



LEJ Properties Limited

Nuralite Industrial Estate

Demolition and Construction Logistics Plan

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RSK GENERAL NOTES

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1 INTRODUCTION

RSK Environment Limited has been commissioned by SCP, on behalf LEJ Properties Limited (hereafter 'the client'), to produce a Demolition and Construction Logistics Plan (DCLP) to support the discharge of planning conditions set out by the Gravesham Borough Council (ref: 20190290) for the systematic redevelopment of the existing Nuralite Site, Canal Road, Higham, Rochester, ME3 7JA.

This DCLP is a live document and is subject to change throughout the Project. Where necessary, agreement to the changes will be sought from the Client and statutory consultees.

1.1 Aim

The aim of this CEMP is to ensure that the construction works outlined in this document do not result in unacceptable environmental impacts. In particular, the CEMP shall:

- Provide a mechanism for ensuring that measures to mitigate potentially adverse environmental impacts are implemented;
- Provide assurance to third parties that their requirements with respect to environmental performance will be met; and
- Provide a framework for compliance auditing and inspection to enable the Project to be assured that its aims with respect to environmental performance are being met.

1.2 Objectives

The main objective of this CEMP is to set out how construction works will be managed to reduce, avoid, and mitigate adverse impacts.

This CEMP contains the site-specific control measures that will be applied by the Principal Contractor and where relevant its sub-contractors during the construction stages. In preparing this CEMP the requirements of the following documents have been considered:

- ADAS: Preliminary Ecological Appraisal Nuralite Industrial Estate;
- 2061971-RSKA-RP-001-(01) Construction Noise and Vibration Assessment;
- 661792 – Construction Traffic Management Plan;
- 314395-R01(00) Remediation Options Appraisal and Method Statement; and
- 11606 – Contamination Risk Assessment.

A copy of this CEMP will be provided to each Contractor working on behalf LEJ Properties Limited. The Principal Contractor is required to maintain a copy of the CEMP at all work site offices for reference by the entire workforce. It must be accessible to all site personnel and representatives of the relevant enforcement authority, and all sub-contractors.

1.3 Statutory Guidance and Best Practice

All site works shall be undertaken in compliance with this CEMP and with all applicable legal and regulatory requirements. It is the full responsibility of all Principal Contractors to ensure that their works do not contravene legal requirements, and adherence to this CEMP alone cannot be a full defence regarding legal action against the Principal Contractor.

The Principal Contractor shall comply as necessary with the Construction (Design and Management) Regulations 2015 (CDM) and shall comply with all applicable pollution control regulations in which case the Principal Contractor shall obtain and keep current any necessary consent, authorisation, approval or permission (Section 6.10).

The Principal Contractor shall, where relevant, undertake construction works in accordance with current guidance and best practice, including:

- Environmental Good Practice on Site Guidance (C741, 4th edition, Ciria, 2015);
- Gravesham Borough Council local requirements;
- Gravesham Local Plan: Core Strategy (September 2014);
- National Planning Policy Framework 2024;
- Guidance on the assessment of dust from demolition and construction (IAQM January 2024)
- British Standards 5228-1:2009+A1:2014: 'Code of Practice for noise and vibration control on construction and open sites – Noise';
- Institute of Lighting Professionals. Guidance Notes for the Reduction of Obtrusive Light. ILP GN01:2021; and
- Pollution prevention guidance set out at <https://www.gov.uk/guidance/pollution-prevention-for-businesses>.

1.3.1 Environmental Management System

This document has been produced in accordance with principles outlined in ISO 14001:2015, and to have an EMS certified to the standard. The Principal Contractor is expected to mirror the RSK environmental values and standards whilst implementing this document, including the promotion of environmental awareness among their staff, sub-contractors and suppliers engaged on the construction works.

2 THE PROJECT

The client is LEJ Properties Limited who shall have ultimate responsibility for the construction works. The client will employ a main contractor (and directly or indirectly as required) certain sub-contractors to carry out the works on site.

The main details of the project are summarised in this section; the description is limited to an overview of the main element/approaches sufficient to provide an understanding of the approach to the planned works, and the roles of those main parties responsible for undertaking each part of the works.

2.1 Project Description

The proposed development consists of the systematic redevelopment of the Nuralite industrial estate located on Canal Road, Hingham, Rochester for which planning permission (ref: 20190290) approved in December 2021 by Gravesham Borough Council. The redevelopment proposal includes:

- The importation of inert material to cap and landscape the historic asbestos landfill, containing its contamination risk;
- To demolish the existing buildings of the Nuralite industrial estate;
- Deal with the existing contamination, through capping and removal of areas of hydrocarbon pollution;
- The laying of new services and utility infrastructure;
- The construction of 11 new purpose built light industrial type units; and
- Construction of a site office.

The DCLP has been produced to discharge Planning Condition 8 of the planning permission approved by Gravesham Borough Council (reference number 20250721), which states:

“Other than the works shown on [Drawing No.23/171/14 - Nuralite Retaining Wall) no development approved by this permission (including demolition and engineering operations) shall commence until a comprehensive Demolition and Construction Logistics Plan covering all environmental impacts of this development or the relevant phase of development during the demolition and construction phase is submitted for approval to the Local Planning Authority in consultation with the Local Highway Authority..

The report shall include assessment of the impacts during the demolition and construction phases of the development on nearby residents and other occupiers together with means of mitigating any identified impacts, and make reference to British Standard BS5228:2009, for Deconstruction and Construction Sites (and arrangements for liaison set out therein).

For the avoidance of doubt the Demolition and Construction Logistics Plan shall include, but not exclusively cover the following:

- a) Parking of vehicles of site personnel and visitors;*
- b) Storage of plant and materials;*

- c) Dust management controls;*
- d) Location and height of cranes and scaffolding;*
- e) Measures of minimising the impact of noise and vibration arising from demolition and construction activities;*
- f) Predicted noise and vibration levels for demolition and construction using methodologies and at locations agreed with the Local Planning Authority;*
- g) Scheme for monitoring noise and vibration levels using methodologies and at points agreed with the Local Planning Authority;*
- h) Scheme for location and appearance security fencing/hoardings, depicting a readily visible 24-hour contact number for queries, complaints or emergencies;*
- i) Details of disposal of waste arising from the construction programme, including final disposal points (the burning of waste on the site at any time is specifically precluded);*
- j) Hours of operation;*
- k) Smoke management controls;*
- l) Odour controls;*
- m) Any other matters relevant to this particular site.*

The development hereby permitted shall be carried out in accordance with the approved Demolition and Construction Logistics Plan.

Reason: To ensure the free flow of traffic on the highway and to minimise the impact on residential amenity and in accordance with Policy CS19 Gravesham Local Plan: Core Strategy (September 2014)."

The site is a former asbestos manufacturing facility, where the presence of in ground asbestos containing material across the entire site, particularly within the western portion of the site formerly used to landfill waste products from the former asbestos manufacturing facility. There is a number of locations throughout the site where past and present areas of fuel storage are present, the industrial estate portion of the site has contamination impacts to the underlying soils and groundwater associated with this storage however it is limited to an area towards the southern site boundary. Towards the northern site boundary of the industrial estate area of the site elevated soil hydrocarbon concentrations were noted.

2.2 Site Location and Plan

The phased redevelopment of the current industrial estate, to comprise the sequential demolition of the existing buildings and the construction of 24,000 square metres of new, B1 and B3 space, provided over eleven flexible business units and associated outside space, alongside a small site office/canteen/amenity complex.

The site is circa. 15ha and is comprised of an industrial estate, which was the site of the old British Uralite asbestos factory. This part of the site consists of approximately 30 buildings of varying ages and disrepair, a large majority of the original and main factory buildings of the old British Uralite Asbestos works are closed off to the public due to the potentially dangerous state of repair and asbestos contamination. The site lies

approximately 1.5km North West of the village of Lower Higham and approximately 3km east of the town of Gravesend, on the south side of the Thames estuary.

To the North and Northeast of the site, is a stretch of the old Thames and Medway Canal, no longer navigable and in many places silted and/or completely dried out/overgrown but is being maintained and improved by The Thames and Medway Canal Trust.



Figure 1: Site Plan

2.3 General Site Arrangements

2.3.1 Site Set Up and Compound

A temporary compound will be constructed for the various phases of remediation, demolition and construction. This will include a temporary car park. The main access to the site is currently using Canal Road on the eastern boundary of the site.

Once construction of the industrial estate on the western half of the site is complete, it is anticipated that all occupants will relocate to the new units where car parking will be provided within the curtilage of each unit. The demolition and construction on the eastern side of the site will then commence, with parking provided in a temporary car park in this area.

The site set up works shall include the establishment of secure site access, works signage, dedicated laydown area(s) and construction compound. The compound shall be set up in accordance with the Client's HSE policy and procedures if available. Full details can be obtained by reference to the Client's HSE procedures; however, as a minimum this will include the display of:

- Environmental Policy;
- Details of environmental constraints including mapping;

- Traffic Management information; and
- Site information.

When appointed, the principal contractor will be required as part of this DCLP as a live document to define, in line with the phasing strategy detailed information of the location and height of cranes and scaffolding as well as the parking and storage of plant and equipment on site.

The site layout including the main construction compound and car parking can be found in Appendix 1.

2.3.2 Fencing and Site Security

For vehicular access there will be a secure gate installed at the entrance of the site. A security guard will control and have knowledge of the ingoing and outgoing HGVs visiting the site during construction. Additionally, there will be a holding area within the compound which will be a space for HGVs to wait in the event of an incident or obstruction, such as a large load being delivered.

Only authorised personnel will be permitted on site. All visitors shall be required to enter through the main site access and report to the Construction Manager/Site Manager. All visitors will be required to sign in and out to ensure that site management is aware of the people on site in the event of an emergency.

Visitors and site team will be required to undergo induction training, wear the necessary PPE and be accompanied by a representative on site at all times.

The site shall be checked on a regular basis to ensure that it is maintained in good condition and is secure.

When appointed, the principal contractor will be required as part of this DCLP, a live document to define, in line with the phasing strategy a detailed plan for plot construction hoarding/security fencing, security measures, with clear site contact details to satisfy the requirements for the project's complaints and emergency procedures.

2.3.3 Site Lighting

Site lighting shall be established in accordance with the Clients HSE Policy, environmental management requirements established through environmental assessments and surveys, and planning conditions issued by Gravesham Borough Council.

Section 35 of The CDM Regulations (2015) states the Site must be provided with suitable and sufficient lighting, which must be, so far as is reasonably practicable, by natural light. This relates to both the construction site as well as the approach and traffic route to the Site.

Site lighting will be at the minimum luminosity necessary to enable the safety and security of the construction site. In determining temporary construction lighting arrangements for the site, consideration will be given by the Principal Contractor to sensitive receptors that may experience a nuisance by the light, including wildlife.

General control measures for the use of lighting on site are outlined below:

- Temporary site lighting when used adjacent to residential areas must be fixed with a noise screen to keep noise levels to a minimum;

- As far as is practical, lighting must be directed away from residential properties; and
- Lighting should always be positioned to avoid glare.

2.3.4 Working Hours

The normal hours of working (including access and egress) on any part of the development during the construction period will be:

- 08:00 hours to 18:00 hours Mondays to Fridays;
- 08:00 hours to 13:00 hours on Saturdays.

The following controls will also apply to the works:

- No works, including site deliveries and collections, will take place on Sundays or Public Holidays.
- There will be no stacking of lorries on the site boundary outside of the working hours.

Any works outside of the normal hours of working will be subject to the requirement to obtain consent from the Local Authority. The agreement should include working hours and methods to ensure that the 'best practicable means' to control potential nuisances are included.

Normal hours of work set out above do not apply to emergency works nor to equipment that is required to operate continuously.

2.4 Project Programme and Key Dates



Figure 2: Project Programme and Key Dates

3 ENVIRONMENTAL ASPECTS

An Environmental Impact Assessment (EIA) Scoping was undertaken by RSK Environment in July 2018 to determine the potential environmental risks associated with the redevelopment of Nuralite industrial estate. Following this, in March 2019, an Environmental Statement was submitted to the council.

The key environmental sensitivities are summarised in this section with consideration as to how this may be affected by the construction works. In addition, the potential environmental impacts on these features, are likely to arise as a result of the planning construction works to be undertaken are also summarised in this section. Environmental mitigations are considered in Section 4.

3.1 Residents and Local Community

The site lies approximately 1.5km North West of the village of Lower Higham and approximately 3km east of the town of Gravesend, on the south side of the Thames estuary. There is commercial properties along Canal Road and Queen's Farm Road.

Given the location and nature of the development, the construction process may impact upon residential properties located within the vicinity of the proposed development. The sensitivity of each receptor to various construction activities will depend on location and proximity to the site and identified transport routes, however, it is anticipated that the following environmental issues could be of concern if not appropriately managed:

- Nuisance including:
 - Mud on roads spread by construction traffic;
 - Excessive or poorly directed light; and
 - Litter.
- Dust and fumes from transport and construction activity;
- Noise and vibration from transport and construction activity;
- Traffic and transport disruption;
- Disruption to business; and
- Reduction of access to amenity space.

3.2 Air Quality

RSK Environment was commissioned in January 2019 to undertake an assessment of the potential air quality effects associated with the proposed redevelopment of Nuralite industrial estate.

Atmospheric emissions from construction activities will depend on a combination of the potential for emissions (the type of activity and prevailing conditions) and the effectiveness of control measures. In general terms, there are two sources of emissions that will need to be controlled to minimise the potential for adverse environmental effects.

- Exhaust emissions from site plant, equipment and vehicles; and
- Fugitive dust emissions from site activities.

3.2.1 Exhaust Emissions from Plant and Vehicles

The operation of vehicles and equipment powered by internal combustion engines results in the emission of exhaust gases containing the pollutants Nitrogen Oxide (NO_x), Particulate Matters less than 10µm (PM₁₀), volatile organic compounds, and carbon monoxide (CO). The quantities emitted depend on factors such as engine type, service history, pattern of usage and fuel composition. The operation of site equipment, vehicles and machinery will result in emissions to atmosphere of exhaust gases, but such emissions are unlikely to be significant, particularly in comparison to levels of similar emission components from vehicle movements on the surrounding highways network.

Construction traffic is likely to comprise haulage/construction vehicles and vehicles used for workers' trips to and from the site.

3.2.2 Fugitive Dust Emissions from Construction Works

Fugitive dust emissions arising from construction activities are likely to be variable in nature and will depend upon the type and extent of the activity, soil type and moisture road surface conditions and weather conditions. Periods of dry weather combined with higher than average speed have the potential to generate more dust.

Construction activities that are the most significant potential sources of fugitive dust emissions are:

- Earth moving, due to the handling storage and disposal of soil and subsoil materials;
- Construction aggregate usage, due to the transport, unloading, storage and use of dry and dusty materials (such as cement and sand);
- Movement of heavy site vehicles on dry or untreated haul routes; and
- Movement of vehicles over surfaces where muddy materials have been transferred off-site (for example, onto public highways).

Fugitive dust arising from construction and demolition activities can potentially impact upon human health.

The site is adjacent to a SSSI and Ramsar site, South Thames Estuary and Marshes, which are the designated ecological receptors that have been identified within 50m of the application site boundary and the anticipated track out.

Table 1: Sensitivity of surrounding area

Potential Effect	Sensitivity of the Surrounding Area			
	Demolition	Earthwork	Construction	Track out
Dust Soiling	Medium	Medium	Medium	Medium
Human Health	Low	Low	Low	Low
Ecological	High	High	High	High

Mitigation measures relating to dust emitting activities can be effectively controlled by appropriate dust control measures and any adverse effects can be greatly reduced or eliminated. Air Quality mitigation measures to minimise environmental impacts can be found in Section 4.5.2.

3.3 Noise and Vibration

RSK Acoustics conducted a baseline noise survey undertaken between 16 November and 28 November 2023 at positions considered representative of the nearest noise sensitive receptors, in order to quantify the existing ambient noise levels during both daytime and night-time periods.

Construction phase noise impacts arising from equipment, vehicular movements and processes related to the construction of the proposed development have the potential for a short-term impact however standard construction methodologies are to be employed to control noise and vibration during construction in accordance with current legislation and standards including British Standard 5228-1:2009+A1:2014: 'Code of Practice for noise and vibration control on construction and open sites – Noise'.

The Control of Pollution Act 1974 (COPA 74) gives local authorities power for controlling noise and vibration from construction sites. If deemed necessary by the Local Planning Authority a Section 61 consent may be utilised to agree methods, times duration and noise levels with the client. A Section 61 prior consent would need to be used prior to work starting. The lead period for this to be determined is 28 days, meaning that any application to work outside of the permitted hours, shall be required giving at least 28 days' notice.

3.3.1 Baseline Noise and Vibration Survey Methodology

A description of the measurement locations and rationale is provided below in Table 2.

Table 2: Measurement Location Details

No.	Type	Orientation	Rationale
UL1	Long term, unattended noise	North-east boundary	To quantify baseline noise levels representative of closest identified receptor.
AT1	Short term noise	Adjacent to Canal Road	To quantify existing road traffic noise emissions from Canal Road.
V1	Short term vibration	North-east boundary	To contextualise baseline vibration environment representative of closest identified receptor at Bridge House, Canal Road.
V2	Short term vibration	South boundary	To contextualise baseline vibration environment at southern boundary of the existing site.

It should be noted that access was not permitted to monitor at receptors; alternative positions were therefore chosen based on the security of both personnel and equipment. Locations chosen, albeit not within the confines of the receptor itself, were deemed as appropriate alternative locations and representative of the existing noise environment at nearest receptors through observation made by RSK Acoustics.

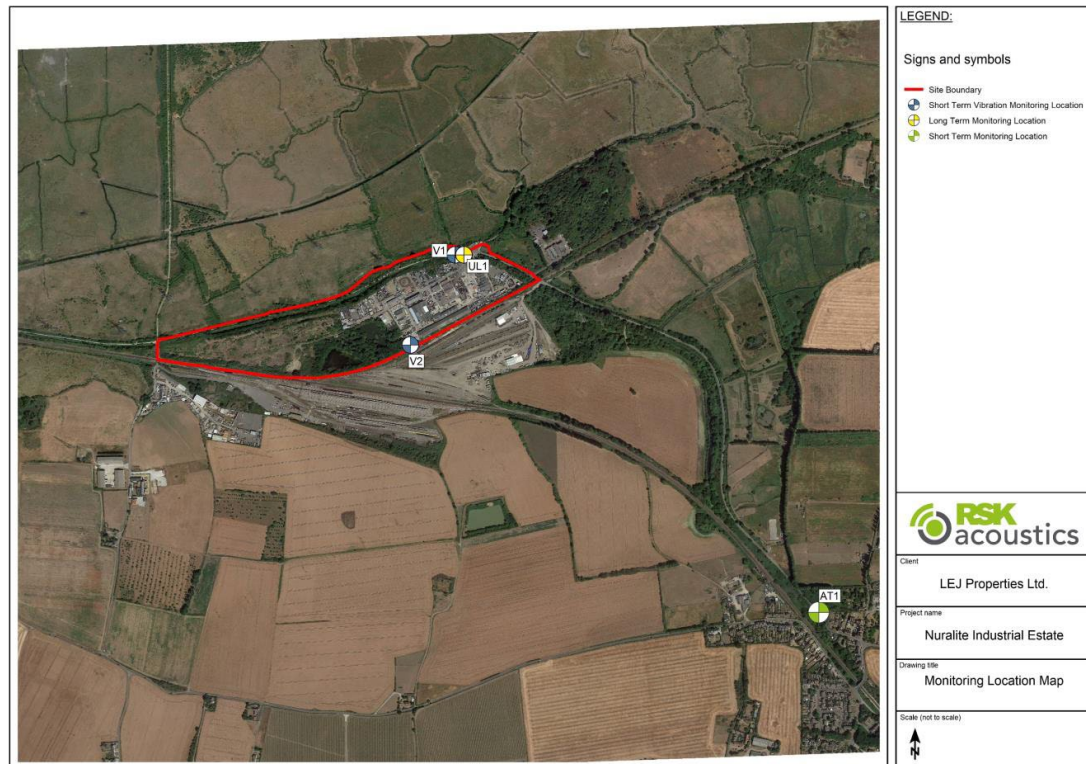


Figure 3: Baseline noise and vibration measurement locations

3.3.2 Noise Predictions – Demolition and Construction Phase

Measurements of baseline noise levels around the site indicate that the nearest residential receptors facing the site have a daytime threshold of 65dB(A). Neighbouring receptors are likely to experience similar or lower magnitude of noise.

