INTRODUCTION

18.1 Mitigation refers to '*measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment*' as set out in the EIA Regulations (amended 2018, 2020)[1]. Throughout the design process, environmental mitigation measures have been incorporated into the Outline Parameters and Design Code for the Proposed Development to prevent and reduce potentially adverse effects, as discussed in **ES Volume 1, Chapter 3: Alternatives and Design Evolution**, and as such comprise part of the scheme for which planning consent is sought. These environmental mitigation measures are often referred to as 'primary'[2] or 'embedded' mitigation measures and have been described in this ES in **ES Volume 1, Chapter 3: Alternatives and Design Evolution** and **ES Volume 1, Chapter 4: The Proposed Development**; they are not repeated within this chapter of the ES. Securing these measures will be via the planning permission granted for the Proposed Development itself.

18.2 Environmental enhancement measures have been incorporated into the design of the Proposed Development where practical to improve the existing environmental conditions of the site and surrounding area. Again, these are described in this ES in **ES Volume 1, Chapter 4: The Proposed Development**; they are not repeated within this chapter of the ES. Securing these measures will also be via the planning permission granted for the Proposed Development itself.

18.3 Several Management Plans or Management Documents have also either been prepared to accompany the planning application or are committed to being prepared and implemented which relate to mitigating adverse environmental effects. These Management Plans/Documents provide for a range of 'secondary'[3] mitigation measures and are expected to be secured through obtaining planning consent for the Proposed Development and their drafting, agreement and implementation will be subject to Planning Conditions attached to the development consent if granted by South Cambridgeshire District Council (SCDC) and Cambridge City Council (CCC). Table 18.1 lists the Management Plans/Documents. The requirements or 'secondary' mitigation measures (which has been identified as being necessary by the Environmental Impact Assessment (EIA)) of each of the Management Plans/Documents is summarised below in Table 18.2 and where a Management Plan/Document has been prepared this has been submitted alongside the planning application.

18.4 Table 18.2 also presents other 'secondary' mitigation and environmental design commitments required for the Proposed Development which have been identified as being required by the EIA process and described within this ES, but which doesn't necessarily sit within a specific Management Plan or Management Document. These measures are typically project bespoke mitigation and design commitments that have been identified as being required by the EIA, both in relation to the enabling, demolition and construction works and following completion and during operation of the Proposed Development.

18.5 Table 18.2 also sets out any relevant 'tertiary'[4] mitigation. This is environmental mitigation and design commitments which are standard measures/commitments that would be adopted as a matter of course to meet legislative requirements and best practice guidance in relation to the enabling, demolition and construction works; and completed development as relevant to the EIA.

18.6 Monitoring can relate to observations and recordings throughout the enabling, demolition and construction works (for example noise, vibration or dust monitoring). In addition, monitoring can be relevant at the operational stage of a development, for example in relation to a staff or residential travel plan and use of cycle parking or electric vehicle charging facilities. Monitoring can also be relevant where mitigation needs to be checked and validated for success; for example, tree/vegetation growth over time.

18.7 The environmental mitigation, design commitments and monitoring presented in Table 18.2 are measures that the LPA will need to secure for the Proposed Development, either using Planning Conditions (related to the Planning Permission) or through the Section 106 Agreement.

18.8 The environmental mitigation, design commitments and monitoring set out in Table 18.1 and Table 18.2 have been developed through coordination with the Applicant, Design Team and EIA technical specialists to ensure the environmental mitigation, design and monitoring measures suggested are deliverable and are considered appropriate in terms of their ability to mitigate likely significant adverse environmental effects associated with the Proposed Development.

Table 18.1 Management Plans/Documents

MANAGEMENT PLANS/DOCUMENTS	ES / OTHER RELEVANT REFERENCE
PRE-COMMENCEMENT	
Piling Method Statement	ES Volume 1, Chapter 9: Noise and Vibration
Piling Risk Assessment	ES Volume 1, Chapter 13: Ground Conditions and Land Contamination
ENABLING, DEMOLITION AND CONSTRUCTION	
Construction Environment Management Plan (CEMP)	ES Volume 1, Chapter 5: Enabling, Demolition and Construction ES Volume 1, Chapter 6: Socio-Economics ES Volume 1, Chapter 8: Air Quality ES Volume 1, Chapter 9: Noise and Vibration ES Volume 1, Chapter 10: Built Heritage ES Volume 1, Chapter 11: Ecology and Biodiversity ES Volume 1, Chapter 13: Ground Conditions and Land Contamination ES Volume 1, Chapter 14: Water Resources, Flood Risk and Drainage ES Volume 1, Chapter 15: Climate Change and Greenhouse Gases
Construction Method Statement (CMS)	ES Volume 1, Chapter 5: Enabling, Demolition and Construction
Demolition Method Statement (DMS)	ES Volume 1, Chapter 5: Enabling, Demolition and Construction
Construction Traffic Management Plan (CTMP)	ES Volume 1, Chapter 7: Traffic and Movement ES Volume 1, Chapter 8: Air Quality
Dust Management Plan (DMP)	ES Volume 1, Chapter 5: Enabling, Demolition and Construction ES Volume 1, Chapter 8: Air Quality
Site Waste Management Plan (SWMP)	ES Volume 1, Chapter 5: Enabling, Demolition and Construction ES Volume 1, Chapter 13: Ground Conditions and Land Contamination
Material Management Plan (MMP)	ES Volume 1, Chapter 13: Ground Conditions and Land Contamination
Soil Resources Management Plan (SRMP)	ES Volume 1, Chapter 12: Land Take and Soils (Agriculture)
COMPLETE AND OPERATIONAL	
Framework Site Wide Travel Plan	ES Volume 1, Chapter 7: Traffic and Movement
Operational Waste Management Strategy	ES Volume 1, Chapter 4: The Proposed Development
Ecological Enhancement Plan	ES Volume 1, Chapter 11: Ecology and Biodiversity
Landscape Maintenance and Management Plan	ES Volume 1, Chapter 4: The Proposed Development ES Volume 2, Landscape and Visual Impact Assessment

18.9 The requirements of each of the above plans/documents is summarised below in Table 18.2, along with other identified measures.

[1] *https://www.legislation.gov.uk/uksi/2017/571/schedule/4/made?view=plain*
[2] *https://www.nipa-uk.org/uploads/news/NIPAroundtablemitigationP2.pdf*
[3] *https://www.nipa-uk.org/uploads/news/NIPAroundtablemitigationP2.pdf*
[4] *https://www.nipa-uk.org/uploads/news/NIPAroundtablemitigationP2.pdf*

