Statutory Consultation 2022

Preliminary Environmental Information Report

Volume 3: Appendix 4.2

Draft Code of Construction Practice

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1 INTRODUCTION

1.1 Background

1.1.1 Luton Rising (a trading name of London Luton Airport Limited) (the Applicant) proposes to increase the capacity of London Luton Airport (the airport) to 32 million passengers per annum (mppa) (the Proposed Development) consistent with their Vision for Sustainable Growth 2020 to 2050 published in 2017.

1.1.2 This document is the Draft Code of Construction Practice (CoCP) for the works to construct the Proposed Development and is provided as part of a suite of documents which make up the Preliminary Environmental Information Report (PEIR) for consultation.

1.1.3 The Proposed Development builds on the current operational airport with the construction of a new passenger terminal and additional aircraft stands to the north east of the runway.

1.1.4 This will take the overall passenger capacity from 18 mppa to 32 mppa.

1.1.5 In addition to the above and to support the initial increase in demand, the existing infrastructure and supporting facilities will be improved in line with the phased growth in capacity of the airport.

1.1.6 Key elements of the proposed development include:

a. extension and remodelling of the existing passenger terminal (Terminal 1) to increase the capacity;
b. new passenger terminal building and boarding piers (Terminal 2);
c. earthworks to create an extension to the current airfield platform, material for these earthworks would be generated on site;
d. airside facilities including new taxiways and aprons, together with relocated engine run-up bay and fire training facility;
e. landside facilities, including buildings which support the operational, energy and servicing needs of the airport;
f. enhancement of the existing surface access network, including a new dual carriageway road accessed via a new junction on the existing New Airport Way (A1081) to the new passenger terminal along with the provision of forecourt and car parking facilities;
g. extension of the Luton Direct Air to Rail Transit (DART) with a station serving the new passenger terminal;
h. landscape and ecological improvements, including the replacement of existing open space; and
i. further infrastructure enhancements and initiatives to support the goal of a net zero airport operation by 2040, with interventions to support carbon neutrality being delivered sooner including facilities for greater public transport usage, improved thermal efficiency, electric vehicle charging, on-site energy generation and storage, new aircraft fuel pipeline

connection and storage facilities and sustainable surface and foul water management installations.

1.1.7 The Draft CoCP includes control measures and standards to be implemented throughout the construction of the Proposed Development. Whilst multiple construction works will run concurrently throughout the Proposed Development, the CoCP will act as the overarching document for all construction related activity. The CoCP will present a consistent approach to the environmental management of construction activities for the entire Proposed Development.

1.2 Structure of the document

1.2.1 This document comprises the following sections:

a. Purpose and development of the Draft CoCP (**section 2**);

b. Policy and Environmental Management Principles (**section 3**): an overview of the identified environmental management systems (EMS) to be implemented during construction;

c. Management Approach (**section 4**): the mechanisms by which broader environmental commitments and detailed requirements in local community areas are passed from the Applicant to the lead contractor;

d. Community relations and stakeholder engagement (**section 5**): an overview to engagement with the local community, including the mechanisms for communications, enquiries and complaints;

e. General requirements: including hours of work, good housekeeping, security and other measures (**section 6**); and

f. Requirements by environmental topics (**sections 7 to 19**): an outline of the measures that will be employed to reduce disturbance from construction activities, as far as reasonably practicable, including:

i. Accident and incident prevention and control;
ii. Agriculture land quality;
iii. Air quality;
iv. Biodiversity;
v. Climate change and greenhouse gases;
vi. Cultural heritage;
vii. Health and community;
viii. Landscape and visual;
ix. Noise and vibration;
x. Soils and geology;
xi. Traffic and transport;
xii. Waste and resources; and
xiii. Water environment.

1.2.2 The identified topics above respond to the relevant chapters as outlined in the Environment Impact Assessment (EIA) Scoping Report (provided as **Appendix 1.1** in Volume 3 of the PEIR, and contents of Volume 2 of the PEIR (to be superseded by the Environmental Statement (ES) which will be submitted as part of the application for development consent) for the Proposed Development.

Other EIA topics, such as employment and economics, and activities such as earthworks, are referenced in a number of sections of this document.

2 PURPOSE AND THE DEVELOPMENT OF THE DRAFT CODE OF CONSTRUCTION PRACTICE

2.1 Purpose of the Draft CoCP

2.1.1 This Draft CoCP outlines the environmental management and mitigation requirements to be implemented by the Applicant and the lead contractor throughout the construction period for the delivery of the Proposed Development.

2.1.2 The purpose of this document is to:

a. deliver effective planning, management, and governance throughout the construction period to manage potential impacts upon individuals, businesses and the natural and historic environment; and

b. outline processes to engage with the local community and their representatives.

2.1.3 The Applicant and the lead contractor will comply with appropriate environmental and health and safety legislation at the time of construction. For this reason, the appropriate statutory requirements are not repeated within this Draft CoCP. Further requirements on specific areas, such as the management of earthworks and groundwater control will be considered from industry best practice guidance documents as established in each environmental topic section of this Draft CoCP. This Draft CoCP, however does include the relevant health and safety aspects pertinent to accident and incident prevention and control.

2.2 Development of the Draft CoCP

2.2.1 The CoCP is one of a suite of documents to be submitted to the Planning Inspectorate (PINS) as part of the application for development consent for the Proposed Development.

2.2.2 This Draft CoCP has been and will continue to be subject to engagement with relevant local authorities and other statutory bodies prior to submission of the application for development consent. The Draft CoCP may therefore be refined where necessary as the design and construction approaches develop.

2.2.3 This Draft CoCP will be further developed until submission as part of the application for development consent. Compliance with the final CoCP will be secured by way of a requirement in the DCO.

3 ENVIRONMENTAL MANAGEMENT PRINCIPLES

3.1 Environmental Management System

3.1.1 The lead contractor will have an Environmental Management System (EMS) that is certified to British Standard BS EN ISO:14001. The management systems will set out processes, practices, and plans that enable the lead contractor to manage environmental impacts and increase their operating efficiency.

3.1.2 As part of the EMS, the lead contractor will include measures to manage environmental effects and ensure that they are integrated into the construction methods. To support this, contractor's method statements for construction operations will be prepared (refer to **section 4**).

3.1.3 The lead contractor's EMS will establish:

a. the primary environmental aspects of the construction work and how these will be managed;

b. staff competence, training and awareness requirements and how these are achieved and maintained;

c. processes for managing auditing and management reviews;

d. record-keeping arrangements; and

e. the procedures to be implemented to monitor and report requirements and the effectiveness of the measures outlined within this Draft CoCP.

3.1.4 One of the key aims of an EMS is to continually improve performance. The lead contractor will therefore ensure that relevant aspects of the EMS are regularly reviewed, audited and updated.

4 MANAGEMENT APPROACH

4.1 Legislative, consent and license compliance

4.1.1 The Applicant and the lead contractor will adhere to all legislative requirements, including the provisions of the DCO. In addition, the Applicant and the lead contractor will obtain all necessary consents and licenses for the construction works in accordance with relevant legislation.

4.2 Enforcement

4.2.1 Compliance with the CoCP will be a requirement of the DCO. The Applicant will impose the requirements of the CoCP through the works contracts which will incorporate both general and environmental topic requirements.

4.2.2 The lead contractor will be required to comply with the requirements of the CoCP and the Applicant will take appropriate action where required to ensure compliance.

4.3 Contractors' Method Statements

4.3.1 The lead contractor will establish the processes to be followed for construction operations in method statements which will seek to address health, safety, site security and the wider environmental issues associated with all construction works.

4.3.2 As a minimum, method statements will be prepared for site preparation, construction operations and reinstatement of land and/or infrastructure post-completion of the primary construction operations.

4.3.3 Contractor's method statements will define any specific environmental control measures to be implemented in accordance with the requirements of the CoCP. Method statements will be informed by risk assessments.

4.3.4 The Applicant or an appointed representative will review and agree the lead contractor's approach to developing methods statements.

4.4 Supervision

4.4.1 To supervise the construction operations, suitably qualified and experienced personnel will be employed. This will include professionally qualified environmental management staff, with relevant experience in the environmental topics outlined within the EIA and the CoCP. They will be present on-site during the main construction operations, as appropriate, to advise the lead contractor and the contract management team. The staff will further supervise and report on the implementation of appropriate environmental mitigation measures and safeguarding processes.

4.5 Contact person

4.5.1 For all construction operations, a point of contact will be identified for communication with the regulatory authorities. The Applicant and/or the lead

contractor will provide the regulatory authorities with the details of the contact person(s) prior to the commencement of the construction works.

4.6 Training and competence

4.6.1 The Applicant will require the lead contractor to appoint an appropriately qualified, competent, and suitably experienced workforce.

4.6.2 The lead contractor will hold responsibility for the identification of training requirements of their personnel. The identification of training requirements will enable appropriate training to be provided and suitably qualified and experienced professionals will be engaged for this purpose.

4.6.3 The training programmes will prepare relevant staff with the appropriate level of knowledge on health and safety regulations, community relations and environmental topics, in addition to the ability to adhere to environmental control measures and advise employees of changing circumstances throughout the construction operations.

4.7 Employment and training

4.7.1 The Applicant will develop an **Employment and Training Strategy** to target specific training and employment opportunities to the local community. A version of the **Employment and Training Strategy** has been published for consultation.

4.7.2 The Employment and Training Strategy will set out proposed measures for contractors, the Applicant and key stakeholders to implement and consider when engaging with the local labour force, educational institutes, and other relevant bodies, to maximise employment benefits from the construction and operation of the airport expansion.

4.8 Considerate Constructors Scheme

4.8.1 The lead contractor will be required to sign up and adhere to the Considerate Constructors Scheme (refer to the Glossary for further information).

4.9 Interface management between adjacent construction sites

4.9.1 The Applicant or an appointed representative will be responsible for the interfaces between the lead contractor and appointed sub-contractors. The lead contractor will be required to implement measures to manage the environmental aspects of interfaces between adjacent construction sites. The construction sites will include the boundaries between sites under the responsibility of different contractors or, where reasonably practicable, other third-party contractors.

4.10 Monitoring and reporting

4.10.1 The lead contractor will undertake the appropriate monitoring as outlined for each environmental topic (see **sections 7 to 19**) with the aim of ensuring

compliance with the requirements of this Draft CoCP, and any additional consent requirements.

4.10.2 The monitoring process will evaluate the effectiveness of mitigation measures and the potential impact of construction operations associated with the Proposed Development. Consideration will also be given to those additional actions that may be necessary to enable compliance.

5 COMMUNITY RELATIONS AND STAKEHOLDER ENGAGEMENT

5.1 Community Engagement

5.1.1 The lead contractor will prepare a construction-specific community engagement plan for the construction operations of the Proposed Development. The plan will provide the overall approach to community engagement and a detailed guide to the enquiries and complaints procedure.

5.1.2 The plan will include procedures to:

a. maintain effective community engagement throughout the construction operations to further develop existing relationships with the communities alongside the Proposed Development;

b. communicate with affected communities prior to the commencement of the relevant construction operations about how the effects of construction activities will be managed and, where appropriate, mitigated;

c. communicate to affected communities prior to the commencement of relevant construction operations regarding the programme of the construction operations; and

d. present information on the enquiry and complaints procedures and how this is managed and operated.

5.1.3 The lead contractor will provide appropriately experienced community relations personnel to implement the plan, to provide appropriate information and to be the first point of contact to resolve community issues.

5.1.4 The lead contractor will take reasonable steps to engage with the community, particularly focusing on those who may be affected by construction impacts, including local residents, businesses, landowners and community resources, and the specific needs of protected groups (as defined in the Equality Act 2010).

5.1.5 The Applicant will be a key member of community focus groups providing strategic insight and feedback to and from the Proposed Development. Meetings will be attended by the lead contractor's Community Liaison Officer together with a representative from the Applicant and local authorities as may be necessary to cover the matters to be discussed. The community engagement plan will detail the process for the Applicant's engagement with community focus groups (e.g., the programme and method for community engagement).

5.2 Communications

5.2.1 During the construction operations, a programme of relevant and ongoing communications will be prepared and implemented by the lead contractor following approval by the Applicant. This will include, but is not limited to, the following:

a. digital media: a website for the construction works relating to the Proposed Development (including the mechanism for residents/stakeholders to sign up to electronic newsletters);
b. social media: project-specific social media channels (e.g. Facebook/Twitter) for the construction works relating to the Proposed Development;
c. printed media: the lead contractor will provide printed-media and materials to inform the affected communities. This will include a newsletter, prepared by the lead contractor on the Proposed Development's progress and planned construction operations. the lead contractor will ensure the material is accessible and easy to read;
d. helpline: a Community Relations Line will be made available 24 hours a day, 7 days a week, to handle enquiries during the construction period;
e. stakeholder database: a database will be established to set up and maintain effective stakeholder communication through an up-to-date contact list;
f. noticeboards: noticeboards will be employed to provide information at appropriate sites, locations and at relevant local community centres; and
g. community events: where appropriate, relevant community events will be set up to respectively engage with local communities and maintain ongoing communication relating to detailed design, implementation and establishment of the Proposed Development.

5.2.2 Wherever possible, the lead contractor will notify occupiers of nearby or affected properties, businesses, adjacent or affected parish councils, and other elected representatives four weeks in advance, and again two weeks in advance, of the nature and anticipated duration of planned construction works that may affect them, including both principal and ancillary works. As a minimum, the lead contractor will take steps including direct correspondence and/or mail drops, as well as providing information in local community centres. The notification will also provide details of the enquiries and complaints procedure developed in accordance with the requirements below. Information included in the notifications will include, as appropriate:

a. the location of the planned works;
b. the activities to be carried out;
c. the duration of the planned works and the periods within which works will be undertaken (i.e., whether during normal working hours, during the evening or overnight);
d. the anticipated effects of the planned works;
e. the measures to be implemented in line with the ES and the final CoCP to mitigate the impact of the planned works; and
f. the enquiries and complaints procedure.

5.3 Enquiries and complaints procedure

5.3.1 The lead contractor will employ a Community Relations Line to deal with enquiries and complaints from the public. The Community Relations Line will be staffed 24 hours a day, seven days a week and is comprised of a phone line, email and website contact facility.

5.3.2 The lead contractor will prepare a complaints procedure. The procedure for logging an enquiry or a complaint will be outlined within the community engagement plan.

5.3.3 The extent of the action taken will depend on the nature of the complaint. All complaints will be investigated by the lead contractor with the aim of determining the cause of the complaint and assess whether the construction works adhere to the Proposed Development's environmental requirements and other relevant requirements such as legislation, standards and codes of practice.

5.3.4 The lead contractor will also establish a small claims procedure and an independent complaints commissioner. The small claims procedure will present a positive and transparent platform for minor, construction-related claims from residents, businesses and agricultural landowners.

6 GENERAL REQUIREMENTS

6.1 Working Hours

Core working hours

6.1.1 Core working hours will be from 08:00 to 18:00 on weekdays (excluding bank holidays) and from 08:00 to 13:00 on Saturdays. he Applicant will require that the lead contractor adhere to core working hours as far as is reasonably practicable with additional working hours as outlined below or unless otherwise permitted under Section 61 of the Control of Pollution Act 1974.

Start-up and close down periods

6.1.2 To maximise productivity within the core hours, the lead contractor will require a period of up to one hour before and up to one hour after core working hours for start-up and close-down of activities. This will include (but not be limited to) deliveries, movement to/from place of work, unloading, maintenance and general preparation work. This will not include operation of plant or machinery likely to cause a disturbance to local residents or businesses unless covered by an exemption. These periods will not be considered an extension of core working hours.

Additional working hours

6.1.3 Some operations may need to be conducted on a 24 hour/seven days per week basis for safety or operational reasons, or to significantly reduce the duration of construction and associated effects of construction on local communities.

6.1.4 Operations which require 24 hour, and seven days per week working may include, but are not limited to, the following:

a. construction of the Luton DART tunnel and directly associated activities (such as removal of excavated material, supply of materials and maintenance of equipment); where reasonably practicable, material will be stockpiled for removal during core working hours;
b. utility diversions and taxiway constructions to keep the airport in operation during construction of the Proposed Development;
c. highways-related works (e.g. for highways lane closures and lifting operations over live highways);
d. earthworks activities, which are season and weather dependent;
e. surveys (e.g. for wildlife or engineering purposes), which need to be carried out outside core working hours; and
f. other specific construction activities requiring extended working hours for reasons of engineering practicability, including major concrete pours, piling/diaphragm wall works.

