

CITY AIRPORT DEVELOPMENT PROGRAMME
(CADP1) S73 APPLICATION

ENVIRONMENTAL STATEMENT

NON-TECHNICAL SUMMARY

DECEMBER 2022



P e l l F r i s c h m a n n

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1 Introduction

1.1 Introduction

1.1.1 An Environmental Statement (ES) has been prepared on behalf of London City Airport Limited (LCY) to accompany a minor material amendment application pursuant to Section 73 (S73) of the Town and Country Planning Act 1990 (as amended) to vary several planning conditions attached to the City Airport Development Programme (CADP1) which was granted planning permission in 2016 (Ref: 13/01228/FUL).

1.1.2 The S73 application description is:

“Section 73 Application to vary conditions 2 (approved drawings and documents), 8 (aircraft maintenance), 10 (restrictions on development – Plan P4), 12 (aircraft stand location – Plan P4), 17 (aircraft take-off and land times), 23, 25, 26 (daily limits), 35 (temporary facilities), 42 (terminal opening hours), 43 (passengers) and 50 (ground running) attached to planning permission 13/01228/FUL, dated 26 July 2016 (as varied) to allow up to 9 million passengers per annum (currently limited to 6.5 million), arrivals and departures on Saturdays until 18.30 with up to 12 arrivals for a further hour during British Summer Time (currently allowed until 12.30), modifications to daily, weekend and other limits on flights and minor design changes, including to the forecourt and airfield layout”.

1.1.3 This document is a Non-Technical Summary (NTS) of the full ES submitted with the planning application. It presents a summary of the findings of a legally required process of Environmental Impact Assessment (EIA) that has been undertaken to firstly, determine the “main” and “likely significant environmental effects” of the proposed development, and then to identify the ways by which such effects can be avoided, reduced or compensated for (collectively known as “mitigation measures”) as well as measures the airport will take to further enhance the beneficial effects of the proposed development.

1.1.4 Within the ES, the consequential environmental effects of the proposed development are assessed by comparing the projected future growth of the airport under the existing (unamended) 2016 CADP1 permission - known as the “Do Minimum (DM)” scenario, with the “Development Case (DC)” in which the existing passenger cap will be increased from 6.5 to 9 million passenger per annum (mppa), the Saturday operational hours will be extended to 18.30 hours (with up to 12 additional arrivals until 19.30 in the Summertime) and an additional 3 aircraft movements (from 6 to 9) will be permitted during the early morning period (6.30 to 6.59am) from Monday to Saturday.

1.1.5 The NTS provides:

- 1) A description of the site and surrounding context;
- 2) A description of the proposed amendments to the CADP1 planning permission;
- 3) An outline of the aviation forecasts that underpin the development proposals, the development scenarios assessed and the alternatives considered; and
- 4) A summary of the likely significant environmental effects predicted and key mitigation measures recommended.

1.1.6 The aim of the NTS is to summarise the main findings of the ES in a clear and concise manner to assist the public and other interested parties in understanding what the significant environmental effects of the proposed development are likely to be.

1.1.7 For those wishing to review the full ES in detail, this can be downloaded from the London Borough of Newham’s website <https://pa.newham.gov.uk/online-applications>. Hard copies of the ES can be made available for viewing by contacting the London Borough of Newham at Newham Dockside, 1st Floor – West Wing, 1000 Dockside Road, Beckton, E16 2QU.

1.2 Background to the Proposed Development

1.2.1 Consistent with the CADP1 planning application, the redline boundary for the S73 planning application encompasses the entirety of airport site, as shown in Figure 1.1 below. The physical entity of London City Airport is referred to as “the airport” for the sake of simplicity.

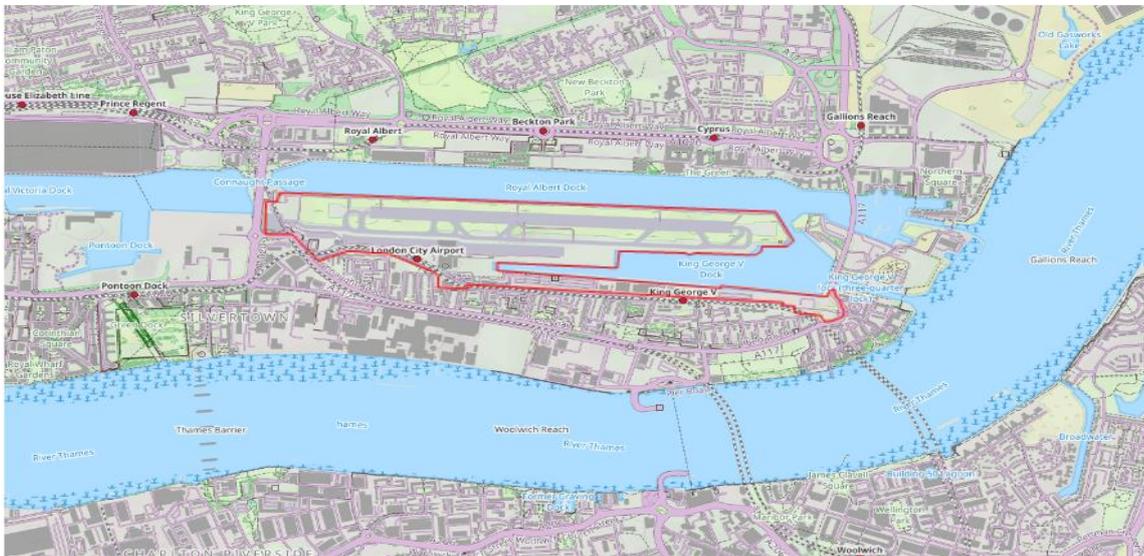


Figure 1.1 Site Plan with Redline Boundary

1.2.2 The 2016 CADP1 planning permission secured consent for the following:

- a) *Demolition of existing buildings and structures;*
- b) *Works to provide 4 upgraded aircraft stands and 7 new aircraft parking stands;*
- c) *The extension and modification of the existing airfield to include the creation of a taxiway running parallel to the eastern part of the runway and connecting with the existing holding point;*
- d) *The creation of a vehicle access point over King George V dock for emergency vehicle access;*
- e) *Laying out of replacement landside Forecourt area to include vehicle circulation, pick up and drop off areas and hard and soft landscaping;*
- f) *The Eastern Extension to the existing Terminal building (including alteration works to the existing Terminal Building) to provide reconfigured and additional passenger facilities and circulation areas, landside and airside offices, immigration areas, security areas, landside and airside retail and catering areas, baggage handling facilities, storage and ancillary accommodation;*
- g) *The construction of a 3 storey Passenger Pier to the east of the existing Terminal building to serve the proposed passenger parking stands;*
- h) *Erection of a noise barrier at the eastern end of the proposed Pier;*
- i) *Erection of a temporary noise barrier along part the southern boundary of the Application Site to the north of Woodman Street;*
- j) *Western Extension and alterations to the existing Terminal to provide reconfigured additional passenger facilities and circulation areas, security areas, landside and airside offices, landside retail and catering areas and ancillary storage and accommodation;*
- k) *Western Energy Centre, storage, ancillary accommodation and landscaping to the west of the existing Terminal;*
- l) *Temporary Facilitation works including erection of a noise reduction wall to the south of 3 aircraft stand, a Coaching Facility and the extension to the outbound baggage area;*

- m) *Works to upgrade Hartmann Road;*
- n) *Landside passenger and staff parking, car hire parking and associated facilities, taxi feeder park and ancillary and related work;*
- o) *Eastern Energy Centre;*
- p) *Dock Source Heat Exchange System and Fish Refugia within King George V Dock; and*
- q) *Ancillary and related works.*

1.2.3 The major civil engineering works associated with CADP1; namely, the construction of the new taxiway adjacent to the runway and the creation of a concrete deck over King George V Dock to provide the 8 new aircraft stands, were completed in 2020. The parallel taxiway and 4 of the new stands are now fully operational. However, the remaining construction works for CADP1 were temporarily suspended due to the onset of the Covid-19 pandemic and the adverse and prolonged effect this had on the airport business.

1.2.4 Prior to the pandemic, LCY exhibited strong and stable growth consistent with the expectations as set out at the time of the CADP1 Application. In 2019 the airport handled 84,274 total aircraft movements, of which 79,942 were operating commercial passenger services carrying a total of 5.1 million passengers. However, changes in the mix of airlines and types of aircraft using the airport meant that the anticipated passenger growth through to 2019 was achieved using fewer aircraft movements than originally envisaged. This trend is expected to continue, meaning that the consented 111,000 annual aircraft movements are now able to accommodate more passengers, the full use of which would allow the airport to better meet growing demand within its catchment area over the period beyond 2025.

1.2.5 In addition, whilst activity continues to be focussed on the needs of business travellers wishing to make day return business trips, the growth of activity by British Airways CityFlyer (BACF) in particular, has resulted in a greater proportion of the flights being operated by aircraft based at the airport. As a result, there is more intensive use of aircraft during the day, including the operation of flights to leisure destinations, which means that the peaks of activity are less pronounced relative to the total activity over the day. Consequently, over the year, more passengers can be handled with the same infrastructure.

1.2.6 The changing profile of airline operations at the airport has informed the development of updated set of aviation forecasts of how the consented 111,000 aircraft movements could be used in future to deliver a higher passenger throughput, consistent with the Government policy that airports should make best use of their existing runways, and given the economic benefits to local, regional and national economies of doing so.

1.2.7 These updated forecasts predict that, were the S73 planning application to be granted ('the Development Case'), the 6.5 million passenger throughput would be reached by around 2026/ 2027, and then grow progressively to 9 million passengers and 111,000 annual aircraft movements by 2031. However, were the proposed amendments not to occur, then the current 6.5 mppa cap would act to suppress this growth and the ability of the airport to meet demand from passengers and airlines. Thus, in this 'Do Minimum' (DM) Scenario, a throughput of 6.5 million passengers and around 85,000 aircraft movements a year would be reached 4 years later, by around 2030.

