

Rail Central Strategic Rail Freight Interchange

Northamptonshire

Code of Construction Practice

Report for

Ashfield Land Management Limited and
Gazeley GLP Northampton s.à.r.l.

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1.0 INTRODUCTION

1.1 Background

This Code of Construction Practice (CoCP) has been prepared for the enablement and construction works to be undertaken for Ashfield Land Management Limited and Gazeley Northampton S.à r.l (the Applicant) at a site known as Rail Central, Northamptonshire.

The proposed development is to comprise a Strategic Rail Freight Interchange (SRFI) including warehousing, an intermodal facility, express freight platform, lorry park and associated infrastructure. Works to J15a of the M1 and other minor highways works are also proposed.

The Code of Construction Practice (CoCP) defines the overarching control measures and standards to be implemented throughout the schemes development. The Construction Environmental Management Plan (CEMP) sets the site specific control measures will be included to manage the development.

A site location plan (Hydrock Drawing 151171/D001), and a Site Extents Plan (Hydrock Drawing 151171/D002) are presented in Appendix A.

1.2 Purpose & Objectives

The CoCP sets out a series of measures and controls to be applied throughout construction to mitigate the potential impact of site activities on the natural and historic environments, amenity, well-being, health and safety of local residents, road users and traffic flow, businesses and the public. Any significant effects from construction will be minimised in the vicinity of the works by implementation of this CoCP. The Principal Contractor shall follow best practice at all times in minimising the construction impacts. Measures specified within this document are considered to be the minimum standard acceptable in the construction of the Project.

The CoCP role is also to identify the main legal responsibilities and requirements of the Applicant, their consultants and contractors in constructing the scheme. Whilst the Applicant has ultimate responsibility, it is recommended that the various parties concerned in the sites delivery should agree a nominated person who will take responsibility for compliance with the CoCP on their behalf. This person should be someone with the necessary authority to deal with the matters covered by the CoCP on behalf of all those parties working on a site without the need to seek further authority.

1.3 Previous Reports

This draft CoCP is based on the following reports:

- Hydrock Consultants Limited. April 2015, Updated February 2018. 'Milton Malsor Northamptonshire - Desk Study Report', Ref R/151171/001 Issue 8.
- Hydrock Consultants Limited. April 2015, Updated February 2018. 'Milton Malsor Northamptonshire - Desk Study Report', Ref R/151171/001 Issue 8.
- Hydrock Consultants Limited. April 2015, Updated February 2018. 'Rail Central. Milton Malsor, Northamptonshire. Ground Investigation Report - Main SRFI Site', Ref R/151171/002 Issue 4.
- Hydrock Consultants Limited. July 2017, Updated February 2018. 'Rail Central, Milton Malsor. Ground Conditions Desk Study Report, M1 Junction 15A Improvements', Ref R/151171/003 Issue 2.



- Hydrock Consultants Limited. September 2017, Updated February 2018. 'Rail Central. Milton Malsor, Northamptonshire. Ground Investigation Report - Main Strategic Rail Freight Interchange - Conceptual Geotechnical Design', Ref R/151171/005 Issue 2.
- Hydrock Consultants Limited. September 2017, Updated February 2018. 'Rail Central. Milton Malsor, Northamptonshire. Ground Investigation Report - Main Strategic Rail Freight Interchange - Remediation Method Statement', Ref R/151171/006 Issue 2.
- Hydrock Consultants Limited. February 2018. 'Rail Central Strategic Rail Freight Interchange, Northamptonshire. Materials Management Plan', Ref. RCL-HYD-XX_REM-RP-GE-3001-SO-P4.
- Hydrock Consultants Limited. February 2018. 'Rail Central Strategic Rail Freight Interchange, Northamptonshire. Pollution Prevention Method Statement, Ref. Hydrock Ref. RCL-HYD-XX_REM-RP-GE-3003-SO-P4.
- Hydrock Consultants Limited. February 2018. Rail Central Strategic Rail Freight Interchange, Northampton - Construction Environmental Management Plan. RCL-HYD-XX-VAL-RP-5001-S2-P4.

The assessment and conclusions of the reports listed above have not been replicated within this CoCP. The reader is directed to the original documents accompanying the DCO application.

1.4 Limitations

This document will be updated as detailed design progresses and consultation with the appointed Principal Contractor is undertaken.

Hydrock has prepared the report based on available information obtained during the study period. Although every reasonable effort has been made to gather all relevant information, all potential environmental constraints or liabilities associated with the site may not have been revealed.

The report has been prepared for the exclusive benefit of Ashfield Land Management Limited and Gazeley Northampton S.à r.l and those parties designated by them for the purpose of providing information on the environmental management of works to be undertaken during the enablement and construction phase of the development. The report contents should only be used in that context. Furthermore, new information, changed practices or new legislation may necessitate revised interpretation of the report after the date of its submission.

Hydrock has used reasonable skill, care and diligence in reporting. Information provided by third parties has been used in good faith and is taken at face value. However, Hydrock cannot guarantee the accuracy or completeness of any information provided by others.

The work has been undertaken in general accordance with recognised best practice as detailed in this document.

Any site boundary line depicted on plans does not imply legal ownership of land.



2.0 ENVIRONMENTAL OBLIGATIONS

2.1 Identification of Requirements

It is important that the scheme adhere to the requirements of:

- Appropriate legal and regulatory requirements.
- Any consents, permits and licences.
- Any technical reports provided in support of future planning applications and decisions.

Additionally the Principal Contractor is expected to possess and operate in accordance with its own Environmental and Sustainability Policies.

2.2 Legal and Regulatory Requirements

The Principal Contractor shall comply with all legal requirements and best practice regarding environmental pollution protection and undertake the works in accordance with future Specification(s) and Employers Requirements.

A summary of the key relevant environmental legislation and regulations for the scheme is listed in Table 2.1 below. Other legislation and regulations may also apply and attention should be paid to any relevant updates to existing environmental legislation and new legislation coming in to force.

Table 2.1: Legislation and Relevance to Project

Legislation	Relevance
Control of Waste (Registration of Carriers and Seizure of Vehicles) regulations, 2009	Transportation of waste from site.
Environmental Damage (Prevention and Remediation) Regulations, 2009	No required permits and consents, except environmental permit for transport and handling waste.
Environmental Damage and Liability Regulations, 2009	Use approved Risk Assessment documents.
Environmental Permitting (England and Wales) Regulations (Amendment), 2013	Waste Management / permit for waste recycling contractor. Responsibility for producing Waste Transfer Notes.
Environmental Protection (Controls on Injurious Substances) Regulations, 1992 (Amended 2001)	COSHH Assessment completed for all known substances to be used on site.
Environmental Protection (Duty of Care) Regulations, 1991 (Amended 2003)	Ensure compliance with Duty of Care requirements.
Environmental Protection Act, 1990	Framework for Duty of Care for waste, contaminated land and statutory nuisance.
Hazardous Waste (England) Regulations, 2002 (Amended 2005)	In the event of hazardous waste. Qualifying limit for notification changed from 200kg to 500kg a year of hazardous waste.
Health and Safety at Work Act, 1974	All hazardous substances on site COSHH assessment should be produced.
Land Drainage Act, 1991	For land drainage consent.
Landfill (England and Wales) Regulations, 2002 (Amended 2005)	For all site waste sent to landfill.



Legislation	Relevance
Landfill Tax Regulations, 1996 (Amended 2009)	For any waste sent to landfill.
List of Wastes (England) Regulations, 2005	List of EWC Codes needed.
Pollution Prevention and Control Regulations, 2000	Approved plant and equipment to be used on site.
Protection of Badgers Act, 1992	There has been no evidence of badgers on site but vigilance required.
The Rail Central Rail Freight Interchange and Highway Order 201X	Adhere to the requirements of the Order
The Noise and Statutory Nuisances Act 1993	For any noise disturbance caused.
Planning Act, 2008	Discharge of appropriate DCO requirements.
Traffic Sign Regulations and General Directions (TSRGD) 2011	Appropriate signage for lorries delivering to site.
Waste Electrical and Electronic Equipment (WEEE) Regulations, 2006	For any electrical or electronic waste. When purchasing new EEE (i.e. computers), retain producing registration number for future replacement or disposal.
Waste (England and Wales) Regulations, 2011	Declaration that waste hierarchy has been applied on the Waste Transfer Notes and consignment notes. Classification of the 2007 Standard Industrial Classification (SIC) code of the person transferring the waste.
Waste Management Licensing (England and Wales) (Amendment and Related Provisions) Regulations, 2006	Environmental Permit to be included within documentation.
Water Resources Act ,1991 (Amended 2009)	Section 119 Consent to discharge trade effluent into public sewer.
Wildlife and Countryside Act, 1981 (as amended)	Protected species of birds and animals. Species most likely to be found on site include breeding birds and great crested newts. Animals, nests and eggs cannot be disturbed or destroyed unless a licence is issued.