Construction noise has been predicted at the facades of the nearest receptors surrounding the site using computational noise model predictions. The model uses data from the anticipated construction equipment for the five construction phases detailed previously. The predicted noise level at facades of surrounding receptors are detailed below. The prediction assumes a 2.4 meter hoarding around the perimeter of the construction site will be installed throughout the duration of works.

The predicted noise levels are based upon assumptions that all plant items operate simultaneously (based on the individual task plant list(s)). It is important to note that works will progress in a sequential manner, and plant will be distributed across the working extents. As a result, the most exposed receptors classified above are unlikely to experience the predicted noise levels on a continuous basis throughout each task.

Table 3: Predicted Daytime Construction-only Noise Levels

Receptor	Daytime Predicted Noise Level, dB(A)				
	Remediation (west portion)	Demolition	Earth Works	Foundations	General Construction
Bridge House, Canal Road	50	63	65	61	65
King's Farm, Lower Road	42	43	43	39	43
Queens Farm, Queens Farm Road	51	41	43	39	43
Red House Kennel, Lower Road	38	37	39	35	39
Sun Cottage, Church Street	37	36	37	36	40
Atlantis, Chalk Road	35	36	39	34	38

The results of the assessment highlight that earthworks and general construction activities are predicted to produce the highest noise levels; these are predicted not to exceed the threshold level for potential significance (65 dB daytime based on BS5228) affecting Bridgehouse, off Canal Road. Noise as result of foundation, demolition and remediation works are also expected to be within the aforementioned threshold level for all the considered receptors. Similarly, noise from earthworks and general construction activities are considered to comfortably meet the noise criteria at the rest of the receptors which are situated at least 700 meters away from the site.

It should be noted that the predicted noise impacts would be short term and temporary (i.e. infrequent during the construction phase dependent on location of plant) as assumed based on awareness of construction activities however would require confirmation through review of programme.

3.3.3 Construction Traffic

Predicted façade noise levels were calculated based on supplied traffic figures at closest receptors to those roads experiencing changes in the traffic volume due to the site redevelopment construction phase. The magnitude of impact, according to Design Manual for Roads and Bridges (DMRB) methodology, is presented in Table 4 below.

Table 4: DMRB Magnitude of impact during the construction phase

Road name	Highest Calculated Noise Level, $L_{A10, 18hr}$ at Receptor			
	Construction related source (traffic)			
	Adopted Future Baseline Scenario, dB	Adopted Future Baseline Scenario + Construction Traffic, dB	Level Increase, dB	Magnitude of Impact
Canal Road	62.9	69.9	+7.0	Major
Lower Rochester Road	61.4	64.7	+3.3	Moderate
Gore Green Road	62.4	65.6	+3.1	Moderate
Chequers Street	65.0	66.6	+1.6	Minor

An increase of 7.0 dB during daytime hours has been assessed upon those properties situated at close distance from Canal Road as a result of the predicted increase in vehicle movements caused by the construction works at the proposed site.

Given the limited access routes to the site, Canal Road would be expected to experience the highest noise increase levels.

3.3.4 Vibration Predictions – Demolition and Construction Phase

In the absence of specific piling methods, and pile Table 4 provides generic estimation of vibration levels at different separation distances as a result of a typical Vibratory Piling Rig, a Percussive (Hammar) Piling Rig and compaction works. These predictions are based on the calculation method detailed in the RSK Acoustics Construction Noise and Vibration Assessment.

Table 5: Indicative Piling and Compaction Vibration (for information only)

Vibratory Piling Method		Percussive (hammar) Piling Method	
Distance (m)	Predicted Peak Particle Velocity (mm/s)*	Distance (m)	Predicted Peak Particle Velocity (mm/s)**
5	32.8	5	36.2
10	13.3	10	19.9

25	4.1	25	6.8
50	1.6	50	2.8
Vibratory Compaction (steady state)			
Distance (m)	Predicted Peak Particle Velocity (mm/s)*		
5	32.7		
10	14.7		
15	8.8		
30	3.4		

Estimated vibration values from piling and compaction works indicated potential exceedances of the cosmetic damage criteria between 9 and 13 meters on the type of plant and activity used. These distances are comfortably below the distance from the works extent to the nearest sensitive receptor resulting in the likelihood of cosmetic damage being very low.

Proposed measures to manage potential impacts of noise during construction and a scheme for monitoring noise and vibration levels are detailed in Section 4.7.

3.4 Ecology

A Preliminary Ecological Appraisal (PEA) report was completed by RSK ADAS Ltd in June 2018. A previous PEA report was undertaken in November 2017 by Icen Ecology Ltd, which identified nine buildings as having potential to support roosting bats.

3.4.1 Designated Sites

A desk study was carried out in May 2018, Kent and Medway Biological Records Centre (KMBRC) was used to provide details of non-statutory designated sites of nature conservation importance and records of protected and other notable species.

The wider area comprised predominantly marshland and farmland, interspersed with watercourses, hedgerows and pockets of deciduous woodland.

One Ramsar, one Special Protection Area (SPA) and five Sites of Special Scientific Interest (SSSI) were located within 5km of the site. One non-statutory designated Local Wildlife Site (LWS), was located within 2km of the site.

Table 6: Statutory and Non-Statutory designated Sites

Site	Designation	Description	Distance from Site
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Thames Estuary and Marshes (including South Thames Estuary and Marshes).	Ramsar, SSSI	A c.40m wide strip consisting of canal and woodland falls within a Ramsar and SSSI and provides additional habitat variety complementing the estuarine habitats. Site supports internationally important numbers of waterfowl including avocet and regularly occurring migratory birds.	Adjacent along the northern boundary
Thames Estuary and Marshes	SPA	The SPA consists of an extensive mosaic of grazing marsh, salt marsh, mudflats and shingle. Freshwater pools and areas of woodland provide additional habitats. The site provides wintering and breeding habitats for important assemblages of wetland bird species, as well as supporting migratory birds on passage. A number of nationally rare and scarce invertebrate species and nationally scarce plants are also found within the site.	c. 75 northeast
Shrone and Ashenbank Woods	SSSI	Complex of ancient and plantation woodland supporting important and diverse invertebrate fauna, in particular beetles, true bugs and dragonflies.	2.67km southwest
Great Crabbes Wood	SSSI	Site is representative of woods on north west Kent tertiary sediments which give rise to a range of soil types reflected in species composition of the tree canopy, shrub layer and ground flora.	2.87km south
Chattenden Woods and Lodge Hill	SSSI	Site comprises a mosaic of habitats, including ancient and other long-established semi-natural woodland, dense scrub and neutral grassland. The site is also of importance for its breeding nightingales.	3.4km east

Cobham Woods	SSSI	Site consists of woodland and old parkland on acidic thanet sands and on chalk soils. An outstand assemblage of plants is present at this site which is also of importance for its breeding birds.	4.76km south
Non-statutory Designated Sites			
GR17 Canal and Grazing Marsh, Higham	LWS	-	Falls within site.

3.4.2 Habitats

Table 7: Habitats overview

Habitat	Overview	Species
Amenity grassland	Amenity grassland was recorded within the industrial area to the east of the site and limited to well-maintained areas around the buildings	Species comprised annual meadow-grass, white clover, common daisy and ribwort plantain.
Bare ground	The site, particularly the eastern section was dominated by hardstanding. The hardstanding area was utilised for car parking, storage, roads and footpaths.	-
Building	33 buildings were recorded within the industrial area to the east of the site. The buildings varied from flat roofed metal sheds to large brick built industrial warehouses.	Full description of these buildings in relation to their bat roost potential is provided in table x.x
Dense/continuous scrub	Dense/continuous scrub was a frequent habitat throughout the site, particularly around the site	The scrub was dominated by buddleia and hawthorn, with bramble and elder, goat willow, white poplar and silver birch and occasional sycamore and alder.

	boundary and around the two lakes.	
Ephemeral / short perennial	The majority of the eastern section of the site which is the former landfill was dominated by ephemeral/short perennial. This habitat transitioned into areas of tall ruderal, scrub and poor semi-improved grassland within a mosaic of habitats located within the western area of the site.	Species were those typical of disturbed ground and comprised teasel, bristly oxtongue, forget-me-not, ivy, common nettle, annual nettle, common daisy, knapweed, bramble, white bryony, lesser burdock, creeping thistle, spear thistle, what campion, red campion, hemlock, green alkanet, mallow, mugwort, bird's-foot-trefoil, comfrey and ribwort plantain.
Poor semi-improved grassland	Grassland had colonised some areas of the former landfill site to the west.	Grassland was dominated by false oat-grass and meadow barley. It is also comprised of many of the species recorded within the ephemeral/short perennial as these two habitats mixed with each other throughout the site.
Scattered broad-leaved trees	Scattered broad-leaved trees were located around the western and northern edge of the western lake and along the northern boundary of the site.	The trees were typical of plantation due to the linearity and equal spacing, comprising predominantly of silver birch, with occasional hornbeam, ash and white poplar. Additionally a singular mature pedunculate oak was located to the southern boundary
Scattered scrub	Scattered scrub was frequent throughout the site, particularly within the western landfill area.	Buddleia colonised at the base of the buildings and in some cases growing out sections of the brickwork. Occasional goat willow and bramble was also present.
Semi-natural broad-leaved woodland	A section of c. 1ha of semi-natural broad-leaved woodland was located between the two lakes. The woodland was also listed as Priority Habitat Lowland Deciduous Woodland under	The woodland canopy was dominated by white poplar with silver birch, ash and occasional lime and alder. The shrub layer was dominated by buddleia, goat willow and hawthorn with occasional pine, yew and

	the Natural Environment and Rural Communities (NERC) Act (2006).	weeping willow. The ground flora was dominated by common nettle, cleavers and cow parsley, with frequent ground ivy and occasional ragwort.
Standing water	Two large lakes were located within the site. The western lake measured c.065ha and the eastern lake measured c.055ha. Both lakes were similar in that they are managed as fishing lakes with a perimeter comprising dense scrub. Semi-natural broad-leaved woodland separated the two lakes. A smaller pond (c.500m²), likely formed from rain. A manmade concrete reservoir was located within the eastern section of the site (c.0.11ha). The reservoir was rectangular in shape with vertical concrete edges. The water quality was poor. A section of isolated canal was located along the northern boundary of the site which formed part of the Ramsar site. The canal was approximately 15m wide and ran a length of 700m.	Plant species within the lake comprised yellow flagged iris, blue flagged iris, greater reedmace, greater pond sedge and common reed. The smaller lake was shallow with emergent ruderal species present throughout with a number of carp present in the waterbody.
Tall ruderal	Within the centre of the woodland there is an opening (c.0.1ha) of tall ruderal.	This was dominated by common nettle with frequent cleavers.

3.4.3 Protected and Notable Species

3.4.3.1 *Amphibians*

KMRC provided 10 historical records (over 10 years old) of great crested newts (GCN) approximately 30m to the west of the site within Filborough Marsh. Additionally, one

record of common toad was provided from 2012, which was located within the north eastern corner of the site.

The waterbodies within the site were considered unsuitable for breeding GCN due to large numbers of fish and waterfowl present. The wider area around the site was considered more suitable, comprised ponds and interconnected ditches within the marshland. These ponds were more likely to support a breeding metapopulation of GCN than the fishing lakes within the site.

The previous asbestos landfill may offer potential as hibernacula for widespread amphibians known to the area such as common toad, which may also be breeding within the fringes of the waterbodies.

3.4.3.2 *Badgers*

KMBRC provided four records of badger within 2km of the site. The most recent record dated 1996. No evidence of badger was recorded within the site.

The site held limited potential to support badgers due to the previous use of asbestos landfill making the ground unsuitable for sett digging. The more suitable areas such as the woodland, are likely flooded annually due to its location between two lakes. However, there is good potential for foraging if badgers were to use the site, with the grassland and woodland floor likely providing a good food source.

3.4.3.3 *Bats*

KMBRC returned records of seven bat species known to be roosting within 5km of the site. The nearest roost site was of an unknown species, located c.1km to the east of the site.

All buildings within the site were of industrial nature and located within the eastern section of the site. Of the 33 buildings surveyed 24 were considered to hold negligible potential to support roosting bats. Of the 33 buildings surveyed 24 were considered to hold negligible potential to support roosting bats. This was determined by the lack of roosting opportunities, due to the open structure, disturbance from light and general usage, and lack of suitable features (such as gaps in the brickwork or mortar). The buildings were all located close together and comprised of varying structures, some buildings were very large and open and it may be that bats briefly enter them whilst foraging.

A full description of the buildings considered to hold potential to support roosting bats is provided in Table 8 below.

Table 8: Buildings considered to hold potential to support roosting bats

Building Reference	Roosting Bat Potential (BCT Guidelines – Structures)	Description
2	Low	Small, single storey building comprising corrugate asbestos roofing and clad on each gable end.

3	Low	Small, single storey building with a loft void (although this appeared to be damaged and partially exposed to natural elements). Gaps were present within the windows and between the loose asbestos tiles.
8	Low	Brick built building with pebble dash coating. Building appeared to be well sealed although gaps were located within the soffit (particularly on the northern elevation). The soffits were considered to offer low potential to support roosting bats.
13	High	Building exterior comprised a mix of concrete and pebble dash with an upper roof section of asbestos tiles. Pitched roof at very top with broken windows offering entry/exit points for bats into the loft void. The structure of the building may offer thermal stability for bats.
21 22 23	Moderate	Large brick built industrial building with open areas and three corrugated lean-tos. Vegetation such as buddleia growing from walls. Strictly out of bounds due to asbestos and structural safety issue. Many cracks and crevices within the southern elevation of the building.
37	Moderate	Large brick built building currently used as a workshop. Windows are broken allowing interior access. Ivy cover at the northern section and broken windows leading to a potential loft void. The roofing appeared to be intact, which likely protects the interior from rain and wind (potential thermal stability).
38	Moderate	A brick and pebbledash two storey construction, now derelict. The house appeared to be well sealed with an apparent loft void. The house was generally well sealed with a few gaps noted within the tiles on the southern elevation.

In order to determine the use of these buildings by bats, further survey work will be required to establish if bats are roosting.

The site offered limited foraging and commuting potential for bats due to the industrial usages, which likely causes disturbance.

3.4.3.4 *Birds*

Due to the site, being close to an RSPB reserve and an SPA, a large number of bird records were returned by KMBRC are unlikely to be associated with the on-site habitats. However, there was potential for the lakes and canal to support birds such as mallard, tufted duck, shoveler, gadwell and pochard, which are birds known to be present in large numbers locally. Mallard, moorhen and mute swan were recorded using the lake during the time of survey.

The woodland and dense scrub may also offer the potential to support breeding nightingale which is Red Listed under the Birds of Conservation Concern. The site supports a diversity of habitat likely to support a range of passerine species. A barn owl box was located at the northern boundary of the western lake, although no evidence of use could be ascertained from the ground.

3.4.3.5 *Hazel dormouse*

KMBRC provided no biological records of hazel dormice within 3km of the site. Although the site falls within the natural dormouse distribution range the site lacked the diversity of habitats and scrub species typically needed to support dormice.

3.4.3.6 *Invertebrates*

Two historical stag beetle recorded were located near Higham Station, although no recent recorded of protected/notable invertebrates were recorded within 2km of the site within the last 10 years. The site was considered unlikely to support large numbers of protected/notable invertebrate species.

3.4.3.7 *Otter*

KMBRC returned no records of otter within 2km of the site. Although no evidence of otter was recorded, otter may pass through the site on an occasional basis due to the presence of fishing lakes, which are likely considered good foraging opportunities. The woodland between the two sites offered good potential to support an otter holt and was relatively undisturbed due to the dense scrub present.

3.4.3.8 *Reptiles*

KMBRC provided nine records of common lizard, 12 records of slow-worm and 24 records of grass snake within 2km of the site. Although no records were returned from within the site, the main area of records were within the marshes to the north, with a grass snake recorded located c.5m to the north-western boundary of the site. Additionally slow-worm records were returned from the railway station which runs parallel with the southern boundary.

The site comprised a mosaic of habitats typically associated with reptiles such as sunny south facing grass banks, pockets of scrub interspersed with grassland, log piles, the

canal and the pond and lakes. These habitats had good connectivity with the areas of habitat currently supporting reptile populations to the north and south.

3.4.3.9 Water Vole

KMBRC returned 44 records of water vole within 2km of the site. The site is surrounded by a network of small, interconnected watercourses with the majority of records located to the north and east of the site. Although no records pertained to the site itself, the canal was considered suitable to support water vole. Two records were located within the eastern section of the canal (off-site), which was separated from the canal within the site by an access road.

3.4.3.10 Non-native invasive species

No non-native invasive plant species were identified during the field visits of the site, or from the biological record data within 2km of the site.

Mitigation measures and recommendations are outlined in Section 4.8.

3.5 Water Resources and Flood Risk

The initial Phase I and II Geoenvironmental Assessment undertaken in 2012 by WSP also identified instances of groundwater contamination, specifically in the form of dissolved hydrocarbons within two monitoring wells and uncertainties in the site's conceptual understanding.

3.5.1 Ground water contamination

Intrusive surveys had not identified widespread of hydrocarbon impacts to groundwater. Limited hydrocarbon contamination to groundwater has been recovered within the eastern portion of the site with dissolved phase hydrocarbons detected consistent with a fuel related source (such as diesel).

Data from groundwater monitoring does not indicate that hydrocarbon contamination is migrating beyond the site boundaries (from either the west or eastern portion of the site) and hence no significant risks to controlled waters receptors have been identified.

3.5.2 Surface water contamination

Surface water samples were retrieved and tested from the two fishing ponds, and from two locations along the dis-used, off-site canal did not indicate that the surface water was impacted to the same extent as the groundwater.

While elevated levels of polycyclic aromatic hydrocarbons were recorded in the surface waters, the majority of determinants tested were not significantly elevated.

Sediments from the surface water samples were analysed for the presence of asbestos fibres but none were detected.

3.5.3 Flood risk

Hydro-Logic Services carried out a flood risk assessment in 2018. A summary of the key sources of flooding and risk to the site is described in Table 9 below.