1.2.8 Delivering growth to meet the needs of local passengers requires the conditions to be created for the airlines to both modernise and grow their fleets of aircraft based at LCY. This requires extended operating hours on a Saturday to reduce the current inefficiency in terms of aircraft utilisation of having to park aircraft for 24 hours over a weekend or to position the aircraft away from LCY to operate from other airports without restricted operating hours. Modernisation of the aircraft fleets is key to delivering real noise benefits, which would see air noise levels (i.e., from aircraft) reduce on average compared to current levels, even with growth. Without a change to the operating hours, not only would growth be slower than required to keep pace with local demand, but the modernisation of the fleets would take longer to achieve, so delaying the noise benefits.

1.2.9 The proposed amendments will also allow the airlines to grow their route network, increasing frequencies of services to existing destinations and services to new destinations. Specifically, longer operating hours on Saturdays would create more opportunities for local residents to use their local airport for leisure as

well as business purposes, with a greater range of holiday destinations available at weekends, to places such as the Eastern Mediterranean, including the Greek Islands, or the Canary Islands, which currently cannot be served on Saturdays as the airport shuts too early for the return flight to operate. Importantly, the changes will also allow better connections to hub airports, such as Amsterdam, to provide onward connections to global points facilitated by increased early morning and Saturday afternoon operations.

1.2.10 If consent is granted for the proposed development, the CADP1 construction works are expected to be complete by the time the airport reaches 9mppa (around 2031). However, were the airport to continue to operate within its existing passenger cap and other operational constraints, the construction of the terminal extensions and remaining approved infrastructure would most likely be delayed. This is due to a lower rate of growth in passengers and aircraft numbers and a consequential reduction in revenue to fund the works, coupled with the fact that the same level of passenger processing facilities would not be needed in this scenario.

1.3 Summary of Proposed Development

1.3.1 In summary, the proposed amendments to the CADP1 planning permission are:

- An increase in the number of passengers able to use the airport each year, from 6.5 million currently permitted to 9 million per year (expected to be achieved by around 2031);
- An extension of operational hours on Saturday to allow flights to take place through the afternoon up to 18.30 hours and a further one-hour extension (to 19.30 during British Summer Time) for up to 12 arrivals, but only for use by new generation aircraft which are quieter and more fuel efficient;
- An increase in the number of flights permitted between 06:30 and 06:59 (from 6 to 9), but only for use by new generation aircraft; and
- Greater flexibility in the parking locations of the already permitted aircraft to allow for the wider wingspan of new generation aircraft.
- Minor changes to the terminal forecourt to reflect changes to surface access (transport) modal split assumptions since the plans were originally approved, and to the approved 'facilitating works' during the construction of the project.

1.3.2 There will be no change to the number of aircraft currently allowed to fly from the airport each year (i.e., 111,000 aircraft movements per annum); no change to the permitted hourly runway movement rate (45 movements per hour); no increase in the number of aircraft stands (a total of 25 stands); and no material changes to existing or approved physical infrastructure. In particular, the design and layout of the consented terminal buildings and other infrastructure remain as approved in 2016 under the CADP1 permission, as varied thereafter by several non-material amendment applications approved by the London Borough of Newham. However, the area to the west of the airfield at the Jet Centre could be used more efficiently to park new generation aircraft, which have a wider wingspan. This would in turn allow for greater operational resilience at peak times. Minor changes are therefore proposed to include this area for parking of aircraft but with no increase to the total number of stands (which will remain at 25).

1.3.3 The airport will also continue to operate under various strict environmental controls and conditions attached to the CADP1 planning permission and the associated Section 106 planning agreement with the London Borough of Newham. These controls include, amongst others: restricted hours of operation (with no night-time flights between 22.30 and 6.30 and no flights before 12.30 on Sundays), an aircraft noise classification scheme (which restricts the type of aircraft able to use the airport), a noise monitoring and flight track-keeping system, a maximum aircraft noise contour, an air quality monitoring and management system, surface access strategy and travel plans, and other environmental management and reporting procedures.

1.3.4 The proposed development will enable the airport to make best use of its infrastructure and to meet passenger demand to 2031 in a sustainable way. This aspiration directly accords with national planning policy with regard to aviation growth whilst maintaining compliance with the UK Government's commitment to Net Zero Carbon by 2050. As mentioned above, the proposed development will also accelerate the transition to cleaner, quieter, 'new generation' aircraft such as the Embraer E195-E2 and Airbus A220-100.

1.3.5 The proposed development is consistent with the airport's current master plan, published in December 2020, which sets out the longer-term vision for the airport campus over the next 15 or so years. Subsequent to the publication of this master plan, the airport also published its Sustainability Roadmap which sets out its ambitious plans to become London's first Net Zero emissions airport by 2030.

2 Environmental Impact Assessment (EIA)

2.1.1 EIA is a process of identifying and collating information to inform an assessment of the main and likely significant environmental effects of a project. The resulting ES reports the findings of a systematic assessment of both the beneficial (positive) and adverse (negative) effects of the proposed development. An ES should be “proportionate” but must contain the necessary information that the determining authority (in this case the London Borough of Newham) “reasonably requires” in order to determine the likely significant environmental effects of the development and, where necessary, to impose planning conditions and others environmental controls to ensure that such effects are appropriately mitigated.

2.1.2 An EIA was undertaken in conjunction with the original CADP1 planning application in 2013. LCY was subsequently granted planning permission for the CADP1 scheme 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 2016. The final version of this ES, known as the 2015 Updated Environmental Statement (UES), was considered at the planning inquiry and found by the Inspector to be comprehensive and technically sound. The current 2022 ES, prepared for the proposed development and S73 application, provides an update to the 2015 UES, but is focussed on those environmental effects (or factors) which could be altered or materially influenced by the proposed amendments.

2.1.3 At an early stage in the EIA process, it was determined that for most technical disciplines, the likely environmental effects from the proposed development (as amended by the S73 application) would not be ‘significant’ and would generally be of a lesser scale than those predicted in the 2015 UES. However, given the time that has elapsed since the previous assessment work was undertaken, and for the sake of completeness and transparency, the airport has undertaken an updated EIA to support this application.

2.1.4 As there are no material changes to the physical infrastructure of the approved CADP1, there will be no additional effects on archaeology, ground conditions, ecology, or townscape and views, beyond those which were assessed and presented in the 2015 UES. Furthermore, where potential significant effects on these receptors were identified in the UES, suitable mitigation measures have since been developed and agreed with the London Borough of Newham through the discharge of various pre-commencement planning conditions. In view of this, and as further described in the ES, there is no need to reassess these topics in any detail at this time. The ‘scoping-out’ of these topics from the EIA was agreed by the Council, as confirmed by its EIA Scoping Opinion which was issued on the 24th November 2022.

2.1.5 The 2022 ES reports on the outcome of the EIA process, which was conducted over a period of approximately 10 months. Whilst not required to do so, the airport first published an Initial Environmental Report (IER) in July 2022 as part of the public consultation on the proposed development. This IER document was a precursor to the ES and had the objective of providing an initial overview of the likely significant effects of the proposals and the mitigation and enhancement measures being considered by the airport at the time. It was published in conjunction with other consultation materials, to enable the public and interested parties to understand the effects of the proposals and provide specific feedback.

2.1.6 The ES presents the final assessment of the likely significant environmental effects of the proposed development in a systematic way, thereby ensuring that the main adverse and beneficial effects are properly identified, and that options for avoiding, reducing, off-setting or enhancing such effects are considered. For all topics, the ES takes into account the mitigation and enhancement measures that are already in place at the airport, having been secured through the planning conditions and S106 Agreement attached to the CADP1 planning permission, together with addition mitigation now being proposed by the airport. It then evaluates the significance of the residual (remaining) environmental effects.

2.1.7 The findings of the EIA process and ES are intended to inform the London Borough of Newham and interested parties of any residual effects as part of the decision-making process.

2.1.8 The ES comprises five volumes as follows:

- A standalone Non-Technical Summary (NTS) (this document);
- Volume 1 (Main ES Text and Figures);
- Volume 2 (ES Technical Appendices);
- Volume 3 (Need Case); and
- Volume 4 (Transport Assessment).

2.1.9 Volume 1 of the ES is divided into a series of chapters, as set out in Table 1.1.

Table 2.1 Structure of Volume 1 of the ES

Chapter	Chapter Title	Content
1	Introduction	Scheme background, context and need; explanation of EIA process and the EIA Regulations; the structure of the ES; information on the project team and chapter authors; availability of the ES.
2	Site Description, Development Proposals and Alternatives	Description of site and the wider study area; description of the CADP1 development and the proposed amendments being applied for; and an outline of the alternative options considered by the Applicant, where appropriate.
3	EIA Methodology	Approach to EIA process, including: consultation, responses received and how/where issues have been addressed within the ES, spatial and temporal scope of the EIA and approach to assessment of residual impact significance. Details of the assessment years, scenarios and sensitivity tests considered.
4	Aviation Forecasts	Details of the aviation forecasts that underpin the EIA, including the Do Minimum Scenario, Development Case Scenario and 'slower growth' and 'faster growth' sensitivity tests.
5	Planning Context & Existing Controls	Summary of relevant national, regional and local policy relevant to the application. Description of the relevant planning history and summary of the existing environmental controls in place at the airport and relevant planning conditions attached to the CADP1 planning permission.
6	Development Programme & Construction	Description of the remaining build-out programme for CADP, based on a revised Construction Phasing Plan (CPP) and the proposed mitigation measures to be adopted through the approved Construction Environmental Management Plan (CEMP), with any necessary amendments.
7-12	Technical Assessment chapters	Detailed assessment of each environmental topic area scoped into the EIA, namely: <ul style="list-style-type: none"> • Chapter 7: Socio-economics • Chapter 8: Noise • Chapter 9: Air Quality • Chapter 10: Surface Access • Chapter 11: Climate Change • Chapter 12: Public Health & Wellbeing
13	Other Environmental Topics	Presentation of the findings of the 2015 UES, updated assessment work and summary of relevant CADP1 planning conditions, with respect to the topics scoped-out of the ES, namely: <ul style="list-style-type: none"> • Water Resources; • Ecology and Biodiversity; • Ground Conditions and Contamination; • Archaeology and Built Heritage; • Townscape and Visual Impact; • Waste; and • Major Accidents and/or Disasters.