Table 18.2 Mitigation and Monitoring Schedule

ENVIRONMENTAL MITIGATION	ES REFERENCE
PRE-COMMENCEMENT	
SURVEYS, INVESTIGATIONS AND CONSENTS / LICENSES	
A number of surveys and investigations will be undertaken prior to the commencement of works across the site for each phase, envisaged to be as follows: • Ecological surveys to facilitate site clearance; • Geotechnical and contamination surveys and remediation; • Unexploded ordnance, if required; and • Asbestos surveys of the buildings to be demolished (after full vacant possession). All statutory, LPA consents and licences required to commence any on-site activity will also be obtained ahead of the works commencing and give the appropriate notice period. Applications will include but not necessarily be limited to: • A works license for any works on the public highway will be entered into for works on the existing highway in accordance with the Highways Act 1980 and Road Traffic Act 1998; • Hoarding and scaffold licenses for works on the perimeter boundary, if required; • Public Right of Way (PRoW) temporary diversions, which will be locally diverted at various stages of the enabling and construction programme to facilitate construction and to maintain public health safety; • Submission and approval from the Lead Local Flood Authority (LLFA) for the surface water drainage design for the site; • Ordinary water consents and environmental permitting to be obtained for any works associated with the watercourses (i.e. drainage outfalls etc.). The existing PRoW located in the north-west of the site will be temporarily diverted during the enabling works and final landscaping works. Temporary controlled vehicle crossing will need to be formed to all the developments of Plot A. Permission to temporarily divert existing Girton Public Footpath 5 (99/5), where required for construction activities, will be the responsibility of the Principle Contractor(s) to secure and will be subject to approval from Cambridgeshire County Council (CCoC). Request for temporary diversions and the duration of each diversion will be confirmed with CCoC prior to construction activities commencing for each development phase. Once construction activities are completed access to the PRoW will be reinstated along its existing alignment	**ES Volume 1, Chapter 5: Enabling, Demolition and Construction**
All contractors involved in the demolition and construction works associated with the Proposed Development will be registered with the Considerate Constructors Scheme (CCS), Fleet Operator Recognition Scheme (FORS) and Construction Logistics and Community Safety (CLOCS).	
SITE INVESTIGATIONS, REMEDIATION STRATEGY AND VERIFICATION (GROUND CONDITIONS AND LAND CONTAMINATION)	
Additional ground investigation (GI) will be undertaken as recommended in the AECOM Land Contamination Preliminary Risk Assessment (PRA). The GI will be completed prior to development commencing including areas not previous investigated. If risks from potential contamination is determined by the assessments carried following the GI, then a Remediation Strategy will be developed for the site, in consultation with GCSPS and the Environment Agency (EA), and appropriate remediation measures implemented as required. On completion of any remediation, the results will be reported within a Verification Report, to ensure that the remedial criteria set out in the remediation scheme have been achieved. The contamination assessment will be conducted in accordance with CIRIA C552. An adequate risk assessment following an intrusive ground investigation can be undertaken to identify significant adverse effects to human health. If the assessment identifies unacceptable risks, appropriate remedial measures and / or gas protection measures will be implemented during the enabling and construction phase of the Proposed Development in accordance with the Remediation Strategy developed for the site. Additional site investigation, including groundwater monitoring and assessment, will be completed prior to development commencing including areas not previous investigated and appropriate remediation implemented as required, which can be secured by planning condition.	**ES Volume 1, Chapter 5: Enabling, Demolition and Construction** **ES Volume 1, Chapter 13: Ground Conditions and Land Contamination**
Further ground gas monitoring will be undertaken to develop a comprehensive Ground Gas Risk Assessment (GGRA) to appropriate classify the site. Following the GGRA, the appropriate ground gas protection measures will be implemented into building design in accordance with BS8485:2015+A1:2019 'Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings', in line with of protective measures for methane and carbon dioxide ground gases for new buildings.	**ES Volume 1, Chapter 13: Ground Conditions and Land Contamination**
A piling risk assessment will be carried out to reduce as far as reasonably practicable the risk of development of preferential pathways (e.g. groundwater flow) between the Made Ground present and the underlying Principal Aquifer. The assessment will be in accordance with the Environment Agency's guidance documents including, piling into contaminated sites and will determine the risk to receptors through potential pollution scenarios considering any remediation measures proposed by the Applicant. A Piling Risk Assessment will be required to assess the risks associated with piling or other ground stability techniques to ensure no unacceptable risks to groundwater.	**ES Volume 1, Chapter 13: Ground Conditions and Land Contamination**
PILING METHOD STATEMENT (PMS)	
A Piling Method Statement (PMS) will be prepared and agreed upon prior to the commencement of works. Vibration limits will be set in accordance with BS5228-2 to minimise the risk of complaints or building damage. These limits will be controlled through implementation of the CEMP and vibration monitoring. The PMS will also include vibration and noise monitoring and action levels.	**ES Volume 1, Chapter 9: Noise and Vibration**
GROUND CONDITIONS AND LAND CONTAMINATION	
A 10m buffer zone of the Traveller's Rest Pit Site of Special Scientific Interest (SSSI) will be established prior to the commencement of construction works.	**ES Volume 1, Chapter 13: Ground Conditions and Land Contamination**
ENABLING, DEMOLITION AND CONSTRUCTION	
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)	
An Outline CEMP has been prepared in support of the planning application. It is anticipated that the preparation of a detailed CEMP will be conditioned and prepared (alongside any other required management plans) prior to any works on-site starting, in agreement with the Greater Cambridge Shared Planning Service (GCSPS). The Outline CEMP outlines precautions and measures to be implemented to minimise the exposure of workers, surrounding residents/commercial users and the general public to potentially harmful substances and contaminants, and includes: • A plan of the works, highlighting the likely sequences of activities, based on reasonable assumptions in terms of the sequencing of works and site logistics. A detailed methodology of these works will be set out in the final CEMP prior to these works commencing; • Details of site layout arrangements (including requirements for any temporary works) showing locations of site offices, plant and equipment, material storage etc.; and • General site logistics and day to day operations, procedures for any unexpected operations.	**ES Volume 1, Chapter 5: Enabling, Demolition and Construction**

ENVIRONMENTAL MITIGATION	ES REFERENCE
A contractor or contractors will be appointed to undertake the works, in lieu of their appointment the Outline CEMP sets out the principles and requirements that a contractor will have to adhere to and forms the basis for the development of a Detailed CEMP. This includes: • A commitment to environmental protection (all consultants and trade contractors will be invited to declare their support for this at tender stage). • Documentation of measures to comply with environmental aspects of any planning conditions. • Detailed control measures and activities to be undertaken to minimise likely environmental impacts, as well as associated roles and responsibilities. • Target criteria for environmental issues, where practical, such as water and energy consumption. • Any requirements for monitoring and record keeping. • Proposed noise, vibration, and dust monitoring levels to be agreed with CCC / SCDC. • A dedicated point of contact during normal working hours and in emergencies with responsibility to deal with environmental issues if they arise. • A review and monitoring regime of on-site performance against the Detailed CEMP provisions by the project team and regular environmental audits of its implementation. • The necessary level of management and control of demolition and construction practices. This includes advance notice of operations and duration of work that may cause noise, disruption to access, or other effects. **Working Hours** Working hours will be agreed with the CCC / SCDC, but are expected to be: • 07:00 – 19:00 hours on weekdays; • 07:00 – 13:00 hours on Saturdays; and • No working on Sundays, Bank or Public Holidays. • Start-up and close-down periods of up to an hour before and after core working hours will be used for activities such as arrival of workforce and staff on site; deliveries and unloading; maintenance and checking of plant and machinery; general refuelling; site inspections, and safety checks prior to commencing work; site meetings; and general site clean-up and departure. Some activities may need to be conducted outside the agreed working hours such as the following: • Seasonal and / or weather dependent / daylight dependent; • Construction plant repair and maintenance work; • Major concrete operations and other continuous operations; • Setting-up of traffic management schemes; • Short-term construction activities requiring road and railway closures / possessions; and • Delivery of abnormal loads in accordance with the requirements of the Highways Authority and Police, for example during mobilisation and demobilization. For these works the Principal Contractor will apply for dispensation in accordance with the CCC / SCDC noise nuisance guidance. **Housekeeping and General Site Management** Hoardings will be erected around development plots / parcels and in locations where the perimeter interfaces with the public and third to provide a clear and secure demarcation between operational activities and other areas. The hoarding will provide information regarding the Proposed Development and its progress. Particular attention will be paid to locations supporting high volumes of pedestrian movement (for example at the completed phase boundaries), demolition and construction routes, access gates and security arrangements. Hoardings will be lit from half an hour after sunset to half an hour before sunrise. Prior to the erection of any external floodlighting details will be agreed with the CCC / SCDC. The following measures will be implemented to mitigate enabling, demolition and construction impacts: • Prior to any demolition taking place, a pre-refurbishment / demolition asbestos survey will be undertaken. If asbestos is found, it will be removed and disposed of in accordance with UK best practice; • Works will be closely monitored by a surveyor to ensure that the required formation level is reached and no over excavation occurs. It is anticipated that excavated materials shall be hauled and stored at a dedicated stockpile area; • Protocols to be implemented on-site in instances of emergencies and environmental incidences will be set out within the Detailed CEMP for approval by CCC / SCDC; • Principal Contractors will be encouraged to explore options for collaboration within the Proposed Development and with other local sites in the area to manage where possible the import and export of fill material; and • The progress of Phase 1 will be monitored as it is expected to overlap with start of Phase 2 works. Opportunities will be explored for collaborating on holding areas and shared services when works programmes are developed in more detail, where possible. **Environmental Controls** The following mitigation and environmental controls will be implemented to collectively limit potential visual, noise, vibration, traffic, and dust impacts associated with the Proposed Development's construction works at the site: • Aesthetically appropriate site hoardings will be maintained; • Regular road sweeping will be undertaken; • High impact site activities and plant will be located away from neighbouring residential receptors, where practical; • Quiet plant will be selected where practical and will be regularly maintained; • Good housekeeping measures will be implemented at the site; • Site lighting will be directed away from sensitive receptors; • Site lighting will be turned off outside of normal working hours; • Scaffolding and active construction activities will be screened above hoarding levels, where practical; • Construction traffic management measures will be implemented (see '**Construction Traffic Management Plan**'; • Implentation and monitoring of dust management measures (see '**CEMP – Dust Management Plan**'; • Implementation and monitoring of noise and vibration measures (see '**CEMP – Noise and Vibration Controls**'; and • Temporary acoustic barriers will be used around potentially noisy activities.	

