Appendix 4 Demolition, Construction and Site Management

4.1 Outline Construction Environment Management Plan

GRAVEN HILL OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Graven Hill D1 Site, Bicester, Oxfordshire

JER9528
V1
R1
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Contents

1 INTRODUCTION

1.1 Background and Objectives

1.1.1 RPS Consulting Services Ltd (RPS) has been commissioned by Graven Hill Purchaser Ltd (the Client) to produce an Outline Construction Environmental Management Plan (CEMP) for a parcel of land in the southern area of the former MoD Graven Hill site, Bicester (herein referred to as the 'Assessment Site').

1.1.2 The Client is currently planning to submit an outline planning application for the redevelopment of the Assessment Site as a logistics hub. The location of the Assessment Site is shown on Drawing JER9528-001 and the proposed parameters plan is included within Appendix A.

1.1.3 This outline CEMP is required to support an outline planning application for the proposed development and provides an outline of construction practices during the construction phase and to set out the proposed measures to minimise impact of noise, vibration, smells, dust, fumes, biodiversity and waste.

1.1.4 It sets out the outline management measures which will require its contractors to adopt and implement for the construction of the development to avoid, and manage any construction effects on the existing surrounding communities and businesses.

1.1.5 The plan will be used in conjunction with the Construction Phase Plan and is a live document that will be reviewed and amended where changes occur. It will also be used in conjunction with any planning restrictions imposed.

1.1.6 Once designs and phasing have been finalised, and a contractor appointed, a detailed CEMP will be required including details of the responsible persons, to be approved by Cherwell District Council (CDC) prior to commencement of demolition works.

1.1.7 Demolition at the Assessment Site shall not commence until such a time as the CEMP has been approved in writing by CDC, to ensure environmental effects during demolition and construction are mitigated and controlled appropriately. The approved CEMP shall be adhered to throughout the construction period unless otherwise agreed in writing by CDC and any changes and/or improvements to the CEMP will be made in consultation with CDC.

1.2 Site Location

1.2.1 The Assessment Site is located within the south of the wider Graven Hill development site and is referred to as Site D1. It occupies an area of approximately 30 ha and comprises several large former MOD warehouse buildings and areas of external hard and soft standing.

1.2.2 The Assessment Site is bound to the north by Graven Hill Wood, to the east by agricultural land with the village of Ambrosden beyond, the west by MoD barracks and land believed to be under the ownership of the MoD, and to the south by railway lines and a solar farm.

1.3 Proposed Development

1.3.1 The proposals for the site involve the demolition of the existing buildings for the redevelopment into a commercial distribution centre with associated infrastructure and landscaping. The proposed parameters plan is included within Appendix A.

2 CONSTRUCTION PROGRAMME AND ACTIVITIES

2.1 Construction Programme

2.1.1 It is understood that the construction programme is yet to be determined, however following appointment of a Principal Contractor a detailed CEMP will be produced to include more detailed information, including a construction programme.

2.2 Site Preparation

2.2.1 Prior to the main demolition and construction works commencing, site preparation and enabling works will be required, including establishing:

- Site hoarding and security;
- Material delivery and off-loading areas;
- Welfare facilities and site logistics; and
- Access arrangements and vehicle routing.

2.2.2 Any security lighting will be positioned and operated to ensure that no issues are created for neighbouring properties. Existing utilities will be disconnected or diverted.

2.3 Construction Sequence

The construction sequence will be determined following appointment of the main contractor, however is likely to follow an approximate sequence of:

- Site setup;
- Demolition;
- Piling (if required) /groundworks;
- Construction;
- Internal fit-out; and
- External landscaping.

3 ROLES AND RESPONSIBILITIES

3.1 CDM

3.1.1 The Construction (Design and Management) Regulations 2015 are the main set of regulations for managing the health, safety and welfare of construction projects. The CDM Regulations set out the roles and responsibilities for the duty holders, and these are summarised below.

3.2 CDM Duty Holders

Client

3.2.1 The Client has a responsibility to make suitable arrangements for managing a project, including making sure that:

- Other duty holders (Principal Designer, Designer, Principal Contractor and Contractor) are appointed;
- Sufficient time and resource are allocated;
- Relevant information is prepared and provided to the duty holders;
- The Principal Designer and Principal Contractor carry out their duties; and
- Welfare facilities are provided.

Principal Designer

3.2.2 The Principal Designer (PD) must be a designer and have control over the pre-construction phase of the project. The PD is responsible for planning, managing, monitoring and coordinating health and safety in the pre-construction phase of a project, including:

- Identifying, eliminating or controlling foreseeable risks;
- Ensuring Designers carry out their duties; and
- Preparing and providing relevant information to other duty holders.

Designer

3.2.3 The Designer's role when preparing or modifying designs is to eliminate, reduce or control foreseeable risks that may happen during construction or maintenance and use of a building after it has been built. They also provide information to other members of the team to help them fulfil their duties.

Principal Contractor

3.2.4 The Principal Contractor's role is to manage, monitor and coordinate health and safety during the construction phase of a project when there is more than one contractor involved. Their duty is to:

- Plan, manage, monitor and coordinate health and safety in the construction phase of a project
- Liaise with the Client and Principal Designer;
- Prepare the Construction Phase Plan, and
- Organise cooperation between contractors and coordinate their work.

3.2.5 The Principal Contractor must ensure that:

- Suitable site inductions are provided;
- Reasonable steps are taken to prevent unauthorised access;
- Workers are consulted and engaged in health and safety matters; and
- Welfare facilities are provided.

Contractor

3.2.6 The Contractor's duty is to:

- Plan, manage and monitor construction work under their control so that it is carried out without risks to health and safety, and
- For projects involving more than one contractor, coordinate their activities with others in the project team – in particular, comply with directions given to them by the principal designer or principal contractor.

3.3 Other Duty Holders

Works Manager

3.3.1 Duties include:

- Understand the major environmental constraints and implications for the project;
- Ensure the need for compliance with environmental issues is communicated to the rest of the project team and subcontractors;
- Act on findings of internal and external audits;
- Ensure complaints are being addressed and responded to;
- Ensure appropriate pollution response provision is made;
- Report to senior management (PD/PM) on any environmental breaches; and
- Implement and maintain the operation of the CEMP.

On-site Environmental Manager

3.3.2 Duties include:

- Comply with the CEMP;
- Understand the environmental issues associated with the project;
- Maintain and review the environmental risk register;
- Co-ordinate and maintain consultation with Cherwell District Council, local residents and other interested parties on environmental issues including complaints process;
- Maintain the complaints log;
- Ensure environmental audits are carried out and pursue any corrective actions;
- Report any environmental incidents to Senior Management (PM/PD) and Environmental Regulators as required;
- Co-ordinate with the Project Manager and undertake regular reviews of the CEMP during the project to ensure its continued effectiveness throughout the construction activities; and

- Co-ordinate environmental awareness training and ensure relevant responsibilities are included in the site induction.

Health & Safety Advisor

3.3.3 Duties include:

- Undertake regular site inspections;
- Carry out audits at regular intervals, and
- Provide advice and support to the Project Management team.

Off-site Environmental Manager

3.3.4 Duties include:

- Provide support and advice for the project team;
- Assist with the management and selection of specialist environmental resources; and
- Ensure that the Project Management Team, Principal Contractor, and subcontractors manage environmental issues in accordance with the CEMP.

