



**GRAINGER PLC
TOWN PARK PHASE B
BEREWOOD, WATERLOOVILLE,
HAMPSHIRE**

OUTLINE CEMP

OCTOBER 2020



the journey is the reward

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Grainger plc
Town Park Phase B
Berewood, Waterlooville, Hampshire
Outline CEMP

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1 Introduction

1.1 This Outline Construction Environmental Management Plan (CEMP) indicates the management framework required for the planning and implementation of the proposed site works, in accordance with environmental commitments identified within the Environmental Statement and any requirements of planning conditions or Section 106 legal agreements. Its purpose is to reduce the risk of adverse impacts resulting from construction on sensitive environmental resources, and to minimise disturbance to local residents and other sensitive receptors. The Outline CEMP describes the checking, monitoring and audit processes that will be required to ensure works are being undertaken in accordance with these requirements, together with measures to ensure that appropriate corrective actions or mitigation measures are taken. The Outline CEMP will form part of the overall project management and as such, activities described will be integrated with other Quality, Sustainability and Health and Safety management processes.

1.2 The provision of the works is subject to the discharge of Condition 11 of the Winchester City Council Decision. Therefore, this Outline CEMP will include for the specific RMA condition set out below.

1.3 Condition 11 states:

“No development within a reserved matters area shall take place until a Construction Environmental Management Plan (CEMP) which should be in accordance with the ecological mitigation measures set out in Environmental Statement and the ecological mitigation plan submitted for that Reserved Matters Application, has been submitted for each particular reserved matters application, and approved by the Local Planning Authority, to include details of:

- i. construction traffic routes in the local area;*
- ii. parking and turning of operative, construction and visitor vehicles;*
- iii. loading and unloading of plant and materials;*
- iv. piling techniques;*
- v. storage of plant and materials;*
- vi. programme of works (including measures for traffic management);*
- vii. all deliveries and building works which should only be carried out between the hours of 0800 and 1800 hours Monday to Friday and 0800 and 1300 hours Saturday and no time on Sundays or recognised public holidays;*
- viii. provision of boundary hoarding and lighting including construction lighting;*

- ix. protection of trees, hedgerows and other natural features to be retained including their management until such time as they are adopted;*
- x. details of proposed means of dust suppression and noise mitigation;*
- xi. measures to protect the listed building as necessary;*
- xii. details of measures to be taken to prevent mud from vehicles leaving the site during construction;*
- xiii. measures to prevent pollution of the watercourse during construction;*
- xiv. the handling and management of construction waste;*
- xv details of surface water runoff; and*
- Xvi construction lighting.”*

- 1.4 The specific responses to these requirements are contained within the relevant sections of the document and specifically within **Section 5**.

2 Project Outline

Overview

- 2.1 Berewood is located to the immediate west of Waterlooville and north of Portsmouth in Hampshire. The A3 forms the eastern boundary of the site and the northern boundary extends towards Hambledon Road. The western boundary is formed by woodland belts and hedgerows to the east of Newlands Lane. The main part of the site extends south to Purbrook Gardens, with the southern access part of the site extending further south to near Purbrook Heath Road. The built-up area of Waterlooville borders the eastern boundary of the site with the town centre immediately to the east. The Hambledon Road Local Centre is located to the north east and the Purbrook Local Centre to the south east. Brambles Business Park is located north west of Waterlooville Town bordering the site perimeter. The extent of the Berewood site is illustrated in **Figure 2.1** below.

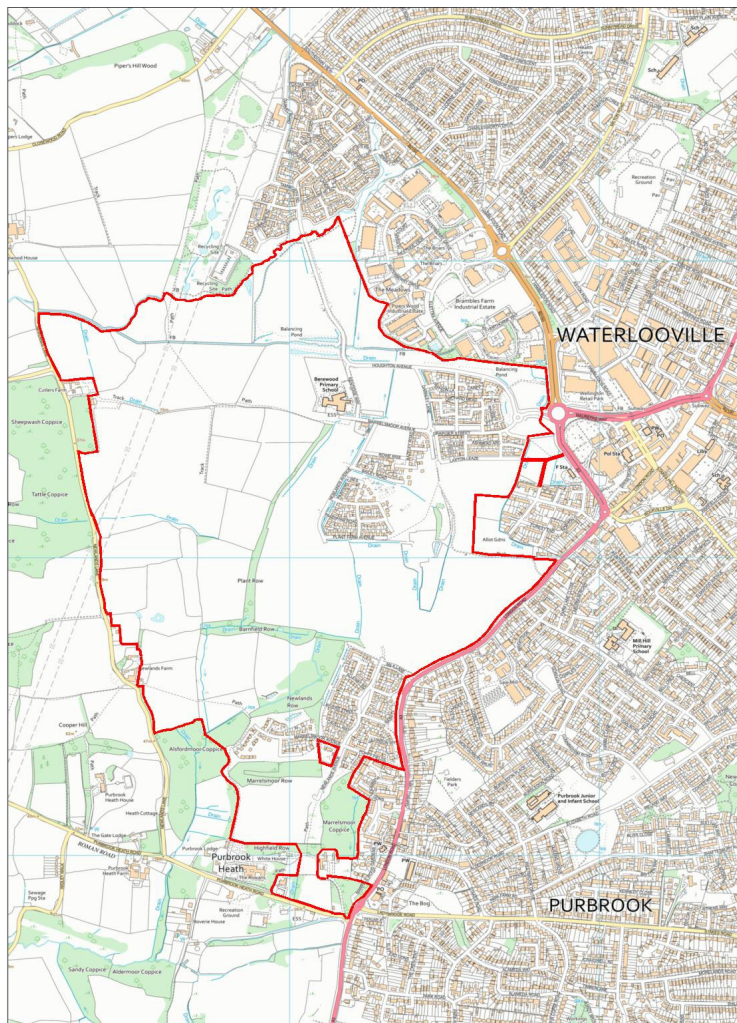


Figure 2.1 Berewood Site in Relation to Local Highway Network

- 2.2 Works have been ongoing at the Berewood site since 2008. In this time the main Development access off Maurepas Way has been constructed, enabling Phase 1 to be built out. A separate Design and Build contract has also been completed on the 'PRS' site in the northern section of Berewood, adjacent to the Brambles Business Centre. In addition, Berewood Primary School has been completed and works are in progress at phases 9 and 10 to the rear of the school. The Berewood Site Office has also been completed.
- 2.3 Works to Phase 3a have also been accessed from this portion of the site and are largely completed.
- 2.4 Infrastructure works have taken place which include the provision of access to a new Commercial Area via a Segmental Arch Bridge, this has enabled a length of River Channel to be realigned and restored to provide riverside walks & habitats. Further works to the western section of the river are currently taking place. The northern pumping station, rising main and Multi-Use Greenway (MUG) which runs almost the full extent of the site, north to south have also been completed. All infrastructure works have included for the provision of stabilised haul roads, extensive drainage & SuDS features, streetlighting and associated landscaping and tree planting. All major services have been installed for developers to connect to. In addition, works have also been completed within the employment land at Proxima Park to the north of the River Wallington.
- 2.5 A further access off London Road, in the southern portion of the site has also enabled Phase 2 to be built out and is complete. Phase 13a works off this access are virtually completed, as are Phase A of the Town Park works. Works have recently begun on the SuDs areas associated with Phase 3b.
- 2.6 The location of the Town Park within Berewood is illustrated within **Figure 2.2** below Phase B of this area is set out within **Figure 2.3** below.



Figure 2.2 Location of Town Park



DERIVED FROM ALLEN PYKE ILLUSTRATIVE SITE PLAN

Figure 2.3 Town Park Phase B

Proposed Works

- 2.7 The works to be undertaken are illustrated within the Allen Pyke Landscape Design Statement¹. Contract drawings and specific contractor responsibilities will be the subject of other documents. Works on site may include for, but are not limited to:
- Provision of compound facilities;
 - Construction of access road;
 - Set up of protective heras fencing and signage where required;
 - Provision and maintenance of pollution control measures;
 - Establishment of temporary wheel wash facilities as required;
 - Construction of sustainable drainage features;
 - Provision of a cricket pitch;
 - Provision of a multi-use sports area;
 - Provision of formal and informal play space, footpaths and decking; and
 - Associated landscaping including seeding and planting.
- 2.8 All works to date have been undertaken with the use of a CEMP management tool in order to control and manage potential environmental impacts. It is Winchester City Council's requirement that all phases of the works are undertaken with the application of the same management principles.

¹ Allen Pyke (2020) Town Park Phase B, Berewood Landscape Design Statement – 2715-TP-DS-01. Allen Pyke, Kingston Upon Thames.

3 CEMP Objectives

- 3.1 The CEMP will aim to ensure that:
- all environmental safeguards are carried out correctly
 - site activities are well-managed
 - adverse impacts on the environment are minimised
 - the biodiversity of the site is conserved or enhanced
 - all relevant legislation is complied with, and
 - the project is monitored for environmental impact.
- 3.2 The CEMP fits into the overall planning process of the project by complying with the conditions attached to the planning consent by Winchester City Council and Havant Borough Council.

Considerate Constructors Scheme

- 3.3 In order to aid compliance with the above objectives, the site contractor must be registered with the 'Considerate Constructors Scheme' (CCS). Contractors which register with the scheme are required to demonstrate the implementation of a five point 'Code of Considerate Practice'. The categories within this code are set out below.
- **Appearance:** Constructors should ensure sites appear professional and well managed.
 - **Respect for the Community:** Constructors should give utmost consideration to their impact on neighbours and the public.
 - **Protect the Environment:** Constructors should protect and enhance the environment.
 - **Secure Everyone's Safety:** Constructors should attain the highest levels of safety performance
 - **Value their Workforce:** Constructors should provide a supportive and caring working environment.

Site Environmental Standards

- 3.4 Site environmental standards will be based upon the above code and will detail the minimum measures that should be achieved for general operations that fall outside the risk assessment/method statement procedure designed to cover the majority of construction activities. They will cover the following issues:

- storage of materials;
- management of waste;
- water pollution;
- noise and vibration;
- air quality; and
- ecology

3.5 The standards will be used as a briefing tool on site.

Legal Requirements

3.6 The CEMP will collate all legal requirements for the works and ensure that all are complied with during the construction phase of works. All legal requirements for the works will be agreed through consultation with the relevant Statutory Body.

3.7 The following legal requirements will be adhered to and this list will be added to as necessary throughout the development of the works.

NB Legislative list below under continuous review

Regulatory Instrument	Requirement
Environmental Protection Act (1990)	Introduces Integrated Pollution Control (IPC). Part III Statutory Nuisance Provisions (England & Wales) Section (79) relating to prevention of nuisance from industrial premises (including construction sites) relating to noise and air (smoke, fumes, gases, dust, steam, odour, smells, effluvia, smuts & deposits) Section 80 permits the local authority to serve an abatement notice on persons responsible for statutory nuisances. Section 61 requires that an application must be made to the local authority for consent to work if it is anticipated that a nuisance will be created.
Control of Pollution Act (1974)	Section (60) Working hours 08:00 to 18:00 Mon to Fri, 08:00 to 13:00 Sat. Nothing on a Sunday, bank and public holiday unless through agreement with the L.A. Section (61) The developer may apply in advance for consent as to the methods by which the works are to be carried out.
Control of Substances Hazardous to Health Regulations)1988	Requires employer to control all substances that are hazardous to health.
Control of Pollution (Amendment) Act (1989)	Registration of controlled waste carriers Control of illegal dumping of waste.
Control of Pollution (Oil Storage) (England) Regulations 2001	Applicable to any construction site storing more than 200 litres of oil above ground. Advises on the control and regulation of oil storage to prevent spills and leaks and to have adequate systems in place in the event of an emergency.