2.3 Consents, Permits and Licences

In addition to the above legislation, the Contractor will need to work within the following consents and licences. Table 2.2 outlines management of consents, permits and licences for the project. Other consents may also be required and will be added to this list when identified by the Principal Contractor.

Table 2.2 Consents and Permits

Consent / Permit	Statutory Authority	Requirements
Planning Act, 2008	Northampton Borough Council (NBC) South Northamptonshire Council (SNC)	Discharge of appropriate DCO requirements.
Environmental Permitting for construction works regarding Waste / Water Discharge / Groundwater.	Environment Agency / DEFRA	To be agreed by the Environment Agency
Discharge to sewer (usually foul) if Principal Contractor needs for works.	Water Utility Company (United Utilities)	For Principal Contractor to apply for.



Table 2.3 lists the typical ecological conditions that can commonly pose a constraint to construction works, though further ecological requirements maybe indicated in the surveys to be undertaken.

Table 2.3 Typical Ecologically Related Licences

Ecology Condition	Comment
Great crested newts (GCN)	A pond east of the Northampton Loop Line (NLL) within 500 m of the Main SRFI Site has a medium-population of GCN. The railway is not considered a complete barrier to GCNs. The Main SRFI Site has habitat suitable for GCNs. No GCNs have been found in the ponds there, but a licence will be required to remove and exclude them from terrestrial habitat (using drift fencing)
Common pipistrelle – minor non-maternity roost for small numbers of bats	European Protected Species Licence (EPSL) required for exclusion of bats from Field Barns near Barn Lane.
Common pipistrelle – minor non-maternity roost for small numbers of bats	EPSL required for exclusion of bats from the main house and barn at Lodge Farm prior to demolitions.
Common pipistrelle – minor non-maternity roost for small numbers of bats	EPSL required for exclusion of these bats from the house and stable block at Manor Farm.
Signal crayfish (Pacifastacus leniusculus)	Native white-clawed crayfish (<i>Austropotamobius pallipes</i>) are probably excluded from the Milton Malsor Brook by large numbers of non-native signal crayfish (to be confirmed by survey). Brook diversion works may generate excavated material containing signal crayfish which may carry Crayfish Plague Disease lethal to the native species. Environment Agency approval (but no actual licence) will be needed for on-site retention and handling of such material to avoid transferring disease to native crayfish habitat elsewhere. If precautions were to include the intentional capture of crayfish then a licence would be necessary.
Fish	Prior to works to divert the Milton Malsor Brook, a fish rescue and translocation will require Environment Agency authorisation (but no actual licence) will be needed for ‘authorisation to fish using instruments (other than rod and line) under section 27A Salmon and Freshwater Fisheries Act 1975’ (FR2 application form). This will be sufficient provided that fish are transferred to another section of the same watercourse in close proximity to their original site of capture.



3.0 SITE ROLES AND RESPONSIBILITIES

The Applicant, and the Project Manager will establish roles, responsibilities, authorities and accountabilities in advance of the construction phase and these will be embedded within the construction contract performance requirements. All works will be carried out in accordance with the conditions attached to any future Development Consent Order (including the submissions made to discharge the conditions) and the general law. A summary of the anticipated roles are detailed in Table 3.1 below.

Table 3.1: CoCP Summary of Anticipated Roles & Responsibilities

Role	Responsibilities
Applicant: Ashfield Land Management Limited and Gazeley GLP Northampton S.à r.l	
Project Manager (tbc)	Overall environmental management of the site on behalf of the owner.
Principal Contractor, to be appointed. Overall responsibility to ensure works are undertaken in accordance with all legislation, best practice and the CEMP Team will include:	
Construction Manager	Day-to-day management of the site.
Waste & Environmental Manager	Plan the works, and those of their sub-Contractors
Site Staff	Obligations under Duty of Care
Designer, Various	
Design out adverse effects on the environment as reasonably practicable, in accordance with legislation and best construction practice. Where effects cannot be designed out, advise the Principal Contractor on environmental hazard that a competent Principal Contractor cannot reasonably anticipate.	
Other Stakeholders, Northampton Borough Council; South Northamptonshire Council, Environment Agency, Natural England, Highways England, HSE, Historic England.	
Environmental Officer	Enforce planning requirements and liaise with public enquiries received.

It is anticipated that the Applicant will nominate a Project Manager for the site.

The successful Principal Contractor will have overall responsibility to ensure works are undertaken in accordance with all legislation, best practice, the Construction Environmental Management Plan (CEMP) and the CoCP. The Principal Contractor will appoint a suitably qualified and experienced:

- Site Manager, will monitor the day-to-day management of the site, including legal and environmental responsibilities, site health and safety, and to ensure adherence to the CoCP, CEMP and all approved method statements and the Development Consent Order (DCO). The Site Manager will be responsible for ensuring that all site staff receive a briefing on the CoCP, CEMP and other planning conditions as part of their site induction and are aware of their roles and responsibilities in fulfilling the requirements of the CoCP.
- The Principal Contractor's Waste & Environmental Manager (if necessary), shall carefully plan the works, and those of their sub-Contractors. The Principal Contractor will provide these details in a Health and Safety Plan (as required under the Construction (Design and Management) Regulations (CDM) 2015). The Principal Contractor and sub-Contractors will be required to adhere to the CoCP.
- Site Staff will have an obligation under Duty of Care to follow training, inductions, method statements, briefings and toolbox talks.



As part of the contract management, between the Applicant, the project manager, designer(s) and the Principal Contractor, the following will need to occur (responsibilities should be allocated in the Contract documents):

- Advising and assisting in avoiding, minimising and mitigating adverse effects of environmental aspects associated with construction.
- Review the construction progress on site and the upcoming works in the context of environmental mitigation.
- Review the environmental monitoring.
- Review the effectiveness of the environmental mitigation.

Should any unexpected environmental issues arise during construction; such as complaints the Principal Contractor will immediately report them to the Site Management Team so that suitable measures can be implemented consistent with the various component plans within this draft CoCP.

The environmental impacts of the works will be assessed within the risk assessments, method statements and control measures developed for the works. Should complaints be received, the appointed Principal Contractor will liaise with the design team, establish the cause of the complaint and propose mitigations to the relevant stakeholder. Further monitoring should then be undertaken to ensure the scenario that first caused the complaint is addressed.



4.0 CONSTRUCTION

This CoCP will form part of the DCO and therefore can only be amended with the explicit consent of the LPA. The Principal Contractor will seek approval from the LPA for any updates. It is envisaged that the Principal Contractor will update this CoCP to provide details on how the Principal Contractor will:

- Conform to the technical reports provided in support of any planning application.
- Ensure that all environmental undertakings and obligations of the Principal Contractor are fulfilled.
- Adopt working practices that will achieve good environmental practice on site.
- Ensure that sub-contractors and suppliers are aware of the environmental constraints and opportunities of the site, and follow any necessary procedures in order to ensure good environmental practice.
- Detail the responsibilities of staff and the Principal Contractor in achieving good environmental practice on site.

4.1 People & Communities

The Principal Contractor's update to the CoCP will detail how earthworks and construction works will be controlled in accordance with best practice and guidance to control possible nuisance issues to neighbouring communities, including dust, noise, ground vibration, odours and traffic management.

4.2 Contractor Requirements

All works will be undertaken in accordance with all relevant environmental legislation, agreements, authorisations, commitments (included in this CoCP) and best construction practice to minimise the impact, so far as reasonably practicable, to the environment, neighbours and environs.