Environmental Specialists

3.3.5 Relevant specialists will be employed, as required, to undertake specialist environmental monitoring (e.g. noise), undertake surveys and advise the Principal Contractor and construction staff.

3.4 Collective Responsibilities

3.4.1 All personnel involved within the construction works have responsibility to ensure impacts to the environment as a consequence of demolition and construction activities are appropriately managed. The site-based management team shall that ensure that all construction personnel:

- Comply with the CEMP and update the document as required;
- Implement the requirements of the CEMP and it's supporting documents on site;
- Report any environmental incidents to the Environmental Manager immediately;
- Are aware of their environmental obligations and have undergone site environmental awareness training; and
- Implement the required action to resolve non-compliance issues.

3.4.2 All site personnel (to be communicated during the site induction) shall:

- Comply with all operational controls and working procedures implemented by this CEMP;
- Undergo environmental awareness training;
- Report any environmental incidents to a supervisor immediately; and
- Suggest potential modifications and improvements to the CEMP or the operational controls it develops.

4 TRAINING AND SITE BRIEFINGS

4.1 Training

4.1.1 Contractual arrangements will require all contractors to provide suitably qualified staff to manage and execute works for which they are responsible. The Principal Contactor will require that all employees demonstrate an appropriate awareness of local sensitivities, expected code of conduct, working knowledge of the legislation, codes of practice, and guidance relevant to the activities in which they are engaged.

4.1.2 A training regime shall be implemented to ensure that all staff members, including sub-contractor personnel, receive focused environmental training to ensure their competence in carrying out their duties on the project.

4.2 Site Induction

4.2.1 The Principal Contractor will provide site induction schemes for all personnel to ensure that they are aware of their individual responsibility to comply with the CEMP. The Principal Contractor will be responsible for identifying the training needs of their personnel and will ensure that appropriate training is provided. Training will include information on local considerations and the Client's expectations on site behaviour, "toolbox talks" for site operatives to maintain an appropriate level of awareness on safety, health and environmental topics and to advise employees of changing circumstances as work progresses. Records will be kept of attendance.

4.2.2 The general site induction shall be developed to introduce all site personnel to the environmental issues connected with the development, important environmental controls associated with the day-to-day operation e.g. boundary control, housekeeping, waste management, and the emergency procedures. A full register of induction attendance shall be maintained on site.

Responsibility: **Environmental Manager**

Action: Develop general site induction to include environmental issues and ensure induction records are maintained.

4.3 Toolbox Talks and Method Statement Briefings

4.3.1 Toolbox talks and method statement briefings will be given as the work proceeds and will cover the environmental controls related to specific activities undertaken during the works for example refuelling, hazardous waste removal, spill response etc. A full register of toolbox talks and method statement briefing attendance shall be maintained on site.

Responsibility: **Environmental Manager**

Action: Regularly assess site activities and ensure relevant training requirements are met. Develop and deliver specialised toolbox talks as required to ensure site activities are carried out in accordance with the CEMP.

4.4 Emergency Procedures and Incident Reports

4.4.1 Procedures will be implemented to respond to any emergency incidents which may occur on site. In order to ensure that compliance with the requirements of the relevant legislation and to avoid or mitigate against any significant environmental impacts, an Emergency Preparedness Plan (EPP) will be developed by the Principal Contractor.

4.4.2 All staff will be trained and made aware of the EPP set in place. In the event of any incident the Principal Contractor's environmental manager and health and safety advisor will be notified as well as the Client.

4.5 Training Records

4.5.1 All training records will be maintained and filed on site. The records shall include the content of the courses (induction and toolbox training), record of attendance and schedule of review.

5 SITE RULES

5.1.1 The site rules shall be developed to include environmental controls wherever applicable. Site rules should be displayed in all on-site offices and welfare facilities.

5.1.2 An initial list of 'Site Rules' to be implemented on site is provided below; these will be updated and developed further by the Principal Contractor:

- All personnel visiting or working on site must complete induction training prior to accessing the site;
- All plant/equipment used during the construction activities must be compliant with the Provision and Use of Work Equipment Regulations 1998 (PUWER), maintenance and relevant certificates must be retained on site
- All substances to be used or handled on site must have the Control of Substances Hazardous to Health (COSHH) assessment available on site for staff members to consult;
- At the end of each working day all means of access, (e.g. steps, ladders left in position) must be secured/removed to prevent unauthorised persons (especially children) accessing the site and hazardous areas;
- Smoking is prohibited on site, except in designated areas, and the possession or use of alcohol and drugs is prohibited;
- Site welfare facilities must be maintained for the duration of the works;
- Standard Personal Protective Equipment (PPE) is required on site at all times, as well as additional Protective Equipment as required for specific works;
- Use of audio equipment is not permitted on site, except in designated areas;
- All staff members must work to their safety method statements and abide by all safety signs at all times;
- All Principal Contractor and sub-contractor staff members must conduct themselves and perform their duties on site in a safe manner;
- All plant and equipment must be checked prior to use, defects or problems must be reported, and where necessary, plant or equipment removed from site;
- All work areas must have clear, well maintained signage;
- Appropriate firefighting equipment to be maintained on site;
- All waste materials must be collected and removed from site at regular intervals;
- No fires are permitted on site;
- A qualified First Aider/ Emergency First Aider to be present on site at all times; and
- Acts of threat or violence will not be tolerated, and any offender will be removed and permanently excluded from the site.

Responsibility: **Construction Manager / Environmental Manager**

Action: Ensure all relevant environmental controls are clearly communicated.

6 COMMUNICATION

6.1.1 A full contact list containing names, job titles and contact numbers of the project team members, shall be produced and maintained. This should include the Environmental Manager. On site communication will be provided by mobile telephone or two-way radio.

6.2 Community Relations

Statutory Authorities and Interested Parties

6.2.1 The Construction Manager in conjunction with the Client and with the support of the Environmental Manager or any appointed specialists will be responsible for the liaison on environmental matters with statutory and non-statutory authorities.

6.2.2 Consultation will be established and maintained with a number of regulatory bodies with regard to the environmental aspects of this project. These will include:

- Cherwell District Council;
- Health & Safety Executive; and
- Emergency Services.

Responsibility: **Construction Manager / Environmental Manager**

Action: Establish and maintain consultation with Cherwell District Council and other interested parties regarding the status of the project, potential impacts, mitigation measures, predicted timescales of activities.

Local Community Engagement

6.2.3 The Principal Contractor will commit to providing community relations personnel, who will be the first line of response to resolve issues of concern or complaints. Reasonable steps will be taken to engage with local community groups and residents prior to and during construction (such as through the use of newsletters and fliers). Information to be disseminated will include: location of planned works, type of works, duration, anticipated effects of the works, contact details for enquiries and complaints procedure. This approach builds upon the initial stakeholder consultation undertaken by the Applicant, as detailed within the Statement of Community Involvement.

6.2.4 Site boards outlining information on the project and forthcoming works will be erected at the entrance to the site. Site contact numbers will be displayed as appropriate, along with the complaints procedure.

6.2.5 All Contact Boards shall include the following:

- The title ‘Contact Board’;
- Name of the Principal Contractor, address and person to whom correspondence should be addressed;
- Name of the site manager;
- Month and year of completion of works; and
- Names and telephone numbers of staff who can take immediate action, so that contact can be made at any time.

Responsibility: **Principal Contractor**

Action: Establish and maintain consultation with local residents, and other interested parties regarding the status of the project, potential impacts, mitigation measures, and predicted timescales for activities.

