

Draft Code of Construction Practice

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Preface: Development of the draft Code of Construction Practice (CoCP)

This draft Code of Construction Practice (CoCP) sets out our proposed approach to manage the potential impacts to people, businesses, and the natural and historic environment from the construction of the Heathrow expansion project. Stakeholders are invited to comment on the draft CoCP as part of this 2026 Public Consultation along with other consultation documents, including the Construction Proposals Document.

This draft CoCP will be subject to further engagement with relevant local authorities and other statutory bodies before submission of the Development Consent Order (DCO) application for the Heathrow expansion (the Project). This draft CoCP may therefore be subject to refinement where necessary as the Heathrow expansion scheme design and construction approaches develop.

At DCO application, a further developed CoCP will be submitted with the intention that it will become a 'certified document'. The detailed plans required to be produced by the CoCP (discussed in this draft) will be required to be developed in substantial accordance with the CoCP that is certified. Non-compliance with those plans would be a breach of the terms of the DCO. In the event of a breach, we and our contractors would be open to enforcement action under Section 161 of the Planning Act 2008.

The draft CoCP is being developed alongside the Environmental Impact Assessment process. The potential likely significant effects of the Project, taking into account the mitigation set out in the draft CoCP, is reported in the Environmental Information for Consultation Document (EICD). The text outlined in grey within this document represents explanatory content for the purposes of this 2026 Public Consultation which may be deleted at DCO submission.

1. Introduction

1.1 Overview

- 1.1.1 This document is the draft Code of Construction Practice (CoCP) for the Heathrow expansion (the Project).
- 1.1.2 Heathrow expansion is a Nationally Significant Infrastructure Project to grow and transform the UK's only hub airport, delivered in phases through to the 2050s. At its heart is a new 3,500m third runway to the north-west, alongside an extension to an existing runway, new taxiways and expanded terminal capacity, including new buildings west of Terminal 5 and upgrades to existing terminals. Together, these changes would allow Heathrow to handle far more flights and passengers each year – up to around 150 million passengers – while improving day-to-day operations.
- 1.1.3 To enable this, the Project extends beyond the airport itself. It includes major transport upgrades, such as tunnelling part of the M25 beneath the new runway, improving surrounding roads, diverting the River Colne and its tributaries, and creating new flood storage, energy and utility systems. It also brings new cargo, maintenance and logistics facilities, along with additional offices, hotels, parking and green space and a continuous “Green Loop”. Some buildings, businesses and community facilities would be relocated or replaced, and 756 homes demolished, with mitigation and compensation provided. Overall, it is a long term, coordinated programme to reshape the airport and its surroundings in support of UK connectivity and economic growth.
- 1.1.4 This draft CoCP includes control measures and standards to be implemented throughout the construction of the Project. While multiple construction works will run concurrently throughout the Project, the CoCP certified by the Development Consent Order (DCO) will act as the overarching document for all construction related activity, setting out the nature of the measures to be taken forward and how the detail of such measures will be brought forward. As such, the CoCP will present a consistent approach to the management of construction activities for the entire proposed works.
- 1.1.5 The implementation of the requirements of the CoCP will be supported through a range of detailed management plans and strategies, to be prepared either for the DCO application, or by the main contractors upon appointment (see also **Section 2.4**).

1.2 Structure of this document

- 1.2.1 The draft CoCP comprises the following sections:
 - 1. Preface: Development of the draft CoCP
 - 2. Purpose of the draft CoCP (**Section 1.3**)
 - 3. Implementation (**Section 2**)
 - 4. Community and stakeholder engagement (**Section 3**)

5. General requirements including hours of work, pollution incident control and security (**Section 4**)
6. Requirements by aspect (**Sections 5–14**) – setting out measures that will be implemented to limit disturbance from construction activities, where reasonably practicable, in relation to the following aspects:
 - a. Air quality and odour
 - b. Biodiversity
 - c. Carbon and greenhouse gases
 - d. Historic environment
 - e. Land quality
 - f. Landscape and visual amenity
 - g. Noise and vibration
 - h. Waste and resource efficiency
 - i. Traffic and transport
 - j. Water environment

1.2.2 These aspects correspond to relevant chapters of the Environmental Statement (ES). Other aspects (such as health and major accidents and disasters) are referenced in a number of sections of the draft CoCP.

1.3 Purpose of the draft CoCP

- 1.3.1 This draft CoCP outlines the proposed measures and standards of work that will be implemented by Heathrow and its contractors throughout the construction period. The aim is to:
 1. Provide effective planning, management and control during construction to manage potential impacts to people, businesses and the natural and historic environment.
 2. Provide mechanisms to engage with the local community and their representatives throughout the construction period.
- 1.3.2 Heathrow and the main contractors will comply, as a minimum, with applicable environmental legislation at the time of construction, together with any additional environmental controls imposed by the DCO. For this reason, the applicable statutory requirements are not repeated within this draft CoCP. Further guidance on specific areas, such as soil handling and dust management, will be considered from industry best practice guidance documents, as set out in each discipline section of this draft CoCP. References to industry standards and best-practice guidance in this draft CoCP are not exhaustive, and any relevant updates issued during the works will be taken into account as appropriate.

2. Implementation

2.1 Legislative, consent and licence compliance

- 2.1.1 Heathrow and its contractors will, as a minimum, comply with all legislative requirements for all aspects set out in this draft Code of Construction Practice (CoCP), including the provisions of the Development Consent Order (DCO). Heathrow will ensure all necessary permits, licences and consents are obtained for all proposed works that are not included in the DCO itself. The scope of these consents will be set out in the application for the DCO.
- 2.1.2 The aspect chapters of this draft CoCP therefore do not refer to the relevant legislative or consent requirements for that aspect, unless it is necessary to do so to introduce Heathrow's thinking about how such licences and consents will be sought.
- 2.1.3 In bringing forward the DCO application, Heathrow is considering how existing legislative requirements for permits and licences can be adapted to dovetail and/or work in tandem with the requirements of the CoCP to avoid duplication and bring efficiencies to the post DCO consent process and will engage with stakeholders in this regard. Heathrow's final proposals in respect of this will be explained in the DCO application, and where necessary, in the CoCP submitted as part of it.

2.2 Delivery model

- 2.2.1 Heathrow will establish a capable delivery management team that encompasses all the functions of a major programme of capital development. This includes but is not limited to project management through health and safety, environment and consenting, community and stakeholder engagement to assurance, quality and compliance. This will be implemented by the delivery management team, main contractors, designers and their sub-contractors and supply chains, all of which will be required to comply with the CoCP and aspect management plans.

2.3 Environmental Management System

- 2.3.1 Heathrow has committed to having an Environmental Management System (EMS) that is certified to ISO 14001, including for the Project.
- 2.3.2 Heathrow will require each of the main contractors to have and apply an EMS that is certified to ISO 14001. Their EMS will include roles and responsibilities to be assigned, appropriate control measures and monitoring systems to be employed during the planning and undertaking of the works.

- 2.3.3 The EMS will identify the principal environmental aspects of the works and set out how these will be managed, including arrangements for record-keeping, auditing and management review. Procedures will also be included to monitor and report compliance with this draft CoCP, the requirements set by the DCO and the effectiveness of management measures, together with provisions for corrective action where required.
- 2.3.4 The EMS will apply to the activities of all main contractors and include arrangements for coordination with other parties whose activities may affect the works. As required by ISO 14001, relevant elements of the EMS will be regularly reviewed and updated to ensure their continued suitability and effectiveness across different phases of the works.

2.4 Environmental Management Plans

- 2.4.1 As part of the detailed management plans to be prepared post DCO consent, the main contractors will develop Environmental Management Plans (EMP) specific to their working areas and in alignment with their EMS, including a number of specific measures by location and aspect; and in accordance with **Section 4** onwards of this draft CoCP. The EMPs will build on the environmental requirements given below and will set out how each part of the Project will adapt and deliver the required environmental and community protection measures across each of the different areas of the Project.

2.5 Enforcement

- 2.5.1 Compliance with the measures in the detailed management plans that are brought forward and approved further to the CoCP will be a requirement of the DCO, applicable to both Heathrow and its contractors. Compliance will be secured by both the DCO and contractually between Heathrow and its contractors.
- 2.5.2 The requirements of the measures that are brought forward and approved further to the CoCP will be imposed by Heathrow on the main contractors through the works contracts. These contracts will incorporate both general requirements and environmental aspect requirements.
- 2.5.3 The main contractors and their sub-contractors will comply with the measures that are brought forward and approved further to the CoCP, and appropriate contractual action will be taken by Heathrow where necessary to ensure compliance. Such action would not replace local authorities' ability to enforce non-compliance, if considered necessary.

2.6 Contractors' method statements

- 2.6.1 The main contractors will set out the procedures to be followed for construction operations in method statements, which will address health, safety, site security and the environmental issues associated with construction operations. The operations requiring a method statement will be identified using a risk-based approach. As a minimum, method statements will be prepared for site preparation, construction activities and reinstatement of land and/or infrastructure following completion of the main construction works.
- 2.6.2 Method statements will define any specific environmental control measures, including environmental and historic environment protection works, to be implemented to meet the requirements of the CoCP, and the detailed plans produced pursuant to it, such as the EMPs, and will set out the measures required to reduce cumulative effects of concurrent construction activities.
- 2.6.3 An assurance programme will be established by Heathrow and its main contractors to ensure compliance with these arrangements.

2.7 Monitoring

- 2.7.1 Heathrow will ensure the necessary monitoring and reporting is undertaken by contractors as outlined for each aspect, to ensure compliance with the requirements of the detailed management plans.
- 2.7.2 Monitoring will include:
 1. Monitoring the effectiveness of mitigation measures
 2. Monitoring the impact of construction works
 3. Taking other actions as may be necessary for compliance

2.8 Training and competence

- 2.8.1 Heathrow will require main contractors to employ an appropriately qualified and competent workforce with sufficient knowledge and experience on construction-related works. Where appropriate, this will include registration with relevant recognised competence schemes and training programmes.
- 2.8.2 The main contractors are responsible for delivering training requirements for their workforce to meet the requirements set out in the measures in the detailed management plans that are brought forward and approved further to the CoCP. They will be required to ensure that suitably qualified and experienced professionals are employed to identify training requirements, and where necessary, provide appropriate training.

- 2.8.3 The training will be comprehensive and will include a holistic range of activities including site briefings and toolbox talks to equip relevant staff with a suitable level of knowledge on health, safety, environmental aspects, and community relations, in addition to the ability to adhere to environmental control measures. The training would also advise the workforce of amendments and changing circumstances as the construction works progress.

2.9 Considerate Constructors Scheme

- 2.9.1 Construction sites will be registered under the Considerate Constructors Scheme. Refer to the **Glossary of terms** for further information.

2.10 Supervision

- 2.10.1 Supervision is necessary to ensure safe and effective construction related works. Supervisory staff will be suitably qualified and/or experienced personnel, such as professionally qualified and/or chartered environmental management staff with appropriate experience in the environmental aspects outlined within the CoCP.
- 2.10.2 Supervisory staff will supervise and report on the implementation of appropriate environmental mitigation measures and safeguards.

2.11 Contact person

- 2.11.1 For any relevant construction works, a single point of contact will be identified, who will be the single point of contact for the regulatory authorities. Heathrow will provide the regulatory authorities with relevant contact details before the commencement of construction.

2.12 Interface management between adjacent construction activities

- 2.12.1 Heathrow will require the main contractors to put in place measures to manage the environmental impacts and effects of interfaces between adjacent construction activities (including those brought forward by other main contractors), including the boundaries between areas under the control of different contractors and (where reasonably practicable) other third-party contractors that are not delivering the Project – these measures will be reflected in the relevant detailed plans required by the CoCP.

2.13 Changes in construction methodology

- 2.13.1 The Project is a complex large-scale project which will take place over many years. As such, in developing the scheme, Heathrow or its contractors may determine that a change in construction methodology or related mitigation measures from that presented at DCO application stage may be required during the construction phase of the Project. This could arise, for example, due to technological changes in the intervening period, contractor innovation, or encountering unexpected construction constraints when on site.
- 2.13.2 Any such proposed amendments will need to be assessed having regard to the assessment criteria used in the Environmental Statement (ES) to determine the significance of effects for the affected receptors, and only be brought forward if the proposed method will not give rise to materially new or materially different adverse environmental effects. The results of this process would be set out in the detailed management plans required by the CoCP.

3. Community communication and engagement

3.1 General provisions

- 3.1.1 Heathrow intends to develop and continue to maintain positive relationships with stakeholders and groups who are part of the local community. This includes groups such as local residents and businesses, community groups, charities and local authorities.
- 3.1.2 Heathrow will continue to maintain a dialogue with communities impacted by its plans; this will be underpinned by the following principles:
 - 1. Open: Heathrow will engage in an open and transparent manner providing communities with access to the information that is relevant and specific to them.
 - 2. Engaging: Heathrow will engage with communities on a continual basis throughout all stages of the Project.
 - 3. Timely: Information on the Project will be shared regularly and in a timely manner for communities.
 - 4. Receptive: Heathrow will be open to receiving enquiries and supporting communities with any concerns and complaints they may have regarding the construction works.
 - 5. Accessible: Information will be accessible in different formats and languages to ensure all members of the community are able to engage with consultation and engagement materials.

3.2 Community engagement

- 3.2.1 Heathrow will prepare and implement community engagement measures in each appropriate area of work. These will be brought forward in substantial accordance with an Outline Community Engagement Plan, which will be submitted with the Development Consent Order (DCO) application and will set out Heathrow's core commitments on community engagement matters, at both a site wide and local work area level, dealing with the matters set out below.
- 3.2.2 The submitted community engagement measures will look to build on the current local engagement already taking place between Heathrow and the local community and will include:
 - 1. Delivering an effective community engagement programme, ensuring local communities are informed about the DCO and any construction activities that may impact them and taking account of the needs of hard to reach groups in doing so.

2. Informing local communities in advance of the relevant construction works commencing in their area, including the timetable of construction activities, and how the effects of construction activities will be managed and mitigated.
3. Providing information on how communities can engage with the Project through the Economic Development Framework, as well as raising enquiries and complaints.
4. Setting out how residents will be given information as to how to engage with the small claims and complaints processes relating to construction impacts that will be set up for the Project. Further information on these processes will be provided with the DCO application, following engagement with stakeholders.
5. Explaining how engagement will seek to identify the key matters of relevance to the wellbeing and mental health of residents so that these can be taken into account in construction planning.

3.2.3 The approach presented for DCO application will be informed by, and take account of, the views of the Heathrow Expansion Independent Community Engagement Board (HEICEB) and other interested parties, such as local authorities, statutory bodies and other stakeholders.

3.3 Communications

3.3.1 A programme of clear, easy to understand and sustained communications will be put in place. This will include a range of measures, such as:

1. Digital media – information will be made available online via a range of platforms. This will include the latest information on the progress of the construction works, how to get involved in the Project including employment opportunities, areas affected by construction, mitigation in place to reduce adverse effects of construction, information regarding planned construction works, road closures and works recently completed.
2. Printed media – information will be available through the regular issue of printed publications. These will provide information regarding the Project's progress and planned construction works and how to get involved in the Project including employment opportunities.
3. Active communication – information will be made available in the local community through a programme of local engagement events and shared with relevant community groups. These events will provide relevant information that is specific to the community keeping residents updated and informed of our plans.
4. Provision of information on progress of construction works – the relevant local authority, district councils, parish councils, councillors, Members of Parliament and other relevant persons will be kept informed of the progress of construction works.

5. Accessible communications – the methods used for notifying and contacting affected communities will consider the specific needs of the local community. For example, materials will be accessible in different formats, will be easy to read and understand and where required will be available in different languages.
6. Notification – occupiers of adjacent or impacted properties and businesses will be notified in advance of the nature and anticipated duration of planned construction works that may affect them. Information contained in the notifications will include, as appropriate:
 - a. The location of the planned works
 - b. The activities to be carried out
 - c. The anticipated duration of the planned works and the periods within which works will be undertaken
 - d. An outline of the potential effects of the planned works
 - e. Enquiries and complaints procedure

3.4 Engagement and raising concerns during construction

- 3.4.1 There will be a procedure to manage enquiries and communication from the public including a phone line and email address, and via other engagement forums such as Local Community Forums and Neighbourhood Groups. The existing community relations line will be expanded to also cover matters relating to the construction works for the Project.
- 3.4.2 The relevant contact number, email and website addresses for Heathrow will be displayed on signs around the construction sites.
- 3.4.3 As noted above, Heathrow will prepare and oversee a communication procedure which includes commitments to response times.
- 3.4.4 The procedure and associated system will:
 1. Log enquiries and complaints in a register.
 2. Manage enquiries and feedback appropriately.
 3. Take appropriate and timely action and respond to enquiries and complaints.
 4. Outline the process for reviewing enquiries and feedback regularly to assess the adequacy, efficiency and effectiveness of the communication procedure and the measures being taken to respond to any enquiries and feedback.
 5. Consider feedback on the improvements to the procedure that would make it more accessible and helpful for local people and those with specific requirements.

4. General requirements

4.1 Working hours

- 4.1.1 Working hours will vary by activity and across different construction sites depending on land uses and receptors surrounding construction sites.
- 4.1.2 Shift start and finish times will be staggered to reduce pressure on local transport services, roads and construction site infrastructure.
- 4.1.3 The proposed working hours are outlined in the following sections.

24-hour day, seven days a week working

- 4.1.4 24-hour day, seven days a week working, including Bank Holiday working, will be required for activities directly related to ensuring that the Project can deliver an operational new runway as soon as possible. Such working hours would also be employed to prioritise the most intensive and disruptive construction works, to better manage and curtail the duration of their impacts.
- 4.1.5 Activities where 24-hour day, seven days a week working, including Bank Holiday working, are likely to apply include:
 1. Earthworks, airfield construction, establishing construction sites, work on or close to road infrastructure (including construction of bridges), tunnelling and railhead construction and any directly associated activities.
 2. Railhead operation, operation of manufacturing/production facilities (for example, concrete batching, asphalt plants), logistics support activities for subsequent shifts, operation of worker car parks, bussing operations, welfare and office facility operations, security, essential plant maintenance, repairs and refuelling, abnormal load delivery, or those requiring a police escort (for example, delivery of prefabricated bridge beams or heavy plant).
 3. Work requiring possession of, or to avoid impact to, major transport infrastructure (road, rail, airport).
 4. Certain other specific construction activities for reasons of engineering practicability or to take advantage of daylight hours including, but not limited to, surveys (for example, for wildlife or engineering purposes), major concrete pours, piling/diaphragm wall works.
 5. Utilising periods of low traffic flow for activities such as abnormal loads/construction plant delivery, works within the highway or footpaths, works affecting operational railways, utility diversions.
 6. Where it is beneficial to minimise disruption to the daytime operations of third parties.

Exceptions to 24-hour day, seven days a week working

- 4.1.6 In preparation for the submission of the Development Consent Order (DCO) application, we will be considering our construction mitigation proposals (for example, bunds or buffer zones) to take account of 24-hour day, seven days a week working, particularly in relation to matters such as noise and lighting, and further to the ongoing environment assessment of effects to sensitive receptors arising from the Project.
- 4.1.7 As part of this exercise, we will consider locations and activities where 24-hour day, seven days a week working may cause unacceptable effects, and will propose reduced working hours/activity restrictions in the DCO application.
- 4.1.8 Potential timing restrictions on the use of specified equipment (if required) will be identified and included as part of the applications for consent from the relevant local authorities in line with the Construction Noise Consents Framework (CNCF – see **Section 11**) for the proposed construction works where necessary.
- 4.1.9 The approach set out above reflects the development of our proposals for the Project to date. In the DCO application, we will set out the working hours proposals, based on the principles set out above.

Short notice working

- 4.1.10 However, even in areas where non 24/7 working has been committed to, there may be isolated occasions where there is the potential for unforeseen/unplanned works outside agreed working hours (see **Section 11**) which, if not completed, would be unsafe or harmful to the works, staff, the public or the local environment, and that need to be completed or undertaken to secure and make safe construction operations. On these occasions, where required, the relevant local authority will be informed as soon as reasonably practicable of the reasons for the works and their likely duration. An example of the type of work envisaged include where unexpectedly poor ground conditions, encountered while excavating, require immediate stabilisation.

4.2 Construction site layout and good housekeeping

- 4.2.1 To mitigate against the likelihood of either an environmental incident or nuisance occurring during construction works, the following measures will be adopted, as appropriate:
 1. Prevention of discharge of site runoff to ditches, watercourses, drains, sewers or soakaways without agreement of the relevant authority.
 2. Maintenance of run-off and emission containment measures, such as wheel washing facilities.

3. Location of storage, machinery, equipment and temporary buildings to reduce environmental effects and potential accidents, where reasonably practicable, beyond flood risk areas.
4. Effective approaches to managing site staff arrivals and departures to minimise likelihood of staff congregating outside the site beyond the core working hours.
5. Containing and limiting visual intrusion of construction sites, where reasonably practicable.
6. Minimising visual intrusion into residential property from site accommodation and facilities, where reasonably practicable.
7. Identification and effective management of sensitive areas and buffer zones where no pollutants are to be stored or used.
8. Avoidance of the use of loudspeaker or other audio enhancement devices, with the exception of audio warnings for plant movements and other health and safety related uses.
9. Security methods, including closed circuit television (CCTV). This will include the positioning and direction of the view of security cameras or blocking software as a mechanism to prevent intrusion to residential properties.
10. Where reasonably practicable, enabling continued use of public rights of way (including diversions) for pedestrians, cyclists and equestrians affected by the Project, including reasonable adjustments to maintain or attain inclusive access.
11. The provision of sufficient and appropriate welfare facilities for staff.
12. Preventative pest and vermin control, including measures to avoid the accumulation of waste that may attract pests, appropriate storage and disposal of food waste and other attractants, and prompt treatment of any pest and vermin infestation. Where historic landfill sites, sewers or other structures are removed, works will be managed to prevent pests causing nuisance within surrounding communities. Heathrow will also implement appropriate pest monitoring and control within vacant properties acquired in connection with the Project. If infestation occurs, Heathrow will seek to eliminate the infestation promptly and prevent further occurrence.
13. Smoking and vaping areas at site offices/compounds or construction sites equipped with containers for smoking-related waste. These should not be located at the boundary of working areas or adjacent to any neighbouring land.