Works that may cause an impact to neighbours will be advertised through a mechanism to be agreed with NBC, SNC or other relevant Planning Authorities. This mechanism may be door to door leafleting of nearby properties, advertising in a local paper, posters in prominent locations etc. and will address issues relating to programme, activities and likely effects, duration and points of contact. The CoCP will detail a communications protocol to be agreed with NBC and SNC before works begin.

The Principal Contractor will ensure that all site personnel, specialist sub-Contractors, delivery drivers and any other persons working on or visiting the site fully understand and implement the obligations of the CoCP and monitor their compliance with it. This will be achieved by providing to all site staff, and those attending site, a safety induction. Inductees will be required to sign a statement stating that they have understood and will abide by the content of the CoCP, the induction, Method Statements and training.

4.3 Anticipated Works

Design associated with developing the detailed phasing of the scheme is ongoing, however it is broadly anticipated to be undertaken in the following stages:



- Construct a temporary construction access off the A43 (left in and left out slip). Ultimately the access will comprise a grade separated junction off the A43 which will come into operation during the early phases;
- The initial construction works will focus on delivering a route through to the east of the site, east of Northampton Road, to construct the rail freight terminal. This will involve a new highway with underpass below the Northampton Road and haul road from the underpass to intermodal area.
- Construction of the intermodal terminal.
- The first buildings are anticipated to have direct rail links
- Thereafter buildings will be constructed at the front of the site (Units 10,12 and 13) and then the remaining plots will follow in the middle/centre of the site.

There are significant earthworks required in each phase – to create the required building plateaus and to create landscape screening mounds in a number of locations within the site.

Works will also include ecological mitigation, J15.A and minor highways works.

4.4 Construction Programme

The programme for the construction works is to be confirmed once the Principal Contractor is appointed, however works are anticipated to take approximately 10 years (2019-2029, with first operation in 2021).

4.5 Working Hours

Construction working hours are proposed Monday to Friday between 7-00 and 19-30, except Bank Holidays, and Saturday 8-00 to 13-00. Some out of hours works may be necessary, however this will be undertaken in consultation with the relevant authorities and due consideration shall be given to those sensitive receptors potentially impacted by this activity. Consideration of out of hours working has been considered within the EIA assessment.

4.6 Security

It is assumed along with informal surveillance through presence of workers on site that 24hr security will also be implemented.

4.7 Plant & Equipment

For the earthworks, at this preliminary stage, main earthworks plant is considered to include excavators (envisaged to be 13t and 21t), bulldozers, mobile crusher, compaction rollers and dumpers, with third party lorries arriving and departing.

4.8 Site Access and Construction Traffic

The Construction traffic movements will be controlled as part of the Construction Phase Plan. The plan, in compliance with CDM 2015 Regulation 27, will consider and detail:

- Staff and visitor parking arrangements - an adequate turning area will be provided at all times to ensure that no vehicles reverse out of the site entrance.
- Arrangements and timing of deliveries to the site.



- Arrangements for the removal of plant and equipment and waste vehicle and plant and equipment movement- An adequate turning area will be provided at all times to ensure that as 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.
- Segregation of vehicular and pedestrian routes.
- Existing vehicular and pedestrian routes.
- Maintaining access for emergency services.
- 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 before works commence.

It is planned to minimise disruption during the construction stage by implementing the following measures:

- External roadways will be signed with the permission of NBC, SNC and other relevant planning authorities to assist construction traffic in finding the site and not blocking the main roads.
- The Principal Contractor will notify the local businesses via newsletters prepared by the Project Manager, explaining the Traffic Management Plan for the Project and the impact on the local roads including those associated with J15a.
- Deliveries will be phased to suit the construction works and 'just in time' deliveries will be utilised where required.
- There will be a rigid booking system for the Main SRFI site and any unannounced deliveries that cannot be accommodated immediately will be turned away. The booking procedures will be reviewed to ensure this approach does not adversely impact the road network.
- Restrictions for parking out-side of the Site will be imposed. The Principal Contractor will support any highway enforcement and actively assist to prevent any parking outside the site on the main road.

The following procedures / arrangements for will apply for traffic and 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.
- Vehicles will be subject to a site set speed limit, commensurate with the site conditions.
- All vehicles to the site will be pre-booked onto site a minimum of 48 hours' notice and on arrival will notify security.
- 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, will pass through the wheel cleaning facility before entering the public roads.

The separation zone where site traffic will cross pedestrian walkways will be clearly marked and delineated.

In addition, the plan will include the following specific details:

- Works will be programmed and managed so that deliveries to site will be either onto a stone capping layer or hard surfacing to minimise the risk of any mud or debris being deposited on the Public Highway.
- The wheels of vehicles leaving the construction site will pass through a wheel wash to minimise the risk of materials being tracked onto the highway.
- Any mud on the site access road will be assessed on at least a daily basis.
- Provision will be made for the immediate removal of any mud, stones, chippings or other debris from the main carriageways.
- Excluding the J15a construction works, heavy construction traffic, such as dump trucks and tracked machines will not be allowed to cross the existing road network. If operational reasons require this approach to be amended it will be subject to the implementation of further task specific mitigation and control that will be developed by the Principal Contractor.
- Particular care will be taken not to damage the existing highway including kerbs, verges and highway drainage. The project manager will agree a photographic record of the highway with the Principal Contractor or their sub-Contractor prior to starting work and the Principal Contractor will be liable to repair and damage to the highway network caused by vehicles / plant or those of his sub-Contractors.
- No loaded vehicle entering or leaving the site will contain material stacked to a level higher than the rigid sides of the vehicle. Vehicles will be stacked such that there is no risk of materials spilling over the sides whilst the vehicle is in motion, and is compliant with current motor (construction and use) regulations.

4.9 Construction Compounds

A site compound will be required for the construction of the project and its location will be confirmed with the planning authority. Further compounds are anticipated to be established for different aspects of the work – for example, the intermodal area and J15a. The location of each element in each compound will be agreed when the Principal Contractor is appointed and whilst the scale and nature of these compounds will reflect the scope and duration of the works to be undertaken, they are anticipated to include: site security cabin (if deemed necessary by the Principal Contractor), welfare facilities, storage, office accommodation, site notice board and designated parking areas.

The compound shall be designed in line with best practice and will be constructed in layers using compacted crushed stone with intermediate geotextile layers (if necessary). Each layer will be fully compacted using a vibrating roller and trimmed to provide a profile and finish suitable to



accommodate the necessary facilities. The surface shall be cambered to shed rainwater and is likely to be maintained for the construction period.

All appropriate safety signage will be displayed at the site entrance to the site compound. A pedestrian area will be clearly defined within the compound.

Following completion of the project, the construction compounds will be dismantled and the areas reinstated. All temporary accommodation, fencing and barriers will be removed. The area will then be reinstated as appropriate to the location.

The main construction compound shall be used for the storage of equipment, site offices, messing/welfare facilities, materials, fuel and parking. Site catering and welfare facilities shall only be present at the site compound during the construction works. The compound will include suitable facilities to protect the health and wellbeing for employees including water supplies and shaded areas to reduce the risk of overheating.

Toilet facilities shall be a sealed chemical system and will be emptied on a routine basis throughout the works. No foul water will be discharged on site.

All offices, canteens and cabins shall be serviced by lighting and electricity provided initially by electrical generators moving to mains supply as soon as possible. The generators shall be silenced and shall be within a waterproof enclosure incorporating the requirements of the Environment Agency's PPG's. A water supply will be installed to the site.

Oil spill kits will be based at the construction compound to deal with any localised oil or fuel spillage (All site plant and site vehicles will carry spill kits). It is important that wherever oils and fuels are stored, the filling and dispensing points are capable of being locked in the closed position to ensure fuel/oil cannot be accidentally or deliberately spilt or left to drip contaminating the surface water runoff.

Appropriate firefighting equipment will be located around the compound to deal with any small localised fires. Muster points and evacuation routes will be clearly signed around the construction compound and around the site as necessary. Where possible, waste from the site shall be sorted and recycled locally or compacted and removed from the site.