ENVIRONMENTAL MITIGATION	ES REFERENCE
An Environmental Risk Assessment (ERA) will be carried out for all work packages on the Proposed Development. The package specific ERA will assess, amongst other things, the environmental aspects and the associated risks of the works being carried out that may adversely affect the any receptors as a result. The ERA will be utilised in conjunction with the method statement for the works being carried out and appropriate mitigation measures or alternative methods of work will be identified and instigated. As a basis the risk assessment will consider the following: • The works and activities being undertaken; • The duration of these works and activities; • The number and types of vehicles and plant used; • The location of the works and the size of the site; • The prevailing meteorological conditions (wind speed, direction, and rainfall); • The proximity of sensitive receptors to the activity and their potential sensitivity to noise, dust, and vibration; • The existing levels of background noise, dust, and vibration e.g., from adjacent traffic and construction works; • The adequacy of the mitigation measures applied to reduce or eliminate noise, dust, and vibration; • The structure of building and foundations and any potential structure borne vibration transmission routes; and • Details of any fuels being stored on-site. **Non-Road Mobile Machinery (NRMM)** Suitable best practice mitigation measures for the site plant will be adhered to as follows to reduce the likelihood of significant adverse air quality effects from NRMM throughout the demolition and construction works: • All NRMM will comply with Stage IIIB of EU Directive 97/87/EC; • No vehicles or plant will be left idling unnecessarily; • An on-site speed limit will be enforced; • NRMM will be modern and well maintained. Should any emissions of dark smoke occur (except during start-up) then the relevant machinery will be stopped immediately, and any problem rectified before being used again; • Engines and exhaust systems will be regularly serviced according to manufacturer's recommendations and maintained to meet statutory limits/opacity tests; • Plant will be located away from the boundaries close to residential areas; and • Use of diesel or petrol powered generators will be avoided by using mains electricity or battery powered equipment where feasible and if safety concerns can be overcome. **Management and Monitoring** A Detailed CEMP will be produced by each appointed Principal Contractor, prior to works commencing on a development plot. The document will be submitted for review and regularly reviewed and updated to reflect the changes in site conditions, mitigations, or methodologies. The Detailed CEMP will define responsibilities and procedures for the management of the potential impacts on the environment arising during demolition, enabling and construction. A monitoring programme of the environmental effects of demolition and construction will be implemented to the agreed CCC / SCDC requirements. This programme will: • Evaluate the effectiveness of environmental mitigation and identify environmental problems and appropriate responses at an early stage. • Ensure that the works are carried out in accordance with the provisions of the Detailed CMP. • Identify and implement any environmental improvements that will contribute to the overall environmental performance of the Proposed Development. Site inspections and more formal audits will be undertaken and a checklist pro-forma, which will cover the environmental issues addressed in the Detailed CEMPs, used. Where a problem is identified, corrective action will be identified and implemented in conjunction with the Applicant, site managers and sub-contractors.	
CEMP – ECOLOGY AND BIODIVERSITY	
Prior to any site clearance or demolition works commencing, a pre-works check will be undertaken by an ecologist for protected or priority species. This will include: • Check for nesting birds, if works are programmed during the period (1 March to 31 August inclusive); • Check for badger setts; • Check for water voles in areas with wetland habitat; • Check for hedgehogs, brown hares, toads and reptiles, and relocation of such animals to suitable areas of retained habitat; and • Check of any buildings or trees for evidence of use by roosting bats. The need for further monitoring and/or ecological oversight by the ecologist will be dependent on the findings and will be determined on a case-by-case basis. The ecologist will undertake regular (at least quarterly) visits during construction until effective completion, or earlier if all possible risks to wildlife can be discounted. **Washpit Brook** No works will take place within 10m of the Washpit Brook unless previously agreed with an ecologist. The temporary crossing of Washpit Brook required in the northern part of the site to allow access across it during the sitewide cut and fill operation will be sited to minimise impacts on the brook and its vegetation. It will be installed on the same alignment as the flow control structure to ensure no additional trees need to be removed. It will be a clear span structure to avoid in-channel impacts. These details will be included within the CEMP, and their implementation will be secured through an appropriately worded planning condition. **Woodlands, Hedgerows and Other Linear Features** The appropriate design and layout of tree protection fencing will be detailed in a Tree Protection Plan at the reserved matters stage for each development plot. **Invertebrates** A proportion of the felled oak trees in the log pile in Plot J will be moved to a suitable area of retained habitat within the plot, to ensure that the Nationally Scarce species of timberworm beetle using the log pile is retained on site. **Great Crested Newt** Permanent newt fencing was installed alongside Eddington Avenue, either side of the Washpit Brook when the road was constructed as part of Phase 1 of the 2013 OPP, under the project's Natural England Great Crested Newt (GCN) Mitigation Licence. The temporary newt fence will be retained and maintained in condition good in this location until June 2031 under the current Natural England licence.	**ES Volume 1, Chapter 11: Ecology and Biodiversity**

ENVIRONMENTAL MITIGATION	ES REFERENCE
Site clearance and construction works within Amenity Cluster C will be overseen by an ecologist, and any newts found would need to be relocated to suitable retained habitat. This will be agreed with Natural England through a modification of the current licence. Monitoring of the numbers of GCNs within Pond 6 is a condition of the current Natural England licence, with surveys programmed for 2028 and 2031. The results of the monitoring will be reviewed as part of the Reserved Matters Application for Plot J, along with an up-to-date assessment of the suitability of the terrestrial habitat within Plot J, to determine whether any specific mitigation measures are required. Any such works, if necessary, will take place under a new Natural England mitigation licence or a modified version of the existing licence. **Common Toad** Site clearance and construction works within Amenity Cluster C, and Plots E1, F1, G and J will need to be overseen by an ecologist, with searches made of terrestrial habitat for toads prior to works commencing. Any toads found would need to be relocated to suitable retained habitat. **Lighting** Construction site lighting will only be turned on during the day (07:00-19:00) and switched off outside of these hours to minimise impacts on nocturnal wildlife. **Grass Snake** Site clearance and construction works within all parts of the site will need to be overseen by an ecologist, with searches made for grass snakes prior to works commencing. Any grass snakes found would need to be relocated to suitable retained habitat. **Barn Owl** Demolition of the building containing the nest and construction works in the vicinity of it, will be undertaken outside of the nesting period. There is significant variation in the nesting season of barn owls, which can commence as early in the year as January and continue into October or November. Demolition in the December prior to works commencing is recommended to ensure compliance with the legal protection afforded to barn owls. **Skylark** Topsoil stripping in the western part of the site will be undertaken in a manner that minimises the risk of damaging a skylark nest, which will include the following; • Works will commence in late summer/autumn (outside 1 March to 31 August), after the nesting period, wherever feasible; and • Where topsoil stripping needs to commence in spring or summer, the areas to be stripped will be surveyed in advance to confirm the absence of nests, and any nests present will be cordoned off and protected until the nest is no longer in use. **Whitethroat and Linnet** Tree felling, hedgerow and scrub clearance will be undertaken in a manner that minimise the risk of damaging any bird's nests, which will include the following: • Works should be undertaken between 1 September and 28 February inclusive, wherever feasible, to avoid the nesting season; and • Where works need to be undertaken during the nesting season (1 March to 31 August inclusive), vegetation will be surveyed in advance to confirm the absence of any nests; with any nests present to be cordoned off and protected until the nest is no longer in use. **Brown Long-Eared Bats** A Natural England licence will be required for the demolition of the farmhouse at Gravel Hill Farm. Works will take place when bats are absent, if possible, and under the supervision of a licensed ecologist. **Water Vole** Water voles will be relocated from the four temporary construction site ponds prior to them being in-filled. They will be relocated from the footprint of the works to construct a drainage discharge into the lagoon at Brook Leys. This will most likely be achieved by displacement, which involves manipulation of the habitat by vegetation strimming and de-watering (in relation to the ponds) to encourage animals to relocate to alternative nearby habitats. Works will take place under a Natural England licence, and there are seasonal restrictions on when such an operation can take place (currently 15 February to 15 April or 15 September to 31 October). **Badger** The four badger setts to be lost will need to be closed in advance of works commencing in relevant parts of the site. Closure will take place under a Natural England Badger Mitigation licence, following approved methods, as well as being undertaken within the appropriate seasonal window (1 July to 30 November inclusive). **Brown Hare** Site clearance and topsoil stripping within the western part of the site will be overseen by an ecologist, with searches made for brown hares prior to works commencing. Any animals found will be encouraged to move into retained habitat. **Hedgehog** Site clearance activities across the site will be overseen by an ecologist, with searches made for hedgehogs prior to works commencing. Any animals found will be relocated into retained habitat.	
CEMP – GROUND CONDITIONS AND LAND CONTAMINATION	
As required by the North West Cambridge Area Action Plan (2009), the Traveller's Rest Pit Site of Special Scientific Interest (SSSI) site will be safeguarded and protected as part of the Proposed Development to ensure that there is no adverse impact during the construction and operation of the Proposed Development. The measures that will be implemented to safeguard the site will be detailed in the Detailed CEMP. All earthworks operations will be undertaken in accordance with the following guidance: • BS1997:2004 Eurocode 7; • BS16907-1 to 7:2018 Earthworks (BSI, 2018); • BS6031:2009 Code of Practice for Earthworks (BSI, 2009); and • National Highways (NH) guidelines including Design Manual for Roads and Bridges (DMRB) Series 600 'Earthworks' (Highways England, 2016). Measures to be included within the Detailed CEMP, in relation to ground conditions and land contamination, include the following • Best practice will be adopted during construction to prevent or reduce as far as reasonably practicable spillage risk and spillage effects by adhering to the CEMP, where such measures are to be set out. The CEMP will address the management of concrete batching, concrete usage and accidental spillage relating to foundation and building construction; • Land disturbance will be reduced as far as is reasonably practicable and disturbed areas outside the development footprint will be revegetated as soon as possible after construction. Soil excavation will be undertaken with consideration given to the prevailing ground and weather conditions when programming the execution of the works to reduce the potential for mobilisation of exposed soil and / or sediment. Although not anticipated to be widely present across the majority of the site, if encountered, topsoil and subsoil will be kept separately during excavation; • Temporary construction compound areas will be located away from all significant surface water bodies where possible; • Washing out of vehicles or equipment will only take place in controlled areas; • Suitable areas for specific construction activities will be identified within the CEMP and consultation with the EA will take place before construction commences;	**ES Volume 1, Chapter 13: Ground Conditions and Land Contamination**