Pollution Prevention and Control Regulations 2000.	Enables regulations to be made to implement EC directive 96/61 on IPPC based of applications of BAT (Best Available Techniques)
Environment Act (1995)	Disposal of all "controlled waste"; including household, industrial and commercial waste as defined by the <i>Controlled Waste Regulations 1992</i> and the 2006 EU Framework Directive for hazardous or "special" waste.
Clean Air Act (1993)	Section 2. Prevention of Black Smoke emissions from industrial and trading premises
Ground Water Regulations (1998)	Prevention of groundwater pollution from industrial / construction activities.
Water Resources Act (1991)	Sections 85 and 88 make it an offence to 'cause or knowingly permit' pollution to enter a controlled watercourse unless this is permitted under other legislation. Section 161 of the <i>Water Resources Act 1991</i> empowers the agency to serve a 'works notice' on any person who has 'caused or knowingly permitted' a pollutant to enter controlled waters, including from contaminated land, requiring them to deal with the problem.
The Water Industry Act (1991)	Sections 77 and 78 require local authorities to keep themselves informed about the wholesomeness and sufficiency of both private and public water supplies. In the case of private supplies, they are required to serve notice requiring improvements. Section 80
The Salmon and Freshwater Fisheries Act (1975)	It is an offence to contaminate waters in a way which may poison or injure fish, spawn, fish food or spawning grounds.
The Groundwater Regulations (1998)	Powers to prevent and control the entry of listed substances to groundwater and require authorisation for disposal or tipping of substances.
Land Drainage Act (1991)	Under Section 66, no person without the previous consent of the Land Drainage Board may erect a building or structure nearby to a watercourse.
Hazardous Waste (England & Wales) Regulations (2005)	Regulation 16 requires that consignees should maintain full site records of all deposits of special waste; including a site plan marked with a grid, or with overlays on which deposits are shown.
Waste Management Licensing (England & Wales) (Amendment & Related Provisions) Regulations (2005)	Under the EPA, the deposit, keeping, treatment or disposal of controlled waste, in or on land, requires a waste management licence.
Control of Pesticides Regulations (1986) (as amended)	Section 26.4 requires consent of pesticides for their use under the conditions of the act. All pesticides must be products on the current list of Agricultural Chemicals Approval Scheme and all pesticide users shall comply with the conditions of approval relating to use clearly stated on the product label.
Town and Country Planning Act (1990) and Town and Country Planning (Trees) Regulations 1999	Part 8. Tree Preservation Orders (TPOs) can be made by the local planning authority to prohibit damage to or removal of trees without the local planning authority's consent.
The Hedgerow Regulations 1997	Where permission is not already proved under planning permission, a hedgerow removal licence is required from the local authority if the hedgerow is

	older than 30 years old or satisfies at least one criteria listed in part 2 of schedule 1.
The Conservation of Habitats and Species Regulations (2017)	Controls the protection of 'European Protected Species' i.e. plants and animals listed in the European Habitats directive. All works to be undertaken in accordance with these regulations.
Natural Environmental and Rural Communities Act 2006	Controls the protection of native species and environments. All works to be undertaken in accordance with these regulations.
The Protection of Badgers Act (1992)	It is an offence to disturb, interfere with, damage or destroy a sett, to obstruct access to an entrance, or to wilfully injure, entrap or ill-treat a badger.
Wildlife and Countryside Act (1981) (as amended)	Controls the spread of invasive species and provides regulatory protection to species of birds, wild creatures and plants as listed within the Act. It is an offence (with the exception of Schedule 2 birds) to intentionally kill injure or take any wild bird or their eggs or nests.

Table 3.1: Legislative Requirements

Permits and Approvals

- 3.8 Where required, all consents, permissions and licences will be stored in **Appendix D**. These will also be reviewed and updated where necessary, as works progress.

Environmentally Sensitive Receptors

- 3.9 The CEMP includes summary information taken from the Lindsay Carrington Ecological Appraisal² of the Town Park area and a further Update Note³ which was prepared to assess the cricket pavilion and car park area. It is required that any contractors must review these documents in the preparation of any Construction Method Statements (CMS) required prior to works commencing. These documents have been reviewed in the production of an initial Environmental Risk Assessment and subsequent Method Statements and shall also be reviewed by the contractor. All mitigations must be in place, prior to the commencement of any works. The initial Risk Assessment and Method Statements are contained within **Appendices G** and **F** respectively.

Flora

- 3.10 The site was previously dominated by areas of semi-improved grassland, scrub and tall ruderals. However, as a result of recent reprofiling works, the site now contains large areas of bare earth. The Barrell Arboricultural Assessment & Method Statement⁴ identified 4 no. trees on site which are of high (A) moderate (B) and low (C) quality. Trees

² Jones, L (2018) *Ecological Appraisal and Phase 2 Surveys Townpark Berewood, Waterlooville, Hampshire PO7 5SH*. October 2018 updated November 2018. Lindsay Carrington Ecological Services, Wareham.

³ Picksley, J (2020) *Cricket Pavilion Town Park – Ecology update note*. Holbury Consultancy Service.

⁴ Cashman, D. (2020) *Arboricultural Assessment and Method Statement Town Park Phase B, Berewood*. Barrell Tree Constancy, Fordingbridge.

within the categories B and C will be removed during the appropriate season however, the category A tree will be retained and protected during works.

- 3.11 The site also contains species rich hedgerows which may qualify as ‘important’ under the Hedgerow Regulations 1997. As a result, a number of mitigations are required, and these are summarised along with those for the trees, within **Table 5.2** and **Method Statement 1** within **Appendix F**.

Fauna

- 3.12 The Town Park Phase B works will take place within the habitats of the following fauna:
- Badgers;
 - Bats (foraging);
 - Dormice (potential);
 - Nesting birds; and
 - Reptiles.
- 3.13 The potential for harm to these fauna is identified within the mitigation matrix in **Table 5.1** and the associated mitigations are set out in **Table 5.2**. All vegetation clearance will be undertaken in accordance with approved method statements which are contained within **Appendix F**.

Top Soil

- 3.14 Where topsoil is required to be removed as part of the works, this will be undertaken and stored in accordance with the appropriate Construction Code of Practice⁵.

Archaeology

- 3.15 An archaeological Written Scheme of Investigation (WSI) should be maintained to monitor the works, including top soil stripping and excavation and to record any archaeological finds. The Contractor will adhere to the requirements of the WSI.

Local Hydrology

- 3.16 An overview of the local hydrology has been taken from the Mayer Brown Flood Risk assessment⁶. The report identifies a number of field drains across the site and which will require protection. It also indicates that site hydrology is such that surface water run-off from higher ground in the south may pass through the site and into the anticipated

⁵ Department for Food and Rural Affairs (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. Defra, London.

⁶ S. S. (2020) Pavilion Development, Berewood. Waterlooville PO7 3DG. Mayer Brown, Woking.

compound area. All such waters will be attenuated, contained and treated. The Contractor will ensure this requirement is observed during the construction phase.

- 3.17 Ground conditions are noted as comprising slowly permeable clayey soils, indicating that site ground conditions will tend towards problematic during wet periods. Any collected water will be appropriately treated before removal or discharge. Despite the slow permeability of the ground conditions, the compound area will be rendered impermeable to prevent contamination of the local soils.
- 3.18 Prior to works commencing on site, the Contractor's Environmental Manager will develop an Incident Response Plan (IRP). This will identify all on-site risks and suitable responses and be disseminated to all appropriate staff. The CIRIA Environmental Good Practice on site guide suggests elements to be included within an effective plan and these are set out **within Table 5.2:**

Site Operatives

- 3.19 Site operative will be protected from construction impacts by the adherence to on-site health and safety protocols and the use of all necessary Personal Protective Equipment

Humans

- 3.20 The human receptors potentially affected by the works include:
- Site workers;
 - New Residents on Plant Farm Crescent; and
 - Residents along haul route.
- 3.21 These receptors will be protected from the impacts of unacceptable levels of noise, dust by the strict application of identified mitigation measures as set out in the Method Statements within **Appendix F**.

4 Planning and Control of Construction Works

CEMP Team

- 4.1 In order to enable efficient working practices on site, a CEMP team member will be identified, with specific responsibilities delegated to each member. The team members required and their responsibilities are set out below.

Title	Contact Details	Responsibilities
Client's Development Manager – (DM)	Asim Kayani Grainger Development Manager 07867409672 akayani@graingerplc.co.uk	The Client's Project Manager (DM) will act with responsibility for managing the Project within the agreed environmental constraints in conjunction with all other necessary management processes.
Client's Project Manager – (PM)	Howard Kennedy Grainger Construction Manager 07483019421 howardk@rund.co.uk	The Client's Construction Manager (PM) will act with responsibility for managing the contractors within the agreed environmental constraints in conjunction with all other necessary management processes.
Client's Environmental Manager – (EM)	Andrea Hughes Mayer Brown Ltd 07974198231 ahughes@mayerbrown.co.uk	The Client's Environmental Manager (EM) will report to the Project Manager and will be responsible for monitoring the performance of the project against statutory requirements and the agreed environmental standards.
Client's Environmental Specialists – (ES)	Jeff Picksley Holbury Consultancy Services 07788638938 Jeff.picksley@holburycs.co.uk	The Client's Environmental specialists will be available to provide advice as required
Contractor's Site Manager – (CSM)	TBC	The Site Manager will ensure that all environmental policies addressed in the CEMP are adhered to by contractors and sub-contractors throughout the construction phase.
Contractors Appropriate Person (CAP)	TBC	The Contractor's Appropriate Person will take on tasks as delegated by CSM and for which they will receive appropriate training.
Contractor's Site Waste Manager – (CSWM)	TBC	The Site Waste Manager will be responsible for overall waste management issues arising from the project.

Contractor's Sustainability Manager – (CSuM)	TBC	The Sustainability Manager will be responsible for implementing all sustainability measures identified in the ES and arising from the project.
Contractors Environmental Manager – (CEM)	TBC	The Contractors Environmental Manager will be responsible for overall Environmental issues arising from the project
Contractor's Overall Project Consultant – (CPC)	TBC	The Overall Project Consultant will be responsible for liaising with the CEMP Team and specialist consultants to ensure that the project is carried out to the required environmental standards.
Contractor's External Relations Officer – (CEO)	TBC	The external relations officer will be responsible for providing a point of contact for third parties and will be kept informed of all issues which may be of interest or concern.
Site Foreman – (CFR)	TBC	The foreman will be required to implement and monitor all environmental and health and safety measures as instructed by the site manager.
Subcontractor(s)	TBA	The contractor will be required to monitor the environmental and health and safety performance of all subcontractors to ensure compliance with the CEMP.
Client's Appropriate Personnel – (AP)	Nigel Baker Mayer Brown Ltd 07747008072 nbaker@mayerbrown.co.uk	All personnel will be required to have undertaken the health and safety and environmental induction course.
Environmental Health Officer – (EHO)	EHO Admin Gemma Crowfoot Winchester City Council 01962 840222 ext 2172 gcrowfoot@winchester.gov.uk	A representative from the Local Authority's Environmental Health Department will be invited to attend CEMP Team meetings to ensure that the project is addressing all environmental issues raised during the project planning stage
Implementation Officer – (IO)	Chris Hughes Winchester City Council 01962848375	A representative from the Local Authority's Planning Services Department will be invited to attend CEMP Team meetings to ensure that the project is addressing all planning issues

	chughes@winchester.gov.uk	raised during the project planning stage
Flood and Water Manager - (FWM)	Clare Mills Hampshire County Council Clare.mills@hants.gov.uk 01962846727	A representative from the County Council will be invited to attend CEMP Team meetings to ensure that the project is addressing all issues raised during the project planning stage
Environment Agency Biodiversity Officer (BO)	George Woodward Environment Agency 01962 764938	A representative from the Environment Agency will be invited to attend CEMP Team meetings to ensure that all issues of concern to the Environment Agency are being addressed.

Table 4.1: CEMP Team and Responsibilities

Resource Management Plans

- 4.2 Grainger plc has a number of Key Performance Indicators that are to be monitored as part of the works. These are listed in **Appendix A** and include water and diesel usage.
- 4.3 Water and diesel consumption should be continuously monitored on site and will be recorded within the Resource Management Plans (**Appendix E**) of the CEMP on at least a fortnightly basis.

Action Plans/Method Statements

- 4.4 Where required, an Action Plan or Method Statements will be prepared by the contractor and environmental specialist to identify and sequence mitigation activities that are needed in order to complete a required site works process. They will identify reference documentation, the approval required to complete that activity and the verification documentation to be produced as evidence of satisfactory completion of the works.
- 4.5 Action Plans and Statements will include a review of the environmental risks and commitments, so that appropriate control measures can be developed and included within the construction process
- 4.6 The Plan or Statement will also identify where “cessation of works” will be required when necessary. These will be put in place when continuation of a subsequent activity is prohibited unless the former activity has been signed-off. The Plan or Statement will be broken down into appropriate categories depending on the phase of works to be carried out.

- 4.7 Where required, Action Plans and Method Statements will be identified for general site management and to deal with activities under specific types of works e.g. hedge removal, earth works.
- 4.8 Where required, method statements will be submitted to the enforcement agencies (Environment Agency, Natural England, and Local Authority Pollution Control Department), as appropriate.
- 4.9 Any Action Plans/ Method Statements created will be saved within **Appendix F** of the CEMP. It should be noted that where action plans / method statements evolve through e-mail discourse, they will be stored in this form.