Complaints Management

6.2.6 A formal complaints procedure will be developed and the Construction Manager (or delegated personnel) will be responsible for receiving, recording and responding to external complaints.

6.2.7 The Construction Manager (or delegated personnel) will have their telephone number displayed for quick response to complaints. A staffed telephone enquiry line will be maintained at all times when site works are in progress to deal with enquiries and complaints from the local community. The telephone number (and any changes to it) shall be publicised widely in the local area and notified to Cherwell District Council.

6.2.8 The complaints will be logged in a complaints register, together with a record of the responses and action taken.

Responsibility: **Construction Manager**

Action: Log complaints, conduct investigation, develop any corrective action, produce written response to complaints and generate monthly report of complaints received.

7 GENERAL ARRANGEMENTS

7.1 Construction Traffic Arrangements

7.1.1 Prior to commencement of works, the routing of construction traffic will be agreed with Cherwell District Council and detailed within a Construction Logistics Plan (CLP) or site Traffic Management Plan (TMP) which will be issued to all relevant parties, will be displayed on site and covered during the site induction.

7.1.2 This document will address all signage for construction traffic, pedestrians and other users of the site. In addition, it will address the controls on arrival and departure times for construction vehicles.

7.1.3 The type and number of vehicles generated during the demolition and construction period will vary according to the different stages of the construction programme, and the type and intensity of work being undertaken at the different stages. HGV movements will be restricted as far as reasonably possible so as to avoid peak traffic flow periods (i.e. 08:00-09:00am and 5:00-6:00pm).

7.1.4 The Principal Contractor will maintain an up-to-date log of all drivers that will include a written undertaking from them to adhere to use of the approved routes for construction traffic.

7.1.5 Directional signage will be implemented to ensure that construction traffic utilises designated routes to minimise the effect on the surrounding road network and will form part of the CLP/TMP.

7.1.6 All construction traffic entering and leaving the site will be closely controlled and during delivery times. Traffic marshals will be positioned appropriately to control and record entry and exit movements.

7.2 Security

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

7.2.2 Visitors will be required to undergo induction training, wear the necessary PPE i.e. safety helmet, hi-visibility attire, safety footwear, eye protection and appropriate gloves and will be accompanied by a representative on site at all times.

7.2.3 Banksmen will aid construction vehicles in entering and exiting the site. All mobile plant/equipment will be parked safely and locked within a designated area to prevent tampering, and keys to all plant/equipment will be kept in a secured location.

7.2.4 If deemed necessary by the Principal Contractor, the site boundary will be surrounded by hoarding of a minimum of 2.4m high and comprise solid panels of plywood or a similar material.

7.3 Lighting

7.3.1 Lighting on construction sites, whether natural or artificial, is essential to health and safety. Poor lighting can represent significant risks to staff members which can result in accident and injury, the quicker and easier it is to see a hazard the better the likelihood of avoiding it.

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

7.3.3 Site lighting will be at the minimum luminosity necessary to enable the safety and security of the construction site. Where appropriate, lighting to site boundaries will be provided and illumination will be sufficient to provide a safe route for the passing public.

7.3.4 Where appropriate, lighting will be activated by motion sensors to prevent unnecessary usage. It will comply with the Institute of Lighting Professionals' Guidance notes for the reduction of obtrusive light.

7.3.5 In determining any temporary construction lighting arrangements for the site, due consideration will be given by the Principal Contractor to residents and other sensitive receptors that may experience a nuisance by the light.

7.4 Working Hours

7.4.1 As per the acceptable working hours provided by Cherwell District Council, the following working hours will be adhered to:

- Monday to Friday – 7:30am to 6:00pm;
- Saturday – 8:00am to 12:30pm;
- Sunday – no noisy work; and
- Public / Bank holidays – no work.

7.4.2 Should works be required to be undertaken outside of the above hours due to exceptional circumstances then Cherwell District Council will be consulted prior to works being carried out.

7.5 Storage of Materials

7.5.1 All materials will be stored in a safe and secure manner at all times to prevent uncontrolled movement or migration in inclement weather and to prevent attempted theft.

7.5.2 Hazardous materials will be stored within a secure area as per the Material Safety Data Sheet within the contractor's compound away from water courses or drainage. In particular, the following measures will be employed:

- Avoidance of oil / chemical storage within 50 m of a spring, well or borehole;
- Avoidance of oil / chemical storage within 10 m of a watercourse;
- Avoidance of oil / chemical storage where oil could run over hard ground into a watercourse;
- Implementation of a secondary containment system that can hold at least 110% of the oil / chemical volume stored; and
- Avoidance of storage of oil / chemicals in areas at risk of flooding.

7.5.3 Suitable spill kits, relevant to the materials being stored will be held within the storage area and will be used to contain any spills at source.

7.5.4 Fuels for plant will be held in bunded bowsers with a spill kit kept beside the fuel container at all times. Drip trays will be used when fuelling plant and equipment. There will be a designated fuelling point set up within the boundaries of the construction compound. The bowser will be locked off and only opened when fuelling up is taking place.

7.5.5 Fuels for equipment such as generators will be stored in the correct and secured containers at all times. Fuels will be kept to a minimum to minimise the effects of any potential leaks.

7.5.6 Machinery would be routinely checked to ensure it is in good working condition and any tanks and associated pipe work containing oils and fuels will be double skinned and be provided with intermediate leak detection equipment.

7.5.7 Generators will be stored on drip trays and spill kits will be held within the works area near to the generators.

7.5.8 In an emergency all spills will be contained by use of the spill kit or by use of sand or other absorbent materials. The absorbent materials will be applied directly to the spill and the materials will then be cleared up immediately.

7.5.9 Once cleaned up it will be then transferred to a waste container for removal by an approved and licensed waste contractor.

7.6 Layout

7.6.1 As far as reasonably practicable and appropriate, the site layout and appearance will be designed using the following principles:

- The site will be secured at all times with fencing/hoarding. Directional signage and safety signage will be displayed on the fence and predominantly at the entrance and exit points;
- There will be a main access and egress point for plant, vehicles and deliveries with a separate entrance to the works area for pedestrians;
- All works vehicles will park within the confines of the site in a designated parking area. This will be clearly marked with site safety signage and segregated by means of barriers;
- Storage areas, plant, machinery, equipment and temporary offices will be located to limit environmental impacts, as far as reasonably practicable, and having due regard to neighbouring properties, as far as allowed by the constraints of each site;
- Site lighting will be located and directed so as not to intrude into occupied properties or on sensitive areas including environmental receptors; and
- Site facilities will be powered from mains electrical sources where available. Where power is not available on site a generator will be utilised until power is available on site.

7.7 Compound

7.7.1 A contractor's compound will be set up within the confines of the site boundary. The details of the contractor's compound, storage areas and car parking arrangements for the contractor's employees and visitors will be advised during the placing of orders and site inductions.

7.7.2 A site plan will show the location of parking and compound layout. This will be displayed within the site office and welfare facilities.