Table 9: Summary of flood risk

Key sources of flooding	Possibility at Site
Fluvial (Rivers)	None
Tidal	Northern part of Site lies within Flood Zone 3 but is protected by tidal defences
Groundwater	Low due to elevated nature of Site
Sewers	No problems reported by Site operators
Surface water	Generally low risk, other than associated with the fishing lakes and ponds on the southern margin of the site.
Infrastructure failure	Canal is at lower elevation than the majority of the Site so poses no problem in the event of failure

Overall, the site is at a low risk of flooding from all sources. The main risk is from tidal flooding, though the site is protected by tidal defences. According to the Environmental Agency data, it confirms that the only areas at risk would be the lowest parts of the site, largely the canal. No measures are required to protect the Site from tidal flooding or breach of the defences.

The Site is considered to be low risk from all sources of flooding. This is not expected to increase following development, provided that the recommendations are considered. Recommendations, mitigation measures regarding groundwater and surface water contamination can be found in Section 4.9.

3.6 Potential sources of contamination

Potential sources of contaminants of concern are summarised in Table 10 below.

Table 10: Potential source and types of contamination

Potential sources	Contaminants of concern
Site-wide made ground and impacted reworked natural soils associated with former site use as asbestos manufacturing works.	Significant asbestos fibre and visible fragments of asbestos containing materials (ACM) have been identified throughout the made ground and at surface. Fibre concentrations identified up to 9.74% w/w, with some waste materials containing 48.81% w/w and 75.75% w/w respectively. Asbestos predominantly identified as cement, debris and loose fibres but included insulation, lagging and board.

	Asbestos predominantly identified as chrysotile but also included amosite and rarely crocidolite.
Canal banks and silt build-up within disused canal	Limited investigations has identified asbestos fibre and visible fragments of asbestos containing materials (ACM) within the silt. Fibre concentrations were not quantified during the investigations.
Silt and soil forming the base and banks of the two existing ponds within the west of the site	Investigation has identified asbestos fibre and visible fragments of asbestos containing materials (ACM) within the bank silt. Fibre concentrations identified up to 0.962% w/w and identified as cement and loose fibres of chrysotile.
Limited, localised hydrocarbon hotspots related to locations of former storage tanks, and limited area of fly-tipping	Principally hydrocarbons associated with storage of fuel and oils at the site, typically identified as heavy end hydrocarbon fractions. Total hydrocarbon concentrations of up to 2,500mg/kg noted.

The remedial strategy and recommendations to minimise the disturbance of asbestos can be found in Section 4.10.

3.7 Traffic, Transport and Rights of Way

RSK completed a Construction Traffic Management Plan (CTMP) in April 2026 for the site.

The remediation of the site will generate a large number of HGV movements. These will be routed via the proposed route as set below Section 4.10.2 and it is assumed that 100% of HGV movements associated with the site are assigned to this routing. At its peak, the busiest phase of the programme is expected to generate an average of 686 daily two-way trips, of which 420 are HGV trips associated with the remediation and redevelopment.

The HGV trips have been distributed evenly across a 10-hour period, resulting in 42 two-way HGV trips during each peak hour, or less than one per minute. It is not anticipated that any abnormal indivisible loads will be required.

3.7.1 On-site parking requirements

A temporary car park will be provided within a construction compound on site for those involved with remediation, demolition and construction compound for the development on the former landfill.

Traffic Management measures can be found in Section 4.11.

3.8 Waste Management

The proposed site is predominantly hard standing with the proposal to demolish the existing industrial estate (c.5.45ha) and construct a new industrial estate (Class B)

comprising 11 new units over the existing hardstanding to the east. This will involve filling in the easter lake c. 5500m²) to extend the industrial estate to extend the new hardstanding area. Period to demolition all asbestos containing material will be removed by a licensed contractor.

The Site will operate in full compliance with the Environmental Protection Act 1990, the Environmental Protection (duty of care) Regulations 1991, and all other relevant legislative requirements and the Construction Environmental Management Plan.

Wherever possible, a principle of reduce-reuse-recycle will be adopted. This will be particularly appropriate with respect to the proportions of the Site containing waste and potentially contaminated materials.

An accurate record will be maintained which details all waste disposal from Site such as waste types, quantity of disposal route. The Site will be maintained in a clean, litter-free condition throughout the works.

No burning shall take place on site, all waste must be removed from site.

Measures will be put in place to control pests or scavengers should they be noted during site inspections.

Further waste management measures are listed in Section 4.12.

4 ENVIRONMENTAL MANAGEMENT PROCEDURES

Environmental management measures have been developed to avoid or reduce environmental impacts associated with the construction works. Appendix 2 includes an environmental management matrix that illustrates the association between construction activities, environmental aspects and impacts and the environmental management measures. The matrix defines responsibilities and frequency of actions.

Environmental management measures shall be incorporated into the Risk Assessment and Method Statements (RAMS) prepared by the Principal Contractor. All RAMS shall be communicated to the workforce by the Site Manager.

4.1 Fuel Storage and Refuelling

Fuel storage and refuelling will be managed as follows during construction:

4.1.1 Fuel Storage

- Fuel levels shall be monitored and recorded regularly (sudden changes may be a sign of leaks).
- Fuel tanks, secondary containers and storage compounds shall be inspected regularly for damage, corrosion, leaks, faults and vandalism. Repair defects/faults immediately and retain records.
- The secondary containment system must provide storage for at least 110% of the tanks maximum capacity and ensure that any valves, filters, sight gauges, vent pipes or other ancillary equipment are also situated within the secondary containment system and arranged so that any discharges would be contained.
- Fully lockable and labelled 'Fuel Safe Static Tank' will be deployed.
- Sufficient spill kits will be provided. Spill kit supply to be monitored regularly to ensure adequate stock remains full.
- Spill kits will be available within each plant on site and located close to identified pollution sources or sensitive receptors (fuel storage areas, water course crossings, etc.).
- All drains located adjacent or near to refuelling points shall be covered by a drain guard before commencing transfer. All fuel transfers to be supervised.
- Drums must be stored in a secure interceptor drum store within the designated refuelling area.
- Oil spill and oil impacted water must be collected in a fuel safe container with fuel tags. Fuel spills must be contained using the spill kits provided, spills should be reported to the contractor's Site Manager immediately.
- Records must be maintained of all environmental incidents, mitigation works, clean up method and validation.
- A suitable container for hazardous wastes must be provided within the waste compound.

4.1.2 Refuelling

- Where possible, refuelling should only be carried out in a designated area, which will be secured/locked out of hours.
- The refuelling area shall be located away from drains and watercourses (>10m from a watercourse and >50 meters from a spring, well or borehole).
- Areas of permanent waste oil/fuel/chemical storage will be located 50m away from watercourses or drainage paths. Where this is not possible, advice will be sought from the ECoW and a minimum distance will be agreed with the Client.
- Refuelling will always be supervised by a competent supervisor.
- Mobile plant must be refuelled away from surface waters, drains, permeable pavements and open excavations. A fuel drip tray must be used.

4.2 Use and Storage of Hazardous Materials/Substances

The use and storage of solvents, cements, adhesives, grout and concrete shall be managed as follows during construction:

- Concrete wash-out on site shall only be permitted when the Contractor has provided a designated, suitably prepared wash-out area with signage identifying the area as suitable for wagon wash-out.
- Concrete wash-out may be dried and crushed to be re-used on Site or disposed of in accordance with a Site Waste Management Plan.
- Surplus dry concrete, cement and grout is to be collected and reused where possible e.g., as inert rubble; reuse of dried materials may require environmental permits or exemptions.
- Areas of permeable pavements are not to be used for the temporary storage of cement bags. If unavoidable ensure adequate protection measures are in place to prevent the pavement from becoming blocked.
- The Contractor is responsible for carrying out a risk assessment of each substance and ensuring that all appropriate storage, protective equipment and if necessary emergency procedures are put in place on Site.
- All hazardous materials shall be labelled, sealed and stored with their COSHH assessment in a bunded and lockable container away from drains and watercourses when not in use.
- COSHH datasheet will be read and understood before using any hazardous materials.
- Any spent (contaminated) spill kits, absorbent granules, sheets or fibres must be disposed of in accordance with COSHH regulations and Site Waste Management Plan requirements.
- Hazardous liquids shall be transferred using a funnel and drip tray and sealed and returned to the container immediately after use. Damaged containers shall be reported to the Site Manager.
- All usages shall comply with its requirements.
- Hazardous liquids must be re-sealed after use. Empty containers are to be disposed of to the designated container within the waste compound.
- Construction workers are required to wear PPE such as gloves and face masks (where appropriate) to prevent dermal contact and inhalation or ingestion.

4.3 Use of Plant and Equipment

- Mains electricity shall be used where available. If not, generators are to be used and must be sized for the required output, if it is diesel they must be set up by the supplier.
- All plant shall be suitability maintained and noise screens shall be used where required. Use generators having a sound power level rating below 65 db(A) canopied and silenced. Position exhausts away from site boundaries and occupied areas when in use.
- To assist with noise attenuation, where possible, generator will be located away from adjacent residents, also taking account of prevailing wind conditions.
- Siting of portable generators must consider proximity to sensitive receptors (e.g., >10m from a watercourse and >50m from a spring, well or borehole) and must be fitted with a drip tray.
- Turn off all plant overnight.
- All equipment shall be inspected before use and any defects/faults reported to the Site Manager.
- Vehicle/plant refuelling in designated compound/areas.
- Sufficient spill kits shall be provided. Kit must be replenished as required.

4.4 Site Set up, Groundwork and Construction

Groundwork and construction will be managed as follows during construction:

- Local Authority consent must be obtained for particularly noisy activities before starting works. For example, crushing and piling. Principal Contractors and operatives must be informed of consent conditions.
- Minimise the use of builders skips and inspect lifting and locking points, doors and door locks and general condition weekly as minimum.
- Ordered materials shall be adequately managed to avoid spoilage or overordering and surplus materials shall be minimised: provide a suitable and sufficiently sized materials storage compound that is lockable and provides an above-ground covered area, protected from wind and rain. Encourage the reuse of cut-offs and arrange for suppliers to take back unused surplus materials and packaging.
- Storage compounds will be located away from any identified water features.
- Surplus materials are to be reused on site where possible. All reuse and recycling to be carried out in accordance within the terms of a valid waste exemption or voluntary codes of practice/protocols.
- Excavated material surplus shall be minimised so far as practicable; details of all inert material reuse on site including composition and disposal location must be mapped and records retained.
- If necessary temporary bunding and/or settlement ponds will be installed to allow for isolation and onsite treatment of any sediment laden or contaminated water prior to discharge to the drainage system.

4.5 Pollution Control/ Nuisance and Disturbance

Mud, dust, light, litter and water pollution have the potential to cause nuisance and in some cases complaints and statutory nuisance and therefore must be minimised. The

following processes and procedures shall be implemented to manage potential nuisance issues.

4.5.1 Lighting

- Lighting shall be switched off when not in use unless specifically needed for construction activities or for security and / or health and safety requirements.
- Glare (and the potential for complaints) caused by poorly directed security and floodlighting shall be minimised by ensuring that light fittings are horizontally mounted and directed inwards on Site.
- Temporary lighting fixtures are to be installed and designed to provide full cut-off or should be directionally shielded to ensure that artificial light is controlled and substantially confined to the defined area intended to be illuminated.
- Post-installation checks and monitoring of the lighting installations shall be undertaken to ensure that correct tilting angles and appropriate direction of lighting is achieved. This will allow adjustments to be made, where practicable, should undue light spill or glare be identified.
- Wherever possible, lighting shall be located and directed so that it does not cause unnecessary intrusion to adjacent buildings.
- The construction areas close to walkways or roadways shall be lit in an appropriate way to minimise glare and shall be clearly defined at all times to ensure the safety of motorists, cyclists, pedestrians. This will also assist in defining the limits of the construction area for motorists, cyclists and pedestrians.
- Temporary walkways, roads or parking areas shall be illuminated in accordance with current guidance stipulated in the current ILP Guidance Notes.
- Care should be taken to avoid casting shadows from hoarding on the surrounding and adjacent footpaths and roads.
- Light spillage shall be reduced by directing any construction lighting below the horizontal plane, at an angle of less than 70 degrees away from features that offer suitable bat roosting potential.

4.5.2 Dust and Mud

- All work will be carried out where possible in accordance with Control of Dust from Construction Sites (BRE DTi Feb 2003).
- Where foreseeable and significant dust is to be generated during an operation, dust fencing and/or barriers must be provided to minimise impact.
- Timing of earthworks and material movements shall be planned to reduce double handling and minimise traffic movements and therefore associated dust and mud.
- Stripping and stockpiling of soil shall be minimised where possible.
- Site roads shall be kept clear of soil and debris as much as possible.
- All contractor vehicles and private cars are to be parked in the designated area within the site compound and to be removed from site when not in use;
- If dust levels remain excessively high when adequate control measures are in place and operating effectively, then reduce or postpone works during such times (e.g. during dry or windy periods).
- Water can be sprayed onto material to dampen down any potential contaminated dust and prevent it from becoming airborne.
- Construction vehicles shall be regularly maintained to ensure mud-flaps etc. are effective.

- Activities associated with the use of construction vehicles (such as washdown facilities) shall be appropriately managed to contain contaminants and regulate the release of water back into the natural environment.
- Site layout shall be planned so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Where feasible the site or specific operations shall be fully enclosed where there is a high potential for dust production and the site is active for an extensive period.
- The Site shall be set up with hoarding to reduce the liberation of dust from the site. The contractor shall consider the use of a 'green'/vegetated hoarding to reduce particles and reduce carbon dioxide levels.
- Haul routes shall be hard surfaced and/or effectively damped down.
- All vehicle engines will be switched off when not in use to reduce particulate emissions.
- Exhaust systems will be fitted with particulate filters and catalytic converters as necessary.
- Stockpiles shall be covered, seeded or fenced (as appropriate) to prevent wind whipping.
- Excavated materials undergoing treatment shall be covered to reduce the release of odours and vapours.
- Mechanical road sweepers shall be employed to clean roads after movement of soil and of any dust and debris if it is generated within the vicinity of the site entrance.
- All loads entering/leaving the site shall be covered.
- Drop heights must be kept to a minimum and conveyors and enclosed wherever possible.

4.5.3 Water Pollution

- Surface water and drains must be protected from silt run-off: use drain guards to protect drains. Use straw bales, gravel traps or silt fencing to protect surface waters. All silt protection measures must be inspected frequently and maintained throughout the works.
- Stockpiles of contaminated materials must be situated on an impermeable surface at least 10m from any surface waters or drains, and run-off collected within a bund.
- Tracking or washing out next to drains/surface waters must be avoided.
- When dewatering, any pump shall be switched off before removing the last portion of water and suspended solids will be allowed to settle out before discharging.
- All drains located adjacent or near to generators to be covered with drain guards.
- Potentially contaminated water must be tested before dewatering. Contaminated water must be treated or discharged off site.
- Road sweepers shall be utilised where necessary.
- Silty water and associated run-off to surface water and drains must be avoided: minimise any areas of soil stripping and stockpiling, control water volumes used to suppress dust, batter/sheet stockpiles where required.
- If a discharge consent is required, then all conditions within the consent must be understood before commencement of dewatering.

4.5.4 Smoke management controls

- Waste timber or materials must not be burned on site.
- Limit the use of road vehicles or other internal combustion engines.
- Ensure that vehicles are switched off when not required.
- Ensure that haul routes are planned with minimum disturbances.
- Have a planned and preventative maintenance programme or modify existing engines to produce less pollution.
- Use fuels designed to cause less pollution.
- Consider the use of electrical equipment rather than internal combustion engines.

4.5.5 Odour controls

- Green waste: the waste is not actively crushed or mulched so waste degradation and odour release are minimised.
- Full skips shall be removed from site and stored no longer than one month.
- Street sweeping with a mobile water bowser with odour neutralising spray may be used on site if required.
- Site drainage shall be inspected, if odour is detected coming out of the drains, or leachate gully the site manager shall task an operative to inspect the relevant drainage gully. If there is a blockage or cleaning is required.

4.6 Good Housekeeping

- Maintain good housekeeping and site working practices to control litter, insects or vermin. For example, dispose of food into appropriate receptacles.
- Skips shall be kept in a central/designated area away from boundaries, and the only generators are small ones used in short duration for power tools.
- All skips and other waste storage containers will be covered.
- Hazardous waste must be separated and stored; spray cans should not be left outside of containers once used.

4.7 Noise and Vibration monitoring and mitigation

Best Practicable Means (BPM) will be employed at all times to minimise noise and vibrations.

4.7.1 Mitigation of Construction Vehicles (BPM)

- Choice of routes and programming for the transport of construction materials, spoil and personnel;
- Contact will be made with local authorities, where required to ensure that planned designated routes are set in place to minimise disturbance;
- Vehicle weight limits will be taken into consideration and permits obtained from transport authorities if warranted;
- Site speed limits will be set to minimise noise and vibration levels if required;
- Efforts will be taken to reduce numbers of staff/operative cars, and crew buses will be utilised where practicable;
- Deliveries should be carried out within the time limits set by consented conditions and agreement with Gravesham Borough Council;

- All vehicles and mechanical plant used for the purpose of the work shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order and operated to minimise noise emissions;
- All machines in intermittent use shall be shut down in the intervening periods between work or throttled down to a minimum;
- Lorry engines will be switched off when vehicles are stationary;
- As far as reasonably practicable, noise from reversing alarms will be managed through the following hierarchy of techniques:
 - The layout will be designed to limit and where reasonably practicable, avoid the need for the reversing of vehicles. Measures will be undertaken to ensure that drivers are familiar with the worksite layout.
 - Banksman will be utilised to avoid the use of reversing alarms.
- Reversing alarms incorporating one or more of the features listed below or any other comparable system will be used where reasonably practicable:
 - Highly directional sounders;
 - Use of broad band signals;
 - Self adjusting output sounders;
 - Flash warning lights; and
 - Reversing alarms will be set to the minimum output noise level required for health and safety compliance.
- Toolbox talks will be carried out to ensure that all site staff are aware of their environmental responsibilities and of the sensitivity of the vicinity. These will also ensure the Best Practicable Means of control are delivered on the site.

4.7.2 Mitigation of Construction Activity (BPM)

4.7.2.1 Best Practicable Means

- Careful selection of plant and construction methods. Only plant conforming to relevant national, or international standards, directives and recommendations on noise and vibration emissions will be used;
- Design and use of site enclosures, housing and temporary stockpiles, where practicable and necessary, to provide acoustic screening at the earliest opportunity. Where practicable, doors and gates shall not be located opposite occupied noise-sensitive buildings. The mechanisms and procedures for opening doors/gates will minimise noise, as far as reasonably practicable;
- Careful programming so that activities which may generate significant noise are planned with regard to local occupants and sensitive receptors;
- All compressors and generators shall be “sound reduced” models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use, and all pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers;
- All machines in intermittent use shall be shut down in the intervening periods between work or throttled down to a minimum;
- Noise emitting equipment which is required to run continuously shall be housed in a suitable acoustic enclosure;
- As far as practicable, demolition shall be carried out using equipment that breaks concrete in bending in preference to percussive methods;

- Plant and equipment liable to create noise and/or vibration whilst in operation will, as far as reasonably practicable, be located away from sensitive receptors and away from walls reflecting towards sensitive receptors;
- Where reasonably practicable, fixed items of construction plant should be electrically powered in preference to diesel or petrol driver;
- Machines in intermittent use should be shut down or throttled down to a minimum during periods between work. Static noise emitting equipment operating continuously will be housed within suitable acoustic enclosure, where appropriate. Doors on plant and equipment will be kept closed; and
- BPM will be used to control the potential impact of soil relaxation on surrounding properties.