6.1.5 Where there are operational constraints, airside construction activities may be required outside of core working hours.

6.1.6 Large or unusual unloading activities may also be carried out outside of core working hours to avoid congestion risks in and around the airport and construction site.

6.1.7 Activities outside core working hours that could give rise to disturbance will be kept to a reasonably practicable minimum.

6.1.8 Repairs or maintenance of construction equipment that is required to be carried out outside core working hours will normally be carried out on Saturday afternoons between 13.00 and 18.00 or Sundays between 10:00 and 17:00. Only essential repairs or maintenance works will be undertaken on Sundays.

6.1.9 In the case of work required in response to an emergency or which, if not completed, would be unsafe or harmful to the works, staff, the public or the local environment, the relevant local authority will be informed as soon as reasonably practicable of the reasons for the works and their likely duration. This information will also be made available to the helpline. Examples of the type of work envisaged include where unexpectedly poor ground conditions, encountered while excavating, require immediate stabilisation.

6.2 Construction site layout and good housekeeping

6.2.1 To reduce the likelihood of an environmental incident or nuisance occurring, the following measures will be used, where relevant:

a. Treatment of perimeters, cleanliness on site, provision of staff facilities, waste management.

b. Effective preventative pest and vermin control and prompt treatment of any pest and vermin infestation, including arrangements for disposing of food waste or other attractive material, if an infestation occurs, the contractor will take action to eliminate the infestation and prevent further occurrence.

c. Prohibition of open fires, and a requirement to take measures to control the risk of fires.

d. Removal or stopping and sealing of drains and sewers taken out of use; no discharge of site run-off to ditches, watercourses, drains, sewers or soakaways without the agreement of the appropriate authority.

e. Maintenance of wheel-washing facilities or other containment measures.

f. Location of storage, machinery, equipment and temporary buildings to minimise environmental effects and, where practicable, outside flood risk areas.

g. The use of less intrusive noise alarms that meet the particular safety requirements of the site, such as broadband reversing warnings, or proximity sensors to reduce the requirement for traditional reversing alarms.

h. Controls on lighting/illumination to limit visual intrusion or any adverse effect on sensitive ecology.

i. The location of site accommodation to avoid overlooking residential property.

j. Management of staff congregating outside the site prior to commencing or leaving work.

k. Security measures, including closed circuit television (CCTV) – the location and direction of view of security cameras or blocking software to prevent intrusion into residential properties will be considered.

l. Avoidance of the use of loudspeaker or loudhailer devices.

m. Containing and limiting the visual intrusion of construction sites, as far as reasonably practicable.

n. Provision of maps showing sensitive areas and buffer zones where no potential pollutants are to be stored or used.

o. Smoking areas at site offices/compounds or worksites equipped with containers for smoking wastes – these would not be located at the boundary of working areas or adjacent to neighbouring land.

p. Public Rights of Way (PRoW), including diversions, will be maintained for as long as reasonably practicable for pedestrians, cyclists and equestrians affected by the Proposed Development, including reasonable adjustments to maintain or achieve inclusive access.

6.2.2 Where reasonably practicable, inclusive access (including for people with reduced mobility) will be maintained to services and buildings where they have been temporarily disrupted during the works. Where a need is identified (e.g. through stakeholder engagement with relevant local organisations or community liaison processes), the lead contractor will review access and routes. These reviews will indicate where additional measures or reasonable adjustments may be required for the purposes of ensuring accessibility by disabled or mobility-impaired people. Where the normal means of access has to be diverted or blocked off, alternative safe routes for persons with restricted mobility will be identified, taking into account existing hazards and obstructions such as pavement kerbs and street lighting standards.

6.3 Worksite security

6.3.1 The Applicant has a statutory duty to prevent unauthorised access to the site. The lead contractor will carry out site-specific assessments of the security and trespass risk at each site and implement appropriate control measures.

6.3.2 The following measures may be used by the lead contractor, where appropriate, to prevent unauthorised access to the site:

a. use of high perimeter fencing or hoarding, as appropriate for site security and public safety, and placed so that PRoW is maintained or appropriately diverted;

b. site lighting at site perimeters;

c. adequate security guards and patrols;

d. CCTV and infra-red surveillance and alarm systems where required;

e. consultation with neighbours on site security matters;

f. consultation with local crime prevention officers on security proposals for each site with regular liaison to review security effectiveness and response to incidents; and

g. immobilisation of plant out of hours, removing or securing hazardous materials from site, securing fuel storage containers and preventing unauthorised use of scaffolding to gain access to restricted areas and neighbouring properties.

6.3.3 The lead contractor will agree the security measures with the Applicant.

6.4 Hoardings, fencing and screening

6.4.1 The lead contractor will be responsible for the appropriate provision of high quality, effectively designed and sustained high perimeter security hoardings, fencing and screening where appropriate. These features will be designed to respond to local landscape character and visual amenity in each location. The features will further enhance site security and public safety and must be situated so that there is no intrusion to public rights of way and other identified routes.

6.4.2 The following measures will be used as appropriate:

a. maintenance of adequate screening, fencing and hoardings to an acceptable condition to prevent unwanted access to the construction site, to provide noise attenuation, screening and site security where required;

b. maintenance of protective fencing and/or specialist fencing (e.g. reptile fencing) to protect environmentally sensitive features during construction operations;

c. maintenance of existing walls, fences, hedges and earth banks for the purpose of screening as far as reasonably practicable;

d. adoption of different types of fencing, including hoardings used for noise control and sound insulation;

e. consideration for the impact on local landscape character and visual amenity of hoardings facing away from the site;

f. provision of site information boards with contact details including out-of-hours contact details, the community helpline and details of the construction programme, at key locations;

g. display of notices on site boundaries to warn of hazards on site, such as deep excavations and construction access;

h. display of notices to confirm that businesses whose access or view may be impacted upon by construction operations remain open, including details of access;

i. provision of signage to indicate re-routed pedestrian/cycle paths; and.

j. provision of information on routes to alternative community facilities.

6.5 Site lighting

6.5.1 To enable the safety and security of the construction sites, site lighting and signage will be provided by the lead contractor. The site lighting will provide the minimum illumination levels required to enable a safe and secure construction site and will use low energy consumption fittings. Where necessary, and for health and safety, lighting to site boundaries will be provided and illumination will be sufficient to provide a safe route for the construction workforce and passing pedestrians.

6.5.2 Measures will be adopted to enhance feelings of safety and security within and around the construction sites. Of note, precautionary measures will be adopted to avoid shadows cast from the site on surrounding footpaths, walkways, roads and amenity areas. Further measures include lighting combined with smart-technology where appropriate, such as lighting activated with motion sensors to avoid unnecessary usage and act as a security method.

6.5.3 Task-based lighting will be provided for specific high-risk tasks. The lead contractor will be responsible for switching off task-based lighting after use and at the end of the working hours.

6.5.4 Proposed lighting will comply with the following, where applicable:

a. The Institute of Lighting Professionals, Guidance notes for the reduction of obtrusive light GN01:2020;
b. The Institution of Lighting Professionals, Maintenance factor determination and its impacts on the performance and overall efficiency of LED luminaires GN11:2020;
c. The Institution of Lighting Professionals, Guidance note 8: Bats and artificial lighting GN08:2018;
d. The Institution of Lighting Professionals, The brightness of illuminated advertisements, PLG05:2014;
e. The International Commission on Illumination (CIE), Guidelines for minimizing sky glow CIE 126:1997;
f. The International Commission on Illumination (CIE), Guide on the limitation of the effects of obtrusive light from outdoor lighting installations, CIE 150:2017;
g. BS EN 12464-2 (Lighting of workplaces - Outdoor) (2014); and
h. BS 5489-1 (Code of practice for the design of road lighting) (2020).

6.5.5 Lighting will also be designed, positioned and directed to account for aesthetic and environmental conditions using horizontal cut-off optics and zero floodlight tilt angles. Lighting will seek to avoid intrusion on adjacent buildings, sensitive receptors, ecological receptors and structures used by other protected species, and additional land uses to prevent unnecessary disturbance. The identified aesthetic and environmental measures will be most applicable to sites where night working will be undertaken.

6.5.6 Site lighting will be located and directed so that it will not cause undue interference with railway operations, highway users or airport operations.

6.5.7 Particular attention will be paid to the likelihood of sky glow and light intrusion beyond the construction site. Lighting will be visually checked from the perspective of sensitive receptors (e.g. nearby residential properties) and any necessary adjustments made.

6.5.8 The lead contractor will keep a record of lighting installed on the construction site. The record will be available on request to show that all lighting fixtures comply with the requirements of this Draft CoCP. Where requirements have not been met, the record will explain why and detail why and what alternative approaches have been implemented.

6.6 Welfare facilities

6.6.1 Welfare facilities will be provided for construction workers.

6.6.2 The welfare facilities will be subject to the same environmental control measures as outlined within this Draft CoCP for other construction works.

Worker Code of Conduct

6.6.3 The Applicant will require the lead contractor to sign up to and adhere to a Worker Code of Conduct, to be cascaded through the workforce.

6.6.4 The Code of Conduct will cover general behaviour expected of those involved in construction activities, including their interaction with local communities, in line with the Applicant’s values.

6.6.5 Particular provision will be included relating to construction workers using temporary workforce accommodation, car parking, use of local community and recreation facilities, anti-social behaviour and communicable diseases.

7 ACCIDENT AND INCIDENT PREVENTION AND CONTROL

7.1 Emergency Preparedness

7.1.1 The lead contractor will be responsible for the development of the emergency procedures for each site. As far as reasonably practicable, the procedures will be standardised across the various work sites and will account for the anticipated hazards relevant to the site-specific layout. The emergency procedures will contain phone numbers for the emergency services and the principal staff of the lead contractor, in addition to the method for notifying statutory authorities and airport operator.

7.1.2 The emergency procedures will be developed in consultation with the emergency services and other relevant third parties where appropriate. Consultation will also take account of the construction operations on the existing airport and will be developed in accordance with established industry best-practices.

7.1.3 The lead contractor will liaise with emergency services and key stakeholders to ensure that emergency access routes, muster points, and parking for emergency services vehicles are appropriately considered and maintained during construction.

7.1.4 For the provision of site access points, the lead contractor will ensure that the reasonable requirements of the relevant emergency services will be adopted. The lead contractor must ensure that the access points are suitably designed and developed and account for the types of emergencies that could occur, and the extent and severity of their effects. The design and development should further account for the alteration of site access points throughout the duration of construction operations and will therefore be updated as appropriate.

7.2 Major accidents and disasters

7.2.1 The lead contractor will identify relevant major accidents and disasters that could arise during construction and eliminate/reduce the risk as far as reasonably practicable. Where this is not reasonably practicable, the lead contractor will implement measures to reduce, control and mitigate the effects of the major accident/disaster on people, the built environment and the natural environment.

General Provisions

7.2.2 As part of planning the phasing of the works, a Construction Phase Plan will be established by the lead contractor in liaison with LLAOL, which will consider the interaction of the works with airport operations. The sections below describe measures to be considered (albeit not limited to) within the Plan.

7.2.3 The lead contractor will consider the interaction of the works with airport operations and existing safety, environmental and emergency systems and vice versa (including obstruction of signs and lighting). The lead contractor's safe system of work will incorporate specific consideration of arrangements for the identification of steps necessary for safe working and the management of risk of

major accidents and disasters during construction, in a proportionate manner. This will include processes to ensure that any significant changes are assessed, and relevant documents and procedures are reviewed and updated where required.

7.2.4 The lead contractor's safe system of work will incorporate specific consideration of arrangements for the identification of steps necessary for safe working and the management of risk and major accidents and disasters during construction. This may include, but is not limited to, arrangements for the operation of construction machinery and for undertaking works, which will consider adverse weather conditions, such as strong winds, snow, lightning etc.

7.2.5 Construction methods and equipment that comply with restrictions, such as height of equipment, will be selected so that they do not infringe taxiway, apron or runway regulated clearances. Heights and safe working constraints will have regard to the Obstacle Limitation Surface (OLS) heights. Restrictions on working will also be implemented due to jet blast and wingtip clearance. Phases of construction that are near to existing live taxiways and taxiing aircraft, such as on the additional taxiways, may require revised or curtailed taxiing routes to avoid being in close proximity to live construction areas.

7.2.6 Crane operations would be managed through the use of advanced notifications and, if required, the fitting of aviation warning lighting.

7.2.7 Measures further include, but are not limited to:

a. adequate signal interference risk assessment and control; and
b. inspection pits for the buried utilities would be performed and clearances clearly demarcated on site.

7.2.8 Further consideration of arrangements for the identification of steps necessary for the safe working and management of the risk of major accidents and disasters are detailed within section 6.3 (relating to worksite security), section 7.4 (fire prevention and control), section 10.1 (relating to bird strike risk), section 9.4 and section 16.2 (management of site earthworks), and section 9.6 and section 17 (relating to construction traffic management).

Emergency Plan

7.2.9 The lead contractor will implement emergency arrangements in accordance with an Emergency Plan. The objectives of the Emergency Plan will be to:

a. avoid, contain and control any major accidents/disaster hazards;
b. implement the measures necessary to protect persons and the environment;
c. communicate to the public and to the emergency services and authorities concerned in the area; and
d. provide for the restoration and clean-up following a major accident.

7.2.10 The emergency arrangements will consider major accidents to people and to the environment, and will include the following as appropriate:

a. the strategy for responding to major accidents/disasters both off and on-site;
b. roles and responsibilities of the lead appropriately qualified and experienced personnel;
c. identification and provision of facilities required to enable effective response, including alternatives where the effects of a major accident could render them inaccessible or unusable;
d. identification and provision of suitable equipment and materials required to respond to an emergency, including a system of inspection and maintenance to ensure that they can be deployed effectively when required; and
e. consideration of potential adverse effects resulting from emergency actions.

7.2.11 The lead contractor will be responsible for preparing the Emergency Plan, which will set out emergency procedures and relevant guidance required to execute the plan effectively. The plan will be subject to suitable drills and practice at appropriate intervals, and/or whenever a significant change to the arrangements is made.

7.2.12 The Emergency Plan will include, but is not limited to, procedures for:

a. activating the emergency plan;
b. mobilising internal and external resources;
c. accounting for people on-site;
d. enacting emergency action;
e. communicating with relevant off-site authorities and other third parties; and
f. maintaining an incident log and preservation of the scene.

7.2.13 The lead contractor will monitor the effectiveness of the arrangements to manage risk of major accidents using means tailored to the major accidents that could arise and their mitigation.

7.3 Pollution prevention and incident control

7.3.1 The lead contractor will develop and implement appropriate measures to control the risk of pollution resulting from construction operations. This will include a pollution incident control plan, produced as part of the contractors' EMS. The pollution incident control plan will recognise the risk of pollution from construction operations and will present proactive management practices to ensure that any pollution incident that may occur is controlled, reported to relevant parties and remediated. The plan will define the criteria for implementing the relevant measures.

7.3.2 The lead contractor will prepare a pollution incident control plan including the following measures as appropriate to manage the risk of pollution incidents:

a. a statement of appropriate information to be provided to the Applicant, and the relevant local authority/ies and the Environmental Agency, as appropriate, in the event of any incident such as a spillage or release of a potentially hazardous material;
b. notification of appropriate emergency services, authorities and personnel on the construction site;
c. notification of relevant statutory bodies, environmental regulatory bodies, local authorities and local water and sewer providers of pollution incidents, where required;
d. provision of maps showing the locations, together with address and contact details, of local emergency services facilities (e.g. police stations, fire authorities, medical facilities and other relevant authorities);
e. ensure that site drainage plans and flood risk management plans are available on site and are kept up to date;
f. ensure that pollution shut-off valves are used in compounds with formal drainage;
g. ensure staff competence and awareness in implementing plans and using pollution response kit;
h. provision of contact details for the relevant authorities, such as the Environment Agency, and the persons responsible on the construction site and within the contractors' organisation for pollution incident response; and
i. provision of contacts with a competent spill response company which can be contacted at short notice for an immediate response, where appropriate.

7.3.3 In the preparation of the pollution incident response measures, as outlined within the pollution incident control plan the lead contractor will consult with the relevant statutory bodies and other relevant third parties. The measures will also comply with the Environment Agency's Pollution Prevention Guideline (PPG), PPG21: Incident Response Planning. This document has been withdrawn, but as it constitutes relevant advice on good practice it should be referred to in the absence of alternative guidance documents.

