

City Airport Development Programme (CADP1)

Condition 88: Construction Environmental Management Plan



December 2019
Version 2



CITY AIRPORT DEVELOPMENT PROGRAMME (CADP 1)

PRE-COMMENCEMENT CONDITION 88 UPDATED CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

DECEMBER 2019
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Our Ref: JCG22506

RPS

140 London Wall
London
EC2Y 5DN

Tel: 020 7280 3200

Fax: 020 7283 9248

Email: rpslp@rpsgroup.com



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1 INTRODUCTION

1.1 The City Airport Development Programme (CADP 1) planning application (13/01228/FUL) was granted planning permission by the Secretaries of State for Communities and Local Government and Transport in July 2016 following an appeal and public inquiry which was held in March/April 2016.

1.2 Condition 88 requires that:

“Prior to Commencement of Development a Construction Environmental Management Plan (CEMP) shall be submitted to and approved in writing by the Local Planning Authority.

The CEMP shall be implemented as approved.

The CEMP shall include (but not be limited to):

a) A Construction Noise and Vibration Management and Mitigation Strategy (CNVMMS);

b) An Air Quality Construction Management and Mitigation Strategy (AQCMMMS);

c) Details of Wheel washing equipment

The CEMP shall be in accordance with the environmental standards, mitigation measures, embedded mitigation measures, requirements, recommendations and methods of implementing the Development contained in the Updated UES, appendices and addenda therein relevant to the Development.

Reason: To ensure a satisfactory standard of Development and to safeguard the amenities of the surrounding area.”

1.3 The CNVMMS ([updated to account for the 2019 Revised Construction Phasing Plan](#)) is contained within Appendix A to this CEMP, and details of potential wheel washing equipment are described in Section 3: Construction Details.

1.4 [Upon review, it has been determined that the AQCMMMS remains valid and does not need to be updated on account of the 2019 Revised Construction Phasing Plan. Therefore, the version of this document which was submitted to and approved by LBN with the previous Condition 88 report \(18/01312/AOD\) remains valid. A summary of the main requirements of the AQCMMMS is provided in section 8 of this report.](#)

1.5 The Airport submitted a Construction Phasing Plan to LBN pursuant to Condition 4 of the CADP1 permission in February 2017. It was proposed to build out CADP1 as a single uninterrupted period of construction over 5 years split into two distinct phases. Consistent with terminology used in the UES, the two phases were referred to as the ‘Interim Works’ and the ‘Completed Works’ – each delivering different parts of the CADP infrastructure. The Interim Works would be delivered first and would be immediately followed by the Completed Works. This Construction Phasing Plan was approved by LBN in March 2017 (ref. 17/00500/AOD) and the details pursuant to Condition 88 for the ‘Interim Works’ were also approved at the same time (ref. 17/00624/AOD).

- 1.6 Subsequently, an Accelerated Construction Phasing Plan was submitted to and approved by LBN in May 2018 (Ref. 18/01290/AOD). The Accelerated Construction Phasing Plan superseded the previously approved programme and reduced the duration of the construction programme, delivering the full CADP1 infrastructure in an accelerated single phase and removing the distinction between the 'Interim Works' and the 'Completed Works'.
- 1.7 The build out of the CADP1 infrastructure in a single phase has been subject to several unforeseen delays including to the ongoing piling and deck works within KGV Dock. These delays have occurred at the same time as unprecedented growth in passenger numbers using the terminal buildings. As explained below, the delays to construction require some consequential changes to the previously Construction Phasing Plan; namely, to re-sequence some of the build to allow for the continued, uninterrupted operation of the terminal during construction. This resequencing of the works is referred to as the *2019 Revised Construction Phasing Plan* which has been submitted to LBN for approval in accordance with Condition 4.
- 1.8 The *2019 Construction Phasing Plan* is not dissimilar to the *Updated Construction Programme* originally assessed in the Updated Environmental Statement (UES Appendix 6.1, September 2015), albeit that earlier plan envisaged construction of the CADP1 infrastructure in a somewhat different order and in two distinct phases (the Interim Works and the Completed Works) with the total works lasting 80 months and spanning 7 calendar years. Including the construction works which have already been completed¹, the *2019 Revised Construction Phasing Plan* spans 90 months and 8 calendar years but does not involve any greater intensity of works to that which has been assessed previously. Moreover, *2019 Revised Construction Phasing Plan* does not increase the frequency of Out of Operational Hours (OOOH) and aligns with the requirements of the planning conditions attached to the CADP1 permission, in particular Condition 82 which requires that all piling that needs to be conducted during OOOH is completed within a maximum of 32 weeks in total.
- 1.9 The extended single-phase build proposed in the *2019 Construction Phasing Plan* is required primarily due to delays during the piling and deck works (such as pile collapse) and clearance of unexploded ordinance (UXO) and other previously unrecorded debris across the dock bed. These delays have caused several additional knock-on effects to the delivery of other elements of CADP1, as described in the separate submission to LBN to discharge Condition 4 – 2019 Revised Construction Phasing Plan (RPS, September 2019).
- 1.10 This submission seeks re-approval of details pursuant to Condition 88 for the remaining components of the CADP1 infrastructure to be delivered in accordance with the *2019 Revised Construction Phasing Plan*. The construction works commenced in November 2017 and have been ongoing since that time. These works, including the piling and decking in KGV Dock, have been conducted in accordance with the previous versions of this CEMP, which was last updated in 2018 and approved by LBN on the 14th May 2018 (Ref.18/01312/AOD). This document has

¹ The CADP1 construction works commenced on 25th October 2017 with site set up, erection of temporary construction noise barriers and demolition of Dolphin No.7

therefore been further updated at this juncture to account for any consequential changes to the CEMP and to the CNVMMS (Appendix 1), as a result of the *2019 Revised Construction Phasing Plan*.

- 1.11 Replacement or new text in this submission is shown in blue font to allow the reader to appreciate and follow the updated information more easily.

Scope

- 1.12 The outline scope of this CEMP was set out in a memorandum to LBN on 25th August 2016. Written agreement to this approach was received from Mark Partridge (Environmental Control Officer at LBN) on 15th September 2016.
- 1.13 This CEMP is informed by, and acts to draw together, the environmental standards, mitigation measures and recommendations set out in the UES. However, it is further supplemented by the details contained in the reports submitted to LBN in order to discharge various pre-commencement conditions, as listed below.
- 1.14 This CEMP covers the activities and operations under the control of the Airport, [its Delivery Partner - Bechtel](#) (who will perform the role of the 'Principal Contractor') and its appointed contractors [for individual works packages during](#) the construction of the entire CADP 1.
- 1.15 The requirements of this CEMP apply to the all parties engaged in the project, including contractors and subcontractors involved in the works under the direction of the Airport Construction Team, which comprises employees of both the Airport and its Delivery Partner. The proposed responsibilities and management structure are outlined in Section 4 of this CEMP. It should be noted that the balance of responsibilities between the Airport and its Main Contractors may change somewhat depending on the particular nature of the works package and the associated contractual arrangements. However, the CEMP will comprise a core element of the legal contract with all contractors and thereafter its requirements must be adhered to.
- 1.16 Conformity to this CEMP will ensure all parties manage and control the environmental effects arising from the construction of the CADP1, such that these effects are no worse than those predicted in the UES and, where practicable, are improved through further mitigation proposed to discharge the conditions listed in paragraph [1.17 below](#).
- 1.17 This CEMP should be read in conjunction with the following [approved](#) documents submitted to LBN satisfy the requirements of other CADP 1 pre-commencement conditions:
- Condition 4: [2019 Revised Construction Phasing Plan](#);
 - Condition 39: Contamination;
 - Condition 60: Use of River Thames for Construction Strategy;
 - Condition 70: Waste Management Strategy;
 - Condition 81: Unexploded Ordnance (UXO) Site Safety and Emergency Procedures Plan;
 - Condition 85: Construction 1;
 - Condition 87: Construction Design and Method Strategy;
 - Condition 89: Construction Sound Insulation for Sensitive Receptors;
 - Condition 90: Night Time Construction Noise Mitigation;
 - Condition 91: Day Time Construction Noise Mitigation;
 - Condition 92: Construction Lighting;

- Condition 94: Temporary Construction Noise Barrier; and
- Condition 96: Construction Compound Operation and Hoarding.

1.18 In addition, all contractors will be required to comply with the approved details under the following conditions:

- Condition 82: Piling 1;
- Condition 83: Piling 2;
- Condition 84: Piling 3;
- Condition 86: Construction 2;
- Condition 95: Construction Complaints Handling; and
- Condition 97: Vibration Limits.

Aims

1.19 The aims of this CEMP are to:

- Ensure appropriate resource is provided to identify, monitor and control environmental effects associated with the phased progression of the CADP 1;
- Implement measures to avoid or reduce significant environmental effects as far as reasonably practicable, and to ensure legal compliance throughout; and
- Ensure that all relevant environmental mitigation measures and enhancements set out in the UES and/or required by planning conditions, are achieved in an effective and coordinated manner.

1.20 This CEMP will ensure that best practice means (BPM) are employed in order that adverse effects of construction on the environment and the local community are avoided or minimised at source.

1.21 This CEMP is a 'live document' and may be revised and/or updated from time to time in light of relevant legislation, discussions with the local planning authority and/or other affected parties. The Airport will undertake a [review](#) of the CEMP every quarter throughout the construction programme and the results will be reported to LBN [through the monthly construction meetings](#). In the event that the CEMP needs to be substantially re-written following any of the above [reviews](#), a revised CEMP will be submitted to LBN for agreement. Where necessary, such revisions will also be accompanied by a Statement of Conformity with the UES. [\(Note: to date the CEMP has proved to be effective and therefore it hasn't needed to be modified until this point, but has been updated now to account for the 2019 Revised Construction Phasing Plan\).](#)

1.22 The Airport is responsible for ensuring compliance with this CEMP and that:

- The appointed contractors submit reports regarding the performance and other relevant matters, sufficient to inform the Airport regarding compliance with this CEMP;
- Arrangements for auditing are in place and are implemented; and
- Accountabilities and responsibilities, throughout the contractor organisations, are clearly allocated and identified.

Sensitive Receptors

1.23 The nature of the works and its urban setting means that there are a number of key environmental sensitivities on which construction activities could have an impact.

- 1.24 The UES should be referenced for complete information on local sensitive receptors. However, in summary these include:

Local Residents – Nuisance and Disruption

- 1.25 Residential properties and other noise sensitive receptors surround the Airport. Due to the nature of the project some night time and other out of operational hours (OOOH) working [has and will continue to](#) be required. This has the potential to cause disturbance to local residents from noise, dust and light pollution generated by the site activities and associated traffic movements. Control measures and monitoring regimes are defined in this CEMP (see Section 8) to mitigate the effects of noise, dust and light emissions generated by construction and a formal Section 61 Consent (pursuant to Condition 85) [has been agreed with LBN](#).
- 1.26 A community engagement strategy is also provided in this CEMP (see Section 7) to ensure effective public consultation is maintained with the local community and the LBN throughout the works.

Airport Operations

- 1.27 The normal operation of the Airport and the safety of aircraft flight and passengers must not be affected by the construction works in any way. This constraint applies restrictions to the type of daytime operations that can be carried out and places great emphasis on works programming, housekeeping, cleanliness, waste management and the control of airborne emissions - as airport environments are extremely sensitive to fugitive dust, smoke, road debris or light pollution. Specific controls to ensure the operation of the Airport is not affected by such emissions are provided in this CEMP and site rules (see Section 8).

King George V Dock

- 1.28 A large proportion of the project involves construction works near, over or within the controlled waters of King George V (KGV) Dock. This increases the risk of a water pollution incident occurring as a result of the works; through the accidental spillage or escape of construction material or the generation of disturbed sediment. Pollution control measures, a pollution incident response plan and a water monitoring programme [have been implemented by the appointed contractors for the piling and deck works in order to](#) monitor, control and minimise the potential impact of the works on the water quality of KGV Dock. [These measures have proven to be effective to date and no significant water pollution incidents have been recorded. Accordingly, the water monitoring programme will be continued until at least the completion of the piling and deck work in Year 3 \(2020\). Other construction works \(including landside activities\) will also be subject to appropriate pollution controls measures and incident response plans to avoid any risk of uncontrolled discharges and pollution of the docks.](#)

2 LEGAL AND CONTRACTUAL REQUIREMENTS

- 2.1 Throughout the CADP 1 works, the Airport Construction Team and appointed contractors will comply with statutory health and safety, environmental and highway laws. Legal compliance takes precedence over all other requirements in this CEMP.
- 2.2 The Airport's Environmental, Safety and Health (ES&H) Manager will provide a dedicated point of contact for all responsible construction personnel and will be available to provide advice on the legal and policy requirements of the project. However, it is the responsibility of all appointed Contractors to meet these statutory requirements.
- 2.3 In addition, the following requirements must be met by the Airport Construction Team and all appointed contractors.

Section 61 Agreement

- 2.4 A Section 61 consent under the Control of Pollution Act [has been obtained from LBN in accordance with](#) Condition 85. [This agreement with](#) the Environmental Health Officer (EHO) at LBN [has the effect of](#) formalising certain noise management controls and procedures and sets maximum noise threshold levels which must be adhered to during the works.
- 2.5 It [is](#) the responsibility of the EH&S Manager (see section 6 for responsibilities) to develop and maintain consultation with the local EHO to report on compliance with the requirements of the Section 61 Agreement and, if necessary, to agree any modifications that may be required.

Contractual Requirements

- 2.6 A copy of this CEMP will be attached to all contracts and will need to be reviewed and signed by the Contractor prior to appointment.

Planning Conditions

- 2.7 A number of conditions are attached to the CADP 1 planning permission that must be complied with during the construction works.
- 2.8 This CEMP has been informed by the [approved](#) details to discharge the relevant conditions including mitigation measures, recommendations and procedures.

Construction Design and Management Regulations

- 2.9 The Construction (Design and Management) Regulations 2015 (CDM Regulations) came into force on 6th of April 2015, replacing CDM 2007. These Regulations require major construction projects such as CADP1 to be notified to the Health & Safety Executive (HSE) in advance of the works and for the Airport and/or Principal Contractor to:

“plan, manage, monitor and coordinate health and safety in the construction phase of a project, including:

- *liaising with the client and principal designer;*
- *preparing the construction phase plan; and*

- *organising cooperation between contractors and coordinating their work*

2.10 And to make sure:

- *suitable site inductions are provided;*
- *reasonable steps are taken to prevent unauthorised access;*
- *workers are consulted and engaged in securing their health and safety ; and*
- *welfare facilities are provided.”*

2.11 The CDM 2015 Regulations require the appointment of a Principal Designer or Principal Contractor who, for the purpose of the CADP1 works, will **generally** be the Airport Construction Team. Although there are some areas of overlap with this CEMP, a separate Health and Safety Plan **has and will continue to be** developed to ensure compliance with the CDM Regulations.

3 CONSTRUCTION DETAILS

Construction Programme and Phasing

- 3.1 It is proposed to build out CADP1 as a single uninterrupted period of construction over approximately seven and a half years. Full details are provided under Condition 4: *2019 Revised Construction Phasing Plan* (September 2019) which amends the approved *Accelerated Construction Phasing Plan* (May 2018) - this provides a breakdown of piling and all other external construction activities over the duration of CADP1.
- 3.2 This CEMP will be valid over the duration of CADP1.
- 3.3 Construction of the CADP1 infrastructure commenced on 25th October 2017 with a start to the demolition of Dolphin No.7 and the construction of the Temporary Construction Noise Barrier. Piling works and construction of the deck over the KGV Dock is also now ongoing, having commenced in June 2018, with airside attenuation works following in late 2018.
- 3.4 The sequence of construction and order of completion of the remaining, main components of the CADP1 infrastructure in accordance with the *2019 Revised Construction Phasing Plan* are described more fully in the separate submission document under Condition 4. However, these can be summarised as follows:
1. Completion of piling and deck over KGV Dock; including constructing the apron platform for all new stands, the full-length parallel taxiway, and the deck for the ETE and NEP;
 2. Airside and Landside Drainage Attenuation Works;
 3. Construction of East Energy Centre (EEC);
 4. Taxilane up to the new Foxtrot runway;
 5. Construction of Eastern Terminal Extension (ETE) and the New East Pier (NEP);
 6. Construction of Western Energy Centre (WEC); and
 7. Construction of new Forecourt (including demolition of City Aviation House) and upgrade to Hartmann Road;
 8. Construction of RVP Pontoon;
 9. Upgrade to the Dockside and construction of the Surface Car Park;
 10. Construction of Western Terminal Extension (WTE);
 11. Construction of the car parking deck.
- 3.5 The main construction activities and indicative durations of the proposed continuous build are summarised in Table 3.1 below:

Table 3.1: Likely Construction Durations under the 2019 Revised Construction Phasing Plan

Activity Phase	Approximate Duration
Mobilisation	2 months
Stands Deck & Temporary Construction Noise Barrier*	37 months
Taxilane to Foxtrot	9 months
Airfield Services (including reconfiguration of aircraft stands)	25 months
Airside Attenuation Works	16 months
Eastern Energy Centre (EEC)	12 months
Western Energy Centre (WEC)	13 months
New East Pier (NEP)	32 (17+15 months)
Eastern Terminal Extension (ETE)	25+3+7 months
Western Terminal Extension (WTE)	25 months
Car Parking Deck	9 months
Forecourt / Hartmann Road Utilities (including demolition of City Aviation House)	14+12 months
Landside Attenuation Works	2+2+2 months
Dockside Upgrade (including Hartmann road upgrade) + Surface Car Parks	19 months
Floating RVP Pontoon	2 months
Overall Construction Duration	90 months**

*includes opening of new stands, reconfiguration of existing Stands 21-24 and full length parallel taxiway.

** This is less than the sum of the above due to the overlapping nature of the above activities.

Hours of Work

- 3.6 The hours of construction **are** limited by the operational hours and activities of the Airport. Some construction works need to be performed at night and during the 24 hour weekend period when the Airport is closed.
- 3.7 Construction works **have and will continue to be** carried out during the Airport's core operational hours wherever practical. This minimises any disruption during night time and at weekends (i.e. the typical periods of rest and leisure).
- 3.8 A detailed *2019 OOOH Programme* forms part of the *2019 Revised Construction Phasing Plan* and identifies those construction activities that will need to take place when the Airport is shut for operational safety reasons. The provision of details on the timing of specific construction activities are covered as part of the Section 61 Agreement under the Control of Pollution Act 1974, **has and will continue to be** submitted separately to LBN on a six-monthly basis, or alternative intervals as agreed. (Note: the last version was approved by LBN in April 2019).
- 3.9 Notwithstanding the specific controls set out by Conditions 82 and 83 on the hours when piling takes place, a number of other construction activities need to be carried out during the OOOH period to ensure continued operational safety. Where OOOH works are not required, typical construction activities **have and will continue to be** carried out between 0800 hours and 1800 hours Monday to Friday and between 0800 hours and 1230 hours on Saturday.
- 3.10 Other activities such as site set up and mobilisation will be permitted during the 'shoulder' periods of each working day (including 18.00 – 22.00 Monday to Friday) and during the OOOH periods

(see Table 4.1 below) in order to ensure that the programme of works runs smoothly and efficiently. In addition, the Construction Compound is a manned 24 hour facility which enables the delivery, movement and storage of essential construction material and plant. However, wherever possible, noisier activity within this compound has and will continue to be restricted to operational hours. For example, the Waste and Materials Laydown Area (forming part of the approved Construction Compound under Condition 96) only operates during the day, except on infrequent occasions when the piling operators need to facilitate barge movements to and from their working area.

- 3.11 Construction works occurring inside buildings once the frame and cladding is erected (e.g. terminal fit out) will be permitted 24 hours a day. These works will not be audible to local residents.

Site Setup

- 3.12 Prior to commencement on site, notification was given to the following parties:
- LBN;
 - Local Police;
 - Adjoining neighbours;
 - Public Utilities Companies, with regard to the disconnection of existing services and commissioning of the necessary temporary supplies;
 - Health and Safety Executive (HSE);
 - London Fire Brigade;
 - Royal Docks Management Authority (RoDMA); and
 - Transport for London.
- 3.13 A secure site compound has been established and will be maintained for the duration of the construction works (described in further detail below and Condition 96: Construction Compounds Operations and Hoarding). Hoarding and a Temporary Construction Noise Barrier has been erected along the site boundary and this will be maintained to suit the phasing of works.
- 3.14 Site office and welfare facilities have been established for the piling and deck contract and similar facilities will be in place for future works, comprising: site management offices, meeting rooms, induction room, canteens and welfare facilities. These will be erected on hard standings within the contractor's compounds and segregated from construction traffic by pedestrian barriers.
- 3.15 All pedestrian and vehicular gates are maintained by security officers/ Banksmen during working hours.