Concrete wagons, plant and equipment will be washed out in designated areas with appropriate facilities designed to treat the wastewater including the removal of suspended solids and the adjustment of pH as necessary. Concrete works and washing areas will be located at least 20m from watercourses and surface water drainage.

Surface water runoff from the compound will be controlled and diverted via silt traps and oil separators to prevent runoff into watercourses.

Both the electrical generator and any associated (bunded) fuel tank will be sited on a drip tray or within a bunded area.

4.10 Lighting

Security lighting will be provided to the compound area and for task specific items associated with earthworks and stockpiling activities on site and the surrounding works area.



Lighting will be directed so only the site compound is illuminated, minimising light pollution beyond the compound boundary. There may be a security presence on site overnight. However to minimise impacts on local residents there will be minimal lighting of the construction site once works cease each evening.

Construction lighting will be required to illuminate the access / egress point to the site, site safety working and security. Construction lighting may also be required to facilitate early evening working through the winter. Where appropriate, site lighting will be time controlled to turn off to a reduced coverage for security after dark.

Where the demands for external lighting would be particularly concentrated, potential obtrusive light impact will be minimised through orientation and the positioning of buildings and artificially lit operations.

The lighting adopted will be selected and installed to negate obtrusive light (light pollution). The selection of lighting fittings and illumination levels will be in accordance with the recommendations of the Chartered Institute of Building Services Engineers (CIBSE) and relevant Health and Safety Regulations. Modern, LED luminaires will be used where possible to minimise the obtrusive light spill footprint and to be as energy efficient as possible. Luminaire selection will be based on inherent glare control to an appropriate G class ranging between 4 and 6. All luminaires used around the perimeter (but within) the Order Limits will be mounted so that the main photometric distribution of the luminaire will be towards the task area only.

Columns will be placed as far away as practicable from rail bridges or the fence line of the railway track. Warm/ neutral white light will be used where there is risk of conflict with rail signal lights being green, yellow and red.

A Lighting Management Plan, secured as part of the DCO, will be prepared which includes periodic monitoring and makes provision for necessary remedial works, and deals with the control of lighting associated with after dark construction activities.

During the earthworks and development works temporary site lighting will be in accordance with the Guidance Notes for the Reduction of Obtrusive Light GN01 (Institution of Lighting Professionals 2011). including:

- Lighting will be switched off when not required for safety or security;
- Temporary lighting will be directed into the site away from residential areas;
- Wherever possible lighting will be directed downwards to illuminate the target area to reduce spill light to a minimum;
- Specifically designed lighting equipment will be installed to minimise the spread of light near to or above the horizontal;
- Keep glare to a minimum; the main beam angle of all lights directed towards any potential observer will be kept below 70 degrees. Higher mountings used for the lighting will lower the main beam angle reducing potential glare; and,
- Wherever practicable, floodlights with asymmetric beams will be used.



Wherever possible and subject to landscape design, natural and solid screen perimeters should be included to reduce obtrusive light to adjacent sensitive areas and light should be extinguished when not in use.

Illuminance levels should be designed in accordance with BS EN 12464-2: 2014 and CIE 129 to ensure areas are not over lit.

Lighting Design for Ecological Protection

Wherever possible consideration should be given to minimise the need for lighting in areas of ecology habitat or in areas situated directly adjacent to ecology habitat. Should health & safety risks demonstrate a need for artificial lighting of these areas all luminaires will be directed away from the habitat area.

After dark lighting during construction phases will be directed away from retained natural habitat, as directed by the Ecological Clerk of Works (ECoW) i.e. wetland habitats, hedgerows or specimen trees. These dark corridors will reduce the impact on bats, allowing free movement between foraging and resting sites.

In ecologically sensitive areas, and to minimise disruption to bats, the lighting design will employ lamps with minimal or zero ultra violet (UV) and blue light emission such as 'LED' light sources (<4200K) (insects are attracted to UV).

To minimise disturbance to commuting/foraging otters and bats, there will be no after dark working within 100m of the Grand Union Canal. No lighting will be left on within 50m of the canal, and none within 100m unless it is screened and directed away.

4.11 Storage and Use of Hazardous Materials

Any hazardous materials and substances stored on site during the construction phase shall be stored in a 'Haz-Bin' or similar secure lockable container located within the construction compound. Spill kits will be available at all storage lockers and in all plant/machinery associated with the works.

All contractors for activities using hazardous substances shall complete Control of Substance Hazardous to Health (COSHH) assessments, incorporating data sheets supplied by manufacturers. Copies of all relevant COSHH sheets shall be available at the storage area and at the site office.

4.12 Fuel Storage

Fuel storage on site will only be permitted in secure and bunded areas and quantities will be kept to a minimum.

Fuel will be stored in containers that house a separate fuel tank internally. These have a void between the tank and outer wall of the container that acts as a bund to store 110% of the tanks volume. Fuel will only be stored at the site compounds.

There will be spill kits kept on site to deal with spillages. Designated refuelling areas will also be put in place to reduce the risk of spillages. Other hazardous substances will be stored in secure



areas in accordance with the control measures identified in the manufacturers COSHH assessment.

4.13 Site Waste Management

As part of the CoCP, minimising and reducing waste during the construction stage is a key priority and the following core principles will be maintained throughout the construction process:

- Toolbox briefing sessions (including ecology toolbox talks to be delivered by the ECoW).
- Adopting good on-site working practices.
- Reducing wastage on site.
- Ensuring adequate waste storage facilities are provided.
- Ensuring adequate security measures are in place.
- Appropriate waste disposal routes.

Further details of good site practices to be considered in the update to the CoCP include:

- All construction personnel including sub-Contractors will be briefed through toolbox talks regarding the importance of minimising, segregating and recycling wastes during the construction process. The objectives of the toolbox talks will be to maximise opportunities for recycling and minimise waste to landfill.
- Guidance will be provided on the segregation of certain waste streams such as aggregates, excavated materials, metal, wood, cardboard and polythene packaging waste.
- Deliveries will be on a 'just-in-time' basis to minimise potential damage and wastage of materials.
- Clearly labelled waste skips will be provided at the site for the segregation of waste streams for recycling and for general waste to be disposed of to landfill. The skips will be stored in a secure location on-site to prevent waste nuisance issues arising.
- Construction materials will be stored in a secure compound to prevent the potential for vandalism and theft of material.
- Segregated waste for recycling will be removed from site by a licensed Contractor to an appropriate Materials Recycling Facility (MRF).
- A licensed waste Contractor will remove wastes that cannot be recycled from site to an appropriate licensed landfill facility-ensuring adherence to the Environmental Protection (Duty of Care) Regulations.
- Waste will only be placed in the approved locations to minimise litter and pollution.
- To minimise water use during construction, monitoring and recording of water use and capture will be undertaken. Where feasible, this will include the re-use of rainwater and water from de-watered excavations.

A draft site waste management plan (SWMP) [RCL-HYD-XX-REM-RP-GE-3002-S2-P4] has been produced to accompany the S42 consultation documents, and will be updated as appropriate to inform the DCO submission. For further information please refer to this document.



The main principles of waste management are:

- to re-use site won arisings on site;
- the processing and re-use of on-site and other incorporable materials, including demolition arisings; and
- the disposal of non-compliant or non-incorporable materials to landfill or for off-site treatment or recycling.

The intention is that maximum volumes of materials are re-used on site, no unacceptable material shall be reused on site and as much of the unsuitable material as possible shall be treated off site in preference to landfilling.

A key opportunity is to recycle waste from one component of the construction into another. For example, excavation waste (topsoil) will be retained on site for use as site bunding. Any additional excavation waste (soil and stones) would likely be retained on site for recycling or reuse in the proposed development, e.g. as low-grade backfill, where it is suitable for use; otherwise, the material will be sent for recycling off-site.

Appropriate space is provided in the site for recovering and storing waste, including segregation of contaminated soil if identified. The management of this process will be the responsibility of the Waste and Environmental Manager.