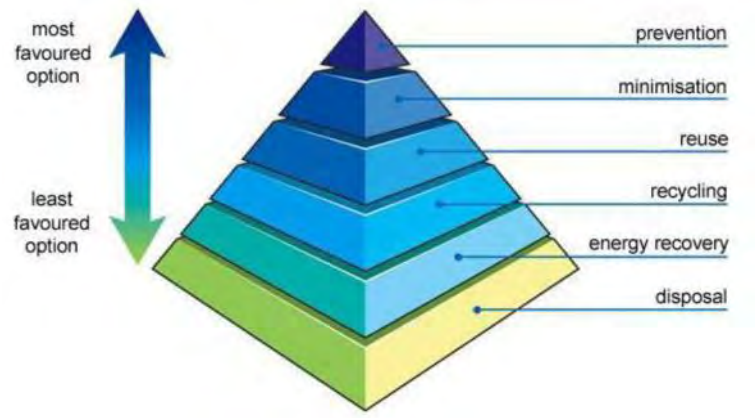
7.8 Waste Management

7.8.1 Prior to commencement of the works, a Site Waste Management Plan (SWMP) or Construction Waste Management Plan (CWMP) will be prepared by the Principal Contractor. Generally, the disposal of all waste or other materials removed from the site will be in accordance with the Site Waste Management Plans Regulations 2008 and requirements of the Environment Agency (EA), COPA, 1974, Environment Act 1995, Special Waste Regulations 1996, the Duty of Care Regulations 1991, and any Environmental Permit requirements.

7.8.2 In general, and in accordance with the principles of the Government's "Waste Strategy 2000", and the Site Waste Management Plans Regulations 2008, a principal aim during demolition and

construction will be to reduce the amount of waste generated and exported from site. This approach complies with the waste hierarchy (illustrated below) whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary.

Waste Management Hierarchy



7.8.3 The generation of construction waste will, as the first priority, be avoided. Any packaging used for transporting of construction materials delivered to site will be sent back with the delivery vehicle whenever practicable. If waste is generated on-site, it will be sent for reuse and recovery in preference to disposal. Where practical, spoil, demolition materials, prunings and surplus construction material or clean concrete arising from the works on site will be reused. Any suitable stone found on-site may be crushed and used as sub-base for roads and buildings. Re-use of materials should be undertaken in line with the Definition of Waste Code of Practice applicated by the Environment Agency.

7.8.4 Waste produced during all construction activities on site will be subject to the 'Duty of Care' under the Environmental Protection Act (1990). It is the joint responsibility between the Principal Contractor and the Client to ensure that waste produced onsite is disposed of in accordance with legislation.

7.8.5 Waste for final disposal will be transported by Licensed Waste Carriers to local sites which operate in accordance with the appropriate Waste Management Licenses issued by the EA. Under the Duty of Care Regulations, the receiving site must be authorised to accept the type and quantity of waste generated. Transport of wastes will be minimised by the selection of local licensed sites where available. The only exception to this principle may be for the disposal of hazardous wastes (contaminated soil) where suitable landfill or other disposal sites may only be found further afield. No disposal of waste by open burning will be permitted on-site.

7.8.6 The Principal Contractor will audit waste carriers and disposal facilities and maintain documentary evidence that these requirements are being met. A register of waste carriers, disposal sites (including transfer stations) and relevant licensing details will be produced and maintained on site.

7.8.7 All relevant contractors will be required to investigate opportunities to minimise and reduce waste generation, such as:

- Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;
- Implementation of a 'just in time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
- Attention to material quantity requirements to avoid over-ordering and generation of waste materials;
- Segregation of waste at source where practical;

- Re-use of materials on-site wherever feasible. The Government has set broad targets of the use of reclaimed aggregate, and in keeping with current guidelines and relevant legislation, contractors will be required to maximise the proportion of materials recycled, and
- Re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re-use or reprocessing).

7.8.8 Materials and waste will be stored in appropriate conditions to prevent damage or contamination of storage areas. All hazardous materials including chemicals, cleaning agents, solvents and solvent containing products will be properly sealed in containers at the end of each day, prior to storage in appropriately protected and bunded storage areas. Containers should be sited away from drains or unsurfaced areas and should be regularly maintained and inspected for damage.

7.8.9 Waste will be sorted into different waste types such as timber, copper, metal, paints, plasterboard etc. and either disposed of into larger skips, or if suitable, placed into a compactor to reduce the volume of the waste before it is taken off-site.

7.8.10 Stockpiling of contaminated materials on site would be avoided where practicable. Soils would be stored away from surface watercourses and placed within suitably constructed bunded areas and covered to prevent migration of contaminants via rainwater run-off.

7.9 Site Environmental Controls

7.9.1 A suitable drainage scheme will be implemented to control surface water run off during the construction phase. This is to manage surface water run off generated during construction to prevent an increase flood risk downstream.

7.9.2 The scheme will be designed to manage surface water effectively on site. The scheme will also include measures for managing silt that may be generated during the construction activities (including wheel washing should it be required).

7.9.3 Measures will need to be adopted to mitigate against risk to ground and surface waters from contaminated surface water run-off arising from general construction activities, the stockpiling of contaminated materials and the operation of construction vehicles (including wheel washing should it be required).

7.9.4 Although a review of ground investigation data has identified a low risk of contamination present on site, measures will be put in place to manage the migration of contaminants present on the site during groundworks, such as:

- Cut off ditches to prevent water from entering excavations; and
- Temporary bunding and a settlement pond to allow for isolation and on-site treatment of any sediment laden or contaminated water. This will be prior to discharge to the receiving system.

7.9.5 Other measures available to control, contain and mitigate issues relating to water run-off and pollution will be utilised in addition to the above measures, include:

- Use of temporary land drains draining to a catch-pits to remove the solids before draining to a watercourse;
- Using pump sumps in excavations;
- Protection of the pump inlet to avoid drawing in aquatic life and other debris; and
- Minimising disturbance of standing water.

7.9.6 The external hard standings that are constructed will drain to the permanent drainage network and be dealt with as the drainage design intended.

7.9.7 All plant will be inspected daily to ensure that it is in good working order. This includes inspecting hoses to ensure that they are not corroded or leaking fuels such as hydraulics.

7.9.8 Any plant found to have faults will be taken out of service and stored on a hard standing area until repaired or removed.

7.9.9 Regular audits and inspections will be carried out to ensure compliance of the pollution control measures to ensure that they are suitable and satisfactory.

7.10 Ground Contamination

7.10.1 In the event that contamination is identified within the soil / groundwater during the construction works, a Discovery Strategy shall be implemented to manage the identified contamination.

7.10.2 Should contamination be encountered at the Application Site during construction works, the concentration of contamination must be assessed in relation to a recognised system of defining whether a site should be regarded as contaminated. In the UK this is achieved by the use of the risk assessment process as outlined in Land Contamination Risk Management (2021).

7.10.3 The assessment of risk at the Application Site is based on ensuring the protection of human health (future site users and construction workers) and controlled waters.

7.10.4 A watching brief will be maintained incorporating a visual assessment of ground conditions for visual or olfactory signs of contamination. Lines of evidence that will be considered indicative of significant soil contamination that may require remediation include:

- The presence of free phase hydrocarbon contamination;
- Fibrous or cement bound potentially asbestos containing materials;
- Significant staining and discolouration of exposed soils; and/or
- Olfactory evidence of volatile contamination.

7.10.5 All site personnel involved in the construction works will be briefed on the likely nature and type of soils that could indicate the presence of contamination (e.g. asbestos, discolouration, oils and odours).

7.10.6 In the event that significantly contaminated materials are revealed during construction works, the contractor shall inform the appointed environmental consultant immediately who shall attend site to assess the contamination and take soil samples as necessary for laboratory analysis.

7.10.7 Based upon the results of the laboratory analysis, a risk assessment will be undertaken to determine potential risks to human health and controlled waters.