Chapter	Chapter Title	Content
14	Cumulative Effects	Assessment of cumulative ('in combination') effects of the proposed development with other identified committed schemes, on key receptors, and assessment of intra-cumulative effects.
15	Residual Effects Summary & Conclusions	Residual effects of the development, the mitigation measures proposed and how these are to be secured.

2.1.10 Volume 2 of the ES includes a set of technical appendices, including plans and drawings, separate reports, surveys and data, which have informed the EIA process. This information is supplied as a separate volume to prevent the main ES becoming excessively long and cumbersome.

2.1.11 Volume 3 comprises the Need Case which sets out the aviation forecasts that underpin the EIA in detail; providing a detailed account of the reasons and need for the proposed development.

2.1.12 Volume 4 comprises the Transport Assessment as this provides some of the source data used to inform the noise, air quality and other environmental assessments.

2.2 Project Team

2.2.1 LCY has appointed a specialist Project Team for the planning application. The consultants involved in the EIA process are listed in Table 1.2.

Table 1.2 - Project Team

Organisation	Consultant Role
Pell Frischmann	EIA Coordinator and Principal Author of ES
RPS	Technical Disciplines: Public Health & Wellbeing ES Chapter. Secondary/ non-significant environmental topics, as listed in Table 1.1 above.
Quod	Planning Consultants and joint author of Socio-economics ES Chapter
Pascall + Watson	Scheme Architects
WSP	Airfield engineers Sustainability
York Aviation LLP	Aviation Forecasting, Simulations, Need Case Assessment Joint author of Socio-economics ES Chapter
Bickerdike Allen Partners (BAP)	Noise
Air Quality Consultants (AQC)	Air Quality and Climate Change
Ecolyse	Climate Change
Steer Group	Transport and Surface Access.

3 Site Context

3.1.1 LCY is the most centrally located London airport and it lies within the administrative area of the London Borough of Newham (LBN). The airport extends to an area of approximately 60 hectares and is located between the Royal Albert Dock and King George V (KGV) Dock, adjacent to the Woolwich Reach and Gallions Reach of the River Thames.

3.1.2 The airport is approximately 9.5 km east of the City of London, approximately 3 km east of Canary Wharf and 0.8 km away from the ExCeL Exhibition and Conference Centre. The surrounding area comprises of a mix of residential, industrial and commercial uses. There is also a significant amount of planned development and regeneration in the vicinity of the airport.

3.1.3 Figure 3.1 below shows a recent aerial photograph of the airport and its immediate setting.



Figure 3.1 Aerial Photo of London City Airport

3.1.4 The land around the airport is in urban use with a mix of clearly defined zones including residential and industrial/commercial areas located on the northern and southern banks of the River Thames at Silvertown and North Greenwich. Significant non-residential uses in the area include the large Tate and Lyle factory to the south of the airport; the University of East London (UEL) on the north-east side of the Royal Albert Dock; the Royals Business Park to the north; the London Regatta Centre on the north-west side of the Royal Albert Dock; the Excel Exhibition Centre and three adjacent high rise hotels to the west on the northern side of Royal Victoria Dock; and several areas of vacant land including land at Albert Basin to the east and a large expanse of land on the north side of Royal Albert Dock ('the ABP site') between UEL and Royals Business Park. Some of these sites are currently being developed.

3.1.5 The land immediately south of the airport is dominated by residential land uses between Hartmann Road and the DLR ramp to the north, and Albert Road to the south. In addition, several new major residential developments have been completed in the vicinity of the airport since 2016, when CADP1 was granted planning permission. These include at Gallions Reach and Royal Albert Wharf at the eastern end of the runway between the KGV Dock and the River Thames, and the Royal Wharf and Barrier Park East developments adjacent to Thames Barrier Park to the southwest of the airport.

3.1.6 There are numerous other proposed developments in the local area (with planning permission) that have not yet commenced, including Silvertown Quays to the southwest of the airport.

3.2 Airport Layout and Current Infrastructure

3.2.1 The airport is constructed on the site of a disused shipping dock, with the runway situated on the strip of land between KGV Dock and the Royal Albert Dock. It first opened in 1987 as a Short Take-off and Landing (STOL) airport and was predominantly used by propeller-powered aircraft conveying business passengers to domestic and European destinations. However, it has grown progressively since this time and now handles a mix of aircraft types including regional jet aircraft with a seating capacity of around 98 to 110. The airport continues to serve a primarily business travel market but with an increasing proportion of leisure/ holiday passengers.

3.2.2 A concrete deck over KGV Dock (the “Eastern Apron”) was constructed between 2003 and 2008 to provide four aircraft stands (numbers 21-24) undertaken as part of the airport’s Operational Improvement Programme (OIP). This deck was then extended eastwards between 2018 and 2020 to create eight additional stands, a parallel taxiway and a runway hold, in accordance with the CADP1 planning permission. The concrete deck is suspended on piles extending to the base of KGV Dock, which is approximately 10m deep.

3.2.3 The existing airport layout is illustrated in Figure 3.2. The runway, which is categorised ‘Code 2C’, is used by aircraft taking off and landing in an easterly (Runway 09) direction and westerly (Runway 27) direction.

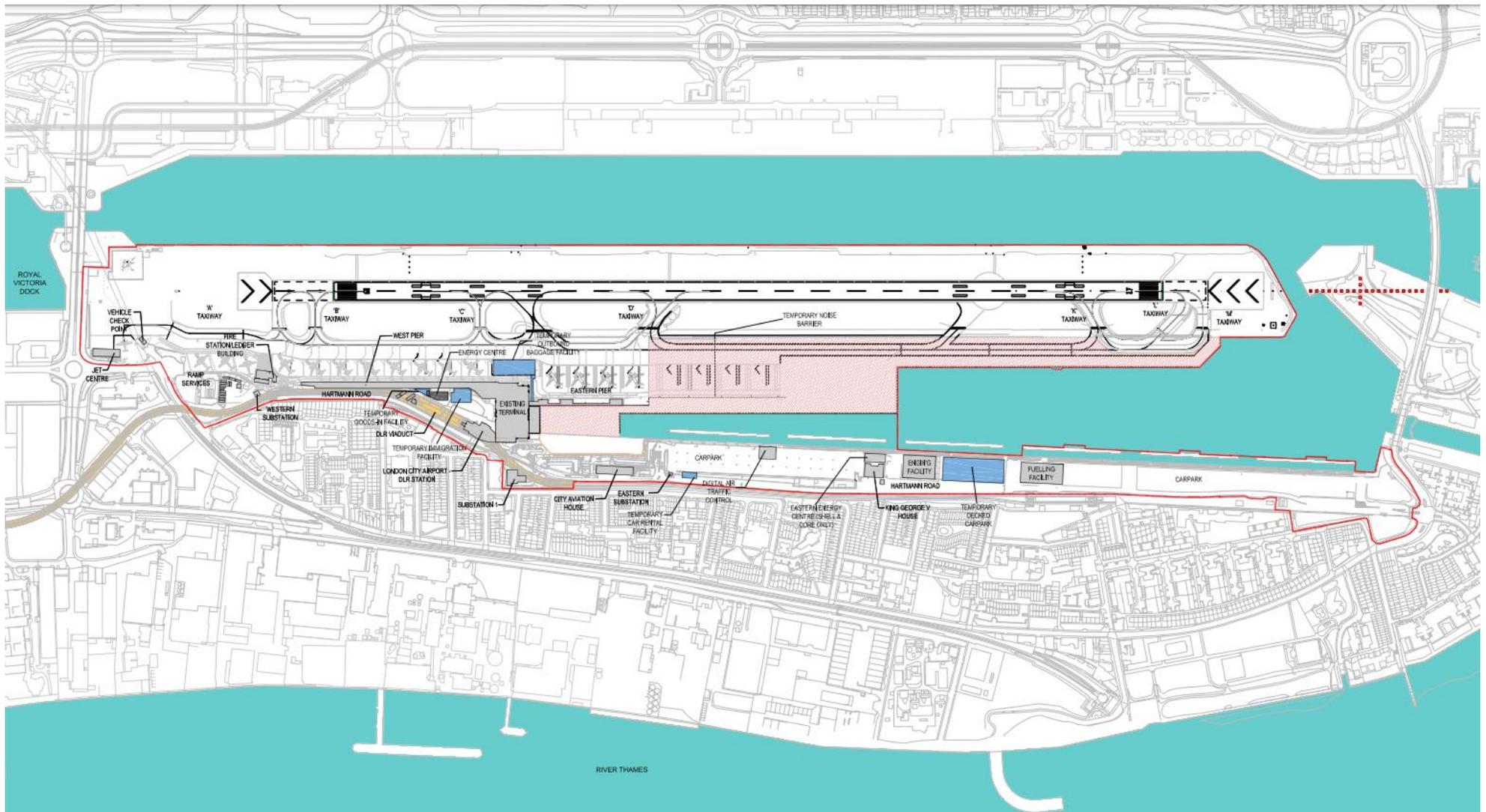


Figure 3.2 Existing Site Layout

3.2.4 Since the completion of the parallel taxiway and runway hold (known as Runway Hold 27) in 2020, all permitted aircraft types and sizes have been able to use the full length of the parallel taxiway, including along the Western Apron, removing the need for the backtracking of aircraft and thereby enabling the capacity of the runway to be optimised. In its present configuration, the runway is restricted to 45 aircraft movements per hour under the CADP1 planning permission. This restriction will not change as part of the S73 application.

3.2.5 The airport has 25 approved stands for scheduled commercial aircraft, but only 19 are currently operational. Eleven of the stands were original to the initial opening of the airport, with three more provided when the Western Apron was reconfigured in 2002 and another four upon the completion of the OIP in 2008. Stands 21 – 24 and the eight new CADP1 stands are the only ones currently capable of accommodating the largest aircraft operating at the airport and future variants such as the E195-E2.

3.2.6 The existing aircraft stands located between the runway and terminal and are serviced by the West and East Piers which adjoin the Main Terminal Building (MTB). The existing East Pier is 9m high and extends along the south side of aircraft stands 21-24, ending in a short length of an 8m high noise barrier which screens aircraft at the eastern end of the aircraft stands. The airfield is surrounded by a mix of natural and artificial grass, on which are located the navigational and landing aids. The airside land also accommodates a fire station, various fuel storage compounds, ground and freight handling, flight catering and facilities maintenance that, collectively, are essential for the operation of the airport.