7.3.4 The lead contractor will put in place arrangements to investigate and provide reports on any potential or actual significant pollution incidents, including, as appropriate:

a. a description of the pollution incident, including its location (and Ordnance Survey (OS) grid reference), the type and quantity of contaminant and the likely receptor(s);
b. contributory causes;
c. adverse effects;
d. measures implemented to mitigate adverse effects; and
e. any recommendations to reduce the risk of similar incidents occurring.

7.3.5 Further considerations relating to the arrangements by the lead contractor to control and manage pollution, chemicals and oils to the water environment are outlined within section 19.4 of this Draft CoCP.

7.4 Fire prevention and control

7.4.1 All construction sites and welfare facilities will have in place appropriate plans and management controls to prevent fires. A Fire Risk Assessment will be completed and implemented to manage risk throughout construction, including emergency plans and procedures and measures for the safe storage and handling of fuel. Any hot work operations will be completed under a Hot Work Permit.

7.5 Unexploded ordnance

7.5.1 The lead contractor will raise awareness of the risks associated with UXO through site induction processes and toolbox talks.

7.5.2 The lead contractor will keep a watching brief in areas identified as having the potential for UXO.

7.5.3 Where UXO is discovered, the lead contractor will prepare and implement an emergency response procedure, including the preparation of notifications to the relevant local authorities and relevant services. The emergency response procedures will be prepared in accordance with Unexploded ordnance, A guide for the construction industry CIRIA C681 (CIRIA, 2009), or the appropriate equivalent guidance at the time of construction should this be superseded.

7.6 Control of infectious diseases

7.6.1 Relevant Government guidance on working safely during epidemics/pandemics will be implemented to prevent the spread of infectious disease during construction.

8 AGRICULTURAL LAND QUALITY

8.1 General Provisions

8.1.1 Controls will be implemented to mitigate potential avoidable impacts on agricultural land, including maintaining access. The lead contractor will:

a. identify the farms and types of farms adjacent to the construction site;

b. identify watercourses and, where known, field drainage layouts and outfalls into watercourses or ditches, fixed irrigation pipes and sources of irrigation water and fixed water supplies for livestock;

c. maintain details of the owners, occupiers and agents for land adjacent to the construction site; and

d. maintain details of the husbandry associated with the areas of land adjacent to the construction site.

8.1.2 The controls will, where appropriate, include protecting agricultural land adjacent to the construction site, including:

a. provision and maintenance of appropriate stock-proof fencing and avoidance of traffic over the land leading to soil compaction;

b. reinstating any agricultural land which is used temporarily during construction, where this is the agreed end use;

c. details of farm accesses which may be affected by construction, including the manner in which farm access will be maintained and avoidance of traffic over land which is used temporarily during construction; and

d. providing a method statement for stripping, handling, storage and replacement of agricultural, forestry and woodland soils and other ecological habitats to reduce risks associated with soil degradation on areas of land to be returned to agriculture, forestry and woodland following construction. This will include any remediation measures necessary following completion of works as part of the aftercare.

8.1.3 The lead contractor will ensure liaison is maintained with affected landowners, occupiers and agents, as appropriate. The lead contractor will be required to:

a. advise landowners, occupiers and agents, as appropriate, regarding the intended commencement of construction works in areas of the site adjacent to agricultural holdings, and when any agricultural land used temporarily is intended to be returned to agricultural use;

b. advise landowners, occupiers and agents, as appropriate, regarding the provision of accommodation works;

c. advise the programme of works and access routes to be used; and

d. take precautions in developing the construction programme to reduce disturbance.

8.1.4 Reasonable precautions will be taken during the construction of the Proposed Development to identify, protect and maintain existing land drainage, irrigation and livestock water supply systems.

8.1.5 The requirements of section **Error! Reference source not found.** (Biodiversity) of this Draft CoCP in relation to measures to prevent the spread of invasive and non-native species will be met. Measures to prevent the spread of weeds generally from the construction site to adjacent land will also be implemented.

8.1.6 The lead contractor is required to comply with the relevant guidance issued by the Department for Environment, Food and Rural Affairs (Defra) regarding the prevention, as far as reasonably practicable, of the spread of soil-borne, plant and animal diseases. Appropriate measures will be implemented to control runoff to reduce any risks associated with disease transmission.

8.1.7 Wherever reasonably practicable, the Applicant will endeavour to mitigate risks associated with the existence of any unrecorded sites. This will include obtaining locations of recorded burial sites from the Animal and Plant Health Agency and the establishment of a protocol for procedures in the event that an unexpected/unrecorded burial site is discovered.

8.2 Agricultural soil resources

8.2.1 Agricultural soil resources will be protected using a Soil Management Plan (SMP), a Draft of which is provided as **Appendix 6.6** in Volume 3 of the PEIR. This will provide additional measures in relation to the use of topsoil and subsoil reserves within the soft landscape scheme.

8.2.2 Appropriate measures will be implemented, in accordance with the Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009), or the appropriate equivalent guidance should this be superseded in the future, in relation to undertaking works on or adjacent to agricultural land.

8.2.3 Mitigation measures for agricultural restoration, landscape design and ecology will be informed by surveys of agricultural and forestry soils.

8.2.4 The soil surveys will provide the necessary information to delineate, quantify (in cubic metres) and characterise the topsoils and subsoils (upper and lower, if both are present within a soil profile) available within the construction site prior to these materials being stripped. The surveys will provide sufficient detail to assess the suitability of the different soil materials for agricultural and other land uses, and to recommend appropriate methods for handling and storing soils in order to protect their natural functions during the construction period. This information will also determine the soil storage areas required.

8.2.5 Where land used temporarily for construction is to be reinstated to agricultural use, reinstatement works will be implemented in accordance with the contract specification and Defra guidance where appropriate. Such reinstatement will be carried out under appropriately qualified supervision.

8.2.6 Reasonable precautions will be taken in relation to the handling and storage of agricultural and forestry soils, including the following, as appropriate:

a. the separate handling and storage of different soils, particularly topsoils and subsoils;
b. handling soils that are in a suitably dry condition and not during wet weather to avoid long-term damage to soil structure from compaction;
c. seed for grass cover or seal medium or long-term excavated material and soil;
d. stockpiles;
e. the prevention of soil contamination with chemicals or other materials; and
f. the control of weeds on soil stores, either through treatment or removal.

8.2.7 All soil materials will be handled under suitable weather and soil conditions using appropriate machinery. The stripping, storage and reinstatement of soils will be carried out in accordance with the SMP and will be accompanied by a soil audit report produced by the lead contractor.

8.2.8 The sources, locations, contents and approximate volumes of soil stockpiles will be available from soil survey records compiled prior to the stripping and storage of soils.

8.2.9 These records form part of the baseline information and will be made available to the Applicant. In defining target restored profiles, the volumes of available soils in storage will be related to the areas of each parcel of land to be restored.

8.2.10 Soils will be handled when least susceptible to damage, in accordance with Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009), or the appropriate equivalent guidance should this be superseded in the future.

8.2.11 The Ministry of Agriculture, Fisheries and Food (MAFF) Good Practice Guide for Handling Soils (April 2000) describes the typical machinery that will be used in most cases to strip and transport soil materials into and out of store, and to reinstate topsoils and subsoils. For example, alternative specialised machinery will be used for landscape planting on areas with steeper slopes. Soil handling machinery will be restricted to marked haul routes and will not traverse undisturbed or replaced soils, except where such trafficking is essential for the permitted operations agreed with the Applicant.

8.2.12 Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2011) describes methods for the construction of soil stockpiles and the Design Manual for Roads and Bridges (DMRB) provides guidance on the storage of topsoils for engineering purposes. These documents set out a range of heights for topsoil and subsoil storage. For the translocation of soils from sensitive donor sites, the soils will generally be removed, transported and reinstated at the receptor site without a period of storage.

8.2.13 Additional measures for the management of soils during the construction of the Proposed Development are outlined in **section** Error! Reference source not found. (Soils and geology).

8.3 Monitoring

Appropriately qualified environmental management staff will be responsible for monitoring Agricultural Land Quality to facilitate compliance with this section of the CoCP.

9 AIR QUALITY

9.1 Air quality management – general provisions

9.1.1 The Applicant will require the lead contractor to control and limit dust, air pollution, odour and exhaust emission during the construction works as far as reasonably practicable and in accordance with best practicable means (BPM).

9.1.2 A dust management plan will be developed and implemented by the lead contractor. This will incorporate the construction phase air quality mitigation measures identified in the PEIR, including but not limited to:

a. communications, in line with the engagement plan to be produced in accordance with section 5.1;

b. a display board (refer to section 5.1) to indicate the person accountable for air quality and dust issues on the site boundary, and the head/regional office contact information;

c. reference to the general site management and good housekeeping procedures as included in the Guidance on the Assessment of dust from demolition and construction, Institute of Air Quality Management, January 2014 v1.1 (IAQM 2014);

d. controls and measures to control or mitigate the effect of potential nuisance caused by the construction works, as determined by an up-to-date and site-specific assessment of the risks;

e. dust and air pollution monitoring measures;

f. measures relevant to control risks associated with asbestos dust; and

g. reference to best practice publications, including:

i. Guidance on the Assessment of dust from demolition and construction, Institute of Air Quality Management, January 2014 v1.1 (IAQM 2014); and

ii. Air Quality Monitoring in the Vicinity of Demolition and Construction Sites, Institute of Air Quality Management, October 2018 (IAQM 2018).

9.2 Site management

9.2.1 The lead contractor will plan the site layout to ensure that machinery and dust-causing activities are situated away from sensitive receptors, as far as possible.

9.2.2 The lead contractor will erect hoardings, screens or barriers along the site perimeter to control the spread of dust.

9.2.3 Task-based dust control will be included in contractors' method statements, including, but is not limited to:

a. use of enclosures for small areas and misting for larger areas;

b. excavated materials will be carefully placed and not dropped from height; and

c. covered/netted materials during transportation.

9.2.4 Site fencing, barriers and scaffolding will be kept clean using wet methods, where necessary.

9.2.5 The lead contractor will ensure there is an adequate water supply for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate, and avoiding site runoff of water or mud.

9.2.6 The lead contractor will ensure equipment is readily available on site to clean any dry spillages. Spillages will be cleaned up as soon as reasonably practicable after the event using wet cleaning methods.

9.3 Construction plant and vehicles

9.3.1 Measures will be implemented by the lead contractor to limit emissions from construction plant and vehicles, including the following, as appropriate:

a. the lead contractor will operate construction plant in accordance with the manufacturer's written recommendations;

b. all vehicles and plant will be switched off when not in use;

c. vehicle and construction plant exhausts should be directed away from the ground and be positioned at a height to facilitate appropriate dispersal of exhaust emissions;

d. enclosing, shielding or provision of filters on plant likely to generate excessive quantities of dust beyond the site boundaries. Dust extractors, filters and collectors on drilling rigs and silos will be used;

e. the movement of construction traffic around the site will be kept to the minimum reasonable for the effective and efficient operation of the site and construction of the Proposed Development.

f. construction plant will be located away from site boundaries which are close to sensitive receptors where reasonable and practicable;

g. site access points will be designed to avoid queuing traffic;

h. the use of diesel or petrol-powered generators will be avoided by using mains electricity or battery powered equipment where reasonable and practicable;

i. all diesel non-road mobile machinery will use ultra-low sulphur tax-exempt diesel where available. Machinery with power outputs of over 37kW will be fitted with appropriate exhaust after-treatment from approved Energy Saving Trust list (achieving filtration efficiency of over 85%);

j. cutting and grinding operations will be conducted using equipment and techniques which incorporate appropriate dust suppression measures;

k. vehicle, plant and equipment maintenance records will be kept on site and these will be made available to the Applicant on request.

9.4 Transportation, storage and handling of materials

9.4.1 The lead contractor will implement measures to reduce emissions to air through the effective transportation and storage of materials. Measures include, but are not limited to the following:

a. construction vehicles transporting materials within or outside the construction site will not be overloaded beyond outlined capacity;

b. construction vehicles delivering and/or removing materials or loads from the construction site via the highway will be required to be covered by a fixed cover or sheeting (which must be appropriately effective at preventing the spillage of materials and dust) or to use alternative dust suppression measures (such as damping);

c. stockpiles and mounds will be covered, seeded or fenced to prevent wind whipping;

d. sand and other aggregates will be stored in bunded areas and not allowed to dry out, unless this is required for a particular process, in which case it will be ensured that appropriate additional control measures are in place;

e. a wheel washing system will be implemented for vehicles entering and leaving the site, and water-assisted dust sweepers will be used on access and local roads to remove any material tracked out of the site;

f. there will be an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits;

g. access gates will be located at least 10m from sensitive receptors where possible;

h. The lead contractor will be provided with a specification that all HGVs used on and off-site should meet the most up to date Euro VI emission standards;

i. electric charging will be provided in the temporary staff car park;

j. stockpiles and mounds will be positioned at a suitable angle and will avoid sharp changes in shape to prevent material slippage;

k. any materials that have potential to produce dust will be removed from the site as soon as possible, unless being re-used on site;

l. the quantity of handling operations for materials and resources will be kept to a minimum practical level, including the optimisation of materials movements to minimise double handling of materials wherever practicable; and

m. handling areas for materials will be maintained to constrain dust emissions. This includes appropriate measures such as carrying out watering to reduce or prevent release of dust from site boundaries.

9.4.2 A Construction Traffic Management Plan (CTMP) will be produced by the lead contractor to manage the delivery of goods and materials. The CTMP follows the development of the draft Outline CTMP as produced for statutory

consultation (**Appendix 18.3** in Volume 3 of the PEIR). In addition, the lead contractor will produce a Construction Workforce Travel Plan (CWTP) to support and encourage sustainable travel (public transport, cycling, walking and car-sharing). See **section 17** (Traffic and transport).

9.5 Haul routes

9.5.1 Haul routes will be provided through the works for use by construction vehicles to access the works. The construction and maintenance of haul routes, will include the following measures, as appropriate:

a. install hard surfaced haul routes which are regularly damped down with fixed or mobile sprinkler systems, or water bowsers, and regularly cleaned;

b. inspection of all on-site haul routes regularly and instigation of necessary repairs to the surface as soon as reasonably practicable;

c. recording of all inspections of haul routes and any subsequent action in a site log book;

d. re-use of haul route surfacing materials where the locations of haul routes change during the course of construction;

e. provision of areas of hard standing at site access and egress points to be used by any waiting vehicles;

f. methods to clean and suppress dust on haul routes (including watering) and in designated vehicle waiting areas. The frequency of cleaning will be suitable for the purposes of suppressing dust emissions from the site boundaries;

g. enforcement of speed limits on haul roads for safety reasons and for the purposes of suppressing dust emissions; and

h. remove any haul routes when no longer required as soon as reasonably practicable.

9.6 Dust

9.6.1 The lead contractor will develop and implement a dust management plan as part of their EMS, which will include measures to control emissions.

Demolition activities

9.6.2 Dust pollution from demolition activities will be managed using the following measures, as appropriate:

a. effectively covering and securing skips;

b. stripping of interiors of buildings before demolition;

c. any blasting works will be kept to the reasonably practicable minimum in the context of the design and programme requirements of the Proposed Development, and explosive blasting will be avoided, using appropriate manual or mechanical alternatives;

d. effective water suppression will be used during demolition operations, including the use of hand-held sprays over hoses to allow water to be directed more precisely to where it is needed, and the use of high-volume water suppression systems, to produce fine water droplets that effectively bring dust particles to the ground;

e. bonfires and burning of material will not be permitted on site;

f. any biological debris will be bagged and removed, or such material damped down, before demolition;

g. avoidance of the prolonged storage of waste materials on site and compliance with this CoCP in respect to storage; and

h. removal of waste from the site will comply with the requirements of this CoCP relating to the transportation of materials.

Excavations and earthworks activities

9.6.3 Dust pollution from excavations and earthworks activities will be limited through the use of the following measures, as appropriate:

a. topsoil will be stripped as close as reasonably practicable to the period of excavation or other earthworks activities to avoid risks associated with runoff or dust generation;

b. drop heights from excavators to vehicles involved in the transport of excavated material will be kept to the reasonably practicable minimum;

c. materials will be compacted after deposition, with the exception of topsoil and subsoil on land to be restored for landscaping and wildlife habitats; and

d. soil spreading, seeding, planting or sealing of completed earthworks will be undertaken as soon as reasonably practicable following completion of the earthworks.