Access to the Site

- 3.16 Construction vehicle access arrangements for the CADP 1 works are shown on Figure 3.1, which denotes the four principal road and dock access routes to the site.

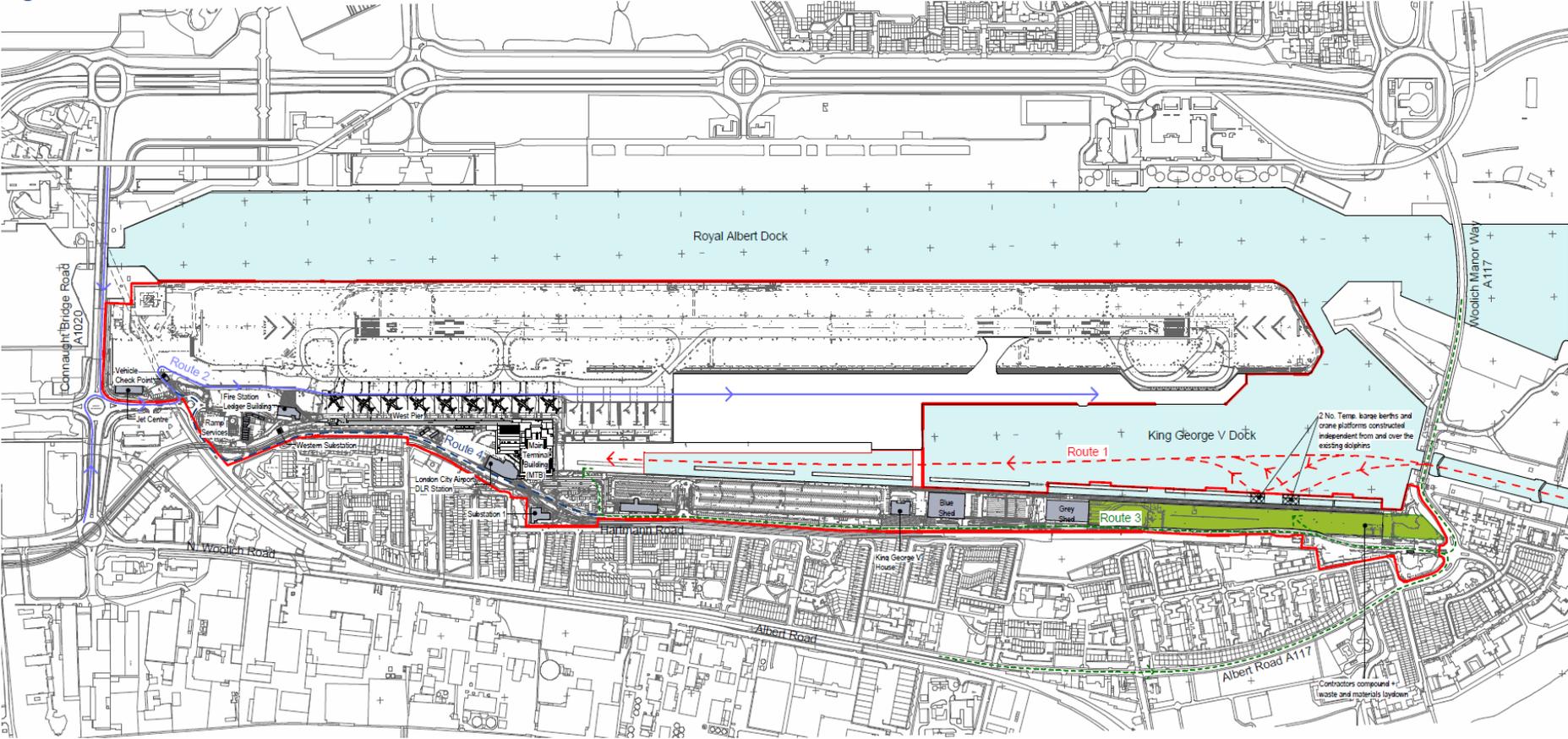
Road Access

- 3.17 In terms of access, the following routes have been identified:
- Route 1 – Barge Access, via King George V Dock;

- Route 2 – Airside Site Access, via the A1020 Connaught Bridge Road and the A112 Connaught Road;
- Route 3 – Compound and Landside Site Access, via the A117 Woolwich Manor Way or Albert Road; and
- Route 4 – Secondary Compound and Landside Site Access, via the A1020 Connaught Bridge Road, the A112 Connaught Road, Camel Road and Hartmann Road. The secondary route is intended to be used only under exceptional or emergency situations.

3.18 All appointed contractors will ensure, in consultation with LBN, that site delivery access and egress is properly signposted and that any diversionary routes do not cause undue disturbance to residential properties. Site road access by large or heavy loads to the landside compound and material storage area is restricted to agreed times.

Figure 3.1: Road and Dock Access to the Site



- - - - - Route 1 - Barge Access
- Route 2 - Airside Site Access
- - - - - Route 3 - Compound & Landside Site Access
- - - - - Route 4 - Secondary Compound & Landside Site Access
- Contractors Compound + Waste + Materials Laydown
- Temporary Barge Berths & Crane Platforms
- Existing Facilities
- Application Boundary

River Access

- 3.19 As required to discharge Condition 60 a strategy has been prepared that seeks to maximise the use of the River Thames and other waterways for the transport of construction and waste materials to and/ or from the site.
- 3.20 Delivery of materials to the CADP 1 project **has and will continue to** provide the opportunity for using the River Thames and other waterways. A typical barge has a tonnage capacity of 180t vs. the weight capacity of:
- A typical 2 axle tractor with open trailer (20.3t)²;
 - A typical 3 axle tractor with open trailer (28.1t)¹; and
 - An 8 wheel rigid tipper (20t)³.
- 3.21 Once the preferred supplier has been appointed for a specific contract, and where relevant, prior to the commencement of that contract, the strategy for managing movements along the River Thames and other waterways will be agreed with RoDMA and the Port of London Authority (PLA). It is essential that any restrictions and approval processes imposed by these bodies on the movement of barges and other vessels are fully understood, so that the successful contractor is able to incorporate these requirements into their final methodology. This final methodology will then be submitted to LBN for information.
- 3.22 Due to the proximity of the Airport to KGV Dock, and the connection of the Dock to the River Thames via openable lock gates at its eastern end, it is considered feasible for barges to transport **waste and other** materials to and from the river using 'Route 1' shown in orange in Figure 5.1. **This means of transport for waste (e.g. barges carrying purged dock bed sediment) has been successfully employed in the ongoing piling and deck works, resulting in an estimated 1,173 lorry loads being avoided (up to August 2019). Options for the further use of river transport are expected to be identified and employed for future works contracts (where feasible).**
- 3.23 An area for on/off barge loading berths **is and will continue to** be provided within the contractors compound. This arrangement is illustrated on Figure 2 of Condition 60: Use of the River Thames for Construction.
- 3.24 KGV Dock is and will continue to be used for transporting materials and equipment from the construction compound area to the immediate area of the active works, thus reducing road movements along Hartmann Road.

² Tata steel technical information sheet - axle weights and load distribution

³ Midland quarry products vehicle data information

Car Parking

- 3.25 There **is** limited car parking located within the main construction compound **and** all construction staff and operatives **are** encouraged to travel to the site using public transport where possible. **This policy will continue to apply for all future contracts.**
- 3.26 However, on-site parking **is and will continue to be** made available for those personnel who need to carry heavy equipment or materials to the site.

Wheel Washing Facilities

- 3.27 **Where necessary**, wheel wash facilities will be located at the entrances to the site will remain in place for the construction works to ensure all vehicles accessing the site are free from mud before returning to the public highway.
- 3.28 Subject to the selection of **future** contractors and the plant available to them, wheel washing facilities could include, but not limited to: a drive-over dry ramp system; drive through bath system; or high pressure spray wash systems:
1. **Drive-over dry ramp system** works on the vibration effect created by the vehicle tyres driving over inverted steel bars on a raised platform, the vibrations and motion flexes open the tyre treads enabling dirt and debris to fall to the ground;
 2. **Drive through bath system** comprises of the central bath section which contains internal metal grids that are submerged in water. As the vehicle drives through the bath and over the metal grids, the tyres flex enabling dirt to fall out while the water effectively washes the tyres; and
 3. **High pressure spray system** comprises of either the manual washing of the vehicle, by site staff member, in a designated wash area; or the installation of an automated drive through wheel washing facility that sprays water over the tyres of the vehicle as it drives through or stand on a raised platform.
- 3.29 The Banksmen of the appointed contractors will be charged with the responsibility of checking the cleanliness of all vehicles leaving the site. Furthermore, should any mud be deposited on the public roads a road sweeping machine will be on call to respond swiftly. In addition, an emergency response team shall clean up the mud/dirt in anticipation of the road sweeper's arrival to deal with the bulk. The effectiveness of the above will be monitored by conducting visual inspections and corrective actions employed, if necessary.
- 3.30 **Note: For the piling and deck works, the Main Contractor (BAM Nuttall) has not needed to employ a ramp or bath wheel wash systems (options 1 and 2 above) as vehicles have remained largely free of mud due to the hardstanding area they operate in and because the dock sediment is loaded directly to barges. However, a manual high-pressure washer has been utilised when required, coupled with a road sweeping machine.**

Plant and Equipment

3.31 The indicative plant and equipment associated with the construction process is set out in Table 3.2. Images of typical construction plant and equipment (e.g. piling rigs and cranes) are given in the Condition 87: Construction Design and Method Strategy.

Table 3.2:- Indicative Plant & Equipment

Plant and Equipment	Construction Element				
	Piling	Concrete Deck	Drainage and Services	Buildings	Landside Infrastructure
Tracked Excavators			✓	✓	✓
Tracked Excavators with Pulverizers			✓		
Wheeled Backhoe Loaders			✓		
Wheeled Backhoe Loaders with Breakers			✓		✓
Hand Held Pneumatic Breaker		✓	✓		✓
Dump Trucks			✓	✓	✓
Muck Away Barges	✓				
Vibratory Rollers			✓	✓	✓
Steel Pile Casing Placements by Vibration	✓		✓	✓	✓
Gas Cutters for Pile Steel Casings	✓		✓	✓	✓
Piling Rigs – Rotary Bored	✓			✓	✓
Tracked Mobile Cranes	✓	✓		✓	
Mobile Telescopic Cranes		✓	✓	✓	✓
Floating Craft with Cranes / Lifting Booms.		✓			
Mobile Generators	✓	✓	✓	✓	✓
Water Pumps	✓		✓	✓	✓
Mobile Floodlights with Generators	✓	✓	✓	✓	✓
Floating pontoons, barges and tug boats	✓	✓	✓		
Concrete Mixer Trucks	✓	✓	✓	✓	✓
Truck Mounted Concrete Pumps	✓	✓	✓	✓	✓
Poker Vibrators	✓	✓	✓	✓	✓
Air Compressors	✓	✓	✓	✓	✓

Plant and Equipment	Construction Element				
	Piling	Concrete Deck	Drainage and Services	Buildings	Landside Infrastructure
Diamond Cutting Tools / Saws		✓	✓	✓	✓
Road Sweepers		✓	✓		✓
Core Drill			✓	✓	✓
Scaffold				✓	
Mobile Access Platforms				✓	✓
Delivery Trucks	✓	✓	✓	✓	✓
Skips and Skip Truck	✓	✓	✓	✓	✓

Foundations and Substructure

- 3.32 Further details on foundations and the substructure of the buildings constructed during the CADP1 works are provided in [the Approval of Details \(AOD\) submitted in accordance with Condition 87: Construction Design and Method Strategy \(ref. 18/00578/AOD\)](#).
- 3.33 Details on piling are provided [the AOD submitted in accordance with](#) in Condition 84: Piling 3 ([ref. 17/00334/AOD](#))

Superstructure

- 3.34 Further details on the superstructure and façade specification of the buildings constructed during the CADP1 works are provided in [the AOD for Condition 87: Construction Design and Method Strategy](#).

Construction Compound and Hoarding

- 3.35 The detailed construction compound and hoarding layout plan is provided [in the AOD submitted to discharge Condition 96: Construction Compound Operations and Hoarding \(ref. 18/00761/AOD\)](#). The Compound comprises two separate areas: a main Contractors Compound (0.6Ha); and a Waste and Materials Laydown Area (1Ha).
- 3.36 The main Contractor Compound area [is and will continue to be](#) used as the main logistics hub. It includes:
- Site cabins (security/contractors' offices & meeting rooms);
 - Welfare facilities (toilets, washdown & drying rooms);
 - Construction materials and component storage;
 - Contractor vehicle parking;
 - Construction plant and machinery (whilst not in use);
 - On-site construction manufacturing (such as welding, joinery); and
 - A maintenance workshop.
- 3.37 The compound [has](#) two barge berthing points which will be the locations for loading and off-loading barges used for bringing materials to and from the compound. The berthing points [are](#)

also be used for loading (and un-loading) plant and materials onto barges used for the airfield piling and deck works.

- 3.38 The contractors compound **is** fully enclosed to the south by a 3 metre high construction noise barrier, **approved** under Condition 94 of the CADP 1 permission ([ref. 17/03556/AOD](#)). The north of the compound **is** secured by a 3 metre high mesh fence. A further construction noise barrier **has been** erected south of Hartmann Road to protect the residential properties at Woodman Street from construction noise related to the construction compound.
- 3.39 **Due to the transient nature of the works, it is not possible to enclose the Western Service Yard area with fixed hoardings. However, portable acoustic barriers are, and will continue to be, used when working in this area in order to provide adequate noise abatement.**

Construction Lighting

- 3.40 Site lighting and signage will be provided to ensure the safety and security of the construction site and will be at the minimum luminosity necessary. Further details are provided in the **AOD** report 'Construction Lighting' issued to discharge Condition 92 ([ref. 18/00761/AOD](#)).
- 3.41 The **appointed** contractors **are** responsible for producing a construction lighting design **for each relevant works area under their management**. The design criteria below are extracted from BS EN 12464 Pt 2 and should be considered as the starting point for the contractor to develop the detailed lighting design to suit the final construction strategy. The final design of each luminaire will be determined by the exact nature of the works that the contractor is undertaking in each specific area. The contractor's lighting detailed lighting design shall cover the construction lighting installation identifying:
- Maintained illuminance levels;
 - Luminaire aiming positions and tilt for each luminaire;
 - Maintenance factor;
 - Luminaire construction and datasheet;
 - Initial Illuminance Levels;
 - Illuminance Uniformity min/average;
 - Illuminance Diversity minimum/maximum;
 - Lamp or LED type and Efficacy;
 - Luminaire details including images and performance datasheets;
 - Luminaire absolute photometry;
 - Glare Ratios;
 - Threshold Increments (road lighting for site roads);
 - Luminaire mounting heights;
 - Annotated and dimensioned lighting layouts identifying luminaire types aiming points and column positions; and
 - Typical Luminance calculations to the sensitive receptors identified for each of interim sites and compounds.
- 3.42 The following measures will be utilised by the contractors during the detailed design of the construction lighting **for their working compounds/ areas:-**

- Utilisation of the minimum mounting height for all luminaires. (max allowable height 12m);
- Optimisation of luminaire light distribution;
- No upward light output;
- Mounting of luminaires on existing buildings and site accommodation to light walkways;
- Maximising colour rendering of lamp sources to reduce installed illuminance levels and to maximise colour contrast;
- Minimising backward light output; and
- Minimising initial Illuminance by maximising maintenance factor and optimising luminaire specification; and Minimising the maximum light output of luminaires.

Cranes

- 3.43 All lifting operations will be supervised by the nominated Lift Operator in compliance with current Lifting Regulations. Details on positions and locations during the CADP 1 works have been submitted to discharge Condition 87: Construction Design and Method Strategy ([ref. 18/00578/AOD](#)).

4 RESPONSIBILITIES AND MANAGEMENT STRUCTURE

4.1 Contractual arrangements will require all appointed contractors to provide suitably qualified staff to manage and execute works for which they are responsible. The Airport [and its Delivery Partner](#) (acting as the 'Principal Contractor' in this instance) will require that all employees demonstrate an appropriate awareness of local sensitivities, expected code of conduct, working knowledge of the legislation, codes of practice, and guidance relevant to the various construction activities in which they are engaged.

4.2 As mentioned in the introduction to this CEMP, the specific responsibilities between the Airport and its contractors (as set out below and in Sections 5, 6 and 7) may change somewhat depending on the particular nature of the works package and the associated contractual arrangements.

Management Structure

4.3 Primary responsibility for all environmental issues relating to the proposed development falls with the Airport; individual responsibilities will be divulged throughout the Airport Construction Team (comprising representatives of both the Airport and its Delivery Partner) relating to the co-ordination of inspection, monitoring or reporting. The main individual responsibilities are outlined below.

4.4 The Environmental Manager will report to the ES&H Manager whilst maintaining an Airport-wide operational role. Both will be appointed to oversee Environmental and Health and Safety performance during construction of CADP1 and will be available to offer support and provide advice to the project staff throughout the scheme, as required. Specialist environmental resources, including an external noise consultant, will also be employed where necessary.

Individual Responsibilities

4.5 The Airport and its Delivery Partner have the primary role of managing environmental issues during all construction phases. However, both Airport Construction Team and appointed contractors will jointly have to implement the environmental control measures set out within this CEMP.

4.6 The indicative individual responsibilities of the Airport Construction Team including the Contracts Manager, Project Manager, Field Engineer, Community Relations Ambassador (CRA) and the responsibilities of the ES&H Manager and appointed contractors are detailed below.

Contracts Manager

- Ensure that the contractual requirements of the CEMP are adhered to throughout the Project

Project Manager

- Approve CEMP and applicable environmental policy;
- Allocate appropriate project resources and designate representative responsible to deal with environmental issues and complaints;
- Ensure that this CEMP is effectively established and implemented throughout the project;

- Review and approve environmental action plans; and
- Undertake regular site inspections which will include compliance with the requirements of this CEMP.

Field Engineer

- Available on-site at all times to understand the major environmental constraints and implications for the project;
- Act on findings of internal and external audits;
- Ensure appropriate pollution response provision is made;
- Report to ES&H Manager on any environmental breaches; and
- Comply with this CEMP.

Community Relations Ambassador (CRA)

- Engagement with the local communities, with particular focus on the Royal Docks, Beckton, Silvertown, Custom House, advising on construction programme and progress;
- Work with Sustainable Procurement Manger to raise awareness concerning job opportunities at the Airport and relevant pre-recruitment training courses in liaison with Newham Workplace; Work with Sustainable Procurement Manager to liaise with the LBN and the Education Partnership Board on the schools programmes and the curriculum activities being undertaken by the Airport Companies;
- Maintain the Complaints Log; and
- Ensure complaints are being addressed and responded to.

Environmental, Safety & Health (ES&H) Manager

- Implement and maintain the operation of this CEMP;
- Understand the environmental issues associated with the project;
- Co-ordinate environmental awareness training and ensure project control measures and pollution control plans are included within site induction;
- Ensure appropriate pollution response provision is made.
- Ensure that the need for compliance with environmental issues is communicated to the Project Manager, Duty Manager and appointed contractors;
- Co-ordinate and maintain consultation with the LBN and RoDMA on environmental issues;
- Report on any significant environmental incidents to the Environmental Regulators;
- Coordinate environmental audits and pursue any corrective actions;
- Conduct regular reviews of this CEMP and its action plans during project to ensure its continued effectiveness throughout the changing construction phases;

Appointed Contractors

- Comply with this CEMP;
- Maintain CEMP document control system;
- Implement the requirements of CEMP and its supporting documents on site;
- Report immediately to ES&H Manager on any environmental incidents;
- Ensure site personnel are aware of their environmental obligations and have undergone site environmental awareness training; and
- Implement the action necessary to resolve non-compliance issues.

All Personnel – to be communicated during site induction

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

5 TRAINING AND RAISING ENVIRONMENTAL AWARENESS

- 5.1 The Airport Construction Management Team and its appointed contractors **are** required to employ an appropriately qualified workforce.
- 5.2 A training regime **has and will continue to be** implemented to ensure that all members of the construction team, including sub-contractor's personnel receive focused environmental training to ensure their competence in carrying out their duties on the project.

Site Induction

- 5.3 The Airport and its main contractors **have and will continue to** operate induction schemes for all personnel to ensure that they are aware of their individual responsibility to comply with this CEMP. They **are** responsible for identifying the training needs of all personnel and will **continue to** ensure that appropriate training is provided. The training includes information on local considerations and expectations on site behaviours, "toolbox talks" for site operatives to maintain an appropriate level of awareness and health, safety and environmental topics and to advise employees of changing circumstances as work progresses. Records will be kept of attendance.
- 5.4 The general site induction shall **continue to be implemented** to introduce all site personnel to the environmental issues connected with the project, important environmental controls associated with the day to day operation of the project e.g. pollution control, boundary control, housekeeping, waste management, and the emergency procedures. A full register of induction attendance shall be maintained on site.