7.10.8 Cherwell District Council (CDC) will be informed in the event that unexpected contamination is encountered during the construction works and will be consulted with regard to any sampling and risk assessments undertaken to address the contamination. All stages of work will be agreed with CDC including:

- The requirement for remediation works to be undertaken;
- The remedial methodology to be employed and appropriate remedial criteria; and
- Verification that any remedial works undertaken have been satisfactorily implemented in line with the agreed methodology and remedial criteria.

8 ENVIRONMENTAL FACTORS

8.1 Dust and Air Quality

Traffic and Transport

8.1.1 Construction plant will adhere to relevant emissions standards for NO_2 and PM10 set out for Non-Road Mobile Machinery. The following significant effects have been identified in relation to demolition and construction activities:

- Temporary generation of dust arising from the construction works leading to potential dust nuisance to surrounding sensitive receptors; and
- Temporary changes in traffic-related emissions during the construction works as a result of changes in traffic generated by such works / activities and emissions from construction plant.

8.1.2 Potential primary mitigation measures for the demolition and construction phases shall include:

- Implementing measures to reduce dust emissions during transport (for example, sheeting the sides of vehicles carrying fine material);
- All mobile plant shall be maintained to prevent or minimise the release of dark smoke from vehicle exhausts;
- Using dust screens and covers, and the appropriate location of dusty materials storage;
- Fires to be prohibited on the site;
- Restricting drop heights onto lorries;
- Assessing the risk of dust annoyance from the operations throughout the working day, taking account of wind speed, direction, and surface moisture levels. The Contractor should ensure that the level of dust suppression implemented on site is adequate for the prevailing conditions. The assessment should be recorded as part of documented site management procedures;
- Spraying of internal un-surfaced temporary roadways with water at regular intervals as conditions require. The frequency of road spraying will be recorded as part of documented site management procedures;
- Keeping surfaced roads and the public road clean during all ground works clean including sweeping at regular intervals using a road sweeper as conditions require. The frequency of road sweeping shall be recorded as part of documented site management procedures;
- Adherence to the speed limits. All vehicles operating within the site on un-surfaced roads shall not exceed 15mph to minimise the re-suspension of dust;
- Where dust from the operations are likely to cause significant adverse impacts at sensitive receptors, operation(s) should be suspended until the dust emissions have been abated. The time and duration of suspension of working and the reason shall be recorded; and
- Review of the dust management plan on a monthly basis during the construction project and the outcome of the review to be recorded as part of the documented site management procedures.

8.1.3 Additionally, all construction traffic logistics would be agreed with CDC and set out in a Construction Logistics Plan (CLP) / Transport Management Plan (TMP). Consideration would be given to the avoidance, or limited use of roads during peak hours, where practicable.

8.1.4 A programme of air quality monitoring will be implemented to ensure that the above mitigation measures are effective and that sensitive receptors are not adversely affected by dust or reduced air quality.

Site Management

8.1.5 The following site management procedures shall be employed during the demolition and construction works:

- Contractors will be instructed to use all reasonable means available to keep dust to a minimum, especially during dry weather conditions;
- Wind speed and direction must be taken into account when organising on site operations;
- The use of damping down equipment must be employed where dust may be generated to control dust at source. Water runoff from dust suppression activities will be controlled;
- Bins and skips will either be located in an enclosed area or covered and sheeted;
- Daily on-site and off-site inspections will be undertaken to monitor dust;
- All dust and air quality complaints will be recorded, identifying cause(s) and taking appropriate measures to reduce emissions in a timely manner and record the measures taken;
- Dust site inspections will be undertaken regularly, particularly in hot and windy conditions; and
- Records will be made of any exceptional incidents that cause dust and/or air emissions, both on- or off-site and action taken to resolve the situation in the log book.

Site Maintenance

8.1.6 The following site maintenance procedures shall be employed during the demolition and construction works:

- As far as possible, fully enclose the site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- Avoid site runoff of water or mud;
- Burning of any material is prohibited anywhere on-site;
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site, and
- All vehicles carrying loose or potentially dusty materials to and from the site will be covered.

Construction Operation

8.1.7 The following operational procedures shall be employed during the demolition and construction works:

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction;
- An adequate water supply should be provided on site for effective dust suppression, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips; and

- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.

8.1.8 Measures will also be implemented to limit emissions from construction plant and vehicles. These are described in the traffic and transport section above and will also include the following, as appropriate:

- Operation of construction plant in accordance with the manufacturer's written recommendations;
- Vehicle engines and plant will be switched off and secured when not in use;
- Construction vehicles to conform to the current EU emissions standards;
- Vehicle and construction plant exhausts to be directed away from the ground and positioned at a height to facilitate appropriate dispersal of exhaust emissions;
- The enclosure, shielding or provision of filters on plant likely to generate excessive quantities of dust beyond the site boundaries;
- The use of diesel or petrol-powered generators will be reduced by using mains electricity or battery-powered equipment where reasonably practicable; and
- Vehicle, plant and equipment maintenance records will be kept on site and reviewed regularly.

8.1.9 The weather conditions will be monitored to allow control measures to be planned in advance as dry weather may cause dusty conditions and wet weather creates the possibility of mud.

8.1.10 Manual clearing of dust and mud will also be carried out as required by means of vacuum, broom etc.

8.1.11 Road sweepers will be utilised along with pressure washing to control and contain any mud/dirt created that could be drawn out onto the highway.

8.2 Noise & Vibration

8.2.1 Best practicable means (BPM) will be applied during construction works to minimise noise and vibration at sensitive receptors. BPM are defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990 as those measures which are "reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications".

8.2.2 The effects of noise and vibration from construction will be controlled by introducing management and monitoring processes to ensure that BPM are planned and employed.

8.2.3 All works must comply with BS 5228: Noise and Vibration Control and the construction and Open Sites Part 1: Noise and Part 2: Vibration. In order to ensure compliance with BS 5228 it is expected that noise monitoring will be required, at a level to be agreed with Cherwell District Council.

8.2.4 The Principal Contractor shall carry out prediction of noise and vibration levels before any work is carried out on site. Where the measured noise levels are more than 3 dB (A) above the predicted noise levels, or in the event of a noise-related complaint, an investigation shall be carried out to ascertain the cause of the exceedance or complaint and to check that BPM are being used.

8.2.5 The following mitigation measures shall be implemented during the demolition and construction works to manage noise and vibration impacts:

- Use of hoarding to the required height and density appropriate to the noise sensitivity of the assessment site;

- Use of modern, quiet and well-maintained machinery such as electric powered plant, where possible and hoists should use the Variable Frequency Converter drive system;
- Vehicles and mechanical plant used for the works would be fitted with exhaust silencers, which would be maintained in good and efficient working order and operated in such a manner as to minimise noise emissions in accordance with the relevant EU / UK noise limits applicable to that equipment, or no noisier than would be expected based the noise levels quoted in BS 5228. Plant should be properly maintained and operated in accordance with manufacturers' recommendations. Electrically powered plant would be preferred, where practicable, to mechanically powered alternatives;
- Avoidance of unnecessary noise (such as engines idling between operations, excessive revving or engines) by effective site management;
- Demolition works to have consideration to Demolition Code of Practice BS6187 (2011);
- Establish noise and vibration target levels (a Section 61 agreement under the Control of Pollution Act 1974 (COPA)) to reduce noise and vibration to a minimum in accordance with best practicable means, as defined in Section 72 of COPA;
- Using low impact techniques where possible (e.g. demolition munchers);
- Off-site prefabrication or preparation of building elements where possible to reduce on-site works;
- Use of acoustic screens or enclosures where possible to reduce localised noise emissions around key plant;
- Use of broad-band audible alarms wherever practicable including reversing alarms and other equipment such as mobile elevated work platforms;
- Use of broad-band audible alarms wherever practicable including reversing alarms and other equipment such as mobile elevated work platforms;
- Where required, monitoring of noise and vibration levels;
- Changing, where possible, methods and processes to keep noise and vibration levels low as reasonably practicable;
- Positioning and or screening plant as far away from residential property as physically possible; and
- Works would be limited to the specified hours to be agreed with CDC and any works outside of these times will be agreed in advance.