4.3 Site lighting

- 4.3.1 To enable the safety and security of the construction sites, site lighting and signage will be provided. The site lighting will provide the minimum illumination levels required to enable safe and secure construction sites.
- 4.3.2 Where necessary, and for security, health and safety, lighting to site boundaries, on-site construction routes, construction access routes and public diversion routes will

be provided with sufficient illumination levels to provide a safe route for the construction workforce and pedestrians. Measures will be adopted to enhance the perception of safety and security within and around the construction sites, and minimise, where reasonably practicable, casting shadows from the site on surrounding footpaths, walkways, roads, ecologically sensitive areas and amenity areas. Lighting will be combined with smart technology where reasonably practicable, such as automatic adjustments to lighting levels with motion sensors, to avoid unnecessary usage and to act as a security method.

- 4.3.3 Task-based lighting will be provided for specific tasks.
- 4.3.4 Environmental zone plans will be defined in the Environmental Management Plans (EMP) to be developed by the main contractors, to allow limitations on obtrusive light to be applied to the different zones.
- 4.3.5 Proposed lighting will comply with the following guidance documents:
 - 1. The Institute of Lighting Professionals' Guidance notes for the reduction of obtrusive light (GN01:2021)
 - 2. BS EN 12464-2: Lighting of workplaces – Outdoor (2024)
 - 3. BS 5489-1: Code of practice for the design of road lighting (2020)
 - 4. BS EN 13201-2 - Road lighting - Performance Requirements (2015)
- 4.3.6 Lighting will also be designed, positioned and directed to account for aesthetic and environmental conditions. As such, lighting will seek to avoid intrusion on adjacent buildings, public rights of way, open spaces, sensitive receptors, ecological receptors and structures used by other protected species, townscape/landscape and visual receptors 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. Further measures may include the use of warm colour temperature luminaires, full cut off fittings to eliminate upward light spill, and directional lighting focused on active work areas only.
- 4.3.7 Site lighting will be located and directed so that it will not cause undue interference with railway operations, highway users, airport operations or aircraft safety.

4.4 Security arrangements

- 4.4.1 Heathrow, in conjunction with its main contractors, will use a security industry recognised Security Risk Management (SRM) framework for the Project. The SRM framework will enable Heathrow to identify and assess threats, to manage the associated security risks, and to subsequently implement innovative and good practice security mitigation and controls across the Project.
- 4.4.2 The SRM framework will incorporate security arrangements to provide a holistic approach to security, including appropriate and commensurate security mitigation and controls. This may include barriers, access control systems, monitoring/alarm systems, plant immobilisation and the use of security officers/patrols.

- 4.4.3 Heathrow will liaise with relevant stakeholders such as local law enforcement agencies, the emergency services and the operational airport regarding security across the construction sites.

4.5 Fencing and screening

- 4.5.1 Heathrow will ensure that there are security measures that will include an adequate provision of appropriately well-designed and well-maintained perimeter security. This may take the form of fencing, barriers, ditches/bunds or hoarding of suitable strength and dimensions where necessary. These elements will be designed so that they consider landscape character, visual amenity, biodiversity and noise control in each location, while taking account of, site security and public safety needs and vulnerabilities.

4.6 Management of trees

Protection of trees

- 4.6.1 A specialist arboricultural consultant will be employed to oversee works relating to the protection of trees.
- 4.6.2 The main contractors will protect trees in line with the recommendations in BS5837: Trees in relation to design, demolition and construction (British Standard Institute (BSI), 2012). 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.
- 4.6.3 Measures to protect retained trees will be discussed with the relevant local authority and included in the main contractors' Environment Management Plan before implementation. These will include the following, as appropriate:
1. 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.
 2. Standard guidance for working within RPA, such as procedures to follow in the event significant roots are uncovered.
 3. Ground protection measures to prevent compression of soils within RPAs by vehicles and plant movement, storage of materials.
 4. Maintenance of vegetation buffer strips, where reasonably practicable.
 5. Processes for the selective removal of lower branches to reduce the risk of arboricultural damage by construction plant, machinery and vehicles.
- 4.6.4 All tree surgery operations conducted throughout the Project will comply with the recommendations in BS 3998: Tree work – Recommendations (2025), where appropriate.

Tree felling

- 4.6.5 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 Project. 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 will consider the presence of protected species, such as roosting bats and breeding birds, in line with the provisions set out in **Section 6.3**. The main contractors will be responsible for undertaking tree felling and will give appropriate consideration to the Forestry Commission's Tree felling: getting permission guidance (2025).
- 4.6.6 The selected arboricultural consultant would coordinate with the main contractors 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

- 4.6.7 The main contractors will undertake all works relating to the supply, storage, handling, planting and maintenance of new planting. This will be conducted in accordance with BS 8545: Trees from nursery to independence in the landscape – Code of practice (2026), BS 4428: Code of practice for general landscape operations (excluding hard surfaces) (1989), BS 3998: Tree Work Recommendations (2025) and other guidance such as the UK Forestry Standard, UKFS (2017) and the United Kingdom Woodland Assurance Standard, UKWAS (2024).
- 4.6.8 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, in line with BS 8545.

4.7 Risk of bird strike

- 4.7.1 Increased risk of bird strike will be taken into account during relevant construction works. In particular, the following conditions that can attract birds to the construction works will be managed appropriately by the main contractors:
1. Avoiding the pooling of water which may attract flocks of waterfowl
 2. Vegetation removal and stockpiling of removed vegetation
 3. Ground excavation
 4. Soil stockpiling which may attract foraging birds (due to exposed invertebrates etc.)

4.8 Unexploded ordnance

- 4.8.1 Owing to the potential presence of unexploded ordnance (UXO), an UXO response plan will be prepared and implemented in accordance with 'Unexploded ordnance, A guide for the construction industry' CIRIA C681, CIRIA (2009), which will set out how contractors should respond to any discovery of UXO. This will include notifications to the appropriate local authorities and emergency services, in accordance with the approach set out in **Section 4.14**.
- 4.8.2 Through site induction processes, toolbox talks and appropriate training, the main contractors will raise awareness of hazards associated with UXO. Relevant training and awareness would thereby support the development of appropriate actions in the event of a UXO discovery.
- 4.8.3 The UXO response plan will provide that the main contractors will keep a watching brief in areas identified as having the potential for UXO as part of the DCO application.
- 4.8.4 In the areas identified in the DCO application as having a moderate UXO hazard level, and above, clearance certification for borehole or pile locations will be carried out. Where deep excavations are required, and practical feasibility allows, investigation by non-intrusive geophysical methods will be undertaken. In this case, excavations will be supervised by an explosive ordnance clearance (EOC) operative.
- 4.8.5 In the identified areas with a low UXO hazard level, the main contractors will follow recommendations on risk mitigation detailed in CIRIA C681 (2009), as appropriate.

4.9 Management of site earthworks

- 4.9.1 The site earthworks will require the management of topsoil and natural subsoils as well as waste materials associated with existing historical and permitted landfills.
- 4.9.2 The earthworks approach has been developed to achieve, as far as reasonably practicable, a balanced earthworks solution within the site boundary by:
 - 1. Maximising the use of on-site materials to meet fill requirements where possible, thereby minimising the need to import materials.
 - 2. Reducing waste generation through the recovery, processing and reuse of suitable excavated materials where reasonably practicable and achievable within programme constraints.
 - 3. Accommodating unsuitable materials within the site, where feasible, through the creation of new landfill areas or the extension of existing landfills, reducing the need for off-site disposal and management.
- 4.9.3 The main contractors will handle excavated material that is acceptable to be used on the Project in an appropriate manner to ensure it remains of sufficient quality to be used as engineered fill for infilling works and structural embankments or environmental mitigation earthworks to reduce the environmental effects of the Project. All earthworks operations will be subject to the measures described in

section 5.4, the Materials Management Strategy (MMS) and the requirements of the relevant permitting regimes (as adapted for the purposes of Heathrow expansion) under which materials are being reused or disposed of.

- 4.9.4 The earthworks will, where reasonably practicable, be phased to limit the volume of soils requiring temporary stockpiling. Where stockpiles are required, these will be carefully designed to reduce visual intrusion and the spreading of dust while also accounting for the timing of land availability, construction efficiency and the need to maximise opportunities for re-use.
- 4.9.5 Landfill materials encountered during earthworks will be excavated, processed and classified to maximise the recovery of suitable materials for reuse within construction. Residual waste materials that cannot be recovered, but are suitable for on-site disposal, will be deposited within new landfill areas constructed as part of the Heathrow expansion. Waste materials classified as hazardous, or otherwise unsuitable for on-site disposal, will be removed to appropriately permitted off-site waste management facilities (see **Section 12**).

4.10 Discovery of asbestos

- 4.10.1 The contractor will develop approaches for asbestos management to be adopted in the event of discovery of asbestos in:
 - 1. Earthworks
 - 2. Roads and Highways (in line with National Highways requirements)
 - 3. Buildings
- 4.10.2 Heathrow/the main contractors will comply with the requirements of the Control of Asbestos Regulations 2012 (CAR-2012), the Approved Code of Practice (ACOP) Managing and working with asbestos and the HSE approved CL:AIRE guidance document Interpretation for Managing and working with Asbestos in Soil and Construction and Demolition Materials (CAR-SOIL™).
- 4.10.3 The potential for asbestos-containing materials (ACM) to be present in buildings/materials which will be demolished/dismantled as part of the construction works will be assessed through pre-construction hazardous materials surveys and, where identified, Heathrow/the main contractors will arrange for this to be removed by licenced contractors under appropriate controls and Duty of Care in line with CAR-2012 and the ACOP.

4.11 Worker Code of Conduct

- 4.11.1 All workers will be required to sign up to a Worker Code of Conduct that will be submitted as part of the DCO application, which will provide a shared set of principles that promote a positive, respectful and inclusive environment. These principles will be promoted throughout construction through regular communication and engagement activities.

- 4.11.2 The Code of Conduct will cover general behaviour expected of those involved in construction activities, including their interaction with local infrastructure and communities, in line with Heathrow's values.
- 4.11.3 Particular provisions 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.

4.12 Temporary workforce accommodation

- 4.12.1 The majority of the construction workforce is expected to be drawn from the existing construction labour market residing within a commutable distance from the works and so would not require accommodation to be provided.
- 4.12.2 Worker accommodation solutions will adopt a “plan, monitor and manage” approach to help deliver the required accommodation capacity in a controlled manner while avoiding undue pressure on existing provision and surrounding communities. Workers utilising temporary accommodation will be encouraged to use a centralised Heathrow Worker Accommodation Management Service, which will offer negotiated rates at both project appointed accommodation as well as local providers.
- 4.12.3 In addition, Heathrow will maintain accurate records to support monitoring and active management of worker distribution within local communities, allowing potential impacts to be identified and mitigated over time.
- 4.12.4 Further details of Heathrow's approach to worker accommodation will form part of the DCO application.

4.13 Welfare and occupational healthcare

- 4.13.1 Welfare and catering facilities, offices, parking for fleet vehicles, and storage depots are planned to be located within the boundary of the construction support sites (CSS).
- 4.13.2 To avoid negative impacts to occupational health and wellbeing, Heathrow will ensure that there is provision for access to occupational healthcare either on site or in appropriate locations. The occupational healthcare facilities will include a combination of statutory first aid support, occupational hygiene, health and safety training, health promotion campaigns aligned with the National Health Service (NHS), on-site healthcare providers (for example, advanced nurse practitioner) and a protocol on healthcare access. Occupational health nurses and doctors will be available, where required. The 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.
- 4.13.3 The occupational healthcare will be available to all construction workers during all working hours. Provision will be provided in a proportionate way that varies over time relative to demand. A contact number will be available for construction workers (including those using temporary accommodation) to direct them to the appropriate health/social care provider (for instance, promoting use of on-site healthcare in the

first instance for triaging except in an emergency). The level of use of health and social care services by construction workers will be monitored by Heathrow. This mechanism will enable visibility of the demand that the Project places on local healthcare. Appropriate engagement with the local integrated care system will be undertaken to allow for suitable and proportionate on-site care provision. 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 and the results of the on-going monitoring.

- 4.13.4 Construction workers will receive training on the health consequences of risk-taking behaviour and controlling communicable diseases.
- 4.13.5 Relevant Government guidance on working safely during epidemics/pandemics will be implemented to prevent the spread of infectious disease during construction.

4.14 Emergency preparedness and major accidents and disasters

Emergency preparedness

- 4.14.1 Heathrow will develop emergency arrangements for each construction and work site. Where reasonably practicable, these arrangements will be standardised across construction sites and will take account of the anticipated hazards relevant to the site-specific layout.
- 4.14.2 Emergency arrangements, including pollution incident controls and measures to be taken in the event of a fire and, where applicable, for major accidents and disasters, will be in place from the point of on-site mobilisation and included in the main contractors' EMPs. Emergency arrangements will be reviewed at least every two years, and in response to changes in circumstances or following incidents or near misses and adapted as required to take account of the changing nature of hazards as construction progresses.
- 4.14.3 The emergency arrangements will be developed in consultation with Heathrow operational airport, the emergency services, local authorities, local resilience fora, and other third parties as relevant. Consultation will also take account of the works on existing airports, and will be undertaken in accordance with established industry best practice.
- 4.14.4 The emergency arrangements will contain emergency contact details and the method for notifying statutory authorities. A suitable method for contacting the appropriate main contractors' representatives in a timely manner will also be included within the arrangements. See also **Section 2.11** of this draft Code of Construction Practice (CoCP).

Emergency access

- 4.14.5 Heathrow will ensure that there is sufficient provision for access and egress to the site in event of an emergency. Emergency access and egress routes will be designed and developed taking into account the types of emergencies that could occur and the extent and severity of their effects. Heathrow will engage with the relevant fire and rescue service(s) and other emergency services to identify their requirements to ensure that emergency vehicles can access/egress the site, if required in an emergency, without delay. The access points may alter over the duration of the construction works and will therefore be reviewed and updated as required.

4.15 Pollution prevention and incident control

- 4.15.1 Appropriate measures to control the risk of pollution from construction-related activities and severe weather events will be developed and implemented. A variety of measures will be introduced to mitigate against risk of pollution incidents. Such pollution incidents, if they occur, would also be remediated and where necessary reported to relevant parties in accordance with legislative requirements. Criteria will be defined for the implementation of relevant measures as well as processes to address any of the adverse findings from the monitoring procedures during and following completion of construction works.
- 4.15.2 Consideration of firewater run-off and any other discharges arising from emergency actions will also be considered in defining measures for pollution incidents.
- 4.15.3 The main contractors will adopt measures to manage the risk of pollution incidents, aligned with Heathrow's existing processes where appropriate, to ensure coordination and an effective response. Measures will be set out in the main contractors' EMPs and will include:
1. A statement of appropriate information which will remain on site and be provided immediately in the event of any incident such as a spillage or release of a potentially hazardous material.
 2. Maintenance of spill kits on site and use of drip trays for static plant and during refuelling of plant.
 3. Provision of impermeable surfacing and bunding in areas used for the storage of pollutant materials such as fuels, chemicals and oils to avoid significant releases.
 4. Bunds capable of retaining 110% of the total volume of materials stored within them, or 25% of the total tanks, if this is greater, in line with the Oil Storage Regulations.
 5. Consideration of the risks to pollutant materials storage sites from flooding and, where necessary, implementation of specific measures such as raised construction compounds.
 6. The provision of maps depicting the locations, address and contact details of local emergency service facilities, such as police stations, medical facilities, fire authorities and other appropriate authorities.

7. Up-to-date site drainage and flood risk management plans, which will remain on site.
 8. The provision of contact details for the relevant authorities, such as the Environment Agency, and those responsible on construction sites and within the main contractors' organisation for pollution incident response.
 9. The provision of contact details for those with a competent spill response company which can be contacted at short notice for an immediate response to incidences.
 10. The provision of pollution shut-off valves in compounds with positive drainage systems.
 11. Notification of relevant statutory bodies, environmental regulatory bodies, local authorities and local water and sewer providers of pollution incidents where required.
 12. Notification of relevant emergency services, authorities and personnel on the construction site.
- 4.15.4 Further details of pollution control measures are outlined in **Sections 9** and **14** of this draft CoCP.

4.16 Fire prevention and control

- 4.16.1 Before mobilisation and before finalising arrangements, fire risk will be assessed by a suitably competent and suitably qualified and experienced fire risk assessor.
- 4.16.2 The fire risk assessment will be reviewed at least every 2 years, and at appropriate milestones, including where there are significant changes to arrangements (for example, numbers and locations of people, equipment and materials present), in light of new information, or following relevant incidents or near miss events, and adapted as required to take account of the changing nature of hazards as construction progresses.
- 4.16.3 Heathrow will ensure that relevant plans account for the fire safety of all construction sites, associated welfare facilities and areas of hard standing for temporary accommodation.

4.17 Severe weather events

- 4.17.1 Due consideration will be paid to the impacts of severe weather events and related conditions during construction. The contractors will use a short to medium range weather forecasting service from the Met Office, or other meteorological data and weather forecast provider, to inform short to medium term programme management, environmental control and impact mitigation measures. In respect of areas of flood risk, the main contractors will register with the Environment Agency's flood warning service.

- 4.17.2 The main contractors will take measures to ensure the resilience of the proposed mitigation of impacts during severe weather events. A risk assessment of severe weather impacts on the construction process will be produced by the main contractors to inform mitigations. Any receptors and/or construction-related operations and activities potentially sensitive to severe weather events will be considered in the assessment.
- 4.17.3 The main contractors' EMS will consider measures deemed necessary and appropriate to manage severe weather events and will, as a minimum, cover training of personnel and prevention and monitoring arrangements.
- 4.17.4 Measures will be implemented to address extreme weather risks, including actions to prevent worker exhaustion in high temperatures (such as provision of protective clothing, sun protection, rest breaks and cooled water), design of temporary buildings to reduce summer overheating, and controls to manage high-wind impacts such as dust generation or damage to structures and construction plant.
- 4.17.5 As appropriate, construction method statements will also consider severe weather events where risks have been identified.

5. Air quality and odour

5.1 General provisions

- 5.1.1 The main contractors will manage dust, air pollution, plant-related emissions and odour during the construction works of the Project in accordance with best practicable means (BPM). This will include the following, as appropriate:
1. Reference to the general site management and good housekeeping procedures (relevant to limiting dust, odour and air pollution), as described in **Section 4** and Institute of Air Quality Management (IAQM) (2024) guidance, or as updated.
 2. Controls and measures to control or mitigate the impact of potential adverse effects caused by the construction works.
 3. Dust, odour and air pollution monitoring measures to be employed during construction of the Project.
 4. Construction Electricity Supply (CES) from grid electricity, where reasonably practicable, to reduce use of mobile generation plant.
 5. Taking account of publications on 'best practice' at the time of implementation. Current best practice includes:
 - a. Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their significance, IAQM (2024).
 - b. Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites, IAQM (2018).
 - c. The Control of Dust and Emissions during Construction and Demolition: GLA Supplementary Planning Guidance, Greater London Authority (2014).
 - d. Guidance on the Assessment of Mineral Dust Impacts for Planning, IAQM (2016).
 - e. Guidance on the Assessment of Odour for Planning, IAQM (2018).
 - f. Air Quality and Planning Guidance, London Councils (2007).
- 5.1.2 The Environmental Management Plans (EMP) will be used to document the approach to managing construction related dust and odour, focusing in particular on the risks arising from the excavation of the historic and authorised landfill sites beneath the construction area, the excavation of new borrow pits to extract aggregate minerals and the infilling of new landfills with waste materials generated from the earthworks (including landfill material).
- 5.1.3 Any general protocols documented in the management plans will be assessed and adapted for each individual site using a site-specific strategy and risk assessment.

Site management

- 5.1.4 The site layout will be planned to ensure that where reasonably practicable, machinery, plant and dust-causing activities are situated away from sensitive receptors.
- 5.1.5 Construction works will be carried out in accordance with Heathrow's requirements for working airside.
- 5.1.6 Relevant methods, such as the erection of hoardings or additional barriers along the site perimeter, will be implemented where appropriate to control the spread of dust to any sensitive buildings or other environmental receptors.

5.2 Construction plant and vehicle emissions

- 5.2.1 The main contractors will implement measures to reduce the emissions from construction plant and vehicles. Measures will include the following, as appropriate:
 1. The main contractors will operate all construction plant in line with the manufacturer's written guidelines and recommendations.
 2. The main contractors will inspect and maintain all construction plant in accordance with the manufacturer's written procedures as a minimum but also taking into account site-specific conditions and usage.
 3. All vehicles, plant, and other machinery will be switched off when not operational.
 4. Consideration will be given to the use of low emission plant and machinery, where reasonably practicable.
 5. Site access points will be designed and developed to manage the likelihood of queuing traffic.
 6. Construction plant and vehicle exhausts should be positioned away from the ground and should be positioned at a height that facilitates the appropriate dispersal of exhausts emissions.
 7. The movement of construction traffic around construction sites will be planned to ensure the effective and efficient operation of the site and construction of the Project and avoidance of unnecessary vehicle movements.
 8. Construction plant will be situated away from the site boundaries which are close to sensitive receptors (where reasonably practicable).
 9. Cutting and grinding operations will be carried out using techniques and equipment which incorporate adequate dust suppression measures where reasonably practicable.
 10. Mains electricity or battery powered equipment will be used to reduce the use of diesel or petrol-operated generators or equipment where reasonably practicable.
 11. Vehicle, plant, and equipment maintenance records will remain on site and these will be readily available upon request by Heathrow.

12. All Non-Road Mobile Machinery (NRMM) will use Ultra-Low Sulphur Diesel (ULSD) and will be required to meet Stage IV of EU Directive 97/68/EC, and Stage V from 1 January 2030 (giving regard to the GLA exemptions and retrofit policy).
13. To mitigate impacts on local air quality, Heathrow will require all construction vehicles during construction, to be powered by set minimum vehicle emission standard engines. Heavy Goods Vehicles (HGVs) will be required to comply with Euro VI emission standards. Petrol Light Duty Vehicles (LDVs) will be required to comply with Euro 4 emission standards and Diesel LDVs will be required to comply with Euro 6 emission standards.