Materials and methods will be specified to optimise the opportunities to utilise recycled materials. The appointed Principal Contractor will be charged with utilising recycled materials and selecting methods of construction which create recyclable products, whenever possible. Contractors will also be charged with the responsibility of segregating wastes to facilitate recycling onsite in the first instance and offsite for waste that cannot be recycled into the works

The Principal Contractor will be required to:

- undertake waste management activities in accordance with the principles of the waste hierarchy;
- undertake activities in accordance with the Applicant's Environmental Policy;
- undertake activities in accordance with the CL:AIRE Definition of Waste Code of Practice; and
- obtain the waste metrics of waste management solutions providers where waste is removed from site.

All excavation processing, treatment and material reuse will be undertaken under the supervision of the Site Manager.

Waste tracking and recording will be carried out using a template form. Relevant forms and records will be available for inspection throughout the project, including:

1. waste carrier registrations;
2. environmental permit and exemptions;
3. waste transfer notes; and
4. hazardous waste consignment notes.



The SWMP will be a live document, and will be kept on site along with all relevant waste documentation including waste carrier registrations and environmental permits.

On completion of the site construction, these documents will be transferred, with all other SWMP documentation to the Project Manager for completion before issue to the Applicant.

The SWMP also contains forecasts of waste tonnage likely to arise.

4.14 Excavated Soils Management

Earthworks and remediation works will be undertaken in accordance with the 'Definition of Waste: Development Industry Code of Practice, March 2011' with the development of a Materials Management Plan (MMP) for the earthworks under a Qualified Persons Declaration.

A draft MMP [RCL-HYD-XX-REM-RP-GE-3001-S2-P4] has been produced to accompany the S42 consultation documents, and will be updated as appropriate to inform the DCO submission. For further information please refer to this document.

It is envisaged that the majority of the soils present onsite will be suitable for reuse during the earthworks.

The appropriate reuse of excavated materials will minimise haulage traffic, with resultant reduced noise, dust and ground vibration, as well as improving air quality, in the vicinity of the site. These environmental controls are achieved by the reduction of haulage traffic both disposing of materials off-site and bringing imported soils to site.

4.15 Construction Site Drainage

The Section below details how construction works will deal with drainage for the temporary construction works.

Run-off from the site will be treated to reduce silt loads to acceptable (permitted) limits. The drainage system put in place will include an allowance for increased rainfall due to climate change

Any earth moving and construction activity that takes place in close proximity to a watercourse will include measures for water control. These will include the use of temporary settlement lagoons, cut off ditches, settling ponds, silt traps and restricting activity in certain areas by temporary fencing and other delineations.

Specific drainage facilities shall additionally be provided for:

- Construction vehicle parking areas; and
- Excavations below the water table which requiring de-watering.

Any specific discharges from the above to any watercourse shall be subject to discharge consents from the Environment Agency. Discharges will pass via settlement and oil interception facilities and will be monitored to a programme agreed with the Environment Agency. Effluent exceeding the Environment Agency discharge consent conditions will be held for further on site treatment / settlement or alternatively will be tankered away to a licensed liquid waste disposal site.



Construction site sewage will either be tankered to treatment facilities off site or disposed to public foul sewer, under a licence to discharge to foul sewer from the utility company (United Utilities). Also, the Principal Contractor may obtain a licence to discharge to foul sewer for groundwater, if pumping is necessary to advance deep(er) excavations (to be determined by the Principal Contractor, depending on the earthworks necessary).



5.0 IMPLEMENTATION AND OPERATION

5.1 Environmental Management System

The Principal Contractor shall operate an accredited environmental management system and will operate to the requirements throughout the contract.

The principal requirement of the environmental management system for the earthworks and development works is to provide a management framework to address the environmental aspects identified for the works.

Significant aspects and impacts relating to expected activities will be detailed by the Principal Contractor.

These environmental aspects identified will be evaluated in terms of significance to ensure that resources are targeted appropriately and effectively and will be reviewed for improvement in performance, where appropriate. The Environmental Aspects Register is to be compliant with the Principal Contractor's Environmental Management System, which will be available for inspection on site at all, times. Headline terms for the schedule register may comprise:

Environmental Aspects Register						
Activity	Aspect	Impact(s)	Legislation	Significance	Management Response	Comments

Although the Principal Contractor's template may vary, these headlines are to be considered.

The Aspects and Impacts Schedule will be a live document and will be updated through the project.

5.2 Sub-Contractor Environmental Management

Sub-Contractors will work to the CoCP and must comply with risk assessments and method statements (RAMS) that apply to the tasks being undertaken.

5.3 Communication

The Principal Contractor will ensure all issues requiring liaison and co-ordination are identified, and a responsible person with the required skills and experience will be appointed to resolve and co-ordinate. Refer also to Section 3, Site Roles and Responsibilities.

Environmental information will predominantly be communicated by ensuring that all relevant parties have a copy of the CoCP and / or ensure all relevant parties have access to the CoCP, relevant management plans and work specific Risk Assessments and Method Statements (RAMS).

The Principal Contractor will keep a register of all issued copies of the CoCP and will circulate any amendments to copyholders. The CoCP shall not be copied or distributed by holders; if additional copies are required, a request will be made to the Principal Contractor.



Environmental risk information detailed in the CoCP that is deemed relevant to the workforce will be communicated through formal inductions and Health and Safety Assessment Briefings. Environmental Toolbox presentations will also be undertaken during the construction phase.

A register of all appropriate internal environmental communication will be compiled and a process will be implemented to ensure that all actions are dealt with accordingly. All relevant internal communications will be stored for the duration of the project and will be made available for audit by an external representative or on a monthly basis.

In addition a copy of the complaints log will be made available for a monthly review and at the request of the local authority.

5.4 Training, Awareness and Competence

For the successful implementation of the CoCP, it is essential that all people working for, or on behalf of, the Principal Contractor who have responsibility to undertake work activities (that have the potential to result in environmental impacts) are appropriately trained and are competent to fulfil their designated roles within the project.

During the construction phase, the Principal Contractor will take ultimate responsibility for identifying all environmental training needs, ensuring that all key staff and personnel responsible for environmental management are competent, made aware of their environmental responsibilities, and are trained as necessary to meet the requirements of the CoCP and all applicable method statements.

As part of the commitment to achieving effective management of the environment, awareness training will be provided to all appropriate Project Management and site personnel.

The primary focus of such training will be to ensure that all team members understand the key environmental and sustainability issues and requirements associated with the project works; ensuring that all key staff and personnel working are sufficiently aware of the key environmental issues associated with the project and understand the importance of compliance with Environmental Management documents.

Training will include briefings on general environmental issues of concern as part of Induction Training and Toolbox Talks, and cover environmental responsibilities comprising:

- Minimising the use of resources – materials, fuel, power, water etc.
- Applicable legislative, regulatory and other requirements.
- Principal Contractors policies.
- Housekeeping requirements.
- Incident management and use of the Pollution Incident Response Handbook (PIRH).
- Cultural heritage requirements.
- Air quality management.
- Noise reduction and abatement.
- Pollution prevention.
- Ecology including protected species/areas and invasive species.



- Waste management.

These training requirements will be reviewed through the project and added to where required. Such additional training will be included within Toolbox Talks.

A record of competence and training will be maintained by the Principal Contractor throughout the project.

Environmental awareness among site personnel will also be promoted through media such as notice boards and newsletters. All site personnel will be made aware of the structure and individuals by which environmental issues are managed.



6.0 ENVIRONMENTAL MANAGEMENT

6.1 Introduction

The Principal Contractor will aim to minimise, and if reasonably practical, eliminate all risks including environmental, planning, health, safety, commercial and operational risks associated with the Project.

To ensure that environmental aspects and impacts are identified and addressed throughout the construction, all works will be undertaken in accordance with the requirements set out in this CoCP.

6.2 Ecology

6.2.1 Habitat Management Plan

The Habitat Management Plan will set out the specific management prescriptions for the areas of habitat to be managed for wildlife benefit. It will be designed by ecologists who are knowledgeable about the scheme, and implemented by the Ecology Manager. The plan will include a schedule of monitoring to measure the success of mitigation measures and implement changes if necessary, for a period of 5 years.