CEMP Action Plan Responsibilities Statement of responsibilities The contract as a minimum requires that the Contractor document and nominate persons (in a management position) with responsibility for the following		
Activity	Details	Responsible Person
Acquisition of appropriate licences and permits	Where activities require that e.g. CES (Contractor's Ecological Specialists) are required on site or that permits need to be obtained for relevant authorities	CEM - (Contractor's Environmental Manager) Reporting to: CSM – (Contractors Site Manager)
Dust and noise producing activities.	Where dust and noise producing activities are taking place the appropriate mitigations will be put in place and monitored on a daily basis.	CAP: (Contractors Appropriate Person) Reporting to CEM
Run off producing activities	Where run off from the site has the potential to enter watercourses, mitigations should be in place to ensure this does not occur. Where consents to discharge are required these should be obtained.	CAP Reporting to CEM CEM: Reporting to CSM
Waste Producing Activities	Where activities have cause to generate waste materials including spoil and top soil, this must be managed on site in accordance with requirements and where necessary, disposed of appropriately	CSWM (Contractors Site Waste Manager) Reporting to CEM CEM: Reporting to CSM

Table 4.2: Action Plan Responsibilities

General Site Management	Responsible Person
Implement a soil and water management plan for the site	CSWM
Install appropriate silt fences and other sediment control structures where required	CEM
Regularly check and clean silt from behind silt fences and barriers	CEM/CAP
Ensure sediment control measures are in place before starting clearing and excavation activities	CEM/CSM
Stockpile materials only in designated areas behind sediment fences	CSWM
Limit vehicle entry points and stabilise vehicle access ways	CSM
Minimise disturbance to areas designated for conservation	CSM
Implement a construction site waste management plan (SWMP)	CSWM
Order only required quantities of materials	CSM
Separate recyclable from non-recyclable waste	CSWM
Ensure correct waste materials are used by site personnel	CSWM
Minimise chemicals stored on-site	CEM/CSM
Ensure personnel are aware of emergency phone numbers in case of environmental incident (Fire Brigade, Environment Agency and Pollution Control, Winchester City Council and Havant Borough Council)	CSM
Keep Material Safety Data Sheets (MSDSs) on site at all times	CSM
Ensure that there are clearly marked booms or absorbent materials on-site in case of a spill	CSM
If a spill occurs, stop at source, contain it, clean up in accordance with MSDSs and notify the relevant authorities.	CEM/CSM
Damp down dusty areas as required	CSM/CAP
Minimise water use for cleaning	CSM
Sweep roads free of dirt each day	CSM/CAP
Maintain fence at site boundary	CSM/CAP
Fence off no go areas to minimise disturbance	CSM
Minimise vegetation clearance	CSM
Ensure that there is no burning of waste on-site	CSM
Instruct trucks to use the routes identified for minimal impacts on residents	CSM
Avoid parking site vehicles where they will unduly impact local use of the street	CSM
Do not place waste containers, skip bins or building materials on road or footpath – store all materials within the work site	CSM /CSWM
Limit hours of operations to suit Local Authorities requirements listed in consent agreements	CSM
Use noise suppressors on machinery	CSM
Do not use loud radios where neighbours can be disturbed	CSM
Take appropriate care when using construction equipment in the proximity of buildings	CSM
Advise neighbouring premises of commencement date for works at least one week prior to starting, including hours of work	CSM
Protect trees during construction	CEM
Avoid harming protected species, e.g. reptiles, breeding birds	CEM

Table 4.3: Responsibilities for General Site Management

Environmental Risk Assessments

- 4.10 An initial Environmental Risk Assessment has been completed in accordance with the requirements of the CEMP and this is included within **Appendix G**. Method statements associated with the removal of the initial risks identified are included within **Appendix F**. Further risk assessments and method statements will be undertaken where required as works progress. The results of risk assessments and their residual risks will only be considered acceptable if:
- the severity of the outcome is reduced to the lowest practical level;
 - the number of risk exposures are minimised;
 - all reasonably practical mitigating measures have been undertaken; and
 - the residual risk rating is reduced to a minimum.
- 4.11 The findings of the risk assessment and in particular the necessary controls will be explained to all operatives before the commencement of the relevant tasks using an agreed instruction format.

Work Programme

- 4.12 The work programme will be completed by the Contractor's Project Manager (CPM) in order to facilitate the regular monitoring of on-site activities in relation to the requirements of the CEMP and this includes measures for traffic management. This will be used to identify the need for environmental risk assessments, work method statements, training and mitigation. The programmes will be saved in **Appendix H** of the CEMP.

Construction Traffic Management and Delivery Plan

- 4.13 A Construction Traffic Routing Plan indicating the route to the anticipated Town Park compound is provided in the drawing section of this report. The appointed contractor must provide a Construction Traffic Management Plan and Delivery Plan for distribution to all operatives and delivery companies. This must contain the requirement that all construction traffic will access the Berewood site via the A3, Hulbert Road (B2150) and London Road only. It will be directed away from Hambledon Road and Purbrook Village. All contractor provided Construction Traffic Management Plans and Delivery Plans will be stored in **Appendix I** where an initial outline Delivery Plan is currently stored.

Site Compound Layout

- 4.14 An indicative compound location is provided within the drawing section of this report. This drawing also indicates that a large tipper can access and egress this location. Once the contractor is appointed, the detailed compound layout will be required to demonstrate the following:

- Appropriate areas for the parking and turning of operative, construction and visitor vehicles is provided;
- The compound is safe and secure;
- Areas are provided for the safe loading and unloading and storage of plant and materials;
- Areas are provided for the storage of waste in clearly signed and appropriate sized containers;
- Suitable welfare is provided to include:
 - Canteen;
 - Drying room;
 - Toilets; and
 - Office

Training, Awareness and Competence

- 4.15 The raising of environmental awareness is viewed as a crucial element in the appreciation and implementation of the CEMP. In order to make sure the environmental control measures are effective, all staff will be provided with the following training before starting work on site.
- a site induction;
 - emergency response training;
 - familiarisation with site environmental controls; and
 - specific environmental training for relevant employees e.g. installing erosion and sedimentation controls, daily checks to maintain controls, cleaning up spills.
- 4.16 Training for all personnel will be completed before commencement of the associated construction activities and a record of this will be kept within **Appendix J** of the CEMP along with a copy of the induction material. Line managers and supervisors will ensure that all personnel engaged in activities that may have an impact on the environment are competent to carry out their duties or, where necessary, arrange for suitable training to be undertaken.

5 Work Activities, Potential Impacts and Mitigations Required

- 5.1 For the purpose of assessing potential impacts, the outline works have been set out in **Section 2**.
- 5.2 Prior to construction, the Contractors site management team and the Clients Environmental Manager will review the planned phases of works alongside the potentially affected receptors for potential impacts. i.e. the potential for the creation of a source, receptor pathway impact model will be assessed. Where potential impacts are identified, the mitigation required to prevent these will be identified along with the associated team responsibilities.
- 5.3 Main activities, potential impacts and controls for the above phases are set out within the matrix in **Table 5.1** below. Further detailed mitigations are contained within the Lindsay Carrington Ecological Appraisal which is summarised in **Section 3**.

N.B. Subscript numbers refer to mitigation measures as set out in Table 5.2

Source Activity	Impact Pathways and Receptors			Actions & Responsibilities
	Nature Conservation	Air	Water	
Removal of topsoil	Death or disturbance of in-situ sheltering or foraging badgers, dormice, reptiles and or breeding birds, 1,2,3, 5,	Creation of dust impacting on-site and off-site receptors and flora and fauna 1, 6, 7, 8, 9, 10, 11, 12, 13, 22, 23, 24, 25,	Pollution impacts via ditches and streams 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36,	Clients Environmental Specialists (ES) to obtain any appropriate licences and ensure Contractors undertake appropriate action prior to disturbing activities. All activities to be recorded by EM
Establishment of site compounds, setting up of fencing, haul and access routes.		Noise impacts upon on site and off site receptors 1, 13, 14, 15, 16, 17,	Potential for the migration of liquids from storage areas impacting on site and off-site flora and fauna 28, 29, 30, 31, 32, 33, 34, 35,	
Establishment and maintenance of drainage and pollution control measures including wheel wash facilities.	Lighting impacts upon bats and other nocturnal species 4,	Noise impacts upon on site fauna 1, 14, 15, 16,		AP to ensure appropriate dust and noise control mitigations in place and report to EM on weekly basis.
Provision of sustainable drainage features		Potential for migration of dust from active and storage areas impacting on site and off site receptors and flora and fauna 6, 7, 10,		Where appropriate CEM will advise Contractors External Relations Officer) CERO to contact public. CSM/CAP to file weekly report with EM
Provision of landscaping, landforms and mounding, top soiling, grass seeding, shrub, tree and other planting.	Loss or damage to existing habitat 36,37			

Table 5.1: Impacts Identification and Mitigation Matrix

- 5.4 Where the above activities are identified as potentially creating a source-receptor-pathway impact model, these activities will be associated with mitigation measures such as those below in **Table 5.2**. When applied, the mitigation will break these links and prevent incidents of pollution, nuisance and non-conformance. The following mitigation should be read in conjunction with **Appendix A** – Appropriate Site Management Practices and **Appendix B** – Summary of Mitigation Measures from the ES.
- 5.5 NB: These will be updated with any conditions arising from the Reserved Matters Application.

Number	Mitigation Measure
1	Appropriate space to be provided for parking and turning of operative, construction and visitor vehicles. Appropriate construction routeing to be set out for construction traffic within a Construction Traffic Routeing Plan
2	Dormice and reptile fatalities will be avoided within the working area through vegetative management including the removal of ground cover ⁷ Hedgerow removal will take place during May. 50m lengths will be cleared each day following a search for dormice and breeding birds by a licenced ecologist. Stump removal will be undertaken immediately after above ground vegetation clearance has been completed. All areas of retained vegetation (hedgerows, scrub and trees) will be clearly marked
3	The Holbury Consultancy Services Ecology Update notes that badger setts were recorded within the area of dense scrub on the Town Park site with a potential clan boundary present on the western boundary. It is currently not clear what the impacts will be to the area of the site where the setts are located. Therefore, construction mitigation is proposed in line with the standard guidelines and the mitigation proposed in the Ecology Chapter, as per condition 6. These are summarised within Method Statement 1 in Appendix F.
4	Where construction site lighting is required, the following measures will be put in place: • Directing lighting to only where it is needed away from the hedgerows and trees. • Through the design of the luminaire by using accessories such as cowls or hoods. • Light sources should emit minimal ultra-violet light, peak higher than 550nm and be of a warm/neutral colour <4,200 kelvin. • Using low pressure sodium lighting with light levels kept as low as practically possible (between 1 and 3 lux). • Restricting the height of the lighting columns to three metres or less.
5	Any spoil heaps to be regularly sprayed and cut with cuttings removed before any significant vegetation can establish
6	Vehicles carrying dusty materials to be suitably covered.

⁷ Semi-improved grassland areas can be cut in the winter period to make them unsuitable for reptiles to dissuade reptiles from entering the area in the spring. If habitat clearance is delayed until the spring, the habitat within the works area will be made unsuitable by strimming the habitat. This will be carried out in temperatures above 10°C when reptiles are more mobile. The cutting of the habitat will be carried out in a two strim cycle with the first cut to 15cm and the second to ground level. This cutting will take place in one direction towards the suitable habitat that is being retained in order to give any reptiles a chance to leave the area

7	Site roads to be swept and sprayed with water to prevent dust nuisance.
8	Activities that have the potential to generate dust to be sited in such a way to minimise dust nuisance to sensitive receptors.
9	Activities found to be generating dust in conditions where dust being spread may affect the public to be stopped, rescheduled or mitigated.
10	All supervisors to be familiar with the provisions of IAQM 'Guidance on the Assessment of Dust from Demolition and Construction'
11	All plant to be fitted with diesel particulate filters.
12	Site vehicles to be preferentially sought to have vertical exhausts to limit surface dust re-suspension.
13	All vehicle drivers to be acquainted with agreed haulage routes selected to minimise any air quality impact arising from additional lorry movements.
14	All supervisors to be familiar with provisions of BS5228, & advised on noise minimisation.
15	Noise levels to be set at the site boundary using the method described within Annex E of BS5228. These will apply during work hours. These are: Monday to Friday - 0800hrs to 18:00hrs Saturday - 08:00hrs to 13:00hrs. Sundays and Bank Holidays - No work on site is permitted Noise levels will be monitored in accordance with the prescribed noise protocol and records will be kept for review. All monitoring will be undertaken by appropriately trained staff using an integrating Type 1 monitor which will be laboratory calibrated on a yearly basis. Any non-conformance will be registered and reported to Winchester.
16	Silencers or mufflers as appropriate to be fitted to plant and machinery.
17	Letter drops to surrounding residential areas to warn of particularly noisy periods of works.
18	Systems of temporary drainage shall be installed to ensure that no polluted surface runoff enters site streams and ditches. Any surface water collected will be directed via treatment before discharge.
19	Any existing surface water drains to be bunded to ensure that no surface water enters them.
20	Where any pesticide use is required, refer to the strict requirements for notification of relevant bodies, secure storage, transportation, use and competences required, as set out in the Landscape Maintenance and Management Plan.
21	Where possible over-site hard standing to be retained & haul routes to be hard surfaced.
22	All vehicles leaving the site where necessary to be subjected to wheel washing.