4.7.3 Noise and Vibration Monitoring Procedure

The purpose of monitoring:

- To quantify noise and vibration emissions from specific plant items;
- To quantify the performance of specific mitigation measures; or
- To assess compliance with project specific criteria in anticipation of the most intrusive works after the reception of any complaints.

4.7.3.1 Long term monitoring

In order to demonstrate BPM, it would be recommended to undertake demolition and construction monitoring (noise and vibration) through a combination of long-term fixed noise loggers and short term spot checks.

The following procedures for long term monitoring would apply:

- Noise and vibration measurements would be undertaken by a suitably qualified and competent person, affiliated to the Institute of Acoustics (IOA);
- Noise and vibration loggers to be installed at a maximum of two positions, representative of those receptors likely to experience the highest levels as a result of the works;
- Noise measurements would be undertaken representative of those closest receptors, with the microphone positioned away from reflecting surfaces and at 1.5 metres above ground height to the requirements of British Standard BS7445-1:2003 'Description and measurement of environmental noise. Guide to quantities and procedures';
- Vibration measurements will be undertaken in accordance with BS ISO 4866:2010 'Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures' and BS 5228-2:2009 'Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration.'
- Long term monitors to be installed with web-server capability, allowing for real-time data capture and trigger alert functionality;
- The noise monitoring results will be used to assess compliance with the applicable criteria. The criteria for vibration is deemed as that which offers a compromise for the protection of nearest receptors and also allowing for works to take place (in accordance with the threshold of perception within BS 5228-2: 2009+A1: 2014)'
- Should trigger levels to be exceeded, the contractor shall immediately assess the cause of the exceedance and where necessary, amend current working practices;

- The sound level meter would be Class 1, with suitable traceable calibration history, and conform to the requirements of BS EN 61672-1:2013 'Electroacoustics – Sound level meters. Specifications', measuring broadband indices including $L_{Aeq, T}$ and L_{Amax} ;
- The calibration of the sound level meters would be checked before and during the measurements (likely on a 3-month cycle), using the acoustic calibrator 94 dB (1 kHz); with any calibration drift noted. The acoustic calibrator would conform to the requirements of BS EN IEC 6094:2018 'Electroacoustics. Sound calibrators';
- In the event of complaints due to site activities, an investigation would be sought as soon as possible and where appropriate, additional noise monitoring would be conducted at closest position to the complainant's location in order to quantify site noise emissions and assess compliance;
- The survey results would be analysed and assessed against the aforementioned criteria with results compiled in a short technical note on a monthly basis, suitable for submission to Gravesham Borough Council within one week (7 days) of the monitoring period.

4.7.3.2 Short Term Monitoring

In addition to those procedures outlined as part of the long-term monitoring, the following procedures for short term (spot check) monitoring would apply:

- Attended spot check measurements shall be employed during the likely noisiest tasks. Additional spot checks would also be carried out following any complaints of noise;
- Noise monitoring would be carried out during appropriate weather conditions, namely:
 - Wind speed not exceeding 5 m/s;
 - No strong temperature inversions near the ground; and
 - No heavy precipitation.
- The survey would be carried out during standard construction working hours for a minimum of one hour per location and be representative of those worse case activities (i.e with special attention to those working involving the continuous use of noisy plant or situated at close proximity to sensitive receptors). One-hour measurements of noise and vibration would be assessed against the applicable noise criteria to assess compliance. Where activities change involving significant alterations to plant items and equipment, further measurements would be considered;
- Detailed notes of observations made during the monitoring would be recorded, suitable to distinguish between construction and non-construction noise sources. Weather conditions would also be noted during the survey; and
- The survey results would be analysed and assessed against the aforementioned noise criteria. The results would be compiled and included within a technical note, suitable for submission to Gravesham Borough Council within one week (7 days) of the monitoring.

4.8 Ecology Mitigation and Recommendations

A proposed draft habitat creation map can be found in Appendix 3.

4.8.1 Designated Sites

Table 11: Recommendations for Designated and Non-designated sites

Designated Sites	Recommendations
Statutory designated sites	The northern section of the site comprising of the canal fell within c. 45m of the Thames Estuary and Marshes Ramsar and SSSI sites. There is the potential to directly impact on the site of both international and national importance. Therefore a Habitats Regulations Assessment and consultation with Natural England will be required to determine likely significant effects and agree appropriate mitigation measures.
Non- Statutory designated sites	A section of the GR17 Canal and Grazing Marsh, Higham LWS was located within the site and is likely to be affected by the proposed works. Consultation with the local planning authority regarding impacts to this site will be required.

4.8.2 Habitats

4.8.2.1 Dense / continuous scrub

A large amount of scrub will be removed for the development to take place. Upon completion, scrub should be planted within the proposed conservation area to the west of the site. Scrub planting should be comprised of species such as common hawthorn, blackthorn, alder buckthorn, gorse, spindle and wild privet. These species are considered wildlife friendly scrub species.

4.8.2.2 Semi-natural broad-leaved woodland

The woodland (c.1ha), proposed for removal was classified as Priority Habitat – Lowland Deciduous Woodland under the NERC Act (2006).

Upon completion of the works, it is recommended that c.1.5ha of woodland be replanted. This should ideally be within the same area as before so over the existing area of the western lake (which is to be removed). Replanting woodland will provide a net gain in biodiversity upon completion of the development in line with the Gravesham Local Plan Core Strategy.

The woodland planting will comprise similar species to those currently present within the site, such as silver birch, lime, oak, alder and goat willow.

4.8.2.3 Standing water

Due to the loss of the eastern lake and associated aquatic/marginal planting, it is recommended that the western lake is enhanced. It will not be possible to create an additional pond due to the amount of buried asbestos within the landfill.

Marginal plants should comprise yellow flag iris, meadowsweet, water mint, marsh marigold, brooklime and purpleloosestrife.

Plant species in groups around the perimeter of the base of the lake to consist of a minimum of 25 locations planting at a density rate of eight plants per square metre. Plants to be removed planters and slot planted or dug into the ground, plants must not be planted in a position where they will be completely submerged.

4.8.2.4 Wildflower meadow

On completion of the asbestos management, a wildlife / tussocky grassland meadow will be created to enhance the proposed conservation area.

4.8.3 Protected and Notable Species

4.8.3.1 Bats

Ground Level Tree Assessment and Aerial Inspections

The site held low potential for foraging and commuting bats with the proposed works likely to impact on these habitats with the removal of the woodland, eastern lake and scrub / grassland.

The survey identified a number of scattered trees and a woodland within the site. A further ground level tree assessment (GLTA) should be undertaken to establish each individual tree's potential to support roosting bats in accordance with the BCT Guidelines (2016). It may be necessary for a tree to be subject to an aerial inspection following assessment, where a surveyor will climb the tree and use an endoscope to further inspect and features identified.

Buildings

Building 13 was identified as having high potential to support roosting bats. One dawn swarming and two evening emergence surveys are recommended prior to building works, to establish the presence/absence of roosting bats. Surveys should be undertaken May to September, with at least two between May and August.

Building 21, 22, 53, 37 and 38 was identified as having moderate potential to support roosting bats. One dawn swarming and one evening emergence survey are recommended prior to building works, to establish the presence/absence of roosting bats. Surveys should be undertaken May to September, with at least one between May and August.

Building 2, 3 and 8 were identified as having low potential to support roosting bats. One evening emergence/dawn swarming survey is recommended prior to building works, to establish the presence/absence of roosting bats. Survey should be undertaken May to August.

If a bat roost is identified within any of the buildings it may be necessary to apply for a mitigation license through Natural England.

4.8.3.2 *Birds*

The site located adjacent to a RSPB reserve and comprised of habitats which typically support species such as nightingale, cuckoo and black redstart. As such two breeding bird surveys are recommended, with one in the first half of the season (March/April) and one in the later half (May/June). These should start ideally one hour after sunrise and record all breeding behaviour within the site.

It is recommended that work to the site vegetation take place outside of the breeding bird season (March to August) this will ensure minimal disturbance to birds nesting within proximity to the development. If this is not possible, a nesting bird check by a suitably trained ecologist should be undertaken a maximum of 48 hours prior to the development.

4.8.3.3 *Otter*

As otter are likely to be present within the local area considered the amount of watercourses, they may enter the fishing lakes on an occasional basis. A pre-construction otter holt check should be undertaken a maximum of 6 weeks prior to any works around the perimeter of the lakes.

4.8.3.4 *Reptiles*

Due to the significant number of reptile records within proximity to the site and the amount of potential habitat within the site, reptile surveys have been recommended. This will involve deploying refugia (reptile tins or felts) around areas of suitable habitat and allowing them to 'bed-in' for at least a week. A minimum of seven subsequent visits should be undertaken during optimum weather conditions to check the refugia for reptiles. Reptile surveys should be undertaken between March and September.

4.8.3.5 *Water Voles*

Although the canal did hold potential to support water voles, no further survey work is recommended as the canal is not to be impacted. However, it is recommended that a 5m buffer zone be established around the perimeter of the canal to prevent impact to potential burrowing habitat. Additionally, best practice measures should be implemented to prevent pollutants from entering the canal.

4.9 **Water Resource and Flood Risk Management**

A Surface Water Management Plan and outline Surface Water Drainage Strategy can be found in Appendix 4.

Generally, the site is considered to be at low risk from all sources of flooding. The flood risk to or from the site will not increase following development, provided that the following recommendations are considered to:

- An infiltration-based Sustainable Drainage System (SuDS) is the preferred drainage option from the site;
- Setting finished floor levels at or above the existing ground level;
- Surface water generated from the development site should not discharge off the site at a higher rate; and

- Safe conveyance of surface water flows across the site without impacting the development, residents or others.

The largest risk is the uncapped areas of asbestos and related contaminants may pollute waters. Refer to Appendix 4 for detailed information regarding prevention of contaminants to water.

4.10 Remediation/Construction considerations

4.10.1 Storing and stockpiling of asbestos contaminated soils

Once asbestos contaminated soils have been excavated, they should be immediately removed from the site. Should this not be possible it would be preferable to place the soils in lined skips which can be covered and protected from the elements. This would also prevent any excess run-off, should soils also be affected by hydrocarbon contamination.

The stockpiling of asbestos contaminated soils should be avoided where possible with affected soils being removed from site immediately after excavation. Should stockpiling of these soils be unavoidable then the following precautionary actions should be adhered to:

- a) The stockpile should be secured with heras fencing around its entire perimeter to prevent unauthorised access;
- b) In addition to fencing, the stockpile should be clearly signed as asbestos contaminated materials in order to prevent accidental use of the soils;
- c) The stockpile should be placed on suitable material (i.e. polyethene sheeting, lapped up at the edges) to prevent migration or spreading of contaminants to the underlying soils;
- d) The stockpile should be covered with a polythene sheeting or tarpaulin material in order to suppress any dust which may arise from soils; and
- e) While the stockpile is uncovered, for example during the initial stockpiling or during removal, the soils should be constantly wet down through the use of water spraying, although this may not be possible if the soils are also contaminated with hydrocarbons. In this case, a lined skip as described above, should be utilised.

4.10.2 Storing and stockpiling of hydrocarbon contaminated soils

Stockpiling of any contaminated material will be placed directly into a lined skip or placed on top of heavy duty sheeting. Methods will be employed to keep the stockpile as dry as practicable by covering the impermeable sheeting/tapering the pile to ensure maximum runoff. Stockpiles will be placed as far away as possible from nearby buildings and surrounded with heras fencing.

4.10.3 Drains, Interceptors and Soakaways

Prior to the redevelopment, these features, if encountered, should be emptied of all liquids/sludge and chemical analysis should be undertaken to determine an appropriate disposal method. Subject to regulatory authority agreement this may be by soil sewer or, alternatively, by effluent tanker for offsite treatment/disposal. Collected water should

not be disposed via any ground surface, drain or surface watercourse without the appropriate regulatory consents to discharge. Drainage structures should then be broken out and excavated where necessary or grouted and sealed.

4.11 Traffic Management

A preferred route for vehicles was agreed with officers of the Kent County Council (KCC) and Gravesend Borough Council (GBC) during the remediation and construction phases of the site. It is proposed that the routing of these vehicles is restricted to the specific routes as described in section 3.7 to minimise residential amenity impacts.

To facilitate the HGV movements that will occur across the crossroads junction at the eastern end of Canal Road, there will be a junction improvement comprising conversion of the layout into a mini roundabout.

The Principal Contractor shall provide for the safe and secure management and control of pedestrian and vehicular movements, both on and off site, to ensure the safety of all members of the general public and workforce at all times throughout the construction work period in accordance with all requisite Acts and Regulations, including, but not limited to the:

- Health and Safety at Work etc Act, 1974;
- Management of Health and Safety at Work Regulations, 1999;
- Construction (Design and Management) Regulations, 2015;
- Supply of Machinery (Safety) Regulations 1992; and
- Provision and Use of Work Equipment Regulations, 1998.

The Principal Contractor shall be responsible for:

- Promotion, management and control of such general provisions and measures for traffic management and control to be implemented by all contractors and sub-contractors throughout the extent and duration of the construction.
- On-site provision for site access roads and pedestrian footways, with controlled access from the public domain for pedestrians and vehicles, on-site parking provisions, standing, lay-down and unloading facilities for delivery vehicles, and on-site compound, welfare facilities and material holding areas for use by all contractors and sub-contractors.
- Ensuring that the on-site provisions are controlled, managed and shall be safe at all times through the provision of planned and informed procedures and segregation between vehicular and pedestrian traffic.

4.11.1 Road Safety Initiative

LEJ Properties will adopt a safe driving initiative that applies to all personnel and any person deviating from this plan may incur sanctions resulting in the driver and company being refused access to site. Everyone involved with LEJ Properties including suppliers and deliveries will be issued with a Road Safety Initiative leaflet. Posters of the Road Safety Initiative will be displayed throughout the site. The project induction will highlight:

- The dangers along Canal Road, which include narrowing's and the junction onto Church Steet;
- Unique local conditions such as agricultural movements and seasonal work on the land e.g. silage spreading; and

- Increased HGV traffic associated with the Lower Thames Crossing, should the construction stages coincide.

4.11.2 Construction vehicle routing

To minimise the potential risks of two-way HGV traffic on rural lanes, an alternative routing system has been strategised and the proposal will restrict the use of Lower Rochester Road to westbound HGV movements while eastbound movements would use Gore Green Road. The proposed route can be found in Appendix 5 and would apply to all HGVs associated with the development site during demolition and construction as HGV volumes will be higher during this period than during operation.

This routing system has been set out to acknowledge the challenges along the existing highway network.

Lower Rochester Road is currently the signed HGV route between the A2 and the site. The increased number of HGV's during the remediation and construction stages has the potential to lead to congestion at pinch points along Lower Rochester Road.

The proposed routes will be improved along both Lower Rochester Road and Gore Green Road. This includes some upgrades of existing informal passing bays, including lengthening, along with some additional passing bays where insufficient width and/or forward visibility to the next passing bay is not available.

Canal road is already being used by HGV's frequently visiting the former industrial estate as well as other premises and has operated without incident for a considerable period of time. Although there are some narrower sections, particularly towards the eastern end, the forward visibility is good along the rural section of this road.

At the eastern end of Canal Road, there is a narrowing close to residential properties where forward visibility to oncoming vehicles is restricted, such that large HGVs would be unable to pass and could require reversing manoeuvres. During remediation and construction the risk will be higher and therefore temporary traffic signals will be used to control this section of Canal Road.

4.11.3 Construction Site Access

The main access to the site is currently through Canal Road. The new layout will offer a spine road through the centre of the site providing direct access to each of the units that are being constructed.

For vehicular access there will be a secure gate installed at the entrance of the site. A security guard will control and have knowledge of the ingoing and outgoing HGVs visiting the site during construction. There will also be a holding area within the compound, which will be a space for where HGVs can wait in the event of an incident or obstruction, such as a large load being delivered.

Pedestrian access will be segregated within the site. The route for pedestrians will be protected alongside the access road using barriers.

4.11.4 Temporary Warning Signs

Canal Road will include additional signages to be erected, in agreement with Network Rail, to highlight the private ownership/unadopted status, presence of walkers, cyclist and speed humps.

The applicant will fund additional signages on the approaches to the proposed mini roundabout to raise awareness for this. For those drivers who ignore or don't see the signage, a swept path analysis has been undertaken to demonstrate that an articulated vehicle can turn within the entrance to the Network Rail yard, in advance of the bridge.

In addition, all construction materials suppliers will be made aware of the height restriction and ensure that any large items can be assembled on site if they would otherwise exceed the available height, including the foul water treatment plant.

4.11.5 Maintenance of the Highway

The public highway and the section of Canal Road under the ownership of Network Rail will be cleaned regularly using road sweepers and cleared of snow/gritted, when required. These will complement the provision of the on-site wheel washing facilities, where appropriate. The extent and frequency of road sweeping will be reviewed regularly and agreed with KCC to ensure highways are kept clear of mud.

Pre-construction and post-construction condition surveys, under a section 59 agreement and any required ongoing associated maintenance, will be carried out.

The maintenance of Canal Road throughout construction will be coordinated with Network Rail as owners of the majority of the road.

4.12 Waste Management

The Principal Contractor shall apply the principles of waste hierarchy (eliminate, reduce, reuse, recycle, dispose) to the waste management of the site.

The development shall seek to promote the re-use of excavated materials through optimisation of cut and fill operations to improve the sustainable and cost-effective development of land, as per the Definition of Waste: Development Industry Code of Practice (DoWCoP). In many instances the DoWCoP can provide an alternative to Environmental Permits or Waste Exemptions when seeking to reuse excavated materials, this is only if the process is followed in full and a Materials Management Plan (MMP) is produced that has been signed off by a suitably qualified person and submitted to CL:AIRE.

Any excavated excess spoil should always be classified prior to removal from site as required by 'Duty of Care' (Environmental Protection Act 1990) legislation. This means that material has to be given a proper description and waste classification prior to removal; consequently, details of the materials required for disposal, together with certificates of chemical analysis should be sent to a suitably licensed waste disposal contractor for classification and to confirm compliance with their license conditions.

A waste disposal log should be maintained by the main contractor. Copies of waste transfer logs, waste transfer tickets, waste consignment notes and landfill receipt tickets, should they be generated, should be provided to RSK for inclusion in the validation report.

A photographic log of the material excavated along with the base and sides of the excavation once complete should be kept and provided to RSK for the inclusion in the validation report.

As part of the geo-environmental site assessment reports, it was noted that some localised soils designated for removal are contaminated with visible fragments of asbestos (such as the main stockpile in the south of the site and potentially the three smaller stockpiles, as well as soils around WS142). Therefore all soils excavated from these areas would be classified as hazardous.

The testing frequency should be confirmed with the landfill to ensure that their requirements are fulfilled. Depending on the final volume of soil requiring removal from site, further testing may be required.

The final disposal point will be decided once the Principal Contractor is working on the project. The contamination strategy which defines the proposed monitoring points can be found in Appendix 6.