6.2.2 Retained Habitat

All retained habitat will be appropriately buffered or fenced to ensure there is no accidental damage or encroachment from construction traffic. This will follow general best practice methods such as the Environment Agency Pollution Prevention Guidelines. This will address the following matters that are of particular relevance to ecology:

- installation and maintenance of fencing at the start of construction;
- environmental awareness training for construction personnel;
- dust control;
- appropriate storage of fuels,
- lubricants and chemicals;
- lighting, and
- environmental management.

Unless otherwise specified, there will be fenced-buffers of at least 15m from retained potential wildlife sites within and adjacent to the development area.

Retained watercourses and hedgerows will similarly be protected from damage during construction by 10m and 5m buffers respectively. Silt fencing will be installed to prevent run-off from spoil piles into watercourses and ponds as directed by the ECoW.

Specific advice on ecological issues to be adhered to during construction will be further developed by the appointed Contractor (Ecology Manager), as detailed below, and supervised by the ECoW if appropriate.



6.2.3 Grand Union Canal

Disturbance to sensitive ecology areas will be minimised by measures designed to avoid lighting impacts. In particular, to avoid disturbance to commuting bats and otters, no lighting will be left on within 50m of the Grand Union Canal, and none within 100m unless it is screened and directed away.

There will be no after dark working within 100m of the canal.

6.2.4 Nesting Birds

- Where possible, habitat should be removed during the winter period, before the end of February. Trees and scrub should be cut to ground level and where possible roots removed. Where this is not possible, appropriate action must be taken to ensure relevant habitats remain unsuitable for nesting birds during the nesting season. This could include trimming scrub prior to the nesting season, and as above keeping the grass short. If removal at this time is not possible then the vegetation will require checking by an ecologist prior to removal.
- If a nest is found then works around the nest should be stopped and the Ecology Manager will be informed. Works within the immediate area will be delayed until the young have fledged.
- Trees with Barn Owl nesting sites will be excluded at a suitable time of year following the installation of pole mounted nest boxes both within the red-line and in neighbouring land to provide compensation roost sites. No works will take place within 500 m of the nest sites if they are being used by nesting Barn Owls.

6.2.5 Tree Removal - Potential Bat Roosts

A high proportion of trees on the site have the potential for use by roosting bats. A thorough survey of all trees on the site has been undertaken, but final surveys are required for medium and high potential trees prior to their felling. A detailed tree removal plan will be supplied to the Principal Contractor and no trees should be removed without first being surveyed by an ecologist to prevent the possible destruction of a roost site. Nothing should be stored against tree trunks and the site compound and excavation works should be undertaken outside the spread of the trees canopy.

6.2.6 Veteran Tree Removal

- A CIEEM¹ registered ecologist/arboriculturalist will be consulted at least one month in advance of tree felling, so that an appropriate receptor location for the felled veteran tree can be identified.
- Tree Resurrection – Large diameter stems should be utilised in as large a single length as possible and appropriate and installed resting on the ground at the base of an existing tree and attached at the top by non-invasive methods. The location and method should be coordinated by the ecologist and an arboriculturist in order to choose the best combination of providing habitat for a variety of species with connectivity to nearby features, together with safe positioning and attachment in an appropriate location for health and safety.

¹ Chartered Institute of Ecology and Environmental Management



- Limb/feature re-attachment – Deadwood and newly cut limbs can be affixed to living tree branches to provide habitat for saproxylic invertebrates, woodpeckers and bats. This again should be undertaken with advice from the ecologist and the arboriculturist.
- Deadwood habitat piles – Any stems and branch wood that cannot be utilised as above should be retained in appropriate areas close their origin in the largest pieces that are possible and compatible with other aspects of land use.

6.2.7 Great Crested Newts

There is a medium population of great crested newts outside the Main SRFI Site to the east of the NLL, but within 500m of the Order Limits. Under the current guidance an EPS licence will be required for works to proceed. Although no earthworks are proposed for the area east of the NLL, fencing will be required to prevent great crested newts moving into the development area. Exclusion of the site using drift fencing and hand searches to ensure any great crested newts are relocated prior to any works.

6.2.8 Construction of Bat and Barn Owl Roosts in Buildings

Renovation of the field barns on the Main SRFI site and J15a Site are part of the ecology mitigation proposals. Specific guidance from ecologists will be sought regarding the design and construction of the buildings, and the works will be subject to an EPS licence.

Any other bat roosts in buildings due to be demolished will be the subject of an EPS licence. The Ecology Manager in collaboration with the licence holder will be responsible for ensuring that the mitigation measures are implemented and that subsequent monitoring is undertaken.

6.2.9 Badgers

The site should be re-surveyed for badgers within 1 month of construction starting as badgers can set up a new territory very rapidly. Should a new sett be discovered near the construction area an ecologist will monitor the holes for activity. If any new holes are discovered on site the use of heavy machinery within 50 m of the sett must be avoided and the Ecology Manager contacted.

While construction is ongoing all Contractors should be aware badgers are active on the site any pits or trenches should be covered up or left with an escape ramp if left overnight.

A 'good housekeeping' policy should be adopted e.g. chemicals should be stored securely at after dark, food waste should be removed at frequent intervals, and any machinery should be prevented from encroaching into root protection areas for all retained vegetation including woodland and hedgerows. .

6.2.10 Additional Elements

Other elements of the site will require specific inputs from an ecologist during and in advance of construction (as well as subsequent monitoring) and will be overseen by the Ecology Manager. These are likely to include the following:

- Sign-off on source and composition of grass seed mixes to be used in areas of natural habitat creation.
- Inputs to design of attenuation ponds.
- Inputs to design and planting of re-aligned river corridor.
- Advice on location, type and source of bat boxes, bird boxes, and barn owl boxes.



- Detailed inputs to design and implementation of ecology mitigation area at J15a.
- Wildlife pond creation including location, design and planting.
- Location of deadwood piles.
- ECoW assistance in watching briefs during removal of potential reptile habitat.

6.3 Heritage & Archaeology

Archaeological investigation work across the Order Limits has been undertaken, the scope of which was agreed with Northampton City Council (NCC) Archaeology Team. Based on the findings of the initial investigation works, a programme of mitigation will be devised, in consultation with NCC's Archaeology Team that will deliver mitigation acceptable to the Council.

The commitment to construction phase archaeological mitigation acceptable to NCC, and set out in the Written Scheme of Investigation(s) would include provision for post-excavation analyses and dissemination of the results of the mitigation works, as well as for archiving of the project materials and records, as appropriate.

If required, following the adoption of other proposed and agreed mitigation measures, written guidelines would be issued for adoption by all construction Contractors to avoid causing unnecessary damage to archaeological sites. This will include arrangements for calling upon retained professional support on the event that buried remains of potential archaeological interest (such as building remains, human remains and artefacts) should be discovered in areas not subject to archaeological monitoring. The guidance would make clear the legal responsibilities placed upon those who disturbed artefacts or human remains.

6.4 Air Quality & Dust

The works have the potential to result in impacts upon local air quality and dust as a result of emissions from plant used on site, vehicle movements, plant and vehicle emissions and dust generation especially related to the large volumes of excavation and soil movement. There is a particular need to account for a potential increase in dust due to warmer, dryer summer climate during construction.

Control measures, as set out below, will be put in place to minimise construction dust and any potential adverse effect on air quality from vehicle emissions.

6.4.1 Odours

There will be no burning of any material anywhere on-site. Anyone caught breaching this will be disciplined appropriately.

Appropriate air quality monitoring will be agreed with NBC and SNC with the Principal Contractor.

6.4.2 Emissions to Air

The following measures are proposed to minimise emissions to air:

- Vehicle and equipment engines shall not be left running unnecessarily.



- Maintenance of vehicles and equipment through a programme of routine servicing completed in accordance with the manufacturers' recommendations and keep records for the work undertaken.
- Location of haul routes and operation of equipment away from sensitive receptors including, but not limited to, houses and ecological receptors, wherever practicable.
- Avoidance of the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.

6.4.3 Dust

Monitoring at the Northampton Kingsthorpe monitoring station will provide NO₂ and PM_{2.5} concentrations during the construction of the development and once it is operational.

The Institute of Air Quality Management (IAQM) provides guidance on the assessment of dust from demolition and construction document lists mitigation measures for low, medium and high Dust Impact Risks. The measures described as 'highly recommended' for high risk sites are listed below and following sign-off from the Applicant will be implemented where appropriate:

6.4.4 Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.