5.3 Transportation, storage and handling of materials

- 5.3.1 Measures will be implemented to reduce pollution through the effective transportation and storage of materials. Measures include the following, as appropriate:
 1. Construction vehicles transporting materials within or outside construction sites will not be overloaded beyond outlined capacity.
 2. Construction vehicles delivering and/or removing materials or loads from construction sites via the highway will be required to be covered by a fixed cover or sheeting (which would be appropriately effective at preventing the spillage of materials and dust) or to use alternative dust suppression measures (for example, sprinklers, dry fog systems).
 3. Where reasonably practicable, stockpiles and mounds will be kept away from sensitive receptors, water sources and surface drains. Measures such as re-vegetated surfaces, hessian, mulches or topsoil will be considered to cover the exposed surface to mitigate the potential for windborne dust and particulates arising from the stockpiles.
 4. Stockpiles and mounds will be positioned at a suitable angle and will avoid sharp changes in shape to prevent material slippage.
 5. Appropriate dust suppression measures (for example, covering, fencing, watering, seeding) will be employed where material stockpiles have the potential to generate dust through wind whipping (See **Section 1** and **Section 14.9** of this draft Code of Construction Practice (CoCP)).
 6. Weather conditions (for example, wind, rain, dry periods, low temperatures) will be considered when planning the handling and transportation of materials.
 7. Where stockpiles pose a heightened threat of dust or air pollution, surfaces will be stabilised or covered with appropriate sheeting.
 8. Enclosed or shield areas will be provided when mixing significant quantities of concrete or bentonite slurries.

9. Sufficient storage space will be provided for fine, dry material within buildings or enclosures.
10. The quantity of handling operations for materials and resources will be kept to a minimum practicable level, including the optimisation of materials movements to minimise double handling of materials where reasonably practicable.
11. 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.
12. The mixing of grout or cement-based materials will be carried out using a process suitable for the prevention of dust emissions.

5.4 Excavations and earthworks activities

- 5.4.1 Dust pollution from excavations and earthworks activities will be limited using the following measures, as appropriate:
 1. 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, subject to the requirements of archaeological investigations.
 2. Drop heights from excavators to vehicles involved in the transport of excavated material will be kept to the reasonably practicable minimum.
 3. Materials will be compacted after deposition, except for topsoil and subsoil on land to be restored for agriculture, forestry, landscaping and wildlife habitats.
 4. Soil spreading, seeding, planting or sealing of completed earthworks will be undertaken as soon as reasonably practicable following completion of the earthworks.

5.5 On-site construction routes

- 5.5.1 On-site construction traffic routes will be provided for construction vehicles to use and access construction work areas safely. The construction and maintenance of on-site construction traffic routes will include, but are not limited to, the following measures, as appropriate:
 1. Planning routes so that they are located as far as reasonably practicable from receptors.
 2. The maintenance of on-site construction traffic routes to limit dust emissions as far as reasonably achievable, considering the intended level of traffic movements by the main contractors.
 3. The regular and timely inspection of on-site construction traffic routes, essential for monitoring the need for repair and recovery including maintenance of a smooth-running surface and timely repair of potholes.

4. The provision of areas of hard surfacing and hard standing at the approach to site access and egress points for use by waiting construction vehicles.
5. The reuse of on-site construction traffic route materials where the locations of on-site construction traffic routes change throughout the construction process.
6. The enforcement of speed limits on on-site construction traffic routes for safety reasons and to suppress dust emissions.
7. Methods to clean and suppress dust on on-site construction traffic routes and in designated vehicle waiting areas, such as watering. The frequency of cleaning will be suitable for purposes of suppressing dust emissions from site boundaries.

5.6 Construction access routes

- 5.6.1 To reduce the effects of construction traffic utilising the public highway, Construction Transport Management Plans (CTMP) will be prepared, as described in **Section 13**.
- 5.6.2 Specific air quality measures included in the CTMPs will include where reasonably practicable:
 1. Priority given to transport of materials by rail.
 2. Priority given to the movement of materials by conveyor within and between construction sites where reasonably practicable (subject to the provisions in **Section 5.8**).
 3. Selection of designated routes to consider areas of poor air quality.
 4. Selection of designated routes that minimise the distance travelled on public roads.
 5. Consolidation of freight to reduce the number of movements.
 6. Provision of HGV parking areas to reduce queuing or waiting on the public highway.
 7. Timing of deliveries and movements to manage potential congestion impacts.
 8. Monitoring and enforcement to ensure that contractors use designated routes only.

5.7 Demolition activities

- 5.7.1 Demolition activities may cause dust pollution, and this will be controlled through the adoption of appropriate mitigation measures. Mitigation measures include the following as appropriate:
 1. Effectively covering and securing skips.
 2. Stripping building interiors before demolition.
 3. Enclosing or shielding rubble chutes and/or using water to suppress dust emissions from equipment.

4. Spraying buildings and/or structures to be demolished with water or screening as necessary, before and during demolition.
5. Programming activities that are close to schools or routes to school to avoid times where children are likely to be nearby.
6. Prohibiting the burning of material on site.
7. Avoiding the prolonged storage of waste materials on site, and compliance with measures developed further to the CoCP in relation to material storage.
8. The removal of waste from construction sites will comply with the requirements outlined with measures developed further to the CoCP in relation to the transportation of materials.

5.8 Conveying, processing, crushing, cutting and grinding activities

- 5.8.1 Dust emissions associated with processing and crushing rock (for use as aggregate or other materials within the works), and for any conveying of material, processing, crushing, cutting and grinding, and liming will be limited. This will be achieved using the following measures, as appropriate (to be determined in relation to distance to receptors):
1. Drop heights from conveyors, excavators, and crushing plant to stockpiles will be kept to the reasonably practicable minimum.
 2. The enclosure of conveyer transfer points, and where appropriate damping of conveyor loads.
 3. Enclosed conveyers where crossing roads, other public areas and property temporarily possessed or otherwise not owned by Heathrow.
 4. Suitable temporary enclosures for cutting and grinding activities.
 5. The application of water sprays to damp down in dry weather.

5.9 Odour

- 5.9.1 As excavated materials could contain volatiles that may give rise to odour impacts, the following measures will be implemented where reasonably practicable:
1. Landfill waste will be excavated, processed and transported directly to new landfill sites.
 2. Early identification of materials that could generate odour.
 3. Segregation of potentially odour forming materials into separate stockpiles.
 4. Taking measures to control the emission of any potential odours forming from contaminated or non-contaminated materials (for example, covering up/tenting any potentially odorous materials uncovered where appropriate).

5. Locating stockpiles of potentially odour forming materials as far away from residential receptors as reasonably practicable.
6. Careful programming to limit the duration of work with potential to generate odour nuisance.
7. Removing potentially odour forming material sources in a timely fashion to limit the formation of odours.
8. Where odour forming materials are encountered and cannot be removed or avoided, spraying with an approved oxidising agent will be undertaken if appropriate to control the potential for release of odour.
9. Use of an odour guard or masking agents will also be considered in situations where the risk of odour release cannot be eliminated or controlled.

5.10 Monitoring

- 5.10.1 Inspection and monitoring processes will be implemented to assess the effectiveness of mitigation measures to reduce odour, dust and air pollutant emissions, as set out below.

Dust and particulate monitoring

- 5.10.2 For each construction site, or cluster of construction sites, a dust risk assessment of construction activities will be undertaken. The risk assessment will adopt best practice methodology, drawing on IAQM (2024) and the Mayor of London's Supplementary Planning Guidance to ascertain the risk of each site to ensure that the appropriate monitoring is employed.
- 5.10.3 Construction sites will be categorised as either low, medium or high risk, in accordance with IAQM guidance (2024), within the dust risk assessment. The categorisation of each construction site will dictate the level of monitoring. Visual inspections and maintenance of logs of activities and complaints, for instance, will suffice for the management of low-risk sites; whereas at medium and high-risk sites, the monitoring of dust and particulate matter will be undertaken through the use of a combination of deposition monitors and continuous automatic monitoring instruments in adherence with current best practice guidance. Monitoring will commence in advance of construction to establish a baseline against which changes can be considered.
- 5.10.4 The monitoring process will be developed in accordance with the Mayor of London's Supplementary Planning Guidance on the Control of Dust and Emissions from Construction and Demolition (2014) and in consultation with all relevant local authorities.

- 5.10.5 At all sites, as a minimum, the following measures will be carried out:
1. Site inspections covering the establishment of operation of the construction site.
 2. Visual assessment of activities that may be generating particulate matter and air pollution in areas adjacent to the construction site.
 3. Inspection of the maintenance schedules for construction vehicles, plant and machinery.
 4. Inspection processes relating to the level of traffic movements, use and condition of on-site construction traffic routes.
- 5.10.6 For the continuous automatic monitoring of particulate matter (PM10), instruments will be used that digitally send an alarm to the relevant person. Trigger levels will be set, above which investigation will be required. For automatic PM10 measurement, this trigger level will be 190µg/m³ measured as a one hour mean in accordance with IAQM (2018) guidance. The alarm will be sent when the trigger level is breached.
- 5.10.7 If the trigger level is breached, the following on-site process will be adhered to:
1. The contractor will investigate construction site activities, as soon as reasonably achievable, to determine 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 set out in the main contractors' EMPs.
 2. Identify the source of exceedance and put in place remedial actions to address the pollution incidents where reasonably practicable. Any identified causes of threshold exceedance will be mitigated against, and relevant actions will be recorded and reported to the relevant authority as soon as reasonably practicable.
 3. If the source of the incident cannot be identified as originating from construction site operations, the outcome of the investigation and the reasons for this conclusion will be recorded and reported to the relevant authorities, where required.
- 5.10.8 On request and where applicable, the main contractors will make available monitoring data and associated reports with the relevant authorities.

Monitoring of pollutants around construction traffic routes

- 5.10.9 Additional air quality monitoring and any appropriate remedial actions along the defined construction traffic routes will be identified and discussed with the local authorities as appropriate, throughout the duration of the construction works. Considerations will include the location of the existing monitoring sites operated by the local authority or Heathrow, sensitive receptors in the area, baseline air quality and the likely construction related impacts of the Project. The need for any additional monitoring sites will also be considered and discussed with local authorities.

Odour monitoring

5.10.10 Where any potentially odorous material is being uncovered, or extracted, emissions of odour will be managed in accordance with the Guidance on the assessment of odour for planning, IAQM (2018). The management regime will include suitable monitoring as determined using this guidance.

Reporting

5.10.11 Quarterly reports of dust and air quality monitoring data will be prepared. The quarterly reports will include a summary of the construction activities occurring, any complaints received, the data recorded over the monitoring period broken down into appropriate time periods, any periods in exceedance of the agreed trigger levels and the results of any investigations and identified source. Where the works have been found to be the source of an exceedance, the reports will set out any action taken to resolve the issue and to prevent a re-occurrence.

6. Biodiversity

6.1 General provisions

- 6.1.1 Appropriate measures will be adopted and set out in the Environmental Management Plans (EMP) to protect the biodiversity of the area in which the Project will be constructed, with special attention to specified areas of ecological value and relevant Zone of Influence (Zol), as identified within the Environmental Statement (ES).
- 6.1.2 For the purposes of this draft Code of Construction Practice (CoCP), the Zol includes areas beyond the Development Consent Order (DCO) limits that could reasonably be affected by construction activities (including, as relevant: hydrological catchments/drainage pathways; groundwater and surface water receptors; airborne pathways including dust; noise/vibration propagation; lighting spill; and construction traffic routes).
- 6.1.3 Impacts from construction on ecological resources, including the following, will be appropriately managed:
 - 1. Designated sites including European sites designated for nature conservation, Ramsar sites, Sites of Special Scientific Interest (SSSIs), Local Nature Reserves (LNR) and Local Wildlife Sites (LWS) (such as non-statutory sites designated for nature conservation).
 - 2. Legally protected and conservation notable species.
 - 3. Other habitats and features of ecological importance (including ancient woodlands, linear/ecological corridors and surface and groundwater bodies).
 - 4. All other habitats will be protected in line with a level of protection proportionate to ecological value and sensitivity.
- 6.1.4 Within the DCO limits, habitat loss will be minimised and where reasonably practicable, biodiversity will be protected and enhanced.
- 6.1.5 Where habitat is removed, damaged or destroyed, it will be mitigated or compensated for, pursuant to the requirements of the DCO and licensing.
- 6.1.6 The main contractors will need to account for the requirements in this draft CoCP relating to dust and air quality, noise and vibration, lighting, protection from ground contamination and of the water environment, respectively to protect ecologically important habitats and species both within and adjacent to construction sites.
- 6.1.7 Where appropriate and in line with the conclusions of the ES, legislative requirements and engagement undertaken, pre-construction surveys will be undertaken to determine the status and distribution of protected species, including their current status and distribution. Exclusion zones will be maintained in line with good practice and the context of the construction works to be undertaken.

6.2 Ecological management measures

- 6.2.1 Management measures for potential ecological impacts are addressed in other sections of this document and are not repeated here. These include measures relating to:
1. Management of trees (see **Section 4**)
 2. Protection of retained habitat (see **Section 10**)
 3. Control of dust (see **Section 5**)
 4. Control of water quality and flow (see **Section 14**)
 5. Measures to avoid and/or manage the effects of ground contamination (see **Section 9**)
 6. Control of noise and vibration (see **Section 11**)
 7. Lighting (see **Section 4**)
 8. Measures to manage the effects of major accidents (see **Section 4**)
- 6.2.2 In addition to the measures described in other sections, management of construction activities will include, where reasonably practicable:
1. The main contractor will provide ecological management/supervision by an Ecological Clerk of Works (ECoW) who would provide for sufficient specialist coverage (for example, bats, great crested newts, fish, invasive species, ornithology) as necessary considering the activities proposed and the baseline affected.
 2. Relocation or translocation of species, soils and plant material, where this is identified as necessary in accordance with the ES.
 3. Effective ecological management/supervision of the river diversion works by an ECoW, considering potential effects on habitats, fish and all aquatic fauna as appropriate.
 4. Reinstatement of any areas of temporary habitat loss and any arrangements necessary for displaced species to maintain long-term conservation status of those species concerned.
 5. Restoration and replacement planting (for example, trees, hedgerows, scrub and grassland) for any retained habitats adversely affected during construction.
 6. Use of by-products of construction to enhance mitigation provision (for instance, use of felled timber to provide dead wood habitat).
- 6.2.3 Measures will be implemented to ensure that biodiversity is protected. This will include, where reasonably practicable, the following:
1. The careful siting of compounds, materials storage areas, and on-site construction traffic routes to avoid potential impacts on habitats and protected species, including as a result of accidents.

2. Avoiding using lighting, generators, and other noisy equipment, after working hours in areas where it has been determined that due to ecological sensitivity, working methods should be restricted (see **Section 4.1**). Lighting proposals would also be developed taking account of Guidance Note 08/23: Bats and Artificial Lighting, Institute of Lighting Professionals and Bat Conservation Trust (2023) and the CIEEM UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Reason, P.F. and Wray, S. (2025).
3. Careful and regular management of soil storage areas to maximise their future value in landscape planting and to discourage badgers and other burrowing animals from colonising them in the interim stages.
4. Reducing the impact of habitat severance by maintaining habitat features intact as long as possible and providing temporary and/or permanent replacement features (for example, mammal ledges, amphibian fencing with safe crossing points, temporary culverts/bridges, habitat stepping stones) early in the construction programme.
5. Maintaining habitat connectivity.

6.3 Conservation of legally protected and notable species

- 6.3.1 The requirements of protected species licences and accompanying method statements that are necessary for construction of the Project will be complied with. Licences and accompanying method statements may include the following, as appropriate:
1. European Protected Species (EPS) derogation licences – in respect of any works likely to require a derogation license under the Conservation of Habitats and Species Regulations (2017), as amended. Species potentially requiring a derogation licence include the great crested newt, otter, bats and dormouse. Mitigation licences under the Wildlife and Countryside Act 1981 (as amended) may also be required, including for water vole, where relevant.
 2. Badger development licences – in respect of any works likely to result in the disturbance, damage or destruction of a badger sett.
 3. Breeding bird method statement – a document that details how breeding birds and their nests will be safeguarded from damage or disturbance during construction.
 4. Reptile method statement – a document that details how the four common species of reptile (as applicable) will be safeguarded from killing and injury during construction.

- 6.3.2 The programme for the construction works, post the translocation of relevant species, will consider best practice requirements relating to seasonal constraints for the protection of all protected and notable species and habitats, such as breeding birds, bat roosts, habitats used by reptiles and great crested newt breeding ponds.
- 6.3.3 Vegetation will be removed in a staged manner, during the period when birds are not typically breeding (September through to mid-March). Where this is not reasonably practicable, vegetation removal will be undertaken under supervision and halted if active nests are present. Exceptions may occur where a competent specialist is able to undertake a thorough inspection of the vegetation for active bird's nests before clearance. Once the inspection is completed, the competent ecologist will need to provide confirmation that no birds, their eggs, or their nests will be harmed or disturbed while breeding and/or that there are suitable measures put in place to protect nesting birds on the site. Consideration would also be given to impacts on nesting birds in close proximity to the site, based on advice provided by a suitably qualified Ecological Clerk of Works (ECoW).
- 6.3.4 The ECoW will be responsible for dealing with all instances relating to biodiversity on and around site, including the discovery or suspicion that protected or other species may be affected.
- 6.3.5 Any ecological management measures will be developed and implemented in accordance with the main contractor's EMPs. This will include the scope of induction and targeted toolbox talks to be delivered to onsite personnel (protected species, pollution prevention, invasive non-native species, biosecurity, reporting and stop-work process).

6.4 Control of invasive and non-native species

- 6.4.1 Appropriate measures for the treatment/control of invasive non-native species (both plants and animals) and harmful weeds will be implemented.
- 6.4.2 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 Managing invasive non-native plants, Environment Agency (2010) guidance, will also be referenced in determining the strategy.
- 6.4.3 Project-wide measures will be implemented to promote biosecurity and minimise the risk that invasive non-native species and diseases are spread as a consequence of the Project. Biosecurity measures will address not only invasive non-native species but also pathogens and diseases (for example, plant and aquatic diseases), including cleaning protocols for plant/equipment, controlled sourcing of planting material, and restrictions on water transfers where relevant.
- 6.4.4 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.

- 6.4.5 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.

6.5 Monitoring

- 6.5.1 Heathrow/the main contractors will engage with relevant authorities in relation to the monitoring and survey works to be undertaken before construction. The survey works will be planned to provide sufficient baseline data to inform the development of appropriate construction programmes, methods and mitigation measures. Where appropriate, the monitoring and survey works will be used to update the baseline ecological and arboricultural conditions to inform the management measures to be brought forward.
- 6.5.2 Suitable monitoring will be undertaken throughout the construction works. This will include regular ecological inspections (frequency defined by risk), with findings recorded, actions assigned, and close-out tracked.

7. Carbon and greenhouse gases

7.1 General provisions

- 7.1.1 Construction related greenhouse gas emissions (hereinafter referred to as ‘carbon’) will be managed through a series of mitigation measures which have been grouped into three distinct activities: construction material selection, site construction works, and site logistics and transport.

Construction material selection

- 7.1.2 The selection and procurement of construction materials will consider cradle-to-gate carbon (that is manufacturing emissions) of construction material, following the Institute of Sustainability and Environmental Professionals (ISEP) Greenhouse Gas (GHG) Management Hierarchy (Eliminate, Reduce, Substitute, Remove).
- 7.1.3 Related mitigation measures may include, where reasonably practicable, the following:
1. Consideration of carbon impacts when selecting construction materials and products including the use of low carbon alternatives and maintenance and replacement frequency.
 2. Use of secondary or recycled construction materials, where use of such materials results in carbon reductions (see **Section 12** for more detail on resource efficiency considerations).
 3. Appropriate management and reuse of excavated material throughout construction works, to reduce release of carbon (see **Section 12.4** for more detail on the management of construction waste and excavated materials).
 4. Sourcing of construction materials and products locally to where they are used.

Site construction works

- 7.1.4 An Outline Carbon Management Plan will be prepared for the Development Consent Order (DCO) application, which will set out how carbon emissions will be managed throughout construction, with a requirement for detailed Carbon Management Plans to be brought forward and implemented by contractors.
- 7.1.5 Carbon emissions arising on site will be reduced through careful selection of plant and construction activity approaches. Related mitigation measures may include, where reasonably practicable, the following:
1. Use of carbon efficient plant and the application of management measures to limit carbon emissions, such as use of renewable/zero or low carbon fuels for construction vehicles, plant and machinery (see also **Section 12**).
 2. Avoidance of oversized generators for plant and temporary buildings.
 3. Use of energy efficient light fittings for temporary and permanent site lighting.

4. Avoiding unnecessary lighting by providing lighting only to recommended lux levels together with appropriate controls to ensure lights are off or dimmed when not required.
5. Monitoring of fuel use/compressed air leaks.
6. Construction Electricity Supply (CES) from grid electricity to reduce use of mobile diesel energy generation (see **Sections 5.1** and **5.3**).
7. Provision of suitable levels of thermal insulation to the appropriate areas of site accommodation to reduce energy demand for heating.

Site logistics and transport

- 7.1.6 Site logistics and transport focuses on the efficient movement of materials, workers, and waste to and from construction sites. Related mitigation measures may include, where reasonably practicable, the following:
1. Enhancement of the efficiency of materials transport through the use of a Construction Transport Management Plan (CTMP) (see **Section 13.3**)
 2. Promotion of modes of sustainable transport in line with the Construction Workforce Travel Plan (CWTP) (see **Section 13**)
 3. Driver/plant use training
 4. Use of logistics hubs
 5. Use of rail freight to deliver materials to and from site
 6. Consideration of alternative, low-carbon transport modes and water-based transport

7.2 Monitoring

- 7.2.1 In order to track performance, a carbon emissions inventory will be developed and regularly updated.