Measures to avoid waste issues are likely to include:

- A waste collection area shall be set up before site works start. This area shall be as close to the site compound as possible with adequate hardstanding for the waste containers and unobstructed access for telehandler and waste removal vehicles.
- Front-end loader (FEL) or rear-end loader (REL) skips shall be provided to segregate wastes including plasterboard, timber and metal. A designated area shall be provided for inert wastes, for example bricks, clay pipes and roof tiles. A designated container[s] shall be provided for hazardous wastes, which and must be clearly labelled.
- Wastes shall be collected by a licensed waste carrier. A copy of all Waste 'Duty of Care' documentation shall be held on site.
- Duty of Care documentation must be completed for all waste transfer copies. They must be signed by a competent person and kept on file in the site office. Waste transfer notes or hazardous waste consignment notes and Duty of Care procedures are to be audited regularly (monthly as a minimum).
- If required, a Site Waste Management Plan shall be made available on site and its requirements understood by all contractors and operatives before starting work on site.
- Road sweepers shall be deployed as necessary. All road sweepers must be removed from site accompanied with a completed waste transfer note from the driver. If road sweepings are inadvertently discharged on site, these should be disposed of appropriately.
- All waste incidents shall be reported immediately to the Site Manager and Environmental Advisor.
- Spoil and recycled aggregate transfers shall be carried out in accordance with an approved Materials Management Plan (or Remediation Strategy in Scotland) and all transfer tickets must be retained on Site.
- Contact the Environmental Advisor if specialist advice on waste segregation and disposal is required.
- Monthly updates on the amount of waste successfully recycled will be made available to the Site Manager and displayed in the site office and can also be issued to the council upon request.

Wherever possible, the following waste streams will be diverted from landfill:

- The site works shall be designed to retain as much soil on site as possible whilst maintaining protection of human health and the environment.
- All timber is to be segregated on site and sent for recycling.
- All metal is to be segregated on site and sent for recycling.
- All inert waste (e.g. bricks, blocks, concrete) will be segregated on site and used under roads etc.
- All mixed waste removed from site shall be taken to a material recycling facility for further segregation to maximise recycling and recovery.
- All hazardous waste shall be segregated from all other wastes and clearly labelled.
- All other site waste shall be segregated on site.

5 EMERGENCY PREPAREDNESS AND RESPONSE

5.1 Emergency Preparedness

5.1.1 Spill kits

Spill kits capable of dealing with hydrocarbon and chemical spills shall be available at all worksites. Each storage location shall be clearly visible to the workforce, for instance by deploying clear signage.

If a construction compound, fuel storage point or COSHH store is provided then additional spill kits will need to be available at each separate location.

The spill kit contents shall include absorbent pads, absorbent booms, absorbent granules and hazardous waste disposal sacks as a minimum. Regular checks of the spill kits shall be completed to ensure they remain adequately stocked to deal with environmental incidents.

Spill drills shall be performed periodically to confirm that the workforce can effectively contain and clear up potentially polluting spillages. All drills will be documented and details kept on record for the duration of the works.

5.1.2 Fire prevention

Means to raise the alarm in the event of a fire shall be available at the points of work. An assembly point shall be designated a safe distance from the active works locations and will be communicated to all members of the workforce before works commence. The workforce shall assemble at the point for a roll-call and to receive further instructions. All individuals at the worksite, including visitors, will be obliged to immediately sign in on arrival.

5.1.3 Extreme weather

The Principal Contractor's Site Manager shall register to receive Met Office weather warnings. All warnings issued by the Met Office with the potential to impact upon the works shall be communicated by the Site Manager to the workforce in a timely manner so that measures can be implemented where necessary. In the absence of the Site Manager the Works Environment Manager shall also receive and act upon all alerts.

5.2 Incident Reporting and Investigation

5.2.1 Reporting

All incidents, including near misses, shall be classified according to the categories outlined in Table 3. All categories of environmental incident shall be reported by the Principal Contractor to the client as outlined below.

Table 12: Incident Classification

Incident Classification	Definition
Near Miss	An event, controlled through implementation of an effective incident control measure (e.g. drip tray used, effective use of noise barrier).
Minor Environmental Incident	Incidents that have caused minor harm or damage to the environment e.g. • A minor fuel spill below 20 litres onto ground which is immediately cleared; • A minor spill of a chemical not classified as presenting an ecotoxic risk; • Exceeding noise levels; • Silt runoff from site which does not enter into a surface water feature; or • Excess dust emissions.
Major Environmental Incident	Incident that have caused or may cause significant harm or damage to the environment e.g. • A minor fuel spill which impacts a sensitive land feature, a water, or drains; • A major fuel spillage or 20 litres; • Any spillage of a chemical which is classified as presenting an ecotoxic risk; • Silt runoff from site which enters a water feature; or • Receipt of a nuisance complaint.

Minor incidents and near misses must be reported to the Client within 24 hours. Major incidents must be reported to the Project Manager as soon as reasonably practicable.

The contractor, after informing the Client, shall report all environmental incidents that are required to be reported to the Environment Agency and/or to any other relevant statutory or regulatory bodies. Emergency contact details are outlined in Section 5.2.3 for all contacts relevant to the works.

5.2.2 Investigation

Reporting of an incident to the Project Manager shall, where necessary, commence the incident investigation which shall be jointly conducted between the Client and its contractor[s].

The Principal Contractor shall prepare an investigation report for all environmental incidents. The report is to include:

- Summary of the environmental incident, describing the:
 - Nature of the incident;

- Details of any pollutant released including the type and quantity of pollutant released;
- Location for the incident (e.g. grid reference);
- Receptors that were or could have been impacted
- An analysis of what led to the incident occurring
- Summary of immediate actions taken to mitigate the incident
- Summary of any remedial action required
- Lessons learned and future measures or actions to be implemented.

The Client will verify the incident investigation and agree with its contractors any further actions which are to be implemented to prevent a reoccurrence of comparable incidents. A timeline for the implementation of all actions shall be established and the contractors shall provide details of when they have been implemented.

An incident investigation shall be complete when all details have been recorded on file.

5.2.3 Emergency Contacts

In the event of an emergency occurrence at the Site, the Client and its contractors shall determine the relevant statutory and regulatory bodies that must be notified. Notification shall be in accordance with the measures outlined above in Section 5.2.

Table 13: List of Emergency Contacts

Emergency Contacts	
Contact	Contact Details
Client Site Manager – [Name/TBC]	TBC
Contractor Site Manager - TBC	TBC
Contractor Environmental Manager - TBC	TBC
Environment Agency Emergency Number	0800 807 060
Health and Safety Executive (HSE Construction)	01519 229 235
Local Authority – TBC	TBC
Major Spill Emergency Response – e.g. RSK Response	0333 999 7687
Fire	999 / 112
Police	999 / 112
Ambulance	999 / 112

5.3 Incident Response

All pollution incidents should be managed through the STOP – CONTAIN – NOTIFY concept.

As soon as an incident is identified, the first action should be **STOP** and prevent further discharge to drainage/river/ground.

CONTAIN may constitute control of discharge in the event of a spill, or cessation of works if it is the works that are resulting in the incident, e.g. halting excavations until silt runoff is contained. It is recognised that due to personal health and safety risks it may not always be safe to stop the source of the spill, for instance if a significant volume of an unidentified substance has been released.

NOTIFICATION should take place as soon as practicable, and frequently can take place while further release is being stopped or while a spill is being contained. The emergency contact numbers outlined in Table 4 should be used.

Appendix 7 consists of standard incident response procedures, intended to provide guidance for the contaminant and limitation of adverse effects.

5.3.1 Oil, fuel or chemical spill to ground

- i. Wearing protective clothing, prevent further release at source e.g. switch off tap/valve, correct leaking drum and make the area safe.
- ii. If the spill is migrating, creating a temporary bund to prevent further spread by using spill kit materials / sandbags.
- iii. If drains or field ditches are located nearby, install drain seals / deploy additional spill kit materials to prevent the spill discharging to the drain or ditch.
- iv. Apply absorbent granules or pads (available from spill kit) to the affected area.
- v. The Contractor will notify the Environment Agency regarding the nature and scale of incident. The following information should be included in the notification:
 - o Time of discharge;
 - o Type/quantity of material discharged;
 - o Location of discharge; and
 - o Site contact details.
- vi. The Contractor will notify the Client of the incident and communicate the information provided to the Environment Agency.
- vii. The Client will notify the Local Planning Authority regarding the nature and scale of the incident as per the requirements of the Environmental Damage (England and Wales) Regulations 2015.
- viii. Containment measures should remain in place until the nature and extent of the contamination can be assessed and a remediation strategy must be prepared.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and the Duty of Care requirements.

5.3.2 Oil, fuel or chemical to surface water feature

- i. Wearing protective clothing, prevent further release at source e.g. switch off tap/valve, correct leaking drum and make the area safe.
- ii. If the source is not readily identifiable, contain first (see below) then identify and prevent further release at source.
- iii. Immediately deploy appropriate sized boom from nearest spill kit across affected surface water feature. Use stakes to attach it to the sides of the surface water feature. Tie booms together to increase length if required.
- iv. Supplement with additional booms across the surface water feature, as required, to contain any migration of the spill not halted by the first installation.
- v. The Contractor shall notify the Environment Agency regarding the nature and scale of incident. The following information should be included in the notification:
 - o Time of discharge;
 - o Type/quantity of material discharge to surface water feature;
 - o Location of discharge; and
 - o Site contact details.
- vi. The Contractor shall notify the Client of the incident and communicate the information provided to the Environment Agency.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

5.3.3 Oil, fuel or chemical spill to drainage system

- i. Wearing protective clothing, prevent further release at source e.g. switch off tap/valve, correct leaking drum and make the area safe.
- ii. If source is not readily identifiable, contain the visible pollutant first, then identify and prevent further release at source.
- iii. Immediately deploy appropriate drain cover(s) to affected gullies.
- iv. Supplement with booms around the gully to contain any migration of spill.
- v. The Contractor shall notify the Environment Agency and the relevant water company regarding the nature and scale of incident. The following information should be included in the notification:
 - o Time of discharge;
 - o Type/quantity of material discharged to the drain;
 - o Location of discharge, specifically which drain; and
 - o Site contact details.
- vi. The Contractor shall notify the client of the incident and communicate the information provided to the Environment Agency.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

5.3.4 Discovery of unexpected contamination

- i. On the discovery of unexpected contamination, the Contractor will immediately halt works in the area.
- ii. If impacted materials have already been removed they shall be returned to the excavation or placed on to a membrane, e.g. terram, to prevent migration of the contaminant to another area.
- iii. Contractor to report the situation to the Client.
- iv. Arrangements will be made between the Contractor and the Client for samples of the contamination to be collected and tested on fast turnaround.
- v. Contractor to only continue with works in the area once the test results have confirmed the contaminant and a safe means of working has been established.

The Contractor shall be free to continue works in areas unaffected by the contamination, BUT the Contractor will not speculatively continue to excavate material to find the extent of the contamination without supervision from a geo-environmental engineer.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

5.3.5 Explosion / Fire Procedure

Explosion/fire incidents should also be dealt with through health and safety procedures. In the event that a fire is detected or an explosion occurs:

- i. Notify the emergency services and evacuate the area.
- ii. Attempt to tackle the fire with site equipment only which it is safe to do so.
- iii. Ensure that pollution of nearby water bodies including surface water drainage from fire control water or other substances is minimised. Where possible and safe to do so, any site drainage systems should be protected through the deployment of drain seals/ spill kit materials to ensure any firefighting waters are captured and can be disposed of appropriately.
- iv. At a time when it is acceptable to do so, the Environment Agency shall be notified regarding the nature and scale of incident. The following information should be included in the notification:
 - o Nature of the incident;
 - o Time and date of the incident;
 - o Quantity of fire control water discharged to surface water feature/drainage, where relevant;
 - o Location of discharge; and
 - o Site contact details.

5.3.6 Silt

In the event of an unexpected discharge of silty water, then:

- i. Prevent further release at source e.g. cease dewatering the excavations.
- ii. Contain silt and protect sensitive receptors from further discharge:

- If a drain is located nearby, install drain seals or deploy spill kit materials to prevent discharge.
 - If silt flow is in the direction of surface water features deploy hay bales around the surface feature.
 - If silt is being generated by runoff from stockpiles deploy spill kit materials, silt fencing or move soil to form a bund at the base to prevent further silt laden runoff from the stockpile.
- iii. If silt is discharged without prior approval the Environment Agency shall be notified. If the silt discharge enters the drainage system the relevant water company shall also be notified regarding the nature and scale of incident. The following information should be included in all notifications:
- Time of discharge;
 - Type/quantity of material discharged;
 - Location of discharge, e.g. which drain or surface water feature; and
 - Site contact details.

5.3.7 Complaint over a nuisance

This procedure should be followed for all nuisance complaints include noise, dust and light.

- i. Immediately stop the activity leading to the complaint; or where not possible to entirely stop the activity reduce it to the lowest possible level e.g. shut off all non-essential plant.
- ii. Remain polite and courteous. If able to resolve the issue through discussion with the complainant, then determine what action is needed and put it into practice.
- iii. Record the details of the complainant including their name, contact details and address. Contractors shall report the details of the complaint and the complainant to the Client.
- iv. The Contractor and the Client will register the complaint on a Complaints Log.
- v. The Client will act on the complaint and remedial actions shall be put in place within 24 hours.

5.3.8 Contamination of or by waste materials

- i. Assess whether the area needs to be evacuated, such as if fumes are being given off.
- ii. Assess whether the damage can be undone through segregation.
- iii. Complete a risk assessment for the task including consideration of any COSHH risks.
- iv. It is safe to do so segregate the waste. If it is not safe to do so, then the full waste quantity is to be consigned as hazardous waste.
- v. The Contractor is to report the incident to the Client.
- vi. Waste is to be collected from site in accordance with normal practice.

5.3.9 Discovery of archaeological artefact or heritage feature

- i. Immediately stop works in the area of the artefact or feature.
- ii. Ensure the area is isolated from interference by erecting fencing around the discovery. Prevent vehicles from navigating through this area.
- iii. Provide a safe means for pedestrians; and if possible vehicles, to move around the isolated area.
- iv. The Contractor shall report the finding to the Client.
- v. The Client is to arrange for the finding to be assessed by a qualified heritage or archaeological specialist. The Contractor is to prevent tampering with the find until it has been assessed.
- vi. Works to proceed in accordance with the recommendations given by the heritage or archaeological specialist.

5.3.10 Ecological discovery or damage

- i. Immediately stop works in the area.
- ii. Contractor to immediately report the incident to the Client.
- iii. Client to arrange for a qualified ecologist to assess the discovery or damage caused.
- iv. Works to proceed in accordance with the advice received from the ecologist.

5.3.11 Vandalism/theft procedure

Acts of theft and vandalism present the risk that damage may be caused to equipment containing hazardous substances that could cause pollution, or damage may be caused to measures which have been installed to prevent the release of pollution. On identifying an act of vandalism or theft:

- i. The Contractor shall notify the Police of the incident.
- ii. Inspect all fuel storage tanks/drums and equipment to ensure there has been no release of the fuel or other hazardous substances, e.g. hydraulic fluid.
- iii. If a spill is identified follow the procedures for oil, fuel or chemical spills in Section 5.3.1 above.
- iv. Inspect pollution protection measures, e.g. drainage or silt protection, to ensure it has not been interfered with. Where it is possible, correct any issues identified without causing further release.
- v. Inspect site boundaries to identify the access point if not immediately clear and secure the Site.

6 GENERAL ENVIRONMENTAL REQUIREMENTS

6.1 Roles, Responsibility and Authority

The Principal Contractor shall make available sufficient time and resource for the effective management of environmental risks that could arise during construction work. This includes appointing adequately qualified personnel with knowledge and capability in the environmental management of construction site works. Persons having responsibility for environmental site management, and in particular any persons required to undertake and oversee response to any incidents with potential environmental consequences, shall be empowered to make decision and take appropriate action necessary to avoid or mitigate adverse environmental effects, even when this may lead to delay and/or additional cost to the Principal Contractor.

6.1.1 Project Roles

The LEJ Properties project team and all appointed contractors will be responsible for ensuring that the potential risks to the environment are adequately avoided or controlled by the application of measures as documented within this CEMP, which shall be complied throughout construction. The main organisations and persons involved in the construction stage works are set out in Table 14.

Table 14: Project roles and environmental responsibilities

RACI DETAILS – R – Responsible: The individual(s) who perform an activity responsible for action/implementation – although usually only one, R's can be shared. A – Accountable: the individual who is ultimately accountable including yes/no decision and power of veto – only one (A) can be assigned C – Consulted: the individual (s) to be consulted prior to a final decision being made or action taken – two way communication I – Informed: the individual (s) who need to be informed after a decision is made or action is taken – one-way communication	Key Control Activity	Developer	Project Manager/ Director	Site /Sub-contractor Manager	Senior Foreman	SHE Manager	All Site Staff/Contractors
	Process Task						
	Developing and maintaining the CEMP	C	A	C	I	R	I
	Monitor environmental aspects through review of construction method statement, identify and control issues.			A	C	R	I
	Monitoring construction works to ensure any necessary environmental issues and control measures are in place; ensuring they are effectively communicated, appropriate and implemented on site.			A	R	C	I
	Ensuring the work is performed by training and qualified staff; and providing training where necessary.		A	R	C	I	I
	Ensuring the adequate resources are allocated for environmental management	I	A	R	C	C	I
	Ensuring that all relevant environmental documentation and information (including permission, consents, permits and assessments) is communicated	C	C	A	C	R	I
	Regular site inspections and maintaining a record of environmental performance; and reporting performance and monitoring environmental performance	I	I	A	C	R	I
	Following good practice and minimising impact of activities on the environment.	C	C	A	R	C	I
	Understanding project environmental obligations and mitigation measures.	C	A	R	C	R	I
	Liaison with local authority, other statutory bodies, members of the public, press and the media.	R	C	A	C	R	I
	Supporting all site staff with environmental management including reviewing and commenting on method statements and risk assessments.		R	A	C	R	I
	Ensuring that the environmental policy of the client is delivered		R	A	I	C	I

Providing information on waste management/reduction procedures to relevant staff.				A	C	R	I
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6.2 Competence, Training and Awareness

The Principal Contractor shall ensure that appropriate awareness training is delivered to all site operatives and only appropriately qualified sub-contractors are appointed.

Every member of the workforce shall be required to participate in a site induction prior to starting work on the Site. The level of induction training will depend upon the position and duties the person is to perform. The site induction will include:

- A brief overview of the works to be undertaken and any potential environmental aspects associated with the construction activities;
- A summary of the sensitive environmental receptors near the Site;
- An overview of the applicable environmental mitigation and pollution control measures; and
- An overview of the health & safety management measures in particular emergency response procedures required at the Site.

The Client will require its Principal Contractor to provide continuing training and awareness raising of the workforce. This can be delivered in the form of Toolbox Talks tailored to the specific environmental mitigation measures required dependent on the work activities being undertaken and to raise awareness on environmental best practice.

Records of all inductions and Toolbox Talk deliveries shall be maintained at the site office. Copies shall be made available to the Client on request.

6.2.1 Internal Communication

The Principal Contractor's Site Manager, Environmental Advisor and other relevant team members shall meet weekly to review the status of environmental aspects including but not limited to:

- Works activities underway and planned;
- Mitigation measures required to be implemented;
- Results of weekly inspections and any audit results/feedback;
- Any corrective and preventative actions required to be implemented;
- Identification of areas for continual improvement;
- Status of staff competence and training needs; and
- Status of CEMP and of any required consent and approvals and the need for review and updating.