Grouting activities

9.6.4 Dust pollution associated with grouting activities will be limited through the use of the following measures, as appropriate:

a. dust extractors, filters and collectors on silos, for example; and

b. the mixing of grout or cement-based materials will be undertaken using a process suitable for the prevention, as far as reasonably practicable, of dust emissions.

Conveying, processing, crushing, cutting and grinding activities

9.6.5 Dust pollution associated with processing and crushing rock, for use as aggregate or other materials within the works, and for conveying material, processing, crushing, cutting and grinding will be limited through the use of the following measures, as appropriate:

a. drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be minimised, and fine water sprays will be used on such equipment wherever appropriate;
b. use of cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction;
c. the enclosure of conveyer transfer points, and damping of conveyor loads;
d. enclosed conveyers where crossing roads, other public areas and property not owned by the Applicant;
e. scabbing (roughening of concrete surfaces) will be avoided if possible;
f. enclosure of specific operations where there is a high potential for dust production; and
g. the application of water sprays to damp down in dry weather.

9.7 Odour

9.7.1 As contaminated materials may be excavated during the Proposed Development, excavated materials could contain odorous materials The following measures will be implemented by the lead contractor to minimise the risk of odour generation:

a. contaminated and non-contaminated materials will be stockpiled, covered and enclosed separately following excavation;
b. early identification of contaminated material which could generate an odour issue;
c. enclosing of any odorous materials;
d. locating contaminated materials as far away from residential receptors as possible;
e. careful programming to minimise the duration of work with potential to generate odour nuisance;
f. removing odour generating material sources in a timely fashion to limit the formation of odours; and
g. delivering an odour risk assessment (in line with the Remediation Strategy).

9.8 Monitoring

9.8.1 The lead contractor will implement inspection and monitoring procedures to assess the effectiveness of measures to prevent dust and air pollutant emissions.

9.8.2 Relevant local authorities will be consulted on the monitoring procedures to be implemented, which will include the following measures, as appropriate:

a. Daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust and record inspection results and logs to be available to the local authority on request. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary.

b. Regular site inspections to monitor compliance with the dust management plan and recording of inspection results. An inspection log will be produced which will be made available to the local authority on request.

c. Frequent site inspections by the person accountable for air quality and dust issues on site, with regular checks (at least three times a day) and continual visual assessment by site workers when activities with a high potential to produce dust are being carried out, or during prolonged dryer windy conditions.

d. Inspection procedures for areas adjacent to the construction site to visually assess any dust and air pollution which may be generated.

e. Plans for undertaking continuous automatic monitoring of airborne dust and setting a relevant site action level (defined as a measurement threshold above which investigation will be required).

f. Reference to inspection and maintenance schedules for construction vehicles, plant and machinery.

g. Inspection procedures relating to the level of traffic movements, use and condition of haul routes.

9.8.3 On request, the lead contractor will provide local authorities with reports of the monitoring. These will include, where appropriate, the interpretation of any continuous automatic monitoring data, any site action level alarms, investigations and remedial actions.

9.8.4 All dust, odour and air quality complaints will be recorded in a complaints log and the causes identified. The lead contractor will take appropriate measures to reduce emissions in a timely manner and record the measures taken.

9.8.5 Monitoring of dust and particulate matter during the construction of the Proposed Development will be undertaken following the current best practice guidance (currently IAQM 2018).

9.8.1 Continuous automatic monitoring of dust as airborne PM_{10} will be undertaken. The monitoring instruments will send an alarm (via the internet or mobile phone system) when a pre-determined site action level is reached. The site action level will be determined as appropriate from current best practice guidance.

9.8.2 If the alarm is triggered, the following on-site process will be followed:

a. A nominated person (as identified by the lead contractor) will investigate activities on site, as quickly as reasonably practicable, to ascertain if any

visible dust is emanating from the site or if any activities are occurring on site that are not in line with the dust control measures.

b. Any identified causes will be rectified where practicable and actions recorded in the site logbook and reported to the Applicant and the relevant authority as soon as reasonably practicable.

c. If the source of the incident cannot be identified as originating from the site operations, operations of other nearby construction sites and other activities will be investigated for potential causes of the alarm.

d. If the source of the alarm is not related to the site operations, the outcome of any investigation and associated actions will be recorded in the site logbook.

9.8.3 The data collected will be provided to the Applicant and the relevant local authorities.

9.8.4 Dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations will be discussed with the local authority.

9.8.5 Regular liaison meetings will be held with other high-risk construction sites within 500m of the site boundary to ensure that plans are coordinated, and dust and particulate matter emissions are minimised.

10 BIODIVERSITY

10.1 General measures

10.1.1 Appropriate measures will be adopted to protect the biodiversity of the area in which the Proposed Development is located, with special attention to specified areas of ecological value.

10.1.2 The Applicant will require the lead contractor to manage impacts from construction on ecological resources, including the following:

a. non-statutory sites designated for nature conservation such as Local Wildlife Sites (LWS), County Wildlife Sites (CWS) and District Wildlife Sites (DWS);

b. legally protected and conservation notable species; and

c. other habitats and features of ecological importance (including ancient woodlands, veteran and ancient trees, linear/ecological corridors and water bodies).

10.1.3 Species specific mitigation strategies and protected species licences will be detailed within the Ecological Design Strategy (EDS) submitted as part of the application for development consent. The broader package of mitigation, including the large areas of habitat creation, are detailed within the Landscape and Biodiversity Management Plan (LBMP) an outline version of which is provided as **Appendix 8.2** in Volume 3 of the PEIR. Both documents will be submitted as part of the Environmental Statement (ES) accompanying the application for development consent and will be implemented by the lead contractor during the works. These documents describe preparatory works that will need to be undertaken ahead of the start of construction to permit timely progress of the programme.

10.1.4 Within the boundary of the Proposed Development, the lead contractor will take opportunities to further reduce habitat loss and protect and enhance biodiversity. Strategies to achieve this include the installation of appropriate exclusion measures to prevent accidental incursion; measures to avoid pollution of sensitive habitats such as watercourses; and making use of existing access routes through vegetation belts where possible.

10.1.5 Where habitat is removed, displaced or destroyed, the necessary information required to implement identified biodiversity mitigation measures and deliver biodiversity net gain will be taken from the LBMP. Habitat creation will include elements integrated with the developed infrastructure and the wider green infrastructure strategy. The phasing of required biodiversity mitigation will also be stated, ensuring that delivery of necessary measures coincides with the construction programme in relation to the specific mitigation measure (e.g. provision of adequate habitat creation prior to translocation of species out of the construction zone).

10.1.6 The lead contractor will need to account for the requirements relating to dust and air quality, noise and vibration, and protection of the water environment, detailed within **sections** Error! Reference source not found. (Air quality) Error!

Reference source not found. (Noise) and **19** (Water environment) respectively in order to protect ecologically important habitats and species both within and adjacent to the construction site.

10.1.7 The lead contractor will need to account for the requirements relating to tree protection fencing, as detailed within **section 14** (Landscape and visual) in order to protect retained trees adjacent to and within the construction site. Additional measures in relation to ancient woodland and ancient or veteran trees, and potential veteran trees, to be detailed within the ES, will be adhered to. This includes the establishment of buffer zones within which no works can be undertaken.

10.1.8 Ground clearance and excavation works have the potential to attract birds which may pose a bird strike risk to aircraft. Reference should be made to the Bird Strike Risk Assessment (BSRA) (**Appendix 8.4** of Volume 3 of the PEIR), which details those bird species that pose the greatest risk to aircraft. Appropriate measures to mitigate bird strike risk must be agreed with the airport operator. Operations during construction which could attract birds include:

a. allowing the pooling of water which may attract flocks of waterfowl;
b. vegetation removal;
c. ground excavation; and
d. soil stockpiling which may attract foraging birds (due to exposed invertebrates etc).

10.1.9 **Section 19** (Water environment) details measures that will be taken to manage surface water run-off and flood risk. These measures will reduce the risk of pooling of surface water. Additional mitigation measures may include netting excavated areas and material stockpiles and active control and dispersal.

10.1.10 In accordance with the mitigation and other measures to be set out in the ES, where survey baselines have expired (usually taken as being valid for 2-3 years) the lead contractor will undertake pre-construction surveys to determine the current status and distribution of notable and protected species (including orchids, bats, great crested newt, badger, breeding birds (including barn owl), wintering birds, roman snail, reptiles and amphibians).

10.1.11 The lead contractor will ensure that exclusion zones are maintained in line with best practice and the context of the construction works to be undertaken, and all mitigation measures to be included within the ES and detailed within its supporting documents.

10.2 Ecological management measures

10.2.1 Ecological management measures will include the following, as appropriate:

a. summary of features of interest for all known areas of ecological value that may be affected due to construction;
b. plans showing the locations of all known areas of ecological interest that may be affected due to construction, including access routes;

c. plans showing the location of invasive non-native species including those listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended, such as Japanese knotweed. Control measures of such species will need to be implemented as described in **section 10.3;**

d. provision of guidance on ecological best practice methods to be followed in order to mitigate potential ecological effects during construction;

e. plans showing the location of any fences/barriers to be erected for the purpose of controlling animal movements during and after construction (e.g. deer, badger and amphibian fencing);

f. plans showing the location of any ecological features that are to be created/installed prior to construction (e.g. bat roosting features/boxes, artificial badger setts, otter holts);

g. procedures to be adopted in the event of unanticipated discovery or disturbance of protected species or important habitats;

h. reference to the relevant procedures, including any special measures, to be implemented in the event of a pollution incident, where this occurs on or adjacent to a designated nature conservation site or where protected or notable species are known to be present, or other habitats and features of ecological importance i.e. ancient woodland; and

i. reference to the species-specific mitigation strategies and draft protected species licences that will be included as part of the ES.

10.2.2 Other measures for potential ecological impacts are addressed in other sections of this document and are not repeated here. These include measures relating to:

a. control of dust (see **section** Error! Reference source not found.);

b. control of water quality and flow (see **section 19**);

c. control of noise and vibration (see **section** Error! Reference source not found.); and

d. lighting (see **section** Error! Reference source not found.).

10.2.3 The lead contractor will implement the mitigation measures to be included in the ES and detailed within its supporting documents. These measures serve to mitigate the loss of ecologically important features through implementation of species-specific mitigation strategies and habitat creation, including enhancements to any habitats that lie within the land provided for the Proposed Development but outside the minimum area required for construction. Where replacement planting is provided, this mitigation will be integrated with landscape planting, as appropriate, and use native species of local provenance.

10.2.4 A suitably qualified and experienced Ecological Clerk of Works (ECoW) will be appointed by the lead contractor to oversee the implementation of the ecological mitigation.

10.2.5 General measures to be implemented by the lead contractor will include, where reasonably practicable:

a. ensuring careful siting of compounds, materials storage areas, haul routes and other measures to avoid semi-natural habitats and protected species;

b. avoiding night-time working wherever practical, particularly in the vicinity of sensitive habitats such as woodland, hedgerows and watercourses;

c. limiting the use of lighting, generators and other noisy equipment at night in the vicinity of sensitive habitats;

d. covering all excavations overnight or providing appropriate escape ramps for mammals, e.g. badgers, in the form of a sloped face to the excavation or a scaffold plank or similar;

e. avoiding the formation of large areas of surface water pooling which could attract birds that pose a strike risk to aircraft;

f. visually checking uncovered excavations for the presence of wildlife each morning before works commence, taking advice from the ECoW if a protected species is found or suspected;

g. supervised vegetation clearance and translocation of animals and plants to retained/enhanced areas of the Proposed Development and for translocation to occur once receptor habitats are established, as described within the ES;

h. reducing the severance impact of vegetation removal by maintaining the feature intact as long as possible, keeping any gap to the minimum required for the purpose and considering filling gaps with brash or similar when work is not being undertaken (e.g. on a bat commuting route at night) so that it can continue to function as a wildlife corridor; and

i. careful and regular management of soil storage areas to maximise their future value in landscape planting and to dissuade badgers and other burrowing animals from colonising them in the interim.

10.2.6 Draft licences and mitigation strategies will be prepared and included as part of the ES. These will be prepared in relation to the following ecological features:

a. European protected species derogation licence for bats – in respect of any works otherwise likely to breach the Conservation of Habitats and Species Regulations 2017. Species potentially requiring a derogation licence include bats and otter.

b. Badger development licences and mitigation strategy - in respect of any works that will result in the disturbance, damage and/or destruction of a badger sett.

c. Bird mitigation strategy – a document that details how breeding birds and their nests will be safeguarded from damage or disturbance during construction.

d. Reptile and amphibian mitigation strategy – a document that details how common reptile and amphibian species will be safeguarded from killing and injury during construction.

e. Orchid mitigation strategy – a document that details how orchids will be safeguarded from damage or destruction during construction.

10.2.7 The programming of construction works will comply with the requirements set out in the ES, including seasonal constraints for a range of species and their habitats (e.g. bird nesting habitat, amphibian and reptile hibernation and bat breeding roosts as applicable). Consideration should be given to impacts on nesting birds outside of, but adjacent to the construction zone. In addition, supervised and staged clearance of suitable reptile and amphibian habitats within the construction zone should occur at an appropriate time of year (April – October). These seasonal constraints will be fully detailed within the ES and its supporting documents.

10.3 Control of invasive and non-native species

10.3.1 A specialist invasive non-native species contractor will be appointed to implement appropriate measures for the treatment/control of invasive, non-native species (both plants and animals) and injurious weeds.

10.3.2 Appropriate construction, handling, treatment and disposal procedures will be implemented in relation to these and any other species listed in Schedule 9, Part I or Part II of Section 62 the Wildlife and Countryside Act 1981, as amended, or the Weeds Act 1959 to prevent the spread of such species. Advice in the Environment Agency's publication: Managing invasive non-native plants, April 2010, will also be referenced in determining the strategy.

10.3.3 Measures will be implemented for biosecurity to reduce the risk that invasive non-native species and diseases are spread as a consequence of the Proposed Development.

10.3.4 Removal of invasive species will take account of ecological best practice guidance and appropriate measures will be taken to identify and protect other features of environmental importance (e.g. heritage assets).

10.3.5 A programme of works will be implemented that will reflect the fact that it can take a number of years to eradicate invasive species such as Japanese knotweed.

10.4 Monitoring

10.4.1 The lead contractor will consult with the Applicant and all relevant authorities, such as Natural England, the local authorities, and the relevant statutory authority relevant to its function, in relation to any monitoring and survey works to be undertaken prior to construction i.e. update badger survey work. Where required, the monitoring and survey works will update the baseline ecological conditions to be identified in the ES that accompanies the application for development consent.

10.4.2 Species specific monitoring requirements will be detailed within the relevant Natural England licence method statements.

10.4.3 Habitat monitoring will be implemented to assess the success of the establishment of newly created habitats and the protection measures for retained habitats, as detailed within the LBMP.

10.4.4 The lead contractor will undertake suitable monitoring throughout the construction works. The lead contractor will also hold responsibility for the implementation of mitigation measures to enable the effectiveness of these measures to be identified.

11 CLIMATE CHANGE AND GREENHOUSE GASES

11.1 General provisions

11.1.1 The impacts of climate change will be considered in relation to all construction-related activities, and mitigation measures in relation to a reduction in carbon emissions and protecting against physical climate change risks must be adopted where appropriate.

11.2 Reducing carbon emissions

11.2.1 The lead contractor will develop and implement a Carbon Efficiency Plan as part of their EMS, to manage carbon emission from construction activities and promote good practice. This will contain measures including:

a. proposed measures to reduce significant sources of construction energy use (fuel/electricity) and associated carbon emissions;

b. the approach to procuring energy from renewable and/or zero or low emission sources;

c. the approach to energy and carbon dioxide (CO_2) monitoring and reporting from relevant site activities including construction activities and the transportation of materials and waste; and

d. consideration of the procurement, maintenance and use of energy and carbon efficient construction plant.