8. Historic environment

8.1 General provisions

- 8.1.1 All construction works will be managed in accordance with industry best practice and guidance adopting, as appropriate, the standards and guidance produced by Historic England, the Chartered Institute for Archaeologists and the Institute of Historic Building Conservation. This will include, but is not limited to, measures in relation to statutory designated heritage assets (for example, scheduled monuments, listed buildings, registered parks and gardens and conservation areas) and non-designated heritage assets (for example, archaeological and paleo-environmental remains, including geological deposits that may contain evidence of the human past, historic landscapes and locally designated assets).
- 8.1.2 A number of broad management measures for the historic environment will be undertaken. These will include the following, as appropriate:
 - 1. Provision of locations and descriptions of all known historic environment assets within and adjacent to construction sites where these have been identified in the Environmental Statement (ES) or subsequently, to identify those heritage assets with potential to be impacted during construction (for instance, due to dust, noise, vibration, light and/or accidental strike).
 - 2. Preparation of a schedule of historic environment investigation, surveys and protective arrangements to be implemented before and during construction works.
- 8.1.3 All interventions, recording, reporting, analysis, dissemination and archiving will be carried out by an appropriately qualified and demonstrably experienced archaeological contractor, or equivalent specialist organisation.

8.2 Historic Environment Management Strategy (HEMS)

- 8.2.1 The Outline Historic Environment Management Strategy (HEMS), to be submitted in the Development Consent Order (DCO) application, will cover the entirety of the Project, including all historic environment investigative works (from evaluation to excavation), historic building/landscape recording and through analysis, publication and museum archiving, as well as all aspects of construction processes that interface with historic environment receptors described in the Environmental Statement (ES). The HEMS describes the principles, standards, approaches and techniques to be employed for the entirety of the Project for the protective management of the historic environment, including any associated mitigation works. Detailed HEMS will then be brought forward by contractors, in substantial accordance with the Outline strategy.
- 8.2.2 The Outline HEMS will define the engagement to be undertaken with local authorities, Historic England and the Greater London Archaeology Advisory Service (GLAAS) on the Project for historic environment works. Further detail describing location specific integrated historic environment investigation, construction working

processes and site arrangements, will be provided as supplementary Site-Specific Written Schemes of Investigation (SSWSI) to be developed in accordance with the HEMS (see **Section 8.3**).

- 8.2.3 The HEMS will also set out control processes and procedures to be adopted by the main contractors. These include, the following, as appropriate:
1. Construction control processes to minimise potential risks from construction activities that might result in settlement or structural damage. This may include the prior installation of monitoring equipment.
 2. Procedures for:
 - a. Archaeological monitoring and recording (also known as an archaeological watching brief) during groundworks.
 - b. The discovery of unexpected assets.
 - c. Instances where there are sensitive assets close to construction activities (for example, a listed building adjacent to a construction traffic route), the review of main contractors' method statements to confirm that risk of damage has been adequately mitigated, in accordance with the measures outlined in this Code of Construction Practice (CoCP) and the HEMS.
 - d. Basic protective measures to be implemented for heritage assets retained within the land required for construction, including temporary support, hoardings, barriers, screening and buffer zones around heritage assets and archaeological mitigation areas within and adjacent to the site.
 - e. Security and condition monitoring arrangements for historic buildings not in use.
 - f. Installation with asset owner approval of non-intrusive temporary protection/supports or monitoring devices to manage impacts to the fabric of the historic building structures.
 - g. Secure repository for recording and storage of portable items removed from buildings that are to be returned to original locations at the earliest safe and secure opportunity.
- 8.2.4 The HEMS will furthermore provide guidance on construction working processes and arrangements related to specific integrated historic environment protection measures, such as:
1. Any preventative intrusive works to specified historic or listed buildings, whether structural support or work to temporarily stop for protection.
 2. Any remedial action to listed or historic buildings necessary to ensure the preservation of the building.
 3. Any requirement to remove and reinstate structures of heritage and significance.
 4. Works to listed or historic buildings that require the removal of fabrics, such as roof coverings, windows or floor surfaces.

5. Measures to retain the character of conservation areas and the setting of listed buildings, including boundary walls, trees, gardens, roads and pavement surfaces, and street furniture. Items that contribute positively to character to be protected on site, and traffic or plant movement directed away from such features.

8.3 Written Scheme of Investigation (WSI)

- 8.3.1 The majority of the historic environment mitigation works will be undertaken in advance of construction, and the scope of this early archaeological work will be set out in the HEMS. The HEMS will nevertheless include strategies for mitigation works that may be required during construction. For example, this might be the case where impacts to archaeological remains of lesser significance need to be mitigated and where it was not warranted or feasible to carry out the work pre-construction. Such work would be undertaken during preliminary groundworks in the form of archaeological monitoring and recording (also known as a watching brief).
- 8.3.2 Further detail, describing location specific integrated historic environment investigation and construction working processes and site arrangements, will be provided as Site-Specific Written Schemes of Investigation (SSWSIs) to be developed in accordance with the HEMS. The HEMS will provide a structure for consulting and agreeing changes to archaeological strategies, where necessary, and a means for recording and agreeing such changes.
- 8.3.3 SSWSIs will be prepared, where required, to address clearly defined construction activities or locations where archaeological monitoring or further investigation is necessary. Each SSWSI will be in substantial accordance with the requirements set out in the HEMS.

8.4 Metal detectors

- 8.4.1 During construction site preparation and works the use of metal detectors will be prohibited within areas of identified and/or defined archaeological interest. The exception to this is deployment by archaeological specialists or other appointed persons in the execution of their activities. The use and purpose of metal detectors on site will be detailed in the Outline HEMS.

8.5 Human remains

- 8.5.1 In the unlikely event of the identification and discovery of human remains during archaeological works as part of construction works, this will be appropriately recorded in accordance with the terms of SSWSIs developed pursuant to the Outline HEMS.
- 8.5.2 The removal of identified human remains will be carried out in accordance with the provisions of the DCO and Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England (second edition), Advisory Panel on the Archaeology of Burials in England (2017).

8.6 Measures in the event of unexpected discoveries of national significance

- 8.6.1 In the event of the discovery of unexpected cultural heritage assets of potential national significance during construction works, a process for managing the assets will be agreed and implemented together with the local authorities, Historic England and GLAAS, in line with the Outline HEMS. Mitigation may include, the following, as appropriate:
1. Investigation and assessment of all discoveries to determine their significance if this cannot be determined from the asset as found.
 2. Assessment of the potential project impacts to inform design of appropriate mitigation measures for the historic environment.
 3. Preparation of a SSWSI for each stage of archaeological work required prepared by the archaeological contractor.
 4. Excavation, recording and reporting on any discoveries.
 5. Recording and implementing measures to preserve any discoveries in situ, if necessary.

8.7 Monitoring

- 8.7.1 Heathrow will consult with the relevant authorities, including GLAAS and relevant county archaeology and conservation advisors to local authorities, to ensure appropriate monitoring of mitigation (for instance, in relation to air pollution, noise and noise induced vibration) and historic environment management works is put in place, in line with the approach set out in the Outline HEMS that will be engaged in the development of the DCO application.
- 8.7.2 Measures for post-fieldwork reporting by the archaeological contractor will be developed as part of the HEMS including, as appropriate, interim reporting and post-excavation assessment.

9. Land quality

9.1 General provisions – Mitigation of potential impacts

- 9.1.1 Measures will be implemented by the main contractors to assess and control potential risks to human health and controlled waters. Measures could include pathway management techniques such as cut-off walls or capping layers.
- 9.1.2 The presence of ground gas and/or vapours will also be considered by the main contractors for any work in locations where there may be confined spaces, such as during excavations. In the event of the identification of significant ground gas issues, appropriate monitoring will be carried out, and where necessary, relevant ground gas protection measures will be provided by the main contractors. Any work in locations where there may be confined spaces will be subject to specific risk assessment and controls in line with current legislation and HSE guidance on confined space working.
- 9.1.3 Groundwater levels will be monitored and assessed, where appropriate, by the main contractors. The main contractors will also consider land stability and as such will undertake structural or dilapidation surveys of buildings or structures adjacent to the works where there may be potential settlement risks or a risk of lateral ground movements which may damage structures.
- 9.1.4 The main contractors will also assess land stability issues associated with the excavation of borrow pits and other structures including the effects of dewatering which have the potential to draw potentially contaminated groundwater through the underlying aquifer.

9.2 Site ground investigation

- 9.2.1 Where necessary, the main contractors may be required to carry out further targeted ground investigation and monitoring to accommodate changes in design, to further assess contamination conditions or monitor construction activities. Where required, this investigation will be undertaken in accordance with UK best practice, including BS 5930:1999+A2: Code of practice for site investigations (1999) and BS 10175:2011+A2:2017: Investigation of potentially contaminated sites code of practice (2017).
- 9.2.2 Where unacceptable risks are identified through the ground investigation, and remediation is undertaken, this will be documented to provide a formal record and to evidence that appropriate assessment, remediation and verification has been undertaken in line with Land Contamination: Risk Management (LCRM), Environment Agency (2025).
- 9.2.3 Management of risks from unexploded ordnance will be undertaken as detailed in **Section 4**.

- 9.2.4 A suite of remedial options will be developed to manage unacceptable risks to human health, controlled waters and other property. Where remediation as part of the Project is necessary, an options appraisal will be undertaken to select the most appropriate remediation technique to be employed from the suite of options. This suite of options and selection of appropriate technique will take into account the results of the ongoing ground investigation and site-wide risk assessment process and be based on multi-criteria attribute analysis that considers environmental, resource, social and economic factors in accordance with Sustainable Remediation Forum UK: A Framework for Assessing the Sustainability of Soil and Groundwater Remediation (Sustainable Remediation Forum UK, 2010). The selected remediation technique will then be developed into a remediation strategy, which will be consulted on with the relevant regulatory authorities.

9.3 Construction on or adjacent to contaminated land

- 9.3.1 Suitable measures will be implemented for construction works on or adjacent to land potentially affected by contamination including the following, as appropriate:
1. Waste water generated by vehicle washing, wheel washes, excess surface water, dewatering of underground structures and tanks or lowering groundwater for geotechnical purposes will be collected, suitably stored and disposed of.
 2. Redundant services near potentially contaminated areas will be either removed or isolated and sealed to avoid creating potential migration pathways for contamination.
 3. Material identified as or anticipated to be contaminated will be tested before reuse, recovery, or disposal in line with the Materials Management Strategy (MMS). Stockpiles will be separated and labelled subject to the source of the material and the nature of the contamination. Stockpiles will be placed on a low permeability liner, suitably protected from damage by earthmoving plant, to prevent leaching of contaminants into underlying groundwater and surface watercourses. Proposed known/suspected contamination stockpile areas will be thoroughly examined before and after use to highlight the absence of cross-contamination. Stockpiles will be managed as detailed in **Section 5.3** to manage risks associated with the generation of dust.
 4. Earthworks materials deemed unacceptable for direct reuse will, if achievable, be treated at a soil treatment facility before reuse.
 5. Pre-classification testing of soils will be carried out before the reuse of site-won materials. Pre-classification test data will be assessed against suitably developed criteria for the protection of human health and controlled waters receptors to ensure soils are suitable for the proposed reuse as set out in the MMS.
 6. All imported fill will meet the soil and soil leachate acceptance criteria derived in the detailed design stage and will be subject to a detailed testing regime before acceptance on site.

7. Piled foundations and ground improvement works located on existing landfill sites or potential or known areas of land contamination will require a site-specific environmental risk assessment. The main contractors will adhere to appropriate guidance, including the Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination, CL:AIRE (2025), Land Contamination Risk Management (LCRM), EA (2020) and the Groundwater protection guidance, EA (2017).
8. Within areas of known or predicted contamination, buried services such as highways drainage, utilities and telecom ducts should be designed to reduce the risks from the ingress of mobile and aggressive contaminants. In the case of drainage runs, the infiltration of surface water into the underlying contaminated ground would be minimised and clean or lined service corridors installed to provide a suitable barrier to potential migrating ground gases adjacent to known/potential sources.
9. Any earthworks material used for the Project (for example, fill materials, landscaping materials, river sediments) will be proven 'suitable for use' by adoption of acceptance criteria and will be deposited under either an environmental permit or the CL:AIRE (2011) Definition of Waste, Development Industry Code of Practice, following consultation with relevant stakeholders.

- 9.3.2 An unexpected contamination protocol will be produced and implemented if contamination over and above that identified during ground investigation is encountered during construction. During the site works, and in particular during the initial below-ground works, works will be routinely monitored for contamination, for example, the presence of odours and unusual staining, as well as oily, tarry or fibrous materials.
- 9.3.3 If such contamination is suspected, works in the immediate area will be made safe and secure and the event reported via a defined reporting procedure, which will be set out in the unexpected contamination protocol. A land contamination specialist will inspect the site and, where deemed necessary, arrange for further sampling and laboratory testing of soils or liquids. Further risk assessments to receptors will be carried out as necessary and reported to Heathrow, the local authority and the Environment Agency.
- 9.3.4 If unacceptable risks are identified, a revised remediation method statement will be prepared in consultation with the regulators.
- 9.3.5 Where ground investigation works identify the presence of asbestos in soil, the control measures will be reviewed for the management of construction works in line with CAR-2012 and its interpretation for soil within CAR-SOIL™ (2012) and, where appropriate, implement additional monitoring and control measures to reduce the risks from asbestos in soils.
- 9.3.6 Where bulk earthworks (excavation) is required in locations where significant quantities of asbestos fibres in soils are encountered, Heathrow will implement measures to manage and monitor risks to human health. The additional measures will be documented in an Asbestos Management Strategy (see **Section 4.9**).

- 9.3.7 The Asbestos Management Strategy may include reduced extraction rates, pre-excavation soil stabilisation/solidification, tenting of excavations (where reasonably practicable and feasible) and additional wash down/decontamination for construction plant. Additional monitoring may include the use of real-time asbestos monitors and air quality asbestos fibre sampling.

9.4 Outline Materials Management Strategy (MMS)

- 9.4.1 An Outline Materials Management Strategy (MMS) will be developed in consultation with relevant stakeholders and included in the Development Consent Order (DCO) Application. The MMS will outline a process which seeks to retain materials (such as Made Ground, landfill material, natural soils and river sediments) for reuse within the Project (for example, as general earthworks fill and landscaping) and detail procedures for the screening and treatment of excavated soils to ensure they are suitable for the proposed reuse in line with the relevant permitting regime under which the materials are being reused including the CL:AIRE 2011 Definition of Waste: Development Industry Code of Practice (DoW CoP).
- 9.4.2 The MMS will include chemical and geotechnical re-use screening criteria, which will be used to assess the suitability of materials excavated during the construction works to be reused within the Project. An assessment of soils to be reused will be carried out by the main contractors. This will ensure that the reused soils are suitable for use by assessing risks to human health and the water environment (see also **Section 9.3**). The MMS will also set out how verification and recording of the sampling, screening and reuse process will be undertaken.

9.5 Measures to reduce potential impacts on geodiversity and mineral resources

- 9.5.1 Procedures will be implemented to reduce the potential impact of the construction works on geodiversity sites (for example, local geological sites). Such measures would include, as appropriate, inspections, the appropriate recording of geological information, and mapping of soil and rock exposures.
- 9.5.2 The MMS will incorporate good practice mitigation measures in respect of mineral resources, seeking to maximise the reuse of clean mineral resources excavated as part of the Project. See also **Section 9.3**.

9.6 Agricultural land quality

- 9.6.1 Controls will be implemented via the Environmental Management Plans (EMP) to mitigate potential avoidable impacts on agricultural soils, including:
1. Identifying the agricultural soils adjacent to the construction site.
 2. Identifying watercourses, fixed irrigation pipes and sources of irrigation water and fixed water supplies.

3. Undertaking a pre-construction survey of existing land drainage.

9.6.2 The controls will include the following, as appropriate:

1. Protecting agricultural soils by avoiding soil compaction.
2. Modifying existing drainage to avoid adversely affecting the drainage of adjacent agricultural or other land (for example, drainage ditches are not blocked).
3. Protecting farm accesses that may be affected by construction, including documenting how farm access will be maintained, and avoiding traffic over land which is used temporarily during construction.

9.6.3 Heathrow will:

1. Advise landowners, occupiers and agents in advance, 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.
2. Advise the programme of works and access routes to be used.
3. Take precautions in developing the construction programme to reduce disturbance to agricultural soils, subject to **paragraph 9.7.7**.

9.7 Measures to reduce potential impacts on soil resources

- 9.7.1 Appropriate measures will be implemented, in accordance with Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, Department for Environment, Food and Rural Affairs (Defra) (2009) and Sustainable Management of Surplus Soil and Aggregates from Construction. Berryman, C, Watkins, G, Crozier, F, Parsons, J (2023) (CIRIA), in relation to undertaking works on or adjacent to agricultural land and will be set out in the EMPs.
- 9.7.2 To support the DCO application, and where necessary before the works commence, surveys will be undertaken to record agricultural soils disturbed for the Project. These surveys will collect data that will inform agricultural restoration, landscape design and ecological mitigation measures. Soil surveys will be carried out on land required for the construction of the Project, including from existing agricultural land, other ecological habitats and public and private open spaces, where access to such land becomes available. The soil information will be used to inform soil handling that may be necessary for the reinstatement of land and preparation of tree planting and habitats.
- 9.7.3 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 before these materials are 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 to protect their

natural functions during the construction period. This information will also determine the soil storage areas required.

- 9.7.4 Agricultural restoration will rely principally on identifying and recording the physical characteristics of the soil profile. Landscape planting and habitat creation will also be informed by the chemical and organic matter characteristics of the soil horizons (layers) to be recorded.
- 9.7.5 These soil surveys will include/record as appropriate:
 1. Relevant local topographic features (local relief, slope, aspect, micro-relief), land use and ground cover, flood risk and climatic information
 2. Depth of the topsoil, upper subsoil (where present) and lower subsoil horizons
 3. Soil textures
 4. Soil structures
 5. Soil colours
 6. Stone content
 7. Signs of impeded drainage and presence of slowly permeable layers
 8. Presence of calcium carbonate
 9. Sampling for laboratory analysis of pH, major nutrients (extractable phosphorus, potassium and magnesium) and organic matter content
- 9.7.6 Other features that will be recorded include:
 1. Drainage, irrigation and water supplies
 2. Hedgerows, ditches, field boundaries and irrigation ponds
 3. Forest land, including individual trees and ancient and other woodlands
- 9.7.7 Where land used temporarily for construction is to be reinstated to agricultural use, reinstatement works will be implemented to return the land to its pre-construction condition. Such reinstatement will be carried out under appropriately qualified soil scientist supervision and will be verified through completion of soil surveys.
- 9.7.8 During construction, topsoil may become buried under subsoil or topsoil may be sterilised by development. Preventative measures will include the following:
 1. Topsoil will be removed from areas where it is likely to be affected by development and, where reasonably practicable, reused on site.
 2. Where there is surplus topsoil, ways to use the surplus for landscape schemes will be identified, as part of the Project or elsewhere (for example, through local community or allotment schemes, where reasonably practicable).

- 9.7.9 Reasonable precautions will be taken in relation to the handling and storage of agricultural soils, including the following, as appropriate:
1. Topsoil and subsoils will be stripped separately, where reasonably practicable in dry weather. Soils will not be stripped during heavy rainfall or if the soil is already saturated with water.
 2. Topsoils and subsoils will be stored separately using a methodology that will be defined with reference to good practice guidance, including BS 3882:2015 British Standard Topsoil).
 3. Where soils are exposed, particularly on slopes, they will be covered with suitable barrier materials (for example, tarpaulin), to prevent erosion and gullyng due to the effects of rain and wind.
 4. The use of plant and machinery on soils potentially vulnerable to erosion will be minimised.
 5. Outside areas of excavation soils compaction will be minimised using a combination of temporary tracks, low ground pressure types, tracked vehicles and low axle loads, and limiting the use of machinery in wet weather.
 6. Reinstated soils/natural soils over which construction vehicles have travelled will be surveyed to determine whether there is a need for soil ripping/loosening of soils to reduce compaction or for vegetation to be established to reduce soils erosion.
 7. Using seed for grass cover or sealing medium or long-term excavated material and soil stockpiles.
 8. Preventing soil contamination with chemicals or other construction materials.
 9. Controlling of weeds on soil stores, either through treatment or removal.
- 9.7.10 The stripping, storage and reinstatement of soils will be accompanied by a soil audit report. The storage of soil stockpiles (such as, size and height) will be undertaken in accordance with Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2011).
- 9.7.11 The sources, locations, contents and approximate volumes of soil stockpiles will be available from the soil survey records completed by the main contractors before commencement of works (including the stripping and storage of soils). In defining target restored profiles within the soil audit report, the volumes of available soils in storage will be related to the areas of each parcel of land to be restored.
- 9.7.12 Soils will be handled when least susceptible to damage and in accordance with Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2011). The MAFF Good Practice Guide for Handling Soils (2000) (Sheets 1 to 4) 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 on-site construction traffic routes and will not traverse undisturbed or

replaced soils, except where such trafficking is essential for the delivery of the Project and no alternative route is available.

- 9.7.13 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. Where reasonably practicable, soils will generally be removed, transported and reinstated without a period of storage. These documents will be referenced and followed by the main contractor.
- 9.7.14 Good practice mitigation measures will be incorporated into the MMS which will seek to retain clean topsoil for reuse on the Project, and to maintain soil integrity during excavation and removal/transport.
- 9.7.15 Where stockpiled soils are required for specific ecological or landscaping purposes, appropriate restrictions on seeding and weed control will be implemented while the material is stockpiled. Where seeding is not appropriate, the use of temporary covers will be used to mitigate the risk of erosion resulting from rain and wind. Where chemical weed control is not appropriate due to the presence of environmental receptors, mowing or strimming will be used to aid weed suppression.

9.8 Monitoring

- 9.8.1 A suitably qualified soil scientist, whose responsibility will include the monitoring of topsoil and subsoil stripping, handling, storage and replacement, as appropriate, will be appointed to facilitate compliance with this section of the draft Code of Construction Practice (CoCP) in relation to soils.
- 9.8.2 The main contractors will keep detailed records of the volumes and nature of the soils and other materials excavated and either disposed of off site, disposed of in new on-site landfills or reused elsewhere on the Project under the MMS, in accordance with Duty of Care requirements.
- 9.8.3 Suitably qualified personnel, whose responsibility will include the evaluation of human health and controlled waters risks and remediation validation (where required), will be appointed to facilitate compliance with this section of the draft CoCP in relation to land contamination.
- 9.8.4 Where materials are reused in line with the MMS, an independent person registered as a Qualified Person under the requirements of the CL:AIRE Code of Practice (CoP) will be appointed to complete a declaration that the MMS has been completed and will provide confidence to the Environment Agency and Natural England that best practice is being followed. Materials not reused under the MMS will be subject to appropriate environmental permitting requirements (for example, Deposit for Recovery (DfR)), where applicable.