ENVIRONMENTAL MITIGATION	ES REFERENCE
• Chemicals, fuels and oils will be stored in secure and designated storage areas in accordance with the appropriate regulatory requirements, including the Control of Pollution (Oil Storage) (England) Regulations 2001 and Control of Substance Hazardous to Health (COSHH) Regulations 2002. Storage areas will need to be located on hardstanding areas to prevent the possible infiltration of contaminants into soils; • Re-fuelling of plant will take place in appropriate areas to be agreed in the CEMP i.e. in locations with an impervious base and are bunded or provided with interceptor drains. Spill kits will be kept with all vehicles on-site and all bowsers are to be double skinned or have a bund. Vehicles and equipment will not be left unattended during re-fuelling. To prevent materials leaking from static plant, such as pumps and generators, static plant will be placed on drip trays wherever practicable; • All pumps, generators and similarly fuelled equipment will be placed on drip trays or in a bunded area, and no vehicles or equipment will be allowed to enter any watercourses at any stage. Refuelling areas will be positioned a minimum of 50m away from any watercourse or drain. All vehicles, generators and similarly fuelled equipment will be maintained to a high standard to reduce as far as is reasonably practicable potential pollution incidents; • All valves, hoses and associated re-fuelling equipment will be regularly inspected to ensure that they are still in a suitable condition. This equipment will be protected from vandalism and unauthorised interference and will be turned off and securely locked when not in use; • All storage of drums containing hazardous material will be located within the main site temporary construction compound. Any spillages or leaks will be dealt with promptly and all waste disposed of in an appropriate manner. All tanks, drums and other containers will be clearly marked as to their contents. Before any tank is removed or perforated, all contents and residues will be emptied by a competent operator for safe disposal; • All bunds will have a capacity of at least 110% of the storage volume and will be covered where practical to prevent the collection of rainwater; and • Any staff involved in fuel handling will be given appropriate training, and site-specific procedures will be developed for all staff. Workers will be made aware of their statutory responsibility under section 85 of the Water Resources Act 1991 not to "cause or knowingly permit" water pollution. In addition, they will be made aware of their statutory responsibility under Regulations 38(1) and 12(1) of the Environmental Permitting Regulations 2019 not to "cause or knowingly permit" a water discharge activity or groundwater activity without an environmental permit. Rainfall runoff from areas where there is a risk of contamination will be managed using temporary drainage systems and or tankered offsite for treatment (including settlement of suspended solids and or oil interceptors) prior to discharge to local watercourses with the approval of the Environment Agency pursuant to a discharge licence. The drainage systems will incorporate pollution control systems designed in line with the CIRIA C532[5] or as agreed with the relevant authorities. Surface watercourses and waterbodies near worksites will be regularly inspected for signs of siltation or other forms of pollution in line with CIRIA Environmental Good Practice on Site Guide C811[6], whilst pumped groundwater, process effluents and construction site runoff will be tested to ensure compliance with discharge consent requirements – these measures are to be detailed in the CEMP. Best practice will be adopted during construction to prevent or minimise spillage risk and spillage impacts by adhering to the CEMP. The CEMP will address the management of concrete batching, concrete usage and accidental spillage relating to foundation and building construction.	
CEMP – DUST MANAGEMENT PLAN	
A scheme for dust monitoring, assessment and mitigation for all demolition and construction activities will be issued as part of a Dust Management Plan (DMP), implemented via the CEMP, to be approved in writing by the Local Planning Authority prior to commencement of the development. The DMP/CEMP will be in accordance with the best practice guidance laid out by the IAQM, and shall include: • A dust risk assessment to determine the level of dust risk the site poses and the applicable mitigation measures; • The identification of dust sensitive premises to be used as the location for dust monitoring, including any arrangements proposed for amending the selected locations if new dust sensitive premises are introduced; • The frequency and other arrangements for dust monitoring; and • The arrangements for reporting the results of dust monitoring and the implementation of mitigation measures to the Local Planning Authority. The construction shall thereafter be carried out in accordance with the DMP/CEMP for dust monitoring, assessment and mitigation for all demolition and construction activities unless otherwise approved in writing by the Local Planning Authority. Following the implementation of these measures: • All dust and air quality pollutant emission incidents and complaints will be recorded and responded and will be made available for local authority when requested. Equipment like Disc cutters, table saws, sanders, etc., will have dust suppression or a dust collection facility fitted. Dust-generating materials like stockpiles of sand, earth, cement, other fine aggregates will be covered when not in use; • A wheel washing system will be implemented for all construction vehicles. Commercial road vehicles attending the site will meet European Emission Standards pursuant to the EC Directive 98/69/EC of Euro 4 for petrol vehicles and Euro 6 for diesel vehicles and Euro VI for all lorries and heavy goods vehicles; and • The adopted public highway within the vicinity of the site will be swept within an agreed time frame as and when reasonably requested by any officer of the Highway Authority. Measures adopted by the DMP will include as a *minimum*: **Communication** • Develop and implement a stakeholder communications plan that includes community engagement before work commences on site; • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary; • Display the head or regional office contact information; **Site Management** • Record all dust and air quality pollutant emissions complaints; • Make the complaints log available to the local authority when asked; • Record any exception incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book; • Hold regular liaison meetings with other high risk construction sites within 250m of the site boundary, to ensure plans are coordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes; **Monitoring** • Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills in close proximity to the site boundary, with cleaning to be provided if necessary; • Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked; • Increase the frequency of inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions;	**ES Volume 1, Chapter 5: Enabling, Demolition and Construction** **ES Volume 1, Chapter 8: Air Quality**

[5] *Control of Pollution from Construction Sites: Guidance for Consultants and Contractors: CIRIA C532 (2001)*
[6] *Environmental Good Practice on Site (fifth edition): CIRIA C811 (2023)*

ENVIRONMENTAL MITIGATION	ES REFERENCE
• Agree dust deposition, dust flux, or real-time PM10 continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction; **Preparing and Maintaining the Site** • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible; • Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site; • Enclose 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; • Keep site fencing, barriers and scaffolding clean using wet methods; • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on site cover as described below; • Cover, seed or fence stockpiles to prevent wind whipping; **Operating Vehicle/ Machinery and Sustainable Travel** • Ensure all Non-Road Mobile Machinery (NRMM) comply with London's NRMM emission standards; • Ensure all vehicles switch off engines when stationary – no idling vehicles; • Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable; • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate); • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials; • Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing); **Operations** • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; • Ensure an adequate water supply on the Site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate; • Use enclosed chutes and conveyors and covered skips; • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on equipment wherever appropriate; • Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods; **Waste Management** • Avoid bonfires and burning of waste materials; **Demolition** • Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust); • Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground. • Avoid explosive blasting, using appropriate manual or mechanical alternatives; • Bag and remove any biological debris or damp down such material before demolition; **Earthworks** • Re-vegetate earthworks and exposed areas/soil stockpiles to minimised surfaces as soon as practicable; • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; • Only remove the cover in small areas during work and not all at once; **Construction** • Avoid scabbling (roughening of concrete surfaces), if possible; • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place; • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; **Trackout** • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site; • Avoid dry sweeping of large areas; • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable; • Record all inspections of haul routes and any subsequent action in a site log book; • Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned; • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable); • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and • Access gates to be located at least 10 m from receptors where possible.	

