will be compensated for via appropriate planting around the site, with plant species used being complementary of the habitats already present, using specimens ideally of local provenance, and with a sufficient species mix to provide an overall habitat enhancement post-works. The Landscape Strategy as a whole is being designed with the intention of provide an overall biodiversity

enhancement post-works. Habitats to be created will include areas of woodland, native species-rich hedgerow, and wildflower meadow. Full details are provided on the Landscape Proposals Plan.

Further to the above, two new attenuation ponds are to be created as part of the proposed development. While the primary purpose of these features will be to facilitate site drainage, they are also designed to maximise their value for wildlife. A species-rich seed mix will be sown to create a diverse sward of vegetation around the pond basin to provide suitable habitat for invertebrates, which will in turn provide foraging opportunities for a range of wildlife, including birds and bats. At least one shallower side should be present to allow an access/egress point for wildlife.

Artificial lighting will be installed as part of the proposed development, and a lighting design has been produced to outline this for the main part of the site. The External Lighting Layout drawing indicates that light spill onto sensitive ecological receptors to be retained – including the edge of Whinny Moor Plantation along the western boundary and North Burn – will be minimal overall. Light spill onto North Burn will be almost entirely avoided, and any spill onto the woodland edge will be mostly 1 lux (equivalent to deep twilight), with some very limited areas experiencing brightness of 5 lux (between deep twilight and twilight). Standard measures to be incorporated to minimise disturbance impacts will include sensitive positioning to angle light spill away from adjacent habitats and use of cowls to minimise the angles of spill.

Construction method statements, where applicable and relevant, will identify specific hold points whereupon checks for wildlife (e.g. newts, bats, active birds' nests, etc.) will be made. ISG Site SHE Manager, or an individual designated with that responsibility by him will carry out inspections for wildlife (e.g. newts, bats, active birds' nests, etc.) prior to construction activities. Inspections for wildlife (e.g. newts, bats, active birds' nests, etc.) will be recorded, as necessary, on the General permit for the activity for that day. The system will be monitored through the Site Audit scheme.

Ecological Mitigation and Monitoring

No active sheltering habitat (setts, holts or burrows) for badgers, otters or water voles were recorded on or adjacent to the site during the survey work undertaken, but suitable habitat for all of them are present on or adjacent to the site for each, there are historic records for each species in the area, and badger latrines were recorded in the south-eastern corner of the site. On this basis, a pre-start walkover survey (or series of walkovers, depending on the likely duration of clearance works) should be carried out shortly prior to site clearance to ensure that no active setts, holts or burrows are present that will be significantly impacted by the works. In the event any active sheltering habitat is found, avoidance measures would need to be put in place and appropriate mitigation would need to be implemented, which may include consultation with Natural England on the requirement for mitigation licences to damage or disturb the habitat of any of these species.

Based on the survey findings, historic records and habitats to be affected by the proposed development, GCN and reptiles are considered unlikely to be encountered during site works; however, in the unlikely event reptiles are being encountered on a regular basis during site clearance, works should stop and a suitably qualified ecologist should be contacted for advice on how to proceed. In the event any GCN are encountered, it is a legal requirement to stop work and an alternative working approach will need to be discussed and agreed, which is likely to include consultation with Natural England on any further survey effort and requirements for a mitigation licence to allow works to proceed.

Any common toads or hedgehogs encountered during site works should be carefully moved to a safe location away from the works, or be allowed to move off of their own accord. Any brown hares disturbed should be allowed to move off of their own accord.

Any trenches or other excavations created during site works should be back-filled during the same working day or covered over. If this is not feasible for any reason, an adequate means of escape should be provided for any nocturnal wildlife, such as badgers and hedgehogs, that may fall in and become trapped. An adequate means of escape would comprise a ramp with adequate grip, at least 30 cm wide and set at an angle of no greater than 45°.

Due to the suitability of habitats across the site to support nesting birds, site clearance should be carried out outside of the nesting season, which is defined as running from March to August, inclusive. If this is not feasible for any reason, a nesting bird survey (or series of surveys, depending on the duration of clearance works) must be carried out by a suitably qualified ecologist shortly prior to the start of works to ensure no active nests are present. In the event that any active nests are found during this survey or at any point during the works, a suitable exclusion zone should be put around the nest, with no work taking place in this area until such time as the nest can be confirmed as no longer active.

Other measures to be implemented prior to or during construction that are relevant to the ecological constraints will include minimising and preventing runoff and works pollution from entering watercourses. This will be achieved through the use of bunds to catch and divert runoff, drip trays to prevent any oil and fuel spillages spreading. Also see below regarding water issues.

Training / Coaching

Training and information about the importance of 'Wildlife Protection Zones' to all Site Operatives will be carried out throughout the duration of the Project via:

- HS&E Site Induction
- Environmental Awareness training provided to all Sub-Contractor Supervisors
- Toolbox Talks (spillage response, waste segregation, prevention & control of nuisance, ecology etc)
- Daily Activity Briefings

Roles & Responsibilities

Competent Person

Whilst the Project Manager will remain accountable, the Project Manager will formally appoint a Sustainability Champion to manage and implement the Project Sustainability Plan.

The Project Sustainability Plan addresses:

- Waste Management (SWMP)
- Permits / Consents
- Prevention & Control of Nuisance e.g. dust, noise
- Pollution Prevention
- Environmental Risk Assessment
- Project Targets
- Environmental Emergency Plan
- Training

The Sustainability Champion will be supported by the Projected Manager and the visiting Sustainability Manager who will attend site monthly.