Responsibility: ES&H Manager

Action: **Continue to implement and deliver** general site induction to include environmental issues and ensure induction records are maintained.

Toolbox Talks and Method Statement Briefings

- 5.5 Tool box talks and method statement briefings **will continue to be** given as the work proceeds and will cover the environmental controls related to specific activities undertaken during the works for example refuelling, night works, piling etc. A full register of toolbox talks and method statement briefing attendance shall be maintained on site.

Responsibility: ES&H Manager

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

Emergency Procedures and Incident Reports

- 5.6 General procedures for addressing spillage **will continue to be** included in the general site induction. However, specific tool box talks will be delivered to ensure operatives are aware of any extra emergency procedures that may be required for working within the docks.

Training Records

- 5.7 All training records will [continue to](#) be maintained and filed on site. The records shall include the content of the courses (induction and toolbox training), record of attendance and schedule of review.

6 COMMUNICATION, SITE RULES AND REQUIREMENTS

Progress Meetings

- 6.1 Performance against this CEMP will **continue to** be reviewed at regular progress meetings. Progress meetings include internal (Airport Construction Team) meetings and project team meetings with contractors or their sub-contractors. Performance against 'rolling' targets **will** be reviewed and corrective actions agreed as required. These actions **will be** monitored to demonstrate continuous review and improvement.

Responsibility: Project Manager

Action: Environmental issues to be added to the agenda of all internal progress meetings and external progress meetings.

On-Site Communication

- 6.2 A full contact list containing names, job titles and contact numbers **has and will continue to be** produced and maintained. On site communication will be provided by mobile telephone or two way radio.

Site Rules and CEMP

- 6.3 Site rules, including environmental controls, are to be displayed in all on-site offices and welfare facilities. These rules will be updated and developed further by the Airport for each phase of the CADP1. **They include, inter alia:**

- All personnel visiting or working on site must complete induction training prior to accessing the site;
- All plant/equipment used during the construction activities must be compliant with the Provision and Use of Work Equipment Regulations 1998 (PUWER), maintenance and relevant certificates must be retained on site;
- All substances to be used or handled on site must have the Control of Substances Hazardous to Health (COSHH) assessment available on site for staff members to consult;
- At the end of each working day all means of access, e.g. steps, ladders left in position must be secured/removed to prevent unauthorised persons (especially children) accessing the site and hazardous areas;
- Smoking is prohibited on site, except in designated areas, and the possession or use of alcohol and drugs is prohibited;
- Site welfare facilities must be maintained for the duration of the works;
- A qualified First Aider/ Emergency First Aider to be present on site at all times.
- Standard Personal Protective Equipment (PPE) is required on site at all times, as well as additional Protective Equipment as required for specific works;
- Use of audio equipment is not permitted on site, except in designated areas;
- All staff members must comply with the Demolition, Construction and Phasing Strategy, work to their safety method statements and abide by all safety signs at all times;
- The Airport and all sub-contractors on site must co-operate in the interest of health and safety;
- All staff members must conduct themselves and perform their duties on site in a safe manner;
- All work areas must have clear, well maintained signage;

- Appropriate firefighting equipment to be maintained on site;
- Firefighting equipment should be maintained on site;
- No fires are permitted on site;
- All waste materials must be collected and removed from site at regular intervals; and
- Acts of threat or violence will not be tolerated and any offender will be removed and permanently excluded from the site.

7 EXTERNAL REPORTING AND COMMUNITY RELATIONS

Statutory Authorities and Interested Parties

- 7.1 The Airport in conjunction with the support of the EH&S Manager or any appointed specialists **is** responsible for the liaison on environmental matters with statutory and non-statutory authorities.
- 7.2 Consultation **will continue to be maintained** with a number of regulatory bodies with regard the environmental aspects of this project, **including**:
- Local Environmental Health Officer (LBN);
 - Environment Agency; and
 - RoDMA.

Responsibility: ES&H Manager

Action: Establish and maintain consultation with the Airport, LBN RoDMA, EA, and other interested parties about the status of the project, potential impacts, mitigation measures, water exclusion zones, predicted time scales of activities.

Local Community Engagement

- 7.3 A complaints handling procedure and community engagement strategy has been developed by the Airport to ensure that the local community are correctly informed of progress and any complaints are dealt with in a timely and efficient manner. The complaints handling procedure has been provided to LBN and this will **continue to be** reviewed at **regular** construction meetings with the Council and modified, as necessary, to ensure its continued effectiveness.
- 7.4 The Airport have appointed a dedicated Community Relations Ambassador, who **is** focussed on engaging with the community to provide appropriate information and to be the first line of response to resolve issues of concern. Reasonable steps **will continue** be taken to engage with all residents including those who may be differently affected by construction impacts. Occupiers of nearby properties will **continue to** be informed in advance of any work taking place, including the duration of any OOOH activities.
- 7.5 The London City Airport Consultative Committee (LCACC) is an independent committee whose role **also now includes** a forum for discussion on all matters concerning CADP 1 which have an impact on the users of the airport and on people living and working in the surrounding area. The LCACC meets quarterly and has 3 Sub-Committees which discuss a wide range of topics which include community engagement, airport development, noise and air quality and other key issues. The main committee meetings are open to the public.

Responsibility: Community Relations Ambassador

Action: **Continue to** maintain consultation with the local residents, the LCACC and other interested parties about the status of the project, potential impacts, mitigation measures/ corrective actions and predicted time scales of activities.

Complaints Management

7.6 The Community Relations Ambassador **is** responsible for receiving, recording and responding to external complaints. The guiding principles of the formal complaints procedure are summarised below and will **continue to be** reviewed at the monthly construction meetings with LBN to ensure its ongoing effectiveness.

- Channels available for the public to **submit** complaints: the Airport provides a 24 hour telephone line (manned by an Airport Construction Team representative during office and site operational hours and a telephone message recording facility outside office and site operational hours) and an email address;
- Information to be stored for each complaint, including details of complainants, and information obtained from any investigation if needed. The recording of such details **is made** in accordance with the requirements of the General Data Protection Regulation 2018;
- Where required, investigation into the causes of the reported disturbance will be conducted and reported;
- An acknowledgement/ response will be sent within two working days from the initial correspondence being received and, where further investigation is required to address the complaint, this will be undertaken and a further response sent within a further 5 working days;
- A record of all complaints will be maintained, together with actions taken and the times associated with any actions; and
- A report on complaints received and actions taken **has and will continue to** be prepared by LCA on a monthly basis and made available for inspection by the LBN.

The appointed contractor **is** responsible for passing on immediately to the PM or ES&H Manager any complaints received by from the local community.

Responsibility: Community Relations Ambassador.

Action: Log complaints, conduct investigation, develop any corrective action, produce written response to complaints and generate weekly report of complaints received by the Airport and LBN.

8 ENVIRONMENTAL CONTROL MEASURES BY TOPIC

- 8.1 Table 8.4 at the end of this section presents a summary of the environmental control measures [which have and will continue](#) to be implemented during the CADP1 works.

Pollution Incident Control Plan

- 8.2 A Pollution Incident Response Plan will be prepared to cover the potential pollution risks generated from the construction activities. This plan shall include:
- Step by step procedure for assessing and containing the spillage;
 - A list of equipment and its location; and
 - Emergency contact numbers and reporting procedures, including relevant Environment Agency contact numbers.
- 8.3 The implementation of pollution response plans shall be inspected by the ES&H Manager and failures in implementation will be reported in the Safety and Environmental Report Log.
- 8.4 All pollution incidents shall be logged and reported to the ES&H Manager who shall be responsible for reporting to the Environment Agency. The following information should be included:
- Date and time of incident;
 - Nature of incident including root cause and materials involved;
 - Effects;
 - Immediate action taken; and
 - Details of any corrective or preventative action taken/required.

Waste Management

- 8.5 The details to discharge Condition 70 ([ref. 18/00671/AOD](#)) set out the strategy for managing waste during the CADP1 works, which will follow the principles set out in the Waste Framework Directive (2008/98/ES) and other legislative and policy requirements.
- 8.6 Reduction of waste will be promoted, where practicable, at source through the careful design and management of materials. All contractors will be required to investigate opportunities to minimise and reduce waste generation, such as:
- Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;
 - Implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
 - Attention to material quantity requirements, to avoid over-ordering and generation of waste materials;
 - Segregation of waste at source where practical; and
 - Reuse and recycling of materials off-site where re-use onsite is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct reuse or reprocessing).
- 8.7 Effective waste management will be facilitated through segregation and storage facilities being provided within the dedicated construction compound and lay down areas to the south of KGV

dock and within other working compounds in the WSY. All contractors are required to adopt a Site Waste Management Plan (SWMP) which will differ between the type of contract and the nature of the works. However, each SWMP needs to ensure that the targets listed below are met.

- 8.8 The Waste Management Strategy sets out targets that will be achieved by the implementation of the SWMPs. Such targets have been created using the estimate volumes of waste calculated in Chapter 15: Waste Management of the UES and are summarised in Tables 8.1 to 8.3.

Table 8.1: Site Preparation/ Enabling Works (Demolition)

Target Ref	Target
SP1	Where possible, provide onsite processing of demolition materials in order for them to be reused as part of CADP 1. Consideration must be given if any such processing activities could cause noise impacts e.g. crushers. At least 10% of material should be reused in this way.
SP2	Processing demolition waste at offsite facilities as detailed in the regional Joint Waste Development Plan Document for use in other development projects. Such offsite facilities include other local developments or local mineral processing sites. Consideration should especially be given to sites whereby waste can be transported by the river Thames. At least 70% of material should be reused in this way.

Table 8.2: Piling and Earthworks

Target Ref	Target
PE1	15% of clean earthworks, excavation and piling spoil to be re-used as engineering fill off site.
PE2	15% of clean earthworks, excavation and piling spoil to be re-used as engineering backfill on site as part of CADP 1.
PE3	All clean earthworks excavation and piling which are not reused as backfill on site needs to be transported through the river Thames network.

Table 8.3: Construction

Target Ref	Target
C1	For the Principal Contractor to provide suitable site induction, information and training for employees and sub-contractors that is specific to this development.
C2	90% of waste material is to be re-cycled, re-used or otherwise diverted away from landfill.
C3	Agreement with suppliers for a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste.
C4	Agreement with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme.
C5	During the procurement of materials; where possible, ensure they are sustainably and locally sourced.

Traffic and Transportation

- 8.9 The Airport will ensure that legal requirements for works affecting highways are implemented and shall undertake the works in such a way as to maintain, as far as reasonably practicable, existing public access routes and rights of way during construction. The Airport **has and will continue to** endeavour to limit undue inconvenience to the public whilst carrying out the works.
- 8.10 The Airport will ensure, in consultation with LBN, that site delivery access and egress **continues to be** properly signposted and that any diversionary routes do not cause undue disturbance to residential properties. Site road access by large or heavy loads to the landside compound and material storage area will be restricted to agreed times.
- 8.11 Modern construction management methods allow ‘just-in-time’ deliveries, ensuring that relatively constrained sites operate efficiently with limited on-site storage of materials. This leads, where appropriate, to the use of smaller size delivery vehicles and short delivery times.
- 8.12 Upon appointment of each contractor, details of the designated construction traffic routes to / from the Airport; the number and type of construction vehicles; access and egress arrangements for all construction vehicles; and local traffic management measures as required by the highway authorities will be agreed.
- 8.13 After completion of any works affecting a highway, all surplus materials arising from the works will be cleared, leaving it in a clean and tidy condition in accordance with the requirements of the highway authority.
- 8.14 Construction workers will be encouraged to travel to site by public transport rather than by car to minimise the use of local streets for parking.
- 8.15 The Airport Construction Team **has developed** a Construction Logistics Plan (CLP) in line with TfL’s guidance for traffic movements under their urban planning and construction policies. The CLP **(currently at Revision 2) will be** further refined **to suit, as new** contracts are awarded and suppliers engaged. The purpose of the CLP is to identify and assess the most appropriate methods of freight movement and ensure a distribution network which minimises congestion, ensures the safe passage of goods and mitigates its environmental impact.

Noise and Vibration

- 8.16 The full Construction Noise and Vibration Management and Mitigation Strategy (CNVMMS) is included in Appendix **A** to this CEMP and provides details on the following:
- Maximising the use of daytime hours to undertake construction works;
 - The mechanisms for controlling construction noise;
 - Community liaison and complaints handling procedures;
 - Monitoring procedures for controlling construction noise and vibration;
 - Procedures for monitoring data and reporting to LBN
 - Procedures for reporting of complaints;
 - Procedures for identifying any predicted sensitive receptors eligible for the Construction Sound Insulation Scheme and the phasing plan for undertaking works under the scheme;
 - Ownership of section 61 and procedures;
 - Location, dimensions and materials of construction noise barriers; and
 - Any other noise mitigation measures to be implemented at source.

8.17 All contractors shall have regard to and comply with the requirements of the following:-

- Control of Pollution Act 1974;
- Environmental Protection Act 1990;
- Control of Noise at Work Regulations 2005;
- Safety, Health and Welfare at Work Regulations 2007; and
- The Health and Safety at Work Act 1974.

8.18 The full mitigation and control measures are provided in Appendix A including noise and vibration level limits.

Monitoring

8.19 The Airport and its appointed noise consultants are responsible for the operation and placement of all noise and vibration monitoring equipment on and around the site. For each subsequent main contract, the Airport will liaise with the Appointed Contractors to agree the placement of a noise monitor or monitors to ensure that the Appointed Contractor's works are undertaken in a manner that does not exceed the noise thresholds identified in the CNVMMS (Appendix A). The location of all monitoring equipment and the trigger values will continue to be subject to agreement with LBN.

8.20 The trigger/alert levels for the noise monitors along the southern boundary of the Airport and any other noise monitors within each specific contractor construction site will be specified to each contractor based on an assessment of the confirmed construction methodologies, to account for the potential cumulative effect of the different work packages.

8.21 The noise data collected by all noise monitors will continue to be centralized and policed via a web-based system with alert facilities which will send by e-mail and/or text a message to the Field Engineer, ES&H Manager and appointed contractors when a trigger threshold is exceeded. The data will also be reported to LBN to demonstrate compliance with the Section 61 requirements.

8.22 Further details are provided in the CNVMMS in Appendix A.

Construction Noise Barriers

8.23 A series of temporary construction noise barriers have been erected and will continue to be maintained throughout the CADP 1 works to protect Sensitive Receptors from the effects of construction noise. These include:

- Temporary Construction Noise Barrier;
- Construction Compound Hoarding; and
- Hartmann Road Temporary Screen.

8.24 Further details are provided in the CNVMMS in Appendix A and the details to discharge Conditions 94 (ref. 17/03556/AOD) and 96 (ref. 18/00761/AOD)

Dust and Air Quality

8.25 The Airport will seek to control and limit emissions to the atmosphere in terms of gaseous and particulate pollutants from vehicles and plant used on site, and dust from construction activities as far as is reasonably practicable.

8.26 The Airport **has and will continue to** implement the Air Quality Construction Management and Mitigation Strategy (AQCMMMS). The AQCMMMS outlines measures that will be incorporated into works to minimise the effects of air pollution and reduce the impact of dust in an appropriate and timely manner.

8.27 Measures to mitigate dust and other pollutant emissions impacts on nearby sensitive receptors are summarised below.

Site Management:

- Regular site inspections to monitor compliance with air quality and dust control procedures will be undertaken, inspection results recorded (further details of a monitoring programme are provided in the next section). An inspection log will be made available to the LBN upon request;
- The frequency of site inspections by those accountable for dust and air quality pollutant emissions issues will be increased when activities with a high potential to produce dust and emissions are being carried out and during prolonged dry or windy conditions;
- Any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, will be recorded, and the action taken to resolve the situation also recorded in the log book; and
- Regular liaison meetings with other high risk construction sites within 500 m of the site boundary will be held, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. Specific regard will be given to the construction site on the land to the north of Royal Albert Dock.

Preparing and Maintaining the Site:

- Solid screens or barriers will be erected around dusty activities or the site boundary, that are at least as high as any stockpiles on site;
- Site or specific operations will be fully enclosed, where there is a high potential for dust production and the site is active for an extensive period;
- Site fencing, barriers and scaffolding will be kept clean using wet methods;
- Materials that have a potential to produce dust will be removed from site as soon as possible, unless being re-used. If they are to be re-used, they will be covered at all times;
- Stockpiles will be covered or fenced to prevent wind whipping; and
- Regular dust soiling checks of buildings within 100 m of the site boundary will be carried out and cleaning provided if necessary.

Operating Vehicle/ Machinery:

- All on-road vehicles will comply with the requirements of the London Low Emission Zone (and the Ultra-Low Emissions Zone if its' boundary encompasses the site during the duration of the works);
- All Non-road Mobile Machinery (NRMM) will comply with the standards set within the GLA's Control of Dust and Emissions During Construction and Demolition SPG. From commencement of the works, all NRMM of net power 37 kW to 560 kW used on the site will meet Stage IIIA of EU Directive 97/68/EC (Directive 97/68/EC of the European Parliament and of the Council, 1997) and its subsequent amendments, as a minimum (unless specifically exempted by GLA). From 1st September 2020, all NRMM used on any site will meet Stage

IIIB of the Directive, as a minimum (unless specifically exempted by GLA). An up-to-date inventory of all NRMM on site will be maintained, and will be made available to the LBN on request.

- All vehicles will be required to switch off engines when stationary;
- Mains electricity or battery-powered equipment and generators will be used where practicable;
- All cutting, grinding or sawing equipment will be used in conjunction with suitable dust suppression techniques such as water sprays or local extraction systems;
- An adequate water supply will be maintained on the site for effective dust/ particulate matter suppression/ mitigation, using recycled water where possible and appropriate;
- Any chutes or conveyors will be enclosed and skips will be covered;
- Drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be lowered as far as practicable, and fine water sprays will be used on such equipment wherever appropriate; and
- Equipment will be readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event, using wet cleaning methods.

Measures Specific to Demolition:

- Buildings will be soft-stripped before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust);
- Water suppression will be used as appropriate during demolition operations; and
- Any biological debris will be bagged or damped down before demolition.

Measures Specific to Earthworks:

- Exposed areas/ soil stockpiles will be stabilised as soon as practicable. Hessian, mulches or trackifiers will be used where it is not possible to re-vegetate or cover with topsoil; and
- Surface stripping will be conducted in a manner that allows exposed areas to be rapidly stabilised.

Measures Specific to Construction:

- Scabbling (roughening of concrete surfaces), will be avoided, if possible;
- Sand and other aggregates will be stored in bunded areas and not allowed to dry out, unless this is required for a particular process (in which case appropriate additional control measures will be put in place); and
- Bulk cement and other fine powder materials will be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overflowing during delivery.

Measures Specific to Trackout:

- A water-assisted dust sweeper will be regularly used on the access and local roads, as necessary, to remove any material tracked out of the site;
- All vehicles entering and leaving the site will be covered to prevent escape of materials during transport;
- On-site haul routes will be regularly inspected for integrity, and necessary repairs to the surface undertaken as soon as reasonably practicable;
- Inspections of haul routes and any subsequent action will be recorded in a site log book; and

- Wheel washing systems (see paragraphs 3.27 to 3.30) will be installed at the site access points and/or the construction compound to remove excess mud or other materials from lorries leaving the site.

Dust Monitoring Strategy

- 8.28 Two automatic dust monitoring sites have and will continue to be operated throughout the duration of the works. The location and readings from these monitors will be periodically reviewed by the Airport's air quality consultants who will advise on any necessary adjustments to their siting and function. This will ensure that remain effective and appropriately located throughout the CADP1 works.

Ecology and Biodiversity

- 8.29 Best practice working methods on-site will continue to be followed, including adherence to the Environment Agency's Pollution Prevention Guidelines set out in PPG5, PPG1 and PPG6. BS5837: Trees in Relation to Construction, will also be adhered to for the protection of retained semi-natural features both within and adjacent to the site.
- 8.30 In the unlikely case that the site is left dormant within the bird-breeding season, between February and mid-August, for two weeks or more during the construction phase, an experienced Ornithologist will be required to visit the site to check for the presence of nesting birds before works recommence. If any active nests are found, then construction activities will cease and an appropriate buffer zone will be established. This is likely to comprise a circular area surrounding the nest that will be left intact until it has been confirmed by an experienced Ornithologist that the young have fledged and the nest is no longer in use.
- 8.31 All plant brought onto site will be cleaned as part of bio-security measures to minimise the chance of introducing non-native invasive species into the Airport site. Where any invasive species are discovered, removal of these plants will be undertaken in accordance with standard best practice guidance.