23	All materials and spoil to be stored on site to be sheeted or damped down as appropriate in dry weather to reduce dust.
24	Stockpiling to be in accordance with best practice as in the Environment Agency's PPG6 (now rescinded) and CIRIA guidance
25	Stockpiles of materials not suitable for on-site re-use to be removed as soon as is practicable in accordance with applicable waste management legislation.
26	Fuels and chemicals to be stored in accordance with the Environment Agency's PPG6 (now rescinded) and CIRIA guidance
27	All tanks and containers to be labelled with nature of contents and total volume secured.
28	Fuel storage and delivery facilities to be on impermeable surface in a secondary containment system.
29	Provision of spill kits at all storage areas & provision of emergency response numbers.
30	Biodegradable hydraulic oil to be used for machinery/plant where possible and all relevant plant to be fitted with drip trays.
31	All deliveries to be supervised and levels of tanks checked before delivery. Locking mechanisms on diesel hoses are not permissible.
32	Stockpiles to be sited so as not be subject to inundation during extreme rainfall events.
33	Contingency plan required for temporary covering of stockpiles during adverse weather conditions.
34	Sorted & screened material to be placed on a prepared clean granular surfacing.
35	Supervisors to be familiar with the provisions of the Environment Agency's PPG6 (now rescinded) and CIRIA Guidance re control of contaminated run off.
36	Strict adherence to Landscape Management Plan and Method Statements.
37	Trees and hedgerows to be retained will be protected in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction and Barrell Manual for managing trees on development sites.

Table 5.2: Mitigation Measures

6 Communication and Coordination

Supervision of Construction Activities

- 6.1 All construction and installation activities, including those carried out by subcontractors and suppliers will be supervised or regularly checked through the completion of site inspections, by the Contractor's Environmental Manager, to ensure that requirements identified in risk assessments or method statements have been implemented. The frequency and extent of this supervision will vary according to the degree of competence displayed by the workforce and the level of risk to the environment. Records of Sub Contractors will be saved within **Appendix K** – Record of Sub-contractors.

Environmental Inspection and Reporting

- 6.2 Client appointed representatives or 'Appropriate Personnel' will carry out regular inspections of the construction area, to verify that housekeeping or supporting controls are being implemented effectively. These inspections will use the site environmental standards (see **Section 3**) as the minimum standards that should be achieved, with necessary actions being recorded and raised at progress meetings. They will also be required to implement and undertake monitoring and review of the Construction Traffic Routing Plans which will be saved in **Appendix I**. Records of inspections can be saved in **Appendix L**.

Environmental Inspection and Reporting

- 6.3 The Contractor's Environmental Manager will carry out regular inspections of the project's environmental performance, based upon site visits and reports from the Clients Appropriate Personnel.
- 6.4 These inspections will be used to confirm that:
- construction works are progressing in accordance with the agreed environmental method statements;
 - agreed protection or mitigation measures are in place, prior to or during the implementation of construction activities; and
 - all mitigation measures in place are appropriately maintained.
- 6.5 Inspections will be carried out at a frequency of no greater than monthly intervals, but could be held more regularly depending on the nature of the construction activity. An assessment of the environmental performance will be made and discussed at progress meetings and inspections will be recorded in **Appendix M**–Record of Inspections by EM.

Environmental Monitoring

- 6.6 Monitoring of noise, vibration, dust and water quality will be carried out in accordance with the specialist environmental procedures and environmental commitments made where required. The Environmental Manager will maintain a register of all formal environmental monitoring within **Appendix N** – Record of Environmental Monitoring.

Control of non-conformance

- 6.7 Non-conforming processes will initiate a Non-Conformance Report, which will identify the nature of the problem, the proposed corrective action, action taken to prevent recurrence of the problem and verification that the agreed actions have been carried out. Records of Non-conformance will be saved within **Appendix O**.

Non Conformance Report
Date:
Issue raised by:
Potential Impact:
Relevant personnel informed: (details)
Corrective action applied: (details)
Supervisor Signature:
Site Manager's Signature:

Table 6.1: Non Conformance Template

Internal Communications

6.8 Internal project communications will be via two processes:

- weekly team meetings; and
- fortnightly progress meetings – to be agreed.

Weekly Team Meetings

6.9 Weekly meetings will be held by the Contractors team to review performance and co-ordinate short-term planning of forthcoming activities. Close review of the CEMP or prior discussion with the Client's Environmental Manager should feed into these meetings to ensure that all planned activities are proceeding in accordance with the permits, conditions, action plans and method statements therein.

Progress Meetings

6.10 Environmental issues will be discussed at progress meetings, attended by the Contractor's Environmental Manager, relevant sub-contractors environmental representatives and when necessary, environment specialists and representatives from Statutory Consultees. The Client's Environmental Manager will report on inspections made and any non-conformances noted as well as discussing the implications of any proposed activities. Minutes of these meetings will be saved within **Appendix P**. Issues to be discussed may include:

- planned actions required to mitigate forthcoming risks;
- disseminate best practice; and
- communications with the public

6.11 Where appropriate, a Project Community Liaison Plan will be established to provide a framework for managing communications with local residents and interested parties.

Audit and Review of Performance

Internal Project Audits

6.12 The Contractor will be required to demonstrate that an appropriate method of auditing the CEMP processes via an internal or external auditing procedure is taking place. Provision of evidence that the agreed auditing procedure has taken place will be a requirement of regular reporting to the Client's Environmental Manager from the Client's 'Appropriate Person' (AP) and meetings between the Contract Manager and the Client's Project Manager. The Contractor's Environmental Manager will be required to provide a report at each progress meeting and a record of these will be saved within **Appendix Q** – Contractor's Progress Report.

- 6.13 The reports will be required to include information on the following issues, where appropriate:

Audit Report	Yes	NO
1. Is all resource management being recorded?		
2. Are any amendments required to the current Construction Traffic Routing Plan?		
3. Is any action planning required to accommodate upcoming works?		
4. What is the current status of the site tree protection?		
5. Have there been any recorded finds or UXB/OXB incidents?		
6. Is the Construction SWMP up to date?		
7. Are any further permits or approvals required?		
8. Has any environmental monitoring taken place? E.g. noise.		
9. Is any update required to the current sub-contractor list?		
10. Have any environmental tool box talks taken place?		
11. Have all new staff been inducted?		
12. Have there been any incidents of Non Conformance?		
13. Have there been any (verbal or written) complaints from nearby residents, Local Authority or the Environment Agency in relation to site activities such as noise, dust, traffic, dirt trucked on roads, or storm water pollution? If yes detail complaints and response to them.		
14. Have there been any incidents on site such as spills, chemicals or fuel? If yes describe what happened and what action has been taken.		
15. Are there any other environmentally related issues to be reported?		

Table 6.2: Example CEMP Audit Report

- 6.14 A Site Waste Management Plan will also be maintained by the contractor with copies provided to the EM at progress meetings. These will be stored in **Appendix R** - Site Waste Management.

DRAWINGS

**APPENDIX A: Grainger Key Performance Indicators and Appropriate Site
Management Techniques**

1. KEY PERFORMANCE INDICATORS

- 1.1 Grainger have indicated the following Key Performance Indicators which they wish to be examined as part of the enabling works:
- Percentage of construction waste by destination (recycled, landfilled, reused).
 - Proportion of recycled materials in new developments.
 - Water consumption at construction sites (litres)
 - Litres of diesel used on development sites
 - Percentage of major sites registered with Considerate Constructors Scheme. (Benchmark: Achieve registration at all major sites).
 - Considerate Constructors Scheme score of registered sites. (Benchmark: Aspire to 32)
- 1.2 The percentage of construction waste by destination and the proportion of recycled materials used will be recorded within the Site Waste Management Plan (See Appendix Q). This will be continuously updated on site and recorded within the CEMP on at least a fortnightly basis.
- 1.3 Water and diesel consumption will be continuously monitored on site and will be recorded within the Resource Management Plans (See Appendix E) of the CEMP on at least a fortnightly basis.
- 1.4 The site must be registered with the Considerate Constructors Scheme and will be assessed by a independent CCS examiner.

1. APPROPRIATE SITE MANAGEMENT PRACTICES

1.1 All site works will be carried out using “best practicable means” (BPM) in order to comply with relevant legislation under the Environmental Protection Act 1990 and the Control of Pollution Act 1974 to prevent statutory nuisance.

1.2 The contractor will ensure that any construction lighting is appropriate for Health and Safety requirements and not intrusive to residents or sensitive site fauna.

1.3 Prior to any works that may have environmental impacts, the relevant Statutory Authorities will be consulted including Winchester City Council and Havant Borough Council as appropriate.

Monitoring

1.4 Where local residents are likely to be affected, good practice working methods that minimise noise, dust, and air pollution impacts will be used at all times.

1.5 The effectiveness of all measures will be monitored frequently by the main contractor and Site Manager and reviewed at least weekly. Officers of the relevant Council departments may be consulted to ensure compliance with relevant legislation.

Publicity

1.6 There will be regular liaison with local residents who may be affected by construction works. Local residents will be informed of the nature of works, proposed hours of work and their expected duration.

1.7 Communication with local residents will include publicity, including the name and telephone number of a main contact. The contact person will be able to give further information to the caller and deal with any complaints or emergencies that may arise periodically. The Council's Environmental Health Department will be notified of any complaints made about the site.

1.8 A site notice board will be provided adjacent to the main site entrance at a point convenient for public access. This will display the following information:

- name, address and telephone number of the Contractor
- out-of-hours contact number in case of emergency
- description of site project
- timetable of works

- commitment to comply with the Council's Code of Practice for site works
- statement that any work at anti-social hours shall be agreed in advance with the Council and communicated to residents by way of a letter drop
- Council contact number in case of complaints

Operation

1.9 Where noise, dust and air pollution are likely to affect local residents the contractor shall be responsible for ensuring that:

- all plant and equipment, including any on hire, is checked to ensure it is in good working order and conforms to the manufacturers' standards. Equipment will be properly silenced and meet statutory emission standards;
- effective methods of work are adopted to prevent dust from becoming airborne at source. As dust is harder to suppress once it has become airborne, careful consideration at the design stage will be required to deal with the enclosure of fixed plant, addition of moisture, or provision of effective exhaust ventilation and filtering;
- measures are taken to protect listed buildings as necessary; and
- prior to the commencement of site works, the workforce will be fully briefed on environmental standards on site through the provision of training. All staff will be made aware of the CEMP and Considerate Constructors Scheme and carry out work to the relevant standards.

2. NOISE MANAGEMENT AND CONTROL

2.1 The hours of work will normally be restricted to the following:-

Monday to Friday	08:00 hrs to 18:00 hrs
Saturday	08:00 hrs to 13:00 hrs
Sunday & Bank Holiday	No work on site except by prior agreement with the local authorities (Winchester City Council)

2.2 Where required noise levels will be set at the site boundary in accordance with a noise protocol. All monitoring will be undertaken by appropriately trained staff using an integrating Type 1 monitor which will be laboratory calibrated on a yearly basis.

2.3 All vehicles and plant arriving at and leaving the site shall comply with the same restrictions on hours. Vehicles shall not be parked off-site in the vicinity outside these hours except in properly designated 'lay up' parking places. The main contractor and Site Manager will ensure that instruction is given to all drivers including those delivering materials or removing waste to and from the site.

2.4 Any work outside of the stipulated hours above will only be carried out on prior approval of Winchester City Council Pollution Control Department. Local residents will also be informed in advance of the proposed activity.

Agreeing Noise Controls in Advance

2.5 A Prior Consent agreement with both Councils will be sought for any substantial or particularly noise-sensitive project. Under Section 61 of the Control of Pollution Act 1974 prior agreement can be reached on noise controls, which prevent the need for formal interventions, which may later be introduced without warning, with associated delays and costs. Noise problems as far as is practical will be anticipated in advance and control measures will be agreed with the local authority to prevent problems later.

Plant and Equipment

2.6 Noisy plant and equipment will be sited as far away as is practicable from sensitive receptors on the eastern boundary. The use of barriers, such as soil mounds, site huts, acoustic sheds and partitions to deflect noise away from noise sensitive areas will be employed wherever practicable. Rapid access to portable acoustic screens such as those specified in British Standard BS5228:1997:Part 1 will be provided.

2.7 Where necessary to control noise, hoardings may be provided. These aid with egress of noise and dust. Hoarding may take the form of existing buildings, security hoards, or

purpose built noise screens. Specific noise reduction hoarding is available where noise impact is a particular issue, or effective hoarding can be constructed on site from two sheets of 12mmmm board filled with a sound absorbing material such Rockwool.