ENVIRONMENTAL MITIGATION	ES REFERENCE
CEMP – NOISE AND VIBRATION CONTROLS (BEST MANAGEMENT PRACTICES)	
Noise shall be minimised by adopting Best Practicable Means (BPM) as standard working practices across the site to ensure that noise is reduced whenever practicable. The following provisions are examples of BPM and will be adhered to where practicable throughout the enabling, demolition and construction programme: • The production of a construction noise and vibration report that evaluates the construction activities and provides specific BPM to reduce noise and vibration; • Installing a solid and continuous barrier around the site; • Limiting high impact activities (e.g., breaking and piling) to specific times during the day, e.g., 1 hour on – 1 hour off, or 09:00-12:00 and 14:00-17:00; • Plant is to be properly maintained and operated in accordance with manufacturer's recommendations. Electrically powered plant is preferred, where practicable, to mechanically powered alternatives; • Where feasible, all stationary plant would be located so that the noise effect at all occupied homes and commercial buildings is minimised and, if practicable, every item of static plant when in operation is to be sound attenuated using methods based on the guidance and advice given in BS 5228[7]; • Trade contractors would at all times apply the principle of Best Practicable Means as defined in Section 72 of the Control of Pollution Act 1974 (COPA), and carry out all work in such a manner as to reduce any disturbance from noise and vibration to a minimum; and • The timing of building operations will be critical in avoiding noise and vibration nuisance to surrounding areas and premises. The contractor would identify particularly sensitive periods in the works so that the potential problems can be minimised and that early and good public relations with the adjacent occupants of buildings are maintained. During the detailed working up of the construction programme and preparation of any future CEMP(s), the BPM measures to mitigate potential noise and vibration impacts on nearby noise sensitive premises will be defined and agreed with the CCC / SCDC, with the primary method for the control of noise and vibration being a Section 61 agreement under the Control of Pollution Act 1974 ('COPA') with the CCC / SCDC reported, with the reports highlighting when it is likely that the construction limits will be exceeded, so that construction activities can be effectively altered to mitigate. In addition, a Section 61 agreement also sets out a dispensation and variation procedure under which consent can be applied for to carry out works which would potentially exceed the agreed noise and vibration limits, or must occur at times when such work is otherwise not approved. Such dispensation/variations would be applied for where there are good engineering, safety or practical reasons for undertaking the works at these times. The selected contractor should adopt measures, including site supervision arrangements, to reduce noise and vibration to a minimum in accordance with BPM, as defined in Section 72 of the COPA. **Noise Management:** Noise from the site when measured 3 metres from the façade (free field) of any noise sensitive property, such as residential, will not exceed the following levels, subject to background reading measures prior to commencement: • LAeq (1 hour) 67 dB between 07:00 and 19:00 (including in the normal working hours); • LAeq (1 hour) 57 dB between 19:00 and 22:00; and • LAeq (5 minutes) 37 dB between 22:00 and 07:00. If noise at a sensitive receptor, such as residential properties, is likely to exceed the levels stated above, the sensitive receptor and CCC / SCDC will be pre-notified, in writing, at least 5 full working days prior to work commencing, with the following information: • Site location; • Duration of site operation, including schedule of operations likely to cause noise and their hours of work; • Noise characteristics; and • Details of community liaison. To mitigate construction traffic noise, the following measures will be employed as best practice: • Vehicles employed for any activity associated with the construction works will, where reasonably practicable, be fitted with effective exhaust silencers and shall be maintained in good working order and operated in a manner such that noise emissions are controlled and limited as far as reasonably practicable; • Time slots will be adopted for deliveries to ensure that convoys of vehicles do not arrive simultaneously and to avoid unnecessary idling on-site; • Strict controls to prevent temporary parking on kerb-sides in the vicinity of noise sensitive receptors; and • The use of sufficient clear signage to ensure that construction vehicles use only designated routes. **Vibration Management:** All available techniques will be used to minimise, as far as is appropriate, the level of vibration to which operators and others in the neighbourhood of site operations will be exposed. The priority will be to avoid the generation of vibration, and where vibration is unavoidable, to control vibration at source. Measures which should be taken include the following: • All activities with the potential to cause vibration levels greater than or equal to 1.0 mm s-1 PPV, eg piling, will be identified in the CMS prior to works commencing; • Compaction will be via vibrating rollers wherever possible; • A mitigation plan will be set out, including justification for siting of plant, types of plant selected, periods of use, working hours, access points, schedule of works likely to cause complaints (if not pre-notified). Construction activities will be carried out using the guidance in 'BS 6472-1: 2008 'Guide to evaluation of human exposure to vibration in buildings, Vibration sources other than blasting" and 'BS 7385-2: 1993, 'Guide to damage levels from ground borne vibration"" and 'BS 5228-2:2009 'Code of practice for noise and vibration control on construction and open site, Vibration". In accordance with BS6472-1:2008, vibration levels should not exceed 0.4 m.s-1.75 in neighbouring properties. If vibration at a sensitive receptor, such as residential, is likely to exceed 0.4 m.s-1.75, the sensitive receptor and CCC / SCDC will be pre-notified, in writing, at least 5 full working days prior to work commencing, with the following information: • Site location - the location of a site in relation to the sensitive receptor; • Duration of site operations, including schedule of operations likely to cause vibration and their hours of work; • Vibration characteristics - e.g. whether it is continuous, intermittent or impulsive; • Effect on buildings; • Details of community liaison. Vibration levels which have the potential to cause building damage will not be tolerated.	**ES Volume 1, Chapter 5: Enabling, Demolition and Construction** **ES Volume 1, Chapter 9: Noise and Vibration**

[7] *British Standard (BS), 2014. BS 5228. Code of Practise for Nosie and Vibration Control on Construction and Open Sites.*