Archaeology and Built Heritage

- 8.32 A Written Scheme of Investigation (WSI) has been prepared to discharge Condition 62 and includes details of a programme for investigating and recording archaeological assets and historic buildings (ref. 18/00671/AOD).
- 8.33 A watching brief of the Dolphin 7 removal has already been undertaken together with Level 2 photographic record of King George V Dock in order to record structural information for these features.
- 8.34 A further watching brief has also now been undertaken for the removal of the coping stones at the Dock edge.
- 8.35 For other landside works associated with CADP1, an appointed archaeologist will be present to observe ground-works that may have an impact on archaeological deposits/ historic structures. The archaeologist will and be positioned outside the working area of the mechanical excavator (if used), in the normal working arrangement. If access to the working area is needed, the machine will cease operations and, if necessary, relocated to ensure safe access. Subject to safe access,

the archaeologist will enter the trench/ excavation area to carry out close inspection or record limited sections.

- 8.36 A record of the full sequence of all archaeological deposits, as revealed in the landside works watching brief, will be made. Appropriate specialist staff will be used depending on the type of artefacts and soil samples recovered during the course of the fieldwork.
- 8.37 The strategy for sampling archaeological and environmental deposits and structures (which can include soils, timbers, pollen, diatoms, animal bone and human burials) will – if required – be developed in consultation with GLAAS. Certain classes of material, i.e. post-medieval pottery and building material may be discarded after recording if a representative sample is kept.
- 8.38 Finds will be scanned to assess the date range of the assemblage with particular reference to pottery. In addition the artefacts will be used to characterise the site, and to establish the potential for all categories of finds should further archaeological work be necessary.
- 8.39 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum. Finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the professional guidelines set out in United Kingdom Institute for Conservation's Conservation Guidelines No. 2.

Water Resources and Flood Risk

- 8.40 The Airport and its appointed contractors **have and will continue to** implement working methods which **act to** protect surface and groundwater from pollution and other adverse impacts including change to flow volume, water levels and quality. **These methods accord** with relevant legislative requirements and appropriate industry guidance.
- 8.41 Site drainage, including surface runoff, will be discharged to sewers where appropriate and relevant permissions will be obtained from the statutory undertaker.
- 8.42 The Airport and its appointed contractors will ensure that protection measures to control the risk of pollution to surface water will be adopted and will include, where appropriate and reasonably practicable:
- Any containers of contaminating substance on site will be leak-proof and kept in a safe and secure building or compound from which they cannot leak, spill or be open to vandalism;
 - All refuelling, oiling and greasing will take place above drip trays or an impermeable surface which provides protection to underground strata and watercourses and away from drains. Vehicles will not be left unattended during refuelling;
 - Only construction equipment and vehicles free of all oil/fuel leaks will be permitted on site. Drip trays will be placed below static mechanical plant; and
 - All wash down of vehicles and equipment will take place in designated areas.
- 8.43 A formal water quality monitoring programme has been developed in consultation with RoDMA and will be continued throughout all works taking place in KGV Dock. A three phase water quality-monitoring programme **is** carried out **including** daily monitoring for pH, turbidity and dissolved oxygen, fortnightly monitoring of organotin and sulphate and a monthly sampling for arsenic,

cadmium, lead, mercury, chromium, copper, nickel and zinc. It is the responsibility of the ES&H Manager to co-ordinate water monitoring and report on results.

Contamination Potential and Ground Conditions

- 8.44 An Outline Remediation Strategy for the CADP1 works has been submitted to discharge Condition 39 (ref. 18/00671/AOD), the key details of which are summarised below.

Handling and Disposal of Materials

- 8.45 Should any soils require off-site disposal as part of the redevelopment, all surplus materials will be transferred to appropriately licensed waste management facilities by registered waste carriers under the relevant Duty of Care. It will be ensured that waste is stored and transported appropriately and securely; that waste is only transported and handled by those that are authorised to do so; and that all relevant documentation is completed, including waste transfer notes.

Mitigation Measures for Human Health Receptors

- 8.46 Construction workers may be exposed to contaminated soils and groundwater during ground works. Suitable measures to protect construction workers are envisaged to include clean/dirty working practices, provision of appropriate personal protective equipment (PPE) including gloves, provision of adequate welfare/hygiene facilities as well as explanations of the potential risks. Operatives are prohibited from eating, drinking or smoking within contaminated areas.
- 8.47 Asbestos has been recorded within three samples of Made Ground. A formal Asbestos Management Plan will be implemented prior to excavation work commencing on the affected part of the site. Should significant quantities of asbestos be detected in soils during any site redevelopment, a specialist contractor will be approached to advise on removal and disposal.
- 8.48 Depleted oxygen and elevated carbon dioxide levels may represent a risk to ground workers and appropriate precautions will be applied for personnel entering below ground confined spaces.

Discovery Strategy/Watching Brief

- 8.49 A watching brief will be carried out during construction for previously unidentified contamination.
- 8.50 A discovery strategy for any previously un-encountered contamination will be implemented as part of the redevelopment of the dockside areas of the site. RPS or another suitably qualified environmental consultant will be contacted, where any significant visual or olfactory evidence of contamination, not previously encountered, is identified by construction workers during the development works. Any construction activities in areas where contamination is encountered shall cease until an appropriate plan for dealing with the contamination has been put in place. The nature and extent of the contamination shall be fully investigated, a risk assessment carried out to identify any potential risks to sensitive receptors during and following construction and, if necessary, these risks will be mitigated to the satisfaction of LBN and the EA.

Validation Report

- 8.51 A Validation Report will be issued upon completion of each phase of construction to confirm completion of the above measures. The reports will be submitted to LBN for information. Where relevant, the reports will include the following information:
- Scaled photographs to confirm the depth of the cover layer installed in areas of soft landscaping across the site, where required;
 - Logs of hand pits completed including PID results;
 - Results of chemical analysis for soil samples taken from imported topsoil;
 - Comparison of the chemical results of topsoil to appropriate assessment criteria;
 - Details of any additional remediation measures implemented upon receipt of these results or upon encountering any previously un-encountered contamination;
 - Verification of the installation of gas protection measures; and
 - Duty of Care documentation, including waste transfer notes.
- 8.52 The final Validation Report will be produced in-line with current best practice and include a photographic record of all works undertaken.
- 8.53 Any requirement for longer term monitoring of pollutant linkages and maintenance post redevelopment will be determined upon completion of the works.

Unexploded Ordnance

- 8.54 The risk level on site for UXO is deemed as 'High'. An Unexploded Ordnance (UXO) site safety and emergency procedures plan [has been prepared in order to discharge Condition 81 \(ref. 17/00245/AOD\)](#)
- 8.55 UXO safety awareness training [has and will continue to](#) be given to all site personnel. The training covers the following topics to a level commensurate with the audience's responsibilities and duties:
- Project overview and the responsibilities of those working on site with regard to duty of care and public safety;
 - UXO recognition and safety procedures to be followed on discovery of a suspicious object or the alarm being sounded;
 - Emergency procedures to be followed in the event of an explosion including evacuation routes, muster stations and accounting for personnel; and
 - Work permits, works methodology and specific UXO risk mitigation methods. Post incident inspections and returning to normal works.
- 8.56 [As occurred prior to piling commencing in KGV Dock, before](#) any intrusive piling or drilling commences [elsewhere](#), UXO safety testing and appropriate clearance certification will be undertaken to a sufficient depth below ground to provide clearance from UXO. This can be done using a progressive drilling process (where large numbers of piles are to be placed and ground permitting) or using a vehicle borne hydraulic system to push a magnetometer into the ground to test for the presence of UXO prior to piling.
- 8.57 UXO safety monitoring of all "at risk" excavations will be undertaken, including geotechnical or archaeological trial pits. This should be provided by a UK Home Office Authorised UXO Contractor with specialist locators and detectors to scan the ground ahead of the excavation wherever possible.

Summary of Environmental Control Measures

8.58 Table 8.4 presents a summary of the environmental control measures to be implemented during the ongoing CADP 1 works.

Table 8.4 Summary of Environmental Controls

Topic	Environmental Control Measures
Pollution	Preparation of a Pollution Incident Response Plan.
Waste Management	Adoption of a SWMP to achieve targets set out in Condition 70: Waste Management Strategy.
Traffic and Transportation	Signposting for site delivery access and egress. Time restrictions for heavy load vehicles. 'Just-in-time' deliveries.
Noise and Vibration	Maximising the use of daytime hours to undertake construction works. Following the procedures for controlling construction noise and vibration set out in the CNVMMS (Appendix A). Following the noise monitoring and complaints handling procedure set out in the CNVMMS (Appendix A). Installation of construction noise barriers.
Dust and Air Quality	Implementation of the control measures within the AQCMMS and other parts this CEMP. Operation of the two automatic monitoring sites.
Ecology and Biodiversity	Adherence to the Environment Agency's Pollution Prevention Guidelines set out in PPG5, PPG1 and PPG6. BS5837. All plant brought onto site will be cleaned as part of biosecurity measures.
Archaeology and Built Heritage	Occasional watching brief will be undertaken on further areas of excavation and a record of all archaeological deposits made.
Water Resources and Flood Risk	Site drainage, including surface runoff, will be discharged to sewers where appropriate. Implementation of pollution protection measures as set out in this CEMP. Continuation of the water quality monitoring programme, depending on the phase of works .
Contamination Potential and Ground Conditions	Transfer of all surplus materials to appropriately licensed waste management facilities by registered waste carriers under the relevant Duty of Care. Provision of appropriate PPE including gloves, and provision of adequate welfare/hygiene facilities. Implementation of a formal Asbestos Management Plan. A watching brief to be carried out during construction for previously unidentified contamination. Implementation of a further UXO site safety and emergency procedures plan.

9 AUDITING AND REVIEW

Environmental Auditing

- 9.1 An auditing and inspection regime shall be [maintained](#) to ensure the continued compliance of the construction works with policy, the contract conditions and relevant legal requirements.

Site Inspection

- 9.2 Regular inspections (at least monthly) of the works shall be undertaken by a nominated member of the site staff to ensure the continued compliance of site operations with the provisions of this plan and control measures outlined in relevant method statements.
- 9.3 Any non-conformities and actions arising from monthly inspections will be raised in the 'Safety and Environmental Report System', which is maintained by the Airport.

Environmental Audit

- 9.4 [This CEMP has been reviewed following approval of the previously submitted CEMP \(ref. 18/01312/AOD\) and commencement of works on site. It can be confirmed that the monitoring and control measures outlined in this document remain up to date and valid.](#)
- 9.5 A trained competent auditor will carry out a further environmental audit of this [updated CEMP](#) within 6 months of approval, [and every 12 months thereafter, until the completion of the programme, as agreed with LBN.](#)
- 9.6 Environmental audits will focus on the compliance with this CEMP throughout project management, which will include performance against the environmental objectives and targets, legal and contractual compliance and continued effectiveness of this CEMP.

Procedures in the event of failure to comply with requirements of CEMP

- 9.7 If an audit shows that the requirements of this CEMP are not being met, the Auditor would raise a Corrective Action Request (CAR), for procedures to be put in place to deal with the system non-conformance.
- 9.8 If the procedures are adequate but have not been implemented such that there is a potential risk of pollution etc. a Non-Conformance Report (NCR) (part of the Quality Management Systems) shall be raised and only closed out with the agreement of the Auditor. NCRs will be recorded in the site Safety and Environmental Report Book.

CEMP Review

- 9.9 Although approval is being sought from LBN [this current version](#) of this CEMP, this is intended to be a 'live' document and may be [further](#) revised and/or updated from time to time in light of relevant legislation, discussions with the local planning authority and/or other affected parties.
- 9.10 Performance and progress under the CEMP will [continue to be](#) discussed, as required, at monthly construction meetings and/ or quarterly review meetings with LBN.



- 9.11 In the event that the CEMP needs to be substantially re-written following the above [meetings](#), a revised CEMP will be submitted to LBN for agreement. Where necessary, such revisions will also be accompanied by a Statement of Conformity with the UES.

APPENDIX A: CONSTRUCTION NOISE AND VIBRATION MANAGEMENT AND MITIGATION STRATEGY (CNVMMS)

City Airport Development Programme 1 (CADP1)

Construction Noise Vibration Management and
Mitigation Strategy

City Aviation House
Royal Docks
London
E16 2PB

September 2019

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Section A **INTRODUCTION**

A.1 General

A.1.1 The City Airport Development Programme (CADP1) planning application (13/01228/FUL) was granted planning permission by the Secretaries of State for Communities and Local Government and Transport in July 2016 following an appeal and public inquiry which was held in March/April 2016.

A.1.2 Condition 88 of the CADP1 permission requires that:

Prior to Commencement of Development a Construction Environmental Management Plan (CEMP) shall be submitted to and approved in writing by the Local Planning Authority.

The CEMP shall be implemented as approved.

The CEMP shall include (but not be limited to):

a) A Construction Noise and Vibration Management and Mitigation Strategy (CNVMMS)

(Author's emphasis);

b) An Air Quality Construction Management and Mitigation Strategy (AQCMMS);

c) Details of Wheel washing equipment

The CEMP shall be in accordance with the environmental standards, mitigation measures, embedded mitigation measures, requirements, recommendations and methods of implementing the Development contained in the Updated UES, appendices and addenda therein relevant to the Development.

A.1.3 The definitions of the CADP1 planning consent define the CNVMMS as a strategy in accordance with the environmental standards, mitigation measures, embedded mitigation measures, requirements, recommendations and methods of implementing the Development contained in the UES and appendices to include (but not limited to) the following:

- *maximising the use of daytime hours;*
- *mechanisms of control;*
- *community liaison and complaints handling;*
- *monitoring procedure;*
- *reporting of monitoring data;*
- *reporting of complaints;*

- *identification of any predicted Sensitive Receptors to be offered the Construction Sound Insulation Scheme in accordance with Conditions 90 and 91 and the proposed Phasing Plan for the carrying out such Construction Sound Insulation in each case;*
- *Section 61 procedure and ownership;*
- *location, dimensions and materials of any construction noise barriers; and*
- *any other mitigation measures to be implemented at source.*

A.1.4 This strategy is submitted as part of the requirement to discharge the requirements of condition 88 concerning the CEMP.

A.1.5 . This CNVMMS has been reviewed considering a proposed re-sequencing of the CADP construction programme. The construction programme is well underway and the CNVMMS strategy dated June 2018 and updated below has been and continues to be complied with. The Construction Sound Insulation Scheme (CSIS) is now complete. All eligible properties who accepted the offer of sound insulation works have been treated. At completion a total of 613 dwellings were offered CSIS works. 554 dwellings have been treated. No newly eligible properties have been identified as a result of the 2019 Revised Construction Phasing Plan.

Section B THE CNVMMS

B.1 CADP1 Assessment

- B.1.1** The construction works associated with CADP1 have been ongoing since 2017, with some works taking place at night. Whilst the extent and duration of Out of Operational Hours (OOOH) construction has been and will continue to be reduced as far as practicable, taking into account the overriding engineering, operational and safety considerations, certain construction activities, such as work within the airfield, must still take place when the runway and apron areas are not operational. [The remaining construction will be undertaken continuously in a single phase of work as set out in the 2019 Revised Construction Phasing Plan under Condition 4.](#)
- B.1.2** A full assessment of CADP1 construction noise was undertaken and reported in Chapter 6: Development Programme and Construction and Chapter 8: Noise and Vibration of the Updated Environmental Statement (UES). The noise assessment has now been updated to reflect the likely construction phasing and programme [of the remaining works](#) under the 2019 Revised Construction Phasing Plan.
- B.1.3** There will be periods throughout the remaining CADP1 build when such out of operational hours (OOOH) works will be necessary, as detailed on the OOOH Programme appended to the [2019 Revised Construction Phasing Plan](#) under Condition 4. However, the extent of OOOH working is limited by the other planning conditions attached to the CADP1 permission, in particular Condition 82 which requires that all piling taking place outside of operational hours is completed within a maximum of 32 weeks in total.
- B.1.4** Construction noise levels have also been assessed in the CADP1 UES and Construction Phasing Plan using the methods and significance criteria given in Annex E of BS 5228-1:2009+A1:2014. For night-time, the British Standard uses a 1 hour averaging time period for night. This is commonly adopted on major infrastructure projects such as Crossrail. The noise limits set out for previous construction projects at LCA, such as the Operation Improvement Project (OIP) which included the construction of the holding area at the start of Runway 28, used a 15 minute averaging time period at night to assess noise levels. This standard is more stringent than British Standard guidance. This more stringent threshold is also [being](#) used during the CADP1 works.
- B.1.5** The CADP1 UES sets out the following measures for mitigating construction noise, which have been and will continue to be implemented:
- The introduction of a Construction Sound Insulation Scheme (CSIS) (and now set out in Conditions 89, 90 and 91 of the CADP1 permission) which includes:
 - An offer of Standard Construction Sound Insulation (secondary glazing and vents) to properties predicted to be exposed to construction noise levels at night in the range 50 dB to 55 dB $L_{Aeq,15min}$ (for a period of 10 or more days of working in any 15 consecutive days or for a total number of days exceeding 40 in any 6 consecutive months) ;
 - Advanced Construction Sound Insulation (secondary or high performance thermal double glazing and acoustic vents) for properties predicted to exceed 55 dB $L_{Aeq,15min}$ at night regularly (for a period of 10 or more days of working in any

15 consecutive days or for a total number of days exceeding 40 in any 6 consecutive months);

- Temporary noise barriers, 3 metres in height, along the southern boundary of LCA, south of the KGV Dock, between City Aviation House and the western end of the Contractor's Compound, as well as close to Woodman Street, around the Contractor's Compound and Hartmann Road; details of which have been approved Conditions 94 and 96.
- Respite from night-time construction during Sunday nights (2000 Sunday to 0700 Monday);
- Continuous noise monitoring throughout the construction works;
- Re-assessment of noise levels [periodically as the works progress \(through the Section 61 agreement as agreed with LBN Officers\)](#) and using Best Practicable Means (BPM) to identify any further improvements available. This will include more details of the proposed construction plant and methodology, in addition to identifying any further appropriate noise reduction measures that may be available; and
- Local noise screening around plant where necessary.

B.1.6 The CADP1 conditions and the CNVMMS also include additional mitigation measures, which have been and will continue to be implemented:-

- Control over the hours operation of construction activities and limiting the number of weeks during which piling can take place during OOOH;
- Noise thresholds are to be applied at the site boundary which, if reached, will trigger alerts to ensure timely action can be taken to control noise during the day and night;
- Noise monitors are to be deployed around the site, on the site boundary and, where necessary, outside Sensitive Receptors, to ensure construction noise levels are controlled to specified levels;
- Vibration limits are to apply at Sensitive Receptors;

- A Community Liaison and Complaints Handling system will be in place throughout the works;
- Noise monitoring and on-going assessments will take place to establish whether any additional properties become eligible under LCA's CSIS;
- Works under the CSIS will be phased so that those eligible properties that accept the works will be treated having regard to the sequencing and programming of the construction works, to ensure they are adequately protected; and
- LCA will [has and will continue to comply with](#) a Section 61 Agreement with the London Borough of Newham (LBN) to ensure construction works are carried out in accordance with Best Practical Means (BPM) and that appropriate noise mitigation measures are deployed throughout the works.

B.2 Proposed Strategy

B.2.1 This Construction Noise and Vibration Management and Mitigation Strategy (CNVMMS) builds upon the framework report included in the UES and sets out the management, monitoring and mitigation strategies that are to be applied to the construction works associated with CADP1 to ensure that the works utilise BPM and that noise levels at untreated¹ Sensitive Receptors are normally below the relevant thresholds for the Construction Sound Insulation Scheme unless Exceptional Working Arrangements ([See Section D.5 and D.6](#)) have been agreed.

B.2.2 The CNVMMS provides for the following in the sections below:

- maximising the use of daytime hours;
- mechanisms of control;
- community liaison and complaints handling;
- monitoring procedures;
- reporting of monitoring data;
- reporting of complaints;
- identification of predicted sensitive receptors;
- ownership and procedures associated with the Section 61 Agreement ;
- describing construction noise barriers;
- describing mitigation measures at source.

¹ Untreated in this context means a Sensitive Receptor that has not yet been treated or offered treatment under the airport's Construction Sound Insulation Scheme.

Section C HOURS OF CONSTRUCTION OPERATIONS

C.1 Construction Hours

C.1.1 The CADP1 construction works will, wherever possible, **continue to** be undertaken during the operational hours of the Airport. This will minimise any disruption during night time and at weekends (i.e. the typical periods of rest and leisure). There will however be periods when it will be necessary to undertake works outside of operational hours (OOOH), both at night and during the 24 hour weekend period when the Airport is closed. This is due to the need to work within the safeguarding zones of the Airport, for example, some piling works will occur within close proximity of the Airport's aerodrome.

The construction hours are governed by the S61 Agreement and CADP1 conditions 82, 83 and 86.