- 2.8 Effective screening/hoarding must be appropriately sited between the noise source and the potential receptor, contain no holes and ensure that the screening material overlaps with minimal gaps.
- 2.9 Wherever practicable all plant and machinery will be powered by mains electricity in preference to locally powered sources such as diesel generators. Hand tools will be electrically powered rather than diesel or petrol driven where practicable.
- 2.10 All plant and machinery will comply with relevant statutory and manufactures' requirements. Vehicles and plant used for the purpose of the works will be fitted with effective exhaust silencers, maintained in good and efficient working order and operated to minimise noise emissions.
- 2.11 Machinery in intermittent use will be shut down in the intervening periods between work or throttled down to a minimum. Noise emitting equipment required to run continuously e.g. generators, will be housed in suitable noise reducing enclosures.
- 2.12 Where potentially noisy operations such as piling is required, the least intrusive method in terms of noise and vibration will be selected.
- 2.13 Only "sound reduced" compressors shall be used. Models will be fitted with properly lined and sealed acoustic covers that shall be kept closed whenever the machinery is in use.
- 2.14 Pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers. Equipment that breaks concrete, brickwork or masonry by bending or by bursting shall be used in preference to percussive tools as far as practicable.
- 2.15 Where practicable rotary drills bursters actuated by hydraulic, chemical or electrical power will be used for excavating hard or extrusive materials.
- 2.16 Plant will be maintained in good working order so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.
- 2.17 Care will be taken when loading or unloading vehicles, or moving materials etc to reduce noise impact.

3. DUST MANAGEMENT AND CONTROL

- 3.1 In assessing the need for dust control measures regard shall be paid to:
- the nature of works
 - proximity of dust sensitive receptors (e.g. houses, specific crops, utilities)
 - effects on the general public and road user
- 3.2 Where necessary methods of dust prevention will be agreed with the Pollution Control Department of Winchester City Council in advance of works starting on site.
- 3.3 A mains water supply will be available on site from commencement of works. Watering down of the area will be carried out whenever dry or windy conditions pose a risk of dust blowing off site, affecting neighbouring occupied properties.
- 3.4 The choice of plant and equipment and the method of work will reflect the necessity to employ “best practicable means” (BPM).
- 3.5 Where adequate dust control cannot be achieved by the choice of appropriate plant, equipment and work method the most common means of dust suppression using water and/or containment by screening and enclosure will be adopted.
- 3.6 Water suppression of dust will be employed for operations such as cutting or sandblasting of stone or concrete as well as in more general applications where dampening will prevent wind whipping of dust from stockpiles and operational areas of the site, or from demolition.
- 3.7 Where dust is likely to be a persistent problem water spray systems will be available from the commencement of works. The use of these systems will be applied in operations such as demolition and soil removal during construction.
- 3.8 Finely divided materials such as sand and cement products will be stored where practicable under cover or in sealed containers. In some circumstances screening or enclosure may be required in addition to water suppression.
- 3.9 As far as practical constraints will allow, obvious sources of dust such as spillages of finely divided materials will be removed using a wet cleaning technique.
- 3.10 The importance of cleaning will be applied to internal roads and the highway which may become coated with dust from other operations and can become a secondary source of dust emissions.

- 3.11 A speed limit will be applied to vehicles operating on the Site during dry conditions.
- 3.12 Easily cleaned hard-standing areas will be provided within the site for vehicles entering, parking and leaving.
- 3.13 Wheel washing facilities adjacent to the egress points used by vehicles leaving the site will be provided.
- 3.14 Personnel and mechanical road sweepers will be used to clean the hard-standing area and to clean any mud or debris deposited by works vehicles on internal roads and the public highway in the vicinity of the site.
- 3.15 All vehicles carrying potentially dusty materials (skips and removal vehicles) to or from the site will be required to be fully sheeted on the public highway. Watering of any rubble chutes shall be undertaken whenever necessary to prevent excessive dust emissions. Chutes will be fitted with a 'sock' enclosing the discharge into the skip or truck. Socks will be maintained in position at all times when the chutes are in use.
- 3.16 Any plant used for crushing of materials must have a permit, issued by the appropriate local authority (Winchester City Council) under the Pollution Prevention and Control Regulations 2000 (prescribed processes). All works will be carried out in accordance with the conditions of such a permit. Plant used to recycle materials will require a permit/licence from the Environment Agency. The relevant Regulatory Authority will be notified prior to the equipment being brought on site.
- 3.17 Water bowsers will be provided for use in suppressing surface dust generated from unpaved roads or other sources during periods of dry weather, use of sprinklers and water carts, and re-vegetation of stockpiles will be applied where appropriate.
- 3.18 Materials and storage/stockpiling areas will be located away from sensitive locations, such as residential properties, as far as reasonably practicable. Stockpiles will be screened or bunded where practicable. Stockpiles of all potentially dusty materials shall be damped down or covered to prevent emissions of dust from the site. Stockpile sites will be planned, sited and profiled to minimise the potential for dust generation. Handling of material should be kept to a minimum and when deposited onto a stockpile it should be dropped from the minimum possible height.
- 3.19 Particularly dusty activities such as soil stripping will be carried out in suitable weather conditions when practical (i.e. when the ground is damp and during periods of low wind speed) to minimise dust impact on receptors.
- 3.20 Care will be taken to control dust arising from the waste or recycled materials being deposited, handled, processed and stored on the Site.

- 3.21 Monitoring of dust by means of a daily site walk-over will be carried out to inspect the perimeter and check for dust deposition on fencing and any trees close to the edge of the area of the site being worked on. A daily inspection of the local area will also be carried out to check for any evidence of excessive levels of dust deposition that may be a result of the construction site activities. This will confirm the effectiveness of adopted dust management procedures and allow any problems to be identified so that remedial action can be employed as necessary.
- 3.22 Operations will be monitored and if necessary stopped in particularly dry and windy weather conditions when the dust control measures are proving to be ineffective'.
- 3.23 Although dust will occur from site activities, this is likely to have a minimal and temporary impact on the surrounding environment if appropriate mitigation is applied. The use of best practice to control dust during construction activities is normally sufficient to avoid any unacceptable problems occurring. Provided the proposed dust management measures are properly implemented, dust will be controlled to an acceptable level.

4. CONTROL OF SMOKE AND EMISSIONS

- 4.1 Smoke can be considered to constitute a Statutory Nuisance under the Environmental Protection Act 1990 if it affects the occupiers of other properties. The emission of dark smoke from industrial or trading premises (including construction sites) constitutes an offence under the Clean Air Act 1993. The lighting of fires on site shall not be permitted and waste will be disposed of under the conditions set out in a Site Waste Management Plan (SWMP).
- 4.2 If timber has been confirmed diseased, burning of the material shall only occur after the local authority has been informed in writing and permission to burn on site has been granted.
- 4.3 All necessary precautions will be taken to prevent emissions of smoke and fumes from site plant / equipment or stored fuel oils. Plant will be well maintained and measures will be taken to ensure that it is shut down in intervening periods between work or throttled down to a minimum.

5. CONSTRUCTION LIGHTING

5.1 Where required, construction lighting will be provided. This can provide a deterrent to vandals and thieves and allow late/early working where authorised, but may also cause a nuisance to local residents. Therefore, when planning and designing a lighting compound the following must be considered:

- Directing lighting to only where it is needed away from the hedgerows and trees;
- Through the design of the luminaire by using accessories such as cowls or hoods;
- Light sources should emit minimal ultra-violet light, peak higher than 550nm and be of a warm/neutral colour <4,200 kelvin.
- Using low pressure sodium lighting with light levels kept as low as practically possible (between 1 and 3 lux); and
- Restricting the height of the lighting columns to three metres or less.

6. WASTE MANAGEMENT

- 6.1 A Site Waste Management Plan will be maintained throughout the works. All major waste streams that will be generated during the Contract will be identified including;
- green waste
 - construction waste, including;
 - spoil
 - demolition waste
 - asphalt or bitumen
 - concrete and metal
 - chemical and paints
 - office waste
 - kitchen waste
 - sewage effluent;
- 6.2 For each waste stream how and where the waste is to be reused, recycled, stockpiled or disposed of will be identified
- 6.3 Waste generated from site activities will be sorted and amounts estimated and recorded.
- 6.4 Where available, waste suitable for reuse or recycling will be reused or recycled.
- 6.5 Materials and products with recycled content will be proposed for the works wherever these are cost and performance competitive and they are environmentally preferable to the non-recycled alternative.
- 6.6 Waste oil will be sent to approved recyclers where appropriate.
- 6.7 Waste and containers not able to be recycled will be disposed of at a licensed landfill site.
- 6.8 No construction waste material will be left on site once the site works have been completed.
- 6.9 The site will be left in a clean and tidy state on completion of the site works.
- 6.10 How the waste will be transported between the site and point of reuse, recycling, stockpiling, treating or disposal and who will be responsible will be identified.

APPENDIX B: Summary of Mitigation Measures from the Environmental Statement

The following is the Summary of Impacts Table for the construction phase, taken from the Environmental Statement. It sets out a summary of the impacts and the mitigation measures that have been identified for each of the environmental issues during construction across the whole of the site, in order to minimise any potential adverse significant impacts and enhance beneficial impacts.

Table 17.1: Summary of Impacts and Mitigation

Construction Phase

ENVIRONMENTAL TOPIC	SIGNIFICANCE OF POTENTIAL EFFECT		PROPOSED INHERENT MITIGATION	PROPOSED ADDITIONAL MITIGATION	SIGNIFICANCE OF RESIDUAL EFFECT	
	POTENTIAL EFFECT BEFORE MITIGATION	SUBSTANTIAL, MAJOR, MODERATE, MINOR, NEGLIGIBLE			SUBSTANTIAL, MAJOR, MODERATE, MINOR, NEGLIGIBLE	ADVERSE, BENEFICIAL, NEUTRAL
SOCIO-ECONOMIC AND COMMUNITY						
Impact on Housing and subsequent population	Major	Beneficial	None Required	None Required	Major	Beneficial
Economy and Employment	Moderate	Beneficial	Construction process would include the creation of a range of occupational levels providing employment.	None Required	Moderate	Beneficial
Health and Wellbeing	Negligible	Neutral	Production and implementation of the Construction Environmental Management Plan (CEMP) to minimise any risks to health.	None required	Negligible	Neutral
GROUND CONDITIONS, HYDROLOGY AND HYDROGEOLOGY						
Land/Water Contamination by intrusive works resulting in potential contamination or release of contaminants	Negligible	Adverse	None Proposed	Use of a CEMP. By employing appropriate site management practices, the potential for contamination of land and controlled waters from site plant and activities during the works can be minimised	Negligible	Neutral

Surface and Groundwater pollution from general construction activities	Negligible	Adverse	None Proposed	Use of a CEMP. By employing appropriate site management practices, the potential for contamination of land and controlled waters from site plant and activities during the works can be minimised	Negligible	Neutral
Unexploded Ordnance	Substantial	Adverse	None Proposed	Detailed proposals in CEMP and Table 7.8 including site safety induction and clearance certification	Negligible	Neutral
Existing ground conditions including risk to buried structures from chemicals in the ground	Minor to Moderate	Adverse	None Proposed	Materials encountered should be suitable for excavation using conventional earth moving equipment; nevertheless for ongoing construction more detailed site specific surveys are recommended. In addition, buried concrete should be designed to resist the effects of known concentrations of contaminants	Negligible	Neutral
Existing ground conditions – high potential compressibility which affect the foundation structures	Minor to Substantial	Adverse	None Proposed	Adopt a piled foundation solution to improve the load carrying capacities of the near surface soils, or soil stabilisation using either lime or cement additives with recommendations in line with those set out in the Geotechnical Report (Appendix 7.1) or use suspended floor slabs	Negligible	Neutral
Soil gas contamination	Minor	Adverse	Incorporation of damp proof membrane in accordance with best practice construction	Further detailed assessment in areas of made ground and provision of specific gas protection solutions where required	Negligible	Neutral
ARCHAEOLOGY & CULTURAL HERITAGE						
Plant Farm Farmhouse	Major	Beneficial	Repair and restore listed buildings	None (historic building record already completed)	Major	Beneficial
The setting of Plant Farm Farmhouse	Moderate	Adverse	Proposed development to be set back from Plant Farm	None (historic building record already completed)	Minor	Adverse
Tithe Barn at Plant Farm	Major	Beneficial	Repair and restore listed buildings	None (historic building record already completed)	Major	Beneficial
Modern Farm buildings at Plant Farm	Minor/Moderate	Adverse	Demolition of modern buildings	None (historic building record already completed)	Negligible	Beneficial