8.2.6 The above mitigation measures should be detailed within the site induction, and further communicated via toolbox talks as required, to ensure that all site staff are implementing the required measures where applicable.

9 ECOLOGY

9.1 Ecology Surveys

9.1.1 An ecological survey was carried out by RPS (ref. ECO01318), initially in October 2020 and most recently updated in April 2022. This report is due to be further updated later this year and any changes to the required mitigation will be incorporated into the detailed CEMP once the Principal Contractor has been determined.

9.2 Designated Sites

9.2.1 There were no statutory or non-statutory designated sites for nature conservation value within or immediately adjacent to the site. The nearest statutory designated site was Arncott Bridge Meadows SSSI and the nearest non-statutory designated site was Graven Hill LWS.

9.2.2 During any construction activities, there is a low risk of air- or water-borne pollutants being transmitted to nearby designated sites, however best practice pollution and dust control measures would be required, and this would ensure they would not affect the designated sites.

9.2.3 Good practice guidelines will include but may not be limited to:

- Protective fencing installed along retained boundary features adjacent to the Assessment Site, where they fall outside the construction areas. Best practice guidelines for constructing exclusion zones, barriers and ground protection around trees provided in British Standard 5837:2012 (Trees in Relation to design, demolition and construction - Recommendations), should be followed where necessary;
- The sensitive siting of construction compounds, access roads and laydown areas away from retained boundary features; and
- A plan produced to ensure that air or water-borne pollution generated during construction is contained and does not affect nearby designated sites.

9.2.4 Based on the implementation of the above measures, significant ecological effects on statutory designated sites are not considered likely.

9.3 Habitats

9.3.1 The majority of the Assessment Site is of low ecological value (i.e. managed grassland, buildings and hardstanding), however higher-value habitats were present in the form of woodland and woodland edges, scattered mature trees and areas of scrub and ruderal vegetation.

9.3.2 In accordance with the NPPF (2021) a Biodiversity Net Gain (BNG) assessment of the Assessment Site will be undertaken to assess the habitats on site prior to and post development, to demonstrate how the Assessment Site will deliver net gain.

9.4 Great Crested Newts (GCN)

9.4.1 The majority of the Assessment Site was not considered suitable for GCN (comprising hardstanding and managed grassland), however the ditches with ruderal vegetation banks, areas of scrubby woodland and less managed grassland areas are considered suitable for them.

9.4.2 GCN were recorded in Pond 6 during surveys undertaken by RPS in 2020 (which is located within 100 m of the site). Since these surveys were undertaken, Ponds 5 and 6 have been cleared and drained under a GCN mitigation licence held for the wider Graven Hill development and extensive newt fencing is present around the boundary of the site, acting as a significant barrier to dispersal.

9.4.3 An updated environmental DNA (eDNA) survey of the remaining four waterbodies within the site boundary undertaken in May 2022 provided negative results for all four ponds which is considered as evidence of GCN absence.

9.4.4 A precautionary method of working will be employed, details of which will be included prior to demolition works commencing.

9.5 Reptiles

9.5.1 The majority of the Assessment Site was not suitable for reptiles (regularly managed grassland through cutting), although the ditches with ruderal vegetation banks were considered suitable for them. Common lizard and slow worm have previously been recorded on site.

9.5.2 Due to the presence of reptiles on site and the time elapsed since the original surveys, these surveys will be updated in 2022 in order to determine the current reptile populations that may be affected by the development.

9.5.3 The level of mitigation required will be dependent on the results of the updated surveys however may include a destructive search of suitable reptile habitat or translocation programme; part of the Assessment Site may be required for reptile mitigation as part of the translocation exercise.

9.5.4 Reptile surveys can be undertaken between April and June and again in September when temperatures were between 10°C and 19°C avoiding rain or strong winds. A total of seven survey visits would be required and an additional visit would be required to lay out the refugia (to be undertaken 10-14 days prior to the start of the survey visits).

9.6 Breeding Birds

9.6.1 Vegetation (trees and scrub) and buildings with the potential to support breeding birds is present on site. Habitats suitable for breeding birds will be cleared outside of the bird nesting season, as far as practicable. The clearance works will be undertaken between October and mid-February to ensure nesting birds are not disturbed.

9.6.2 If any clearance or works are required during the nesting season, the relevant areas should be inspected by a suitably experienced ecologist to check for the presence of nesting birds prior to any site clearance. If an active nest is present, the nest and vegetation within 5m of it would be retained until the young birds have fledged. If the nest proved to be of a species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), advice from the inspecting ecologist regarding suitable distances to avoid disturbance of the nest and any bird using it will be sought and agreed with clearance contractors. Such buffers will remain in place until the young birds have fledged and left the nest.

9.6.3 The potential nesting habitat lost due to the development will be compensated for through tree and scrub planting exceeding the area of the habitats lost. This would provide feeding and nesting opportunities for breeding birds; provide foraging habitat for common bird species and provide a source of food in the autumn to early winter months.

9.6.4 Bird nest boxes will be installed on retained trees to enhance the site for nesting birds.

9.7 Bats

Building Roosts

9.7.1 A Preliminary Bat Roost Assessment (PRA) undertaken in by RPS in July 2020 identified 12 buildings with high potential, two buildings with moderate potential and one building with low potential to support roosting bats. Bat droppings were found in two buildings during the PRA. The

outbuildings associated with Buildings D1, D4 and D7 were also considered suitable as hibernation roosts.

9.7.2 The emergence / re-entry surveys undertaken in September 2020 and between June and August 2021 identified seven buildings with confirmed bat roosts, including day roosts for common pipistrelle, soprano pipistrelle and brown long-eared bats; night / feeding roosts for brown long-eared bats and a satellite roost for natterer's bats. One building was confirmed as a maternity roost for common pipistrelle and one building was confirmed as a hibernation roost for brown long-eared during the surveys undertaken between January and February 2021.

9.7.3 The site is in use by multiple species of bat with some rarer species present (such as natterer's bat) and has a number of bat roost types such as maternity roosts, day roosts for multiple species and a hibernation roost. The site also has high levels of bat activity with foraging and commuting activity from least nine different species recorded during the summer surveys undertaken in 2020 and 2021.

9.7.4 Due to the presence of roosts in multiple buildings across the Assessment Site, a Natural England Protected Species (EPS) licence will be applied for prior to works commencing on the Assessment Site. As part of the licence application a detailed method statement and mitigation strategy will be produced, including details of the 'soft-strip' approach during demolition. Due to the type of roosts and species present, a bespoke bat house will be constructed on site prior to demolition in order to compensate for the roosts lost. A detailed design of the bat house will be included within the licence application. The location of the bat house was chosen to maximise the likelihood of successful occupation; the bat house will be well connected to high-quality foraging and commuting habitat (off-site) and be shielded from excessive lighting of the project site.