- 9.8.5 The main contractors will prepare and implement groundwater and surface water monitoring strategies, where necessary, to ensure construction activities do not impact on controlled waters. Water monitoring will be undertaken in accordance with:
1. BS 5930:1999+A2 Code of practice for site investigations (1999)
 2. BS 10175:2011+A2:2017 Investigation of potentially contaminated sites – Code of practice (2017)
 3. BS 5667-11:2009 Water quality. Sampling. Guidance on sampling of groundwaters (2009)
 4. BS 5667-3:2024 Water quality. Sampling. Preservation and handling of water samples (2024)
- 9.8.6 Where additional monitoring points are required to be installed, these will be undertaken in accordance with BS 5667-22:2010 Guidance on the design and installation of groundwater monitoring points (2010) and the Environment Agency Guidance on the design and installation of groundwater quality monitoring points (Science Report SC020093, 2006).
- 9.8.7 The groundwater and surface water monitoring strategies will identify specific requirements for each individual area of the site and include pre-construction baseline monitoring, monitoring throughout the construction period and post-construction monitoring. The strategies will include the frequency of sampling to be undertaken, parameters to be analysed and the reporting mechanism and frequency.
- 9.8.8 The main contractors will prepare and implement gas and vapour monitoring strategies, where necessary, due to the potential for the presence of landfill and ground gases. Gas monitoring will be undertaken in accordance with measures set out in BS 8576:2013 Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs), BSI (2013).
- 9.8.9 It is noted that for sites that fall under the Environmental Permitting Regulations (such as the new proposed on-site landfills or mobile treatment plant), additional monitoring and reporting requirements will be applicable to those specific sites, in line with specific Environment Agency guidance (for example, Environmental permitting: landfill sector technical guidance in the case of new landfills) and will be detailed in the applicable environmental permits. The DCO application will seek to ensure that such controls are not duplicated in the CoCP or detailed management plans.
- 9.8.10 Heathrow and its main contractors will prioritise using real-time monitoring for airborne dust, VOCs and, where necessary asbestos, to provide information for active management of the works. The data will be reviewed by suitably qualified environmental management staff and trigger levels for action agreed with relevant stakeholders. The trigger levels will be based on UK air quality standards and any specific targets set out in Heathrow's/the main contractors environmental permits.

10. Landscape and visual amenity

10.1 General provisions

- 10.1.1 Construction-related impacts on landscape and visual amenity will be controlled through the following:
1. Protection of existing elements of the landscape that are to be retained.
 2. Careful design and management of temporary construction components in response to landscape character and visual amenity.
 3. 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.
- 10.1.2 Existing landscape features, including trees, hedgerows, watercourses and landform, will be retained wherever reasonably practicable. Where retention is not possible, temporary relocation (where feasible) or replacement/compensation will be considered. The assumptions in this regard will be set out where appropriate in the DCO Application. Protection measures will be implemented in accordance with **Section 4.6** (Management of Trees) and relevant industry standards.

10.2 Protection of existing trees

- 10.2.1 Protection of existing trees and other vegetation to be retained where reasonably practicable, in order that these elements continue to make a contribution and maintain the landscape character and visual amenity, while screening construction works, as described in **Section 4**. This should be done in accordance with BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (2012), providing appropriate protection fencing, access and storage restrictions, and monitoring.

10.3 Appropriately designed and maintained hoardings and fencing

- 10.3.1 The use of appropriately located, well-maintained and regularly inspected temporary hoardings and fencing throughout the construction works, with damaged or degraded sections repaired or replaced promptly. As described in **Section 4**, the design, height, colour and finish of hoardings and fencing will respond to the surrounding landscape or townscape character and the sensitivity of nearby receptors, particularly adjacent to residential areas, public rights of way and open spaces. Where reasonably practicable, hoardings will incorporate appropriate colour palettes to reduce visual clutter and screen construction activity. Opportunities to include visual communication materials illustrating construction progress or future design outcomes will be considered where appropriate.

10.4 Management of site lighting

- 10.4.1 Site lighting will be managed to protect visual amenity and reduce visual disturbance as described in **Section 4**.

10.5 Management of temporary earthworks and stockpiles

- 10.5.1 Well-maintained temporary earthworks, including borrow-pits and soil stockpiles, will be appropriately sited, shaped and scaled to respond to the surrounding landscape or townscape character and visual amenity, avoiding abrupt or visually intrusive forms where reasonably practicable. Temporary earthworks will be kept in a tidy and stable condition, with erosion control and dust suppression measures in place as appropriate. Where earthworks remain in place for extended periods, temporary landscape treatment, such as seeding or hydroseeding will be implemented, with regular inspection and maintenance. Refer to **Sections 4** and **9**.

10.6 Protection and management of soils for landscape purposes

- 10.6.1 Protection of soil to be used for landscape purposes will be managed during construction with the aim of ensuring they remain suitable for reinstatement and long-term landscape mitigation, as described in **Section 9**. Topsoil and subsoil will be stripped, stored and handled having regard to recognised best practice, including appropriate segregation, storage in suitably sized and located stockpiles, while avoiding compaction, contamination or erosion. Soil stockpiles will be clearly identified, maintained and, where stored for extended periods, stabilised through appropriate measures such as seeding.

10.7 Implementation of landscape design proposals

- 10.7.1 Implementation of proposals, including landscape design proposals, would be undertaken in accordance with the design documents submitted with the Development Consent Order (DCO) application. This would include appropriate coordination between construction activities and landscape implementation, with the aim of ensuring works are delivered at the appropriate time, protected from damage, and consistent with the design intent.
- 10.7.2 Maintenance and management of landscape proposals during the construction phase will be undertaken in accordance with the documents submitted with the DCO application, with the aim of ensuring successful establishment and long-term performance of landscape mitigation.

- 10.7.3 There will also be provision of suitably qualified and experienced specialists, such as a Landscape Clerk of Works (LCoW), with responsibility for monitoring landscape works to ensure they are carried out in accordance with the approved design and relevant best practice.
- 10.7.4 Where no conflict exists with construction activities or other requirements of the Project, landscape design measures will be implemented as early as reasonably practicable to support early visual integration and screening. As appropriate, the construction programme will be reviewed to identify opportunities for advance or phased landscape delivery, particularly where early planting or earthworks can reduce construction-phase visual effects.
- 10.7.5 Suitable locations for landscape proposals will relate to the findings of the Environmental Statement (ES) regarding mitigation of adverse effects on landscape and visual receptors.

10.8 Monitoring

- 10.8.1 Appropriate monitoring of the effectiveness of landscape and visual amenity mitigation proposals will be undertaken by suitably qualified and experienced specialists, such as landscape architects or arboriculturists.
- 10.8.2 Monitoring will include regular inspections during peak construction phases, with corrective actions implemented where appropriate.

11. Noise and vibration

11.1 General provisions

- 11.1.1 Best practicable means (BPM) will be used to minimise noise (including vibration) emanating from the site in order to protect people and other noise sensitive receptors from the adverse effects of noise.
- 11.1.2 BPM represents a balance between the need to allow the works to proceed and the need to protect people from the adverse effects of noise. It is 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”. Compliance with BPM aims to ensure that all reasonable and appropriate controls will be in place to minimise noise (including vibration) throughout the construction works.
- 11.1.3 BPM will firstly consider control at the source. For instance, the selection of quiet and low vibration working methods and equipment, review of construction programme, careful location of equipment on site, control of working hours (see **Section 4.1**), the provision of localised acoustic enclosures and the use of less intrusive alarms such as broadband vehicle reversing warnings. Specific measures will also be implemented to control the transmission of sound from the site, for example, using perimeter solid hoarding, bunds/temporary stockpiles or dedicated noise barriers.
- 11.1.4 Compliance with BPM will include employing the good practice measures and recommendations of BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise (2014) (specifically section 8: Control of noise), and BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Vibration (2014) (specifically section 8: Control of vibration), as well as implementation of noise and vibration mitigation measures detailed within the Environmental Statement (ES) and this Code of Construction Practice (CoCP), as appropriate.
- 11.1.5 A project specific Construction Noise Consents Framework (CNCF) will be implemented through the CoCP and the Development Consent Order (DCO). The framework will be specific to Heathrow expansion, founded on the well-established principles of prior consents under Section 61 of the Control of Pollution Act (1974) including the requirement to confirm that all works for which prior consent is sought will be undertaken in accordance with BPM.
- 11.1.6 A Noise Insulation Policy will apply, where, despite the implementation of BPM, the noise exposure exceeds the criteria defined in **Section 11.3**.

11.2 Noise and vibration management

- 11.2.1 The main contractors will be required to prepare and then comply with Noise and Vibration Management Plans detailing the management and monitoring processes to be applied throughout the construction works, such that BPM are planned and employed to minimise noise and vibration.
- 11.2.2 Noise and Vibration Management Plans will include the management and monitoring processes to enable, as a minimum:
1. Integration of noise control into the preparation of method statements.
 2. Proactive links between noise management activities and community relations activities (see **Section 3**).
 3. Preparation of details of site hoardings, screens or bunds that will be put in place to provide acoustic screening during construction, together with an inspection and maintenance schedule for such features.
 4. Development of procedures in accordance with the Noise Insulation Policy (see **Section 11.3**) to identify properties eligible and make provision for noise insulation or temporary-rehousing and to ensure such measures are, where required, in place as early as is reasonably practicable and in advance of commencement of the works giving rise to this requirement.
 5. Preparation of risk assessments to inform structural surveys of buildings and structures that may be affected by vibration from construction.
 6. Development of a noise and vibration monitoring protocol, including a schedule of noise and vibration monitoring locations, and stages during construction of the Project when monitoring will be undertaken.
 7. A schedule of proposed noise consent applications, including, confirmation that as part of those consent applications, the works, the method by which they are to be carried out, and the BPM steps proposed to be taken to minimise noise resulting from the works will be included.
 8. The undertaking and publication of all monitoring required to ensure compliance with all acoustic commitments and consents.
 9. Implementation of management processes to ensure ongoing compliance, improvement and rapid corrective actions to avoid any potential non-compliance.
 10. The good practice measures and recommendations detailed in BS 5228-1 and BS 5228-2 are complied with.
 11. All relevant noise and vibration mitigation measures detailed within the ES, and those detailed within this draft CoCP, are complied with.

Secondary consents

- 11.2.3 We recognise that the management of construction noise will be an important issue for residents and local authorities. We also recognise that the Project and community will need some level of certainty at the DCO application stage as to how construction noise is managed and how the relevant authorities will be consulted on this for the range of works required.
- 11.2.4 As such, we will be proposing, at DCO application stage, a CNCF which uses best practice from major infrastructure projects and lessons from the Control of Pollution Act (1974) regime applied to the circumstances of the Project. We will bring forward applications for approval ('noise consents'), in line with this framework and the Noise and Vibration Management Plans, to an independent decision-making body, specifically constituted by the DCO.
- 11.2.5 The CNCF will be implemented through the CoCP and through provisions in the DCO itself to create a suitable, Heathrow expansion specific regime for the management of noise impacts.
- 11.2.6 It is currently envisaged that the CNCF will be based on the principles of Section 61 of the Control of Pollution Act (1974) regime, but with modifications, as set out below:
1. The decision-making body for noise consents will likely also have the role of approving the discharge of a number of the DCO's requirements.
 2. In determining noise consent applications, the decision-making body will work within a set of parameters specified in the CNCF.
 3. A Construction Noise Technical Panel (CNTP) will be formed comprising Environmental Health Practitioners from each of the local authorities in whose area the works applied for are to be carried out or would be affected by such works, contractor managers and technical specialists and Heathrow technical specialists. The CNTP will be chaired by a member of the decision-making body. The CNTP will review contractors' draft Noise and Vibration Management Plans and draft 'noise consents'. The CNTP will be able to make representations to that decision-making body to ensure its views are taken into account.
 4. The CNCF will lay out set specified timeframes for the determination process of the noise consents.
 5. In considering the conditions to be applied to any consent under the CNCF, and the application of BPM principles, the decision-making body will be required to accord with the working hours proposals which will be put forward in the CoCP at DCO application.
 6. The CNCF is expected to involve, while noting point 5, the creation of minimum standards which any application for a noise consent by us and our main contractors will have to meet. This will include the need for applications to:
 - a. Describe the works, the method by which they are to be carried out and the BPM measures that will be used to minimise noise (including vibration) from Project construction activities, including explaining how control at source has been considered.

- b. Demonstrate that measures to control the transmission of sound from the site have been considered and are being brought forward as appropriate, such as through the use of local enclosures and screening of equipment, perimeter bunds or barriers.
 - c. Demonstrate that the scheduling of activities has considered the needs of potentially affected community facilities, for example, scheduling construction/demolition activities close to schools outside of exam periods.
 - d. Demonstrate that the relevant recommendations of BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise (2014), specifically section 8: Control of noise, and BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Vibration (2014), specifically section 8: Control of vibration will be implemented.
 - e. Identify the properties where noise is predicted to exceed the Noise Insulation Policy trigger thresholds set out in **Section 11.3** and confirm that noise insulation will, so far as is reasonable and practicable, be offered and, if accepted, installed before the works giving rise to those noise levels are commenced.
 - f. Include the measures set out in **Sections 11.4** and **11.5** and outline the control (mitigation and compensation) measures that will be implemented if the levels set out in those sections are breached.
 - g. Set out the results of noise assessments for the activities and location to which the noise consent will relate. For such assessments, noise levels will be predicted in accordance with the methodology established in Annex F of BS 5228-1 (2014). Vibration levels will be predicted using the methods provided in Annex E of BS 5228-2 (2014) and, where applicable, Section 3.4.4: Predictive model, of Transport and Road Research Laboratory (TRRL) Research Report 246 (RR 246): Traffic induced vibration in buildings.
 - h. Include monitoring proposals for pre-construction and during construction – with minimum standards for such proposals to be given in the framework (for example, an audit and reporting standard and the need for remedial actions to be taken) and consideration of instantaneous maximum noise levels.
7. In addition to the consent process set out above, the CNTP will also deal with day-to-day noise concerns and complaints and to facilitate engagement between us and our main contractors, the local community, local authorities and the noise consent decision making body. We are considering how this can best operate as part of or alongside our existing noise liaison groups and the wider communications and complaints mechanisms that are created for the Project.

11.3 Noise Insulation Policy (including temporary re-housing)

- 11.3.1 Additional to the framework described above, Heathrow will also implement a Noise Insulation Policy.
- 11.3.2 The Policy is intended to address circumstances where it is not reasonably practicable to control noise emanating from the site to a level below the noise insulation trigger levels set out in **Table 11.1**.
- 11.3.3 Noise insulation and temporary re-housing arrangements apply to dwellings and other buildings lawfully used for residential purposes.
- 11.3.4 A dwelling would be eligible where the predicted or actual noise exceeds any of the relevant thresholds in **Table 11.1** for:
1. A period of 10 or more days of working in any 15 consecutive days during construction.
 2. A total of 40 days or more in any 6 consecutive months during construction.
- 11.3.5 The noise thresholds for both noise insulation and temporary re-housing are set out in **Table 11.1**.

Table 11.1: Noise thresholds for noise insulation/temporary re-housing

Day	Time (hours)	Averaging Period T	Noise Insulation trigger level LAeq,T (dB) *	Temporary re-housing trigger level LAeq,T (dB) *
Monday to Friday	0700 – 0800	1 hour	70	80
	0800 – 1800	10 hours	75	85
	1800 – 1900	1 hour	70	80
	1900 – 2200	1 hour	65	75
Saturday	0700 – 0800	1 hour	70	80
	0800 – 1300	5 hours	75	85
	1300 – 1400	1 hour	70	80
	1400 – 2200	1 hour	65	75
Sunday & Public Holiday	0700 – 2200	1 hour	65	75
Any night	2200 – 0700	1 hour	55	65

*Project construction sound only. All noise levels are defined as 1m in front of the closest façade of a habitable room. Where measurements are used, they will be taken either at the façade or in free-field. A façade correction will be applied to any free-field measurements to establish the façade level.

Where the current ambient noise level is greater than the noise insulation trigger level:

1. The ambient noise level will be used as the noise insulation trigger level.
2. The temporary re-housing trigger level will be the ambient noise level +10dB.

11.3.6 Heathrow will develop proposals for the provision of noise insulation to noise sensitive non-residential buildings and residential special cases and will include these provisions in the DCO application. Heathrow will engage with affected local authorities in preparing these proposals.

11.4 Protection of building occupants from vibration disturbance

11.4.1 When considering human response to vibration, BS 5228-2¹ provides guidance levels in terms of Peak Particle Velocity (PPV) as reproduced in **Table 11.2**.

11.4.2 The thresholds for vibration consider, together with the guidance presented in **Table 11.2**, the sensitivity of the building use to vibration. The more sensitive building uses, including residential properties, are defined as Building Group A with less sensitive uses defined as Building Group B. The building uses and threshold values are presented in **Table 11.3**.

11.4.3 BPM will be employed to protect the occupants and users of buildings from vibration disturbance. Where, despite BPM measures, the vibration levels exceed the relevant threshold values defined in **Table 11.3** in a building as a result of the construction works, the actions set out in **Section 11.6** will be undertaken.

¹ BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Vibration (2014)

Table 11.2: Guidance on effects of vibration levels (from BS 5228-2)

PPV Vibration level ²³⁴	Effect
0.14 mm/s	Vibration might be just perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration.
0.3 mm/s	Vibration might be just perceptible in residential environments.
1.0 mm/s	It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents.
10 mm/s	Vibration is likely to be intolerable for any more than a very brief exposure to this level in most building environments.

Table 11.3: Vibration threshold values for protection of occupants of buildings from disturbance

Building Group	Building types	PPV (mm/s)
A	Residential, auditoria, concert halls, theatres, sound recording, broadcast studios, places of worship, courts, lecture theatres, museums, schools, colleges, libraries, hospitals and hotels	≥1.0
B	Occupied office and commercial	≥3.0

11.5 Protection of buildings from cosmetic damage

11.5.1 Construction works which include high vibration sources and occur in close proximity to buildings have the potential to cause cosmetic damage. To protect buildings from damage, the contractor will employ BPM to minimise the risk of physical cosmetic damage to buildings and avoid exceedance of PPV thresholds, defined in **Table 11.4**, at the building foundation due to the Project construction works. The threshold value in **Table 11.4** are from BS 7385-2: Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration (1993).

Table 11.4: Vibration threshold values for building damage

Category of building	PPV at building foundation	
	Transient vibration	Continuous vibration
Structurally sound buildings	12 mm/s	6 mm/s

² The magnitudes of the values presented apply to a measurement position that is representative of the point of entry into the recipient (typically the middle of floors).

³ A transfer function (which relates an external level to an internal level) needs to be applied if only external measurements are available.

⁴ Single or infrequent occurrences of these levels do not necessarily correspond to the stated effect in every case. The values are provided to give an initial indication of potential effects, and where these values are routinely measured or expected then an assessment in accordance with BS 6472 part 1 or part 2 (Guide to evaluation of human exposure to vibration in buildings) using Vibration Dose Values, and/or other available guidance, might be appropriate to determine whether the time varying exposure is likely to give rise to any degree of adverse comment.

Category of building	PPV at building foundation	
Potentially vulnerable buildings	6 mm/s	3 mm/s

- 11.5.2 Where, despite BPM measures, the vibration levels exceed the relevant threshold values defined in **Table 11.4** at a building foundation as a result of the construction works, the actions set out in **Section 11.6** will be undertaken.

11.6 Exceedances of vibration thresholds

- 11.6.1 Upon appointment of the contractor, a scoping vibration assessment will be undertaken, considering the values in **Table 11.3** and **Table 11.4**. High vibration activities requiring an assessment may include vibratory or dynamic compaction, impact or vibratory piling and other driven processes. Based upon the outcome of the scoping vibration assessment, and consideration of BPM to minimise vibration levels at all times during construction, where there is a risk that the values in **Table 11.3** or **Table 11.4** are exceeded a detailed construction vibration assessment will be undertaken to identify measures to avoid significant adverse effects on health and quality of life.
- 11.6.2 Detailed assessment will include predictions of PPV levels of vibration using the methodologies included in BS 5228-2 and BS 7385-1 including the effect of any mitigation measures. If this identifies that people occupying buildings may experience levels in excess of the threshold values in **Table 11.3** or **Table 11.4**, those potentially affected will be notified at least four weeks in advance and again at least two weeks in advance where relevant. The notification will describe the nature and duration of the works, including likely timings of vibration generating activities, and any associated proposals for vibration monitoring.
- 11.6.3 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 (for example, listed). Where information about these structures is not currently known, the more onerous criteria shown in **Table 11.4** shall be adopted on a precautionary basis until condition surveys have been undertaken.
- 11.6.4 Trials of vibration generating activities will be undertaken and monitored at nearby sensitive receptors to validate vibration predictions. This process will seek to ensure that the measured levels are no greater than anticipated/predicted.
- 11.6.5 So that the PPV thresholds in **Table 11.3** are not exceeded as a result of the works, vibration monitoring will be undertaken. Guidelines for the measurement of vibrations and evaluation of their effects on structures are provided in BS 7385-1. Additionally, the contractor and all sub-contractors will be made aware of the advice given in ISO 4866:2010 – Mechanical vibration and shock, regarding vibration monitoring. Notification provided to occupants of affected buildings will describe proposals for vibration monitoring.
- 11.6.6 Where the predicted vibration at the foundations of affected buildings exceeds 6mm/s PPV, an initial structural survey of the building will be undertaken. Based on

the structural survey, the level of vibration above which condition surveys and continuous vibration monitoring are required will be confirmed with the building owner.

- 11.6.7 Where there is no reasonable or practicable means to reduce predicted or measured vibration below a PPV of 12mm/s, the contractor will:
1. Seek to agree with occupiers and owners (as appropriate) of properties:
 - a. the surveys to be carried out to monitor vibration and strain, and any consequent actions; and
 - b. Any additional reasonable and practicable mitigation to be provided for occupants..
 2. Where the condition and vibration monitoring surveys demonstrate that vibration from the works has given rise to building damage, the contractor is to make good that damage.