The Airport's core operational hours are:

- 06:30 to 22:00 hours during the week;
- 06:30 to 12:00 on Saturdays and, 12:30 to 22:00 on Sundays

The OOOH periods (in between these times) are:

- night-time (22:00 to 06:30)
- weekends (12:30 Saturday to 12:30 Sunday).

C.1.2 The piling works associated with CADP1, along with other construction operations in the vicinity of the runway and other airport infrastructure will **continue to** involve the use of some items of plant of a height that infringes safeguarding transitional surfaces of the Airport's aerodrome. As a result, piling in some areas can only be carried out when the Airport, and by default its aerodrome, is not in use. Every effort has been made to ensure that as much piling as possible can be carried out during Airport operational hours, to minimise OOOH works.

C.1.3 Figure C.1 below identifies those zones where piling will be completed outside of the Airport's operational hours (OOOH) as well as where piling is to occur during normal Airport operational hours.

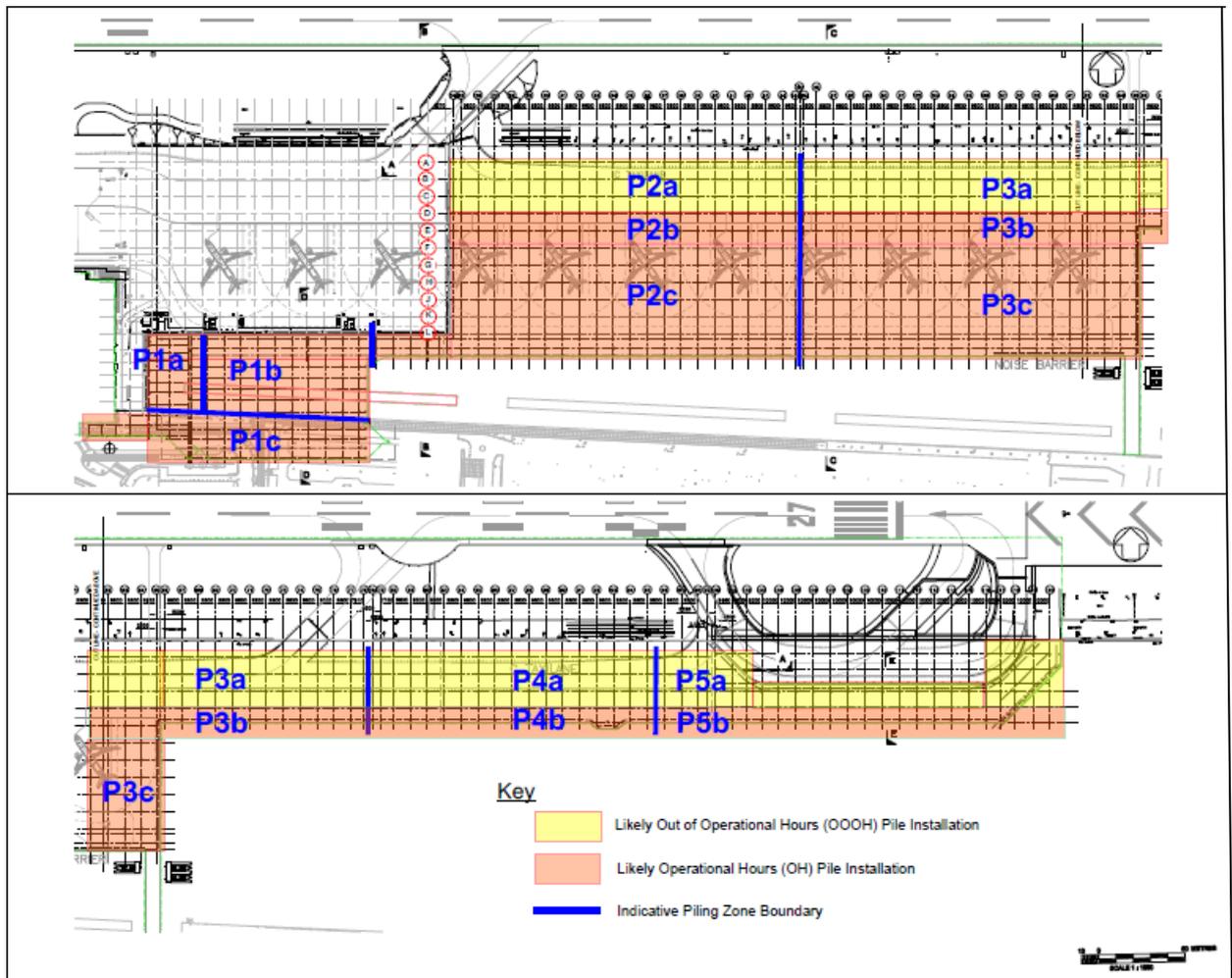


Figure C.1 – Split between Piling Zones during Airport Operations and OOOH

- C.1.4 As required by CADP1 Conditions 82 and 83, no construction of the piles shown in the “Yellow Area” on Figure C.1 shall be carried out:
- a) for more than 32 separate weeks during the entire construction works; and
 - b) within each separate week between the hours of 13.00 Sunday and 07.00 Monday.
- C.1.5 No construction of the piles shown in the “Orange Area” in Figure C.1 shall be undertaken outside of the following hours:
- Monday to Friday 07.00 to 21.00
 - Saturday 08.00 to 21.00
- C.1.6 Additionally, in accordance with CADP1 Condition 86 no construction works will take place on Sunday nights between the hours of 2000 Sunday to 0700 Monday or on Bank and Public Holidays.
- C.1.7 Notwithstanding the specific controls set out by Conditions 82 and 83 on the hours when piling

takes place, a number of other construction activities will **continue to** need to be carried out during the OOOH period to ensure continued operational safety. Where OOOH works are not required typical construction activities will be carried out between 0800 hours and 1800 hrs Monday to Friday and between 0800 hours and 1230 hours on Saturday.

- C.1.8 Other activities such as site set up and mobilisation **are** permitted during the ‘shoulder’ periods of each working day (including 18.00 – 22.00 Monday to Friday) and during OOOH period (see Table C.1) in order to ensure that the programme of works runs smoothly and efficiently. In addition, the Construction Compound **is** a manned 24 hour facility to enable the delivery, movement and storage of essential construction material and plant. However, wherever possible, noisier activity within this compound **is** mainly be restricted to operational hours. For example, the Waste and Materials Laydown Area (forming part of the approved Construction Compound under Condition 96) **only operates** during the day, except on infrequent occasions when piling operators **need to** facilitate barge movements to and from their working area.
- C.1.9 Construction works occurring inside buildings once the frame and cladding is erected (e.g. terminal fit out) will be permitted 24 hours a day. These works will not be audible to local residents. The typical hours of construction **as agreed under the S61 Agreement** are summarised in Table C.1 below.

Typical Hours of CADP1 Construction (External)						
	Airport's Operational Hours (OH)	Typical Construction Working Hours (OH)	OOOH (early morning)	OOOH (late evening)	Piling (OOOH morning)	Piling (OOOH evening)
Monday	06.30 – 22.00 but construction works commence at 07.00.	08.00 - 18.00	No work from 00.00 to 07.00	22.00 – 00.00	No work from 00.00 to 07.00	22.00-00.00
Tuesday to Friday	06.30 – 22.00	08.00 - 18.00	00.00 – 06.30	22.00 – 00.00	00.00 – 06.30	22.00 – 00.00
Saturday	06.30 – 12.30	08.00 – 12.30	00.00 – 06.30	12.30 – 00.00	00.00 – 06.30	12.30 – 00.00
Sunday	12.30 – 22.00	No OH works	00.00 – 12.30	No work from 20.00 to 00.00	00.00 – 12.30	No OOOH piling works

Table C.1: Typical Hours of CADP1 Construction

Section D **MECHANISMS OF CONTROL**

D.1 Introduction

- D.1.1 The construction activities associated with the CADP1 works will occur in close proximity to residential and commercial properties due to the location of the Airport site (hereafter referred to as Sensitive Receptors). This document specifies the thresholds that are applicable to the construction works to ensure noise and vibration emissions are controlled accordingly.
- D.1.2 LCA has deployed and will maintain a noise monitoring regime that will facilitate contractor compliance with the thresholds set out in this document and related planning conditions.
- D.1.3 Noise monitoring has been will continue to be undertaken independently by LCA, or its representatives, to ensure that levels are appropriately monitored, including any cumulative noise from different construction activities and contractors working concurrently. Procedures are set out in Section F of this document and will ensure appropriate actions are taken in the event of any thresholds for Construction Sound Insulation being triggered.

D.2 Mitigation Measures and Control

- D.2.1 The Contractor shall have regard to and comply with the requirements of the following:-
- Control of Pollution Act 1974
 - Environmental Protection Act 1990
 - Control of Noise at Work Regulations 2005
 - Safety, Health and Welfare at Work Regulations 2013
 - The Health and Safety at Work Act 1974
- D.2.2 It is the Contractor's responsibility to ensure that they carry out works in accordance with any conditions or requirements imposed by LBN.

D.3 BS 5228 – Parts 1 and 2:2009+A1:2014

- D.3.1 The Contractor will ensure that any item of plant used is no noisier than the corresponding item of plant and its associated noise levels quoted in BS 5228-1:2009+A1:2014. Only plant in compliance with EU and UK noise limits applicable to that equipment shall be used on site.

D.3.2 The Contractor shall ensure that plant is maintained correctly and operated in accordance with manufacturer's instructions and recommendations. BPM shall be deployed to ensure that operations are undertaken as quietly as possible and within the noise thresholds and vibration limits specified herein. All Contractors are required, as part of the tendering process, to demonstrate as a minimum how the guidance for noise and vibration control in BS 5228 will be adopted on this project to minimise noise and vibration emissions.

D.4 Noise Level Thresholds

External Noise Thresholds

D.4.1 Noise levels produced by construction works are not predicted to normally exceed those set out in Table D.1 (at 1 metre from the façade of an untreated Sensitive Receptor²) as a result of construction of CADP1.

D.4.2 However, as predicted in the Updated Environmental Statement (UES) and Accelerated Construction Phasing Plan, there will be occasions where untreated properties will be exposed to levels exceeding those in Table D.1. As assessed in the UES, those properties that are predicted or at risk of becoming exposed at times to a construction noise level greater than the SOAEL (Significant Observed Adverse Effect Level) for night-time of 55 dB $L_{Aeq,15min}$ were written to in August 2016 to offer them Advance Works as part of the approved Construction Sound Insulation Scheme (CSIS) (Condition 89). Further details are provided in Section I below.

D.4.3 Additional properties were identified as a result of the Accelerated Construction Phasing Plan and all eligible properties were offered works as part of the CSIS (see Section I below). In the event that LCA predicts that further untreated properties will be exposed to levels above those in Table D.1, approval of these Exceptional Working Arrangements will be required, as detailed in D.5 and D.6 below. These will be agreed via the S61 Agreement and will not be dealt with under the CNVMMS.

D.4.4 Individual worksite (proxy) limits are and will continue to be set on the noise monitoring equipment, based on the existing criterion at receptor location. The criterion at nearest receptor are corrected to the position of the worksite monitor, taking into account acoustic features such as terrain, barriers and distance. The worksite limits and procedures for monitoring are included within the technical note (RSK 296868-01(01)-TN) previously submitted to LBN. The adopted thresholds will continuously be monitored for their appropriateness and where applicable, be revised to better represent current working practices. Any changes will be discussed and agreed with LBN prior to their implementation.

² Sensitive Receptors means areas where occupants are more susceptible to the adverse effects of noise pollution. These include, but are not limited to, residential dwellings and public buildings such as hospitals, schools, day care facilities and care homes.

Table D1 - Construction noise thresholds at Sensitive Receptors

Day	Time	Averaging period,T	Noise Threshold,L _{Aeq}
Monday to Friday	0800 to 1800	10 hours	75
	0700 to 0800 and 1800 to 2300	1 hour	65
Saturday	0800 to 1300	5 hour	75
Saturday	0700 to 0800 and 1300 to 2300	1 hour	65
Sunday	0800 to 2300	1 hour	55
Any day	2300-0700	15 min	55

Notes:

- i) Noise level thresholds shall apply to external measurements made at one metre from the façade of the relevant building.
- ii) Noise measurements shall be made with *fast* time weighting
- iii) [Any changes to the criteria in Table D.1 will be subject to agreement via the S61 Agreement and not through revised details in the CNVMMS](#)

D.5 Exceptional Working Arrangements (works of duration less than 10 days)

D.5.1 If it is predicted that an essential demolition or construction operation is likely to give rise to noise levels outside Sensitive Receptors which are higher than the 1 hour or 15 minute noise thresholds specified in Table D.1 above for a period of less than 10 days in any 15 consecutive working days; or less than 20 days in any consecutive 6 months, then permission must be sought and agreement reached with the LCA Project Manager (PM) of these works and the LCA Environmental Safety and Health Manager (ES&H)/[Environmental Manager](#) before any such operation commences. Permission will only be granted for these Exceptional Working Arrangements if it can be demonstrated that BPM is being followed, i.e. there is no reasonable

alternative method, technique or control measure that could be deployed to avoid these thresholds being breached. A full method statement with planned durations of operations and associated noise levels will be submitted in order for this to be considered by both parties. Any request for these Exceptional Working Arrangements, along with associated supporting documentation, must be lodged with the PM at least 7 days before the operation is due to take place. The PM and ES&H/ [Environmental Manager](#) reserve the right to approve or reject the request. Supporting documentation and records of compliance with the agreed procedures for Exceptional Working Arrangements shall be made available for review by the LBN on request.

- D.5.2 Similarly, if it is predicted that an essential demolition or construction operation is likely to give rise to noise levels outside a Sensitive Receptor higher than the 10 hour or 5 hour threshold specified in Table D.1, then permission must be sought and agreement reached with the PM and ES&H/ [Environmental Manager](#) before any such operation commences. Permission will be subject to demonstrating that all BPM have been incorporated, including the use of “quiet periods” such as when the essential construction operation is ceased for a period. The Contractor shall provide all plant and operational data together with associated noise information as necessary to secure such an agreement. A full method statement with planned durations of operations and associated noise levels will be submitted to the PM with this request. Any request for these Exceptional Working Arrangements, along with associated supporting documentation, must be lodged with the PM at least 7 days before the operation is due to take place. The PM/ ES&H/ [Environmental Manager](#) reserves the right to approve or reject the request.

D.6 Exceptional Working Arrangements (works of greater than 10 days duration)

- D.6.1 If it is expected or predicted that an essential demolition and construction operation is likely to give rise to noise levels outside a Sensitive Receptor higher than any of the thresholds specified in Table D.1 for a period of at least:
- 10 days in any 15 consecutive working days; or
 - 20 days in any consecutive 6 months
- D.6.2 Permission must be sought and agreement reached with the PM/ ES&H/ [Environmental Manager](#) before any such operation commences and a submission provided identifying any Sensitive Receptors likely to be exposed to such levels of noise not yet offered treatment under LCA’s CSIS. Any request for these Exceptional Working Arrangements along with associated supporting documentation, must be lodged with the PM at least 3 months before the operation is due to take place. The PM/ ES&H/ [Environmental Manager](#) reserves the right to approve or reject the request.
- D.6.3 Permission will be subject to providing an offer to any Sensitive Receptors which come into the CSIS as a result of the proposed works and using reasonable endeavours to implement such insulation in advance of construction works giving rise to the levels taking place. A list of additional properties to be treated and a phasing plan for doing so will be provided to LBN for agreement. In addition, it shall be demonstrated that all BPM have been incorporated, including the use of “quiet periods” such as when the essential construction operation is ceased for a period.
- D.6.4 The Contractor shall provide all plant and operational data together with associated noise

information as necessary to secure such an agreement. A full method statement with planned durations of operations and associated noise levels will be submitted to the PM with this request.

D.7 Review of Periods of Exceptional Working Arrangements

- D.7.1 A review will be undertaken of any periods of Exceptional Work Arrangements once completed and records of compliance kept for review purposes. If the review and associated assessment indicates that a property has become or is likely to become eligible under LCA's CSIS, an offer of noise insulation will be made in accordance with CADP1 Condition 89 and procedures set out in Sections D.5 and D.6 of this document and in accordance with CADP1 Conditions 90 and 91.

D.8 Vibration Limits

- D.8.1 In accordance with CADP1 Condition 97:

Vibration from construction shall not exceed a Peak Particle Velocity of 1 mm/s in any axis, measured adjacent to the foundations of any Sensitive Receptor and 3mm/s at commercial receptors.

- D.8.2 Where vibration levels exceed the above limits, steps shall be taken as described in the Threshold Exceedance Protocol set out in Section F.6 to reduce levels to within the above limits.
- D.8.3 Where vibration levels exceed 3mm/s works will be required to cease and measures taken to reduce vibration levels to below 1mm/s.

Section E **COMMUNITY LIAISON AND COMPLAINTS HANDLING**

E.1 Introduction

E.1.1 A key aspect of minimising the impact of noise and vibration around the site is the maintenance of good relations with those people living and working in the vicinity of the Airport site. LCA has already appointed a Community Relations Ambassador (CRA) who will remain in place for the duration of the CADP1 construction works. The CRA will continue to keep members of the local community up to date on construction related issues and report into the London City Airport Consultative Committee (LCACC) throughout associated works. The CRA will also continue to assist LCA's Environment team with responding to any complaints or enquiries fairly and expeditiously. A comprehensive complaints management scheme is described and referenced in Section E.2 and F.7 below which has been put in place and will be maintained by LCA including a dedicated channel (telephone line) to facilitate complaints on a 24 hour basis.

E.2 Complaints Handling by LCA/Contractor

E.2.1 The management of environmental related complaints at London City Airport is already controlled by the Environment Operational Procedure Ref: EOP4.4.6A. The purpose of this procedure is to provide guidelines on the management of external environmental complaints directed to LCA.

E.2.2 External environmental complaints are currently considered by the LCA Environment Team. Any complaint regarding an individual incident or multiple occurrences which is perceived to have a negative impact on the environment or an individual, caused as a result of Airport operations is investigated. This can include but is not limited to:

- Aircraft Noise;
- Operational ground Noise; and
- Air quality (odours, smoke, etc.)

E.2.3 This procedure will also apply to any complaints arising from construction noise and will be in place during the course of the CADP1 works. The minimum requirements of this procedure relating to construction noise are set out below:

- Channels will be made available for the public to lodge complaints. LCA will provide at least three mechanisms:
 - manned telephone lines (during office and site operational hours);
 - telephone message recording facility (outside office and site operational hours, i.e. during Sunday night from 23.00 to Monday morning 07.00);
 - email.

- Information will be stored for each complaint, including details of the type of complaint and of the individual lodging the complaint.
- Where required, investigation into the causes of the reported disturbance will be conducted and reported.
- An acknowledgement/response will be sent within two working days from the initial correspondence being received and, where further investigation is required to address the complaint, this will be undertaken and a further response sent within a further 5 working days.
- A record of all complaints will be maintained, together with actions taken and the times associated with any actions.
- A report on complaints received and actions taken will be prepared by LCA on a monthly basis and made available for inspection by the LBN.

The LCA Environmental Team with assistance from the CRA and ES&H/ [Environmental Manager](#) will continue to be responsible for:

- Producing, monitoring and reporting all external environmental complaints in accordance with the above procedure;
- Any particularly 'difficult' complaints should be escalated to the ES&H/ Environmental Manager for further assistance, or if any such complaints are directly addressed to the ES&H/ Environmental Manager;
- Reviewing daily the receipt of complaints;
- If a complaint poses any significant risk to LCA or its employee's e.g. threatening tone, personalised threats, risk of disruption to airport operations, it is the responsibility of the ES&H/ [Environmental Manager](#) to raise such a complaint and to assess and take further action as needed.

E.3 Complaints Handling by Contractor

- E.3.1 The Contractor's Construction Manager (CM) is to be responsible for passing on immediately to the PM or ES&H/ [Environmental Manager](#)/ [Community Relations Ambassador](#) any complaints received by the Contractor from the local community.

Section F **MONITORING PROCEDURES**

F.1 General

F.1.1 CADP1 planning Condition 93 sets out the general requirements for construction monitoring and reporting on the project as follows:-

- 1) *Noise and vibration monitoring shall be undertaken by the Airport continuously throughout the construction of the Development at no fewer than 2 locations to ensure that demolition and construction works and associated activities are being undertaken in a manner that ensures compliance with the specified noise level limits and triggers.*

- 2) *Manual short-term noise measurements shall be undertaken as regularly as necessary to verify that the continuous noise monitoring is adequately reflecting the impact of noise on the surrounding buildings.*

- 3) *Noise monitoring shall be undertaken at one or more locations continuously around the site throughout the duration of the works by the Airport to verify that the continuous noise monitoring is adequately reflecting the impact of noise on the surrounding buildings and that the construction noise levels are in compliance with planning or other legal requirements.*

- 4) *Suitable vibration monitoring equipment shall be made available on site to demonstrate compliance with the specified vibration level limits. The equipment shall be capable of monitoring peak particle velocity in three mutually perpendicular axes and shall be capable of measuring down to 0.1 mm/s.*

- 5) *An alert or traffic light type system shall be operated to warn operatives and the construction manager when the site boundary noise limit is being approached and when it is being exceeded. This will provide the facility to monitor whether limits are being approached.*

- 6) *The noise data from the continuous noise monitoring system shall be made accessible in real time (as far as practically possible) via a web-based system that is available to all relevant parties for viewing.*

F.1.2 This Section sets out the methods by which the above requirements will be met during the CADP1 construction works.