11.2.2 Mitigation measures will consider both the embodied and operational carbon associated with construction works. Mitigation measures include the following, where practicable:

a. specification of materials with lower embodied GHG emissions within lead contractor's contracts (e.g. where practical, materials with a higher recycled content and locally sourced materials will be selected), including where feasible design for end of component reuse;

b. monitoring of fuel use/compressed air leaks;

c. driver/plant use training;

d. avoidance of oversized generators for plant and temporary buildings;

e. nominating individuals with responsibility for site energy management;

f. commitments to recycle/reuse demolition waste;

g. commitments to reduce water use and disposal;

h. use of renewable/zero or low carbon fuels for construction vehicles, plant and machinery where reasonably practicable, e.g. electric vehicles and plant;

i. provision of suitable levels of thermal insulation to the appropriate areas of site accommodation to minimise energy demand for heating;

j. early connection to grid electricity to reduce use of mobile diesel energy generation;

k. increased efficiency of construction plant and machinery, i.e. using appropriately sized plant and machinery, and switching off when not operational;

l. efficient transportation of construction materials and waste transport through electric vehicles;

m. sourcing of construction materials from local suppliers where practicable to reduce transport emissions; and

n. promotion of modes of sustainable transport in line with the CWTP (see **section 17**).

11.3 Climate change risks

11.3.1 The lead contractor will pay due consideration to the impacts of extreme weather events and related conditions during construction. Measures will include, for example:

a. health and safety plans to prevent worker exhaustion due to heat;

b. adherence to the drainage strategy to manage flood risk during construction; and

c. safety measures to mitigate against issues caused by high winds such as increase dust or damage to structures/construction plant.

11.3.2 The lead contractor will use a short to medium-range weather forecasting service from the Met Office or other approved meteorological data and weather forecast provider to inform short to medium-term programme management, environmental control and impact mitigation measures. The lead contractor will register with the Environment Agency's Floodline Warnings Direct service in areas of flood risk.

11.3.3 The lead contractor's EMS will consider all measures deemed necessary and appropriate to manage extreme weather events and should specifically cover training of personnel and prevention and monitoring arrangements. As appropriate, method statements should also consider extreme weather events where risks have been identified.

11.3.4 The lead contractor will produce a high-level risk assessment of extreme weather impacts on the construction process to inform mitigation measures. This will include a consideration of climate change projections, and consideration of receptors and construction-related operations/activities potentially sensitive to severe weather events.

11.3.5 The lead contractor will, as far as reasonably practicable, use construction materials that offer increased tolerance to fluctuating temperatures, heavy precipitation and other extreme weather events, such as storms.

12 CULTURAL HERITAGE

12.1 General Provisions

12.1.1 The Applicant and the lead contractor will manage the impact of construction works on cultural heritage assets, including:

a. designated assets: scheduled monuments; listed buildings, registered parks and gardens; conservation areas and registered historic battlefields; and

b. non-designated assets: archaeological and paleo-environmental remains including geological deposits that may contain evidence of the human past, historic landscapes and historic buildings and the built environment and locally designated assets. Additional mitigation measures have been identified in **Chapter 10** of the PEIR. The scope of archaeological mitigation comprises detailed excavation, archaeological monitoring during the preservation in situ of archaeological remains, and monitoring strategies for heritage assets.

12.1.2 It is anticipated that the mitigation works, comprising detailed archaeological mitigation, as specified in the PEIR , will be carried out in advance of construction activities and in accordance with the Draft Cultural Heritage Management Plan (CHMP) which is provided as **Appendix 10.6** in Volume 3 of the PEIR.

12.1.3 Mitigation comprising the preservation of archaeological remains will be carried out during construction activities and in accordance with the Draft CHMP.

12.1.4 Mitigation works comprising the monitoring of heritage assets will be carried out during the operational stages of the Proposed Development, as detailed in the Draft CHMP.

12.2 Cultural Heritage Management Plan

12.2.1 The Draft CHMP sets out the scope, guiding principles and methodology for the planning and implementation of archaeological mitigation that is required as a result of the construction of the Proposed Development. This includes strategies for the excavation of archaeological remains, the preservation of archaeological remains and monitoring of cultural heritage assets. In addition, the Draft CHMP sets out the requirements for the recording, assessment, analysis, dissemination, and archiving of archaeological remains. The Draft CHMP has been written in accordance with standards and guidance published by the Chartered Institute for Archaeologists.

12.2.2 The Draft CHMP includes:

a. summary cultural heritage baseline information and a summary of previous fieldwork;

b. aims and objectives of the archaeological mitigation, including reference to relevant research agenda and research questions;

c. specification for the required mitigation methods, including:

i. detailed excavation of archaeological remains in advance of specific construction activities;
ii. archaeological monitoring during construction for the temporary protection of archaeological remains;
iii. archaeological monitoring during construction for the permanent protection and preservation of archaeological remains; and
iv. monitoring of heritage assets during the operational stages of the Proposed Development

d. requirement for further site-specific method statements that will be prepared by the archaeological contractor;

e. procedures for site monitoring, progress reporting, meetings and the completion of on-site archaeological works;

f. methodology and process for the required stages of archaeological reporting, including interim and fieldwork report, post-excavation assessment, publication and archive preparation and deposition;

g. general requirements including resources, programme and access arrangements;

h. health and safety information; and

i. references to published standards and guidance.

12.3 Monitoring

12.3.1 The lead contractor will also implement appropriate monitoring of the impacts relating to construction works on designated and non-designated cultural heritage assets to ensure the effectiveness of management.

13 HEALTH AND COMMUNITY

13.1 General Provisions

13.1.1 The lead contractor will make provision to limit adverse health and wellbeing effects relating to the construction of the Proposed Development. Approaches include, but are not limited to:

a. provision and implementation of a community engagement plan to reduce stress and uncertainty associated with the Proposed Development, as described in **section** Error! Reference source not found. (Community relations and stakeholder engagement);

b. measures to manage dust and noise emissions as detailed in **section** Error! Reference source not found. (Air quality) and **section** Error! Reference source not found. (Noise and vibration);

c. measures to limit visual disturbance as detailed in **section 14** (Landscape and visual) and light obtrusion as detailed in **section 6.5** (Site lighting);

d. management of construction vehicle movements and maintaining Public Rights of Way, as detailed in **section 17** (Traffic and transport);

e. maintaining access to Wigmore Valley Park until the replacement open space is completed and accessible to the public; and

f. provision of a Workers Code of Conduct, as detailed in **section** Error! Reference source not found. (General requirements).

13.2 Occupational healthcare

13.2.1 The lead contractor will ensure that there is provision for occupational healthcare, either on-site or in appropriate locations.

13.2.2 The occupational healthcare service will include health and wellbeing campaigns, including, but not limited to, the promotion of healthy living and wellbeing, and mitigation advice against workplace accidents and injuries.

13.2.3 Occupational healthcare will be available to all construction workers during working hours (and agreed extensions to working hours). Outside of working hours, a contact number will be available for construction workers (including those using temporary accommodation) to direct them to the appropriate health/social care provider.

13.2.4 Additional requirements for occupational health care and first aid provision will be determined based on a systematic identification of the occupational health and safety risks arising as a result of the construction activities. Appropriate health surveillance will be provided.

13.2.5 Construction workers will receive training on the health consequences of risk-taking behaviour and controlling communicable diseases.

14 LANDSCAPE AND VISUAL

14.1 General provisions

14.1.1 The lead contractor will employ appropriate measures to protect the landscape from construction activities, to manage and maintain landscape works provided as part of the Proposed Development and to protect visual amenity.

14.1.2 Construction-related impacts on landscape and visual amenity will be controlled through the following:

a. protection of existing elements of the landscape that are to be retained;

b. careful design and management of temporary construction components in response to landscape character and visual amenity;

c. the effective implementation of operational design measures, as early as reasonably practicable during the construction programme, which have a role in mitigating landscape and visual impacts; and

d. relevant local authorities, Natural England, Chiltern Conservation Board and adjacent landowners will be consulted, as appropriate, regarding the landscape and planting proposals.

14.1.3 Planting, seeding, wildflower seeding, and other landscape works will consider the recommendations of the latest version of the following standards (and subsequent revisions at the time of construction):

a. British Standards Institution, BS 3936-1, Nursery stock. Specification for trees and shrubs, BSI (1992);

b. British Standards Institution, BS 3882, Specification for topsoil and requirements for use, BSI (2015);

c. British Standards Institution, BS 3998, Tree Work. Recommendations, BSI (2010);

d. British Standards Institution, BS 5837, Trees in relation to design, demolition and construction, BSI (2012);

e. British Standards Institution, BS 8545, Trees: from nursery to independence in the landscape. Recommendations, BSI (2014);

f. British Standards Institution, BS 6031, Code of practice for earthworks, BSI (1981); and

g. CAP772, Birdstrike Risk Management for Aerodromes, Civil Aviation Authority.

14.1.4 Alternatively, where a British Standard does not exist, works will follow industry best practice and the relevant local authority will be consulted as appropriate.

14.1.5 The lead contractor will adhere to the LBMP, as described in **section** Error! Reference source not found. (Biodiversity). The LBMP will integrate the protection of habitats and ecological features.

14.2 Measures to reduce potential impacts

14.2.1 The lead contractor will implement appropriate control measures to manage the impacts of construction-related impacts on landscape character and visual amenity. Control measures will include, but are not limited to, the following:

a. protection of existing trees and other vegetation to be retained in order that these elements continue to contribute to landscape character and visual amenity;

b. the use of well-maintained temporary hoardings and fencing, designed in response to landscape character and visual amenity;

c. management of site lighting with consideration for visual amenity and to minimise visual disturbance;

d. handling of soils in accordance with the SMP (see **section** Error! Reference source not found., Agricultural land quality);

e. protection of soil to be used for landscape purposes;

f. well-maintained temporary earthworks, including borrow-pits and soil stockpiles, designed in response to landscape character and visual amenity. This will include temporary landscape proposals, where appropriate, such as seeding of soil stockpiles;

g. implementation of design proposals, including landscape design proposals, in accordance with approved design documents;

h. maintenance and management of landscape proposals in accordance with approved landscape design documents; and

i. provision of suitably qualified and experienced specialists with responsibility for monitoring landscape works.

14.2.2 Where land is not required for other construction activities or other requirements of the Proposed Development, landscape design measures will be implemented as early as possible. The Applicant will require the lead contractor to consider where measures can be implemented early and thereby programme the landscape works accordingly.

14.3 Management of trees

14.3.1 The lead contractor will employ a specialist arboricultural consultant to oversee works relating to the management and protection of trees.

Protection of trees

14.3.2 The lead contractor will protect trees in line with the arboricultural survey recommendations and specific requirements set out in LBMP. The lead contractor will be responsible for surveying and verifying the condition of any trees (as appropriate) within 15m of construction activities.

14.3.3 The arboricultural consultant will identify trees that are to be retained and which require protection, based on those that are identified within BS5837 (2012) and

which have stem diameter greater than 75mm measured at 1.5m above ground level.

14.3.4 Measures to protect retained trees will include the following, as appropriate:

a. the provision of appropriate protective fencing around Root Protection Areas (RPA) to reduce the risks associated with vehicles operating over root systems or beneath canopies;

b. measures to prevent compression of soils within RPA by vehicles and plant movement, storage of materials;

c. processes for the selective removal of lower branches to reduce the risk of arboricultural damage by construction plant, machinery and vehicles;

d. maintenance of vegetation buffer strips, where reasonably practicable; and

e. all tree surgery operations conducted throughout the Proposed Development will comply with the recommendations in BS 3998; Tree work Recommendations (2010), where appropriate.

Tree felling

14.3.5 Where there are no windthrow or visual issues, tree felling will be reduced to an appropriate level to facilitate the safe construction and operation of the Proposed Development. Where appropriate, tree surgery, such as crown reduction and pollarding methods, will be employed foremost to felling to maintain the maximum biodiversity and landscape value and visual amenity. All tree surgery and felling operations must consider the legal protection given to species such as roosting bats and breeding birds. The lead contractor will be responsible for undertaking tree felling and will consider the Forestry Commission's Forest and Water Guidelines, Forestry Commission (2003).

14.3.6 The arboricultural consultant should coordinate with the lead contractor, and the appointed ecologist, to establish the quantities of cut timber and brash that should be retained on site for habitat creation measures, such as the creation of log piles and hibernacula.

Tree planting

14.3.7 The lead contractor, or an appropriately qualified specialist contractor, will undertake all works relating to the supply, storage, handling, planting and maintenance of new planting. This will be conducted in accordance with:

a. British Standards Institution, BS 4428: Code of practice for general landscape operations (excluding hard surfaces), BSI (1989);

b. British Standards Institution, BS 8545 Trees: from nursery to independence in the landscape, BSI (1989); and

c. UK Forestry Standard and the United Kingdom Woodland Assurance Standard, UKWAS (2008).

14.3.8 When procuring trees and shrubs, consideration will be given to appropriate biosecurity measures to minimise the risk of pests and diseases being

introduced to the immediate environment. All imported trees will have spent at least one full growing season on a UK nursery and have been subject to a full pest and disease programme. Evidence of this control programme, together with a complete audit trail of when the imported trees were received and how long they have been on the nursery, should be made available on request. This audit trail will extend beyond the nursery after despatch, allowing for a full recall in the event that any pest and/or disease problems may subsequently manifest themselves in the landscape.

Clearance and reinstatement of sites upon completion

14.3.9 The lead contractor will ensure that the construction sites are thoroughly cleared of all construction related machinery, facilities, structures, and materials and waste upon completion of works.

14.4 Monitoring

14.4.1 Appropriate monitoring of landscape and visual amenity mitigation proposals will be undertaken as detailed within the LBMP. Monitoring of landscape works will be undertaken by suitably qualified and experienced specialists, during the works and maintenance/management phases.

14.4.2 The lead contractor will be responsible for implementing management measures, as identified within the LBMP, throughout the construction period as landscape works are completed.

14.4.3 The lead contractor will monitor the progress of new landscape works throughout the construction period. Any failures of landscape planting and seeding will be managed via the specification and works requirements. This will ensure annual replanting and reseeding works are undertaken, including the requirement for reinstating any failed species (as required) to achieve successful establishment of the landscape mitigation proposals at completion of the construction works. The lead contractor will be responsible for replanting or reseeding areas that fail for a period of five years following initial planting.

15 NOISE AND VIBRATION

15.1 General provisions

15.1.1 Best practicable means (BPM) will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors (including local businesses and quiet areas designated by the local authority) arising from construction activities.

15.2 Measures to reduce potential noise and vibration impacts

Best practicable means

15.2.1 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".

15.2.2 The lead contractor will have a duty to avoid, reduce, control and/or manage adverse levels of noise and vibration through BPM, including:

a. Noise and vibration control at source - for example, the selection of quiet and low vibration equipment, review of construction programme and methodology to consider quieter methods, location of equipment on site, control of working hours (see **section** Error! Reference source not found.), the provision of acoustic enclosures and the use of less intrusive alarms, such as broadband vehicle reversing warnings.

b. Screening - for example, local screening of equipment or perimeter hoarding.

15.2.3 The recommendations of the British Standards Institution, BS 5228 Code of practice for noise and vibration control on construction and open sites parts 1 and 2, BSI (2014), will be implemented, together with the specific requirements of this Draft CoCP.

15.2.4 A commitment to adopting BPM must be demonstrated as part of any Section 61 consent application.

Noise and vibration management

15.2.5 Monitoring and management processes will control the impacts from noise and vibration throughout the construction works. This will include the management and monitoring processes to integrate noise controls into the preparation of method statements and ensure proactive links between noise management and community relations activities. In addition, a noise and vibration monitoring protocol will be implemented to check ongoing compliance, improvement and rapid corrective actions to avoid any potential non-compliance.

15.2.6 Noise-generating construction activities that could disrupt community facilities will be identified in the construction programme and their scheduling will consider the needs of potentially affected community facilities. For example, this

may be scheduling construction/demolition activities close to schools outside school hours or during school holidays or outside of exam periods.

15.2.7 Where receptors may be exposed to high levels of construction noise, localised solid site hoarding is proposed to screen the properties from construction noise. At some locations it may not be feasible to install long-term hoarding due to the presence of individual accesses or the short-term duration of the activity. In such cases, the use of localised screening around high noise sources will be considered.

Section 61 Consents

15.2.8 Where high noise generating works are required to be undertaken outside of core daytime working hours (08:00-18:00 Monday to Friday and 08:00-12:00 Saturday) or are not covered by exemptions, the lead contractor will seek to obtain consents from the relevant local authority under Section 61 of the Control of Pollution Act 1974 if requested by the local authority for the proposed construction works, excluding non-intrusive surveys. Site specific management and mitigation requirements for noise and vibration will be defined in the Section 61 consents. Applications will be made to the relevant local authority for a Section 61 consent at least 28 days before the relevant work is due to start or earlier if reasonably practicable, unless otherwise agreed with the relevant local authority.