11.7 Protection of particularly vibration-sensitive equipment/processes

- 11.7.1 BPM will be used to avoid any impacts on particularly vibration-sensitive equipment or processes. Any identified actions required to control or mitigate these impacts will be agreed with the owner/operator of the sensitive equipment/process.

12. Waste and resource efficiency

12.1 General provisions

- 12.1.1 Heathrow aims to deliver a Project that is resource efficient and supports a circular economy. The Project will therefore seek to align with industry initiatives relevant to addressing resource efficiency and the sustainable management of construction, demolition and excavation (CD&E) waste arising throughout all phases of construction.
- 12.1.2 Heathrow, working with the main contractors, will promote resource efficiency (covering materials and waste only; resources such as water and energy are covered in separate sections of this draft Code of Construction Practice (CoCP)) throughout all phases of construction works. This may include the following, as appropriate and where reasonably practicable:
 - 1. Resource efficiency opportunities assessment for construction-related activities.
 - 2. The development of forward-looking partnerships to transfer chain of custody of resources, so that returning value locally is prioritised.
 - 3. Encouraging and promoting resource efficient behaviours to value resources and disincentivise waste.
 - 4. The careful management of the consumption of construction materials.
- 12.1.3 Resource efficiency and waste management aims to sustainably manage resources, reduce waste at the source, and reduce the quantity of waste sent to landfill. The identified overarching resource efficiency and waste management aims will then be translated into the proposed Project through maximising, as far as reasonably practicable, the reduction of waste through design and the diversion from landfill by the re-use, recycling and recovery of materials.

12.2 Resource and Waste Management Strategy

- 12.2.1 Resource efficiency and sustainable waste management measures will also be set out in the Resource and Waste Management Strategy (RWMS) submitted with the Development Consent Order (DCO) application, which will consider material management on the Project (outside the scope of the Materials Management Strategy (MMS)) and waste management with regards to CD&E waste. The main contractors will be required to adhere to the RWMS.

12.3 Material management

- 12.3.1 Building on the material section of the RWMS, Heathrow, working with its main contractors, will aim to effectively manage materials during construction-related activities. A number of measures will be implemented including, where reasonably practicable, the following:
1. The minimisation of the consumption of natural, and particularly virgin non-renewable resources.
 2. The use of recycled or secondary materials (with an emphasis on circular economy principles and with due consideration of the carbon impact).
 3. A reduction in the use of materials that have the potential to harm human health and/or the environment.
- 12.3.2 Management of earthworks materials is also addressed through the MMS described in **Section 9.4**.

12.4 Management of waste

- 12.4.1 The waste hierarchy, as outlined by the Waste (England and Wales) Regulations 2011, as amended, will be used as the overarching framework for the management of waste. It aims to reduce the amount of waste produced and prioritise managing waste that does arise in the least environmentally impactful way.
- 12.4.2 Heathrow and the main contractors will focus on waste prevention and minimisation. The main contractors have the responsibility to reduce the waste generated from all construction-related activities where reasonably practicable. Measures to reduce waste impacts from construction works include the timely delivery and efficient storage of materials on site.
- 12.4.3 The main contractors will also have responsibility for the storage and management of the earthworks material excavated from construction-related activities. This material will be reused on site where reasonably practicable. Owing to the differences in the nature of the excavated materials, each material will be assessed for best-practice reuse and/or recovery, as per the MMS.
- 12.4.4 On/in proximity to the construction sites, there will be areas specifically dedicated to the handling and storing of excavated material. The main contractors will be responsible for the management of these areas to prevent harm to human health, environmental health, and amenities.
- 12.4.5 The main contractors will prepare a Site Waste Management Plan (SWMP) in line with the RWMS and will implement principles outlined in best practice guidance. The role of the SWMP will be to minimise waste arising from construction and to facilitate good practice for CD&E and municipal (arising from the workforce) waste management. The following factors will be incorporated into the SWMP:
1. The classification of all types of waste.
 2. The types, quantities and locations of waste materials generated during construction.

3. The implementation of measures to minimise waste generation.
 4. The implementation of measures to maximise re-use and/or recycling of materials and waste.
 5. The adoption of measures for on-site waste management.
 6. The permitting arrangements for on-site and off-site waste treatment, waste transfer, and waste treatment and disposal.
 7. The details of the waste carriers and off-site treatment and disposal sites to be used.
- 12.4.6 The Project Excavated Material Off Site Options Assessment (EMOOA) submitted as part of the DCO application, will provide a mechanism for assessing potential suitable sites for the off-site treatment, handling or use of excavated material and waste.
- 12.4.7 At construction site offices and compounds, waste avoidance and recycling will be promoted including the provision of appropriate segregated waste collection points. The main contractors will arrange for the suitable transfer of materials to recycling and disposal facilities where required.
- 12.4.8 In addition to this, necessary waste management permits will be obtained for the registration of any relevant exemption from waste permitting that is required during construction works.

12.5 Waste identification and classification

- 12.5.1 One of the principal aims of the SWMP will be to identify the particular types and quantities of waste that is anticipated to arise during the construction works and to classify them in alignment with the appropriate statutory controls. The SWMP will outline the approach to monitoring (see **Section 12.8**).

12.6 Waste segregation and storage

- 12.6.1 The main contractors will ensure that CD&E waste is categorised into separate waste streams as appropriate. Waste produced from any work activities throughout the construction period would be sorted either on site, off site, or by an appropriately licensed contractor for recovery. For waste produced as the result of demolition works, waste categorisation will require pre-demolition surveys to be undertaken.
- 12.6.2 Hazardous waste that is generated on site will be appropriately segregated from other materials and waste streams and removed and managed by the main contractors in line with legal requirements.
- 12.6.3 Appropriate storage receptacles will be used for the collection and storage of waste to facilitate the segregation of waste for reuse, recycling and recovery.

12.7 Duty of Care

- 12.7.1 The main contractors will comply with all legal Duty of Care requirements, to protect the interests and safety of others from the potential impacts of handling, storing, transporting and off-site management of CD&E waste streams that arise from the Project.
- 12.7.2 Any waste leaving construction sites, and those associated sites, will be accompanied by the relevant duty of care documentation in accordance with the relevant statutory requirements for the transfer of non-hazardous and hazardous waste. The relevant duty of care documentation will be retained by the main contractors in accordance with statutory requirements.
- 12.7.3 To enhance the environmental and developmental benefits from the use of surplus materials, materials will be managed across the Project construction sites or the Heathrow estate. This will reduce the adverse environmental impacts and risks associated with off-site disposal.
- 12.7.4 The SWMP will include coherent and thorough details of the processes for compliance with the duty of care documentation requirements, in line with the Waste (England and Wales) Regulations (2011), as amended. The arrangements for auditing the actions of third parties in the waste handling chain will also be included in the SWMP.
- 12.7.5 The main contractors will follow the arrangements for co-signing, handling, and transporting hazardous wastes. This will be adhered to in the context of duty of care and the specific consignment note procedures applicable under the Hazardous Waste (England and Wales) Regulations 2005, as amended, or any succeeding appropriate legislation.

12.8 Monitoring

- 12.8.1 Timely and effective audits and inspections will be undertaken of all construction-related waste management activities. The audits and inspections will be carried out in accordance with relevant statutory controls and additional strategies and policies relevant to the management of surplus excavated materials and waste.
- 12.8.2 The SWMP will also provide a framework to record and monitor environmental performance relating to waste activities throughout the construction process. The plan will identify, measure and record the types, quantities and end-of-life processes for all waste generated; reporting and disclosing the information at regular intervals. This will include the review of the types and quantities of waste arising during the construction works against forecasts and accounting for differences recorded.
- 12.8.3 Furthermore, the main contractors will develop and maintain a register of all waste loads departing from construction sites to provide a suitable audit trail for compliance with Duty of Care, and enable effective monitoring and reporting of waste types, quantities and management processes.

13. Traffic and transport

13.1 General provisions

- 13.1.1 Effective traffic and transport management measures will be implemented during the construction phases of the Project, on or adjacent to public roads, cycle paths and public rights of way, as appropriate.
- 13.1.2 A Construction Movement Strategy will be included in the Development Consent Order (DCO) application and set out the key requirements, principles and measures for adoption. The DCO application will include a Framework Construction Transport Management Plan (CTMP) and a Framework Construction Workforce Travel Plan (CWTP). Post DCO Consent, these Framework documents will be developed into detailed management plans.
- 13.1.3 A number of off-site rail-connected logistics hub facilities will support the Construction Movement Strategy. These facilities will accommodate activities such as material consolidation, off-site manufacturing and component pre-assembly, helping to reduce construction activity and vehicle movements at Heathrow. Their rail connectivity will also support the transfer of materials from road to rail, where practicable.
- 13.1.4 Construction support sites (CSS) will facilitate early construction activities, including utility works, site establishment, site clearance and demolition. The majority of CSS will be connected to the internal haul road and construction road network to reduce the use of the public highway; however, some CSS will require temporary access via the existing public road network until the relevant works have been completed.
- 13.1.5 A Transport Management Working Group (TMWG) will be established with key stakeholders (including Heathrow, main contractors, Transport for London, National Highways and relevant local highway authorities, utility providers and emergency services), before any construction commencing, to co-ordinate the implementation and monitoring of the CTMP and CWTP. The DCO application will include proposals for the membership and terms of reference of this group.
- 13.1.6 It is anticipated that the detailed management plans will be updated on a regular basis as the construction works expand and the programme develops. The frequency and expected duration of updates will be discussed as part of the TMWG, but as a starting point it is expected to be forward looking and updated at a maximum of 12-month intervals.
- 13.1.7 For the purposes of this 2026 Public Consultation, further to this draft Code of Construction Practice (CoCP), relevant information about the Framework CTMP and CWTPs, as well as the TMWG, has been collated into the Transport Information for Consultation Report (TICR) and 'Our emerging construction transport strategy for Expansion'.

13.2 Transport Management Working Group

- 13.2.1 The TMWG will be responsible for monitoring the implementation of the detailed CTMPs and CWTPs. However, Heathrow will retain overall responsibility for the implementation and monitoring to maintain the effectiveness of all the approved CTMPs and CWTPs by the main contractors.
- 13.2.2 In the event of any disputes relating to the implementation of traffic management and other traffic related measures, the members of the working group will have the responsibility for agreeing a resolution procedure to be followed.

13.3 Construction Transport Management Plans

- 13.3.1 The Framework CTMP will provide the structure for the detailed CTMPs and set out the way in which construction traffic will be managed to reduce its associated impacts. It will be prepared in accordance with Construction Logistics Planning (CLP) Guidance (adapted from Transport for London guidance), and National Highways, Local Authority and other relevant guidance.
- 13.3.2 The Framework CTMP will include information on our approach to the following matters:
 - 1. Highway safety
 - 2. Management of deliveries to the construction site
 - 3. Practices to reduce the number of construction vehicles' movements
 - 4. Abnormal loads
 - 5. Protection of the public highway
- 13.3.3 To support safety and compliance across all construction sites, a single vehicle delivery booking and tracking system will be established to manage all vehicle movements associated with construction of the expansion. Where appropriate, this will be coordinated with vehicle movements associated with the ongoing operation of the airport. The system will:
 - 1. Retain control over logistics of the construction programme to the nominated delivery point(s).
 - 2. Provide a single information source for all stakeholders.
 - 3. Enable delivery scheduling and predictability.
 - 4. Track, monitor and report on vehicles associated with construction deliveries.
- 13.3.4 Performance indicators will support the efficient management of resources and may include transit times, on-time delivery, adherence to booking slots, and compliance with defined access and egress routes.

- 13.3.5 As set out above, the main contractors will prepare individual detailed CTMPs, substantially in accordance with the Framework CTMP, which will further describe the transport management, safety and control measures proposed during construction. This will include the following as appropriate:
1. Construction programme and phasing.
 2. Construction site locations and temporary and permanent access to the works.
 3. Permitted access routes for construction traffic set out in the DCO.
 4. Permitted access routes for abnormal loads.
 5. A list of roads which may be used by construction traffic in proximity to the site including any restrictions to construction traffic on these routes.
 6. Measures to support the safety of traffic, the public and construction staff during traffic management works and temporary traffic control measures.
 7. Procedures for the temporary or permanent closure or diversion of roads or accesses.
 8. Procedures to obtain consent to work on or over railways.
 9. Existing pedestrian, equestrian and cyclist routes, including whether the routes are used by one or more of these groups of road users.
 10. Measures to reduce construction traffic demand through consolidation of loads at source, supply chain management and off-site logistics hubs.
 11. Measures to reduce construction traffic demand during peak hours through spreading of the construction demand and measures to control access during construction working hours.
 12. Safety measures at construction site access points.
 13. The construction of new offline highways to minimise disruption to existing routes.
 14. Measures to reduce construction traffic demand through the utilisation of railhead facilities.
 15. Measures to reduce construction traffic impacts or impacts associated with over-parking on residential streets by construction workers.
 16. Measures to actively manage the impacts of construction vehicles in the vicinity of heritage assets, such as scheduled monuments and listed buildings.
 17. Monitoring and reporting requirements in relation to the CTMP.
 18. A programme of traffic management measures in line with the powers granted in the DCO.
 19. Details of the timeline of construction works and operations.
 20. Drawings depicting traffic management layouts, signing and apparatus to be implemented, including proposed routes for pedestrians, equestrians and cyclists.

- 21. The name and contact details of the main contractors' traffic safety and control officers and information and advice for the public regarding ways to raise complaints or request information.
- 22. A register of applications for consents associated with temporary traffic management measures in line with the DCO.
- 13.3.6 Main contractors will be required to meet the requirements of the CLOCS (Construction Logistics and Community Safety) standard (CLOCS, 2024) and their fleet operators will obtain accreditation to FORS (Fleet Operator Recognition Scheme).

13.4 Construction Workforce Travel Plan

- 13.4.1 Main contractors will prepare detailed CWTPs that adhere to the requirements of the Framework CWTP.
- 13.4.2 The objective of the Framework CWTP will be to support and encourage the use of sustainable, active modes of transport, reduce single occupancy car use and to reduce the impacts of workforce travel upon the local transport networks.
- 13.4.3 Travel Plan Coordinator/s (TPC) will be appointed and will be responsible for coordinating the implementation and monitoring of the Framework CWTP and main contractors' CWTPs.
- 13.4.4 The Framework CWTP and main contractors' detailed CWTPs will include information relating to the following as appropriate:
 - 1. A description of the roles and responsibilities of all parties, including Heathrow, local authorities, contractors, construction staff and other workers.
 - 2. The identification of a relevant travel plan coordinator and a description of their responsibilities.
 - 3. Relevant context plans including site activities and surrounding transport networks and their users.
 - 4. The consideration of key issues for each construction site or collection of sites.
 - 5. The methodology for surveying workforce travel patterns.
 - 6. Projected workforce trip generation during all phases of construction.
 - 7. Travel mitigation measures to reduce the impact of the construction workforce on the existing transport network.
 - 8. Limit single occupancy car journeys from the construction workforce.
 - 9. Demand management.
 - 10. The process for monitoring and reviewing the construction workforce travel patterns and the performance of the travel plan against the specified targets.

13.5 Traffic safety and control

- 13.5.1 Traffic management schemes will be designed to:
1. Accommodate the safe passage of traffic through any road or construction works.
 2. Reduce the likelihood of traffic diversion to alternative routes which may negatively impact upon the local community.
 3. Mitigate against the anticipated effects on the local community.
 4. Minimise delays and disruptions to traffic as far as reasonably achievable.
- 13.5.2 Where abnormal indivisible loads are required to be transported during the construction works, the main contractors will be required to notify the police, the highway authorities or the owners of the infrastructure.
- 13.5.3 Throughout the construction process, the relevant road authorities and National Highways will be consulted to ensure effective traffic management. Others required for consultation may include the organisers of major or significant local events and visitor attractions in the surrounding areas; and relevant organisations relating to traffic management and control measures to accommodate abnormal traffic or unusually high traffic demands.
- 13.5.4 As part of the temporary traffic management schemes, or as part of other disruption, signposting of alternative routes for currently signposted destinations and points of interest will be undertaken.
- 13.5.5 Consideration will be given to the management of vehicle movements near schools or routes to schools.
- 13.5.6 Traffic Safety and Control Officers will be appointed by the main contractors and will have a number of responsibilities relating to traffic and transport management. Responsibilities will include the following, as appropriate:
1. Consulting with relevant road authorities and National Highways to ensure effective traffic management.
 2. Overarching management and implementation of traffic management measures associated with the Project.
 3. The management of the layout of construction site access points.
 4. Ensuring that all traffic equipment is in place and operationally effective.
 5. Liaison with Heathrow, the main contractors, the appropriate authorities, the traffic safety and control officers on Project construction sites and any adjacent construction sites, and the monitoring of the traffic management measures employed.
 6. Ensuring compliance with all appropriate health and safety directives relating to operations and live traffic, together with the main contractors' Health and Safety Manager.

7. The arrangement of site inspections at regular intervals, and equipment attended to and maintained so that in the event of accidents/incidents replacement signs, cones, lights and bollards and other necessary equipment can be erected without delay.
8. Ensuring the provision of appropriate traffic and travel information to all construction workers during site inductions.
9. Ensuring communication to all construction workers of construction worker code of conduct when travelling to and from the site during site inductions, and their responsibilities in representing Heathrow in the eyes of local communities.

13.6 Temporary or permanent closure or diversion

- 13.6.1 Pursuant to the powers in the DCO, the main contractors will be able to temporarily stop up, alter or divert, streets and prevent traffic and pedestrians passing along the street if necessary for construction. In doing so, they would allow pedestrians access to their properties which abut the affected streets. Consultation will be undertaken with the relevant property owners, highway authorities and other key stakeholders before temporary or permanent closures or diversions.

13.7 Public transport, pedestrian, equestrian or cycle routes

- 13.7.1 Heathrow will minimise, where reasonably practicable, the need for and duration of the removal of public transport infrastructure or diversion of services. Alternate facilities will be provided where appropriate to limit disruption to service routes and timetables.
- 13.7.2 Where traffic management schemes are likely to impact upon the flow and mobility of buses, relevant local authorities and public transport and bus operators will be consulted through the TMWG. Appropriate measures will be implemented to mitigate disruption to bus services as far as reasonably practicable in developing the CTMPs.
- 13.7.3 The closure of pedestrian and cyclist routes will be minimised where reasonably practicable. Alternative routes will be provided for pedestrians and non-motorised users that are affected by construction works where reasonably practicable to do so.
- 13.7.4 The content in the CTMPs relating to traffic management layouts, signing and apparatus will include details of any temporary measures or signing necessary to maintain access to and signing of National Cycle Network routes and other existing routes designated for, or commonly used by, pedestrians, equestrians or cyclists.
- 13.7.5 Where new routes for pedestrians and other non-motorised users are developed as part of the Project, Heathrow will ensure the availability and suitability of these routes for use and will signpost them appropriately when they are constructed to a condition and approved as safe for use.

13.8 Measures to reduce impacts from construction traffic

- 13.8.1 Heathrow will manage construction-related deliveries and collections using a project-wide Delivery Management System (DMS). The DMS will function by scheduling and re-timing deliveries and collections to avoid, where reasonably practicable, the most congested times of the day.
- 13.8.2 On-site construction traffic routes will be provided across the construction works for use by construction vehicles, where appropriate, to minimise the need to use the public highway. To promote the use of such routes, site access points will be positioned accordingly, accounting for any essential safety considerations in the design and construction of appropriate access points.
- 13.8.3 Mud control measures will be provided at key access points and take other measures necessary to ensure that the roads, accesses and similar are not impacted by mud and other loose materials arising from the construction works.
- 13.8.4 Heathrow will assist local highways authorities and National Highways Traffic Officers in the event of a local traffic incident providing key points of contact and relaying incident-related information to construction traffic operators where reasonably practicable to do so.

13.9 Access routes for construction traffic

- 13.9.1 Access routes for construction traffic will be limited, as far as reasonably achievable, to the strategic road network and A roads. These access routes will be defined in the Framework CTMP and approved as part of the DCO. Where the construction works need to use other local roads, such as town/village centres and high streets, their use will be limited but may at times be necessary; for instance, to enable transport or delivery of locally sourced materials.
- 13.9.2 Generally, access using any other roads not covered by the Framework CTMP will be prohibited. In instances where access on lower class local roads and roads within residential areas is unavoidable/required, measures to manage such access will be implemented.
- 13.9.3 The design and construction of site access points will be completed to a suitable standard to enable the smooth access and egress of vehicles in a forward direction to limit disruption to road users due to use of the access points. The relevant roads authorities and emergency services will be consulted on the positioning of site access and egress points.
- 13.9.4 Site accesses and public roads adjacent to access points will be monitored to keep accesses and roads clean and free of obstacles.

14. Water environment

14.1 General provisions

- 14.1.1 A range of measures will be adopted during the construction phase to control the potential risks to the water environment, relating to the hydromorphology of waterbodies, flood risk, and the water quantity or quality of surface and groundwater receptors including abstractions and water resources. Specific measures relating to instream ecology and riparian ecology are covered in **Section 6**.
- 14.1.2 In developing such measures, reference will be made to policy and guidance on good practice measures including the Design Manual for Roads and Bridges (DMRB), The SuDS (Sustainable Drainage Systems (SuDS)) Manual (C753) CIRIA (2015), National Standards for SuDS (2025), and the replacement guidance series NetRegs Guidance for Pollution Prevention (GPPs).

14.2 Water efficiency

- 14.2.1 Measures to improve water efficiency during construction will be adopted, 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:
1. 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.
 2. Implementing water meters and regularly taking readings.
 3. Implementing measures to identify, minimise and prevent leakage on construction site water supply systems, such as installing leakage monitoring and alert systems.
 4. 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.
 5. On-site messaging to raise awareness and reinforce water efficient behaviour, such as through briefings and posters promoting water efficiency measures.
- 14.2.2 Measures that prioritise use of non-potable water sources will be adopted, such as rainwater harvesting and use of Heathrow's existing borehole water supplies, for on-site non-potable purposes, such as:
1. Wheel washes and dust suppression on site roads
 2. Lorry wash out
 3. Hydro-demolition with high pressure washer
 4. Construction water use
 5. Site and general cleaning (where appropriate)

6. Specialist high pressure cleaning

- 14.2.3 Water recycling techniques will be employed across all construction sites, that is in rainwater harvesting, greywater reuse, vehicle washing, wheel washes, and hydro-demolition.
- 14.2.4 Water use targets will be set, and performance monitored and reported, across all construction sites.