3.2.7 In addition, there are stands at the corporate aviation facility (known as the Jet Centre) for smaller company/ privately owned or leased aircraft. The Jet Centre is situated at the western end of the airfield and includes a public access ('landside') and restricted access to the airport ('airside') off the Connaught Road roundabout. It consists of VIP lounges, parking for business aviation aircraft, immigration and crew facilities. This area of the site also contains a series of fences which form part of the western perimeter boundary of the airfield.

3.2.8 The existing airport terminal is a flat roofed building of approximately 13 m in height with a conning air traffic control (ATC) tower at a maximum height of 15 m, located at the western end of KGV Dock. The air traffic control functions are now provided remotely via the new Digital Air Traffic Control Tower (DATCT) constructed on the southern dockside in 2019. The DATCT became operational in 2021, thus making the old ATC tower redundant.

3.2.9 The MTB contains check-in facilities, ticket desks, security processing, a departure lounge, a departure and arrival pier, departure gate areas, domestic and international baggage reclaim, immigration and customs, shops, a business centre and catering outlets.

3.2.10 The first-floor departure lounge was re-configured and expanded in 1997 and, in 2001, the terminal building was extended westwards to increase baggage reclaim capacity, enhance immigration facilities and provide accommodation for control authorities and handling agents. An upgrade of the airport's departure lounge was completed in 2009. The airport also contains various temporary facilities, including a Temporary Immigration Facility (TIF) and a Temporary Outbound Baggage (OBB) structure and there have been ongoing improvements to the departure lounge and security facilities since 2016.

3.2.11 To the south of the terminal, the existing forecourt provides passenger drop-off and pick-up facilities as well as direct access to the airport's dedicated Dockland Light Railway (DLR) station. To the east of the MTB is the airport's staff office building called City Aviation House (CAH) which is 4 storey building, pick up facilities and the airport's Main Stay Car Park. Further along the dockside is KGV House which is used for offices and as a staff training facility, the LCY Engineering Building, other storage sheds and surface parking. Further east, towards Woolwich Manor Way, the remaining land within the ownership of the airport is either vacant or used for goods storage.

3.2.12 A number of changes have occurred at the airport in recent years as the first elements of the approved CADP1 have been constructed. The approved CADP1 site plan is provided in Figure 3.4 for context. In summary, the following have also been constructed:

- Extension to the deck over the KGV Dock to provide 8 additional 'Code C' aircraft stands and a new taxiway which runs parallel to the eastern part of the runway and connects with a holding point for up to 3 aircraft (known as Runway Hold 27) located at the eastern end of the runway;
- Erection of a temporary noise barrier to the east of the existing East Pier;
- Construction of the foundations and deck for the East Terminal Extension (ETE) and New East Pier (NEP);
- Construction of temporary facilities at the airport, including the Temporary Immigration Facility (TIF), Temporary Outbound Baggage (OBB) structure, Temporary Good-In Facility (TGIF), temporary single deck car park and temporary car rental building; and
- Installation of artificial fish refugia (an ecological enhancement feature) within the KGV Dock.

3.2.13 In addition to the airport improvements delivered as part of CADP1, a number of other specific structures and airfield enhancements have been built out or implemented under the airport's permitted development rights, in accordance with Part 8, Class F of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended). These changes are identified on Figure 3.2 and include:

- The Digital Air Traffic Control Tower (DATCT) to the south of KGV Dock;
- Runway and taxiway rehabilitation works; and
- Introduction of an Engineered Material Arrestor System (EMAS) at either end of the runway (presently under construction).

3.3 Surface Access

3.3.1 Vehicle access to the airport is provided from Hartmann Road, which is a private road with an east-west orientation that connects with the A112 Connaught Road at a signalised junction at its western end. This currently functions as the single point of access to the airport from the wider highway network. At its eastern end, Hartmann Road forms a signalised junction with the A117 Woolwich Manor Way, although this junction is presently closed for public access to the airport. As part of the CADP1 proposals, the eastern end of Hartmann Road will be opened to traffic, to provide enhanced access to the airport.

3.3.2 The A112 Connaught Road has an east-west orientation to the south of the airport, parallel with Hartmann Road. It connects directly to the South Circular at the A117 Albert Road to the east, and to the A13 Newham Way via the A112 Victoria Dock Road/Prince Regent Lane to the north.

3.3.3 Highways access to the airport will be enhanced when the Silvertown Tunnel opens in 2025. This will be broadly parallel to the Blackwall Tunnel and will connect with North Woolwich Road at the western end of Dock Road.

3.3.4 The Ultra-Low Emission Zone (ULEZ) was expanded in October 2021 to cover all areas bordered by both the North and South Circular roads, which includes the A117 Albert Road. As a result, all approach routes to the airport are covered by the ULEZ. Vehicles not meeting the requisite Euro standard (i.e. older, more polluting vehicles) are currently required to pay £12.50 per day to enter the ULEZ.

3.3.5 The main strategic road connections to the airport are the east-west A13 and the A406 North Circular that connects with the M11 and M25 motorways. The airport is approximately 1.5 km from the A13 (Prince Regent's Lane junction), 5 km from the A406 and 25 km from the M25. In addition, the A102(M) crosses the Thames north-south via the Blackwall Tunnel approximately 5 km from the airport. This is the nearest road-river crossing point to the airport.

3.3.6 There are two main car parking areas within the airport, shared between passengers and staff. The Main Stay passenger car park is located to the east of CAH. This car park is accessed via a barrier-controlled exit on to Hartmann Road. The staff car park is currently accommodated in the temporary decked car park further east. The airport has just over 900 car parking spaces at present and consent to increase provision up to 1,251 car parking spaces under the existing CADP1 planning permission. Parking is also provided for motorcycles and cycles.

3.3.7 The public roads within the vicinity of the airport are covered by a Controlled Parking Zone (CPZ) in operation 08:00 – 18:30 Monday to Sunday. This includes parking bays on the residential streets of Silvertown and double-yellow lines on Connaught Road/Albert Road and Hartmann Road.

3.3.8 The airport has a good Public Transport Accessibility Level (PTAL) of 3 (where 1 is the lowest level and 6b the highest level achievable)¹. The airport is well connected to London's public transport rail system via its onsite DLR station, which links directly into the airport terminal building with direct connections to/from the City of London, Stratford and Woolwich. It provides direct connections to the Jubilee, Hammersmith and City, and District Line London Underground services and to the C2C, TfL Rail, London Overground and Greater Anglia national rail services. Frequent services (every four minutes at peak times) operate between 05:30 and midnight, Mondays to Saturdays and between 07:00 and 23:00 on Sundays.

3.3.9 The airport is also served by bus routes 473 (Stratford – North Woolwich) and 474 (Canning Town – Manor Park), both of which stop in the airport forecourt. Route 474 operates on a 24/7 basis and since May 2022, has been diverted to provide a direct link between the airport and Custom House station to coincide with the opening of the Elizabeth Line.

3.3.10 In light of the above, the airport has the highest public transport mode share of any UK airport, with 73% of passengers using public transport (DLR, Bus and Black Taxi) in the Baseline Year of 2019, including 64% of passengers using the DLR, according to an ASQ passenger survey in this year².

¹ <https://tfl.gov.uk/info-for/urban-planning-and-construction/planning-with-webcat/webcat>

4 Updated Aviation Forecasts

4.1.0 Detailed aviation forecasts (prepared by York Aviation on behalf of LCY) have informed the development proposals and the basis for the assessment work undertaken as part of the EIA. Demand projections for the Development Case (DC) and Do Minimum (DM) scenarios have been prepared. The forecasts take into account any prolonged influence of the Covid-19 pandemic and draw upon the latest Department for Transport (DfT) approach to aviation forecasts as adopted for the Jet Zero Strategy (please see the Planning Statement submitted with the S73 application for a further explanation of this and other relevant policies).

4.1.1 The forecasts also take into account potential economic growth in the area and projected increase in population living within the vicinity of the airport. LCY's share of the aviation market has been determined based on its historic performance in meeting demand locally and across London and takes into account both recovery in business travel and increased potential for leisure travel from the airport to meet the needs of the local population. It also factors in capacity constraints at the other London airports, in particular Heathrow and Gatwick, meaning that LCY is expected to increase its share of the overall market in the short to medium term.

4.1.2 The resulting passenger and aircraft movement forecasts are set out in the tables and figures below. Under the DC Scenario, it is predicted that the passenger throughput at the airport will grow progressively from 2023 onwards, with passenger numbers reaching 7.0 mppa by 2027 and 9.0 mppa by 2031, by which time 111,000 annual movements will have been reached and Jet Centre activity will largely have been replaced by commercial passenger aircraft traffic movements (PATMs). This growth would be facilitated by, amongst other factors, the proposed extension to Saturday afternoon opening hours which will act to incentivise airlines to re-fleet more rapidly and to base more aircraft at the airport, without which the airport's ability to meet growing passenger demand locally would be limited and growth would be slower as would re-fleeting to quieter aircraft types.

4.1.3 Under the DM Scenario, it is assumed that all existing operational conditions relating to the CADP1 planning permission would remain in force. This would have the result of suppressing growth, such that the existing 6.5 mppa cap would only be reached in 2030/ 2031. As a consequence, the airlines would re-fleet more slowly and thereby delay their investment, including and the introduction of additional aircraft and route capacity in the absence of a change to the operating hours. In this DM Scenario it is also envisaged that the airport would promote Jet Centre activity to make use of its available annual aircraft movement capacity and that, in line with the assumptions made at the time of the CADP1 application, such movements by business aviation aircraft could grow to 9,000 a year.