The Client shall be informed of the outcome/minutes of all such meetings.

Additional and ongoing communication of environmental performance and requirements is to be determined by the appointed Environmental Advisor and provided as appropriate.

6.2.2 Notice Boards

The Contractor provides and maintains project environmental notice board(s) which are positioned to ensure all operatives are able to review the notice board a daily basis. The

notice boards should be updated at least monthly. As a minimum, the notice boards shall contain:

- Clients Environmental Policy;
- Emergency contacts list;
- Relevant statutory and non-statutory advice and guidance; and
- Description of the key environmental risks and intended risk mitigation measures.

These environmental notice boards will be situated in prominent positions including the main reception area of the site office.

6.2.3 Toolbox Talks

Toolbox Talks will be used to inform all site personnel of key information concerning the management of the site, procedures to be followed and expected standards / controls when working on the project. The Toolbox Talks will cover a broad range of topics including those related to best practice environmental management.

A record of Toolbox Talks will be kept on site, starting date, description of non-conformance, potential implications, proposed corrective actions, individual responsible and target data. Toolbox Talks shall include, but will not be limited to, instances where:

- There is a change to existing legislation, which requires an operation change;
- Site inspections or audits have identified corrective actions which require communicating; and
- There are significant changes in environmental conditions i.e heavy rainfall.

The frequency and topics of the Toolbox Talks shall depend upon the phase construction. They shall be provided as often as necessary to address site-specific environmental requirements.

6.2.4 External Communication

The Principal Contractor, with the agreement of the Client, shall provide advanced notification of the works to those most affected. All local residents and where relevant businesses shall be notified via letter of the works commencing at least two weeks prior to the contractor starting on site.

The contractor may appoint a Liaison Officer to deal with external enquiries and/or complaints; may wish also to specify that the contractor sets up a 'hotline' number and/or email to receive calls during the construction period.

All communication received by the Contractor and the Client on receipt shall assess the complaint and determine what information is required from all parties to formulate a response. The Contractor will endeavour to contact the complainant on the same day. All complaints shall be recorded and investigated.

The Principal Contractor's Site Manager shall serve as the point of contact for the regulatory authorities for their specific activities. Communications from the regulatory authorities received at the worksite by the Site Manager shall be immediately reported to the Client.

A record of all communications shall be maintained by the Principal Contractor. Communications from regulatory authorities concerning incidents are dealt with further in Section 5.3 of this CEMP.

Through the induction all members of the workforce shall be made aware that any direct approaches from member of the public should be directed to their Site Manager. The Site Manager shall record all approaches made by members of the public and shall advise the Client's Project Team of all comments received at the worksite from members of the public.

6.2.4.1 Neighbour Notification – Noise and Vibration

The following neighbour notification procedures will be followed during the operational works:

- Prior to work commencing, the Contractor will liaise with Local Environmental Officer in order to discuss their methods of working and measures planned to minimise disruption throughout the construction works;
- Occupiers of nearby properties shall be informed in advance of the works taking place where relevant, including the duration and likely noise and vibration impacts (compaction and piling activities). In the case of work required in response to an emergency, Gravesham Borough Council and local occupiers shall be advised as soon as reasonably practicable that emergency work is taking place. Potentially affected occupiers will also be notified of the helpline number.
- The contractor should appoint a responsible person to liaise with stakeholders in order to keep them informed of matters likely to affect them.
- Prior to site work commencing (at least one week before the works or a change in works), neighbours will be informed of:
 - The start date;
 - The duration and nature of the project;
 - The principal stages of the project;
 - Possible impacts; and
 - Details of contact names and numbers of appropriate site personnel.
- The names and contact details of appropriate site personnel should be forwarded to Local Environmental Officer.
- The contractor will take into account consultation responses received from the neighbours and will have regard to any reasonable requests by Gravesham Borough Council;
- The contractor will take into account consultation responses received from the neighbours and will have regard to any reasonable requests by Gravesham Borough Council.

6.3 Documentation

The Site Manager and/or work Environmental Advisor shall be responsible for documenting and retaining safe all suitable records relating to environmental issues at the site and/or arising from site operations. Documents shall be stored in a suitable manner and backups created to safeguard the records. The CEMP shall be controlled document and authorised latest version shall be signed and dated by the responsible

person[s]. Other site data records and environmental management document would include, but not necessarily be limited to the following:

- Copies of relevant consents, permissions, or other approvals/ authorisations;
- Environmental data records including waste transfer notes/records of waste collection and treatment/ disposal;
- Records of any environmental incidents including actions taken and resolution;
- Records of all plant/equipment entering / leaving site together with any relevant compliance documentation (for instance in respect of noise or air pollutant emissions class);
- Copies of any enforcement notices or instructions issues by the local authority or statutory regulatory body;
- Record of any prosecutions pending or resolved, and any penalties enforced;
- Records of daily site inspections;
- Records of weekly/monthly audits and minutes of environmental team briefings; and
- Records of staff training including site inductions and toolbox talks.

6.4 Monitoring, Inspections and Audits

The Principal Contractor shall be responsible for managing environmental performance during all site works. This will be supported with a programme of monitoring, inspections and audits.

6.4.1 Daily Inspections

Daily inspections shall be undertaken by the Contractor and recorded as follows:

- i. Visual inspection of the site perimeter to check for dust deposition (evident as soiling and marking) on vegetation, cars and other objects.
- ii. Visual inspection of the local haul roads to check their condition to ensure there is no build-up of dust or earth deposits liable to cause dust emissions as vehicles pass.
- iii. Vehicles, equipment and plant inspections shall be completed to check the absence of damage or maintenance issues and that it is correctly functioning.
- iv. Visual inspection of all acoustic barriers / screening to check they are present and in good condition.
- v. Visual inspection of waste containers and waste storage areas to verify wastes are being correctly segregated and to confirm the absence of mixing of hazardous and non-hazardous wastes.
- vi. Visual inspection of all site areas to ensure there is no deposited or wind-blown litter.
- vii. If a waste collection is made, a check shall be made of the Waste Transfer Note / Hazardous Waste Consignment Note provided for the collection.

On all days when potentially dust emitting activities are being conducted, the level of dust generation shall be kept under constant review. A record shall be added to the official site diary when such activities are conducted, the dust emission conditions observed and when necessary, the mitigation measures taken.

Any elements of the site management found to be in an unsatisfactory condition during the site inspection shall be addressed on the day. In the event it is not possible to address the matter on the day it is raised; a note of the reason why shall be made on the inspection record sheet.

6.4.2 Audits

Only suitably trained and competent staff will be authorised to perform environmental audits.

Audits (or at a suitable frequency to be determined by the nature / duration of the work) of the worksites and Contractors shall be undertaken by or on behalf of the Client. All aspects of the environmental management at the site shall be assessed against this CEMP. The audit shall include checks of the site records including the daily inspection record sheets, vehicle arrival logs and waste disposal paperwork. All audits shall be documented; where audit actions are raised, close out of these actions shall be assessed at the following audit.

An audit of an Environmental Management Process will be undertaken by the Environment Manager throughout the Project duration and will typically cover the activities identified in the above chapters.

6.4.3 Non-Conformity and Corrective Action

Where the client has a concern or raises an issue for resolution, or where potential issues are raised from an inspection or audit of the site/ operations, or by a regulatory authority, the contractor shall investigate the root cause and any implications arising from the issue and shall if necessary following discussion with the client implement measures to rectify the problem.

The contractor shall monitor the effectiveness of the corrective action and report the outcome to the client and where relevant the regulatory authority. All documentation of the issue/ event and corrective action/ outcome shall be retained by the contractor.

Where necessary the CEMP and any associated documentation shall be revised and re-issued to avoid recurrence of the issue/ problem.

6.4.4 Monthly Data Reporting

At the end of each calendar month the Principal Contractor may be required to submit the Client all relevant data on the following:

- Energy usage (i.e. electricity meter readings and diesel generator fuel used/delivered to site).
- Water consumption (i.e. water meter readings or bowser water deliveries to site).
- Waste collections.
- Heavy Duty Vehicles entering/leaving site.

The Principal Contractor shall comply with any additional reporting requirements that may be introduced through the conditions of any agreements or permits.

6.5 Review and updates

6.5.1 CEMP Reviews

The site wide CEMP will be reviewed every 6 months as a minimum; or following any significant change to the work activities, client requirements or legislation. Therefore, this CEMP is a live document and will be continuously updated as required.

6.5.2 Management Review

A management review of the performance of the Environmental Management System will be undertaken at least every 6 months and will include the Clients Project Manager and senior management (as a minimum this should include the Project Director, HSEQ Manager and senior corporate representative) a key personnel including the Environmental Manager.

Matters such as staffing, training, matters arising from audits and inspections and performance against KPIs will be discussed and where there is a shortfall in performance, actions shall be agreed to rectify this.

6.6 Legal and other requirements

Certain aspects of the construction work for this Project may be subject to environmental permits, consents, authorisations and permissions.

6.6.1 Environmental Consents Register

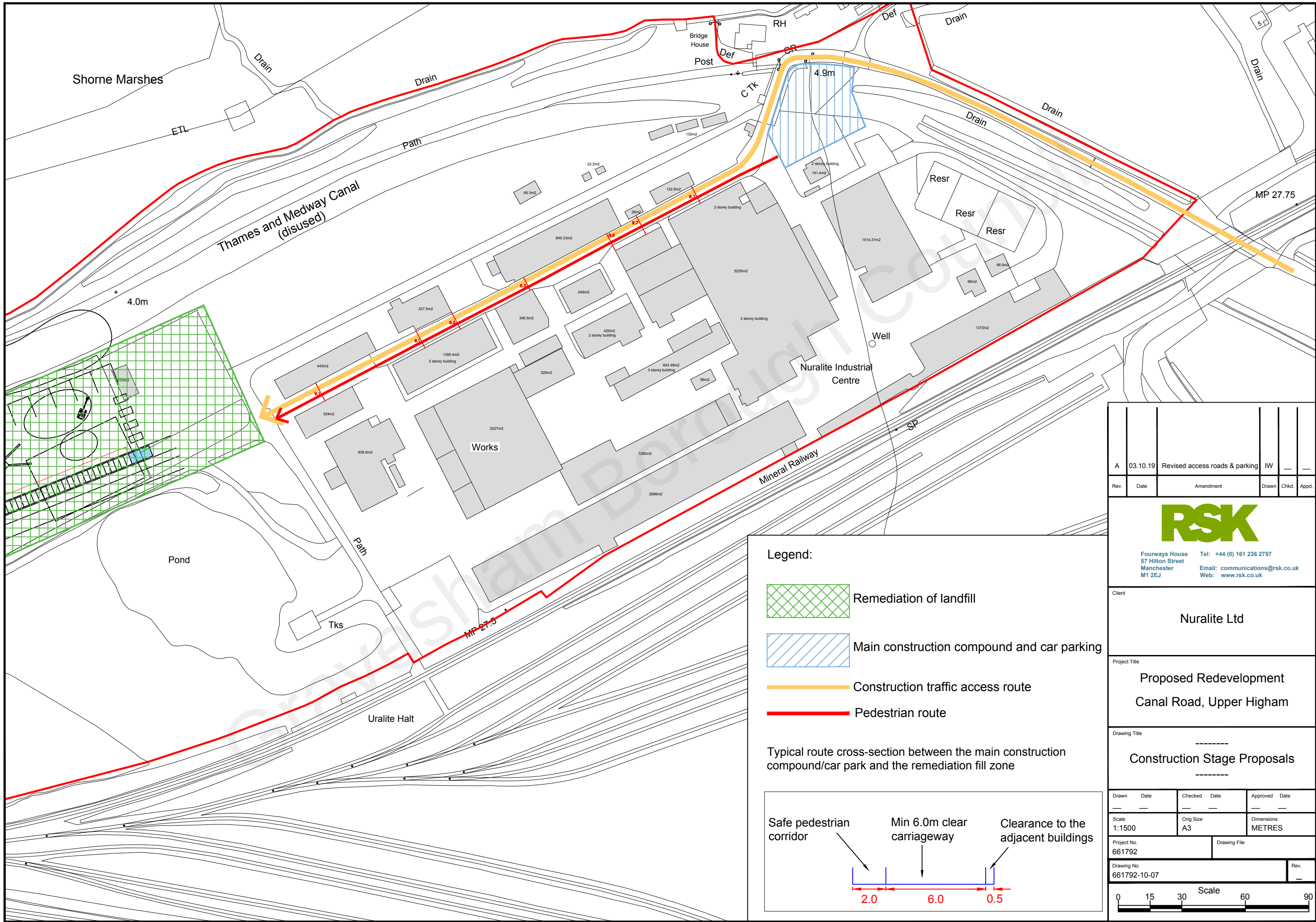
The Environmental Consents Register includes a schedule of all consent submissions and a tracker to confirm they are in place for the start of works.

The register is a live document and shall be reviewed monthly. The Site Manager will be responsible for ensuring resources are available and work is planned to meet the legislative requirements.

An outline Environmental Consents Register is attached as Appendix 8.

APPENDIX 1

SITE LAYOUT



A	03.10.19	Revised access roads & parking	IW	—	—
Rev.	Date	Amendment	Drawn	Chkd.	Appd.



Fourways House
57 Hilton Street
Manchester
M1 2EJ

Tel: +44 (0) 161 236 2757
Email: communications@rsk.co.uk
Web: www.rsk.co.uk

Client	Nuralite Ltd
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Project Title	Proposed Redevelopment Canal Road, Upper Higham
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Drawing Title	Construction Stage Proposals
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Drawn ____		Date ____		Checked ____		Date ____		Approved ____		Date ____	
Scale 1:1500				Orig Size A3				Dimensions METRES			
Project No. 661792						Drawing File _____					
Drawing No. 661792-10-07										Rev. ____	
015306090 Scale											