St John's Conservation Area	Negligible	Neutral	None Proposed	None Required	Negligible	Neutral
Heritage sites 3 to 8	Negligible	Neutral	N/A	Publication of excavation results	Minor	Beneficial
Heritage sites 9 to 13, 16 & 18	Minor/Moderate	Adverse	N/A	Archaeological investigation and recording	Minor	Beneficial
Historic landscape	Minor/Negligible	Adverse	Field boundaries and other topographic features retained	None Required	Minor/Negligible	Adverse
Heritage sites 14, 15 & 17	Negligible	Neutral	Open Space	None Required	Negligible	Neutral
BIODIVERSITY						
Woodland (including all woodland SINCs) – very small area of habitat loss and fragmentation. Impact on associated fauna	Minor (Significant at a Local scale)	Adverse	Scheme designed to avoid majority of woodland	Occurs doing operation phase – see below	Minor (Significant at a Local scale)	Adverse
Hedgerows – small net loss of hedgerow habitat	Minor (Significant at the Parish scale)	Adverse	Scheme designed to avoid majority of hedgerows	Occurs doing operation phase – see below	Minor (Significant at the Parish scale)	Adverse
Wildflower grassland – small area of species-poor semi-improved grassland would be lost	Minor (Significant at a Local scale)	Adverse	None Proposed	Occurs doing operation phase – see below	Minor (Significant at a Local scale)	Adverse
Water features (ponds and watercourses) – river restoration and SuDS installation would adversely impact on existing fauna and flora. Also potential for pollution incidents.	Moderate (Significant at the District scale)	Adverse	None Proposed	Adherence to EA pollution prevention guidance	Negligible	Neutral
Badgers – potential for sett destruction/ disturbance possibly resulting in fatalities	Minor (Significant at a Local scale)	Adverse	Scheme designed to avoid setts and best habitat	Careful timing of works, exclusion zones around setts, trench provisions to prevent Badgers becoming trapped etc.	Negligible	Neutral
Otters - temporary displacement from small sub-optimal section of home range unlikely to be important.	Negligible	Neutral	None Proposed	Adherence to EA pollution prevention guidance	Negligible	Neutral
Dormice - small risk of fatalities if unmitigated.	Minor (Significant at a Local scale)	Adverse	Scheme designed to avoid majority of woodland	Careful timing of works to avoid direct fatalities	Negligible Significant Within	Adverse

				Most mitigation during operation.	Immediate Zone of Influence	
Bats - loss of several small roosts at Plant Farm	Minor (Significant at a Local scale)	Adverse		Mostly during operation. Careful timing and supervision of demolition and tree felling works to prevent direct loss of bats	Minor (Significant at a Local scale)	Adverse
Great Crested Newts - potential for fatalities during construction	Minor (Significant at a Local scale)	Adverse	Scheme designed to avoid ponds and majority of sensitive terrestrial habitat	Careful timing of works to avoid direct fatalities	Negligible	Neutral
Reptiles - potential for fatalities during habitat loss and disruption	Minor (Significant at a Local scale)	Adverse	Scheme designed to avoid majority of sensitive habitat	Translocation/habitat modification/destructive searches	Negligible	Neutral
Breeding birds - potential for nest and egg losses and aborted breeding attempts due to disturbance. Loss of open arable habitat favoured by arable specialists.	Minor (Significant at a Local scale)	Adverse	Scheme designed to avoid majority of sensitive habitat	Avoidance of nests when being built or containing eggs or young in compliance with legal requirements.	Negligible	Adverse
Wintering waterfowl - construction loss/ displacement of much of existing, but limited, wintering waterfowl population. (no Brent Geese seen in 4 years)	Minor (Significant at the scale of the Site and its zone of influence)	Adverse	None Proposed	Should Brent Geese return suitable habitat still available in Brent Goose Compensation Lands; but Lapwing likely to be displaced permanently	Minor (Significant at the scale of the Site and its zone of influence)	Adverse
Fish - loss/displacement of existing fish population	Minor (Significant adverse effect at the scale of the Site and its zone of influence)	Adverse	Work phased so time for existing fish population to adapt to changes	Techniques to ensure aquatic continuity through construction and avoid pollution events. Phased works would give fish population time to adapt	Negligible	Neutral
Invertebrates -loss/ displacement of existing aquatic invertebrate populations of ditches etc, though key populations in ponds not affected	Minor (Significant at a the scale of the Site and its zone of influence)	Adverse	Phased development would give invertebrates time to adapt to changing conditions.	Mitigation mostly during operation	Minor (Significant at a the scale of the Site and its zone of influence)	Adverse
LANDSCAPE AND VISUAL IMPACT						
Landscape character adjacent to site – LCA4 Waterloo Business	Negligible	Adverse	N/A	N/A	Negligible	Adverse

Park character area (HBC)						
Landscape character adjacent to site – LCA6 Purbrook character area (HBC)	Nil - Minor	Adverse		N/A	Nil - Minor	Adverse
Landscape character adjacent to site – LCA18 Forest of Bere Lowlands character area (WCC)	Minor	Adverse	N/A	N/A	Minor	Adverse
Landscape character within site- – LCA18 Forest of Bere Lowlands character area (WCC)	Minor - Moderate	Adverse	N/A	N/A	Minor - Moderate	Adverse
Landscape features – existing landform	Negligible	Adverse	Development layout follows landform, thus minimising earthworks.	N/A	Negligible	Adverse
Landscape features – existing ponds	Nil	-	Assumes existing ponds retained and protected during construction.	N/A	Nil	-
Landscape features – River Wallington	Nil	-	N/A	N/A	Nil	-
Landscape features – existing woodland	Minor	Adverse	Assumes existing woodland retained and protected during construction except at a small number of areas where proposed development necessitates its removal.	N/A	Minor	Adverse
Landscape features – hedgerows	Minor	Adverse	Assumes hedgerows to be retained will be protected during construction Adverse effects due to the necessary removal of hedgerows to facilitate development.	N/A	Minor	Adverse
Landscape features – arable land	Minor	Adverse	N/A	N/A	Minor	Adverse
Landscape features – public access	Minor	Adverse	Assumes existing footpaths will be retained as long as possible, but some closures/diversions will be necessary.	N/A	Minor	Adverse
Visual amenity from the south (including Portsdown Hill)	Negligible - Minor	Adverse	N/A	N/A	Negligible - Minor	Adverse
Visual amenity from the west (including Newlands and Cutlers Farms and Newlands Lane)	Minor - Moderate	Adverse	N/A	N/A	Minor - Moderate	Adverse

Visual amenity - from the north (including Taylor Wimpey site, Brambles Farm Industrial Estate, Closewood Rd, Closewood Farm & footpaths)	Negligible - Moderate	Adverse	N/A	N/A	Negligible - Moderate	Adverse
Visual amenity - from the east (London Rd, Forest End, Purbrook Gardens, Maurepas Way)	Negligible – Moderate	Adverse	N/A	N/A	Negligible – Moderate	Adverse
Visual amenity - from within the site	Minor - Substantial	Adverse	N/A	N/A	Minor - Substantial	Adverse
TRAFFIC & TRANSPORT						
Construction Traffic	Impacts are dealt with under Air Quality and Noise and Vibration		Connection to strategic highway network	Construction traffic management plan including commitments on HGV routes to minimise impact in residential areas	Impacts are dealt with under Air Quality and Noise and Vibration	
AIR QUALITY						
Generation of airborne fumes and dusts from general construction activities	Negligible to moderate (depending on sensitivity of the receptor)	Neutral to adverse	Construction phasing	Examples of measures to control air quality impacts from construction through CEMP. • Routine monitoring of dust at the site boundary and sensitive receptors • Spraying of areas with water in order to reduce dust generation, as and when conditions dictate • A road sweeper to be readily available whenever the need for road cleaning arises • Vehicles carrying waste material off-site to be sheeted • Under no circumstances should fires be allowed on sit • Special provisions will apply for any materials containing asbestos. The safety method statement should	Negligible to minor (depending on sensitivity of the receptor)	Neutral to adverse

				outline the control measures necessary to minimise the risks to an acceptable level and all statutory notices will be placed with the Health and Safety Executive (HSE) Effective wheel/body washing facilities to be provided and used as necessary		
Increase in local pollutant levels (smoke/fumes) from road haulage vehicles (and potentially as a result of slow moving traffic, should local congestion ensue)	Negligible to moderate (depending on sensitivity of the receptor)	Neutral to adverse	Construction phasing	Proposed minimal impact construction routes	Negligible to minor	Neutral to adverse
NOISE & VIBRATION						
Increase in local noise and vibration levels from road haulage vehicles	Negligible to moderate	Neutral to adverse	Construction phasing	Proposed minimal impact construction routes	Negligible to minor	Neutral to adverse
Generation of noise and vibration from construction plant.	Minor to Moderate	Adverse	Construction phasing	All contractors and sub contractors will be required to go beyond best practice site management principles as defined by the Considerate Constructors scheme. The following are examples of measures to control noise and vibration impacts from construction which can be adopted within a CEMP: - choice of methodologies to minimise generation of noise and vibration, for example the use of cutting rather than breaking in order to reduce the transfer of vibration; - setting of 'Action Levels' for noise and vibration based upon: - specific receptor locations;	Negligible to Minor	Neutral to Adverse

				○ source and type of impact; ○ baseline measurements taken; and ○ guidance levels set out in the Magnitude of Impact section; ● routine monitoring of noise and vibration at the site boundary and sensitive receptors; ● use of hoardings for as long as practicable to provide acoustic screening; ● requirement for engines to be switched off on-site when not in use; ● use of quieter plant; ● regular plant maintenance; and ● screening of plant (if appropriate).		
WASTE DISPOSAL & RECYCLING						
Disposal of earthworks	Minor to Moderate	Adverse	None Proposed	Use of Lime stabilisation to minimise excavation & retain surplus earthworks material on site	Minor	Adverse
Generation of demolition waste	Minor to Moderate	Adverse	None Proposed	Retain and re-use as many existing farm structures as is practical	Minor	Adverse
Generation of construction waste	Minor to Moderate	Adverse	None Proposed	Sign up to BRE SMARTWaste scheme	Minor	Adverse
Wastage of material	Minor to Moderate	Adverse	None Proposed	Implement effective Site Waste Management Plans (SWMP) Maximise the use of materials from recycled and reclaimed sources Use of standard sizes and elements to reduce wastage through cutting of materials on site	Minor	Adverse

Transport to licensed tips	Minor to Moderate	Adverse	None Proposed	Skips to be covered in transit and reduction in quantity through above measures as per SWMP	Minor	Adverse
General waste production by operatives	Minor to Negligible	Adverse	None Proposed	Use of temporary litter and recycling bins as per SWMP	Negligible	Adverse
SERVICE SUPPLIES						
Noise, vibration and dust generating activities in close proximity to potentially sensitive receptors during works associated with the provision or alteration of services	Minor	Adverse	None Proposed	Noise and air quality impact from the utilities trenching, laying and reinstatement works will be mitigated by employing appropriate site management practices within a CEMP	Negligible	Adverse
The laying of utilities underground requires clear working space. Clearance of vegetation including trees and shrubs, which may impact on local wildlife	Minor	Adverse	None Proposed	Avoid ecologically sensitive areas wherever possible. Where such avoidance is not possible, the works shall be undertaken so as to minimise damage by avoiding identified wildlife and high value trees	Negligible	Adverse
Potential for disturbance of Archaeology	Minor	Adverse	None Proposed	All sensitive routes with archaeological potential to be reviewed by the archaeologist prior to works commencing	Negligible	Adverse

APPENDIX C: Conditions
[to be inserted by contractor]

APPENDIX D: Permits and Approvals [to be inserted by contractor]

APPENDIX E: Resource Management Plans [to be inserted by contractor]

**APPENDIX F: Environmental Method Statements/Action and Management
Plans**

Method Statement 1

Control of death or disturbance of in-situ sheltering or foraging fauna and protected flora.

Site Address:

Compound Off Plant Farm Crescent
Berewood
Waterlooville

Completed by:

Andrea Hughes – Town Park Phase B Construction Environmental Management Plan Author

This Method Statement should be read in conjunction with the Lindsay Carrington Ecological Appraisal Phase 2 Surveys¹.

Risk Activities/Tasks
Establishment of site compound, access and associated compound features. Provision of landscaping, park furniture and play elements. Construction of SuDS features and ponds, reprofiling of pond and provision of surface water connections. Top soiling, grass seeding and shrub and tree planting where required.

Actions Required
• Appropriate space to be provided for parking and turning of operative, construction and visitor vehicles. Appropriate construction routeing to be set out for construction traffic within a Construction Traffic Management Plan; • Harm to individual dormice to be avoided via clearance of the hedgerows in stages with no greater than 50m of vegetation cleared during each phase. Clearance works may only be undertaken in May or the Autumn (September/October). The ecological clerk of works will undertake a thorough check for dormice prior to clearance;

¹ Jones, L. (2018) *Ecological Appraisal and Phase 2 Surveys, Berewood Waterlooville, Hampshire PO7 7PS*. Wareham Lindsay Carrington Ecological Services.