4.1.4 The forecasts are summarised in Tables 4.1 and 4.2 below.

Table 4.1 ATMs under the DM and DC Scenarios

ATMs	2024	2025	2026	2027	2028	2029	2030	2031
DM Scenario								
PATMs	73,080	73,630	76,370	77,465	82,245	84,985	84,985	84,985
Jet Centre Movements	5,000	5,000	6,000	7,000	8,000	9,000	9,000	9,000
Total ATMs	78,080	78,630	82,370	84,465	90,245	93,985	93,985	93,985
DC Scenario								
PATMs	73,280	78,110	85,585	92,255	96,965	99,265	106,035	111,000
Jet Centre Movements	5,000	5,000	5,000	5,000	5,000	5,000	4,965	0
Total ATMs	78,280	83,110	90,585	97,255	101,965	104,265	111,000	111,000

Table 4.2 - Total Annual Passengers under the DM and DC Scenarios

Total Passengers (Millions)	2024	2025	2026	2027	2028	2029	2030	2031
DM Scenario	4.9	5.0	5.3	5.4	5.9	6.3	6.4	6.5
DC Scenario	4.9	5.4	6.4	7.1	7.6	7.9	8.6	9.0

4.1 Alternative Growth Scenarios

4.1.1 Alongside the core forecasts outlined above, a ‘DC Faster Growth’ and ‘DC Slower Growth’ scenarios have been developed. These alternative forecasts reflect the inevitable uncertainties inherent in projecting future demand, particularly in the circumstance of recovery from the Covid-19 pandemic and the current global economic and political instability. However, whilst they are plausible outcomes, they are considered to be less likely than the core DC forecasts.

4.1.2 The Faster Growth Case indicates the airport reaching 9 mppa in 2029, with a Compound Annual Growth Rate (CAGR) of 5.8%, which is slower than growth rates seen at the airport pre-pandemic. The Slower Growth Case is projected to reach 9 mppa in 2033, with a CAGR of 4.1% per annum.

4.1.3 The Faster Growth Case assumes slightly faster growth in the average number of passengers per aircraft movement than in the core DC and a converse position for the Slower Growth Case. This reflects both changes in the expected route structure and slight differences in the fleet transition to new generation aircraft, as well as load factor (average seat occupancy per aircraft) differences to reflect the underlying demand assumptions.

4.1.4 These faster and slower sensitivity tests are presented and quantitatively assessed in the ES, where appropriate, to identify any realistic alternative (including the ‘worst case’) environmental outcomes resulting from these different growth scenarios. They would also have some influence on the phasing and delivery of the remaining CADP1 structures.

4.1.5 The trajectory of growth with regard to annual passenger numbers and total aircraft movements under all four scenarios considered is illustrated in Figures 4.1 and 4.2.

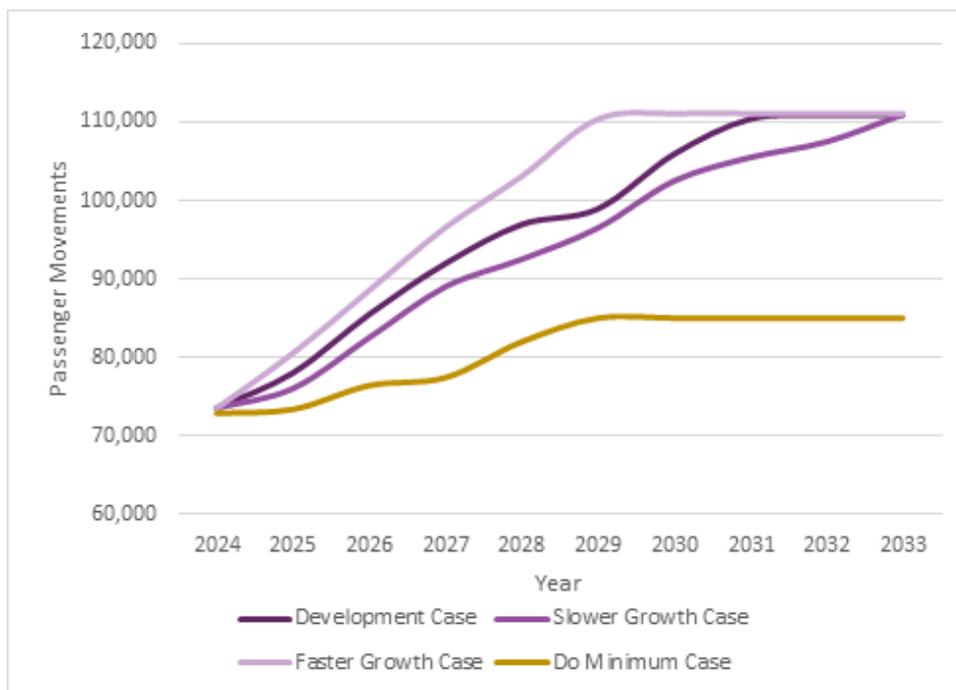


Figure 4.1 Forecast Annual Passenger Aircraft Movements

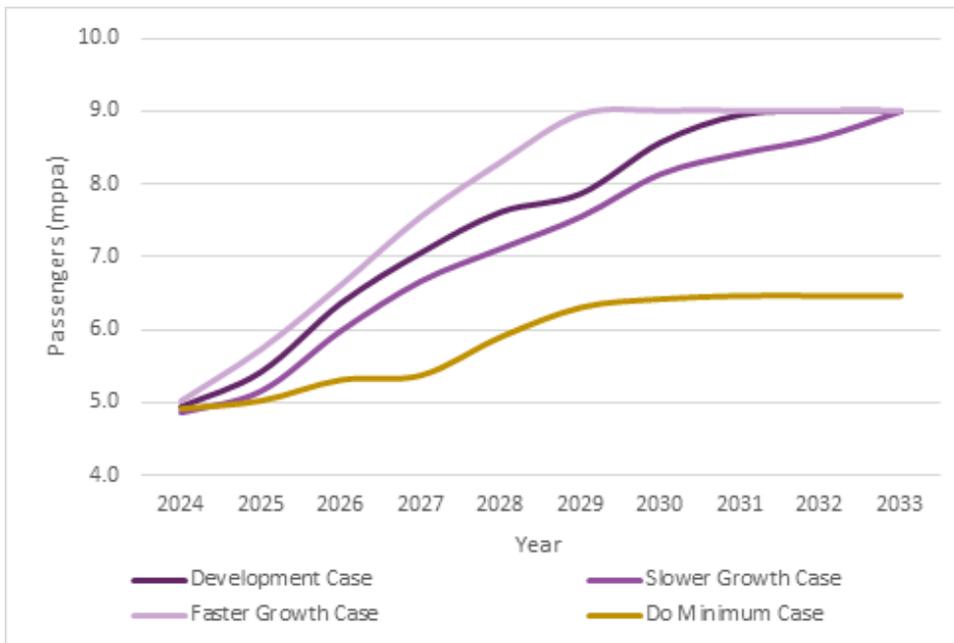


Figure 4.2 Forecast Passengers Per Annum (millions)

4.2 Alternative Construction Programmes

4.2.1 The last approved version of the Construction Phasing Plan, CPP (approved in 2019 under Condition 4 of the CADP1 planning permission) is now out of date and does not represent a realistic alternative baseline against which construction impacts can be assessed. Indeed, this previously approved CPP had assumed the works would be ongoing from 2019 until their completion in 2025, whereas it is now expected that the remaining CADP works will only just have re-commenced by this time and only then subject to the proposed amendments being approved and circumstances being appropriate.

4.2.2 The Covid-19 pandemic, and the hiatus this has caused to the airport's business and the aviation sector as a whole, has led to changes in the underlying market dynamics for the airport compared to the outlook that first informed the CADP1 planning application in 2013 and the forecasts used in the 2015 UES. For the reasons set out in the Need Case (Volume 3 of the ES), notwithstanding the now projected growth in annual passenger throughput to 9 mpps by 2031, the future 'busy hour' demands on terminal capacity are expected to be virtually the same as originally anticipated for the CADP1 scheme at 6.5 mpps. This means that the CADP1 infrastructure can accommodate the forecast throughput in the Development Case without needing further expansion. In part, this is because some of the activity is expected to take place on Saturday afternoons and through the day midweek, so does not add to peak period demands on the infrastructure.

4.2.3 One further consequence of the above is that the remaining CADP1 structures (including the East and West Terminal Extensions and the New East Pier) can be built out later, and in a slightly different order, to that assumed in the 2019 Construction Phasing Plan. These works would be timed so as to match the predicted passenger growth, taking into account the airport's revenue streams and available capital expenditure as the airport recovers from the effects of the pandemic. The ability to delay the build-out of the remaining CADP1 works is facilitated by the retention of the existing temporary facilities (described previously) for slightly longer, and the introduction of technological advancements such as self-service bag drop off and next-generation security screening. The latter equipment also contributes to increasing effective capacity of the terminal facility, which will in-turn also release space to re-configure the departure lounge to provide increased seating in the near term; albeit this may require some reduction in the amount of space provided for retail and catering in the departure lounge.

4.2.4 The likely construction programme in the Development Case, spanning a 6-year period to 2031, is presented and described in the ES. It is important to note that this construction programme is not being put forward for formal approval by the London Borough of Newham at this point in time. Moreover, there is a

reasonable prospect that the works will complete somewhat later, depending on whether the Slower Case forecast materialises and the specific operational and financial constraints prevalent at the time (which are currently unknown).

4.2.5 In the DM scenario, the business case and programme for building out the remainder of the CADP1 infrastructure are much less certain, especially given the slower rate of growth to 6.5 mppa (i.e., being reached in 2030 rather than 2027) and the cap being retained thereafter. This would have an adverse effect on the airport's available revenue, required to fund the works, and it would take the airport longer to recover from the losses it endured during the Covid-19 pandemic. This in turn could delay the completion of CADP1 (depending on the circumstances) until 2037/38 (i.e., 6-8 years later than in the DC scenario).

4.2.6 Accounting for the above, one alternative DC and two alternative DM construction timelines have been considered in the ES, namely:

- **A Slower DC Construction Case** under which construction commences 2 years later than the core DC case - i.e., commencing in 2027 and being completed by 2033
- **A Core DM Construction Case** whereby construction occurs incrementally up to 2038.
- **A DM Construction Sensitivity Test** whereby no further construction takes place (within the foreseeable future), with selective internal modifications/ operational interventions to enable it to process peak hour passenger numbers, and 6.5 million passengers per year.