ENVIRONMENTAL MITIGATION	ES REFERENCE
CEMP – WATER RESOURCES, FLOOD RISK AND DRAINAGE	
The CEMP will outline measures to protect surface and groundwater during the enabling, demolition and construction phase. This will include the following: • Storage of any hazardous substances (including solids and liquids) within well-contained and secured bunded areas to remove the risk of migration to exposed groundwater or surface water runoff; • Dewatering of any exposed groundwater is expected to be disposed appropriately in accordance with the EA requirements; • Wheel wash facilities are expected to be provided for vehicles moving to and from the site to prevent unacceptable levels of silts and debris entering the surface water network; and • Construction plant/materials are anticipated to be stored on hardstanding surfaces where possible to minimise silts and debris within surface water runoff. • Foul and surface water discharge during enabling, demolition and construction will be managed through standard construction practice; • The risk to groundwater contamination as a result of excavation and substructure works will be managed through standard construction practice, including measures such as: – Storage of any hazardous materials within impermeable bunded areas to remove the risk of migration to exposed ground water; and – Dewatering of exposed groundwater; • Any pumped groundwater will be treated appropriately and disposed appropriately in accordance with discharge consent requirements; • Potable water demand during enabling, demolition and construction will be managed through standard construction practice The CEMP will also include requirements to ensure appropriate consents/permits are obtained for any construction-phase discharges of waste (including waste water) and permits obtained as necessary e.g. under the Environmental Permitting Regulations 2010 (as amended), and will also outline requirements to ensure adequate water supply for the site during the enabling, demolition and construction phase.	**ES Volume 1, Chapter 14: Water Resources, Flood Risk and Drainage**
SITE WASTE MANAGEMNT PLAN (SWMP)	
An Outline Site Waste Management Plan (SWMP) has been prepared to support the planning application, and considers the need to lessen the overall impact of waste generation through recycling of materials from the construction phase of the Proposed Development. The Principal Contractors and sub-Contractors will prepare a Detailed SWMP prior to works commencing onsite. The Outline SWMP proposes: • Any concrete or tarmac excavated on site will be crushed for reuse as secondary aggregate subject to obtaining the necessary permits or sent to an off-site facility for processing. • The Principal Contractor is expected to keep signed waste transfer notes (WTN) or consignment notes to document all the waste disposed of or transferred from the site, retained for a period in accordance with all prevailing legislation. • Emphasis will be placed on the provision of appropriate storage conditions for raw materials and key waste streams relating to each development. This will include the segregation of material for reuse or recycling on-site. Where this is not practicable, materials will be segregated for off-site recycling. • A waste storage area will be set out with clearly marked out areas for the segregation of each waste stream to support reuse and recycling. • Sufficient waste skips will be provided to maintain the stie in a neat and tidy state. They will be removed and replaced once full. • Wherever possible, materials will be recycled and re-used either on-site or off-site. The Proposed Development will target the avoidance of waste to landfill and has a target of 95% of the waste generated on-site to be re-used or recycled. The Detailed SWMP will focus on minimising waste being generated through the following measures: • Material ordering will be carefully managed to minimise waste arising from over-ordering; • Minimal packaging will be requested from suppliers. A take-back service will be required for all suppliers, especially for pallets etc.; • Materials will be ordered cut to required sizes (rather than standard sizes); • Pre-fabrication of construction components off-site will be used were possible; • Appropriate storage areas will be pre-prepared on-site to protect materials for weather damage prior to use; • Active management of handling and storage areas (especially where close to local sensitive receptors), including water spraying and/or sheeting of stockpiles and surfaces in dry and windy conditions; • Segregation of waste materials to ensure maximum value is derived from the materials generated; • Compaction to reduce the overall volume of waste and reduce delivery collections; • Minimising the prolonged storage of debris on-site; and • Inclusion of a specific waste performance clause in procurement documentation to drive performance of the project. The SWMP will allow for waste streams to be estimated and monitored and goals set with regards to the waste produced. The SWMP will require that the construction contractor segregates waste streams on-site, prior to them being taken to a waste facility for recycling, disposal or reuse in accordance with appropriate permit. All waste removal from the site will be undertaken by fully licensed waste carriers and taken to permitted waste facilities.	**ES Volume 1, Chapter 5: Enabling, Demolition and Construction** **ES Volume 1, Chapter 13: Ground Conditions and Land Contamination**
MATERIAL MANAGEMENT PLAN (MMP)	
The CEMP will also include a Material Management Plan (MMP) following guidance in Definition of Waste: Code of Practice (DoWCoP)[8]. The re-use of site-won materials will be under a MMP where the DoWCoP requirements have been met and approval from the appropriate regulator (the Environment Agency) has been granted; a Qualified Person under the DoWCoP will be engaged to approve the MMP and a verification report will be produced to demonstrate that the MMP has been properly enacted. Where material requires alteration, remediation or improvement prior to reuse, an environmental permit or an exemption will be sought prior to the reuse of material, where required. Where soil materials are deemed to be surplus to the requirements of the Proposed Development, such materials, will be classified as waste under the Waste Framework Directive (WFD) (2009/98/EC) as either hazardous (17-05-03) or non-hazardous (17-05-04) soils. Classification will be undertaken using a proprietary assessment tool such as "HazWasteOnlineTM". Waste deemed to be hazardous, will require testing using the Waste Acceptance Criteria (WAC) prior to disposal to landfill. The 'Waste Duty of Care Code of Practice' (Department for Environment, Food and Rural Affairs, 2018) notes that there is a duty of care for the safe management of waste, particularly for the protection of the environment and human health. The duty of care is applicable if waste is imported, produced, carried, kept, treated, disposed of or have control (as a dealer or broker) of waste.	**ES Volume 1, Chapter 13: Ground Conditions and Land Contamination**

[8] *Contaminated Land: Applications in Real Environment (CLAIRE) (2011); Definition of Waste: Code of Practice*

ENVIRONMENTAL MITIGATION	ES REFERENCE
SOIL RESOURCES MANAGEMENT PLAN (SRMP)	
The primary measures to mitigate the impacts on soil resources will be set out in a Soil Resources Management Plan (SRMP). The SRMP will consider the measures set out in the Defra Construction Code of Practice for the Sustainable Use of Soils which includes confirmation of the different soil types and depths (based on the soil surveys already undertaken); the most appropriate re-use for the different types of soils within the detailed design; and the proposed methods for handling, storing and replacing soils on site. The adoption of the SRMP will ensure that the soil resources on site will be able to continue to fulfil their various ecosystem services and functions. The aim of the SRMP will be to re-use displaced soil resources on-site in the detailed design of open spaces and green infrastructure. The quality of soils retained on-site would be maintained by following good practice guidance on soils handling and storage, particularly to minimise soil handling and avoid compaction and biodegradation of soils. The reinstated soil resources shall be monitored for up to five years following the completion of the Proposed Development, for signs of such issues as poor drainage and anaerobism which shall be ameliorated as necessary.	**ES Volume 1, Chapter 12: Land Take and Soils (Agriculture)**
CONSTRUCTION TRAFFIC MANAGEMENT PLAN (CTMP)	
A Framework Construction Traffic Management Plan (CTMP) has been prepared and submitted with the planning application. The CTMP will minimise disturbance that could potentially arise from construction traffic generated by the Proposed Development. The key elements of this Management Plan include: • Routing traffic to the site to maintain heavy construction traffic on the adjacent Strategic Road Network (SRN) so far as possible and thereby minimize the impact of construction traffic on local communities; • Signage to identify access routes and to inform motorists that the local roads are accommodating construction traffic; and • Scheduling construction traffic movements (equipment and materials), when possible, to avoid the peak traffic periods at the beginning and end of each working day and other sensitive periods, to minimise potential disturbance to existing residents, users or visitors locally or safety impacts at junctions. The CTMP references the CEMP and details the following measures in relation to strategies to reduce construction traffic impacts: • Vehicle routes will be discussed and agreed with the relevant authorities; where possible, site traffic will be directed to utilise pre-approved routes; • Access to development plots / parcels will be paved with a bound material (for at least 15m) into the site from the boundary of the adopted public highway; • Any temporary gates used for site security will be set back at least 15m from the boundary of the adopted public highway to enable a delivery/muck away vehicle to wait wholly off the adopted public highway while the gates are opened and closed, or they must remain open throughout the entire working day; • When practical, access gates will be a minimum of 6.5m wide to facilitate construction traffic; • Any parking for operatives or contractors will be provided within the site boundary and coordinated with the works by the Principal Contractor. Visitor parking will also be provided within the site boundary; • All deliveries will be pre-booked with the logistics management teams through a delivery management system. Deliveries will be discussed at regular coordination meetings to manage peaks and reduce waiting times offsite; and • The appointed Principal Contractors will be expected to comply with the following schemes in addition to all local policy requirements: – Community Logistics and Community Safety (CLOCS)[9]; – Fleet Operator Recognition Scheme[10]; – Considerate Contractor Scheme[11]; and – All goods vehicles over 3.5 ton will be Fleet Operators Recognition Scheme (FORS) Silver compliant; • All construction traffic entering and leaving the site will be strictly controlled. Vehicles delivering to or removing materials from the site will travel via designated routes, pre-agreed with CCC / SCDC and the Highways Agency; • Deliveries will be avoided between 08:00 – 09:00 and 15:00 – 16:00 due to the local Primary School in Phase 1 during term time; • Construction processes will be programmed to avoid deliveries during peak traffic periods to reduce delays and ensure that drivers can make efficient use of their drivable hours; • Deliveries after 15:00 will be rare due to limited on-site processing capacity; • Due to the size of the site, holding areas will be established on site allowing deliveries to be concentrated outside of peak local traffic times. If required suitable holding areas outside site will be agreed with the relevant authorities; • Principle Contractors will be encouraged to utilise rail freight where benefits can be demonstrated. • Measures to ensure effective management of Heavy Good Vehicle (HGV) traffic will comprise the following: – Suppliers will be informed of specified approach and departure routes to prevent use of unsuitable roads; – HGV deliveries will be scheduled to avoid peak periods; – Approach and departure routes will be clearly signposted and clear controls for access to the site will be provided; – Parking management and staff travel. • A construction Staff Travel Plan will be produced by the Principal Contractor for each development parcel or plot and will set out measures to encourage all operatives to use sustainable means of transport. The use of bicycles as a form of transport will be encouraged, with bicycle storage and shower facilities made available onsite. This will generally be adjacent to site welfare compounds. The following measures will be implemented to address residual traffic and movement effects arising during enabling, demolition and construction. These will be secured by a suitably worded planning condition as part of the CTMP: • Local residents will be consulted and informed about the construction and traffic management proposals to maintain good community relations; • Adoption of reasonable endeavours to publicise employment opportunities in local press to recruit staff locally and thereby reduce the length of journeys to work for construction staff; and • Adoption of reasonable endeavors to sub-contract tenders from local suppliers to reduce the length of journeys to work for construction staff.	**ES Volume 1, Chapter 7: Traffic and Movement**
ECOLOGY AND BIODIVERSITY	
Great Crested Newts The temporary newt fence separating Pond P1 in the Madingley Road Park and Ride from Amenity Cluster C needs to be retained and maintained in good condition until the sports provision in Amenity Cluster C and the adjacent Plot G have been constructed. This is a condition of the Natural England licence and is therefore already secured at the time of the production of this ES.	**ES Volume 1, Chapter 11: Ecology and Biodiversity** **Arboricultural Impact Assessment**