- F.1.3 LCA will be responsible for the operation and placement of all noise and vibration monitoring equipment on and around the site. The positions and placement of noise monitors along the southern boundary of the Airport (excluding those within each specific contractor construction site) will be agreed with LBN. LCA will liaise with the Contractor to agree the placement of a noise monitor or monitors to ensure that the Contractor's works are undertaken in a manner that do not normally exceed the noise thresholds identified in Table D.1.
- F.1.4 The trigger/alert levels for the noise monitors along the southern boundary of the Airport and any other noise monitors within each specific contractor construction site will be specified to each contractor based on an assessment of the confirmed construction methodologies, to account for the potential cumulative effect of the different work packages. The intention of these limits will be to avoid exceeding the thresholds (either individually or cumulatively) for the CSIS set out in Table D.1 outside any untreated Sensitive Receptors.
- F.1.5 The noise data collected by all noise monitors will be centralised and policed via a web-based system with alert facilities which will send by e-mail and/or text a message to relevant recipients including the ES&H/ [Environmental Manager](#), the Environment Team and the appointed Contractors (as a minimum) as and when a trigger threshold is exceeded.

F.2 Noise Measurement on Site

- F.2.1 The Contractor will be provided with a noise monitor(s) by LCA and agreement reached on the monitoring location(s) with the Airport where the Contractor will undertake noise monitoring continuously throughout the contract. This will ensure that demolition and construction works and associated activities are being undertaken in a manner that ensures compliance with site boundary noise levels which are to be agreed with the Contractor. The Contractor's noise monitor(s) shall be moved as necessary as the Contractor's works progress along the site. Relevant alert triggers will be determined and adjusted as necessary, in agreement with the LCA and LBN, to account for where the works are taking place relative to the site boundary noise monitor(s). The Contractor's noise monitor will be used to maintain compliance with site boundary noise levels (including cumulative construction noise from all contractors), with the purpose of avoiding an exceedance of the noise thresholds set out in Table D.1 (above) outside any untreated Sensitive Receptors.
- F.2.2 LCA will additionally place a minimum of two noise monitors at the southern boundary of the Airport site close to residential properties, at positions to be agreed with LBN, to monitor the thresholds determined from Section D.4 above throughout the construction works. The locations of these monitors may alternate periodically, if necessary, to ensure that noise levels from representative construction activities are being accurately measured and assessed. Any such alternate locations will be agreed with LBN beforehand. As and when necessary, the site noise monitors will be supplemented by the provision of mobile monitors outside Sensitive Receptors to ensure that the threshold levels at the facades are in line with those set out in Section D.4 above.
- F.2.3 LCA and the Contractor will operate an alert or traffic light type system to warn operatives and the CM, PM, the Environment Team and ES&H/ [Environmental Manager](#) when the site boundary noise level is being approached and when it is being exceeded. This will provide the facility for LCA and the construction team to monitor whether thresholds are being approached and to take any remedial action necessary.

F.2.4 A web-based system will be provided enabling the Contractor, LCA's project team and relevant Airport advisers to receive alerts in real time and to allow remote inspection of both real time noise data and also historical noise data. This system will also be made accessible to LBN.

F.3 Noise Measurement by LCA off Site

F.3.1 Additional to the above, noise monitoring will be undertaken using mobile noise monitoring equipment by LCA, or as requested by LBN, at one or more Sensitive Receptor locations around the site. This will be done periodically throughout the duration of the works to verify that the continuous noise monitoring is adequately reflecting the impact of noise on the surrounding buildings and that the construction noise levels are in compliance with planning requirements. This monitoring will be further supplemented by manual short-term noise measurements undertaken regularly, as necessary, to verify that the continuous noise monitoring as a whole is adequately reflecting the impact of noise on the surrounding Sensitive Receptors.

F.3.2 LCA shall independently operate an alert system associated with their noise monitoring system that identifies when the site boundary noise level is being approached (First Action Level - Orange alert) and when it has been exceeded (Second Action Level - Red alert). Text and e-mail alerts will be sent to the Contractor and other relevant personnel to advise them of this situation. A procedure, as set out in Section F.7 below, will be in place concerning what action arises as a result of such alerts occurring.

F.4 Noise Monitoring Equipment

F.4.1 Noise monitoring equipment used by either the Contractor or LCA shall comply with BS EN 61672-2:2013. The results of this monitoring shall be made available to the PM, ES&H/ Environmental Manager and the Environment team on the day of monitoring via a website, allowing real-time access to relevant personnel.

F.4.2 The expectation is that works in the relevant construction area would be ceased on site should a Red alert occur, accompanied by a complaint from a member of the public, until an agreed set of actions are undertaken to reduce the noise levels to within agreed thresholds, or unless Exceptional Working Arrangements have been agreed in accordance with the procedures set out in Section D.6 and D.7 above.

F.5 Vibration Measurement

F.5.1 The Contractor shall have available on site suitable vibration monitoring equipment to demonstrate compliance with the specified vibration level limits, described in D.8 and as required by Condition 97. The equipment shall be capable of monitoring peak particle velocity in three mutually perpendicular axes and shall be capable of measuring down to 0.1 mm/s.

F.6 Threshold Exceedance Protocol

F.6.1 In the event that a Red alert occurs and it is determined that this has been caused as a result of construction noise activity, and that no agreement of Exceptional Working Arrangements is in place, the protocol will be initiated as set out in F.7

F.7 Noise and Vibration Complaint/ Alert Procedures

F.7.1 In the event of a COMPLAINT and RED ALERT

F.7.2 A complaint is received by the Environment Team, the CRA, PM or ES&H/ [Environmental Manager](#) concerning construction noise and/or vibration. In addition, a red alert is received from either the noise and/or vibration monitor.

- i) PM or ES&H/ [Environmental Manager](#) to contact Contractor on site to report complaint and alert to seek explanation and cessation of construction operation causing complaint and red alert. In the event of this complaint/alert situation arising, this action will be initiated immediately and at any time while the site is operational.
- ii) Automatic e-mail to LCA's Noise Consultant (copy in the Airport) reporting nature of complaint, time of occurrence and time of alert.
- iii) LCA's Noise Consultant will review monitoring data and prepare a short Incident Report identifying likely cause of event and details of noise or vibration levels recorded including magnitude, frequency and duration. Extent of exceedance of noise/vibration threshold will be identified. Report to be sent within 4 working hours of notification of complaint.
- iv) Report will be sent to PM, ES&H/ [Environmental Manager](#) and the Environment Team advising whether the construction process that has been ceased is the likely cause of the complaint and advising/querying what actions to be taken to avoid repetition.
- v) On instruction from PM, a report will be issued to the Contractor requesting formal explanation of construction process causing complaint and trigger as well as seeking actions to be taken to avoid any future occurrence. Report to be sent within 7 working hours of receipt of Incident Report.
- vi) Complaint handling will be in accordance with the procedures set out in E.2 above.

F.7.3 In the event of a COMPLAINT but NO ALERT

F.7.4 A complaint is received by a member of the Environment Team, the CRA, PM or ES&H/ [Environmental Manager](#) concerning construction noise and/or vibration. No alert appears to have been received relating to the time of complaint.

- i) PM and ES&H/ [Environmental Manager](#) to determine whether nature or extent of complaint (i.e. multiple complaints) is sufficient to warrant initiating any action with the Contractor. If so, contact will be made to LCA's Noise Consultant and the Contractor on site within 3 hours of complaint to report complaint and seek explanation and cessation of construction operation causing complaint.

- ii) Automatic e-mail to LCA's Noise Consultant (copy in the Airport) reporting nature of complaint and time of occurrence.
- iii) LCA's Noise Consultant will review monitoring data and prepare a short Incident Report identifying likely cause of event and details of noise or vibration levels recorded including magnitude, frequency and duration, if applicable.
- vii) Report will be sent to PM & ES&H/ Environmental Manager within 7 working hours of notification of complaint.
- viii) Take one or more of the following three steps:
 - a) On instruction from PM, report is sent to Contractor requesting immediate cessation of construction process causing complaint and query other actions to be taken to avoid repetition.
 - b) LCA's Noise Consultant undertakes a review of alert triggers to check calibration to complaint thresholds.
 - c) Take no further action other than record incident and associated noise and vibration levels.
- vii) Complaint handling will be in accordance with the procedures set out in E.2 above.

F.7.5 In the event of a RED ALERT but NO COMPLAINT

- i) LCA's Noise Consultant, on the request of the PM or ES&H/ [Environmental Manager](#), will review monitoring data and, if considered likely to be caused by construction activities, prepare a short Incident Report identifying likely cause of event and details of noise or vibration levels recorded including magnitude, frequency and duration.
- ii) Report will be sent to PM, ES&H/ [Environmental Manager](#) and the Environment Team within 7 hours of notification of alert.
- iii) Take one or more of the following four steps:
 - a) On instruction from PM or ES&H/ [Environmental Manager](#), send report to Contractor requesting formal explanation of construction process causing alert and query actions to be taken to avoid any future occurrence.
 - b) On instruction from PM, send report to Contractor requesting immediate cessation of construction process causing alert and query other actions to be taken to avoid repetition.
 - c) LCA's Noise Consultant undertakes a review of alert triggers to check calibration to complaint thresholds.
 - d) Take no further action other than record incident and associated noise and vibration levels.

Section G REPORTING OF MONITORING DATA

G.1 Reporting of Monitoring Data

- G.1.1 In accordance with the requirements of Condition 93 of the CADP1 permission, LCA will provide a web-based noise monitoring system with e-mail/text alerts enabled to provide real-time information to relevant Airport personnel and its project team. The system will be capable of remote interrogation allowing data to be inspected in real time from all noise monitors, as well as historical noise data over the period of up to one year.
- G.1.2 LCA will prepare Incident Reports identifying any threshold exceedances that have arisen during the previous week of construction operations, identifying the nature of the event and cause of the exceedance together with the actions taken to avoid future occurrences.
- G.1.3 The Incident Reports will be issued to LCA before the close of business on the following working day or as agreed between the parties.
- G.1.4 The Contractor will also adhere to the complaints and alerts policy set out in Section F.7.
- G.1.5 The Contractor will prepare a monthly report setting out any exceedances that have arisen during the previous week or month of construction works and summarising the measures taken or to be taken to avoid future occurrences. The frequency of reporting may increase to weekly depending on the intensity of construction at certain instances and the number of complaints received). Details of any Exceptional Working Arrangements being sought or in place shall be included in the regular report.

G.2 Reporting of Monitoring Data to the London Borough of Newham

- G.2.1 Access to the web-based noise monitoring system will be made available to LBN. The web-based system will provide an on-screen indication of whether or not trigger levels have been reached at a given noise or vibration monitor in real time and for that day. Historical data will also be available for viewing, showing whether any trigger levels agreed with LBN had been exceeded or approached in respect to compliance with Conditions 89, 90 and 91.

Section H **REPORTING OF COMPLAINTS**

H.1 Complaints received by LCA or via the Local Planning Authority

H.1.1 The complaints procedure, as described in Section E of this document, sets out the method by which complaints are logged by LCA. This is the general procedure that [has and will continue to](#) be adopted for the logging of construction related complaints associated with the CADP1 project.

H.1.2 Once a complaint has been received by LCA, it will be stored within a dedicated database along with the relevant information, in a format as set out below.

Reference	59.2015
Date Received	Wednesday 3 rd June 2015
Date Occurred	Wednesday 3 rd June 2015
Time Occurred	NA
Area	E14
Enquiry	SIS eligibility inquiry
Response Date	Thursday 4 th June 2015
Response	Not eligible currently

Figure H.1 – Format of logging construction related complaints for CADP1 works

H.1.3 Any complaints received either directly or via the LBN will be actioned within the timeframe as specified in Section E.2 above.

H.2 Complaints received by Contractor

H.2.1 The reporting of a complaint received by the Contractor shall be in accordance with the protocol set out in Section F.7 and shall be actioned by LCA in accordance with Section E.2.

Section I IDENTIFICATION OF PREDICTED SENSITIVE RECEPTORS

I.1 Sensitive Receptors

- I.1.1 Based on the CADP1 construction programme contained in the UES, the Sensitive Receptors eligible for Advance Works under the Construction Sound Insulation Scheme (CSIS) (submitted under Condition 89 and included at Annex 10 of the CADP1 Section 106 Agreement) have been determined by predicting the number of properties likely to become exposed to construction noise levels that would qualify them for CSIS works. The list of these 396 properties is given in Table I.1 below.
- I.1.2 The previously approved *Accelerated Construction Phasing Plan* did not materially change the assessed noise impacts but as a result of reducing the duration of the build by one year (from 5 years to 4 years) an additional 111 properties were also offered Advanced works. These properties are listed at Table I.2.
- I.1.3 In addition to reviewing the Sensitive Receptor assessment as part of the *Accelerated Construction Phasing Plan*, the Airport also carried out verification visits in the local area and identified a further 80 properties to receive treatment under the CSIS in order to further mitigate risk of those properties being exposed to construction noise. These are listed in Table I.3.
- I.1.4 2019 Update - The Construction Sound Insulation Scheme (CSIS) is now complete. All eligible properties who accepted the offer of sound insulation works have been treated. At completion a total of 613 dwellings were offered CSIS works. 554 dwellings have been treated. No newly eligible properties have been identified as a result of the 2019 Revised Construction Phasing Plan.

Building Name	No.	Sub Building Name	Thoroughfare	PostCode	TOID	BaseFunction
ALBION HOUSE		FLAT 21	CHURCH STREET	E16 2ND	1000002190696878	DWELLING
ALBION HOUSE		FLAT 22	CHURCH STREET	E16 2ND	1000002190696879	DWELLING
ALBION HOUSE		FLAT 23	CHURCH STREET	E16 2ND	1000002190696880	DWELLING
ALBION HOUSE		FLAT 29	CHURCH STREET	E16 2ND	1000002190696886	DWELLING
ALBION HOUSE		FLAT 30	CHURCH STREET	E16 2ND	1000002190696887	DWELLING
ALBION HOUSE		FLAT 31	CHURCH STREET	E16 2ND	1000002190696888	DWELLING
ALBION HOUSE		FLAT 25	CHURCH STREET	E16 2ND	1000002190696890	DWELLING
ALBION HOUSE		FLAT 26	CHURCH STREET	E16 2ND	1000002190696891	DWELLING
ALBION HOUSE		FLAT 27	CHURCH STREET	E16 2ND	1000002190696892	DWELLING
	19		CLAREMONT CLOSE	E16 2LR	1000002190697328	DWELLING
	20		CLAREMONT CLOSE	E16 2LR	1000002190697336	DWELLING
	21		CLAREMONT CLOSE	E16 2LR	1000002190697337	DWELLING
	22		CLAREMONT CLOSE	E16 2LR	1000002190697338	DWELLING
	23		CLAREMONT CLOSE	E16 2LR	1000002190697339	DWELLING
	24		CLAREMONT CLOSE	E16 2LR	1000002190697332	DWELLING
	25		CLAREMONT CLOSE	E16 2LR	1000002190697333	DWELLING
	26		CLAREMONT CLOSE	E16 2LR	1000002190697334	DWELLING
	27		CLAREMONT CLOSE	E16 2LR	1000002190697335	DWELLING
	28		CLAREMONT CLOSE	E16 2LR	1000002190697342	DWELLING
	29		CLAREMONT CLOSE	E16 2LR	1000002190697343	DWELLING
	30		CLAREMONT CLOSE	E16 2LR	1000002190697344	DWELLING
	31		CLAREMONT CLOSE	E16 2LR	1000002190697345	DWELLING
	32		CLAREMONT CLOSE	E16 2LR	1000002190697340	DWELLING
	33		CLAREMONT CLOSE	E16 2LR	1000002190697341	DWELLING
	35		CLAREMONT CLOSE	E16 2LR	1000002190697350	DWELLING
	36		CLAREMONT CLOSE	E16 2LR	1000002190697351	DWELLING
	37		CLAREMONT CLOSE	E16 2LR	1000002190697352	DWELLING
	38		CLAREMONT CLOSE	E16 2LR	1000002190697346	DWELLING
	39		CLAREMONT CLOSE	E16 2LR	1000002190697347	DWELLING
	40		CLAREMONT CLOSE	E16 2LR	1000002190697348	DWELLING
	41		CLAREMONT CLOSE	E16 2LR	1000002190697349	DWELLING
	42		CLAREMONT CLOSE	E16 2LR	1000002190697354	DWELLING
	55		CLAREMONT CLOSE	E16 2LR	1000002190697417	DWELLING
	56		CLAREMONT CLOSE	E16 2LR	1000002190697421	DWELLING
	60		CLAREMONT CLOSE	E16 2LR	1000002190697422	DWELLING
	61		CLAREMONT CLOSE	E16 2LR	1000002190697423	DWELLING
	62		CLAREMONT CLOSE	E16 2LR	1000002190697424	DWELLING
	63		CLAREMONT CLOSE	E16 2LR	1000002190697425	DWELLING
	65	FLAT 7	CLAREMONT CLOSE	E16 2LR	1000002190697433	DWELLING
		FLAT 3	CLAREMONT CLOSE	E16 2LR	1000002190697436	DWELLING
SHAW HOUSE		FLAT 30	CLAREMONT STREET	E16 2LP	1000002190697639	DWELLING
SHAW HOUSE		FLAT 21	CLAREMONT STREET	E16 2LP	1000002190697638	DWELLING
SHAW HOUSE		FLAT 22	CLAREMONT STREET	E16 2LP	1000002190697639	DWELLING
SHAW HOUSE		FLAT 29	CLAREMONT STREET	E16 2LP	1000002190697666	DWELLING
SHAW HOUSE		FLAT 25	CLAREMONT STREET	E16 2LP	1000002190697668	DWELLING
SHAW HOUSE		FLAT 26	CLAREMONT STREET	E16 2LP	1000002190697669	DWELLING
	12		FELIXSTOWE COURT	E16 2RR	1000002190696800	DWELLING
	17		FELIXSTOWE COURT	E16 2RR	1000002190696818	DWELLING
	18		FELIXSTOWE COURT	E16 2RR	1000002190696811	DWELLING
	33		FELIXSTOWE COURT	E16 2RR	1000002190696833	DWELLING
	34		FELIXSTOWE COURT	E16 2RR	1000002190696827	DWELLING
	35		FELIXSTOWE COURT	E16 2RR	1000002190696828	DWELLING
	36		FELIXSTOWE COURT	E16 2RR	1000002190696829	DWELLING
	39		FELIXSTOWE COURT	E16 2RR	1000002190696743	DWELLING
	40		FELIXSTOWE COURT	E16 2RR	1000002190696744	DWELLING
	41		FELIXSTOWE COURT	E16 2RR	1000002190696745	DWELLING
	42		FELIXSTOWE COURT	E16 2RR	1000002190696741	DWELLING
	47		FELIXSTOWE COURT	E16 2RR	1000002190885914	DWELLING
	48		FELIXSTOWE COURT	E16 2RR	1000002190885915	DWELLING
	53		FELIXSTOWE COURT	E16 2RR	1000002190885920	DWELLING
	54		FELIXSTOWE COURT	E16 2RR	1000002190885921	DWELLING
	55		FELIXSTOWE COURT	E16 2RR	1000002190885922	DWELLING
	56		FELIXSTOWE COURT	E16 2RR	1000002190885923	DWELLING
	59		FELIXSTOWE COURT	E16 2RR	1000002190885926	DWELLING
	62		FELIXSTOWE COURT	E16 2RR	1000002190885929	DWELLING
	106		FELIXSTOWE COURT	E16 2RS	1000002190002834	DWELLING
	107		FELIXSTOWE COURT	E16 2RS	1000002190002835	DWELLING
	4		FERNHILL STREET	E16 2HZ	1000002190660970	DWELLING
	5		FISHGUARD WAY	E16 2RG	1000002190696836	DWELLING
BROCKLEBANK HOUSE		FLAT 13	GLENISTER STREET	E16 2LY	1000002190697714	DWELLING
BROCKLEBANK HOUSE		FLAT 14	GLENISTER STREET	E16 2LY	1000002190697715	DWELLING
BROCKLEBANK HOUSE		FLAT 21	GLENISTER STREET	E16 2LY	1000002190697722	DWELLING
BROCKLEBANK HOUSE		FLAT 22	GLENISTER STREET	E16 2LY	1000002190697723	DWELLING
BROCKLEBANK HOUSE		FLAT 17	GLENISTER STREET	E16 2LY	1000002190697725	DWELLING
BROCKLEBANK HOUSE		FLAT 18	GLENISTER STREET	E16 2LY	1000002190697726	DWELLING
BROCKLEBANK HOUSE		FLAT 29	GLENISTER STREET	E16 2LY	1000002190697730	DWELLING
BROCKLEBANK HOUSE		FLAT 25	GLENISTER STREET	E16 2LY	1000002190697734	DWELLING
BROCKLEBANK HOUSE		FLAT 26	GLENISTER STREET	E16 2LY	1000002190697735	DWELLING
BROCKLEBANK HOUSE		FLAT 30	GLENISTER STREET	E16 2LY	1000002190697740	DWELLING
	25		GRENADIER STREET	E16 2LD	1000002190697440	DWELLING
	26		GRENADIER STREET	E16 2LD	1000002190697473	DWELLING
	27		GRENADIER STREET	E16 2LD	1000002190697476	DWELLING
	28		GRENADIER STREET	E16 2LD	1000002190697477	DWELLING
	22		GRIMSBY GROVE	E16 2RU	1000002190696785	DWELLING
	24		GRIMSBY GROVE	E16 2RU	1000002190696790	DWELLING
	29		LEONARD STREET	E16 2DT	1000002190661129	DWELLING
	31		LEONARD STREET	E16 2DT	1000002190661128	DWELLING