6.4.5 Dust Management

- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include recommended measures outlined in this section of the COCP, as appropriate for the site.

6.4.6 Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.
- Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

6.4.7 Monitoring

- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local



authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of the site boundary, with cleaning to be provided if necessary.

- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real-time PM10 continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.

6.4.8 Preparing and maintaining the site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Where possible erect solid screens or barriers around dusty activities.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extended period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.
- Operating vehicle/machinery and sustainable travel
- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

6.4.9 Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.



- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

6.4.10 Waste management

- Avoid bonfires and burning of waste materials.

6.4.11 Measures specific to earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- Only remove the cover in small areas during work and not all at once.

6.5 Noise

- Construction working hours are proposed Monday to Friday between 7-00 and 19-30, except Bank Holidays, and Saturday 8-00 to 13-00. Some out of hours works may be necessary, however this will be undertaken in consultation with the relevant authorities and due consideration shall be given to those sensitive receptors potentially impacted by this activity.
- Where practical and where there is a positive environmental benefit, temporary spoil heaps could be used to shield the environs from the construction works.
- Site plant will consist of modern machinery fitted with efficient silencers designed to minimise noise levels that are generated during operations.
- Plant will be powered by electricity wherever practicable, and all pumps, plant and generators will be placed at locations to minimise noise emissions to sensitive receptors.
- Plant will be properly maintained in accordance with the manufacturers' instructions to ensure that the occurrence of malfunctions that can give rise to elevated noise levels is reduced, and any malfunctions that do occur are swiftly repaired. Rattling noises will be controlled by tightening loose parts and by fixing resilient materials between the surfaces in contact.
- Plant known to emit noise strongly in one direction will, wherever possible, be orientated to minimise noise where receptors / neighbours are sensitive.
- Stationary plant such as compressors and generators will be positioned away from sensitive locations within the confines of the operational use of the equipment.
- As reasonably practical, noisy plant or processes will be replaced by less noisy alternatives in accordance with Annex B of BS5228.
- The effectiveness of acoustic insulation and silencers fitted to plant will be qualitatively assessed and recorded.



- Any items of plant with defective insulation or silencers will be identified for immediate investigation and remediation.
- To ensure effective acoustic insulation is provided at all times plant will not be operated with covers open or removed.
- Plant and equipment will be shut down when not in use.
- Continuous noisy plant will be housed in acoustic enclosures which will be installed and maintained according to the manufacturer's specifications.
- Semi-static equipment will be sited and orientated as far as is reasonably practicable away from occupied buildings and, where feasible, will be fitted with suitable acoustic enclosures.
- Wherever possible, low noise versions ('smart') of reversing alarms will be fitted to all mobile plant to reduce the intrusive nature of such sources and maintained to the manufacturer's specifications at all times.
- All internal tracks will be regularly graded to remove loose material and a site speed limit imposed to minimise potential 'body slap' impact noise.
- Loading/unloading activities will be located away from residential properties and shielded from those properties where practicable.
- Materials will be handled in a manner that minimises generation of noise, e.g. minimisation of drop heights and bucket impacts.
- Efforts will be made to maximise efficiency of deliveries by arranging full loads.
- Deliveries will be co-ordinated to minimise waiting times.

Construction processes that have the potential to generate significant noise and vibration at nearby residential receptors should be limited in duration as far as is practicable. Residents should be given advance notice of any such activities being carried out and be kept informed as to their likely duration. Where it is anticipated that set thresholds may be exceeded, a programme of noise monitoring will be carried out. If monitoring indicates that thresholds are exceeded, further mitigation will be implemented to reduce noise levels as far as is reasonably practicable.

On-site staff training will include the following, with updates to encourage good practice in minimising noise:

- The proper use and maintenance of tools and equipment.
- The positioning of machinery on site to reduce the emission of noise to the neighbourhood and to site personnel.
- Avoidance of unnecessary noise when carrying out operations, and when operating plant and equipment.
- Using and maintaining measures adopted for noise control.
- By reporting defective noise control equipment.
- Managers and supervisors recognising the need for employees to make proper use of measure to minimise noise.
- Machines in intermittent use will be shut down in intervening periods of non-use or, where this is impracticable, they will be throttled down to a minimum.
- Where practicable white noise reversing alarms will be fitted to all mobile plant.



6.6 Ground Vibration

Ground vibration will be controlled to prevent nuisance, so far as reasonably, and damage to neighbouring property. Should complaints be received monitoring will be undertaken with the agreement with the relevant planning authorities. Assessments to date have indicated minimal ground vibration impacts are anticipated.

In respect of vibration, BS5228: Part 2:2009+A1:2014 gives detailed advice on standard good construction practice for minimising nuisance from construction vibration. This will be adopted as appropriate.

6.7 Land Quality & Contaminated Land

There is the potential for the presence of contaminated land onsite. However, potential impacts were identified, including the following:

- On-site human health: Asbestos Containing Material (asbestos cement) present within a former, now backfilled pit at Rathvilly Farm in the northeast of the site.
- On-site human health: Potential for hotspots of petroleum hydrocarbons at the former petrol filling station in the central western boundary of the site.
- On-site human health: Elevated contaminants at Lodge Farm and an isolated hotspot of hydrocarbons in the southwest of the site adjacent to the Grand Union Canal.
- Plant Growth: Elevated concentrations of Boron and Copper in Made Ground that could impact on plant growth.

A full assessment will be undertaken with recommendations forming a “Remediation Method Statement” This method statement would be anticipated to include practices such as:

- Removal by specialist contractors of asbestos from buildings in accordance with relevant legislation, followed by controlled decommissioning, decontamination and demolition of site buildings and ancillary structures such as tanks and the existing drainage system.
- Removal of the former fuel tanks at Lodge Farm and the Filling Station together with any petroleum hydrocarbon impacted soils around and below the tanks. Whilst not expected, any free phase hydrocarbons should be removed from the surface of the groundwater and treated or disposed.
- It is anticipated that remediation can be undertaken by excavating the impacted soils (if required) which can then be stockpiled, screened or otherwise treated on site (e.g. bioremediation). Suitable material can be reused where appropriate under a Materials Management Plan and the unsuitable material removed from site. Given the volume of earthworks, it is anticipated that all materials are likely to be suitable for use on the site, as unsuitable material from the perspective of human health is likely to be suitable for reuse in the platforms in areas external to the proposed buildings, e.g. in noise bunds or landscaping areas.
- Earthworks on site should be subject to a watching brief by an independent geo-environmental specialist to identify any areas of suspected contamination and recommend remedial measures.
- It is recommended that consideration be given to incorporating basic protection measures.



- Installation of barrier pipework as necessary and agreed with the Water Authority

Specific mitigation measures will form part of the Principal Contractors update to the CoCP.

6.8 Pollution Prevention

Due to the requirements of the construction works and processes, various hazardous substances will be used, including plant fuel, maintenance oils and chemicals that may pose a risk to the environment and require appropriate management.

Control measures will be put in place to limit the impacts of oils, chemicals and other hazardous substances to contaminate the environment. Should there be an accident on site; reactive control measures are to be included within the Principal Contractors update to the CoCP.

The following measures will be adopted during the construction phase to minimise the risk posed by the presence of oils, chemicals and other hazardous substances.