[9] *Available from: https://www.clocs.org.uk/*
[10] *Available from: https://www.fors-online.org.uk/cms/*
[11] *Available from: https://www.ccscheme.org.uk/*

ENVIRONMENTAL MITIGATION	ES REFERENCE
Landscaping works within the narrow strip of land along the eastern edge of Amenity Cluster C will need to be carried out under ecological supervision and any newts present captured and relocated appropriately. This will need to be agreed with Natural England through a modification of the current licence. It is therefore already secured due to the legal requirement to comply with the licence conditions or modify the licence accordingly. Newts associated with Pond 6 may start to utilise the land within Plot J if there is a significant increase in the numbers of newts breeding within the pond. Monitoring of the numbers of GCNs within Pond 6 is a condition of the Natural England licence, with surveys programmed for 2028 and 2031; monitoring is therefore already secured. The results of the monitoring will need to be reviewed as part of the Reserved Matters Application for Plot J, along with an up-to-date assessment of the suitability of the terrestrial habitat within Plot J, to determine whether any specific mitigation measures are required. Any such works, if necessary, would need to take place under a new Natural England mitigation licence or a modified version of the existing licence. **Water Vole** Water voles will need to be relocated from the four temporary construction site ponds prior to them being in-filled. They will also need to be relocated from the footprint of the works to construct a drainage discharge into the lagoon at Brook Leys. This would most likely be achieved by displacement, which involves manipulation of the habitat by vegetation strimming and de-watering (in relation to the ponds) to encourage animals to relocate to alternative nearby habitats. Works would need to take place under a Natural England licence, and there are seasonal restrictions on when such an operation can take place (currently 15 February to 15 April or 15 September to 31 October). **Tree Protection** The following principles for the protection of retained trees will be adopted across the site for the duration of the project: • All retained trees will be protected by fencing that will form the Construction Exclusion Zone (CEZ). • Where fencing cannot provide the necessary protection measures, alternative systems will be installed that will ensure retained trees are protected. This may include the use of either temporary or permanent ground protection. • There will be no storage of materials, or access for construction workers or machinery within any CEZ. • There will be no excavation within a CEZ. All utilities and underground services will be located outside the CEZ or tap into existing service routes. • Any storage or mixing station located outside of a CEZ will be located in a place that minimises the risk of contaminated runoff entering the CEZ and damaging the rooting environment. This may be achieved by using a non-permeable membrane on the ground, surrounded by sandbags to contain any spillage. • There will be no fires within a CEZ. • There will be no use of herbicides within a CEZ.	
GREENHOUSE GASES (GHG)	
The following GHG mitigation measures will be considered at the detailed design stage for incorporation during the construction of the Proposed Development to further reduce the GHG impact: • Where practical, building materials could be sourced locally to reduce transportation pollution and support the local economy; • Where possible, low-carbon materials and/or recycled materials could be used in replacement of virgin materials. Specifically, all cement used in construction could have up to 40% fly ash, Ground Granulated Blast-furnace Slag (GGBS) or recycled binders incorporated into the concrete mixture; • Low carbon reinforcement could be integrated into the design; • The design could consider higher levels of recycled content of aluminium in the glass façade and windows; • All reinforcement steel could be sourced from the UK ensuring it has high recycled content; • Higher strength concrete cladding could be considered to reduce thickness; and • Blockworks with high recycled or cement replacement could be considered.	**ES Volume 1, Chapter 15: Climate Change and Greenhouse Gases**
COMPLETED DEVELOPMENT	
ECOLOGICAL ENHANCEMENT PLAN	
An Ecological Enhancement Plan has been prepared in support of the planning application, which sets out a range of measures to incorporate into the future detailed design of the Proposed Development, including the following: **Integrated Bird Boxes** Each residential plot will deliver integrated bird boxes, and the number of bird boxes will equal (or exceed) the number of dwellings within the plot. Non-residential building plots will also need to deliver integrated bird boxes, and the number of bird boxes must equal (or exceed) 10 bird boxes for the first 1,000m^2 of building footprint, with an additional box required for every additional 100m^2 of building footprint. **Integrated Bat Boxes** Each residential plot will deliver integrated bat boxes. The number of bird boxes will equal (or exceed) 25% of the number of dwellings within that plot. **Barn Owl** At least two barn owl boxes will be installed within areas of extensive grassland habitat, to be provided in the western part of the site. **Woodcock** The area of grassland to the north of Pheasant Plantation will be managed to provide suitable foraging habitat for woodcock. **Woodlands** The appropriate design and layout of tree protection fencing will be detailed in a Tree Protection Plan at the reserved matters stage for each development plot; The existing chestnut paling along the northern edge of Storey's Way Wood will be extended to also run along the western and southern edge of the woodland to discourage public access, when Plots H2, H3 or J come forward for development. The existing chestnut paling along the northern and eastern edges of Cricket Pitch Wood will be extended to also run along the southern edge of the woodland to discourage public access when Plot J comes forward for development. Chestnut Paling will be installed along the northern and southern edges of Pheasant Plantation when Amenity Cluster C comes forward for development, or the security fence that currently restricts access to the woodland from Brook Leys is removed. **Veteran Oak Tree** The Reserved Matters Application for Plot F2 will ensure that the layout and height of buildings is designed to minimise the impact of changes to wind patterns on the tree. Preparation and submission of an Arboricultural Impact Assessment for Plot F2 will be secured by way of an appropriately worded planning condition.	**ES Volume 1, Chapter 11: Ecology and Biodiversity**