Communication

The Pre-Contract Award and Pre-Start Meetings are the primary means of communicating the Sustainability Plan however, Site Operatives will also be briefed on all Environmental aspects:

- Weekly Sub Contractor Meetings
- HS&E Construction Management Plan
- HS&E Site Induction

Water Management / Contamination

Surface Water Management

Surface water quality and quantity shall be managed throughout construction and prevent the impact of work off site. Primary risk to surface water pollution will be during excavation works for creation of the development platform for building and associated parking, localised drainage protection (as required) and appropriate storage of materials will mitigate pollution risk (see section 4.2.3).

In the event of exceptional rainfall (i.e. a severe weather event during excavation works) and the need to dewater the excavation, this will be undertaken in line with Environment Agency Regulatory Position Statement – Temporary dewatering from excavations to surface water, all discharges will be pumped through site drainage to remove sediments. In the event of site drainage providing insufficient removal of sediment, emergency arrangements will be to hire in a silt filtration unit however this is considered unlikely based on the size and duration of excavation works.

The contractor will develop a Construction Surface Water Management Plan which shall include:

- construction surface water drainage system design
- construction management, maintenance and remediation schedules
- required consents, e.g. Land Drainage Act, Environmental Permit
- flood risk controls e.g. temporary attenuation tank
- pollution, water quality and emergency control measures
- construction site plan that includes compounds, material storage areas and temporary site parking

ISG shall adhere to all current legislation, including:

- Control of Water Pollution from Construction Sites – Guide to Good Practice (SP156)
- Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (C532)
- Control of Water Pollution from Linear Construction Projects – Technical Guidance (C648)
- Control of Water Pollution from Linear Construction Projects – Site Guide (C649)
- Environmental Good Practice – Site Guide (C650)
- The SUDS Manual (C753)
- BS 8582:2013 Code of practice for surface water management for development sites
- BS 8582:2013 Code of practice for surface water management for development sites

Contamination

The natural ground model of the Site can be characterised by a variable superficial sequence of glacial cohesive and granular deposits classified as Devensian Till. Such deposits were encountered in all intrusive locations across the Site. Generally, shallower deposits tended to comprise cohesive soils with lenses of sand and gravel (Upper Devensian Till), grading into predominantly granular soils at depth with thinner lenses of clay (Lower Devensian Till). Bedrock was not encountered during the investigation, however, is mapped by the BGS as the Roxby Formation (Secondary B Aquifer), with the Sherwood Sandstone Group (Principal Aquifer) located in the north of the Site.

No visual or olfactory evidence of potential gross soil contamination was observed during the ground investigations

Human Health

None of the contaminant concentrations detected within the soil samples from both the general site area and from the stockpile in the south-west exceeded the relevant Generic Assessment Criteria (GAC). In addition, no asbestos fibres were detected within any of the samples tested. Therefore, the soil contaminant concentrations are considered unlikely to represent a risk to human health in the context of the proposed development.

Controlled Waters

The results of the groundwater analysis identified Site-wide elevated concentrations of copper above the adopted GAC, and elevated concentrations of sulphate were identified in three locations in the south, west and centre. These are considered to be representative of the typical background concentrations of these determinands, and therefore considered unlikely to pose a risk to controlled waters.

Localised elevated concentrations of aromatic TPH C21-C35 and TPH were identified in one location in the east of the Site and an elevated concentration of zinc was identified in one location in the centre. However, given the limited potential sources of contamination identified at the Site, it is plausible that the elevated concentrations have originated from an off-Site source (noting that C21-C35 aromatic hydrocarbons are typically of low aqueous solubility/mobility), albeit not resulting in widespread impact to groundwater quality. The Site is not located within a groundwater SPZ and there are no groundwater abstractions recorded within 1 km. In addition, the substantial thickness of predominantly cohesive Devensian Till identified during the intrusive investigation will limit vertical and lateral migration of the determinands in to the underlying Principal Aquifer and nearby surface watercourses. The risk to controlled waters is therefore considered to be low.

During the construction phase of the works and the unlikely event that pockets of isolated contaminated soils may be discovered, this may release or increase the mobility of any contamination present. If contamination is identified the potential effect will be assessed prior to the implementation of suitable mitigation measures. Records of such areas will be maintained and recorded within the validation reports for the construction works.

Communication / Monitoring / Review

Considerate Constructors Scheme

The construction industry has a huge impact on all our lives, with most construction work taking place in sensitive locations. ISG aspiration is to present an image of competent management, efficiency, awareness of environmental issues and above all neighbourliness.

The Project shall register with the Considerate Constructors Scheme and work closely to the Code of Considerate Practice.

Any complaints will be personally addressed by the Project Manager who is responsible for closing out as quickly as possible as part of ISG's commitment to the Considerate Contractors Scheme.

Communication

ISG aspiration is to demonstrate a positive attitude and commitment toward minimising environmental disturbance to Local Residents and Businesses

An initial letter drop shall be carried out by ISG to all surrounding properties affected by the development. The letter will advise residents and businesses of commencement and duration of the works along with contact details for the project. Monthly letter drops will be undertaken throughout the construction works.

ISG Project Manager contact number will be placed in a prominent place on the perimeter hoarding along with a 24hr contact numbers.

Monitoring / Compliance

The Sustainability Champion will ensure compliance with all relevant Planning Conditions. Whilst weekly Health, Safety and Environmental Inspections are conducted a dedicated Environmental Inspection will be carried out fortnightly with any actions being closed out immediately.

Our Daily Hoarding Inspection will also identify any maintenance works that is required with any environmental matters discussed at the Daily Activity Briefing to which all Sub-Contractor Supervisors attend