- Dormice boxes will be erected within the areas of hedgerows away from the works area, any dormice nests encounter during the works will be relocated to these.
- All works should be undertaken within daylight hours;
- All workers on site will be briefed before works commence and made aware of the potential presence of dormice within hedges;
- If dormice are encountered during these works, despite the mitigation procedures, works will stop and a licence application submitted;
- Semi-improved grassland areas can be cut in the winter period to make them unsuitable for reptiles to dissuade reptiles from entering the area in the spring. If habitat clearance is delayed until the spring, the habitat within the works area will be made unsuitable by strimming the habitat. This will be carried out in temperatures above 10°C when reptiles are more mobile. The cutting of the habitat will be carried out in a two strim cycle with the first cut to 15cm and the second to ground level. This cutting will take place in one direction towards the suitable habitat that is being retained in order to give any reptiles a chance to leave the area
- All arisings from the cutting and clearance will be immediately removed from the works area to prevent any reptiles sheltering within it;
- The habitat within the works area will then be maintained at a short sward height to discourage reptiles from entering the works area;
- Any spoil piles, log piles or tree root systems that need to be removed should be dismantled or excavated carefully during weather greater than 10°C during the time when reptiles are active, March to October, to avoid disturbing any hibernating reptiles;
- Materials and any arisings, such as rubble from demolition, will be kept off the ground through the use of skips or pallets.
- The clearance of any hedgerows, scrub, scattered trees, woodland and semi-improved grassland should where possible be undertaken outside of the bird nesting season, this is considered to extend from the 1st March to the 31st August, or if this is not possible, must be done under the supervision of an ecologist to ensure that nesting birds are not harmed. Where nesting birds are encountered, clearance and/or demolition must be postponed until the nestlings have fledged.

- Where necessary, ploughing of ground to take place prior to nesting season to discourage ground nesting birds and vegetation shall be kept short thereafter until works are completed;
 - Any spoil heaps to be regularly sprayed and cut with cuttings removed before any significant vegetation can establish;
 - Install fencing in areas where it is important to exclude badgers for safety reasons e.g. fuel storage areas;
 - Locate any topsoil / material piles well away from identified badger activity and check on a daily basis for badger activity;
 - Temporarily fence any piles of material that are to be on site for a significant period of time to prevent badgers from accessing the fresh soil.
 - Minimise night-working to avoid disturbance to badgers, and cease works in proximity to active setts at least two hours before sunset;
 - Where possible excavations should not be left open overnight. However, if excavations are left open at night, then an earth / wooden ramps must be installed to allow any animals that fall in to escape. Work areas would be checked daily to ensure no animals are trapped;
 - Cap any pipes over-night on site to avoid animals becoming trapped; and
 - Trees and hedgerows to be retained will be protected in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction and the Barrell Manual for Managing Trees on Development Sites.
-
- See Method statement 2 re control of construction lighting to be observed;
 - See Method statement 3 re control of dust to be observed; and
 - See Method statement 4 re control of noise to be observed.

Method Statement 2

Control of lighting impacts upon bats and other nocturnal species

Site Address:

Compound Off Plant Farm Crescent
Berewood
Waterlooville

Completed by:

Andrea Hughes – Town Park Phase B Construction Environmental Management Plan Author

This Method Statement should be read in conjunction with the Lindsay Carrington Ecological Appraisal Phase 2 Surveys¹.

Risk Activities/Tasks
Establishment of site compound, access and associated compound features. Provision of landscaping, park furniture and play elements. Construction of SuDS features and ponds, reprofiling of pond and provision of surface water connections. Top soiling, grass seeding and shrub and tree planting where required.

Actions Required
Where lighting is installed for security or construction purposes, site ecologists must be consulted and the following measures must be applied: • Direct lighting to only where it is needed away from the hedgerows and trees; • Minimise light pollution via accessories such as cowls or hoods; • Light sources should emit minimal ultra-violet light, peak higher than 550nm and be of a warm/neutral colour <4,200 kelvin; • Light sources must use low pressure sodium lighting with light levels kept as low as practically possible (between 1 and 3 lux); and • Restricting the height of the lighting columns to three metres or less.

¹ Jones, L. (2018) *Ecological Appraisal and Phase 2 Surveys, Berewood Waterlooville, Hampshire PO7 7PS*. Wareham Lindsay Carrington Ecological Services.

Method Statement 3

Creation of dust impacting on-site and off-site personnel and flora and fauna

Site Address:

Compound Off Plant Farm Crescent
Berewood
Waterlooville

Completed by:

Andrea Hughes – Town Park Phase B Construction Environmental Management Plan Author

Risk Activities/Tasks
Establishment of site compound, access and associated compound features. Provision of landscaping, park furniture and play elements. Construction of SuDS features and ponds, reprofiling of pond and provision of surface water connections. Top soiling, grass seeding and shrub and tree planting where required.

Actions Required
• Appropriate space to be provided for parking and turning of operative, construction and visitor vehicles. Appropriate construction routeing to be set out for construction traffic within a Construction Traffic Management Plan; • Vehicles carrying dusty materials to be suitably covered. See Appendix 1 Section 3 of CEMP; • Site roads to be swept and sprayed with water to prevent dust nuisance; • Recycling activities that have the potential to generate dust (e.g. concrete crushers) to be sited in such a way to minimise dust nuisance to sensitive receptors; • Activities found to be generating dust in conditions where dust being spread may affect the public to be stopped, rescheduled or mitigated; • All supervisors to be familiar with the provisions of IAQM 'Guidance on the Assessment of Dust from Demolition and Construction'; • All plant to be fitted with diesel particulate filters; • Site vehicles to be preferentially sought to have vertical exhausts to limit surface dust re-suspension; • All vehicles leaving the site to be subjected to wheel washing where necessary; • All materials and spoil to be stored on site to be sheeted or damped down as appropriate in dry weather to reduce dust;

- Stockpiling to be in accordance with CIRIA 'Environmental good practice guide on site (4th edition); and
- Stockpiles of materials not suitable for on-site re-use to be removed as soon as is practicable in accordance with applicable waste management legislation.

Method Statement 4

Control of noise impacts upon on-site and off-site personnel

Site Address:

Plant Farm
Off Plant Farm Crescent
Berewood
Waterlooville

Completed by:

Andrea Hughes – Town Park Phase B Construction Environmental Management Plan Author

Risk Activities/Tasks
Establishment of site compound, access and associated compound features. Provision of landscaping, park furniture and play elements. Construction of SuDS features and ponds, reprofiling of pond and provision of surface water connections. Top soiling, grass seeding and shrub and tree planting where required.

Actions Required
• Appended noise protocol to be adhered to; • Appropriate space to be provided for parking and turning of operative, construction and visitor vehicles. Appropriate construction routeing to be set out for construction traffic within a Construction Traffic Management Plan; • All vehicle drivers to be advised of agreed haulage routes selected to minimise any noise impact arising from additional lorry movements within a Delivery Plan; • Noise levels to be set at the site boundaries using the method described within Annex E of BS5228. These will apply during work hours of: Monday to Friday - 0800hrs to 18:00hrs Saturday - 08:00hrs to 13:00hrs. Sundays and Public Holidays - No work on site is permitted • Noise levels to be monitored in accordance with the noise protocol and records will be kept for review. All monitoring will be undertaken by appropriately trained staff using an integrating Type 1 monitor which will be laboratory calibrated on a yearly basis. Any non-conformance will be registered and reported to Winchester City Council; • Silencers or mufflers as appropriate to be fitted to plant and machinery;

- A Prior Consent agreement with Winchester City Council will be sought for any substantial or particularly noise-sensitive project. Under Section 61 of the Control of Pollution Act 1974 prior agreement can be reached on noise controls, which prevent the need for formal interventions, which may later be introduced without warning, with associated delays and costs. Noise problems as far as is practical will be anticipated in advance and control measures will be agreed with the local authority to prevent problems later;
- Noisy plant and equipment will be sited as far away as is practicable from sensitive receptors such as those on Plant Farm Crescent. The use of barriers, such as soil mounds, site huts, acoustic sheds and partitions to deflect noise away from noise sensitive areas will be employed wherever practicable. Rapid access to portable acoustic screens such as those specified in British Standard BS5228:1997:Part 1 will be provided;
- Where necessary to control noise, hoardings may be provided. Hoarding may take the form of security hoards, or purpose built noise screens. Specific noise reduction hoarding is available where noise impact becomes a particular issue, or effective hoarding can be constructed on site from two sheets of 12mmmm board filled with a sound absorbing material such Rockwool;
- Effective screening/hoarding will be appropriately sited between the noise source and the potential receptor, contain no holes and ensure that the screening material overlaps with minimal gaps;
- All plant and machinery will comply with relevant statutory and manufactures' requirements. Vehicles and plant used for the purpose of the works will be fitted with effective exhaust silencers, maintained in good and efficient working order and operated to minimise noise emissions;
- Machinery in intermittent use will be shut down in the intervening periods between work or throttled down to a minimum. Noise emitting equipment required to run continuously e.g. generators, will be housed in suitable noise reducing enclosures;
- Only "sound reduced" compressors shall be used. Models will be fitted with properly lined and sealed acoustic covers that shall be kept closed whenever the machinery is in use;
- Pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers. Equipment that breaks concrete, brickwork or masonry by bending or by bursting shall be used in preference to percussive tools as far as practicable;
- Where practicable rotary drills bursters actuated by hydraulic, chemical or electrical power will be used for excavating hard or extrusive materials;
- Plant will be maintained in good working order so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum; and
- Care will be taken when loading or unloading vehicles, or moving materials etc to reduce noise impact.

Noise Monitoring Protocol

Introduction

- 1.1 The contractor shall commit to provide and adhere to all of the noise mitigation measures set out within the Construction Environmental Management Plan (CEMP) and within the method statement above during the Town Park Phase 2 works. This includes the provision of this noise monitoring protocol which sets out the construction noise monitoring programme which will be undertaken during the period of works.

Construction Noise Criteria

- 1.1 Construction activities have the potential to cause noise disturbance to both commercial and academic uses in the vicinity of the site.
- 1.2 For this type of development, it is considered likely that the potential impact of construction noise will be most appropriately assessed by reference to fixed noise limits, as promoted in Annex E.2 of BS 5228-1: 2009 +A1:2014: *Code of Practice for Noise and Vibration Control on Construction and Open Sites - Part 1: Noise*. This states:

"Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut. [...] Noise levels, between say 07.00 and 19.00 hours, outside the nearest window of the occupied room closest to the site boundary should not exceed:

- *70 decibels (dBA) in rural, suburban and urban areas away from main road traffic and industrial noise;*
- *75 decibels (dBA) in urban areas near main roads in heavy industrial areas."*

- 1.3 Receptors around the access works are generally located away from main roads and/ or screened from noise by the interposed massing of buildings, a value of 70 dB $L_{Aeq,10hours}$ is considered to represent an appropriate SOAEL for construction noise.
- 1.4 The LOAEL for construction noise is routinely taken to be 55 dB $L_{Aeq, 10hours}$, being numerically aligned with the upper guideline value for daytime noise level determined WHO/ BS 8233: 2014 guidance for external amenity areas.
- 1.5 Whilst construction noise will be "temporary", the effect of such noise will also be influenced by the duration of the works, i.e. the greater the period of noise exposure, the greater the potential impact on neighbouring receptors. Based on advice given in Annex E of BS 5228-1, it is therefore considered that additional significance should be given to an impact exceeding the SOAEL of 70 dB, where such a noise magnitude is predicted to occur on 10

or more days of working in any 15 consecutive days, or for a total of 40 days in any six month period.

1.6 **NB:** Where the threshold is seen to be exceeded during short-term spot checks, the nature and duration of the works taking place should be reviewed to ensure that there is no significant risk of the threshold being exceeded over the longer-term period defined above.

1.7 Combining the above magnitude and temporal criteria, gives the following refined noise matrix for assessing the potential significance of construction noise:

Combined Noise Magnitude and Temporal Criteria	Magnitude of Effect
Daytime noise level less than 55dB $L_{Aeq,T}$	Negligible
Daytime noise level between 55 and 70 dB $L_{Aeq,T}$	Minor
Daytime noise level greater than 70 dB $L_{Aeq,T}$ (For a period less than 10 days of working in any 15 consecutive days, or for a total of less than 40 days in any six month period)	Moderate
Daytime noise level greater than 70 dB $L_{Aeq,T}$ (For a period more than 10 days of working in any 15 consecutive days, or for a total of more than 40 days in any six month period)	Major

Table 2: Definitions of Magnitude of Effect – Construction Noise

1.2 The above criteria will be applied in the assessment of the significance of site noise.

Monitoring Procedure

1.3 Noise monitoring will take place at the locations shown on the site plan, attached at **Annex A** and described in the **Table 1** below:

Monitoring Location	Location Description
Position 1	Microphone positioned at a height of approximately 1.5m, in free field conditions. Position is adjacent to Plant Farm Crescent. The position will be representative of noise levels experienced at residential properties to the north-west of the work area.
Position 2	Microphone positioned at a height of approximately 1.5m, in free field conditions. Position is adjacent to Plant Farm Crescent. The position will be representative of noise levels experienced at residential properties to the north of the compound area.
Position 3	Microphone positioned at a height of approximately 1.5m, in free field conditions. Position is adjacent to Plant Farm Crescent. The position will be representative of noise levels experienced at residential properties to the north-east of the work area and adjacent to the haul road.