4.3 Environmental Management

4.3.1 A Construction Environmental Management Plan (CEMP) was submitted to and approved by the London Borough of Newham in 2019 in accordance with Condition 88 of the CADP1 planning permission. This CEMP sets out the management, monitoring, auditing and training procedures that will be put in place to ensure compliance with the relevant legislation and environmental 'best practice' and identifies specific environmental mitigation and management controls to be implemented throughout the construction works. The CEMP is accompanied by a Construction Noise and Vibration Management and Mitigation Strategy (CNVMMS).

4.3.2 As described above, the major civil engineering works associated with CADP1 were completed between 2017 and 2020. These works, much of which took place at night, were successfully completed without any significant environmental incidents and with only a very limited number of complaints. This demonstrated the effectiveness of the construction environmental management procedures and controls which were implemented by the contractors, in accordance with the approved CEMP and other conditions of the CADP1 planning permission. In addition, construction noise was effectively controlled in accordance with a Section 61 agreement with the London Borough of Newham.

4.3.3 These mitigation measures will be carried forward to the next phases of the CADP1 construction which, in comparison to the piling and deck works already completed, have a much lower potential of causing nuisance to the local community or other environmental effects, especially in respect of noise which will be both less frequent and of a lower magnitude. Moreover, the vast majority of these future construction works will occur during day-time hours and in areas which can be effectively shielded from members of the public, local residents and passengers.

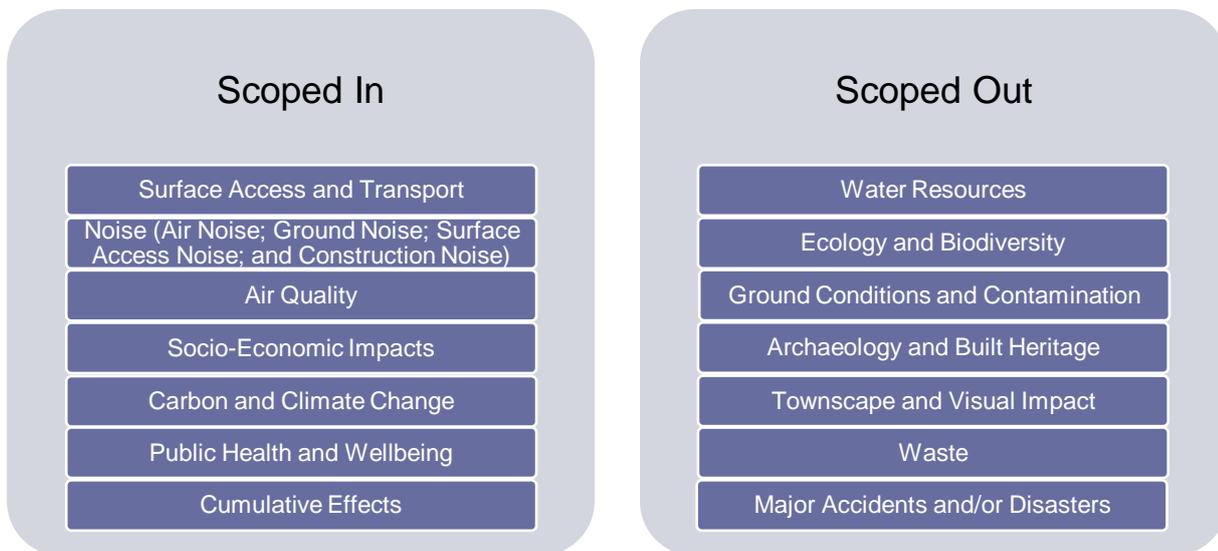
5 EIA Methodology

5.1 Establishing the EIA Scope

5.1.1 The proposed technical scope, assumptions and methodology of the EIA was set out in a detailed Scoping Report which was issued to London Borough of Newham ('LBN') on 28th July 2022 together with a request for a Scoping Opinion in accordance with the procedures set out in Regulation 15 of the EIA Regulations 2017. The formal scoping request was preceded by the submission of a draft version of this Scoping Report (June 2022) and the publication of an Initial Environmental Report (IER) as part of the public consultation exercise.

5.1.2 A number of meetings were held with LBN, as well as with the Greater London Authority (GLA), Transport for London (TfL) and Environment Agency (EA) throughout June to November 2022 and various technical notes were exchanged with the planning officers and their advisors (led by LUC Limited) in order to clarify and address various matters raised in the Draft and Final Scoping Report. As such, the EIA scoping process has been an iterative and thorough one, ensuring that all relevant matters and 'likely significant effects' of the proposed development have been properly addressed in the ES.

5.1.3 LBN issued its formal Scoping Opinion on 24th November 2022 which confirmed the overarching technical scope of the EIA, as set out in below. The rationale for scoping out certain topics was primarily on the grounds that they would not be materially influenced by the proposed amendments and are unlikely to give rise to any significant environmental effects. Nevertheless, as explained earlier, the ES still provides an account of these scoped-out topics, providing up to date baseline information where necessary and justification as to why no significant or materially different effects (to those determined in the 2015 UES) are likely to occur as a consequence of the proposed amendments.



5.2 Approach to the Assessment

5.2.0 The ES provides assessments of potential significant environmental effects during construction and once the proposed development is complete and operational. Each technical assessment considers different types of effects including direct and indirect, temporary and permanent, beneficial and adverse, and cumulative effects.

5.2.1 The principal stages of the technical assessments that form part of this EIA have comprised the following tasks:

- Review of the previous EIA findings, as set out in the 2015 UES;

- Review of subsequent Approval of Details (AoD) submissions to LBN to discharge planning conditions attached to the CADP1 planning permission, together with other mitigation measures embedded into the design and existing consent;
- Collating operational, environmental and other data from LCY and other sources for the Baseline Year of 2019;
- Gathering additional third-party data (e.g., for air quality, employment and socio-economic statistics, ecological records etc.) and obtaining other information and data held by LCY, LBN and other public bodies;
- Undertaking site surveys and modelling (e.g., for traffic and noise) to supplement the 2019 baseline data;
- Identification and mapping of existing sensitive receptors at or in proximity to the site (including residents, listed buildings, ecologically sensitive areas etc.), as well as future potential receptors such as committed developments (i.e., those with planning permission) within the Zone of Influence of the airport;
- Completion of detailed impact assessments;
- Identification of any necessary additional mitigation measures and environmental controls to avoid, reduce or offset identified adverse effects, and to enhance beneficial effects; and
- Identification of the residual (remaining) environmental effects of the proposed amendments, assuming that the proposed mitigation measures and any further enhancements are implemented.

5.3 Assessment Scenarios

5.3.1 As required by the EIA Regulations, when considering the ‘reasonable alternatives’ for a change to permitted operations and amending the existing annual passenger cap, LCY has not identified any credible alternatives which would achieve the overarching objective of making better and more efficient use of the airport’s existing and consented infrastructure, in accordance with Government policy, whilst minimising environmental effects as far as reasonably possible.

5.3.2 The ES describes the baseline environmental conditions which constitute the prevailing conditions at the airport under ‘normal’ operations and within its area of influence. Due to the widespread impacts of the Covid-19 pandemic, particularly on activity in and around the airport where traffic levels and passenger throughput have yet to return to its pre-pandemic levels, 2019 represents the most realistic and appropriate baseline ‘full year’ on which to base the majority of technical assessments. This principle was discussed and agreed with the LBN and the statutory bodies such as TfL.

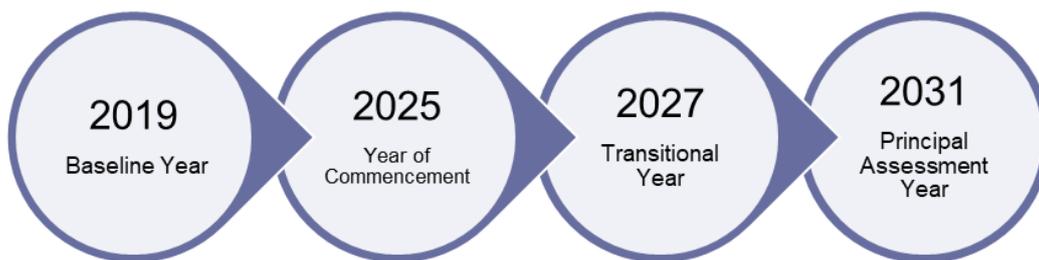
5.3.3 It is also relevant to consider how these baseline conditions may change over time should the proposed amendments not be approved. Therefore, where possible, the existing baseline data has been modelled to predict the likely future baseline conditions in relevant future years. For the purposes of this ES, this projected baseline is represented by the DM Scenario, as discussed above, which assumes that the CADP1 planning permission will be implemented as consented.

5.3.4 It is not appropriate or realistic to consider a future baseline in the absence of the CADP1 scheme on the basis that the existing planning permission has already been ‘implemented’ by virtue of fact that the new airfield infrastructure has been constructed and is operational; namely, the parallel taxiway and the extension of the deck over the KGV dock to create 8 new aircraft stands (albeit only 4 of these stands have so far been brought into use).

5.3.5 As introduced earlier in this NTS, for all environmental topics the ES adopts 2031 as the ‘Principal Assessment Year’. This is the year in which the proposed passenger cap of 9 million passengers per annum (mppa) is forecast to be reached under the DC Scenario and accordingly represents:

- The point at which the full effects of the proposed development would generally occur, being the year in which both the maximum number of passengers and the maximum number of aircraft movements would be achieved; and
- The year in which the greatest difference in aircraft numbers is observed between the DC and DM Scenarios and accordingly the worst-case environmental effects predicted.

5.3.6 The key assessment years are illustrated below.



5.3.7 The notable exception to this pattern is for air noise where a further operational assessment year of 2024/ 2025 is also considered because this constitutes the ‘worst case year’ for air noise.

5.4 Significance Criteria

5.4.0 The determination and classification of the ‘significance’ of environmental effects is intended to aid the London Borough of Newham and the statutory consultation bodies in identifying:

- The likely environmental effects of a development; and
- The relative weight that each identified environmental effect should be given in the decision-making process.

5.4.1 The determination of ‘significance’ is a function of the magnitude of the impact(s) and the value or importance of the receptor.