9.7.5 The timings of building demolition will avoid the most sensitive times of the known roosts, which would be the bat maternity and hibernation periods. Thus, demolition will be undertaken between October and March inclusive (and October to November for the hibernation roost). Demolition of the maternity roost can only take place after construction of the bat house. Compensatory roosting habitat (i.e. bat boxes) will be in situ prior to demolition commencing.

Tree Roosts

9.7.6 A number of trees within the current development site have been identified as having low bat roost potential (T356, T456), moderate bat roost potential (T494) and high bat roost potential (T492). T492 was also confirmed as a bat roost.

9.7.7 Due to the presence of a confirmed roost and time elapsed since the original surveys in 2019, an updated PRA will be undertaken on all trees within the site boundary to reaffirm their potential as a bat roost.

9.7.8 Further survey work (i.e. emergence/re-entry surveys) will be undertaken on any moderate or high potential trees which are likely to be affected by the proposed development works, for example removal, pruning or artificial lighting, to determine whether these are currently being used by bats. If any signs of bats are recorded present or bats are seen emerging or returning from any of the trees, this will be included within the Natural England EPS licence to inform the overall mitigation design for the Assessment Site.

9.7.9 Best practice guidance for bat surveys requires two dawn swarming/dusk emergence surveys for trees with moderate potential, and three surveys for trees with high potential**.** The surveys will follow the latest best practice guidelines and recommendations published by the Bat Conservation Trust in *Bat Survey: Good Practice Guidelines* (BCT, 2016). Three surveys will be required on trees with moderate potential, if a bat roost is identified during the surveys.

9.7.10 The surveys required will be further emergence or dawn swarming surveys where surveyors on each visit will be equipped with bat detectors and recording equipment, observing the potential roost features within the trees, to record any emerging/returning to roost bats. The survey will start

30 minutes before sunset and continue for up to 2 hours after sunset or 2 hours prior to sunrise, until 30 minutes after for dawn swarming.

9.7.11 The optimum survey period to undertake these surveys is between May and August, during suitable weather conditions (temperatures above 10°C, dry, little wind).

9.7.12 No further survey work is required for trees identified as having low suitability. Any trees that are to be removed will require a 'soft fell' methodology to be employed. This can be undertaken at any time of year during suitable weather conditions, but a bat licenced ecologist must be present to oversee the works. If any features are accessible from the ground/aerial inspection the bat licenced ecologist will first check any potential roost features (PRFs)/cavities for signs of bat use (using a high-powered torch/endoscope). If no signs of bat use are identified a soft felling technique can be undertaken on the tree.

9.7.13 Soft felling a tree entails felling the tree in sections, with the following precautions: cutting above or below (rather than directly through) a potential roost feature; lowering cut sections gently to ground level by rope; and, cut sections are then to be left on site, with any potential roost feature entrances left unobstructed, for 48 hours prior to chipping or removal from site.

9.7.14 It should be noted that full Planning Permission (or Planning Permission with all nature conservation conditions discharged) will be required prior to an application for a licence.

Activity

9.7.15 Bat activity surveys have identified ten bat species with activity appearing to be relatively evenly distributed throughout the Assessment Site.

9.7.16 Due to the loss of large areas of woodland along the southern boundary and the time elapsed since the original surveys, updated monthly transect and static activity surveys will be undertaken between April and October 2022. The surveys will aim to determine the importance of these areas to the bat assemblage present and using the site and complement the existing data from 2019. This information would be included within the Natural England EPS licence.

9.7.17 The surveys would include one walked transect per month (comprising either one dawn or one dusk visit) and static surveys, whereby bat detectors would be left on site to record bat activity over five consecutive days each month. The surveys would be undertaken in accordance with the BCT (2016) guidelines.

9.7.18 Lighting to be installed as part of the development should be in line with Guidance Note 08/18 Bats and Artificial Lighting in the UK, the following will be required:

- LED lighting will be used, and light levels should be kept as low as possible. Metal halide, fluorescent sources should not be used;
- Lighting will be directed to where it is needed (away from woodland, woodland edge and mature trees on site);
- Only luminaires with an upward light ratio of 0% and with good optical control should be used, luminaires should always be mounted on the horizontal, i.e. no upward tilt;
- Any external security lighting should be set on motion-sensors and short (one minute) timers;
- Internal lighting within any new structures should be recessed where installed in proximity to windows to reduce glare and light spill; and
- Light sources should emit minimal ultra-violet light, peak higher than 550nm and be of a warm white spectrum (ideally <2700 Kelvin).

9.7.19 A variety of native, woody species should be used in the landscape scheme and these would provide new areas of suitable habitat for bats to forage around. Grassland areas should be sown

with a meadow grassland seed mix to improve the habitat value for bats by providing an additional habitat type suitable for foraging and replacing areas of grassland currently of low ecological value.

9.8 Badgers

9.8.1 An offset of a minimum 30m around active badger setts, where no works would be undertaken is required to avoid disturbing or destroying the setts. If this is not possible, a licence from Natural England may be required, however licences can only be issued for work undertaken between July and November and planning permission would need to be in place before a licence is granted.

9.8.2 It may be possible to undertake some works (i.e. use of light machinery/hand tools) within the 30m buffer zone without a licence, however this will be determined and agreed with an ecologist prior to works being undertaken.

9.8.3 Mitigation measures that would be required to protect badgers that are foraging or commuting on the site during construction are detailed below:

- Prior to the commencement of works a site induction and toolbox talks should be provided to all site workers and contractors which should include measures described in this report as well as emergency procedures to be followed should a badger or sett be located during construction works;
- Night working should be avoided unless essential. Where this is not practicable, lighting should be focussed on construction areas and directed away from areas of high potential value to badgers and other wildlife as directed by the project ecologist (i.e. nearby setts, parcels of woodland and hedgerows);
- Excavations more than 0.5 m deep should be fenced or covered overnight where practicable, and a means of escape, such as wooden planks that could be used as ladders, should be set in place within these excavations, or excavations should be profiled so as to enable badgers to escape; and
- An emergency procedure should be undertaken if a badger or sett is located during construction. This should involve immediately halting works within 30 m of any new sett and then the project ecologist should report this to the construction site manager and developer as soon as practicable and works in the area should be halted until a licence has been obtained.

9.8.4 All licenced works should be carried out in accordance with the requirements of the licence.

9.8.5 A repeat badger survey will be undertaken within six months prior to construction works commencing to monitor the status of the setts (i.e. check whether inactive setts are in use again), check for any new setts within 30m of the proposed development, and monitor activity within the wider area. This would help to inform the amount of mitigation required.

9.8.6 It should be noted that full Planning Permission (or Planning Permission with all nature conservation conditions discharged) should be acquired prior to an application for a licence.

9.9 Enhancement Opportunities

In addition to the mitigation measures outlined above, enhancement measures could also include:

- The provision of bird boxes located within retained vegetation and on mature trees. Boxes would comprise various designs suitable for common species recorded on site;
- Invertebrate boxes in various habitats, including near retained boundary features, adjacent to waterbodies and within retained woodland;

- The provision of additional bat boxes on existing mature trees (up to three boxes per tree) facing in different directions to offer suitable roosting conditions all year round; and
- Amphibian / reptile hibernacula located in retained or newly created habitat in the south of the site.