15.2.9 Section 61 consent applications will include:

a. plans showing the location of the construction works;
b. a full description of the construction works including details of their duration and proposed hours of work;
c. a robust rationale for works which need to be undertaken outside core working hours;
d. a method statement;
e. type of plant and specification of equipment to be used;
f. details of the noise and/or vibration mitigation to be used;
g. noise and vibration sensitive locations (including, for example, residential properties, schools and other teaching facilities, hospitals and residential nursing homes, and/or other buildings which house vibration sensitive equipment) and anticipated noise monitoring points; and
h. a set of predicted noise, and where relevant, vibration levels.

15.2.10 Details of construction activities, noise and vibration mitigation measures, prediction methods, location of sensitive receptors and noise and vibration levels will be discussed with the relevant local authorities, both prior to construction work and throughout the construction period. Prediction, evaluation and assessment of noise and vibration as well as discussion between the Applicant and the lead contractor and the relevant local authorities will continue throughout the construction period.

15.2.11 The application for a Section 61 consent will require noise (and where appropriate vibration) assessments to be undertaken and BPM measures set out to manage noise associated with construction of the Proposed Development. The lead contractor will submit the assessments to the Applicant for review prior to submission to the relevant local authority.

15.2.12 To inform the Section 61 consent application, surveys of ambient noise will be carried out at representative receptors where noise impacts are probable. The requirement for noise surveys, the survey procedure and locations will be agreed with the relevant local authority as part of the Section 61 prior consent procedure.

15.2.13 The lead contractor will carry out noise (and vibration where appropriate) predictions for Section 61 applications. Unless otherwise agreed with the relevant local authority, noise levels will be predicted in accordance with the methods set out in BS 5228-1 (2014). All construction noise levels will be predicted or measured at a distance of 1m from any affected eligible facade which has windows to bedrooms or living rooms.

15.2.14 All applications for consent will include a statement advising how and when local residents, businesses or other organisations likely to be affected by the works will be notified of the start date, nature and duration of the works, along with details of a complaints hotline.

15.2.15 In the event that works for which Section 61 consent has been applied for have to be rescheduled or modified (e.g. method or working hours) for reasons not envisaged at the time of submitting the Section 61 consent application, the lead contractor will apply for a dispensation or variation from the appropriate local authority, before commencing those works, at the time specified within the Control of Pollution Act 1974.

15.2.16 The lead contractor will seek to agree with local authorities a common format and model consent conditions for Section 61 applications or any dispensations and variations to an existing consent.

15.3 Vibration thresholds

Protection of building occupants and users

15.3.1 Occupiers of nearby or affected properties, businesses and adjacent or affected parish councils will be informed in advance of the works taking place where relevant, including the duration and likely noise and vibration impacts.

15.3.2 To protect the occupants and users of buildings from vibration, BPM will be used to control vibration levels so that the vibration dose values in **Table 15.1**: Vibration thresholds , as predicted or measured in accordance with BS6472-1: 2008 Guide to evaluation of human exposure to vibration in buildings – Part 1: Vibration sources other than blasting are not routinely exceeded (considered to be 10 days in any 15 consecutive days) as a result of the works.

Table 15.1: Vibration thresholds for protection of occupants of buildings from disturbance.

Building Type	Period	VDM ($ms^{-1.75}$)
Eligible dwellings*	07:00 to 23:00	0.4
	23:00 to 07:00	0.2
Educational Buildings, offices and similar**	Over normal period of use (daytime)	0.8
Commercial+	Over normal period of use (daytime)	1.6

* Measured on a normally loaded floor of any bedroom or living room. For this purpose, eligible dwellings include dwelling houses, residential institutions, hotels and residential hostels.

** Measured on a normally loaded floor of areas where people normally work. This category of receiver will include all areas where clerical work, meetings and consultations are regularly carried out (e.g. doctors' surgeries and day-care centres, but not shop floors of industrial premises).

+ Measured on a normally loaded floor of areas where people normally work. Commercial premises include retail and wholesale shops.

15.3.3 The vibration thresholds in **Table 15.1**: Vibration thresholds will be weighted in accordance with BS6472-1: 2008, Guide to evaluation of human exposure to vibration in buildings – Part 1: Vibration sources other than blasting.

Protection of buildings from damage

15.3.4 To protect buildings from damage, the lead contractor will require its contractors to use BPM to control vibration levels so that the peak particle velocity (PPV) in **Table 15.2**: Vibration thresholds , as predicted or measured in accordance with BS6472-1*:* 2008, Guide to evaluation of human exposure to vibration in buildings – Part 1: Vibration sources other than blasting 2008, are not exceeded as a result of the works at the building foundation unless agreement is sought based on the clause set out in **section 15.3.10**.

Table 15.2: Vibration thresholds levels for building damage

Category of building	Impact criteria: (PPV at building foundation)	
	Transient vibration	Continuous vibration
Structurally sound buildings	⩾12 mm/s	⩾6 mm/s
Potentially vulnerable buildings[1]	⩾6 mm/s	⩾3 mm/s

[1] BS 7385 highlights that the criteria for aged buildings may need to be lower if the buildings are structurally unsound. The standard also notes that criteria should not be set lower simply because a building is important or historic (e.g. listed). Where information about these structures is not currently known, the more onerous criteria on this row of the table shall be adopted on a precautionary basis until condition surveys have been undertaken.

15.3.5 To determine whether a detailed assessment needs to be undertaken to determine whether the levels in **Table 15.2**: Vibration thresholds are likely to be exceeded, or that there is a potential for building damage, the lead contractor will carry out a scoping vibration assessment. Activities requiring an assessment could include vibratory compaction, impact or vibratory piling and other driven processes.

15.3.6 If predicted vibration levels exceed 1mm/s component PPV at occupied residential buildings or 3mm/s PPV at occupied commercial buildings, more detailed assessment should be carried out in accordance with BS 7385-2: 1993 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration. If this identifies that people occupying buildings may experience levels in excess of the threshold values in **Table 15.2**: Vibration thresholds , those potentially affected will be notified as soon as practicably possible in advance of the works. The notification will describe the nature and duration of the works and any associated proposals for vibration monitoring.

15.3.7 The lead contractor will require its contractors to be cognisant of the advice given in ISO 4866: 2010, Mechanical vibration and shock, vibration of fixed structures. Guidelines for the measurement of vibrations and evaluation of their effects on structures and BS 7385-2, BSI (1993).

15.3.8 The lead contractor will notify and consult the Applicant and the relevant local authority regarding any works predicted to generate a PPV above 10mm/s. Where it is agreed that there is no reasonable or practicable means to reduce predicted or measured vibration, the lead contractor will:

a. seek to agree with the local authority under the relevant Section 61 consent[2], monitoring for vibration and strain induced in the building during the works;

b. seek to agree with occupiers of properties:

   i. the surveys to be carried out and any consequent actions; and
   ii. any additional reasonable and practicable mitigation to be provided for occupants;

c. carry out a condition survey before and after the relevant works; and

d. advise the local authority through the relevant Section 61 consent application.

15.3.9 In addition, any old buildings, or buildings that maybe unusually vulnerable to vibration, that are located within 50m of any activities that may give rise to significant vibration shall be identified.

15.3.10 Where the predicted vibration at the foundations of such buildings exceeds 5mm/s PPV, the lead contractor will require its contractors to undertake an initial structural survey of the building. Based on the survey, the level of

2 Also under the Party Wall Act as necessary.

vibration above which condition surveys and continuous vibration monitoring are required will be confirmed and agreed with the building owner. The local authority will be notified through the relevant Section 61 consent application.

15.3.11 Where the condition and vibration monitoring surveys demonstrate that vibration from the works has given rise to building damage, the lead contractor are to make good that damage.

Protection of particularly vibration-sensitive equipment/ processes

15.3.12 The lead contractor will avoid any impact on sensitive equipment where reasonably practicable. Any actions to control or mitigate impacts will be agreed between lead contractor and the operator of the equipment. The local authority will be notified through the relevant Section 61 consent application.

15.4 Monitoring

15.4.1 The lead contractor will undertake and report on noise and vibration monitoring, including physical measurements, observational inspections and audits (at regular intervals), and real-time noise and vibration monitoring. These measures will demonstrate compliance with all noise and vibration requirements, the conditions outlined in this Draft CoCP and any Section 61 consents.

15.4.2 Monitoring data will be provided regularly to, and will be reviewed by, the Applicant, and will be made available to the local authorities.

15.4.3 Monitoring data will be provided by contractors at minimum on a monthly basis. Where continuous real-time monitoring of noise levels is required (as identified through discussions with the local authorities under the Section 61 process), more frequent sharing of monitoring data will take place, and real-time alerts in case of noise threshold exceedances will be implemented.

16 SOILS AND GEOLOGY

16.1 General provisions

16.1.1 This section provides the control measures and standards to be implemented by the lead contractor in relation to the earthworks.

16.1.2 The Applicant and the lead contractor will comply with appropriate environmental legislation and guidance available at the time of construction. For soils and geology this will be detailed in the Soil Management Plan (SMP), the Material Management Plan (MMP) and the Remediation Strategy. Further requirements for specific areas, such as the management of earthworks and groundwater control will be considered from industry best practice guidance documents.

16.1.3 The Draft SMP provided as **Appendix 6.6** in Volume 3 to the PEIR will be developed by the lead contractor to provide additional measures in relation to the use of topsoil and subsoil reserves within the soft landscape scheme.

16.1.4 An MMP will be produced by the lead contractor to describe how materials (made ground, natural soils) will be handled and reused on site, during construction works. Further details of the MMP are included in Sections 16.2.2 and 16.2.3.

16.1.5 The Remediation Strategy provided as **Appendix 17.5** in Volume 3 will be developed to describe the remediation strategy for the main area of concern with regard to potential contamination, located within the Main Application Site. This is the area of the former landfill (Eaton Green Landfill).

16.1.6 The lead contractor will consider the following documents in the planning of earthworks:

a. Defra (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites;

b. Remediation Strategy for Former Eaton Green Landfill (2021) (included in **Appendix 17.5** of Volume 3 of the PEIR);

c. Earthworks Specification, which will be developed in the detailed design stage post application for development consent; and

d. British Standards for Earthworks (BS EN 16907:2008).

16.1.7 Excavated soils and materials will be managed by the lead contractor in accordance with the Waste Hierarchy (i.e. prevention, preparing for reuse, recycling, other recovery and disposal as set out in the Waste (England and Wales) Regulations 2011) and in such a way as to prevent harm to human health, amenity and the environment.

16.1.8 Material excavated within the area of the historical Eaton Green landfill as part of the earthworks will be separated and treated in accordance with the Remediation Strategy and reused within the scheme under a bespoke Environmental Permit – ‘deposit for recovery’ under the Environmental Permitting (England and Wales) Regulations 2016. The Environmental Permit

will be obtained post application for development consent by the specialist contractor undertaking remediation works to the former landfill.

16.1.9 Soils outside of the area of the historical landfill will be reused in accordance with a Materials Management Plan (MMP). This will be prepared by the lead contractor in line with the CL:AIRE: Definition of Waste Code of Practice (DoW CoP) in order to identify potential risks posed to the water environment, human health and the wider environment (including crops/livestock) at the location of re-use. The requirements of the MMP are detailed in section 16.2.3.

16.1.10 The interface between materials reused under the two regulatory regimes detailed above in 16.1.4 and 16.1.5 will be developed at detailed design stage and included in the earthworks specification.

16.2 Management of site earthworks

16.2.1 The site earthworks will require the management of topsoil and natural subsoils as well as the management and reuse of materials associated with the historical landfill in accordance with the Remediation Strategy, provided as **Appendix 17.3** in Volume 3 of the PEIR, and earthworks specification.

16.2.2 Where reasonably practicable, the lead contractor will:

a. source fill required for development of the earthworks on-site, from the area specified within the earthworks specification, limiting the requirement for the import of materials to site;

b. reduce waste volumes by recovering suitable fill materials from excavated materials where reasonably practicable in available timescales;

c. handle excavated acceptable material in an appropriate manner to ensure it remains of sufficient quality to be used as engineered fill for infilling works/environmental mitigation earthworks to reduce the environmental effects of the Proposed Development; and

d. phase earthworks to limit the volume of soils requiring temporary stockpiling. Where stockpiles are required, these will be carefully designed to reduce visual intrusion and spreading of dust. There will be no temporary stockpiling within areas of active flood risk. Contaminated materials that require stockpiling will be held in contained areas with impermeable bases and bunding to prevent infiltration and run-off of contaminated waters.

16.2.3 A MMP is to be produced for soils outside of the area of the historical landfill. The MMP will be produced by the lead contractor and include the following:

a. a description of the project and how excavated materials are to be re-used;

b. evidence of suitability for use of the material, including copies of specifications for the re-use of the material and risk assessments;

c. explanation of how reuse of excavated materials fits within the planning permission for the development;

d. a breakdown of the quantities of materials to be excavated and placed, including locations;

e. contingency arrangements;

f. details of how materials will be tracked around the site and what records are to be kept; and

g. a verification plan setting out how validation of works will be undertaken, including proving that excavated materials have been reused in the correct location and in the correct quantities within the development works.

16.2.4 The lead contractor will remove any waste material requiring disposal to waste facilities as soon as reasonably practicable to avoid the build-up and need for temporary stockpiling of waste materials on site.

16.3 Land contamination

16.3.1 In addition to the excavation and treatment of contaminated soils and/or landfill material, it may also be necessary to install gas and leachate control systems, on a temporary or permanent basis, to ensure that gas and leachate migration pathways are controlled and do not adversely affect the Proposed Development or the wider environment as a consequence of the Proposed Development.

16.3.2 Control measures will be implemented by the lead contractor during the works, to avoid impact to the health of construction workers and neighbouring site users from contamination in landfilled waste/made ground during earthworks and waste processing. This will include the following, as appropriate:

a. further ground investigation (where identified as required in the Remediation Strategy) and completion of remediation trials;

b. preparation of a Detailed UXO Risk Assessment, where required;

c. establish site compound for stockpiling and processing of soils to control the works and potential for pollution and prevent unauthorised access;

d. programming of earthworks to limit exposure of large areas of the former landfill;

e. boundary odour control system, i.e. use of masking or scrubbing agent;

f. covering of stockpiles to; control odour and potential for contaminated run-off and dust generation especially in dry weather, compacting stockpiles will also reduce dust/odour generation;

g. dust suppression measures i.e. covering of waste, dampening of stockpiles and haul roads, reduce drop-heights when loading;

h. a dust management plan as part of their EMS (see Section 9); and

i. obtaining appropriate environmental permits with respect to the remodelling of the landfill, with preparation of supporting documentation.

16.3.3 Other control measures will also be implemented, which will include the following enhanced precautions, as appropriate:

a. monitoring of air, ground gas and leachates;
b. personal monitoring for construction workers with alarms (where necessary);
c. site briefing;
d. a watching brief during excavation works to ensure any suspected radionuclide containing material is appropriately managed;
e. provision of decontamination facilities; and
f. controls to working practices.

16.3.4 The measures will apply equally to land used for construction and land used temporarily, for example, for site offices and works compounds. However, for land used temporarily, risk assessment and remediation will usually only be designed for the temporary use, rather than any long-term post-construction use.

16.3.5 Where piling or similar penetrative works are undertaken in areas of land affected by contamination, appropriate guidance will be adhered to, including a Foundation Works Risk Assessment for the Proposed Development and the National Groundwater and Contaminated Land Centre's report Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (NC/99/73 2001).