5.4.2 The EIA Regulations and associated planning practice guidance (PPG) do not define what constitutes a ‘significant environmental effect’ as this may vary between topics and be influenced by such factors as the sensitivity of the receiving environment and the susceptibility of local receptors to change. A set of generic significance criteria has therefore been applied based on established best practice in EIA, as described in Tables 5.1 and 5.2 below. These criteria have been used for most assessments, whilst some topics use a derivation of these criteria to account for professional discipline-specific guidance.

Table 5.1 - Generic EIA Terminology Applied within this ES

		Magnitude/Scale of Impact			
		High/Large	Medium	Low/Small	Very Small/Negligible
Value of Receptor	High	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	Negligible
	None/Little	Minor	Negligible	Negligible	Negligible

5.4.3 In order to provide a consistent approach in reporting the outcomes of the various studies undertaken as part of the EIA, the terminology in Table 5.2 below has generally been used within the ES to describe the relative significance of identified effects.

Table 5.2 - Levels of Significance

Level of Significance	Description
Major	Very large or large change in environmental or socio-economic conditions. Effects, both adverse and beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving regional or local objectives or, could result in exceedance of statutory objectives and/or breaches of legislation.
Moderate	Intermediate change in environmental or socio-economic conditions. Effects which are likely to be important considerations at a local level.
Minor	Small change in environmental or socio-economic conditions. These effects may be raised as local issues but are unlikely to be of overriding importance in the decision-making process.
Negligible	No discernible change in environmental or socio-economic conditions. An effect that is likely to have a negligible or neutral influence, irrespective of other effects, often not discernible above the natural levels of variation.

5.4.4 Those effects which are considered significant, and therefore material to planning decisions, are generally those identified as Moderate or Major.

5.4.5 Where it has not been possible to quantify the effects of the proposed development, qualitative assessments have been undertaken, based on professional judgment in the knowledge of the information available and in the context of the proposals.

5.5 Cumulative Effects Assessment

5.5.0 Consideration is also given to the cumulative effects of the proposed development. Cumulative effects have been considered in two ways, defined as follows:

- Inter-Project effects - the combined effects generated from the proposed development with other existing and/or approved developments. The environmental effects of these separate developments may be insignificant when considered in isolation, but when aggregated together could give rise to a significant cumulative effect; and

5.5.1 Intra-Project effects – the combined effects of different types of impact from the proposed development on particular receptors at or surrounding the application site, for example, the combined effects of noise, dust and emissions on a particular sensitive receptor as a consequence of increased traffic flows.

5.5.2 The zones of influence (ZOI) appropriate to the individual assessment topics have been identified within the technical chapters of the ES. For example, air quality impacts are likely to have a greater zone of influence compared to ground noise impacts; these differences have been taken into account when assessing the cumulative effects within this chapter.

5.5.3 Consideration has also been given to the potential cumulative effects of other future permitted developments and improvements inside the airport boundary. Such 'Cumulative Airport Developments' do not form part of the proposed development and are not related to it, nor are they required in order to accommodate the proposed uplift in passengers or other changes brought forward by the S73 application.

6 Summary of Environmental Effects

6.1 Socio-economics

6.1.1 An assessment has been undertaken by Quod and York Aviation of the socio-economic effects of the proposed development during the construction and operational phases of the proposed development.

6.1.2 The assessment of socio-economic baseline conditions and the potential impacts of the proposed development has been undertaken at various spatial scales as follows:

- 'Site' – the airport.
- 'Borough' - London Borough of Newham (LBN).
- 'Local Area' - LBN together with London Boroughs of Barking and Dagenham, Bexley, Greenwich, Hackney, Havering, Lewisham, Redbridge, Southwark, Tower Hamlets, and Waltham Forest, and District of Epping Forest.
- 'Regional' - London.

6.1.3 Construction of the proposed development will support direct employment and associated Gross Value Added (GVA). However, given the nature of the proposed amendments to the CADP1 planning permission being sought, there would be no change to the nature of the construction activities on site and accordingly the construction employment and GVA generated would be the same under both the DM and DC Scenarios. The timing of when this would occur does however change, with construction occurring some 6-7 years later under the DM Scenario. In light of this, the effect of the proposed development is anticipated to be Negligible and Not Significant.

6.1.4 The operational phase of the proposed development is expected to have beneficial socio-economic effects linked to the economy (employment and GVA), the local labour market and skill levels, and wider impacts on the local and regional economies in terms of business productivity, inbound tourism and socio-economic welfare effects such as journey time savings and air fare savings.

6.1.5 The proposed development will result in 1,230 additional direct jobs onsite (1,070 FTEs) compared to the DC Scenario by 2031. This will support £104m of GVA per year in the LBN. There will be further employment supported through indirect and induced jobs – resulting in 1,640 additional direct, indirect and induced jobs (1,430 FTEs) in the Local Area and 1,910 additional jobs (1,660 additional FTEs) in London. This will support an annual GVA of £144m and £175m respectively. By 2031, this will result in Moderate Beneficial effects which are Significant at the Local Area and London level (in earlier years the effect is Minor and not significant).

6.1.6 The employment will support the local jobs market by providing jobs at a variety of skill levels and training opportunities. By 2031, this will result in a Major Beneficial effect within LBN and a Moderate Beneficial effect at the wider Local Area and London level, which are Significant (in earlier years the effect is not significant).

6.1.7 In addition to the beneficial effects of employment and training considered above, the proposed development will also have a positive effect on the local community. There are several pathways in which this happens including through engaging with schools, providing employment and training opportunities for those furthest from the labour market, opportunities for the local supply chain and investment as a result of LCY's Community Investment Framework and Employment Contributions. LCY also has an important role in being the airport of East London and supporting the employment and housing growth.

6.1.8 The combined effect of the investment, in skills, training, employment and the community will result in regeneration which will help to level up a deprived area. Given the overlap with other assessment areas, no scale of significance has been assigned to the effect on the local community. Nonetheless, the importance of LCY in meeting the local, regional and national policy objectives and providing opportunities to the local community should be acknowledged.

6.1.9 The growth of the Airport in line with the DC Scenario will see it become a greater tool for businesses in the study areas, offering greater connectivity to support trade and investment and attracting more tourists. By 2031, it is estimated that there will be 1,800 additional jobs (1,430 additional FTEs) in London as a result of these catalytic benefits, supporting a GVA of £255m. By 2031, this will result in a Moderate Beneficial and Significant effect at the London level (in earlier years and at a Local Area level the effect is not significant).

6.2 Noise

6.2.1 Noise has been assessed with respect to the following:

- Flights into and out of the airport (air noise);
- Aircraft activities on the ground such as taxiing (ground noise);
- Road traffic on the local road network in the vicinity of the airport (road traffic noise); and
- Construction of the remaining elements of CADP1 (construction noise).

6.2.2 The assessment has involved modelling of the 2019 situation, supported by measurements, and modelling of the future environment with and without the proposed development: the DC and DM scenarios. The results of the modelling have been compared to criteria which take into account national policy and published guidance to determine potential impacts. The effects have also been compared to the effects forecast in the 2015 UES.

6.2.3 The air noise assessment finds that the area of the 57 dB contour is forecast to reduce in the future compared to 2019. With the proposed development, it would be around 20% smaller by 2031 than the current contour area limit. The number of people significantly affected by daytime air noise is also expected to reduce by 2031 compared to 2019, due to the introduction of quieter aircraft over time. These changes show the airport will share the benefits of the noise reduction from the new generation aircraft with local communities.

6.2.4 Overall noise will be very similar in 2025 in the DC and DM Scenarios. The airlines are expected to re-fleet to quieter new generation aircraft sooner in the DC Scenario. This results in overall noise being lower in 2027 with the proposed development than without. By 2031 the forecast increase in flights with the proposed development will result in overall noise being slightly greater in the DC Scenario than the DM Scenario, but still less than what occurred in 2019. These effects are not considered significant.

6.2.5 In 2019 nobody was significantly affected by night-time air noise. By 2031 with the proposed development there are forecast to be around 70 people exposed to significant levels of night-time noise. However, for these individuals the increases in noise levels are minor, and they will also all be eligible for the highest tier of the airport's Sound Insulation Scheme (SIS). Therefore, the effect is considered to be Minor Adverse and Not Significant.

6.2.6 The assessment finds that the number of people significantly affected by weekend air noise is expected to increase slightly by 2031 compared to 2019. The additional flights at the weekend are partially offset by the introduction of quieter aircraft over time. Only quieter new generation aircraft will be permitted to operate in the extended operating hours on Saturday into the early evening. The difference between the DM and DC Scenarios is considered Not Significant.

6.2.7 Compared to 2019, there is forecast to be a change in the distribution of ground noise around the area and therefore a change in the population that will be exposed to ground noise, resulting in increased ground noise levels for some and decreases for others. This is partly due to the greater use of new generation aircraft in the future. These aircraft will use the eastern apron stands more and the main and western apron stands less, leading to a shift in noise to the east. By 2031 the remaining elements of CADP1 are expected to have been built out in the core DC scenario, which includes additional buildings. These buildings will result in reductions in ground noise for some residents to the south of the airport due to the additional screening they will provide.

6.2.8 In 2031 the proposed development is expected to result in small increases in daytime, night-time and weekend ground noise, due to the greater number of aircraft movements. For most people these increases will

be small. A few dwellings are forecast to experience potentially significant increases in daytime, night-time and weekend ground noise. However, most of these are student rooms in the UEL accommodation blocks, and these blocks have a very good standard of sound insulation and were specifically designed to deal with noise from the airport. Moreover, all of the dwellings exposed to potentially significant moderate increases in ground noise are within the airport's sound insulation contours and are therefore eligible for, or already treated by the SIS or the separate Construction Sound Insulation Scheme (CSIS). These localised increases in ground noise are therefore forecast to result in generally Minor effects which are considered to be Not Significant.

6.2.9 Overall, ground noise levels in 2031 with the proposed development are forecast to remain relatively low, with nobody forecast to experience significant levels of night-time ground noise and only a small proportion of people forecast to experience significant levels of daytime or weekend ground noise. The daytime ground noise effects are similar to or slightly less than forecast for CADP1 in the 2015 UES (note: the 2015 UES did not specifically assess night-time or weekend ground noise).