Table 1: Monitoring Location Descriptions

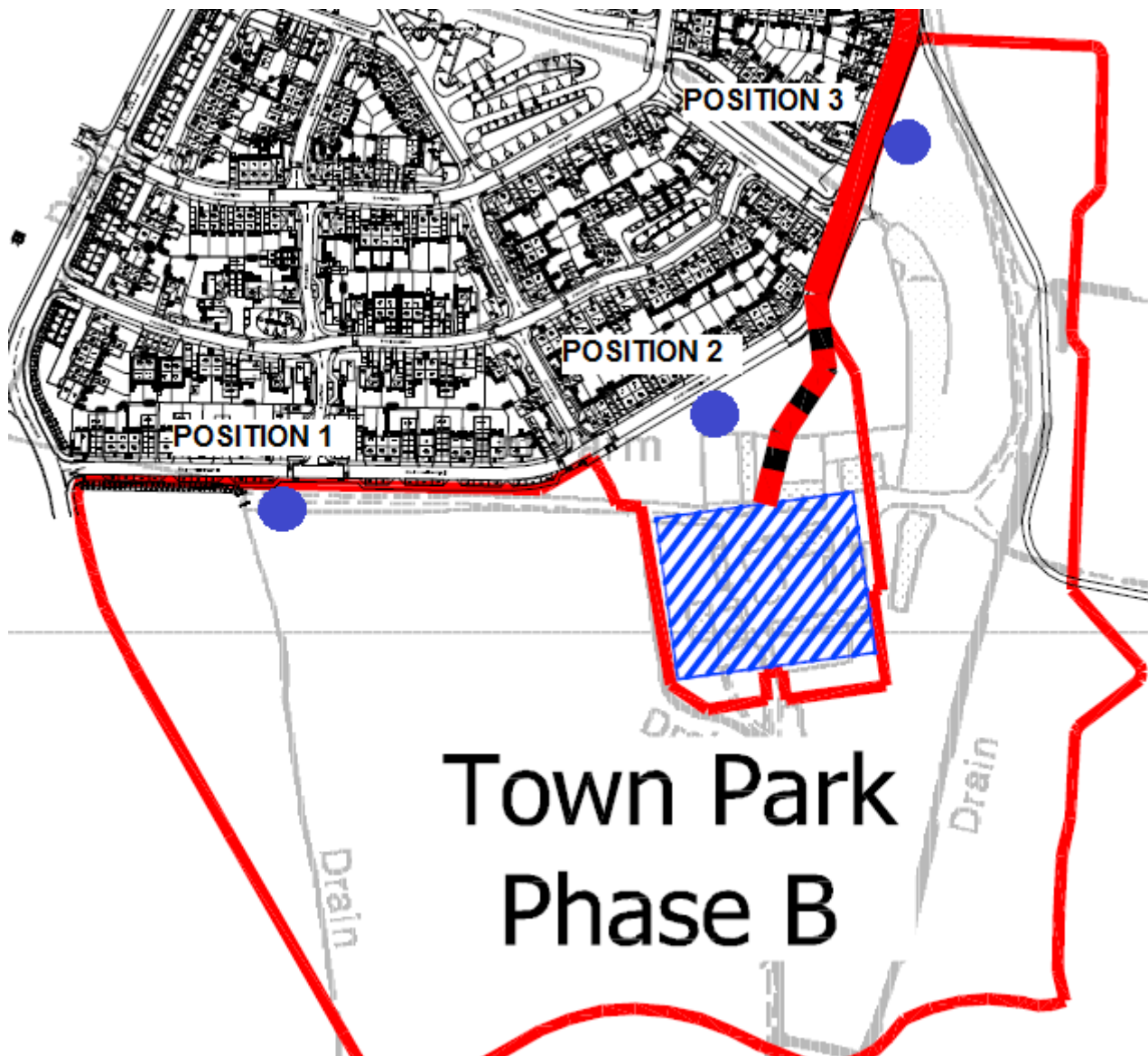
1.4 Fifteen-minute measurements of the L_{Aeq} , L_{Amax} , L_{A10} and L_{A90} sound pressure levels will be undertaken at each of the measurement positions detailed in **Table 1**.

- 1.1 Attended manual measurements will be undertaken with fully calibrated type 1 sound integrating meter. Records of the meter and calibrator used will be taken and kept along with details of the weather conditions prevalent during the monitoring period.
- 1.5 Measurements will be made generally in accordance with the requirements of ISO 1996-2: 2017 – Acoustics - *Description, measurement and assessment of environmental noise – Part 2: Determination of sound pressure levels*.

Noise management

- 1.6 As noted above, all noise mitigations set out with the CEMP, specifically those identified in Section 5 and Appendix B A will be applied to the site. Initial monitoring and set up of the protocol will be undertaken by Mayer Brown Ltd and thereafter, (and unless otherwise advised to Winchester City Council) noise monitoring will be undertaken by the contractor on a weekly basis with all records retained for review. Notwithstanding this, where weekly team meetings identify upcoming works, particularly at the boundary, which are likely to involve intrusive levels of noise, these will be specifically monitored to ensure that trigger levels are not exceeded.
- 1.7 On occasions where it is anticipated the unavoidable short-term exceedances of trigger levels are likely to occur, the environmental manager will seek permission from Winchester City Council to proceed with these works and adjacent residents will be advised of the date and time of upcoming activities.
- 1.8 Any unplanned exceedance of trigger levels will result in the requirement to complete a non-conformance report which will state the data and time of exceedance, the cause, the immediate response and how further exceedance from the same cause will be avoided. The non-conformance report will be completed and provided to Winchester immediately upon resolution of the non-conformance.
- 1.9 It is noted that Winchester may wish to provide amendments to the proposed protocol in the light of observed works or in the event of complaints.

**Annex A: Site Plan Showing Proposed
Measurement Locations**



Town Park Phase B

Method Statement 5

Control of pollution impacts to local ditches and streams, on-site, off-site flora and fauna and local receptors

Site Address:

Compound off Plant Farm Crescent
Berewood
Waterlooville

Completed by:

Andrea Hughes – Town Park Phase B Construction Environmental Management Plan Author

Risk Activities/Tasks
Establishment of site compound, access and associated compound features. Provision of landscaping, park furniture and play elements. Construction of SuDS features and ponds, reprofiling of pond and provision of surface water connections. Top soiling, grass seeding and shrub and tree planting where required.

Actions Required
• Systems of temporary drainage must be installed to ensure that no polluted surface runoff enters adjacent wet or dry ditches or water courses. Any surface water collected to be directed via treatment before discharge; • Any new or existing live surface water drains to be bunded to ensure that no surface water enters them; • Site roads to be swept and sprayed with water to prevent dust nuisance; • Where possible over-site hard standing to be retained & haul routes to be hard surfaced; • All vehicles leaving the working area, to be subjected to wheel washing where necessary; • Stockpiling to be in accordance with best practice within CIRIA 'Environmental best practice on site guide (4th edition); • Stockpiles of materials not suitable for on-site re-use to be removed as soon as is practicable in accordance with applicable waste management legislation; • Fuels and chemicals to be stored in accordance within CIRIA 'Environmental best practice on site guide (4th edition);

- All tanks and containers to be labelled with nature of contents and total volume secured;
- Fuel storage and delivery facilities to be on impermeable surface in a secondary containment system;
- Provision of spill kits at all storage areas & provision of emergency response numbers;
- Biodegradable hydraulic oil to be used for machinery/plant where possible;
- All deliveries to be supervised and levels of tanks checked before delivery;
- Stockpiles to be sited so as not be subject to inundation during extreme rainfall events;
- Contingency plan required for temporary covering of stockpiles during adverse weather conditions;
- Sorted & screened material to be placed on a prepared clean granular surfacing; and
- Supervisors to be familiar with the provisions of CIRIA 'Environmental best practice on site guide (4th edition) re control of contaminated run off.

APPENDIX G: Environmental Risk Assessment

Environmental Risk Assessment Form

Site Address:

Compound off Plant Farm Crescent
Berewood
Waterlooville

Completed by:

Andrea Hughes – Town Park Phase B Construction Environmental Management Plan Author
Based upon the findings of the mitigation matrix (Table 5.1 and 5.2 of Town Park Phase B CEMP)

Risk Activities/Tasks

Establishment of site compound, provision of access, provision of drainage and pollution control measures, SUDs construction, use of wheel wash facilities, provision of cricket pitch, multi-use sports area, formal and informal play space, footpaths and decking. Landscaping and planting as required.

Hazards

1. Death or disturbance of in-situ sheltering fauna and/or breeding birds;
2. Lighting impacts upon bats and other nocturnal species and adjacent residents;
3. Creation of dust impacting on-site and off-site personnel and flora and fauna;
4. Noise impacts upon on-site and off-site personnel and site fauna;
5. Pollution impacts to adjacent drains and streams, on-site off-site flora and fauna and local residents via run off and/or migration of liquids from storage areas; and
6. Damage to adjacent trees and hedgerows.

Those at risk

Foraging badgers, bats and breeding birds. Offsite aquatic environments. On site-personnel. Off site adjacent residents.

Current control measures

1. Adherence to mitigations 2, 3 and 5 within CEMP Table 5.2 – see Method Statement no. 1;
2. Adherence to mitigation 4 within CEMP Table 5.2 and Appendix A5– see Method Statement no. 2;
3. Adherence to mitigations 1, 6, 7, 8, 9, 10, 11, 12, 13, 22, 24 and 25 within CEMP Table 5.2 – see Method Statement no. 3
4. Adherence to mitigations 1, 13, 14, 15, 16 and 17 within CEMP Table 5.2 – see Method Statement no. 4
5. Adherence to mitigations 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 and 35 within CEMP Table 5.2 – see Method Statement no. 5
6. Adherence to mitigation 36 and 37 in CEMP Table 5.2 prior to works commencing.

In addition.

- Weekly review of programme by Site Manager /Environmental Manager to identify any amendments required to existing mitigations;
- Regular environmental tool box talks to site operatives;
- Weekly inspections by Environmental Manager or Appointed Person to ensure all mitigations are in place and active.

Town Park Phase B Berewood Waterloo

Environmental Risk Assessment: Site Overview – October 2020

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With these controls the risk is (highlight)	Unacceptable	Further controls required	Adequately controlled
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Further control measures required List further action needed to adequately control risks
None required

Date	27/10/20				
Initial	AH				

Use a new box each time this assessment is reviewed

Author: Andrea Hughes BSc(Hons), MSc, MEnvSc, MIES

Date: 26 October 2020

APPENDIX H: Work Programme [to be inserted by contractor]

**APPENDIX I: Construction Traffic Management Plan and Delivery Plan [CTMP
to be inserted by contractor]**

Construction Delivery Plan

Site Address:

Compound off Plant Farm Crescent,
Berewood
Waterlooville

Delivery and Collection Times:No vehicles may access the site:

prior to 8:00 or after 18:00 Monday to Friday;
prior to 8:00 or after 13:00 Saturday; or
at any time on Sunday or Public Holiday

Deliveries should seek to avoid school pick up and drop off times of:

8:30 – 9:30; and
15:00 – 16:00

All deliveries must be by prior agreement with the Site Manager or in line with an agreed delivery schedule

Delivery and Collection Access:

- At the scheduled time, all deliveries must approach the Berewood site via Maurepas Way and Haughton Avenue, turning left onto Darnley Lane and progressing onto Plant Farm Crescent.
- No access may be obtained via Grainger Street.
- No Construction traffic may pass in front of Berewood School.
- On entering Plant Farm Crescent, site traffic shall proceed at speeds not exceeding 10mph.
- On exiting the Town Park Phase B compound all drivers must ensure their wheels are clean and request jet wash where necessary.

Site Environmental Standards

- Drivers and occupants to wear full PPE on site at all times;
- Drivers may not remove or adjust barriers;
- Drivers must ensure ground is suitable for vehicle type;
- No reversing without a banksman; and
- No vehicles to be left idling

Site Contact Details

Site Manager: TBC
Email: TBC
Phone: TBC

APPENDIX J: Record of Training /Inductions
[to be inserted by contractor]

APPENDIX K: Record of Sub Contractors
[to be inserted by contractor]

APPENDIX L: Record of Inspections
[to be inserted by contractor]

APPENDIX M: Record of Inspections by EM
[to be inserted during works]

APPENDIX N: Record of Environmental Reporting
[to be inserted by contractor]

APPENDIX O: Record of Non Conformance
[to be inserted during works]

APPENDIX P: Minutes of Meetings
[to be inserted by contractor]

APPENDIX Q: Contractors Progress Reports
[to be inserted by contractor]

APPENDIX R: Site Waste Management
[to be inserted by contractor]