ENVIRONMENTAL MITIGATION	ES REFERENCE
A Veteran Oak Management Plan was prepared in 2013 to guide long-term management of the tree (Lockhart Garratt Report, Document Reference 14-0209/3639 Rv4). This document will be reviewed and updated to account for the construction of Phase 1 and ensure long-term survival of the tree going forwards, including the requirements for watering. This is to be secured by way of an appropriately worded planning condition. **Washpit Brook** The play area in Amenity Cluster C will be designed so that the parts of the play area located within 10m of Washpit Brook comprise soft rather than hard landscaping, to avoid further encroachment of the riparian zone. This will be effectively secured by a planning condition relating to BNG, as the requirement to achieve at least a 10% gain will ensure that the detailed design avoids any further encroachment into the riparian zone. **Barbastrelle Bats** The layout of buildings with Plot J in particular will be designed to minimise light spill onto Storey's Way Wood. This is to be secured by way of an appropriately worded planning condition, requiring the Reserved Matters Application to minimise light spill onto retained woodland, hedgerows and other suitable habitat. **Hedgehog Highways** All development plots will allow the movement of hedgehogs across the plot. Any run of close boarded fencing will include at least one 13cm x 13cm hole, with a hedgehog highway sign fastened above it. There will be sufficient holes to allow hedgehogs to access all rear gardens of residential properties and any areas of public open space. **Amphibians and Reptile Hibernation Sites, Log Piles** Each RMA will include a commitments to construct at least one reptile or amphibian hibernation site, or one log pile in a suitable locations, to provide an additional wildlife feature. **Green and Brown Roofs** All flat roofed buildings will incorporate either a green or brown roof (or combination of either with solar panels). Full details of the type and location of green /brown roods will be provided as part of each RMA. **Invertebrates** Disease-resistant elm cultivars will be included in the planting mix for areas of open space. A proportion of the felled oak trees in the log pile located on Plot J will be moved to a suitable area of retained habitat within the plot, when this plot comes forward for development. **Otters** Two artificial otter holts will be provided along the Washpit Brook. Details of proposed design and materials will be set out at the RMA stage.	
LANDSCAPE MAINTENANCE AND MANAGEMENT PLAN	
A Landscape Maintenance and Management Plan has been prepared in support of the planning application, which sets out the strategic approach to the maintenance and management of the Proposed Development hard and soft landscape. Further specifics will be brought forward at the Reserved Matters Application stage. The Landscape Maintenance and Management Plan will establish a long term plan to ensure establishment and ongoing performance of new planting, Monitoring of planting success will be carried out annually for the first five years, followed by reviews every five years thereafter to assess health, form and function of vegetation.	**ES Volume 1, Chapter 4: The Proposed Development** **ES Volume 2, Landscape and Visual Impact Assessment**
OPERATIONAL WASTE MANAGEMENT STRATEGY	
An Operational Waste Management Strategy (OWMS) has been prepared in support of the planning application, which considers the potential impacts that may arise from waste generated during the operational phase of the Proposed Development, with the overall aim of developing a strategy for legislative compliance and good practice in separation, storage and collection of waste arising. The OWMS demonstrates the following: • The quantity of municipal waste the Proposed Development is expected to generate once operational; • How operational waste will be managed in accordance with the Waste Hierarchy; • The Proposed Development supports the separate collection of Dry Mixed Recycling (DMR) (at least card, paper, mixed plastics, metals and glass), food waste and residual waste; • How operational waste management performance will be monitored and reported; and • Measures such as consolidated, smart logistics and community-led waste minimization schemes have been explored. The developer will be contractually responsible for all operational waste reporting for the Proposed Development. This reporting will be based either on number of container lifts per waste stream, or collection weight data if available. Data requirements and reporting methods will be agreed with the relevant authorities once all elements are occupied. Upon move in, an information pack will be provided to residents detailing measures to reduce waste, including how to reduce avoidable food waste and opportunities to minimise the use of single use items. Details of the local reuse and recycling centres will be provided to residents to advise them how to manage waste streams not collected by Greater Cambridge Shared Waste Service (GCSWS) as part of their standard service offering.	**ES Volume 1, Chapter 4: The Proposed Development**
FRAMEWORK SITE WIDE TRAVEL PLAN	
A Framework Site-Wide Travel Plan has been prepared in support of the planning application, which identifies how, under the long-term stewardship of the Applicant, the ongoing future travel needs of the community will be met, providing opportunities for healthy living, sustainable travel patterns, and helping to meeting wider carbon reduction targets. The Framework Site-Wide Travel Plan provides the framework within which future Travel Plans will be developed. The Framework Site-Wide Travel Plan includes a range of measures, including, but not limited to: • Provision of high quality end of journey facilities. In workplaces, provide shower and changing facilities for people that cycle or wheel. Secure lockers for the storage of clothes, equipment, and helmets; • Provision of cycle and wheeler maintenance facilities within the Proposed Development such as 'Dr Bike' days with free servicing. This will include; bike repair stations, Training, Personalised Travel Plans, and exploration of community cycle led rides; • Encourage organisations to offer employees Cycle to Work scheme opportunities; • Continue to develop and implement new micromobility hubs as appropriate; • Encourage organisations to provide subsidy / loans for season tickets for staff; • Car Club provision will be expanded for use by both residents and employees. It is an aim to ensure these vehicles are electric. Discounted membership and mileage will be explored; • Vehicles parking will be restricted at a ratio of 1:1 for private residential properties to discourage ownership of more than one vehicle; • Continue to utilise the virtual 'Residents Hub' to inform residents of new transport offers, initiatives or external matters; • Travel Information Packs (tailored for employees and residents) which will contain summarised information on the Travel Plan and sustainable travel; • A comprehensive management structure for the Travel Plan has been developed as part of the 203 OPP. This will be continued and, where necessary, further enhanced; • Encourage employment building occupiers to adopt their own agile / flexible working schemes to promote working from home. This may reduce the need to travel for some residents.	**ES Volume 1, Chapter 7: Traffic and Movement**

ENVIRONMENTAL MITIGATION	ES REFERENCE
Phase 1 of the 2013 OPP already has a Full Residential Travel Plan which is accredited "Very Good" within Modeshift Stars. A Full Residential Travel Plan will be required to cover the residential elements of the Proposed Development going forward. The Residential Travel Plan will be prepared prior to occupation, prepared in co-ordination with the Travel Plan Manager and relevant stakeholders, and utilise the successful measures implemented for Eddington. The document will be submitted to CCoC for review. When organisations meet the CCoC travel plan thresholds, a full Travel Plan or Travel Plan statement will be prepared by each organisation/occupier of the Proposed Development.	
TRAFFIC AND MOVEMENT	
To support the Proposed Development, a range of on and off-site transport infrastructure measures are proposed. These will be secured by a suitably worded planning condition and include: • Sustainable Community: – Improved wayfinding on-site; – On-site NMU network; – Phase 1 enhancements (improvements identified to the existing Phase 1 infrastructure as outline in detail within the TA); – Additional on-site Voi hub locations; – On-site amenities and neighbourhoods to encourage internalisation through local living; – On-site car parking pegged to accessibility; • Access: – New access from Cartwright Avenue onto Huntingdon Road that will remove traffic from Eddington Avenue; – Numerous new NMU points of access onto Huntingdon Road adjacent to crossing points over Huntingdon Road; – Update to signals timings and phasing at existing Huntingdon Road / Eddington Avenue junction to offer additional capacity; – Two new priority-controlled accesses off Huntingdon Road, with pedestrian footways linking onto Huntingdon Road, to directly serve the northern Proposed Development employment plots; • Mobility Hubs: – High quality bus stops to be provided within 400m of homes and 800m of each other. And three onsite primary mobility hubs plus additional neighbourhood mobility hubs located throughout the Proposed Development. • Public Transport: – Uplift in existing U2, 5 & 6 service plus uplift and diversion of existing U1; • Walk and Cycle Network: – Bi-directional strategic and segregated cycle link along Cartwright Avenue; – Additional leisure active travel routes through the site; – Improvements for active travel to Storeys Field Playground / Ridgeway junction; – Improvements to Eddington Avenue / Garrod Street Crossing to incorporate cyclists; – Segregated walk and cycle infrastructure along Garrod Street linking the site to the east; – High quality cycle parking; – Provision of uni-directional cycle lanes along north-western end of Huntingdon Road to fill gap between Girton Road and A14 bridge to serve existing active travel users and new residents; – Footway provision between North-West Huntingdon Road access and A14 bridge to fill an existing active travel gap; – Improved PRoW between Huntingdon Road and Girton over A14 Active Travel bridge.	**ES Volume 1, Chapter 7: Traffic and Movement**
NOISE AND VIBRATION	
Low noise road surfaces (single layer or two-layer porous asphalt) can reduce road surface noise, by up to 5 dBA when compared with the hot rolled asphalt (a typical / standard road surface). As the design of the proposed road (Garrod Street) has not been finalised, such mitigation measures will be explored at the detailed design stage, once the layout and other requirements are confirmed. The review of Garrod Street is to be secured with an appropriately worded planning condition.	**ES Volume 1, Chapter 9: Noise and Vibration**
NOISE AND VIBRATION – SERVICES PLANT	
Building services plant will be designed to achieve the recommended limits set out in Table 9.21 of **ES Volume 1, Chapter 9: Noise and Vibration** (in accordance with BS 4142 and CCoC typical requirements), which will be secured by condition. Typical measures to be considered to ensure that the building services noise criteria are achieved include low-noise equipment, in-duct attenuators and acoustic enclosures.	**ES Volume 1, Chapter 9: Noise and Vibration**
BUILT HERITAGE	
Given the outline nature of the Proposed Development, future reserved matters applications will adhere to the core design principles set out in the Design Code. The additional mitigation that can be achieved at this stage through the detailed architectural design, use of appropriate materials palettes across the site in its entirety, together with a detailed layout that responds sensitively to the identified built heritage receptors, will deliver a high-quality townscape that responds positively to its context and will preserve the sensitivity of the nearby built heritage receptors	**ES Volume 1, Chapter 10: Built Heritage**
SOCIO-ECONOMICS	
The delivery of the Proposed Development's sports pitches, playspaces and allotments will be secured via the S106 agreement. It is anticipated that there will be restrictions on the occupation of the Proposed Development until the necessary spaces have been provided, including any relevant spaces being provided by the Phase 1 RMA for Amenity Cluster A and Amenity Cluster B.	**ES Volume 1, Chapter 6: Socio-Economics**