- All storage facilities will be located within the constructed compounds to provide protection from theft and vandalism and facilitate containment and clean-up of any spills.
- Storage of diesel fuel will be within a bunded area or self-bunded tank in accordance with the EA PPG2 and PPG26 so that 110% of the stored capacity is provided. Rainwater will not be allowed to accumulate and reduce the required storage volume.
- Storage of other non-biodegradable Fuels, Oils and Chemicals - storage areas and containers will not be placed within 10m watercourse and 50m of a borehole, well or spring and will be located in designated areas. Only Suitable Qualified and Experienced personnel will have access to these facilities and compounds and will enter and carry out work activities wearing appropriate Personal Protective Equipment (PPE).
- Authorised personnel trained in refuelling and emergency spill response to ensure appropriate procedures are implemented will supervise fuel deliveries and refuelling activities.
- Drainage within the construction compound where diesel fuel is stored, refuelling takes place and vehicles are parked, will be directed to an oil interceptor to contain any accidental spillage.
- Drip trays shall be used beneath static plant; small mechanical tools will be refuelled and maintained. Refuelling will be subject to a detailed method statement and risk assessment.
- All vehicles and plant will be regularly maintained and inspected for fuel, oil and hydraulic fluid leaks.
- A proprietary oil spill kit will be carried by all construction vehicles with additional kits positioned at appropriate locations around the site.
- Oil will be stored in accordance with the Prevention of Pollution (Oil Storage) (England and Wales) Regulations 2001.
- Chemical additives provided in small containers will be stored in a secure fixed container (COSHH Store) located in the compound. Access to the secure container will be by suitably trained and authorised personnel.
- Biodegradable oils will be used on plant operating in or within 10m of any watercourse on site.



- Refuelling will be undertaken in accordance with PPG7 and will be subject to a detailed method statement and risk assessment.
- Vehicle Parking, Maintenance and Refuelling Areas - Mobile refuelling will be avoided wherever possible and shall not be carried out within 10m of a watercourse.

6.9 Protection of Controlled Waters

There are several ponds and springs on the site including the Milton Malsor Brook and Wootton Brook which flow from south to north across the site. Construction works will need to protect the ponds and brooks onsite, which would be considered as controlled waters. The protection of controlled waters and specifically the design of storage, and pollution control systems will include allowance for future climate change due to increased winter rainfall.

Further updates to the CoCP will include measures to prevent silt and site wash off transgressing into the watercourses to prevent possible contaminants migrating downstream and prevent flooding.

To minimise the risk of complaints, should analysis indicate that works are affecting controlled waters, relevant measures will be agreed with stakeholders, including the Principal Contractor and regulators.

The Principal Contractor will ensure that any water which may come into contact with contaminated materials will be disposed of in accordance with the Water Resources Act (1991) and to the satisfaction of the Environment Agency.

All liquids and solids of a potentially hazardous nature (e.g. diesel fuels, oils, solvents etc.), will be stored in accordance with guidelines laid down by the Environment Agency.

The response to all emergency pollution incidents will be set out in the Pollution Incident Response Handbook (PIRH) to be held at all times on site.

The proposed development has the potential, if unmanaged, to result in:

- Contaminated run-off entering watercourses – leading to potential impacts to controlled waters.
- Suspended sediment in site run-off leading to potential impacts to drainage ditches, ponds, Milton Malsor Brook and Wootton Brook.
- Pollution from foul drainage and waste storage.

The following measures are anticipated to be undertaken during the construction phase to minimise the risk of contaminated and/or silt-laden run-off during construction. Their requirement will be dependent on consultation with the appointed Principal Contractor and detailed design and will be detailed within updates to the CoCP

- Detailed design of permanent and temporary drainage will be prepared. This will include for settlement lagoons, silt interceptors and oil interceptors as appropriate.
- Spill kits and drip trays will be provided. Spill kit training will be undertaken.



- Designated parking, maintenance and refuelling areas with appropriate drainage system incorporating oil interceptors. Designated refuelling areas will be located at least 10m from watercourses.
- Fuels, oils, lubricants and other chemicals will be stored where appropriate, in a secure, locked and appropriately signed compound. The compound and facilities will be located at least 10m away from watercourses.
- Oil will be stored in accordance with the Prevention of Pollution (Oil Storage) (England and Wales) Regulations 2001.
- The mixing of concrete will be controlled under a specific and approved method statement and risk assessment.
- Confirming the presence of the water abstraction borehole at Lodge Farm and where present, decommissioning in line with Environment Agency best practice.
- Drainage rate control will be investigated to ensure run-off does not exceed discharge rates stipulated by the Environment Agency.
- Surface water run-off from stockpiles shall be directed through a surface water drainage system to will provide attenuation, monitoring and, if necessary, treatment.
- Oil interceptors will be incorporated into the drainage design, if required, to minimise the risk of hydrocarbon contamination.
- All vehicles and plant will be regularly maintained and inspected for fuel, oil and hydraulic fluid leaks and a proprietary oil spill kit will be carried by all construction vehicles with additional kits positioned at appropriate locations around the site.
- All fuel storage facilities will include impermeable protection or drip trays within the compound to minimise the potential for impact to the underlying soils and groundwater.
- Oil Separators (interceptors) if required - To ensure the good performance of oil separator units they will be subject to routine inspection, maintenance and emptying as part of an appropriate and agreed maintenance schedule.
- Authorised personnel trained in refuelling and emergency spill response to ensure appropriate procedures are implemented will supervise fuel deliveries and refuelling activities. Refuelling will be undertaken in accordance with EA PPG7 and will be subject to a detailed method statement and risk assessment.
- The storage, handling and use of all chemicals on site will be subject to Control of Substances Hazardous to Health (COSHH) Regulations 2002.
- Storage of diesel fuel will be within a bunded area or self-bunded tank in accordance with the EA PPG2 and PPG26 so that 110% of the stored capacity is provided. Storage will be located at least 10m away from the watercourse. Rainwater will not be allowed to accumulate and reduce the required storage volume.
- A register and plan of all storage facilities will be maintained, reviewed and updated as required and will be accessible to the emergency services in the event of an incident.
- Appropriate decommissioning of the Lodge Farm water supply borehole in accordance with Environment Agency best practice guidance.
- Visual inspection of measures implemented to prevent pollution and monitoring equipment shall be undertaken following their installation at regular intervals.



6.10 Landscape and Visual

Construction activities have the potential to result in landscape and visual effects, specifically regarding views of construction activities from surrounding properties.

The following measures will be adopted as embedded mitigation within the Proposed Development to minimise the potential for landscape and visual effects (dependant on the findings of further investigations / surveys and reports):

- The site compound will be located in a non-visually intrusive location.
- Where earthworks are in proximity to neighbours, works will be screened in consultation with stakeholders.
- Appropriate protection of trees and hedgerows to be retained.
- Public rights of way have been determined for the site and construction works will be managed to avoid or control these as necessary. Public rights of way which have been identified will be maintained with temporary signage and other safety features to direct and route people around the works if necessary. Alternatively such routes will be stopped up or diverted in accordance with the powers granted in the DCO.
- Adherence to, and management of, agreed working hours.

Specific mitigation measures will form part of the Principal Contractors update to the CoCP.



7.0 SITE ENVIRONMENTAL AUDITING AND VERIFICATION MONITORING

Regular independent environmental audits will be undertaken to ensure that the requirements of this CoCP are being implemented. The frequency of the audits will be dependent upon the potential for the works being carried out to give rise to environmental impacts. The audits will include a site inspection and review of documentation. This will include a review of the in-house auditing. Non-conformances will be reported to the Principal Contractor's environmental manager with a deadline for remedial action, where necessary.

Environmental issues must be included as an item on the agenda at Progress Meetings, attended by the Principal Contractor, Sub Contractors, relevant Trade Contractors and other members of the project team where appropriate. Where relevant, the following should be discussed:

- Status of Remedial Strategy implementation;
- Results of the monitoring;
- Complaints, including cause and remedial action;
- Neighbourhood liaison;
- Communications with NBC and other statutory bodies; and
- Incidents that have taken place.
- Summary of monitoring undertaken and results. Where appropriate details of proposed corrective actions.

7.1 Documentation

The following documentation must be retained on site for inspection as indicated in the previous sections of the CoCP;

- The Complaints log book with details of the response made to complaints received.
- Noise and vibration monitoring record sheets with details of corrective actions taken where the action levels are exceeded.
- Dust monitoring records.
- Plant maintenance and defect records.
- Details of waste recycling targets and records.
- Records of quantities of waste produced, reused, recycled and disposed of to landfill.
- Waste transfer notes, hazardous waste consignment notes and waste carriers registrations.
- Any validation requirements associated with the sites remediation strategy.
- Copies of discharge consents and licenses.
- Results of discharge water quality testing.
- Controlled water sampling events and data.
- Environmental incident logbook containing details of environmental incidents and corrective action taken.
- Pollution Incident Response handbook



Appendix A

Drawings