14.3 Construction Surface Water Management Plan

- 14.3.1 Detailed measures to be put in place during construction relating to drainage, flood mitigation and river diversions will be described in an Outline Construction Surface Water Management Plan submitted as part of the Development Consent Order (DCO) application.

14.4 Pollution control

- 14.4.1 In addition to complying with the following general good practice for chemical spillage prevention and control, pollution incident controls will be prepared and implemented as described in **Section 4.15**. This will be informed by current Environment Agency guidance on pollution prevention, incident response and environmental management.
- 14.4.2 All fuels, chemicals and oils will be stored within bunded areas in accordance with good practice guidance such as GPP 2, Above ground oil storage tanks (2017), GPP 3, Use and design of oil separators in surface water drainage systems (2022), and GPP 26, Safe storage of drums and intermediate bulk containers (2021), and the Control of Pollution (Oil Storage) (England) Regulations (2001).
- 14.4.3 Bowsers, valves and trigger guns will be protected from vandalism and kept locked when not in use.
- 14.4.4 The main contractors will ensure that all stationary plant used will be provided with measures such as drip trays to retain any leakage of oil or fuel. To prevent overflow, the contractor will empty trays at regular intervals and correctly dispose via a licensed waste disposal operator.
- 14.4.5 Fuel and chemical storage will, where reasonably practicable, be located in Flood Zone 1 and a minimum of 10m away from a watercourse and 50m from an abstraction borehole. Priority will be given to avoiding the storage of fuels and chemicals outside of Source Protection Zone (SPZ) 1 and in areas at risk of surface water or groundwater flooding. No storage or refuelling of mobile plant will take place within these buffers without prior agreement of the Environment Agency. Any storage of chemicals or fuel in SPZ 2 or 3 will be subject to a detailed risk assessment, appropriate mitigation/pollution prevention measures and Environment Agency consultation through the Pollution Incident Control Plan and through consultation and compliance with the appropriate permits/regulation depending on the location and nature of the activity.

- 14.4.6 The Environment Agency will be consulted to develop a site-wide approach to the storage of fuel and chemicals over areas of Principal Aquifer to support individual site risk assessment, and storage in these areas will be minimised where reasonably practicable. See **Glossary of terms** for zone definitions.
- 14.4.7 Mobile plant will be maintained in good working order. Larger items of plant such as excavators will undergo daily recorded inspections by a competent person (usually the operator) for any defects. Where defects are evident, the item or plant shall be removed from the site immediately and serviced or replaced as soon as possible.
- 14.4.8 Leaking or empty oil drums will be suitably contained and removed from site as soon as practicable, for disposal via an appropriately licensed waste disposal contractor.
- 14.4.9 All water runoff from designated refuelling areas will be channelled to an oil separator or an alternative treatment system before discharge.
- 14.4.10 Wheel washing will be undertaken in designated areas in accordance with GPP 13, Vehicle washing and cleaning (2017). Water from wheel washing facilities and wash down areas will be recycled or fully contained and disposed of via tanker or through connection with the foul sewer. Spill kits will be held on site with a variety of absorbent materials to be used in the event of a spill of fuel, oil or chemicals. Staff will be trained in their use, and they will be checked regularly and replaced after an event. Where reasonably practicable, spill kits will also be stored with mobile fuel bowzers.
- 14.4.11 Suitable quantities of pollution control equipment such as sorbent pads, sorbent granules, booms or similar material will be readily available at the temporary construction compounds, and on site.
- 14.4.12 Oil interceptors, if required by the relevant regulatory body or where relevant the statutory undertaker, will be used at site offices and works compounds in accordance with GPP 6, Working at construction and demolition sites (2023).
- 14.4.13 Pollution shut-off valves will be used in compounds with an established drainage network.
- 14.4.14 Any mixing and handling of wet concrete (and cement) that is required on site will be undertaken in designated areas as far as reasonably practicable, and the location and configuration of the plant will be agreed with the Environment Agency. These will be provided at least 10m from any watercourse or surface water drain, and 50m from an abstraction borehole (and not within SPZ 1 if one has been defined) to minimise the risk from pollution from highly alkaline wash water, in accordance with good practice guidance such as GPP 6, Working at construction and demolition sites (2023).
- 14.4.15 Designated areas will also be used for any washing down or equipment cleaning associated with concrete or cementing processes and facilities provided to remove sediment before disposal. Measures will be in place to control, store, recirculate and treat concrete wash water before discharge to the foul sewer (in agreement with Thames Water) or authorised waste disposal off site. Wash water from concrete and cement works will not be discharged untreated into the water environment (for

example, rivers, surface water drains and gullies) as this can have a significant impact on water quality.

- 14.4.16 Suitable measures and best practise guidance for piled foundations on historic landfill sites or within 50m of potential or known areas of land contamination are described in **Section 9.3**, including site-specific environmental risk assessment.
- 14.4.17 Management of groundwater during any piling activities will be described in the Construction Dewatering Strategy to be submitted in the DCO application.

14.5 Protection of buried infrastructure

- 14.5.1 The exact location of buried infrastructure will be established by on-site survey before relevant construction works. An appropriate protection system (such as temporary support structure, sheet piles, and installation of secant piles) will be implemented to manage any impact to the operation of the public sewer network and other buried infrastructure. The piling methodology will be developed considering such utility services.
- 14.5.2 Any buried infrastructure damaged during construction will be repaired or replaced as quickly as is reasonably practicable.

14.6 Stand-off distances from watercourses

- 14.6.1 Where works are not taking place within rivers, a stand-off distance will be implemented.
- 14.6.2 Where this is not reasonably practicable, further mitigation will be introduced to mitigate effects. This could include the use of standard sediment control measures to ensure there is no direct pathway between the construction site and the watercourse. Typical measures for working in proximity to watercourse and the floodplain will be set out in the Construction Surface Water Management Plan.

14.7 Protection of watercourses: river diversions, river and water crossings

- 14.7.1 Rivers are planned to be diverted early in the construction programme to clear the site, manage flood risk and protect river water quality. Works will be undertaken in accordance with GPP 5, Works and maintenance in or near water (2018). Methods of construction of the transfer to the new diversions from the existing channels will be discussed between Heathrow, the main contractors, the Environment Agency, Natural England, and the relevant Lead Local Flood Authority (LLFA). The Royal Parks Authority will also be consulted in respect of the Longford River.
- 14.7.2 The phased movement of rivers will take into account ecological constraints, including seasonal constraints (such as bird nesting, fish spawning) and they will be undertaken to ensure that flood risk is appropriately managed.

- 14.7.3 These measures will also facilitate ecological connectivity during the construction of river diversions.
- 14.7.4 New river channels and their riparian corridors will be managed to allow the areas to become ecologically bedded in.
- 14.7.5 Temporary diversions will be minimised as far as reasonably practicable. Diverted channels will be returned to their existing (or moved to new permanent as per the Project proposed design) channels as quickly as reasonably practicable unless there are environmental reasons to take a different route that represent a betterment relative to the baseline environment.

14.8 Groundwater control and dewatering

Groundwater control

- 14.8.1 Control of groundwater will be required in the following situations:
 - 1. To prevent an excavation situated below the water table from flooding, where required, and to ensure stability of the excavation base and side slopes.
 - 2. To enable lakes to be infilled.
 - 3. To enable the construction of subsurface structures.
- 14.8.2 Groundwater control techniques may include dewatering from excavations, lakes and tunnels; physical exclusion (for instance, utilising a slurry cut-off wall, ground freezing or grouting); pumping from sumps or wells (including wellpoints) to intercept the groundwater before it reaches the excavation, lake or tunnel (resulting in a drawdown of the water table) or by a combination of these techniques.
- 14.8.3 Methods of groundwater control and handling, capturing, controlling, treating and/or disposing extracted groundwater during construction will be developed in accordance with GPP 6, Working at construction and demolition sites (2023), and BS 6031:2009 Code of Practice for earthworks.
- 14.8.4 Detailed measures for groundwater control and monitoring will be included in a Construction Dewatering Strategy to be submitted with the DCO application and are summarised in the following paragraphs.
- 14.8.5 Groundwater control techniques will be tailored specifically to each excavation, lake or tunnel and designed to reduce the risk of groundwater flooding upgradient of any cut-off walls, with consideration of the in-combination effects of multiple excavations.
- 14.8.6 Any materials and methods used for ground treatment techniques such as grouting to control groundwater will be agreed with the Environment Agency before use, including site-specific monitoring proposals that will include groundwater quality monitoring around grouting areas.
- 14.8.7 Assessment will be made of the surrounding area potentially impacted by groundwater control techniques, and all receptors susceptible to groundwater level changes will be identified. This will include assessment of the potential impacts on

the interaction between groundwater and surface water, and potential impacts on groundwater dependent sites on abstractions.

Dewatering treatment and discharge

- 14.8.8 In relation to the dewatering of landfill voids (for non-registered, historical landfills as well as permitted ones) there will be a requirement to treat the leachate pumped from these areas in leachate treatment plants before discharge to the local sewer system.
- 14.8.9 Further work will be undertaken for the DCO application to establish the detail of these measures, including:
 - 1. Identification of the location of leachate treatment plants.
 - 2. Design principles for these plants.
 - 3. Agreement with Thames Water or the Environment Agency on the rate and quality of discharge to Thames Water sewers or the Colne Brook respectively.
- 14.8.10 The Construction Dewatering Strategy for discharging dewatered volumes during the construction phase will be developed as part of the DCO application and the detail developed in consultation with all relevant stakeholders including the Environment Agency and the relevant LLFA. The strategy will ensure no increase in flood risk during the construction phase.
- 14.8.11 Where there is the potential for existing contamination and silt content, the discharge of dewatered volumes to watercourses or the groundwater environment will not be permitted. Water abstracted from and/or during excavations will be treated to an appropriate quality. This could include the use or combination of a number of approaches such as pumping and discharge to settlement tanks or silt busters, petrol/grease or similar traps to separate out contamination and silt. The approach to silt management will be described in the Construction Surface Water Management Plan.
- 14.8.12 Discharge of treated water may be to dedicated soakaways, watercourses, foul sewers or authorised waste disposal off site. Discharges will be suspended if there are naturally occurring high flows in the river or sewer resulting from local rainfall events. Site specific measures will be developed to detail how water will be stored on site during more extreme events.
- 14.8.13 Water abstracted from and/or during excavations will either be kept entirely separate from surface water run-off arising from outside of excavations (separate systems), or if managed in combined systems, these will be designed specifically to accommodate attenuation storage and treatment facilities from both sources of water (rainfall and dewatering) to ensure neither source would compromise the others effectiveness during either extreme rainfall events, or high water table/periods of high groundwater ingress.

14.9 Surface water management

- 14.9.1 Surface water run-off from construction sites will be managed to avoid any increase in flood risk downstream and to protect downstream water quality.
- 14.9.2 The Environment Agency and LLFAs will be consulted in relation to measures to contain and manage surface water runoff from the construction sites. Measures to be implemented will be incorporated into the Outline Construction Surface Water Management Plan and will include the following, as appropriate:
1. The provision of dedicated temporary construction site surface water drainage systems including Sustainable Drainage Systems (SuDS) with appropriately sized attenuation and treatment facilities such as attenuation basins and/or ponds, settlement or detention basins, and hydrocarbon interceptors, for each construction site as necessary.
 2. Implementation of additional measures, as necessary, to protect the water environment include:
 - a. The design of the temporary construction site surface water drainage systems will draw on Defra's Non-statutory technical standards for Sustainable Drainage Systems (with due regard to the short lifetime and limited accessibility of the systems).
 - b. Work will comply with BS 6031:2009 Code of Practice for earthworks, BSI in relation to the general control of site drainage. Measures to be implemented will also be determined with due regard of good practice guidance, including the National Standards for SuDS (2025), current DMRB, The SuDS Manual (C753) (CIRIA, 2015) (in particular Section 3 (designing for quantity), Section 4 (designing for quality) and Section 31 (construction)), Control of water pollution from construction sites: Guidance for consultants and contractors (C532) (CIRIA, 2001) and relevant good practice GPP guidance.
 - c. Where site conditions and the construction phasing permits, the temporary construction drainage attenuation and treatment infrastructure will be located outside of the fluvial floodplain. Exceptions will include where the construction site itself was located in the fluvial floodplain whereby site-specific considerations would apply, but this will be minimised as far as reasonably practicable.
 - d. The relevant temporary construction site drainage measures will be completed before the commencement of relevant earthwork operations and will be retained until the drainage system of the completed development is fully operational, or site restoration works are completed.
 - e. Water abstracted from and/or during excavations will either be kept entirely separate from surface water run-off arising from outside of excavations (separate systems), or if managed in combined systems, designed specifically to accommodate attenuation storage and treatment facilities from both sources of water (rainfall and dewatering) to ensure neither source would compromise the others effectiveness during either extreme rainfall events, or

high water table/periods of high groundwater ingress. Both approaches will be subject to consultation with the Environment Agency and LLFAs.

Sediment control

- 14.9.3 Specific measures to help to control sediment will be consulted on with the Environment Agency; measures for each construction site will be finalised at the detailed design stage.
- 14.9.4 The following general measures will be implemented to limit and manage sediment erosion, control sediment mobilisation and entrainment, and manage sediment transport and deposition (either on land or in watercourses):
1. Management of erosion – source control:
 - a. Areas of exposed ground and stockpiles will be minimised where reasonably practicable to reduce silty runoff. Geotextiles will be used as necessary to shield stockpiles, and stockpiles to be left for more than three months will be seeded.
 - b. Manageable parcels of land only to be cleared at a time (for instance, until stabilised) therefore minimising supply of fine-grained sediment into adjacent watercourses.
 - c. Earth movement will be controlled to reduce the risk of silt combining with the site run-off.
 2. Minimisation of the movement of entrained sediment:
 - a. Mud will be controlled at site entry and exit points using wheel cleaning areas and road sweepers as appropriate.
 - b. Tools and plant will be washed out and cleaned in designated areas within the construction compounds where runoff is isolated for treatment before discharge.
 - c. Cut-off ditches will be installed around excavations, exposed ground and stockpiles to prevent the uncontrolled release of sediments from the site. Vegetated soakaways will be used where reasonably practicable to encourage infiltration.
 - d. Where works are adjacent to watercourses/water bodies, appropriate restrictions and barriers will be installed along their edge to prevent damage to riparian vegetation and to manage/minimise the pathway for untreated silt laden runoff to enter the watercourse. Measures could include the use of straw bale traps, silt fences, gravel and geotextiles as required on a site-specific basis along drains, ditches and watercourses in the vicinity of earthworks.
 3. Treatment of sediment entrained run-off: Provision will be made on site for the settlement of sediment; this will include adequate provision for the removal of sediment from site run-off. Treatment could include settlement tanks/ponds, combined with additional polishing technologies, such as silt busters as required. See also **Section 14.8**.

14.10 Control and management of foul drainage

- 14.10.1 Foul water and sewage effluents from site facilities will be managed and disposed of by the main contractors. Where a discharge to an existing foul sewer is not feasible, alternative arrangements will be implemented in accordance with the guidance outlined in GPP 4, Treatment and disposal of wastewater where there is no connection to the public foul sewer (2017). Such alternatives will only be considered where a connection to the existing foul sewer network is not practicable. The following measures may be implemented, where appropriate:
1. Containment of foul water by temporary foul drainage facilities and disposal off site by a licensed contractor.
 2. Appropriate treatment and discharge to land via a drainage field or soakaway with prior authorisation from the Environment Agency.
 3. Appropriate treatment and discharge to a watercourse, drain, or surface water sewer with prior authorisation from the Environment Agency. Prior authorisation will be obtained for treated foul drainage discharge to a surface water sewer from Thames Water, pursuant to the DCO.
- 14.10.2 Risk assessments and detailed method statements will be approved by the Environment Agency for any non-mains foul arrangements. Non-mains discharge of foul sewage will not be permitted in SPZ 1.
- 14.10.3 The main contractors will comply with any measures specified by the permits that will be sought for any non-mains foul arrangements.

14.11 Flood risk management during construction

Re-provision of lost flood plain

- 14.11.1 Flood plains will be maintained and/or compensatory flood storage will be provided before any loss of flood plain is incurred as a result of the Project. The site-specific approaches for the provision of lost flood plains will be provided in the DCO application. This will include the detailed design and location of compensatory flood plain storage areas.
- 14.11.2 Each flood storage site will comprise of an inflow control structure and outflow control structure. These structures will be passive where reasonably practicable. Any hydraulic structures in rivers will be passable by fish to facilitate passage up and downstream. This will either be through the design of the structure itself, or through the provision of a fish pass. No fish passes will be provided into flood storage areas.
- 14.11.3 The arrangement of all flood storage sites will continue to be optimised as the design is developed. This will include testing of the operation at a range of flood events and agreement of detailed design with the Environment Agency and LLFA in line with the DCO.

Flood storage areas over landfills

- 14.11.4 Where flood storage is proposed on landfill sites, impermeable liners will be provided. The design will consider hydraulic uplift to the liner from local groundwater, and how any pressure relief wells would keep separate landfill water and flood water. Appropriate ground bearing liner design will be carried out based on the findings from site-specific ground investigations.
- 14.11.5 If the landfills remain in place, the existing infrastructure (such as cut off walls and gas wells) will be maintained or replaced and not disturbed where reasonably practicable.
- 14.11.6 The detailed design of any flood storage areas over landfill will be agreed with the Environment Agency in line with the DCO.

Flood Management Plans

- 14.11.7 Part of the planning for severe weather events (**Section 4.17**) will comprise the development of flood management measures to be incorporated into the main contractors' Environmental Management Plans (EMP) (identifying the measures that will be in place and actions to be taken in the event of a flood event during construction). These will outline how to protect staff, hazardous or vulnerable equipment and minimise the risk of pollution. The plans will cover a broad range of topics including all construction sites and areas located within Flood Zone 2 and 3, areas vulnerable to groundwater flooding, and other flood risk sources such as sewer flooding and reservoir flooding. They will be drafted in consultation with the Environment Agency, LLFAs and other relevant stakeholders, which will involve awareness and adoption of copies of the relevant regulatory bodies flood risk management plans, maps and strategies. These will act as a point of reference for the development of specific construction site flood mitigation plans by the main contractors, and where reasonably practicable, 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.
- 14.11.8 The main contractors will use an appropriate short-to-medium weather forecasting service and register with the Environment Agency's Floodline, providing a flood risk warning to flood risk areas within the Project.
- 14.11.9 The emergency procedures (see **Section 4.14**) and pollution incident and control plan (see **Section 4.15**) will include appropriate responses in the event of a flood event. This will include contact details for further help in the event of flooding and emergency flood plans, considering all sources of flooding, will be developed if required.

Consideration of flood risk in the approach to storage and works during construction

- 14.11.10 Mapped locations for the safe storage of hazardous materials will be provided within the main contractors' Environmental Management Plans (EMP) and will avoid Flood Zones 2 and 3. For all temporary and permanent works, a risk-based precautionary approach will be adopted, using the concept of the source to pathway to receptor theory.
- 14.11.11 Where the works phasing or site conditions dictate that stockpiles, accommodation, temporary facilities, machinery and plant are located within Flood Zone 2 or 3 areas or areas at significant risk of flooding from other sources including groundwater, temporary floodplain compensation will be required. Importantly, if soil and materials are to be temporarily stored within Flood Zone 2, they should be positioned to avoid obstructing flow as much as reasonably practicable.
- 14.11.12 The main contractors will undertake construction activities while being mindful of impacts to flood risk. A number of measures may be implemented to avoid significant impacts to flood risk including:
1. Removing obstacles, plant and debris from watercourse pathways.
 2. Works will not be carried out during flood flows to avoid undue erosion of the river beds and/or banks, to protect construction personnel and plant, and to ensure that flood conveyance is not reduced.
 3. Temporary bridges will be designed to ensure an appropriate level of flood conveyance in the construction phase and will be removed as soon as is reasonably practicable.

14.12 Management of impact on abstraction points

- 14.12.1 Existing abstraction points comprise licensed, deregulated and private water supplies. The risk of pollution of groundwater and surface water and impacts on water resources will be managed by the general good practice measures described in this document and the embedded measures to be described in the Outline Construction Surface Water Management Plan.
- 14.12.2 To limit and manage residual risks that water quality and/or availability may deteriorate at existing abstraction points during the construction works, the following measures will be applied:
1. Existing abstractors will be consulted on the measures in place to avoid or manage loss or interruption of supply, or provision of alternative supplies.
 2. A targeted risk assessment will be undertaken by the main contractors for each abstraction point and a monitoring plan developed and implemented to include a period of baseline monitoring appropriate to the timing and type of construction nearby, in discussion with the abstractor. Monitoring may include groundwater

levels, flow and water quality as appropriate and will have particular emphasis on the risk of impacts to aquifers and water supplies.

3. Where monitoring data identifies adverse effects on water quality or availability as a result of the works, the abstractor (licence holder and operator) and the Environment Agency will be contacted as soon as reasonably practicable. Appropriate emergency measures and remediation will be put in place by the main contractors, in consultation with the Environment Agency, to address the adverse impact, including provision of an alternative water supply by bottle and/or tanker as a temporary measure as appropriate to affected parties. Further monitoring and remediation will be undertaken as appropriate.

14.13 Monitoring

- 14.13.1 To limit and manage residual risks that dewatering and other construction activities may affect groundwater and surface water quality and quantity, a surface water and groundwater monitoring programme will be implemented to define baseline conditions and trigger levels using a risk-based approach. The monitoring network for the baseline pre-construction period will provide the basis for the framework that will be used to monitor the effectiveness of mitigation in the construction and operation phases of the development.
- 14.13.2 This monitoring programme will include groundwater levels, water quality and flows in watercourses that are likely to be affected by construction works and will be developed in consultation with the Environment Agency, Natural England and other stakeholders. Monitoring boreholes will be installed in both the deep Chalk aquifer and the superficial gravel aquifer. Initial proposals for monitoring will be documented in the Construction Surface Water Management Plan.