APPENDIX 2

ENVIRONMENTAL MANAGEMENT MATRIX

Environmental Management Matrix

Rev00

ACTIVITY	ASPECT	IMPACT	MITIGATION	WHO	FREQUENCY
Mobilisation/ site clearance and compound set-up					
Site establishment	Water quality	Works affecting watercourses	No works (in, over, under) will be undertaken within 20m of a watercourse bank without technical environmental advice regarding the requirement for a permit. Works can only proceed once appropriate mitigation (within technical environmental advice or permit conditions) has been installed and all conditions met.	Site Manager/ SHE Manager	Pre-construction planning
	Flora and fauna	Removal of habitat and disturbance to wildlife	Works will not commence until an Ecological Appraisal has been completed and appropriate mitigations have been implemented. If during work activities it is suspected that a protected species has been disturbed, all works in the immediate area must cease until a qualified ECoW attends the site.	Site Manager/ SHE Manager	Pre-construction planning
	Archaeology	Disturbance of archaeology	No ground intrusive works shall commence until an Archaeological Appraisal has been completed and appropriate mitigations have been implemented.	Site Manager/ SHE Manager	Pre-construction planning
	Public Rights of Way	Closure/ diversion of Public Rights of Way	Public Rights of Way (PRoWs) shall remain open where possible. Applications for consent for any closures / diversions to existing PRoWs will be obtained and agreed with the local authority in advance of the required works. Advance provision of clear signs to indicate the reasons for, and duration of, the closure or diversion. Provision of adequate advance notification of any closure or diversion at car parks along the route and popular starting points for walkers, along with notices to walking clubs and ramblers' websites etc. Reinstating footpaths and bridleways/PRoWs fully on completion of construction and restoration works (to the satisfaction of the relevant rights of way officer).	Site Manager/ SHE Manager	Pre-construction planning
Hazardous material storage and use	Release to water/ groundwater/ land	Polluting environment	Storage and handling of hazardous substances (including fuels) should not occur within 10 metres from any inland freshwater or coastal waters, or within 50 metres from a well or borehole. The secondary containment system must provide storage for at least 110% of the tank's maximum capacity and ensure that any valves, filters, sight gauges, vent pipes or other ancillary equipment are also situated within the secondary containment system and arranged so that any discharges would be contained. Fuel tanks, secondary containers and storage compounds shall be inspected monthly for damage, corrosion, leaks, faults and vandalism. Repair defects/faults immediately and retain records. All hazardous materials shall be labelled, sealed and stored with their COSHH assessment in a bundled and lockable container away from drains and watercourses when not in use. Hazardous liquids shall be transferred using a funnel and drip tray and sealed and returned to the container immediately after use. Damaged containers shall be reported to the Site Manager. Fully lockable and labelled 'Fuel Safe Static Tank' will be deployed. All drains located adjacent or near to refuelling points shall be covered by Gully Guards before commencing transfer. All fuel transfers to be supervised. Where possible, refuelling should only be carried out in a designated area, which will be secured/locked out of hours. Suitable and sufficient spill kits shall be provided. Note: for sites close to water courses and drains, enhanced spill kits must be provided. Spill kit supply to be monitored weekly to ensure adequate stock remains full.	Snr Foreman	Weekly
Site establishment	Visual intrusion	Cabins and site facilities will be placed, where possible, out of line-of-sight of local residents. Maintain good housekeeping and site working practices to control litter, insects or vermin. For example, dispose of food into appropriate receptacles. The site shall be set up with hoarding to reduce dust leaving the site. The site boundary shall be secured appropriately and all site gates shall be kept locked / closed out of working hours and kept closed and /or manned during working hours. Wherever possible, lighting shall be located and directed so that it does not cause unnecessary intrusion to local residents. Lighting shall be switched off when not in use unless specifically needed for construction activities or for security and / or health and safety requirements. (Glare (and the potential for complaints) caused by poorly directed security and floodlighting shall be minimised by ensuring that light fittings are horizontally mounted and directed inwards on site. Post-installation checks and monitoring of the lighting installations shall be undertaken to ensure that correct tilting angles and appropriate direction of lighting is achieved. This will allow adjustments to be made, where practicable, should undue light spill or glare be identified.	Site Manager/ SHE Manager	Weekly	
	Local issues (nuisance)				
Site operations/ use of plant and equipment	Noise impact to local residents	Local Authority consent must be obtained for particularly noisy activities before starting works. For example, crushing and piling. Contractors and operatives must be informed of consent conditions. Noisy works and deliveries to and from the site shall be conducted within the core working hours. Where necessary, deliveries outside of these core hours would be agreed in advance with the local authority. Plant shall be selected with noise levels in mind and it is important that quiet or silent plant is used. If possible, electrically powered plant should be used. All plant shall be suitably maintained and noise screens shall be used where required. Use generators having a sound power level rating below 65db(A), fully canopied and silenced. To assist with noise attenuation, where possible, generators will be located away from adjacent residents, also taking account of prevailing wind conditions. Position exhausts away from site boundaries and occupied areas when in use. All generators (and other noisy plant) shall be switched off overnight and when not in use. If heat is needed for drying rooms this should be provided via storage type heaters.	Site Manager/ SHE Manager	Pre-construction planning	
	Deliveries and work force travel	Traffic and transport	Effective traffic management will be planned and implemented, where required in agreement with the Local Authority. Sufficient parking arrangements will be provided for site staff, to prevent parking on the side of the road.	Site Manager/ SHE Manager	Pre-construction planning
Site operations	Air emissions	Exhaust fumes affecting local residents/ environment	All equipment shall be inspected before use and any defects/faults reported to the Site Manager. All vehicle engines will be switched off when not in use to reduce particulate emissions. Exhaust systems will be fitted with particulate filters and catalytic converters as necessary.	Snr Foreman	Daily
	Waste management	Lack of suitable facilities leading to increased landfill	A waste collection area shall be set up before site works start. This area shall be as close to the site compound as possible with adequate hardstanding for the waste containers and unobstructed access for telehandler and waste removal vehicles. A waste management plan shall be made available on site and its requirements understood by all Contractors and operatives before starting work on site. Monthly updates on the amount of waste successfully recycled will be made available to the Site Manager and displayed in the site office and can also be issued to the council upon request.	Site Manager/ SHE Manager	Pre-construction planning/ Monthly
	Use of natural resource	Depletion of natural resources	Mains electricity shall be used where available. If unfeasible, generators are to be used and must be sized for the required output; if diesel they must be set up by the supplier.	Site Manager/ SHE Manager	Pre-construction planning
Groundworks					
Topsoil stripping/ excavations	Soil management	Mixing of soil strata and loss of structure	A soil management plan will be developed detailing procedures for soil handling, storage and transfer (aligned to CIRIA Guidance: Sustainable management of waste soils and aggregates (RP1124)). The site works shall be designed to retain as much soil on site as possible whilst maintaining protection of human health and the environment. Excavated material surplus shall be minimised so far as practicable. Stockpiles shall be covered, seeded or fenced (as appropriate) to prevent wind whipping.	Site Manager/ SHE Manager	Pre-construction planning
	Flora and fauna	Removal of habitat and disturbance to wildlife.	Works will not commence until an Ecological Appraisal has been completed and appropriate mitigations have been implemented. If during work activities it is suspected that a protected species has been disturbed, all works in the immediate area must cease until a qualified ECoW attends the site.	Site Manager/ SHE Manager	Pre-construction planning
	Archaeology	Disturbance of archaeology	Groundwork activities will not commence until an Archaeological Appraisal has been completed and appropriate mitigations have been implemented.	Site Manager/ SHE Manager	Pre-construction planning
	Land contamination	Disturbance of contaminated ground	Known areas of contaminated land will be managed according to a method statement provided by a technical specialist. Where unknown contaminated land is disturbed, works will cease until analysis is completed by a technical specialist and appropriate mitigations have been implemented. Stockpiles of contaminated material must be situated on an impermeable surface at least 10m from any surface waters or drains, and run-off collected within a bund. Potentially contaminated water must be tested before dewatering. Contaminated water must be treated or discharged off site using an appropriate waste permit.	Snr Foreman/ SHE Manager	Pre-construction planning/ daily
Topsoil stripping/ excavations	Release to water	Silt run-off/ excavation dewatering entering watercourses and affecting aquatic life	Minimise any areas of soil stripping and stockpiling. Surface water and drains must be protected from silt run-off (e.g. silt fences/ bunds/ french drains) to prevent silt laden water from entering them. All silt protection measures must be inspected weekly and maintained throughout the works. Tracking or washing out next to drains/surface waters must be avoided. Permit to Pump to be used to remove water from excavations, aligned to statutory guidance. If a discharge consent is required, then all conditions within the consent must be understood before commencement of dewatering. If necessary temporary bunding and/or settlement ponds will be installed to allow for isolation and onsite treatment of any sediment laden or contaminated water prior to managed discharge. Vehicle washdown facilities shall be appropriately managed to contain contaminants and regulate reuse or disposal of the water.	Snr Foreman	Daily
	Water quality	Works affecting watercourses	No works (in, over, under) will be undertaken within 20m of a watercourse bank without technical environmental advice regarding the requirement for a permit. Works can only proceed once appropriate mitigation (within technical environmental advice or permit conditions) has been installed and all conditions met.	Site Manager/ SHE Manager	Pre-construction planning
	Local issues (nuisance)	Dust generation potentially smothering crops or plants/ affecting local residents	Site layout shall be planned so that machinery and dust causing activities are located away from receptors, as far as is possible. Where foreseeable and significant dust is to be generated during an operation, dust fencing and/or barriers must be provided to minimise impact. Timing of earthworks and material movements shall be planned to reduce double handling and minimise traffic movements and therefore associated dust and mud. If dust levels remain excessively high when adequate control measures are in place and operating effectively, then reduce or postpone works during such times (e.g. during dry or windy periods).	Snr Foreman	Daily
	Air emissions	Exhaust fumes affecting local residents/ environment	All equipment shall be inspected before use and any defects/faults reported to the Site Manager. All vehicle engines will be switched off when not in use to reduce particulate emissions. Exhaust systems will be fitted with particulate filters and catalytic converters as necessary.	Snr Foreman	Daily
Muck-away and deliveries	Wagon movements affecting local residents	Effective traffic management will be planned and implemented, where required in agreement with the Local Authority.	Site Manager/ SHE Manager	Pre-construction planning	
	Mud/ dust on road affecting local residents	Wash facilities for vehicular use located close to the site entrance shall be connected to an offline gully and trap system located within the site boundary. Haul routes shall be hard surfaced and/or effectively damped down and shall be kept clear of soil as much as possible. All vehicles carrying soil off-site must be sheeted. All vehicle engines will be switched off when not in use to reduce particulate emissions. Mechanical road sweepers shall be employed to clean roads of any dust and debris if it is generated within the vicinity of the site entrance.	Snr Foreman	Daily	
Establishing haul roads/ hard-standings	Use of natural resource	Depletion of natural resources	The environmental impact of materials will be considered in the procurement process. Ordered materials shall be managed to avoid over-ordering or spoilage of surplus materials. Surplus materials are to be reused on site where possible.	Project Manager/ Site Manager	Pre-construction planning/ monthly
Civils					
Laying concrete foundations/ floorings etc	Use of natural resource	Depletion of natural resources	The environmental impact of materials will be considered in the procurement process. Ordered materials shall be managed to avoid over-ordering. Surplus materials are to be reused on site where possible.	Project Manager/ Site Manager	Pre-construction planning/ monthly
	Release to water/ groundwater/ land	Concrete wash-out water incorrectly treated and disposed of, polluting receiving environment	All drains adjacent or near to concreting works shall be covered with Gully Guards before commencing mixing. Concrete wagons should be instructed to not wash-out onsite. A designated wash-out container will be provided to clean the delivery chute. Concrete washings must be treated and tested prior to discharge onsite. RPS 235 'Treating and using water that contains concrete and silt at construction sites' provides further guidance.	Snr Foreman	Daily
Concrete wagon movements	Wagon movements affecting local residents	Effective traffic management will be planned and implemented, where required in agreement with the Local Authority.	Site Manager/ SHE Manager	Pre-construction planning	
	Mud/ dust on road affecting local residents	Wash facilities for vehicular use located close to the site entrance shall be connected to an offline gully and trap system located within the site boundary. Haul routes shall be hard surfaced and/or effectively damped down and shall be kept clear of soil as much as possible. All vehicle engines will be switched off when not in use to reduce particulate emissions. Mechanical road sweepers shall be employed to clean roads of any dust and debris if it is generated within the vicinity of the site entrance.	Snr Foreman	Daily	
Piling	Local issues (nuisance)	Noise and vibration affecting local residents	Employ rotary piling techniques where possible. Position piling rigs away from local residents, so noise is emitted away from them. Install acoustic sleeves around the piling hammer to contain the noise.	Site Manager	Pre-construction
Build and fit-out					
Procurement and material management	Housekeeping	Poor management of materials leading to wastage	The environmental impact of materials will be considered in the procurement process. Ordered materials shall be managed to avoid over-ordering or spoilage of surplus materials. A storage compound will be developed to safely store materials to prevent damage from traffic and weather. Surplus materials are to be reused on site where possible. Surplus dry (powder) concrete, cement and grout is to be collected and reused where possible e.g. as inert rubble. Reuse of dried materials may require environmental permits or exemptions. Encourage the reuse of cut-offs and arrange for suppliers to take back unused surplus materials and packaging. All reuse and recycling to be carried out in accordance with the terms of a valid waste exemption or voluntary codes of practice/protocols. Hazardous liquids must be re-sealed after use. Empty containers are to be disposed of to the designated container within the waste compound.	Project Manager/ Site Manager/ Snr Foreman	Pre-construction planning/ monthly/ weekly/ daily
	Air emissions	Exhaust fumes affecting local residents/ environment	All equipment shall be inspected before use and any defects/faults reported to the Site Manager. All vehicle engines will be switched off when not in use to reduce particulate emissions. Exhaust systems will be fitted with particulate filters and catalytic converters as necessary.	Snr Foreman	Daily
Block cutting/ aggregate deliveries etc	Local issues (nuisance)	Dust generation potentially smothering crops or plants/ affecting local residents	Where feasible the site or specific operations shall be fully enclosed where there is a high potential for dust production and the site is active for an extensive period. Drop heights must be kept to a minimum and conveyors and enclosed wherever possible.	Snr Foreman	Daily
Deliveries and work force travel	Wagon movements affecting local residents	Effective traffic management will be planned and implemented, where required in agreement with the Local Authority.	Site Manager/ SHE Manager	Pre-construction planning	
	Mud/ dust on road affecting local residents	Wash facilities for vehicular use located close to the site entrance shall be connected to an offline gully and trap system located within the site boundary. Haul routes shall be hard surfaced and/or effectively damped down and shall be kept clear of soil as much as possible. All vehicles carrying soil off-site must be sheeted. All vehicle engines will be switched off when not in use to reduce particulate emissions. Mechanical road sweepers shall be employed to clean roads of any dust and debris if it is generated within the vicinity of the site entrance.	Snr Foreman	Daily	
Waste management					

Waste management	Duty of Care	Non compliance to legislation	Wastes shall be collected by a licensed waste carrier. A copy of all Waste 'Duty of Care' documentation shall be held on site. Duty of Care documentation must be completed for all waste transfers and copies provided to the Client every week. Waste transfer notes or hazardous waste consignment notes and Duty of Care procedures are to be audited regularly (monthly as a minimum). Soil and recycled aggregate transfers shall be carried out in accordance with an approved Materials Management Plan (or Remediation Strategy in Scotland) and all transfer tickets must be retained on site.	Site Manager/ SHE Manager	Monthly/ Weekly/ Daily
	Segregation	Cross contamination of materials	Where possible, all waste shall be segregated on site. Skips shall be provided to segregate wastes including plasterboard, timber and metal. A designated area shall be provided for inert wastes, for example bricks, clay pipes and roof tiles. A designated container[s] shall be provided for hazardous wastes, which must be clearly labelled. Hazardous waste streams must be segregated and stored in accordance to their safety data sheets. All road sweepings must be removed from site accompanied with a completed waste transfer note from the driver. If road sweepings are inadvertently discharged on site, these should be disposed of appropriately. All plasterboard waste shall be segregated on site and returned for recycling (e.g. to British Gypsum). All timber is to be segregated on site and sent to a local churty (or similar outlet) for recycling. All metal is to be segregated on site and sent for recycling. All inert waste (e.g. bricks, blocks, concrete) will be segregated on site and used under roads, driveways etc (this may require environmental permits or exemptions). All mixed waste removed from site shall be taken to a material recycling facility for further segregation to maximise recycling and recovery.	Site Manager/ Srr Foreman	Pre-construction planning/ Weekly
Demobilisation					
Demobilisation	Traffic and transport	Wagon movements affecting local residents	Effective traffic management will be planned and implemented, where required in agreement with the Local Authority.	Site Manager/ SHE Manager	Pre-construction planning
		Mud/ dust on road affecting local residents	Wash facilities for vehicular use located close to the site entrance shall be connected to an offline gully and trap system located within the site boundary. Haul routes shall be hard surfaced and/or effectively damped down and shall be kept clear of soil as much as possible. All vehicles carrying soil off-site must be sheeted. All vehicle engines will be switched off when not in use to reduce particulate emissions. Mechanical road sweepers shall be employed to clean roads of any dust and debris if it is generated within the vicinity of the site entrance.	Srr Foreman	Daily

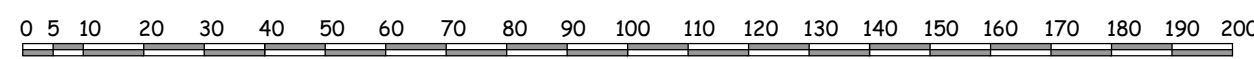
APPENDIX 3

DRAFT HABITAT MAP



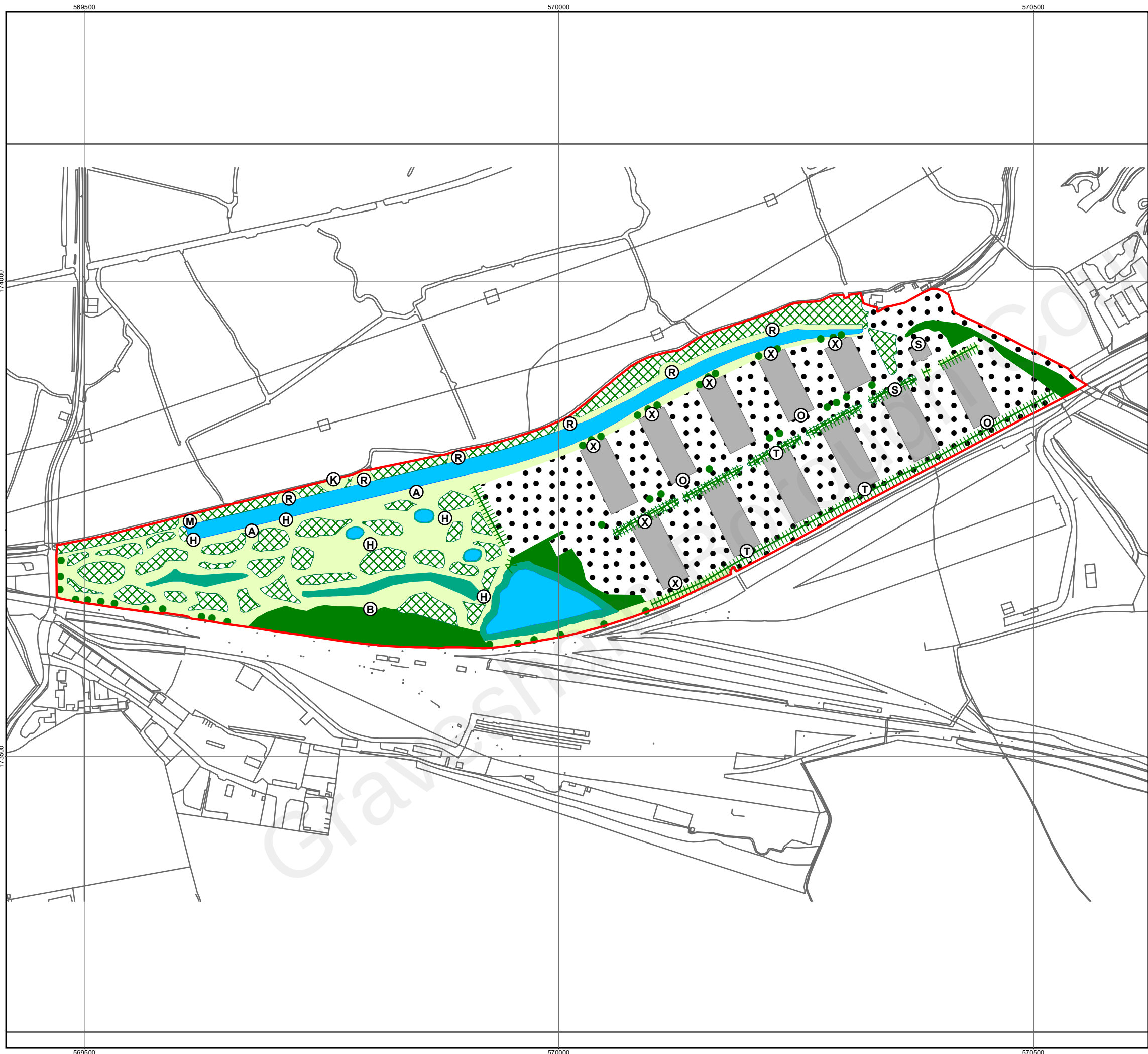
Site Layout Plan

Scale 1:1250



Synergy Planning & Property Consultants Ltd Suite 6 Laser Quay Marine City Centre Rochester Kent ME2 4HU		
Client	Nuralite	
Address	Nuralite Industrial Centre Canal Road ME3 7JA	
Drawing title	Site over plan	
Scale	1:1250	
Date	April 2018	Drawn by
Drawing No		

Document Path: C:\Users\m504216\Desktop\MyProjects\Mapping\Nuralite\A3_Nuralite_HabitatCreation_update_v3.mxd



Nuralite

Nuralite Industrial Centre,
Canal Road, ME3 7JA

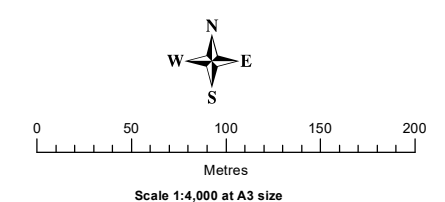
Draft habitat creation map

- Site boundary
- Building
- Hardstanding
- Marginal Planting
- Scrub
- Water
- Wildflower Meadow
- Woodland
- Hedgerow
- Broad-leaf tree

Wildlife Features

- Hedgehog Houses
- Schwegler Kingfisher and Sand Martin Nest Tunnel
- ISP Schwegler Sparrow Terrace
- Pole Mounted Barn Owl Box
- Traditional Bird Box
- Open Front Bird Box
- IFF Schwegler Bat Box
- Eco Rocket Bat Box
- Maternity Bat Box
- Hibernacula

Drawn by Ben Hockridge 07/12/2018, Verified by Henry Smith 07/12/2018



Base mapping from a drawing by Synergy, Medway City Estate, Rochester, Kent.
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APPENDIX 4