Building Name	No.	Sub Building Name	Thoroughfare	PostCode	TUID	BaseFunction
	33		LEONARD STREET	E16 2DT	1000002190661113	DWELLING
	35		LEONARD STREET	E16 2DT	1000002190661114	DWELLING
	37		LEONARD STREET	E16 2DT	1000002190661115	DWELLING
	2		LORD STREET	E16 2DZ	1000002190661218	DWELLING
	10		LORD STREET	E16 2DZ	1000002190661214	DWELLING
	12		LORD STREET	E16 2DZ	1000002190661213	DWELLING
	14		LORD STREET	E16 2DZ	1000002190661212	DWELLING
	16		LORD STREET	E16 2DZ	1000002190661211	DWELLING
	18		LORD STREET	E16 2DZ	1000002190661210	DWELLING
	29		LORD STREET	E16 2DZ	1000002190887307	DWELLING
DUNEDIN HOUSE		FLAT 12	MANWOOD STREET	E16 2LA	1000002190660975	DWELLING
DUNEDIN HOUSE		FLAT 14	MANWOOD STREET	E16 2LA	1000002190660977	DWELLING
DUNEDIN HOUSE		FLAT 13	MANWOOD STREET	E16 2LA	1000002190660978	DWELLING
DUNEDIN HOUSE		FLAT 10	MANWOOD STREET	E16 2LA	1000002190660980	DWELLING
DUNEDIN HOUSE		FLAT 11	MANWOOD STREET	E16 2LA	1000002190660981	DWELLING
DUNEDIN HOUSE		FLAT 20	MANWOOD STREET	E16 2LA	1000002190660983	DWELLING
DUNEDIN HOUSE		FLAT 21	MANWOOD STREET	E16 2LA	1000002190660984	DWELLING
DUNEDIN HOUSE		FLAT 22	MANWOOD STREET	E16 2LA	1000002190660985	DWELLING
DUNEDIN HOUSE		FLAT 16	MANWOOD STREET	E16 2LA	1000002190660986	DWELLING
DUNEDIN HOUSE		FLAT 17	MANWOOD STREET	E16 2LA	1000002190660987	DWELLING
DUNEDIN HOUSE		FLAT 18	MANWOOD STREET	E16 2LA	1000002190660988	DWELLING
DUNEDIN HOUSE		FLAT 19	MANWOOD STREET	E16 2LA	1000002190660989	DWELLING
DUNEDIN HOUSE		FLAT 27	MANWOOD STREET	E16 2LA	1000002190660990	DWELLING
DUNEDIN HOUSE		FLAT 28	MANWOOD STREET	E16 2LA	1000002190660991	DWELLING
DUNEDIN HOUSE		FLAT 29	MANWOOD STREET	E16 2LA	1000002190660992	DWELLING
DUNEDIN HOUSE		FLAT 23	MANWOOD STREET	E16 2LA	1000002190660994	DWELLING
DUNEDIN HOUSE		FLAT 24	MANWOOD STREET	E16 2LA	1000002190660995	DWELLING
DUNEDIN HOUSE		FLAT 25	MANWOOD STREET	E16 2LA	1000002190660996	DWELLING
DUNEDIN HOUSE		FLAT 26	MANWOOD STREET	E16 2LA	1000002190660997	DWELLING
DUNEDIN HOUSE		FLAT 34	MANWOOD STREET	E16 2LA	1000002190660998	DWELLING
DUNEDIN HOUSE		FLAT 35	MANWOOD STREET	E16 2LA	1000002190660999	DWELLING
DUNEDIN HOUSE		FLAT 36	MANWOOD STREET	E16 2LA	1000002190661000	DWELLING
DUNEDIN HOUSE		FLAT 37	MANWOOD STREET	E16 2LA	1000002190661001	DWELLING
DUNEDIN HOUSE		FLAT 30	MANWOOD STREET	E16 2LA	1000002190661002	DWELLING
DUNEDIN HOUSE		FLAT 32	MANWOOD STREET	E16 2LA	1000002190661004	DWELLING
DUNEDIN HOUSE		FLAT 33	MANWOOD STREET	E16 2LA	1000002190661005	DWELLING
DUNEDIN HOUSE		FLAT 45	MANWOOD STREET	E16 2LB	1000002190661008	DWELLING
DUNEDIN HOUSE		FLAT 46	MANWOOD STREET	E16 2LB	1000002190661009	DWELLING
DUNEDIN HOUSE		FLAT 41	MANWOOD STREET	E16 2LB	1000002190661011	DWELLING
DUNEDIN HOUSE		FLAT 42	MANWOOD STREET	E16 2LB	1000002190661012	DWELLING
DUNEDIN HOUSE		FLAT 53	MANWOOD STREET	E16 2LB	1000002190661015	DWELLING
DUNEDIN HOUSE		FLAT 54	MANWOOD STREET	E16 2LB	1000002190661016	DWELLING
DUNEDIN HOUSE		FLAT 49	MANWOOD STREET	E16 2LB	1000002190661019	DWELLING
DUNEDIN HOUSE		FLAT 50	MANWOOD STREET	E16 2LB	1000002190661020	DWELLING
DUNEDIN HOUSE		FLAT 61	MANWOOD STREET	E16 2LB	1000002190661023	DWELLING
DUNEDIN HOUSE		FLAT 62	MANWOOD STREET	E16 2LB	1000002190661024	DWELLING
DUNEDIN HOUSE		FLAT 57	MANWOOD STREET	E16 2LB	1000002190661027	DWELLING
DUNEDIN HOUSE		FLAT 58	MANWOOD STREET	E16 2LB	1000002190661028	DWELLING
DUNEDIN HOUSE		FLAT 69	MANWOOD STREET	E16 2LB	1000002190661031	DWELLING
DUNEDIN HOUSE		FLAT 70	MANWOOD STREET	E16 2LB	1000002190661032	DWELLING
DUNEDIN HOUSE		FLAT 65	MANWOOD STREET	E16 2LB	1000002190661035	DWELLING
DUNEDIN HOUSE		FLAT 66	MANWOOD STREET	E16 2LB	1000002190661036	DWELLING
DUNEDIN HOUSE		FLAT 7	MANWOOD STREET	E16 2LA	1000002190661038	DWELLING
DUNEDIN HOUSE		FLAT 8	MANWOOD STREET	E16 2LA	1000002190661040	DWELLING
DUNEDIN HOUSE		FLAT 38	MANWOOD STREET	E16 2LA	1000002190661041	DWELLING
DUNEDIN HOUSE		FLAT 73	MANWOOD STREET	E16 2LB	1000002190661047	DWELLING
10B			NEWLAND STREET	E16 2DU	1000002190661155	DWELLING
12B			NEWLAND STREET	E16 2DU	1000002190661150	DWELLING
2A			NEWLAND STREET	E16 2DU	1000002190661151	DWELLING
2B			NEWLAND STREET	E16 2DU	1000002190661152	DWELLING
4A			NEWLAND STREET	E16 2DU	1000002190661153	DWELLING
4B			NEWLAND STREET	E16 2DU	1000002190661158	DWELLING
6A			NEWLAND STREET	E16 2DU	1000002190661159	DWELLING
6B			NEWLAND STREET	E16 2DU	1000002190661160	DWELLING
8A			NEWLAND STREET	E16 2DU	1000002190661161	DWELLING
8B			NEWLAND STREET	E16 2DU	1000002190661157	DWELLING
	2		NEWLAND STREET	E16 2DU	1000002190661165	DWELLING
	4		NEWLAND STREET	E16 2DU	1000002190661166	DWELLING
	6		NEWLAND STREET	E16 2DU	1000002190661167	DWELLING
	8		NEWLAND STREET	E16 2DU	1000002190661162	DWELLING
	18		NEWLAND STREET	E16 2HN	1000002190661230	DWELLING
	20		NEWLAND STREET	E16 2HN	1000002190661225	DWELLING
	22		NEWLAND STREET	E16 2HN	1000002190661226	DWELLING
	24		NEWLAND STREET	E16 2HN	1000002190661227	DWELLING
	30		NEWLAND STREET	E16 2HN	1000002190661224	DWELLING
	32		NEWLAND STREET	E16 2HN	1000002190661219	DWELLING
	34		NEWLAND STREET	E16 2HN	1000002190661220	DWELLING
	36		NEWLAND STREET	E16 2HN	1000002190661221	DWELLING
	80		NEWLAND STREET	E16 2HN	1000002190660859	DWELLING
	82		NEWLAND STREET	E16 2HN	1000002190660860	DWELLING
	86		NEWLAND STREET	E16 2HN	1000002190660856	DWELLING
	88		NEWLAND STREET	E16 2HN	1000002190660857	DWELLING
	92		NEWLAND STREET	E16 2HN	1000002190660645	DWELLING
	94		NEWLAND STREET	E16 2HN	1000002190660646	DWELLING
	96		NEWLAND STREET	E16 2HN	1000002190660640	DWELLING
	43		PIER PARADE	E16 2LU	1000002190697611	DWELLING
	44		PIER PARADE	E16 2LU	1000002190697612	DWELLING

Building Name	No.	Sub Building Name	Thoroughfare	PostCode	TOID	BaseFunction
WESTLAND HOUSE		FLAT 20	RYMILL STREET	E16 2LE	1000002190697243	DWELLING
WESTLAND HOUSE		FLAT 21	RYMILL STREET	E16 2LE	1000002190697244	DWELLING
WESTLAND HOUSE		FLAT 22	RYMILL STREET	E16 2LE	1000002190697245	DWELLING
WESTLAND HOUSE		FLAT 32	RYMILL STREET	E16 2LE	1000002190697248	DWELLING
WESTLAND HOUSE		FLAT 33	RYMILL STREET	E16 2LE	1000002190697248	DWELLING
WESTLAND HOUSE		FLAT 34	RYMILL STREET	E16 2LE	1000002190697250	DWELLING
WESTLAND HOUSE		FLAT 28	RYMILL STREET	E16 2LE	1000002190697251	DWELLING
WESTLAND HOUSE		FLAT 29	RYMILL STREET	E16 2LE	1000002190697252	DWELLING
WESTLAND HOUSE		FLAT 30	RYMILL STREET	E16 2LE	1000002190697254	DWELLING
WESTLAND HOUSE		FLAT 40	RYMILL STREET	E16 2LE	1000002190697257	DWELLING
WESTLAND HOUSE		FLAT 36	RYMILL STREET	E16 2LE	1000002190697260	DWELLING
WESTLAND HOUSE		FLAT 37	RYMILL STREET	E16 2LE	1000002190697261	DWELLING
WESTLAND HOUSE		FLAT 38	RYMILL STREET	E16 2LE	1000002190697262	DWELLING
WESTLAND HOUSE		FLAT 12	RYMILL STREET	E16 2LE	1000002190697263	DWELLING
WESTLAND HOUSE		FLAT 59	RYMILL STREET	E16 2LF	1000002190697264	DWELLING
WESTLAND HOUSE		FLAT 13	RYMILL STREET	E16 2LE	1000002190697265	DWELLING
WESTLAND HOUSE		FLAT 60	RYMILL STREET	E16 2LF	1000002190697266	DWELLING
WESTLAND HOUSE		FLAT 61	RYMILL STREET	E16 2LF	1000002190697267	DWELLING
WESTLAND HOUSE		FLAT 62	RYMILL STREET	E16 2LF	1000002190697268	DWELLING
WESTLAND HOUSE		FLAT 56	RYMILL STREET	E16 2LF	1000002190697270	DWELLING
WESTLAND HOUSE		FLAT 57	RYMILL STREET	E16 2LF	1000002190697271	DWELLING
WESTLAND HOUSE		FLAT 58	RYMILL STREET	E16 2LF	1000002190697273	DWELLING
WESTLAND HOUSE		FLAT 67	RYMILL STREET	E16 2LF	1000002190697274	DWELLING
WESTLAND HOUSE		FLAT 68	RYMILL STREET	E16 2LF	1000002190697275	DWELLING
WESTLAND HOUSE		FLAT 69	RYMILL STREET	E16 2LF	1000002190697276	DWELLING
WESTLAND HOUSE		FLAT 70	RYMILL STREET	E16 2LF	1000002190697277	DWELLING
WESTLAND HOUSE		FLAT 63	RYMILL STREET	E16 2LF	1000002190697278	DWELLING
WESTLAND HOUSE		FLAT 64	RYMILL STREET	E16 2LF	1000002190697279	DWELLING
WESTLAND HOUSE		FLAT 65	RYMILL STREET	E16 2LF	1000002190697280	DWELLING
WESTLAND HOUSE		FLAT 66	RYMILL STREET	E16 2LF	1000002190697281	DWELLING
WESTLAND HOUSE		FLAT 71	RYMILL STREET	E16 2LF	1000002190697282	DWELLING
WESTLAND HOUSE		FLAT 72	RYMILL STREET	E16 2LF	1000002190697283	DWELLING
WESTLAND HOUSE		FLAT 73	RYMILL STREET	E16 2LF	1000002190697284	DWELLING
WESTLAND HOUSE		FLAT 74	RYMILL STREET	E16 2LF	1000002190697285	DWELLING
WESTLAND HOUSE		FLAT 41	RYMILL STREET	E16 2LF	1000002190697286	DWELLING
WESTLAND HOUSE		FLAT 42	RYMILL STREET	E16 2LF	1000002190697287	DWELLING
WESTLAND HOUSE		FLAT 43	RYMILL STREET	E16 2LF	1000002190697288	DWELLING
WESTLAND HOUSE		FLAT 44	RYMILL STREET	E16 2LF	1000002190697289	DWELLING
WESTLAND HOUSE		FLAT 8	RYMILL STREET	E16 2LE	1000002190697292	DWELLING
WESTLAND HOUSE		FLAT 9	RYMILL STREET	E16 2LE	1000002190697293	DWELLING
WESTLAND HOUSE		FLAT 49	RYMILL STREET	E16 2LF	1000002190697294	DWELLING
WESTLAND HOUSE		FLAT 50	RYMILL STREET	E16 2LF	1000002190697295	DWELLING
WESTLAND HOUSE		FLAT 51	RYMILL STREET	E16 2LF	1000002190697296	DWELLING
WESTLAND HOUSE		FLAT 52	RYMILL STREET	E16 2LF	1000002190697297	DWELLING
WESTLAND HOUSE		FLAT 45	RYMILL STREET	E16 2LF	1000002190697298	DWELLING
WESTLAND HOUSE		FLAT 46	RYMILL STREET	E16 2LF	1000002190697299	DWELLING
WESTLAND HOUSE		FLAT 47	RYMILL STREET	E16 2LF	1000002190697300	DWELLING
WESTLAND HOUSE		FLAT 48	RYMILL STREET	E16 2LF	1000002190697301	DWELLING
WESTLAND HOUSE		FLAT 53	RYMILL STREET	E16 2LF	1000002190697302	DWELLING
WESTLAND HOUSE		FLAT 54	RYMILL STREET	E16 2LF	1000002190697303	DWELLING
WESTLAND HOUSE		FLAT 55	RYMILL STREET	E16 2LF	1000002190697304	DWELLING
	62	SHELDRAKE CLOSE		E16 2HT	1000002190660660	DWELLING
	64	SHELDRAKE CLOSE		E16 2HT	1000002190660661	DWELLING
	66	SHELDRAKE CLOSE		E16 2HT	1000002190660662	DWELLING
	68	SHELDRAKE CLOSE		E16 2HT	1000002190660663	DWELLING
	70	SHELDRAKE CLOSE		E16 2HT	1000002190660664	DWELLING
	72	SHELDRAKE CLOSE		E16 2HT	1000002190660665	DWELLING
	92	SHELDRAKE CLOSE		E16 2HT	1000002190660697	DWELLING
	94	SHELDRAKE CLOSE		E16 2HT	1000002190660698	DWELLING
	110	SHELDRAKE CLOSE		E16 2HT	1000002190660699	DWELLING
	112	SHELDRAKE CLOSE		E16 2HT	1000002190660698	DWELLING
	114	SHELDRAKE CLOSE		E16 2HT	1000002190660699	DWELLING
	116	SHELDRAKE CLOSE		E16 2HT	1000002190660700	DWELLING
	110	SHELDRAKE CLOSE		E16 2HT	1000002190660700	DWELLING
GLEN HOUSE		FLAT 21	STOREY STREET	E16 2LU	1000002190697696	DWELLING
GLEN HOUSE		FLAT 22	STOREY STREET	E16 2LU	1000002190697697	DWELLING
GLEN HOUSE		FLAT 29	STOREY STREET	E16 2LU	1000002190697704	DWELLING
GLEN HOUSE		FLAT 30	STOREY STREET	E16 2LU	1000002190697705	DWELLING
GLEN HOUSE		FLAT 25	STOREY STREET	E16 2LU	1000002190697708	DWELLING
GLEN HOUSE		FLAT 26	STOREY STREET	E16 2LU	1000002190697709	DWELLING
	44	WINIFRED STREET		E16 2HX	1000002190660713	DWELLING
	50	WINIFRED STREET		E16 2HX	1000002190660720	DWELLING
	52	WINIFRED STREET		E16 2HX	1000002190660721	DWELLING
	54	WINIFRED STREET		E16 2HX	1000002190660722	DWELLING
	56	WINIFRED STREET		E16 2HX	1000002190660718	DWELLING
	94	WINIFRED STREET		E16 2HX	1000002190660676	DWELLING
	96	WINIFRED STREET		E16 2HX	1000002190660677	DWELLING
	100	WINIFRED STREET		E16 2HX	1000002190660683	DWELLING
	102	WINIFRED STREET		E16 2HX	1000002190660684	DWELLING
	104	WINIFRED STREET		E16 2HX	1000002190660685	DWELLING
	106	WINIFRED STREET		E16 2HX	1000002190660686	DWELLING
16A		WOODMAN STREET		E16 2NF	1000002190696854	DWELLING
20A		WOODMAN STREET		E16 2NF	1000002190696856	DWELLING
26A		WOODMAN STREET		E16 2NF	1000002190696848	DWELLING
32A		WOODMAN STREET		E16 2NF	1000002190696847	DWELLING
34A		WOODMAN STREET		E16 2NF	1000002190696840	DWELLING
36A		WOODMAN STREET		E16 2NF	1000002190696837	DWELLING

Table I.1 – Properties eligible for Advance Works (as listed in CADP1 Section 106)