16.4 Groundwater contamination

16.4.1 Control methods will be put in place to avoid groundwater contamination during construction works, including:

a. groundwater monitoring and analysis in accordance with the requirements of the groundwater monitoring plan to be prepared by the lead contractor and agreed with the Environment Agency, prior to, during and after construction;
b. adoption of measures to prevent groundwater contamination detailed in a Foundation Works Risk Assessment;
c. installation of leachate sumps in landfill mass, within the former landfill, a general arrangement has been included in the Remediation Strategy, final locations and design to be agreed with the Environment Agency. Sumps to be monitored during construction with periodic removal of leachate for on-site treatment and disposal to sewer or removal to offsite waste treatment facility;
d. excavation completed in defined stages with contained remediation compounds, water treatment facilities and with additional licences/permits secured e.g. discharge consent to sewer, mobile treatment licence;
e. groundwater remediation, as necessary, if identified by monitoring results, measures to be described in the groundwater monitoring plan;
f. consultation with the relevant local authorities and the Environment Agency regarding control or protection measures to be implemented to

deal with identified risks, including monitoring plans, appropriate techniques for excavating/handling contaminated material and the control of contaminants and discharges in their in situ or mobilised form, for solids, liquids, gas and leachate;

g. excavation, segregation and stockpiling of soils/ waste for reuse in accordance with the remediation strategy, further processing of waste, as required prior to reuse. A typical processing scenario is described in the Remediation Strategy; the actual processes will be determined by the remediation contractor following segregation trials;

h. procedures including watching briefs to identify ACMs during excavation and stockpiling and for all areas within the Proposed Development where land contamination is unexpectedly encountered;

i. identification and decommissioning of existing preferential pathways i.e. services/service trenches (e.g. Thames Valley Drain) affected during construction;

j. lining of drainage trenches and buried services with bedding media to inhibit the mobilisation of contaminated groundwater or lateral migration through granular backfill;

k. installation of gas protection requirements in accordance with the Remediation Strategy and verification in accordance with CIRIA C735 (Good practice on the testing and verification of protection systems for buildings against hazardous ground gases);

l. verification testing of remediated ground or groundwater and preparation of verification reports; and

m. post-remediation permit to work system to protect remediated areas.

16.5 Monitoring

16.5.1 Monitoring plans will be prepared and implemented as part of the lead contractor's EMS and will be consistent with the requirements in the Remediation Strategy and earthworks specification.

16.5.2 Monitoring will include:

a. monitoring of groundwater and ground gases prior to, during and after construction in accordance with the Remediation Strategy and measures set out in **sections 19** (Water environment) and Error! Reference source not found. (Air quality);

b. chemical and geotechnical testing of soils and remediated materials to ensure they meet the standards specified in the Remediation Strategy and earthworks specification;

c. monitoring of ground gases, dust and odours during construction to ensure no off-site impacts from construction activities, in line with the measures set out in **section 9** (Air quality);

d. monitoring of confined spaces for possible ground gas accumulations, restricting access to confined spaces i.e. to suitably trained personnel

only, and use of specialist Personal Protective Equipment (PPE) where appropriate; and

e. post construction monitoring of stability and settlement.

17 TRAFFIC AND TRANSPORT

17.1 General provisions

17.1.1 During construction works, impacts from construction traffic on the local community (including all local residents and businesses and their customers, visitors to the area, and users of the surrounding transport network) will be minimised by the lead contractor where reasonably practicable.

17.1.2 Construction related traffic movements will be managed by a Construction Traffic Management Plan (CTMP) and a Construction Workforce Travel Plan (CWTP).

17.1.3 A Traffic Management Working Group (TMWG) will be considered as a forum for stakeholder engagement prior to commencement of the Proposed Development .

17.2 Construction Traffic Management Plan

17.2.1 An Outline CTMP (a draft of which is provided as **Appendix 18.3** of the PEIR) provides the structure for the document that will set out the way in which the following would be managed to reduce the impact of the construction traffic:

a. highway safety;
b. management of deliveries to the construction site;
c. practices to reduce the number of construction vehicles movements;
d. abnormal loads; and
e. protection of the public highway.

17.2.2 The lead contractor will prepare a detailed CTMP which will further describe the traffic management, safety and control measures proposed during construction of the Proposed Development.

17.3 Construction Workforce Travel Plan

17.3.1 A CWTP will be prepared by the lead contractor with the aim of encouraging the use of sustainable modes of transport to reduce the impact of workforce travel on local residents and businesses. The plan will include:

a. identification of a travel plan co-ordinator and a description of their responsibilities;
b. key issues to consider for each compound/construction site or group of sites;
c. site activities and surrounding transport network including relevant context plans;
d. anticipated workforce trip generation and how it may change during the construction process;
e. travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network;

f. target to reduce individual car journeys by the construction workforce;

g. methods for surveying workforce travel patterns; and

h. the process for monitoring and reviewing the CWTP.

17.4 General measures to reduce construction traffic impacts

17.4.1 Public access will be maintained, where reasonably practicable, and appropriate measures will be implemented to ensure that the local community, economy and transport networks can continue to operate effectively. Where this is not reasonably practicable, alternative measures will be identified to maintain public access, especially for pedestrians and cyclists, to routes in the vicinity of the sites. The impact of road-based construction traffic will be reduced by implementing and monitoring clear controls on vehicle types, hours of site operation, parking and routes for large goods vehicles.

17.4.2 Where appropriate, the lead contractor will provide haul routes through the works for use by construction vehicles to reduce the need to use public roads. Site access points will be positioned to enable the use of haul routes to be maximised, subject to safety considerations in the design and construction of appropriate access points.

17.4.3 The lead contractor will comply with the requirements of the DCO and relevant highway authority regarding the layout and positioning of site accesses.

17.4.4 Where site accesses and at-grade crossings of public roads are required for construction vehicles, the lead contractor will provide traffic management measures as required and design these measures to avoid unnecessary delay to vehicles on the public highway.

17.4.5 The lead contractor will keep roads, accesses and the like free from mud and other loose materials arising from the works, as far as reasonably practicable.

17.4.6 Where reasonable and practicable, construction vehicles will avoid travelling in convoys on public roads.

17.4.7 The design of temporary traffic management schemes will maintain an appropriate number of lanes on public roads. Lane closures will be subject to the traffic regulation process established by the DCO.

17.4.8 In addition to the physical measures described above, the additional mitigation measures will be developed when the construction programme is known, including:

a. delivery scheduling;

b. timing for out of peak deliveries;

c. timing for out of hours deliveries;

d. use of holding and vehicle call off areas;

e. use of logistics and consolidation centres; and

f. smart procurement.

17.5 Monitoring

17.5.1 It will be a requirement that the appointed lead contractor undertakes regular reviews of the effectiveness of the CTMP to ensure that the requirements are being achieved and any revisions undertaken.

17.5.2 It will also be a requirement that a list of indicators is agreed to monitor site targets. These monitors may include:

a. total numbers of vehicle movement in set time periods – i.e. day, week, month;

b. type of vehicle movement – i.e. waste, plant, material deliveries;

c. distance travelled; and

d. effectiveness of logistic management.

17.5.3 The results of this monitoring exercise should be combined with the results of the monitoring of the CWTP and reported to the TMWG in order to gain an overview of the construction traffic impact of the Proposed Development.

18 WASTE AND RESOURCES

18.1 General provisions

18.1.1 The Applicant and the lead contractor will promote resource efficiency (covering waste minimisation and reuse, recycling, and sustainable material specification, energy and water) throughout all phases of construction works of the Proposed Development.

18.2 Management of waste

18.2.1 The Waste Hierarchy, as outlined by the Waste (England and Wales) Regulations 2011, as amended, will be used by the Applicant and the lead contractor as the overarching framework for the management of waste from construction-related activities. The application of the Waste Hierarchy aims to prevent and minimise harm to human health, the environment and local amenities.

18.2.2 The lead contractor will act to minimise the waste generated from construction activities where reasonably practicable. This will include:

a. adherence to targets for waste recovery as defined in the Draft Outline Site Waste Management Plan (SWMP) (refer to **Appendix 19.1** in Volume 3 of the PEIR);

b. identifying further opportunities to minimise waste during detailed design activities; and

c. measures such as careful storage of materials on site, minimisation of packaging and the use of re-usable packaging.

Identification and classification of waste on-site

18.2.3 The lead contractor's SWMP will identify the quantities and types of waste estimated to arise during the construction operations. The identified waste will be classified in accordance with the statutory controls governing the management of inert, non-hazardous and hazardous wastes.

18.2.4 The lead contractor will update and further refine the Outline SWMP and will implement the principles outlined in best practice guidance to minimise waste consigned to landfill.

18.2.5 The lead contractor will also use the CL:AIRE Definition of Waste: Development Industry Code of Practice to reclassify excavated waste as a resource, where appropriate. Further information is provided in **section** Error! Reference source not found. (Soils and geology).

Segregation and storage of waste

18.2.6 The lead contractor will establish a system with the aim of ensuring that waste materials are separated into appropriate waste streams to maximise its reuse, recycling and recovery on and off-site. On-site hazardous excavated material or waste will be segregated and stored away from other materials. Appropriate

storage receptacles will be used for the collection and storage of waste to facilitate the segregation of waste for re-use, recycling and recovering.

18.2.7 The lead contractor will select and appoint an appropriately licenced waste management company / companies to manage and transport waste in line with current waste legislation and policy, and to meet the waste recovery targets as defined in the Outline SWMP.

Duty of care

18.2.8 All waste for disposal off-site will be accompanied by appropriate legal duty of care documentation. The duty of care documentation will adhere to the relevant statutory requirements for waste transfer and hazardous wastes, in accordance with the Waste (England and Wales) Regulations 2011. The documentation will be retained by the lead contractor in line with statutory requirements.

18.2.9 The lead contractor will comply with all duty of care requirements to manage the potential effects of handling, storing, transporting and depositing excavated materials and demolition and construction wastes arising from the Proposed Development. The arrangements for registering the scheme, consigning, handling and transporting hazardous wastes will be followed by lead contractor in line with the duty of care and the specific consignment note procedures in accordance with Hazardous Waste (England and Wales) Regulations 2005 (SI 2005 No.894).

18.2.10 The lead contractor will maintain responsibility for the management of waste generated during construction. The lead contractor's employees will undergo appropriate training to undertake these responsibilities. Training will include, but is not limited to, waste management handling, inspection and reporting.

18.2.11 All waste material will be appropriately transported and disposed of by the lead contractor at permitted or designated sites.

Waste monitoring

18.2.12 To ensure compliance with the requirements of this Draft CoCP and the SWMP, in addition to statutory controls, the lead contractor will conduct frequent and timely audits and inspections of waste management activities. The categorisation, quantities and disposal route of waste generated during construction operations will be identified, measured and recorded in the SWMP. This information shall be reported on a monthly basis.

18.2.13 The lead contractor will be responsible for recording all waste loads leaving the site. The record will provide a suitable audit trail for compliance purposes and will enable monitoring and reporting of waste types, quantities, management and disposal methods.

18.2.14 The lead contactors will adhere to waste recovery targets as defined in the Outline SWMP.

18.3 Material resources

18.3.1 The Applicant will set project specific targets for the lead contractor for sustainable procurement including targets for recycled content in construction materials (e.g. aggregates) for use in the construction of the Proposed Development.

18.3.2 The lead contractor will use resources efficiently to maximise the environmental and built-environment benefits from the use of surplus resources arising during construction, and reduce the adverse environmental effects and risks associated with disposal off-site.

18.3.3 The Applicant and the lead contractor will also identify opportunities to achieve cut and fill balance during the construction operations of the Proposed Development.

18.4 Soil resources

18.4.1 A Materials Management Plan (MMP) will set out the detailed approach to excavated materials management for the Proposed Development. Further information is provided in **section** Error! Reference source not found. (Soils and geology).

18.4.2 A Soil Management Plan (SMP) will set out the correct procedures for intensive soil handling operations, including topsoil stripping and storage and topsoil re-spreading and amelioration, as well as treatments for the subsoil to ensure that a suitable soil profile is produced to help enable healthy root growth and successful plant establishment within the soft landscape scheme. See **section** Error! Reference source not found. (Agricultural land quality).

18.5 Energy efficiency

18.5.1 The lead contractor will adopt measures to reduce energy consumption and improve efficiency of energy use during construction. This includes all energy sources for transport, heating and power. The measures will draw on best practice from other construction schemes for major infrastructure projects. Where reasonably practicable, the measures will include the following:

a. use of energy efficient plant and equipment, serviced in accordance with the manufacturer's guidelines;

b. efficient use of plant and equipment, including turning off when not in use;

c. deploying appropriately sized plant and construction equipment, specifically reducing the use of over-sized generators;

d. reducing the use of mobile generation through connection of construction sites to mains electricity;

e. using energy efficient light fittings for temporary and permanent site lighting;

f. avoiding unnecessary lighting by providing lighting only to recommended lux levels together with appropriate controls to ensure lights are off when not required; and

g. specifying energy efficient site accommodation.

18.6 Water efficiency

18.6.1 The lead contractor will adopt measures to improve water efficiency during construction, for both potable and non-potable end uses. The measures will draw on best practice from other construction schemes for major infrastructure projects. Where reasonably practicable, the measures will include the following, as appropriate:

a. embedding water efficiency measures into facilities such as temporary accommodation and welfare facilities. Measures may include low flush or flush stop toilets, aerated taps and waterless urinals;

b. implementing water meters and regularly taking readings;

c. implementing measures to identify, minimise and prevent leakage from construction site water supply system, such as installing leakage monitoring and alert systems;

d. adopting efficient technologies for dust suppression, such as efficient nozzle technology to create a more efficient spray pattern and/or the use of wetting additives to improve water efficiency for bowsers; and

e. on-site messaging to raise awareness and reinforce water efficient behaviour, such as through briefings and posters, promoting water efficiency measures to reinforce behaviour.

18.6.2 The lead contractor will employ water recycling techniques across all construction sites, where practicable, e.g. rainwater harvesting, greywater reuse, vehicle washing and wheel washes.

18.6.3 The lead contractor will adopt measures that prioritise use of non-potable water sources, such as rainwater, for on-site non-potable purposes, such as but not limited to:

a. wheel washes and dust suppression on site roads;

b. lorry wash out;

c. hydro-demolition with high pressure washer;

d. construction water use;

e. site and general cleaning (where appropriate); and

f. specialist high pressure cleaning.

18.6.4 Non-potable and potable water supply systems will be kept separate to remove the potential for cross contamination.

18.6.5 Those processes utilising non-potable water will avoid dispersal of atomised droplets as far as reasonably practicable to remove the risk of inhalation. Activities with a high degree of splash or dispersal (e.g. dust suppression and

high-pressure cleaning) will be managed by the lead contractor to prevent unwanted distribution or protection for potentially vulnerable receptors.

18.6.6 In addition, the lead contractor will undertake a water use profiling exercise in advance of undertaking all works. This will enable the lead contractor to understand the volumes and quality of the water required, identify potential water sources and align them with the key water demands.

18.6.7 As part of the water use profiling exercise, the lead contractor will liaise with Affinity Water Ltd. The volumes of water used will be agreed with Affinity Water Ltd and monitored.

18.6.8 The lead contractor will set water use targets and effectively monitor, record and report water consumption, and associated water efficiency, against these targets across construction sites.

19 WATER ENVIRONMENT

19.1 General provisions

19.1.1 The lead contractor will implement appropriate measures throughout construction operations where construction-related activities will take place within or in proximity to surface water or groundwater sources. The measures will control the potential risks to the water environment, relating to water resources, water quantity and water quality.

19.1.2 The lead contractor will manage site activities and working methods to protect the quality of surface water and groundwater resources from effects of the Proposed Development, including changes to the hydrological regime through controls to manage the rate and volume of run-off.

19.1.3 Water quality monitoring systems will be employed during the construction works. In the event of the release of potentially polluting material surface water will be diverted to areas where it can be contained and either treated or tankered off site.

19.1.4 Good practice measures will be used (e.g. through the use of silt traps and the re-use of water in wheel washers). Where required, the lead contractor will include arrangements to obtain appropriate approval for works from the relevant regulatory body or statutory undertaker which could affect any surface water or groundwater resource.

19.2 Surface water and groundwater management

19.2.1 The lead contractor will prepare a Construction Surface Water Management Strategy (CSWMS) for the management of construction operations, produced as part of their EMS. The CSWMS aims to protect the quality of surface water resources from adverse effects and avoid any changes of level or volume that could increase in the likelihood of downstream flood risk or reduce the water resources available to a water dependent receptor.