15. Glossary of terms

Term/abbreviation	Description
Abstraction	Removal of water from surface water or groundwater, usually by pumping.
ACM	Asbestos -containing materials
ACOP	Approved Code of Practice
Airfield	An airfield is a designated site where aircraft operate, with basic supporting infrastructure. This is compared to a fully equipped airport.
Ambient Noise Level	The prevailing level of ambient noise (i.e. everyday continuous sounds) present in an environment, at a given time, generally excluding atypical or short-term disturbances.
Ancient Woodland	Woodland that has existed continuously since at least 1600 AD, valued for its irreplaceable habitats, soils, and biodiversity.
Aquifer	A large body of underground rock, gravel, sand or silt that holds and allows the flow of groundwater through it.
Attenuation basin	A purpose-built surface water management feature designed to temporarily store excess rainfall runoff and release it at a controlled rate, thereby reducing the risk of flooding, erosion, and overloading of downstream drainage systems and watercourses.
BPM	Best Practicable Means Defined in the Control of Pollution Act 1974 and Environmental Protection Act 1990 as 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'.
BSI	British Standards Institute. Refer to https://www.bsigroup.com/en-GB/ for further information.
Bund	A landscaped bank of earth, used to screen views, reduce noise, or hold back water.
CAR	Control of Asbestos Regulations 2012. Refer to https://www.legislation.gov.uk/uksi/2012/632/contents for further information.
CAR-SOIL™	Control of Asbestos Regulations 2012: Interpretation for Managing and Working with Asbestos in Soil and Construction & Demolition materials: Industry Guidance (shortened name CAR-SOIL™). Refer to https://claire.co.uk/projects-and-initiatives/asbestos-in-soil.html for further information.
CCTV	Closed circuit television
CD&E	Construction, demolition and excavation
CES	Construction Electricity Supply

Term/abbreviation	Description
Circular Economy	The circular economy is an economic model that aims to eliminate waste and promote sustainability by keeping materials and resources in use for as long as possible. It focuses on reuse, repair, recycling, and regeneration, creating a closed-loop system that minimises resource consumption and environmental effect.
CIRIA	A not-for-profit Construction Industry Research and Information Association. Refer to https://www.ciria.org/ for further information.
CL:AIRE	Contaminated land: applications in real environments – an organisation committed to raising awareness of practical sustainable remediation technologies.
CLOCS	Construction Logistics and Community Safety scheme. Refer to https://www.clocs.org.uk/ for further information.
CLP	Construction Logistics Planning guidance. Refer to https://content.tfl.gov.uk/clp-guidance-clocs.pdf for further information
CNCF	Construction Noise Consents Framework
CNTP	Construction Noise Technical Panel
CoCP	Code of Construction Practice The code sets out the standards and procedures to which developers and contractors must adhere to when undertaking construction of major projects. This will assist with managing the environmental impacts and will identify the main responsibilities and requirements of developers and contractors in constructing their projects.
Connectivity (Biodiversity specific)	The degree to which habitats are linked, allowing movement of species between them.
Conservation	The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.
Considerate Constructors Scheme	Considerate Constructors Scheme A national scheme in the UK that promotes good practice on construction sites through its codes of considerate practice. The codes commit registered sites to be considerate, as well as being respectable neighbourhoods, environmentally conscious, responsible and accountable. Refer to www.ccscheme.org.uk for further information.
Construction/Construction activities	All construction related activities including enabling works, utilities, demolition, transport and construction.
Construction Plant	Construction plant includes all machinery, equipment and tools required to undertake demolition and construction works, such as excavators and cranes.
Construction site	An area identified for permanent land use where construction activities are being carried out (for example, construction of a new road).

Term/abbreviation	Description
Construction support site	An area identified for temporary land use where activities or functions supporting the main construction are being carried out (for example, concrete production for the construction of a road).
Contaminated land	Land that contains substances in, on or under it which have the potential to cause significant harm to human health, property, controlled waters, ecological systems, or the wider environment, either directly or through migration pathways.
CTMP	Construction Transport Management Plan The document that sets out the measures and procedures for managing construction-related vehicle movements and transport activities in order to minimise impacts on the surrounding highway network, communities and transport users during the construction phase.
CWTP	Construction Workforce Travel Plan The document that sets out the measures and procedures for managing construction workforce travel in order to promote sustainable modes of transport and minimise impacts on the surrounding highway network, communities and transport users during the construction phase.
DCO	Development Consent Order This is the means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects, under the Planning Act 2008.
DCO application or Development Consent Order application	Development Consent Order application An application for consent to undertake a Nationally Significant Infrastructure Project (NSIP) is made to the Planning Inspectorate who will consider the application and make a recommendation to the Secretary of State, who will decide on whether development consent should be granted for the Project.
Decibel (dB or dBA)	Units describing sound level or changes of sound level. Expressed as dBA when it relates to the A-weighted scale.
Defra	Department for Environment, Food and Rural Affairs
Designated Heritage Assets	A heritage asset that has been formally identified and protected through statutory designation under relevant legislation because of its archaeological, architectural, artistic, cultural or historic significance. Designated Heritage Assets include Listed Buildings, Scheduled Monuments and Conservation Areas.
Dewatering	The removal or control of surface water or groundwater from a site, excavation, or soil to primarily enable construction, activities to take place.
DfR	Deposit for Recovery
Disaster	A natural occurrence leading to serious damage on receptors, either immediate or delayed. Note 1: The 2014/52/EU Directive Para 14 refers to man-made disasters and the European Commission Document A Community Approach on the

Term/abbreviation	Description
	Prevention of Natural and Man-made Disasters (February 2009). The remainder of the Directive refers only to disasters or natural disasters. Our interpretation is that the concept of man-made disasters is therefore included in the definition of 'major accidents' in the 2014/52/EU Directive. Note 2: This either arises from (directly or indirectly) or has potential to impact upon the development. Examples: Hurricane, landslide, extreme seismic activity, malicious act by third party.
DMS	Delivery Management System
Draft CoCP	Draft Code of Construction Practice
Drainage	The system by which water is collected, conveyed, and discharged from an area. This can refer to both surface water runoff and foul (waste) water flows.
Economic Development Framework	The Economic Development Framework in the UK is a strategic approach aimed at promoting economic growth and poverty reduction. It emphasizes the importance of institutions that encourage private investment, stable business conditions, and responsible governance.
EIA	Environmental Impact Assessment The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. The EIA regulations require that the effects of a project, where these are likely to have a significant effect on the environment, are considered in the decision-making process for the project.
EICD	Environmental Information for Consultation Document
Embedded measures	Embedded measures are measures to prevent, avoid, minimise, offset or mitigate environmental effects that are integral to the built infrastructure design or management activities of our proposals during construction and operation. As they are integral to our proposals, their benefits are assumed when predicting the Project's likely significant environmental effects.
EMOOA	Excavated Material Off Site Options Assessment
EMP	Environmental Management Plan
EMS	Environmental Management System
Enhancement	Measures that provide a net benefit to biodiversity beyond mitigation or compensation.
Environment Agency (EA)	A non-departmental public body, with responsibilities relating to the protection and enhancement of the environment in England.
EOC	Explosive ordnance clearance
EPS	European Protected Species Plant and animal species protected under legislation due to their conservation importance, including protection from disturbance, harm or destruction of habitats.

Term/abbreviation	Description
ES	Environmental Statement The written output presenting the full findings of the Environmental Impact Assessment.
Euro class standards	A standard defining the acceptable limits for exhaust emissions of new vehicles sold in EU and EEA member states.
European Protected Species	Animals and plants given the highest level of legal protection, such as certain bats, great crested newts and otters. Work that affects them needs a licence.
European Site	A site designated under the Habitats or Birds Directives (e.g. SAC, SPA, Ramsar site).
Flood storage	A structure that holds floodwater during times of flood and returns it to a river at a controlled rate, once the flood peak has passed.
Flood Zones	A geographical area defined according to its probability of flooding from rivers or the sea, as identified by the Environment Agency.
Flood Zone 1	A flood zone defined by the Environment Agency within which the land is assessed as having <0.1% chance of flooding from rivers or from the sea in any year.
Flood Zone 2	A flood zone defined by the Environment Agency within which the land is assessed as having a 0.1% - 1% chance of flooding from rivers, or a 0.1% – 0.5% chance of flooding from the sea in any year.
Flood Zone 3	A flood zone defined by the Environment Agency within which the land is assessed as having >1% chance of flooding from rivers or >0.5% chance of flooding from the sea in any year.
Floodplain	This area comprises land where water from rivers or the sea has to flow or be stored in times of flood. In the UK, the functional floodplain usually comprises land having a 3.3% or greater annual probability of flooding, or land that is designed to flood.
FORS	Fleet Operator Recognition Scheme A voluntary accreditation scheme encompassing safety, fuel efficiency, improved operations and vehicle emissions. Refer to https://www.fors-online.org.uk/cms/ for further information.
Foul Water	Wastewater generated from buildings and human activities, including water from toilets, kitchens, bathrooms and industrial processes, which contains contaminants and pollutants. It is distinct from surface (rain) water and is typically conveyed via a foul sewerage system to a wastewater treatment works for treatment before discharge to the environment.
GHG	Greenhouse Gas A gas that contributes to the greenhouse effect by absorbing and emitting infrared radiation, including carbon dioxide, methane and nitrous oxide.
GPP	Guidance for Pollution Prevention Guidelines

Term/abbreviation	Description
GLAAS	Greater London Archaeology Advisory Service
Green Loop	The Heathrow "Green Loop" would comprise a 20km (12.5-mile) network of continuous footpaths and cycleways designed to encircle the expanded airport
Green Space	Land that is predominantly vegetated, such as parks, gardens, playing fields, woodlands, and natural areas, providing recreational, amenity, and environmental benefits.
Groundwater	Water that is stored beneath the ground surface in the pores and fractures of soil, sand and rock formations.
Hazardous waste	Any waste material that poses a risk to human health or the environment due to its toxic, reactive, corrosive, or flammable properties.
Heathrow	Brand name for Heathrow Airport, scheme promoter and/or its designated contractors.
Heathrow Airport Limited	The applicant organisation preparing and submitting the DCO application.
Heathrow expansion	Outlines a £33 billion privately funded investment that will deliver a third runway and new terminals at Heathrow. This investment will boost domestic and international flights, strengthen the UK's global connectivity, and attract trade, tourism, and investment.
HEICEB	The Heathrow Expansion Independent Community Engagement Board (HEICEB) is an independent body set up to meet the Community Engagement Board requirements of the Airports National Policy Statement (ANPS) June 2018. The purpose of the HEICEB is to act as the key focal point for engagement with the local community which includes members of the public, local interest groups, local authorities in the vicinity of the Airport and passengers.
Heritage Asset	The Airport National Policy Statement (ANPS) defines heritage assets as <i>'those elements of the historic environment that hold value to this and future generations because of their historic, archaeological, architectural or artistic interest'</i> . They may be <i>'buildings, monuments, sites, places, areas or landscapes, or any combination of these.'</i> Heritage assets are either designated or non-designated.
HEMS	Historic Environment Management Strategy
HGV	Heavy Goods Vehicles
Hibernacula	Shelter occupied during the winter by a dormant animal (such as an insect, snake, bat, or badger)
Historic environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscape and planted or managed flora.

Term/abbreviation	Description
Historic Landscapes	Historic landscapes are areas of past land use that retain their historic character and may have associated individual heritage assets or archaeological features.
HSE	Health and Safety Executive
Hydromorphology	The shape and physical characteristics of rivers ⁵ , estuaries ⁶ and open coastlines.
IAQM	Institute of Air Quality Management – A professional body for air quality professionals, providing timely and useful guidance on matters affecting air quality.
Impermeable	A surface or material that does not allow water to pass through it, preventing infiltration into the ground. An example is a tarmacked pavement.
Invasive Non-Native Species	Non-native species that have been introduced outside of their natural range due to human activity and have negative impact on the environment.
ISEP	Institute of Sustainability and Environmental Professionals
ISO 14001	A standard that outlines the criteria for an organisation to adhere to a certified environmental management system.
LAeq	Equivalent continuous sound level. The measure used to describe the average sound level experienced over a period of time (usually 16hr for day and 8hr for night) resulting in a single decibel value. Leq is expressed as LAeq when it refers to the A-weighted scale.
Land Contamination	A general term to describe land which may have been affected by substances for example metals, oils and asbestos as a result of its current or past uses, waste disposal or accidental leaks and spills.
Landscape Character	The distinct and recognisable pattern of elements, such as landform, vegetation, settlement and land use, that give an area its sense of place.
LCRM	Land Contamination Risk Management
LDV	Light Duty Vehicle
Listed Buildings	Structures, objects or buildings that have been assessed as being of national importance in respect of their special architectural or historic interest and have been included in the National Heritage List for England, and which are treated as designated heritage assets for the purpose of the planning system. The listed building designation extends to the whole of the building or structure (internal and external), as well as permanently fixed objects or structures and relevant curtilage structures (subject to specific criteria).
LLFA	Lead Local Flood Authority Responsible for managing the risk of flooding from surface water, groundwater, and ordinary watercourses within its administrative area.
LNR	Local Nature Reserve

⁵ <https://www.designingbuildings.co.uk/wiki/River>

⁶ <https://www.designingbuildings.co.uk/wiki/Estuary>

Term/abbreviation	Description
	A designation made by local authorities to conserve wildlife, habitats and geological features whilst providing opportunities for public enjoyment and education.
LWS	Local Wildlife Site A non-statutory local designation identifying sites of substantive biodiversity value, protected through local planning policy rather than legislation.
Made ground	Made ground is land where natural and undisturbed soils have largely been replaced by man-made or artificial materials. It may be composed of a variety of materials including imported natural soils and rocks with or without residues of industrial processes (such as ash) or demolition material ⁷ (such as crushed brick or concrete).
Main contractors	The main contractors on the construction site who holds responsibility for planning, management and coordinating themselves and/or all other contractors working on the site, the works or any other contractor directly employed by Heathrow to carry out any construction works related with this Project.
Major Accident	An occurrence resulting from an uncontrolled event caused by a man-made activity or asset leading to serious damage on receptors, either immediate or delayed. Note 1: This either arises from (directly or indirectly) or has potential to impact upon the Project under assessment. This includes the third runway and associated activities and features, during both construction and operation. Note 2: Major accidents include both those sourced at the Project under assessment and those sourced externally but interacting with it. Examples: Structural failure, excavation collapse or crane topple leading to significant injuries/fatalities or damage to the built environment (for example, ancient monument), or to sensitive habitat (for example, ancient tree), or release of a substance hazardous to the environment (such as diesel), leading to significant and prolonged damage to the environment.
Mitigation	Measures designed to avoid, reduce or manage the impacts of a project. These may include measures identified through the Environmental Impact Assessment, as well as measures required through statutory obligations, planning requirements or other project commitments.
MMS	Materials Management Strategy A document that sets out how excavated materials (such as soil and aggregates) will be managed, reused, treated or disposed of during construction, in a way that is environmentally sustainable and legally compliant. It includes an outline of the processes that will be used to classify material types and their suitability for reuse as part of a construction project and the regulatory frameworks under which that reuse would be controlled.
Monitoring	A planned and systematic programme of measurement, observation and reporting used to track environmental conditions or project effects over time. It helps assess compliance with requirements, limits or forecasts.

⁷ <https://www.designingbuildings.co.uk/wiki/Materials>

Term/abbreviation	Description
National Highways	The government owned company responsible for operating, maintaining and improving England's Strategic Road Network (SRN), including motorways and major A-roads.
National Policy Statements	National Policy Statements are produced by government. They give reasons for the policy set out in the statement and must include an explanation of how the policy accounts for government policy relating to the mitigation of, and adaptation to, climate change.
Natural England	The government advisor for the natural environment in England.
NHS	National Health Services The NHS is the collective term for the publicly funded healthcare systems in the United Kingdom.
Noise Insulation	Measures to reduce the transmission of external noise into a building by improving the sound insulation performance of the building elements such as windows, roofs and doors.
Noise Insulation Policy	It provides an outline of the proposed noise insulation schemes that will be provided to address noise from aircraft movements in the air and on the ground, road, rail and construction noise associated with the Project.
Non-designated heritage assets	A heritage asset identified as having heritage significance, but which is not formally designated under relevant legislation.
Non-hazardous Waste	Waste materials that do not pose significant risks to human health or the environment due to toxic, flammable, corrosive, or reactive properties. Types of non-hazardous waste include glass, packaging, timber, concrete debris, scrap metal, plastics.
Non-motorised user	Any transport network user travelling by non-motorised means, including walking, cycling and horse-riding.
Notable species	A species that is ecologically significant in terms of conservation or policy.
NRMM	Non-Road Mobile Machinery
Open Space	All open space of public value, including not just land, but also areas of water (such as rivers, canals, lakes and reservoirs) which offer important opportunities for sport and recreation and can act as a visual amenity.
Peak construction	The busiest point in the construction programme, when the number of workers needed is expected to be highest.
Planning Act 2008	The legislative framework for the process of approving major new infrastructure projects.
PM10/PM2.5	Airborne particulate matter with diameters of 10 micrometres or less (PM ₁₀) and 2.5 micrometres or less (PM _{2.5}), used as key indicators of air quality and potential health impacts.
PPV	Peak particle velocity

Term/abbreviation	Description
Principal Aquifer	A subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater. They may support water supply and/or river base flow on a strategic scale and are considered by the Environment Agency to be critical to existing or future water supplies. In most cases, Principal aquifers are aquifers previously designated as major aquifers.
Public Rights of Way	A public right of way is a right by which the public can pass along linear routes over land at all times. Although the land may be owned by a private individual, the public have a legal right across that land along a specific route.
Quality of life	A broad term used to describe the wellbeing of individuals, families and communities. It can be shaped by factors such as health, safety, housing, work, transport, access to nature, social connections and environmental conditions.
Ramsar site	A wetland of international importance, protected under an international agreement, usually for the birds and other wildlife it supports.
Receptor	A component of the natural or built environment (such as a human being, water, air, a building or a plant) that is affected by an impact of construction works.
Riparian	Relating to or living or located on the bank of a natural watercourse (such as a river) or sometimes of a lake
RPA	Root Protection Area
RWMS	Resource and Waste Management Strategy
Scheduled Monuments	Nationally important monuments and archaeological sites which have been identified and included in the 'Schedule' pursuant to the Ancient Monuments and Archaeological Areas Act 1979, and which are also listed in the National Heritage List for England. These designated heritage assets can include standing stones, burial mounds, the remains of monastic buildings etc. They can be above or below ground and can consist of remains as well as structures that are still in use.
Scrub	Land covered with shrubs, bushes and small trees, which provides cover and food for wildlife.
Section 61	Section 61 of the Control of Pollution Act (1974); establishing procedures for seeing and obtaining local authority consent to measures for the control of noise and vibration of construction sites.
Severance	Relates to how traffic levels or highway layouts can affect how people move between places, particularly where busy or wide roads make crossing less convenient or comfortable
Significant effect	An environmental effect that will be considered by the Government when coming to a decision on whether the DCO Project should be granted consent. It can be positive or negative and is determined by considering the

Term/abbreviation	Description
	combination of the sensitivity of an environmental receptor, and the magnitude of change it would experience because of the DCO Project.
SPZ	Source Protection Zone An area defined around a groundwater source used for public drinking water supply, where activities are managed to protect water quality from pollution risks. The zones show the risk of contamination from any activities that might cause pollution in the area. They are used to set up pollution prevention measures and to monitor the activities of potential polluters. Three main zones are defined (Inner Zone 1, Outer Zone 2 and Total Catchment Zone 3) and a fourth Zone of Special Interest (Zone 4) is occasionally applied.
SRM	Security Risk Management
SSSIs	Sites of Special Scientific Interest A nationally designated site protected for its ecological or geological importance.
SSWSI	Site Specific Written Schemes of Investigation
Stakeholder	Any person or organisation with an interest in the Project and can either affect, or be affected by, the policies, objectives and outcome.
SuDS	Sustainable Drainage Systems Sustainable Drainage Systems are a form of surface water management which mimics the natural drainage regime in order to attenuate, treat and discharge surface water runoff from a site. They are considered to be more sustainable than traditional piped approaches to surface water drainage.
SWMP	Site Waste Management Plan
The Project	The overarching Heathrow expansion. A structured, timebound programme of work designed to deliver specific planned improvements to Heathrow's capacity, infrastructure, and operational capability.
The scheme	The structured approach, mechanism, or framework through which the project's aims will be delivered.
TMWG	Transport Management Working Group
Townscape	In a heritage context, townscape refers to the overall character and appearance of an urban area, including its buildings, streets, spaces, and layout, and the way these elements combine to form the historic identity, setting, and experiential qualities of a place.
TPC	Travel Plan Coordinator
ULSD	Ultra-Low Sulphur Diesel
UXO	Unexploded ordnance

Term/abbreviation	Description
	Refers to explosive weapons, such as bombs, shells, grenades or other munitions, that were fired, dropped or placed but failed to detonate as intended.
Vibration	Vibration is defined as a repetitive oscillatory motion. Vibration can be transmitted to the human body through the supporting surfaces; the feet of a standing person, the buttocks, back and feet of a seated person or the supporting area of a recumbent person. In most situations, entry into the human body will be through the supporting ground or through the supporting floors of a building. Vibration is often complex, containing many frequencies, occurring in many directions and changing over time. Experience shows that disturbance or annoyance from vibration in residential situations is likely to arise when the magnitude of vibration is only slightly in excess of the threshold of perception.
VOC	Volatile Organic Compounds
Vulnerable groups	Vulnerable groups are sensitive to changes in a health determinant in a given context. Vulnerability includes factors related to young or old age, existing health status, low-income level, social disadvantage and geographic proximity to impacts, such as children and young people, ethnic minorities, people with disabilities, people with existing poor health, people who are homeless, people living in poverty, those who experience social disadvantage, those struggling with addiction and substance abuse, and isolated older people.
Water Quality	The condition of water based on chemical, physical, and biological characteristics.
Watercourses	Natural and man-made channel through which water flows. It includes features such as rivers, streams, brooks, canals, ditches and similar channels, whether they are dry for part of the year or continuously flowing.
WSI	Written Scheme of Investigation A programme for archaeological investigation works.
ZoI	Zone of Influence The geographical area within which a project may give rise to environmental effects. The extent of the Zone of Influence varies by environmental aspect and is determined by the nature, scale and pathways of potential effects, including direct, indirect, secondary and cumulative effects.