REFERENCES

- HSE: Construction (Design and Management) Regulations 2015.
- Cherwell.gov.uk/info/69/pollution/410/noise-nuisance
- The Site Waste Management Regulations 2008
- Control of Pollution Act 1974
- Environment Act 1995
- The Special Waste Regulations 1996
- The Environmental Protection (Duty of Care) Regulations 1991
- Waste Strategy 2000 for England and Wales
- CL:AIRE Definition of Waste: Development Industry Code of Practice 2011
- Land Contamination Risk Management (LCRM) 2021
- Stantec: Graven Hill, D1 Site, Bicester: Environmental Statement (Volume 1)
- Environmental Protection Act 1990
- BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites
- BS 6187:2011 Code of Practice for Full and Partial Demolition
- RPS: MOD Bicester Ecological Assessment (ref. ECO01318, dated April 2022)
- BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations
- National Planning Policy Framework (NPPF) 2021
- Wildlife and Countryside Act 1981
- Bat Conservation Trust: Bat Surveys for Professional Ecologists: Good Practice Guidelines (2016)

Notes
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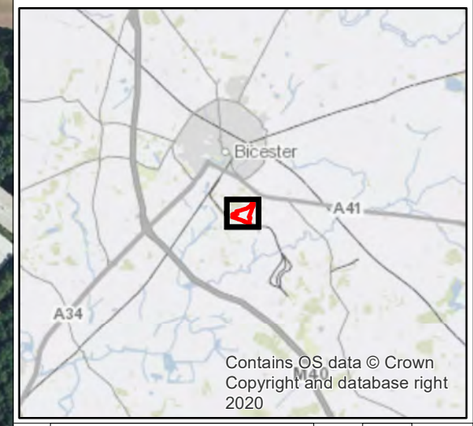
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

Assessment Site Boundary



Rev	Description	By	CB	Date

MAKING COMPLEX EASY

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Client: Graven Hill Purchaser LLC

Project: Graven Hill, Bicester

Title: Site Location Plan

Status	Drawn By	PM/Checked By
ISSUE	RD	GM
Project Number	**Scale @ A3**	**Date Created**
JER9528	1:4,000	APR 2022

Figure Number: **JER9528-001**

Rev: -

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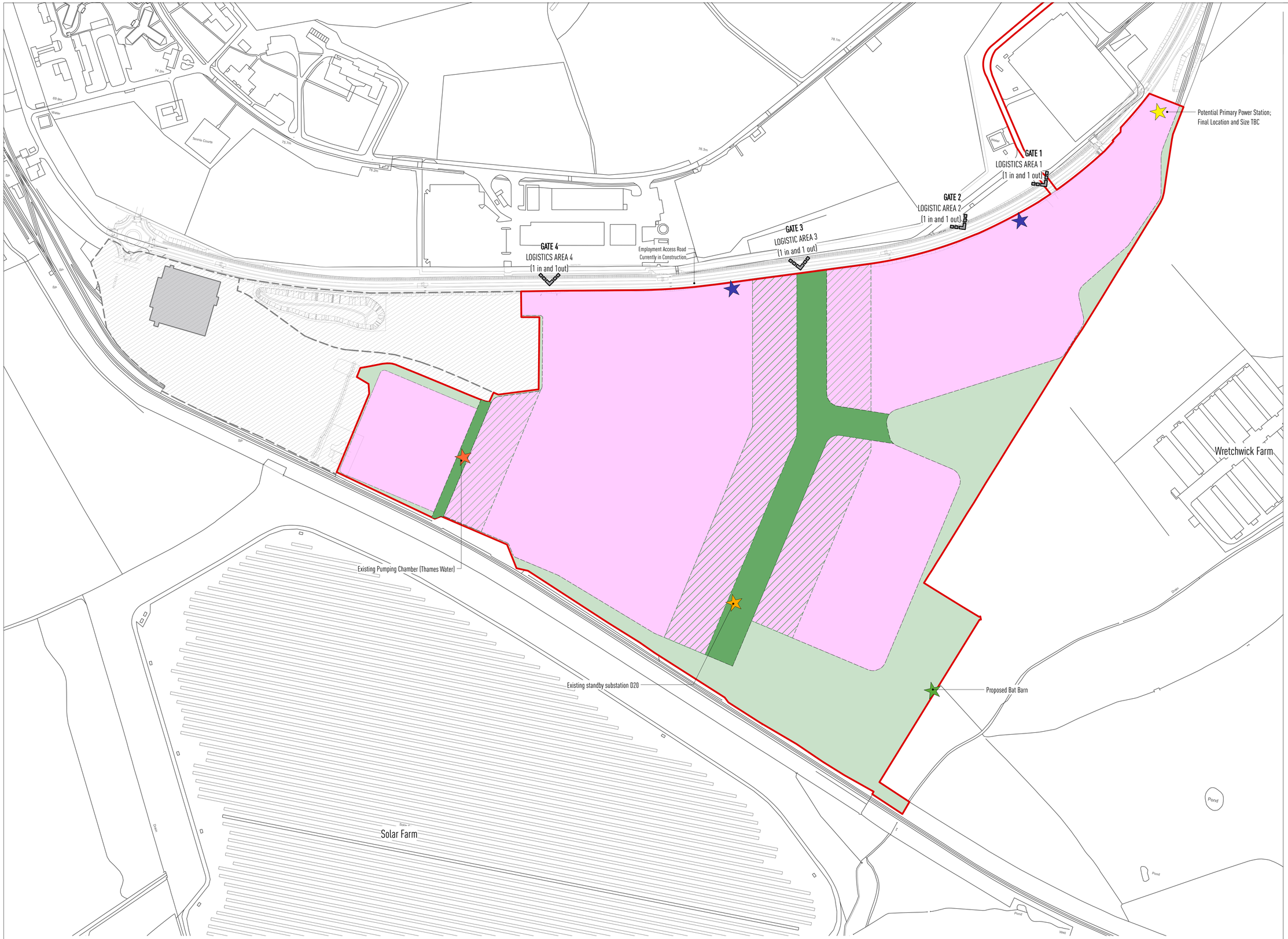
Appendix A
PROPOSED PARAMETERS PLAN



KEY

- Site Boundary
- Extent of Employment Allocated Land
- Structural Landscape planting including Existing woodlands, Proposed Amenity and Sustainable Drainage System (SuDS)
- Indicative route of Green fingers/ wildlife corridors; Final location /extent to be determined at Reserved Matters Stage
- Parameter of Green fingers/ wildlife corridors; Final location /extent to be determined at Reserved Matters Stage
- Development Area; including roads, parking and service yards; Max. 20m Ridge Height
  Details at Reserved Matters Stage
  227,511m2 (2,448,908 ft2)
- Existing D20 Substation
- Existing Thames Water Pumping Station
- New Sub-stations (as part of EAR Dev.)
- New Bat Barn
- Indicative location for Potential Primary Power Station

Refer to 410_S-50 Indicative Proposed Plan and ABA's Transport Report for detailed Gate/ Entrance Layout

PROPOSED LAYOUT PARAMETER PLAN_

0m 40m 100m 200m 400m

Revisions	
P2	10/05/2022 FOR COMMENTS
P1	09/05/2022 FOR DISCUSSION

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Project: Graven Hill D1 Site, Bicester — Project No.: 410

Drawing Title: PROPOSED LAYOUT PARAMETER PLAN

Status	Drawn	Checked
PRELIMINARY	JH	GO
Scale		Date
1:2000 @A1		MAY 2022
Drawing Number		Revision
410_S-51		P2