Building Name	No.	Sub Building Name	Thoroughfare	PostCode	TOID	Building Type
	53		CLAREMONT CLOSE	E16 2LR	1000002190697415	Dwelling
	54		CLAREMONT CLOSE	E16 2LR	1000002190697416	Dwelling
SHAW HOUSE		FLAT 17	CLAREMONT STREET	E16 2LP	1000002190697662	Dwelling
SHAW HOUSE		FLAT 18	CLAREMONT STREET	E16 2LP	1000002190697663	Dwelling
	9		FELIXSTOWE COURT	E16 2RR	1000002190696810	Dwelling
	10		FELIXSTOWE COURT	E16 2RR	1000002190696803	Dwelling
	11		FELIXSTOWE COURT	E16 2RR	1000002190696804	Dwelling
	15		FELIXSTOWE COURT	E16 2RR	1000002190696816	Dwelling
	16		FELIXSTOWE COURT	E16 2RR	1000002190696817	Dwelling
	31		FELIXSTOWE COURT	E16 2RR	1000002190696831	Dwelling
	32		FELIXSTOWE COURT	E16 2RR	1000002190696832	Dwelling
	37		FELIXSTOWE COURT	E16 2RR	1000002190696740	Dwelling
	38		FELIXSTOWE COURT	E16 2RR	1000002190696742	Dwelling
	44		FELIXSTOWE COURT	E16 2RR	1000002190885911	Dwelling
	72		FELIXSTOWE COURT	E16 2RS	1000002190002800	Dwelling
	100		FELIXSTOWE COURT	E16 2RS	1000002190002820	Dwelling
	102		FELIXSTOWE COURT	E16 2RS	1000002190002822	Dwelling
	18		GRIMSBY GROVE	E16 2RJ	1000002190696793	Dwelling
	20		GRIMSBY GROVE	E16 2RJ	1000002190696794	Dwelling
	18		HOLT CLOSE	SE28 8LF	1000002190781114	Dwelling
	12		HOLT ROAD	E16 2DX	1000002190661193	Dwelling
	16		HOLT ROAD	E16 2DX	1000002190661149	Dwelling
	20		HOLT ROAD	E16 2DX	1000002190661147	Dwelling
	22		HOLT ROAD	E16 2DX	1000002190661146	Dwelling
	24		HOLT ROAD	E16 2DX	1000002190661145	Dwelling
	26		HOLT ROAD	E16 2DX	1000002190661144	Dwelling
	28		HOLT ROAD	E16 2DX	1000002190661143	Dwelling
	30		HOLT ROAD	E16 2DX	1000002190661142	Dwelling
	9		LEONARD STREET	E16 2DT	1000002190661137	Dwelling
	11		LEONARD STREET	E16 2DT	1000002190661136	Dwelling
	13		LEONARD STREET	E16 2DT	1000002190661135	Dwelling
	27		LEONARD STREET	E16 2DT	1000002190661130	Dwelling
	27		LEONARD STREET	E16 2DT	1000002190661130	Dwelling
	39		LEONARD STREET	E16 2DT	1000002190661116	Dwelling
	41		LEONARD STREET	E16 2DT	1000002190661059	Dwelling
	43		LEONARD STREET	E16 2DT	1000002190661060	Dwelling
	45		LEONARD STREET	E16 2DT	1000002190661061	Dwelling
	1		LORD STREET	E16 2DZ	1000002190661239	Dwelling
	3		LORD STREET	E16 2DZ	1000002190661240	Dwelling
	4		LORD STREET	E16 2DZ	1000002190661217	Dwelling
	5		LORD STREET	E16 2DZ	1000002190661241	Dwelling
	6		LORD STREET	E16 2DZ	1000002190661216	Dwelling
	7		LORD STREET	E16 2DZ	1000002190661242	Dwelling
	8		LORD STREET	E16 2DZ	1000002190661215	Dwelling
	9		LORD STREET	E16 2DZ	1000002190661243	Dwelling
	11		LORD STREET	E16 2DZ	1000002190661238	Dwelling
	13		LORD STREET	E16 2DZ	1000002190661206	Dwelling
	15		LORD STREET	E16 2DZ	1000002190661207	Dwelling
	17		LORD STREET	E16 2DZ	1000002190661208	Dwelling
	19		LORD STREET	E16 2DZ	1000002190661209	Dwelling
	21		LORD STREET	E16 2DZ	1000002190661234	Dwelling
	23		LORD STREET	E16 2DZ	1000002190661235	Dwelling
	25		LORD STREET	E16 2DZ	1000002190661236	Dwelling
	27		LORD STREET	E16 2DZ	1000002190661237	Dwelling
	10		NEWLAND STREET	E16 2DU	1000002190661163	Dwelling
	12		NEWLAND STREET	E16 2DU	1000002190661164	Dwelling
	14		NEWLAND STREET	E16 2HN	1000002190661228	Dwelling
	16		NEWLAND STREET	E16 2HN	1000002190661229	Dwelling
	26		NEWLAND STREET	E16 2HN	1000002190661222	Dwelling
	28		NEWLAND STREET	E16 2HN	1000002190661223	Dwelling
	38		NEWLAND STREET	E16 2HN	1000002190660801	Dwelling
	40		NEWLAND STREET	E16 2HN	1000002190660802	Dwelling
	42		NEWLAND STREET	E16 2HN	1000002190660803	Dwelling
	44		NEWLAND STREET	E16 2HN	1000002190660804	Dwelling
	46		NEWLAND STREET	E16 2HN	1000002190660805	Dwelling
	48		NEWLAND STREET	E16 2HN	1000002190660814	Dwelling
	50		NEWLAND STREET	E16 2HN	1000002190660815	Dwelling
	52		NEWLAND STREET	E16 2HN	1000002190660816	Dwelling
	54		NEWLAND STREET	E16 2HN	1000002190660817	Dwelling
10A	10A		NEWLAND STREET	E16 2DU	1000002190661154	Dwelling
12A	12A		NEWLAND STREET	E16 2DU	1000002190661156	Dwelling
QUEENSLAND HOUSE		FLAT 7	RYMILL STREET	E16 2LG	1000002190697578	Dwelling
GLEN HOUSE		FLAT 17	STOREY STREET	E16 2LU	1000002190697700	Dwelling
GLEN HOUSE		FLAT 18	STOREY STREET	E16 2LU	1000002190697701	Dwelling
	14		WOODMAN STREET	E16 2NF	1000002190696866	Dwelling
	18		WOODMAN STREET	E16 2NF	1000002190696858	Dwelling
	22		WOODMAN STREET	E16 2NF	1000002190696850	Dwelling

Building Name	No.	Sub Building Name	Thoroughfare	PostCode	TOID	Building Type
	24		WOODMAN STREET	E16 2NF	1000002190696851	Dwelling
	30		WOODMAN STREET	E16 2NF	1000002190696842	Dwelling
	32		WOODMAN STREET	E16 2NF	1000002190696843	Dwelling
	38		WOODMAN STREET	E16 2LS	1000002190697676	Dwelling
	40		WOODMAN STREET	E16 2LS	1000002190697677	Dwelling
	46		WOODMAN STREET	E16 2LS	1000002190697406	Dwelling
	48		WOODMAN STREET	E16 2LS	1000002190697407	Dwelling
	50		WOODMAN STREET	E16 2LS	1000002190697408	Dwelling
	54		WOODMAN STREET	E16 2LS	1000002190697406	Dwelling
	56		WOODMAN STREET	E16 2LS	1000002190697397	Dwelling
	58		WOODMAN STREET	E16 2LS	1000002190697398	Dwelling
	62		WOODMAN STREET	E16 2LS	1000002190697391	Dwelling
	64		WOODMAN STREET	E16 2LS	1000002190697392	Dwelling
	70		WOODMAN STREET	E16 2LS	1000002190697383	Dwelling
	72		WOODMAN STREET	E16 2LS	1000002190697384	Dwelling
	74		WOODMAN STREET	E16 2LS	1000002190697385	Dwelling
14A	14A		WOODMAN STREET	E16 2NF	1000002190696853	Dwelling
18A	18A		WOODMAN STREET	E16 2NF	1000002190696855	Dwelling
22A	22A		WOODMAN STREET	E16 2NF	1000002190696846	Dwelling
24A	24A		WOODMAN STREET	E16 2NF	1000002190696847	Dwelling
30A	30A		WOODMAN STREET	E16 2NF	1000002190696838	Dwelling
32A	32A		WOODMAN STREET	E16 2NF	1000002190696835	Dwelling
38A	38A		WOODMAN STREET	E16 2LS	1000002190697672	Dwelling
40A	40A		WOODMAN STREET	E16 2LS	1000002190697673	Dwelling
46A	46A		WOODMAN STREET	E16 2LS	1000002190697402	Dwelling
48A	48A		WOODMAN STREET	E16 2LS	1000002190697403	Dwelling
50A	50A		WOODMAN STREET	E16 2LS	1000002190697404	Dwelling
56A	56A		WOODMAN STREET	E16 2LS	1000002190697394	Dwelling
62A	62A		WOODMAN STREET	E16 2LS	1000002190697386	Dwelling
64A	64A		WOODMAN STREET	E16 2LS	1000002190697387	Dwelling
66A	66A		WOODMAN STREET	E16 2LS	1000002190697388	Dwelling
70A	70A		WOODMAN STREET	E16 2LS	1000002190697375	Dwelling
72A	72A		WOODMAN STREET	E16 2LS	1000002190697380	Dwelling
74A	74A		WOODMAN STREET	E16 2LS	1000002190697381	Dwelling

Table I.2 – Additional Properties eligible due to Accelerated Construction Phasing Plan

Building Name	No.	Sub Building Name	Thoroughfare	PostCode	TOID	Building Type
	13		CLAREMONT CLOSE	E16 2LR	1000002190697329	Dwelling
	14		CLAREMONT CLOSE	E16 2LR	1000002190697330	Dwelling
	15		CLAREMONT CLOSE	E16 2LR	1000002190697331	Dwelling
	16		CLAREMONT CLOSE	E16 2LR	1000002190697325	Dwelling
	17		CLAREMONT CLOSE	E16 2LR	1000002190697326	Dwelling
	18		CLAREMONT CLOSE	E16 2LR	1000002190697327	Dwelling
	49		CLAREMONT CLOSE	E16 2LR	1000002190697418	Dwelling
	50		CLAREMONT CLOSE	E16 2LR	1000002190697419	Dwelling
	51		CLAREMONT CLOSE	E16 2LR	1000002190697420	Dwelling
	52		CLAREMONT CLOSE	E16 2LR	1000002190697414	Dwelling
	53		CLAREMONT CLOSE	E16 2LR	1000002190697415	Dwelling
	54		CLAREMONT CLOSE	E16 2LR	1000002190697416	Dwelling
	57		CLAREMONT CLOSE	E16 2LR	1000002190697426	Dwelling
	58		CLAREMONT CLOSE	E16 2LR	1000002190697427	Dwelling
	59		CLAREMONT CLOSE	E16 2LR	1000002190697428	Dwelling
	1		CLAREMONT STREET	E16 2LW	1000002148674834	Dwelling
	2		CLAREMONT STREET	E16 2LW	1000002148674835	Dwelling
	4		CLAREMONT STREET	E16 2LW	1000002148674831	Dwelling
	5		CLAREMONT STREET	E16 2LW	1000002148674832	Dwelling
DUNEDIN HOUSE		FLAT 1	MANWOOD STREET	E16 2LA	1000002190660979	Dwelling
DUNEDIN HOUSE		FLAT 6	MANWOOD STREET	E16 2LA	1000002190661038	Dwelling
DUNEDIN HOUSE		FLAT 2	MANWOOD STREET	E16 2LA	1000002190660982	Dwelling
DUNEDIN HOUSE		FLAT 3	MANWOOD STREET	E16 2LA	1000002190660993	Dwelling
DUNEDIN HOUSE		FLAT 4	MANWOOD STREET	E16 2LA	1000002190661043	Dwelling
DUNEDIN HOUSE		FLAT 5	MANWOOD STREET	E16 2LA	1000002190661037	Dwelling
DUNEDIN HOUSE		FLAT 9	MANWOOD STREET	E16 2LA	1000002190661010	Dwelling
DUNEDIN HOUSE		FLAT 13	MANWOOD STREET	E16 2LA	1000002190660976	Dwelling
	56		NEWLAND STREET	E16 2HN	1000002190660818	Dwelling
	58		NEWLAND STREET	E16 2HN	1000002190660845	Dwelling
	60		NEWLAND STREET	E16 2HN	1000002190660846	Dwelling
	78		NEWLAND STREET	E16 2HN	1000002190660858	Dwelling
	84		NEWLAND STREET	E16 2HN	1000002190660855	Dwelling
	90		NEWLAND STREET	E16 2HN	1000002190660644	Dwelling
	98		NEWLAND STREET	E16 2HN	1000002190660641	Dwelling
	100		NEWLAND STREET	E16 2HN	1000002190660642	Dwelling
	102		NEWLAND STREET	E16 2HN	1000002190660643	Dwelling
	104		NEWLAND STREET	E16 2HN	1000002190660647	Dwelling
WESTLAND HOUSE	1	FLAT 27	RYMILL STREET	E16 2LE	1000002190697242	Dwelling
WESTLAND HOUSE	1	FLAT 2	RYMILL STREET	E16 2LE	1000002190697235	Dwelling
WESTLAND HOUSE	1	FLAT 75	RYMILL STREET	E16 2LF	5000005129526140	Dwelling
WESTLAND HOUSE	1	FLAT 4	RYMILL STREET	E16 2LE	1000002190697256	Dwelling
WESTLAND HOUSE	1	FLAT 35	RYMILL STREET	E16 2LE	1000002190697259	Dwelling
WESTLAND HOUSE	1	FLAT 7	RYMILL STREET	E16 2LE	1000002190697291	Dwelling
WESTLAND HOUSE	1	FLAT 1	RYMILL STREET	E16 2LE	1000002190697269	Dwelling
WESTLAND HOUSE	1	FLAT 11	RYMILL STREET	E16 2LE	1000002190697272	Dwelling
WESTLAND HOUSE	1	FLAT 6	RYMILL STREET	E16 2LE	1000002190697290	Dwelling
WESTLAND HOUSE	1	FLAT 19	RYMILL STREET	E16 2LE	1000002190697234	Dwelling
WESTLAND HOUSE	1	FLAT 23	RYMILL STREET	E16 2LE	1000002190697246	Dwelling
WESTLAND HOUSE	1	FLAT 15	RYMILL STREET	E16 2LE	1000002190697237	Dwelling
WESTLAND HOUSE	1	FLAT 3	RYMILL STREET	E16 2LE	1000002190697253	Dwelling
WESTLAND HOUSE	1	FLAT 31	RYMILL STREET	E16 2LE	1000002190697247	Dwelling
QUEENSLAND HOUSE		FLAT 6	RYMILL STREET	E16 2LG	1000002190697577	Dwelling
QUEENSLAND HOUSE		FLAT 2	RYMILL STREET	E16 2LG	1000002190697549	Dwelling
QUEENSLAND HOUSE		FLAT 5	RYMILL STREET	E16 2LG	1000002190697576	Dwelling
QUEENSLAND HOUSE		FLAT 1	RYMILL STREET	E16 2LG	1000002190697546	Dwelling
QUEENSLAND HOUSE		FLAT 3	RYMILL STREET	E16 2LG	1000002190697560	Dwelling
QUEENSLAND HOUSE		FLAT 4	RYMILL STREET	E16 2LG	1000002190697582	Dwelling
WESTLAND HOUSE		FLAT 39	RYMILL STREET	E16 2LE	1000002190697255	Dwelling
	104		SHELDRAKE CLOSE	E16 2HT	1000002190660701	Dwelling
	106		SHELDRAKE CLOSE	E16 2HT	1000002190660702	Dwelling
	108		SHELDRAKE CLOSE	E16 2HT	1000002190660703	Dwelling
	34		WINIFRED STREET	E16 2HX	1000002190660715	Dwelling
	36		WINIFRED STREET	E16 2HX	1000002190660716	Dwelling
	38		WINIFRED STREET	E16 2HX	1000002190660717	Dwelling
	40		WINIFRED STREET	E16 2HX	1000002190660711	Dwelling
	42		WINIFRED STREET	E16 2HX	1000002190660712	Dwelling
	46		WINIFRED STREET	E16 2HX	1000002190660714	Dwelling
	48		WINIFRED STREET	E16 2HX	1000002190660719	Dwelling
	86		WINIFRED STREET	E16 2HX	1000002190660679	Dwelling
	88		WINIFRED STREET	E16 2HX	1000002190660680	Dwelling
	90		WINIFRED STREET	E16 2HX	1000002190660681	Dwelling
	92		WINIFRED STREET	E16 2HX	1000002190660675	Dwelling
	98		WINIFRED STREET	E16 2HX	1000002190660678	Dwelling
	9		WOODMAN STREET	E16 2LL	1000002190697371	Dwelling
	10		WOODMAN STREET	E16 2LL	1000002190697357	Dwelling
	11		WOODMAN STREET	E16 2LL	1000002190697375	Dwelling
	12		WOODMAN STREET	E16 2LL	1000002190697358	Dwelling
	13		WOODMAN STREET	E16 2LL	1000002190697376	Dwelling
	15		WOODMAN STREET	E16 2LL	1000002190697377	Dwelling

Table I.3 – Properties added following LCY verification site visits

I.2 **Future Sensitive Receptors**

- I.2.1 **As the project progresses, periodic updates to the Section 61 agreement will be made.** The method of construction noise assessment **undertaken as part of this process** shall be in keeping with recognised practices and in accordance with recognised standards and guidelines. If the noise assessment indicates **any additional** property is eligible, an offer of noise insulation will be made in accordance with LCA's CSIS approved under Condition 89 and the procedures set out in Annexure 10 of the CADP1 Section 106 Agreement and in accordance with CADP1 Conditions 90 and 91.

Section K CONSTRUCTION NOISE BARRIERS

K.1 General

K.1.1 A series of temporary construction noise barriers **have been** provided throughout the CADP1 works to protect Sensitive Receptors from the effects of construction noise. These barriers are described below.

K.2 Temporary Construction Noise Barrier

K.2.1 A temporary construction barrier **has now been** installed along the southern boundary of the site, extending from City Aviation House to the construction compound at the eastern end of Hartmann Road, in accordance with the details approved under Condition 94.

K.2.2 The temporary construction noise barrier **has been constructed to be** no less than 3m in height above local ground level. The barrier **has been** installed with appropriate supports and panels such that, as a minimum, the following standards **are** met:

- barrier will be imperforate (i.e. there shall be no gaps at joints or the base).
- the minimum superficial surface mass shall be at least 7 kg/m² (for example, 18mm exterior grade plywood will meet this mass requirement).

K.2.3 The extent of the temporary construction noise barrier has been approved under Condition 94.

K.3 Construction Compound Hoarding

K.3.1 A temporary construction hoarding **has been** installed around the CADP1 construction compound which is located at the eastern end of Hartmann Road.

K.3.2 The construction compound hoarding will be no less than 3m in height above local ground level. The hoarding will be installed with appropriate supports and panels such that, as a minimum, the following standards shall be met:

- barrier will be imperforate (i.e. there shall be no gaps at joints or the base).
- the minimum superficial surface mass shall be at least 7 kg/m² (for example, 18mm exterior grade plywood will meet this mass requirement).

K.3.3 The extent of the construction compound hoarding has been approved under Condition 96.

K.4 Hartmann Road Temporary Screen

K.4.1 A temporary screen **has been** installed at the southern edge of Hartmann Road separating this road from properties in Woodman Street.

K.4.2 The temporary screen **is** 3m in height above local ground level. The hoarding **has been** installed with appropriate supports and panels such that, as a minimum, the following standards shall be met:

- the screen will be imperforate (i.e. there shall be no gaps at joints or the base).
- the minimum superficial surface mass shall be at least 7 kg/m² (for example, 18mm exterior grade plywood will meet this mass requirement).

K.4.3 The extent of the Hartmann Road Temporary Screen has been approved under Condition 94.

Section L MITIGATION MEASURES AT SOURCE

L.1 Acoustic Screens

L.1.1 Individual items of plant that are identified as likely to give rise to or contribute significantly to noise exposure levels likely to exceed the noise thresholds set out in Section D.4 of this document shall be screened where practicable from the direct view of Sensitive Receptors using acoustic screens. The typical material specification of such acoustic screens is given in Section K.

L.2 Acoustic Enclosures

L.2.1 For compressors and generator plant, acoustic enclosures shall be provided in accordance with best practicable means to ensure that noise emissions are reduced as far as practically possible.

L.3 Additional Mitigation for Exceptional Circumstances

L.3.1 This CNVMMS includes provision for construction noise mitigation where, by prediction or measurement, it is established that residents will or have become exposed to construction noise levels above specified trigger levels which shall be representative of exceptional circumstances.

L.3.2 Special provision exists for acceptance, at the PM/ ES&H/ [Environmental Manager's](#) discretion, of applications from residents for additional construction noise mitigation supported by evidence of other exceptional circumstances, such as:

- night shift working patterns,
- those working in home occupations,
- local businesses or buildings that provide community facilities requiring a particularly quiet environment, and
- those with a medical condition which will be seriously aggravated by construction noise.

L.3.3 The Contractor and/or LCA, with PM/ ES&H/ [Environmental Manager](#) agreement, will specify the additional mitigation which will be made available in these exceptional circumstances and consideration will be given to the possibility of introducing a scheme for temporary re-housing if appropriate.

L.3.4 Further details concerning proposed mitigation measures are provided in LCA's Section 61 submission issued in compliance with CADP1 Planning condition 85.