19.2.2 The CSWMS will include the following:

a. identification of water resources within the area identified in the ES (including source protection zones) which could be affected during the construction works;

b. identification of sources of potential pollution (identified on relevant drawings);

c. development of plans that reduce the risk of potentially polluting material leaving the site in an uncontrolled manner as far as reasonably practical, including a pollution incident response plan;

d. compliance with the British Standards Institution, BS 6031 Code of Practice for earthworks, BSI (2009c) regarding the general control of site drainage;

e. precautions to be taken to prevent damage to services and control pollution during service diversions, excavation ground penetration and tunnelling;

f. precautions to be taken when working adjacent to watercourses where appropriate, to manage flood risk and the potential for deposition of silt or release of other forms of suspended material or pollution within the water column; and

g. consideration of good practice guidance, including:

    i. The Design Manual for Roads and Bridges and The SuDS Manual (C753) CIRIA (2015);
    ii. Control of water pollution from construction sites: Guidance for consultants and contractors (C532), CIRIA (2001); and
    iii. The Environment Agency's PPGs[3]:
        i. PPG1: General Guide to Prevention of Pollution;
        ii. PG5: Works and maintenance in or near water; and
        iii. PPG23: Maintenance of structures over water.

19.2.3 In relation to groundwater, where reasonably practicable, all works within the saturated zone should be avoided. Where works cannot be avoided measures will be introduced to protect water quality, level and volume, in accordance with the measures outlined in the **section** Error! Reference source not found. (Soils and geology).

19.2.4 The lead contractor will adhere to site good practice and the Environment Agency's Groundwater protection: Principles and Practices (GP3).

19.2.5 Refer to **section** Error! Reference source not found. (Soils and geology) for a further description of management measures identified in relation to groundwater resources and contamination.

Site surface water drainage systems

19.2.6 The lead contractor will implement temporary construction surface water drainage systems, which will be described within the CSWMS, to manage the potential surface water impacts arising from construction operations. The temporary construction site drainage measures will be completed before the commencement of the relevant earthwork operations and will be retained until the drainage system of the completed development is fully operational, or site restoration works are completed.

19.2.7 The temporary construction site surface water drainage systems will include the provision of adequately sized attenuation and treatment facilities, where appropriate. The sizing of attenuation will take account of areas of existing flood risk and the relevant permitting requirements of the Environment Agency and/or the Lead Local Flood Authority.

[3] It is recognised that the Environment Agency archived the PPGs in 2015 and now references the guidance available on the Gov.uk website. However, the view of the Future Luton technical team is that the PPGs still provide useful environmental good practice guidance that should be referenced in the CoCP.

19.2.8 The temporary construction site surface water drainage systems will take into consideration best practice guidance for site surface water drainage systems such as Defra's Non-statutory technical standards for sustainable drainage systems (with due regard to the short lifetime and limited accessibility of the systems).

19.2.9 The management of surface water across the construction site will take account of existing surface water catchments and existing receptor of surface water will be retained wherever practicable.

19.2.10 Measures in the vicinity of the existing landfill will ensure surface water is not able to infiltrate through to the landfill material as this may lead to the migration of contaminants from the landfill into the wider aquifer. Therefore, surface water from the landfill area will be collected and conveyed to other areas and allowed to infiltrate at locations understood to be free of ground contamination.

19.2.11 A treatment train of measures will be implemented across the site to treat potentially polluting matter contained within surface water runoff. This will include measures to manage sediments (see below for further detail), hydrocarbons (generated by fuel oils), cement and other alkali-based construction materials and heavy metals.

19.2.12 The quality and quantity of surface water generated across construction areas will be monitored.

Sediment control

19.2.13 The lead contractor will specify measures to limit and manage sediment erosion, control sediment mobilisation and entrainment and manage sediment transport and deposition. This will include the following measures, as appropriate:

a. minimisation of areas of exposed ground and stockpiles, as far as reasonably practicable, to reduce silty runoff;
b. adoption of geotextiles, where necessary, to shield stockpiles, and stockpiles left for more than three months will be seeded;
c. installation of cut-off ditches around excavations, exposed ground and stockpiles to prevent sediment release;
d. control of earth movement to reduce the risk of the contamination of silt and site run-off;
e. control of mud at site entry and exit points using wheel-cleaning areas and road sweeps, as appropriate;
f. washing and cleaning of plant, equipment and machinery in designated areas within the construction site where runoff is isolated for treatment prior to discharge;
g. installation of restriction and barriers, such as straw bale traps and gravel, for works adjacent to watercourses/water bodies, to prevent damage to riparian vegetation, refer to **section** Error! Reference source

not found. (Biodiversity), and manage the pathway for untreated silt-laden runoff to enter the watercourse, as appropriate; and

h. adequate provision for the removal and treatment of sediment from site run-off, such as in settlement tanks/ponds.

19.3 Wastewater management

19.3.1 The lead contractor will consult with the relevant regulatory bodies on the measures to be implemented to contain and manage surface water run-off from construction operations, as appropriate. The lead contractor will obtain the necessary consents for work likely to affect the quality or quantity of any surface or groundwater resource.

19.3.2 The measures will aim to prevent deterioration of the water environment and other adverse impacts. Measures will include the following, as appropriate:

a. identification of the response procedures to be implemented in the event of works affecting groundwater levels or quality with subsequent adverse effects on abstractions, watercourses, water bodies or springs;

b. procedures for managing construction operations in areas of potentially contaminated land;

c. procedures for managing intercepted groundwater that contains elevated concentrations of contaminants;

d. procedures to limit adverse dust and air pollution effects associated with construction operations (refer to **section** Error! Reference source not found.);

e. compliance with the British Standards Institution, BS 6031, Code of practice for earthworks regarding the general control of site drainage, BSI (2009);

f. adoption of oil interceptors at the site office/ works compound, as appropriate;

g. adoption of pollution shut-off valves in compounds with formal drainage; and

h. adoption of bunds of non-erodible material or silt or sediment fences adjacent to watercourses.

19.3.3 Refer to **section** Error! Reference source not found. (Soils and geology) for further description of management measures identified in relation to groundwater resources and contamination.

19.4 Pollution control

19.4.1 The lead contractor will adhere to a range of measures to control and manage pollution, chemicals and oils. This will include, but is not limited to, the following:

a. adherence to the Control of Pollution (Oil Storage) (England) Regulations 2001, as amended, and the Environment Agency's PPG2: Above ground oil storage tank to manage the storage of any oil-based materials,

including petrol, diesel, waste and vegetable and plant oil, and above-ground fuel and oil storage tanks[3];

b. adherence to PPG27: Installation, decommissioning and removal of underground storage tanks where below-ground oil storage is proposed[3];

c. compliance with PPG26: Drums and intermediate bulk containers in relation to chemical storage, handling and use[3];

d. consultation with the relevant regulatory bodies regarding specific requirements in relation to establishing and operating concrete batching plants on site;

e. identification of emergency procedures to be put in place in the event of any pollution incidents specified in a pollution incident response plan to be prepared in line with Environment Agency guidance;

f. use of stationary plant with secondary containment measures such as plant nappies to retain any leakage of oil or fuel, which will be emptied at regular intervals to prevent overflow;

g. storage of spillage kits at key locations on site and at specific refuelling areas;

h. training of staff to use spillage kits and record all spillage incidents; and

i. the lead contractor will inform the Applicant of any spills which cause land contamination or pollution off-site.

19.4.2 Refer to **section** Error! Reference source not found. (Soils and geology) for further description of management measures identified in relation to groundwater resources and contamination.

19.5 Control and management of foul water

19.5.1 The lead contractor will manage and dispose of foul water and sewage effluents from site facilities. The lead contractor will require approval from the statutory water undertaker for any foul drainage discharged to a public sewer, in accordance with the DCO. If not permitted, the lead contractor will need to adopt provisions to dispose of the liquid from site, such as via a tanker.

19.5.2 The lead contractor will adhere to the following measures, as appropriate:

a. provision of temporary foul drainage facilities to contain foul water;

b. disposal of foul water off-site by a licensed contractor;

c. compliance with relevant guidance, such as PPG4: Treatment and disposal of sewage[3], the Environment Agency's guidance document Groundwater protection: Principles and practice (GP3);

d. connection to the local foul sewer system as agreed with the relevant authorities, where appropriate; and

e. where a foul sewer is not present, appropriate treatment and discharge to a watercourse or soakaway with approval from the Environment Agency, where required.

19.5.3 Records of existing foul water assets including pipe network and other facilities will be obtained. Their location will be taken into account during all construction activities.

19.6 Private water supplies

19.6.1 A risk assessment will be undertaken by the lead contractor for excavation work associated with impacts on aquifers and private water supplies. Refer to **section** Error! Reference source not found. (Soils and geology) for a further description of management measures identified in relation to groundwater resources and contamination.

19.6.2 Records of existing water supply assets including pipe network and other facilities will be obtained. Their location will be taken into account during all construction activities.

19.6.3 Any water supply pipes damaged during construction operations will be repaired or replaced as quickly as is reasonably practicable. The repair of any such damage caused by utility companies working on behalf of the Applicant will be the responsibility of that utility company. Until water supplies are reinstated and tested, drinking water will be provided by bottle and/or tanker as a temporary measure as appropriate to affected parties. Provision of an interim water supply will also apply where supplies to livestock are temporarily interrupted.

19.7 Excavations and dewatering

19.7.1 Where appropriate, the lead contractor will undertake risk assessments for excavation work and dewatering impacts on surface water, groundwater and abstractions.

19.7.2 Refer to **section** Error! Reference source not found. (Soils and geology) for further description of management measures identified in relation to groundwater resources and contamination.

19.8 Flood risk

19.8.1 The lead contractor will undertake all works associated with construction operations whilst being mindful of impacts to flood risk. A number of measures will be implemented to reduce significant impacts to flood risk. This will include the following, as appropriate:

a. removal of obstacles and debris from surface water run-off pathways;
b. development of a plan to identify suitable access and refuges in the event of severe weather events;
c. consultation between the lead contractor and the relevant local authorities;
d. awareness of relevant regulatory bodies flood risk management plans during consultation as a reference for the development of specific construction site flood mitigation plans; and

e. use of the Environment Agency's Floodline to provide a flood risk warning in flood risk areas within the Proposed Development.

19.8.2 Flood risk plans will be developed for the construction operations and will account for a broad range of topics including all construction areas located within Flood Zone 2 and 3, areas vulnerable to surface water and groundwater flooding, and other flood risk sources such as sewer flooding and reservoir flooding.

19.8.3 The lead contractor will ensure the effective planning of sites and the storing of materials in all flood risk plans. For all temporary and permanent works, a risk based precautionary approach will be adopted and specified in a risk assessment to be included in the CSWMS.

19.8.4 The lead contractor will develop construction proposals to ensure that all flood risks are managed correctly. Where appropriate, this will include the provision of evidence that appropriate flood warning and emergency management measures are accounted for, particularly focusing on long-term maintenance and management. Where achievable, lead contractor should ensure that stockpiles, accommodation, temporary facilities, machinery and plant are not located within Flood Zone 3 areas or areas at significant risk of flooding from other sources.

19.8.5 The lead contractor will be required to submit a report on flood risk to the Applicant. The report will summarise any applications that apply for environmental flood risk permits and the status of the works, in addition to any flood risk management or mitigation measures to support temporary or permanent works proposals. The report should also account for any particular conditions of the approval that will be obtained from the relevant consenting bodies; and a statement of the cumulative flood risk impacts of the temporary and permanent works. The lead contractor will be responsible for preparing and submitting any such applications as may be required to relevant bodies.

19.8.6 Rainwater reuse strategies will be applied to supply water for activities where potable standard of water is not required.

19.9 Monitoring

19.9.1 Surface water and groundwater monitoring plans will be prepared and implemented as part of the lead contractor's EMS. The monitoring plans will be included within the CSWMS.

19.9.2 The lead contractor will consult the Environment Agency regarding water quality, flow and level monitoring to be undertaken for watercourses and groundwater that will be affected by construction works or the discharge of surface water run-off, which will include the following, as appropriate:

a. pre-construction monitoring to establish baseline water quality conditions for watercourses and groundwater;

b. monitoring during construction works to enable the effectiveness of mitigation measures to limit pollution risk to be monitored and any pollution incidents to be identified; and

c. monitoring of watercourses or groundwater receiving surface water run-off during construction to enable the effectiveness of treatment and other sustainable drainage systems measures to be determined and to ensure that an unacceptable rise in groundwater levels does not occur.

19.9.3 The lead contractor will carry out appropriate monitoring to identify:

a. pollution risks that are unacceptably high;

b. spillages and leakages;

c. potential non-compliance with the CoCP; and

d. suspected pollution incidences.

19.9.4 Appropriate actions will be taken where pollution risks are unacceptably high, where there is non-compliance with the CoCP, where spillages and leakages are unacceptable or where there are any suspected pollution incidents.

19.9.5 The lead contractor will implement appropriate inspection and monitoring procedures. The contractors will also consult with the relevant regulatory body regarding the pollution incident control plan which will set out the measures to be implemented to address any adverse findings from the monitoring procedures. Refer to section **Error! Reference source not found.** (Soils and geology) for further description of management measures identified in relation to groundwater resources and contamination.

GLOSSARY AND ABBREVIATIONS

Term	Definition
ALARP	As Low As Reasonably Practicable
BPM	Best practicable means
BS	British Standard
BSI	British Standards Institution
CCS	Considerate Constructors Scheme
CCTV	Closed-circuit television
CEMP	Construction Environmental Management Plan
CEP	Community Engagement Plan
CIE	The International Commission on Illumination
CIRIA	Construction Industry Research and Information Association's
CoCP	Code of Construction Practice
Considerate Constructors Scheme	The Considerate Constructors Scheme is a not-for-profit, independent organisation founded to raise standards in the construction industry. The Code of Considerate Practice commits construction sites, companies, and suppliers registered with the Scheme to care about appearance, respect the community, protect the environment, care about safety and value their workforce. https://www.ccscheme.org.uk/
CO_2	Carbon Dioxide
CQP	Construction Quality Assurance Plan
CSWMS	Construction surface water management strategy
CTMP	Construction Traffic Management Plan
CWS	County Wildlife Sites
CWTP	Construction Workforce Travel Plan
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
DoW CoP	CL:AIRE: Definition of Waste Code of Practice
DQRA	Detailed Quantitative Risk Assessments
Draft CoCP	Draft Code of Construction Practice
DMRB	Design Manual for Roads and Bridges
DWS	District Wildlife Sites
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EMS	Environmental Management System
EOC	Explosive ordnance clearance

ES	Environmental Statement
ETS	Employment, Training and Skills
Flood Zone 2	Flood Zone 2: Medium probability Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or. Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.
Flood Zone 3	Flood Zone 3: High probability Land having between a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.
GHG	Greenhouse Gases
HGV	Heavy goods vehicle
Highway Interventions	Junction and road improvement works included in the Proposed Development for which consent is being sought as part of the Application for development consent
HVAC	Heating, ventilation, and air conditioning
IAQM	Institute of Air Quality Management
Lead contractor	A lead contractor on a construction/ work site responsible for planning, managing and co-ordinating themselves and all other contractors working on-site
LBMP	Landscape and Biodiversity Management Plan
LLAOL	London Luton Airport Operations Limited, the current operators of London Luton Airport
LBC	Luton Borough Council
the airport	London Luton Airport
LWS	Local Wildlife Sites
Ministry of Agriculture, Fisheries and Food Good Practice Guide for Handling Soils	MAFF Good Practice Guide for Handling Soils
Main Application Site	The area to the east of Luton Airport where main works for the Proposed Development will take place. Excludes the Off-site Car Park and Highway Interventions.
Major accident	In the context of this assessment, means an uncontrolled event caused by a man-made activity or asset that may result in immediate or delayed serious damage to human health, welfare and/or environment and requires the use of resources beyond those of the Applicant or its contractors to manage. It should be noted that malicious intent is not accidental.
MMP	Materials Management Plan

Off-site Car Parks	The two locations to the south west of Luton Airport, outside of the airport boundary, where car parking is included in the Proposed Development
OS	Ordnance Survey
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
PM10	Particulate Matter 10
PPG	Pollution Prevention Guideline These Environment Agency documents have been withdrawn, but still constitute relevant advice on good practice. Where stated, they should be referred to in the absence of alternative guidance documents.
PPE	Personal Protective Equipment
PPV	Peak particle velocity
Proposed Development	All works for which consent is being sought as part of the application for development consent, including works at the Main Application Site; Off-site Car Parks and Highway Interventions.
PRoW	Public rights of way
RPA	Root Protection Areas
SMP	Soil Management Plan
SSSI	Sites of Special Scientific Interest
SUDS	Sustainable Urban Drainage System
SWMP	Site Waste Management Plan
SWMS	Surface Water Management Strategy
TfL	Transport for London
TMWG	Traffic Management Working Group
UKWAS	United Kingdom Woodland Assurance Standard
UXO	Unexploded ordnance