WATER DRAINAGE STRATEGY

Figure C- 1 Outline Surface Water Drainage Strategy: Industrial Site

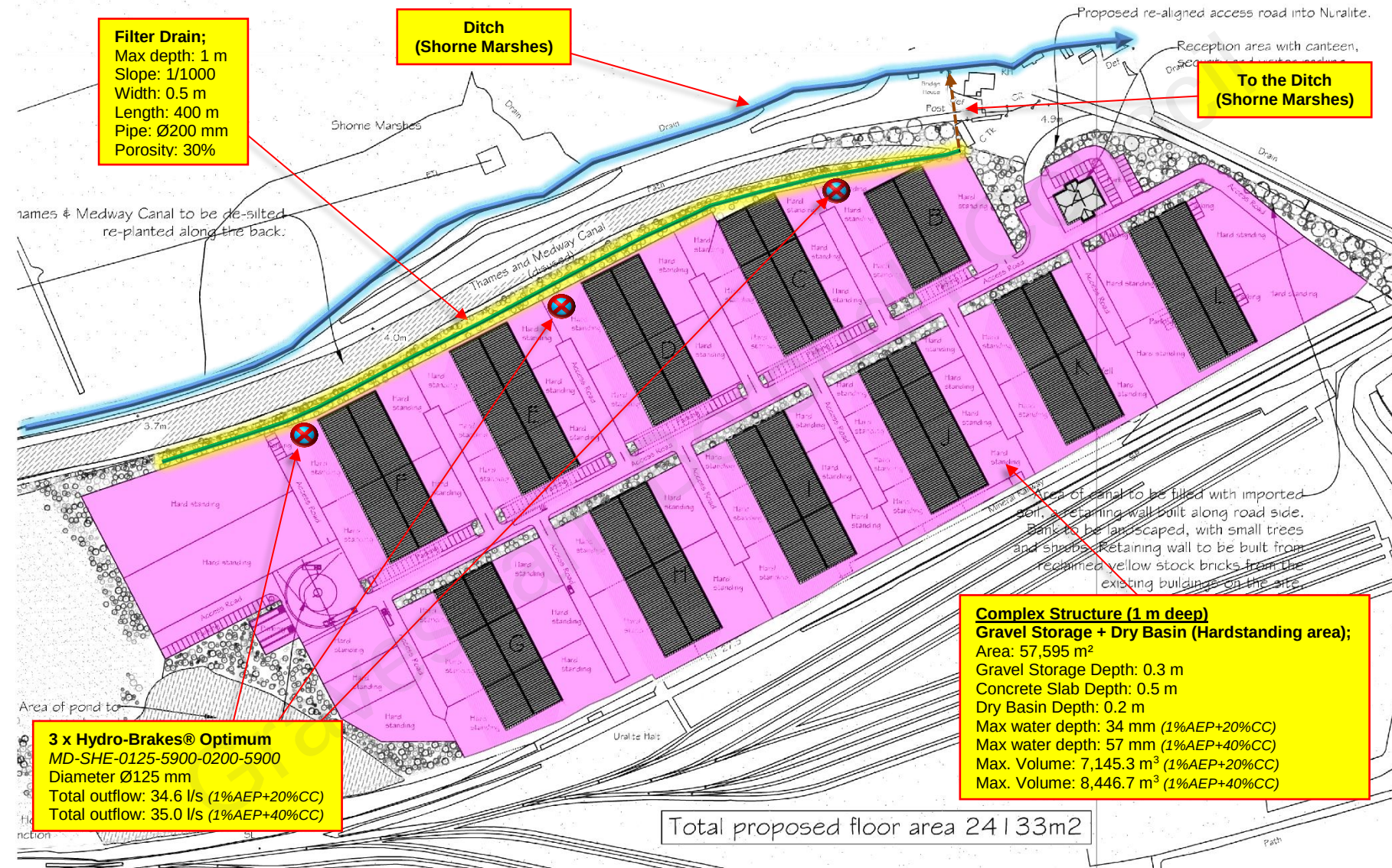
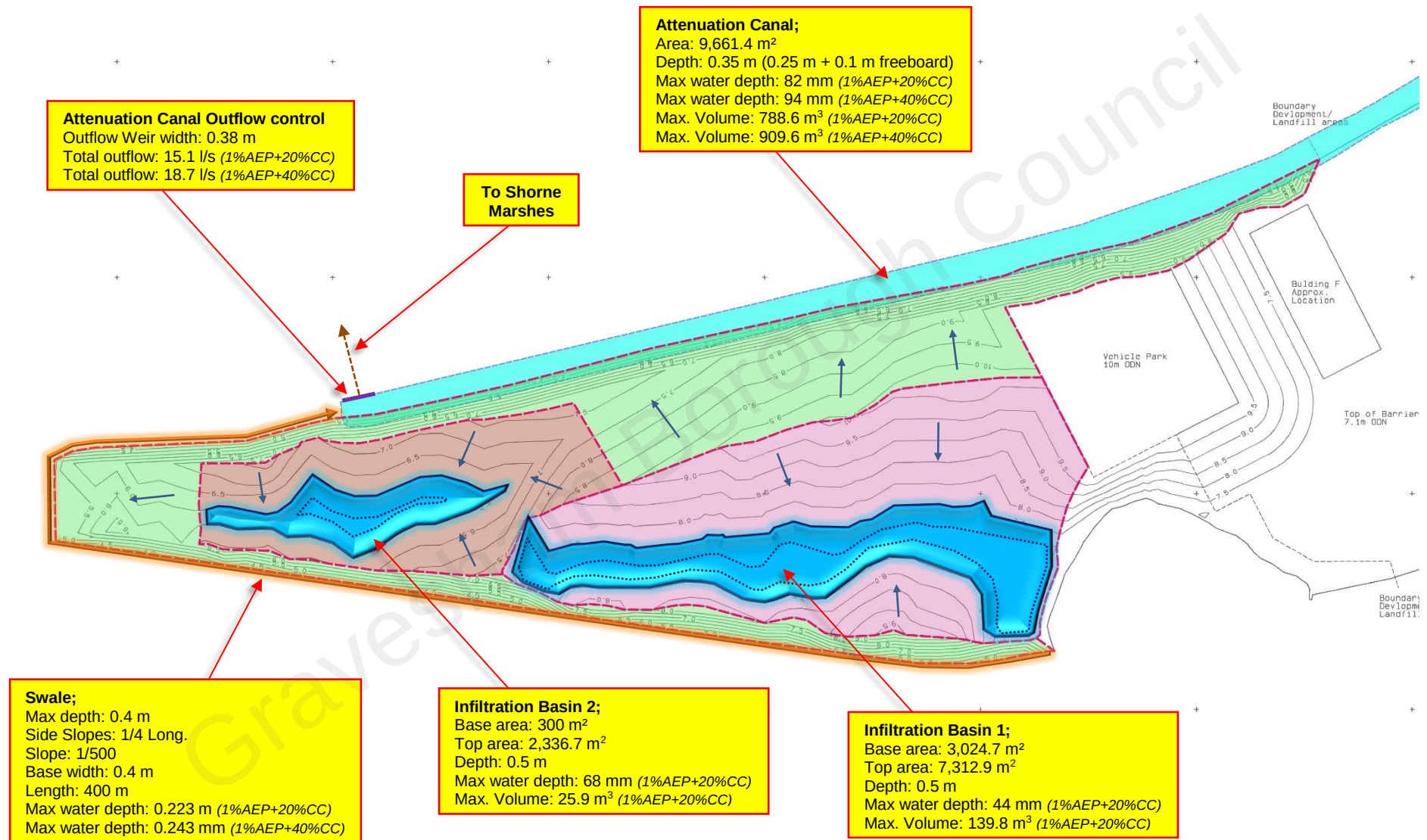


Figure C- 2 Outline Surface Water Drainage Strategy_Former Landfill Site



APPENDIX 5

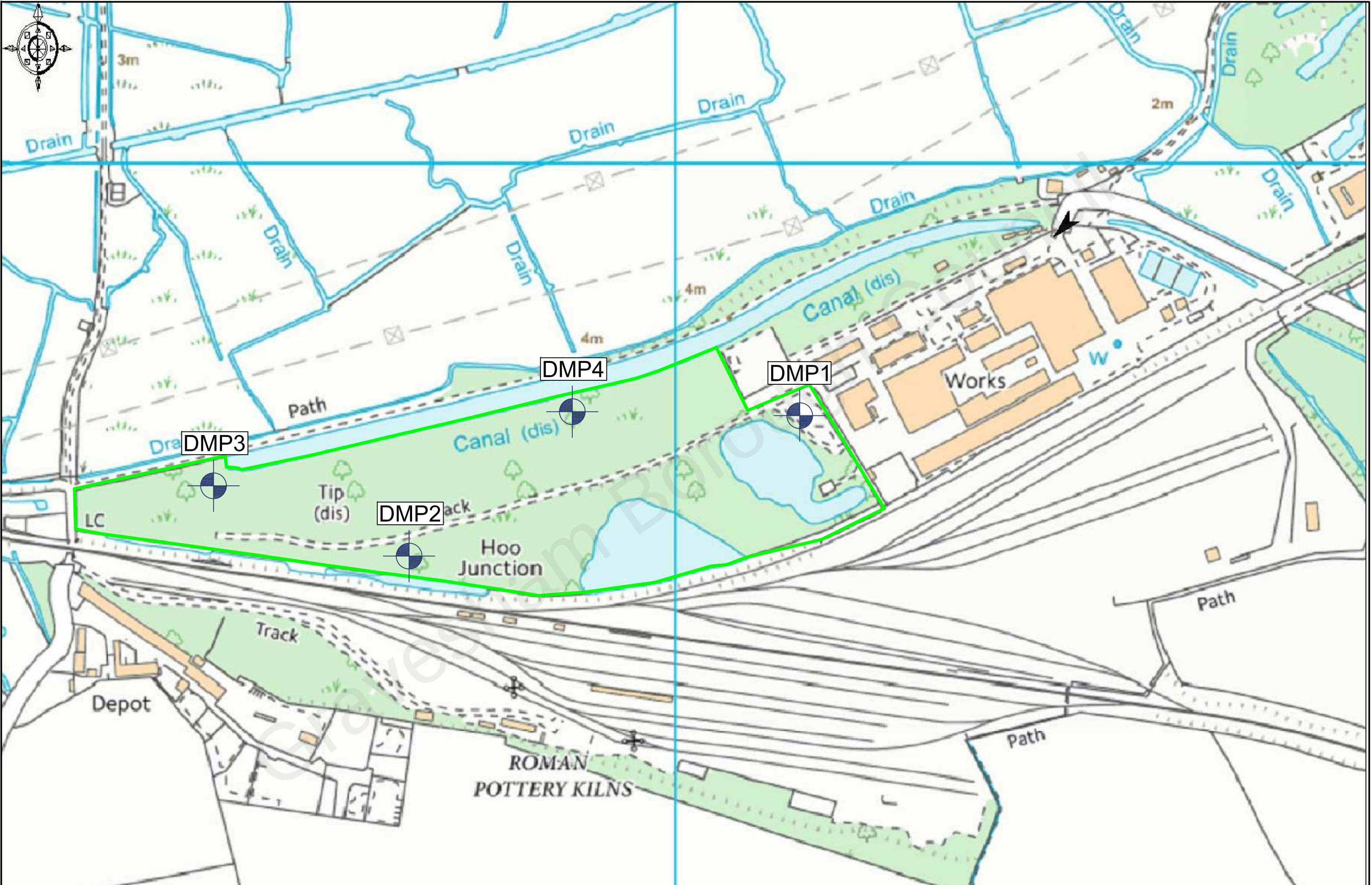
PROPOSED HGV ROUTE

APPENDIX 5 PROPOSED HGV ROUTE



APPENDIX 6

PROPOSED MONITORING POINTS - CONTAMINATION



WS - Window Sample BH - Borehole TP - Trial Pit HDTP - Hand Dug Trial Pit DCP - Dynamic Cone Penetration Test HA - Hand Auger DP - Dynamic Probe GM - Gas Monitoring Standpipe SP - Soakage Pit PT - Percolation Test S - Sample Location DMP - Dust Monitoring Point	Site: Nuralite	Client: LEJ Properties Ltd	Drawn: PRJ	Rev.:	 Unit 2 Montpellier Business Park, Dencora Way, Ashford, Kent TN23 4FG Tel: 01233 646 237
	Title: Figure 2 Proposed Monitoring Locations	Project: 11606	Date: 06/2016	Scale:	

APPENDIX 7

INCIDENT RESPONSE



Incident Response

1 OIL, FUEL OR CHEMICAL SPILL

1.1 To ground

- i. Wearing protective clothing, prevent further release at source e.g. switch off tap/ valve, correct leaking drum and make safe the area.
- ii. If the spill is migrating, create a temporary bund to prevent further spread by using spill kit materials / sandbags.
- iii. If drains or field ditches are located nearby, install drain seals/ deploy additional spill kit materials to prevent the spill discharging to the drain or ditch.
- iv. Apply absorbent granules or pads (available from spill kit) to the affected area.
- v. The Contractor will notify the Environment Agency regarding the nature and scale of incident. The following information should be included in the notification:
 - Time of discharge;
 - Type/quantity of material discharged;
 - Location of discharge; and
 - Site contact details.
- vi. The Contractor will notify the Client of the incident and communicate the information provided to the Environment Agency.
- vii. The Client will notify the Local Planning Authority regarding the nature and scale of the incident as per the requirements of the Environmental Damage (England and Wales) Regulations 2015.
- viii. Containment measures should remain in place until the nature and extent of the contamination can be assessed and a remediation strategy must be prepared.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and the Duty of Care requirements outlined in the CoCP.

1.2 To surface water feature

- i. Wearing protective clothing, prevent further release at source e.g. switch off tap/ valve, correct leaking drum and make safe the area.
- ii. If source not readily identifiable, contain first (see below) then identify and prevent further release at source.
- iii. Immediately deploy appropriate sized boom from nearest spill kit across affected surface water feature. Use stakes to attach it to the sides of the surface water feature. Tie booms together to increase length if required.
- iv. Supplement with additional booms across the surface water feature, as required, to contain any migration of the spill not halted by the first installation.
- v. The Contractor shall notify the Environment Agency regarding the nature and scale of incident. The following information should be included in the notification:
 - Time of discharge;



- Type/quantity of material discharged to surface water feature;
 - Location of discharge; and
 - Site contact details.
- vi. The Contractor shall notify the Client of the incident and communicate the information provided to the Environment Agency.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

1.3 To drainage system

- i. Wearing protective clothing, prevent further release at source e.g. switch off tap/ valve, correct leaking drum and make safe the area.
- ii. If source is not readily identifiable, contain the visible pollutant first, then identify and prevent further release at source.
- iii. Immediately deploy appropriate drain cover(s) to affected gullies.
- iv. Supplement with booms around the gully to contain any migration of the spill.
- v. The Contractor shall notify the Environment Agency and the relevant water company regarding the nature and scale of incident. The following information should be included in the notification:
 - Time of discharge;
 - Type/quantity of material discharged to the drain;
 - Location of discharge, specifically which drain; and
 - Site contact details.
- vi. The Contractor shall notify the Client of the incident and communicate the information provided to the Environment Agency.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

2.1 Discovery of unexpected contamination

- i. On the discovery of unexpected contamination, the Contractor will immediately halt works in the area.
- ii. If impacted materials have already been removed they shall be returned to the excavation or placed on to a membrane, e.g. terram, to prevent migration of the contaminant to another area.
- iii. Contractor to report the situation to the Client.
- iv. Arrangements will be made between the Contractor and the Client for samples of the contamination to be collected and tested on fast turnaround.
- v. Contractor to only continue with works in the area once the test results have confirmed the contaminant and a safe means of working has been established.

The Contractor shall be free to continue works in areas unaffected by the contamination, BUT the Contractor will not speculatively continue to excavate material to find the extent of the contamination without supervision from a geo-environmental engineer.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements as well as relevant Duty of Care requirements.

2.2 Contamination of or by waste materials

- i. Assess whether the area needs to be evacuated, such as if fumes are being given off.
- ii. Assess whether the damage can be undone through segregation.
- iii. Complete a risk assessment for the task including consideration of any COSHH risks.
- iv. If it is safe to do so segregate the waste. If it is not safe to do so, then the full waste quantity is to be consigned as hazardous waste.
- v. Contractor to report the incident to the Client.
- vi. Waste to be collected from site in accordance with normal practice.



3 DISCOVERY OF ARCHAEOLOGICAL ARTEFACT OR HERITAGE FEATURE

- i. Immediately stop works in the area of the artefact or feature.
- ii. Ensure the area is isolated from interference by erecting fencing around the discovery. Prevent vehicles from navigating through this area.
- iii. Provide a safe means for pedestrians; and if possible vehicles, to move around the isolated area.
- iv. Contractor shall report the find to the Client.
- v. Client to arrange for the find to be assessed by a qualified heritage or archaeological specialist. The Contractor is to prevent tampering with the find until it has been assessed.
- vi. Works to proceed in accordance with the recommendations given by the heritage or archaeological specialist.

In the event of an unexpected discharge of silty water, then:

- i. Prevent further release at source e.g. cease dewatering the excavations.
- ii. Contain silt and protect sensitive receptors from further discharge:
 - If a drain is located nearby, install drain seals or deploy spill kit materials to prevent discharge.
 - If silt flow is in the direction of surface water features deploy hay bales around surface the feature.
 - If silt is being generated by runoff from stockpiles deploy spill kit materials, silt fencing or move soil to form a bund at the base to prevent further silt laden runoff from the stockpile.
- iii. If silt is discharged without prior approval the Environment Agency shall be notified. If the silt discharge enters the drainage system the relevant water company shall also be notified regarding the nature and scale of incident. The following information should be included in all notifications:
 - Time of discharge;
 - Type/quantity of material discharged;
 - Location of discharge, e.g. which drain or surface water feature; and
 - Site contact details.



5 COMPLAINT OVER A NUISANCE

This procedure should be followed for all nuisance complaints including noise, dust and light.

- i. Immediately stop the activity leading to the complaint; or where not possible to entirely stop the activity reduce it to the lowest possible level e.g. shut off all non-essential plant.
- ii. Remain polite and courteous. If able to resolve the issue through discussion with the complainant, then determine what action is needed and put it into practice.
- iii. Record the details of the complainant including their name, contact details and address. Contractors shall report the details of the complaint and the complainant to the Client.
- iv. The Contractor and the Client will register the complaint on the Complaints Log.
- v. The Client will act on the complaint and remedial actions will be put in place within 24 hours.



6 ECOLOGICAL DISCOVERY OR DAMAGE

- i. Immediately stop works in the area.
- ii. Contractor to immediately report the incident to the Client.
- iii. Client to arrange for a qualified ecologist to assess the discovery or damage caused.
- iv. Works to proceed in accordance with the advice received from the ecologist.

7 VANDALISM/THEFT PROCEDURE

Acts of theft and vandalism present the risk that damage may be caused to equipment containing hazardous substances that could cause pollution, or damage may be caused to measures which have been installed to prevent the release of pollution. On identifying an act of vandalism or theft:

- i. The Contractor shall notify the Police of the incident.
- ii. Inspect all fuel storage tanks/drums and equipment to ensure there has been no release of the fuel or other hazardous substances, e.g. hydraulic fluid.
- iii. If a spill is identified follow the procedures for Oil, fuel or chemical spills.
- iv. Inspect pollution protection measures, e.g. drainage or silt protection, to ensure it has not been interfered with. Where it is possible, correct any issues identified without causing further release.
- v. Inspect site boundaries to identify the access point if not immediately clear and secure the site.

Explosion/fire incidents should also be dealt with through health and safety procedures. In the event that a fire is detected or an explosion occurs:

- i. Notify the emergency services and evacuate the area.
- ii. Attempt to tackle the fire with site equipment only when it is safe to do so.
- iii. Ensure that pollution of nearby water bodies including surface water drainage from fire control water or other substances is minimised. Where possible and safe to do so, any site drainage systems should be protected through the deployment of drain seals/ spill kit materials to ensure any firefighting waters are captured and can be disposed of appropriately.
- iv. At a time when it is acceptable to do so, the Environment Agency shall be notified regarding the nature and scale of incident. The following information should be included in the notification:
 - Nature of the incident;
 - Time and date of the incident;
 - Quantity of fire control water discharged to surface water feature/drainage, where relevant;
 - Location of discharge; and
 - Site contact details.



APPENDIX 8

ENVIRONMENTAL CONSENTS REGISTER

	Environmental Consents	Revision:	Date:
Site Location:			
Site Description:			
Project Manager			
SHE Manager			
Consent reference	Item	Status	Responsibility
ABC/123	Section 61	Open	Snr Foreman
DEF/456	Water abstraction exemption	Open	SHE Manager