6.2.10 The proposed development is not forecast to result in any significant changes in road traffic noise levels around the airport. Weekend noise levels were lower than the overall daytime noise levels in 2019 and this is forecast to remain the case in the future with the proposed development. Road traffic noise is therefore considered to be Not Significant.

6.2.11 The area around Woodman Street is forecast to experience a significant increase in noise compared to 2019 due to the opening up of the eastern end of the airport access road. This would occur in both the DM and DC Scenarios and the effects are in line with those presented in the 2015 UES. Properties in this area are eligible for the airport's sound insulation scheme and therefore will have or have been offered insulation; or, for more modern properties, will have been required to be built with sufficient noise insulation by planning condition.

6.2.12 The construction noise assessment found that in the daytime no significant noise effects are expected to arise from the construction of the remaining elements of CADP1. There are a small number of dwellings forecast to be exposed to significant levels of OOOH construction works, all of which have already been treated or offered treatment by the airport's Construction Sound Insulation Scheme. Construction noise effects are therefore considered to be Not Significant.

6.3 Air Quality

6.3.1 This Chapter of the ES describes the existing air quality conditions in the local area and the likely significant effects of the proposed development with regard to air quality.

6.3.2 Air quality refers to the amount of pollution in the air that people breathe. Poor air quality is associated with a number of health problems, especially breathing and heart conditions.

6.3.3 The main 'pollutants of concern' of relevance to the proposed development are nitrogen dioxide (NO₂) and fine particulate matter (PM₁₀ and PM_{2.5}). NO₂ is a gas produced by combustion processes, including aircraft engines, road vehicle engines and boilers for heating homes and offices. PM₁₀ and PM_{2.5} are mixes of very small solid or liquid particles which can be inhaled deeply into the lungs. They are produced by burning solid and liquid fuels (including in car engines, aircraft engines, and oil-fired boilers) and are also produced by wear from tyres and brakes on road vehicles and aircraft. There are also natural sources of PM₁₀ and PM_{2.5}, such as salt from sea spray and fine dust lifted off the ground.

6.3.4 Limit values and objectives for the key pollutants above are set in UK law (including the Air Quality Standards Regulations) for the protection of human health and the environment. The Mayor of London has also set a target for PM_{2.5} (with an ambition to achieve this by 2030) which is much more stringent than the national Limit value; and which is currently widely exceeded across much of Greater London.

6.3.5 LBN has declared a borough-wide Air Quality Management Area (AQMA) for exceedances of the annual average objective for NO₂ and the daily average objective for PM₁₀. By definition, the airport lies within this AQMA.

6.3.6 Information on existing pollutant concentrations in the vicinity of the airport has been obtained by collating the results of monitoring carried out by both LCY (as part of their Air Quality Monitoring Strategy (AQMS)) and the local authorities including the London Borough of Newham. Results from the AQMS show that the objectives for nitrogen dioxide, PM10 and PM2.5 were not exceeded in the baseline year for the study (2019), but there are some isolated exceedances of the nitrogen dioxide Limit Value/ Objective close to very busy roads away from the immediate vicinity of the airport. The GLA target value for PM2.5 was widely exceeded across LBN in 2019 (and across much of Greater London). An analysis of the monitoring data shows a statistically significant downward trend in annual average nitrogen dioxide concentrations in the immediate vicinity of the airport and in the neighbouring boroughs. This is principally related to the introduction of more stringent emissions standards for road vehicles, and other measures such as the Ultra-Low Emissions Zone (ULEZ).

6.3.7 The highest predicted odour concentrations in 2019 are at Hartmann Road, to the south of the terminal. The concentrations are below the threshold for complaints related to moderately offensive odours, and is consistent with the very small number of odour complaints that are recorded at off-site locations.

6.3.8 The air quality assessment takes into account the impacts from: aircraft on the ground and in the air, road traffic generated by people travelling to and from the airport, and other potential sources of air pollution at the airport, as well as the contribution from pollution sources not associated with the airport. The assessment makes a number of worst-case assumptions, which means that air quality impacts are likely to be over-stated. The impacts from the proposed development have been assessed at the full range of locations where people may be exposed, especially residential dwellings, including high rise apartment blocks. The assessment follows the recommendations from Environment Protection UK (an environmental charity) and the Institute of Air Quality Management (the professional body for air quality specialists).

6.3.9 The predicted annual mean concentrations in 2025, 2027, 2029 and 2031, with or without the proposed development, are lower than in 2019 at all receptor locations. This is principally due to existing and agreed measures at the regional, national and international levels to reduce pollutant emissions across a wide range of sources.

6.3.10 The predicted concentrations of nitrogen dioxide, PM10 and PM2.5 are below the Limit values/objectives in all future years, with or without the proposed development. The effects are considered to be Negligible and Not Significant at all receptors.

6.3.11 The GLA target for PM2.5 is marginally exceeded at all receptors in 2031, with or without the proposed development. The predicted effects at all receptors are Negligible, other than at two receptors R1 (Hartmann Road) and R2 (Parker Street) which would experience Moderate Adverse effects; however, this is primarily a function of the methodology and criteria adopted, with the absolute change in PM2.5 as a result of the proposed development being extremely small (0.1 µg/m³).

6.3.12 Predicted odour concentrations in all future year scenarios are lower than in 2019. These reductions may be attributed to the introduction of newer aircraft in the DC scenario, which have lower emissions of hydrocarbons. Predicted concentrations remain below the threshold at which moderately offensive odours might occur, and the frequency of odour complaints is unlikely to increase.

6.3.13 In conclusion, there are no significant air quality effects arising from the proposed development when compared to the DM Scenario/ approved CADP1 scheme.

6.4 Surface Access

6.4.1 The scope and approach to surface access modelling (for both road traffic and public transport) for the assessment has been agreed with TfL and LBN through the scoping process. The assessment has been informed by an understanding of the current distribution of trips to and from the airport, the travel modes available and where these have the potential to give rise to significant effects taking into account existing traffic flows and available capacity.

6.4.2 The airport benefits from a very sustainable pattern of surface access travel, with around 73% of all trips to and from the airport in 2019 being taken by sustainable forms of transport. LCY is committed, through its 2020 master plan and its recently published Sustainability Roadmap, to further increase sustainable travel at the airport for both passengers and employees, with a current target of achieving 80% sustainable travel by 2031.

6.4.3 Because of a higher proportion of off-peak leisure trips and no additional car parking being proposed, the proposed amendments are not expected to significantly change peak hour transport movements and, in turn, alter traffic conditions or public transport capacity at the most important peak times. Notwithstanding, the additional passenger numbers associated with the proposed development will lead to increased surface access demands on the surrounding highway and public transport networks. The Surface Access chapter of the ES and accompanying TA present an assessment of the likely significant effects associated with this increase.

6.4.4 In terms of the key environmental effects arising from changes in road traffic, the scale and extent of the assessment is in accordance with the IEMA guidelines for assessing highway impacts. The assessment has involved identifying the affected parties or locations which may be sensitive to changes in traffic conditions and identifying the scale of potential impact. The IEMA guidelines set out a range of potential environmental effects relating to road traffic that should be considered within an EIA. The following effects have been considered in this assessment:

- Severance;
- Driver Delay;
- Pedestrian and Cycle Delay;
- Pedestrian Amenity;
- Accidents and Safety; and
- Fear and Intimidation.

6.4.5 The IEMA guidance suggests traffic volume changes of less than 30% on all local and strategic roads that are deemed non-sensitive could be reasonably considered as not significant (referred to as the ‘Rule 1’ threshold). However, a more conservative approach has been adopted in the assessment whereby consideration has been given to potential environmental impact on all roads that experience a 10% or greater rise in traffic flows when comparing the DM Scenario with the DC Scenario in the principal assessment year of 2031.

6.4.6 The predicted traffic flows show that for the majority of highways assessed, the proposed development would give rise to an increase in traffic flows of less than 10% when compared to the approved CADP1 development. Only four highway links in proximity to the airport are predicted to experience an increase in traffic flows of greater than 10% and therefore require further consideration of the environmental effects identified above. These links, and the predicted change in flows, are set out in Table 6-1.

Table 6-1: Predicted Changes in Traffic Flows on Road Links Exceeding a 10% Increase

Road Link	% Change in Traffic Flow between DM and DC Scenario	Significance
(Hartmann Road, East of Connaught Road)	37%	Moderate Negative
(Hartmann Road, West of Albert Road)	37%	Moderate Negative
(Connaught Road, East of Roundabout)	16%	Minor Negative
(Connaught Road, West of Roundabout)	16%	Minor Negative

6.4.7 A detailed environmental assessment has been undertaken for the identified highway links to determine the significance of effects of the development traffic flows on receptors along it/using it. A summary of the significance of effects is provided in Table 6-2 below.

Table 6-2: Summary of Significance of Environmental Effects

Impact	Highway Links			
	(Hartmann Road, East of Connaught Road)	(Hartmann Road, West of Albert Road)	(Connaught Road, East of Roundabout)	(Connaught Road, West of Roundabout)
Changes in daily vehicle flows on local roads (links)	Moderate Negative Significance	Moderate Negative Significance	Slight Negative Significance	Slight Negative Significance
Severance	Moderate Negative Significance	Moderate Negative Significance	Slight Negative Significance	Slight Negative Significance
Driver Delay	Neutral to Slight Negative Significance			
Pedestrian and Cycle Delay	Neutral to Slight Negative Significance			
Pedestrian Amenity	Neutral to Slight Negative Significance			
Accidents and Safety	Neutral to Slight Negative Significance			
Fear and Intimidation	Neutral to Slight Negative Significance			

6.4.8 For the majority of impacts, the assessment identified a Neutral to Slight Negative, or Slight Negative effect which are Not Significant.

6.4.9 A Moderate Adverse effect has however been identified on Hartmann Road in terms of changes in daily traffic flows and severance effects.

6.4.10 No further mitigation is considered necessary in addition to that already in place through the existing CADP1 consent.

6.4.11 With regard to public transport, the airport is well served by existing and proposed future public transport with capacity to absorb additional demand associated with the proposed development by 2031. The effects of increased demand on public transport services associated with the increase in passenger numbers has been assessed based on the predicted increase in trips and the predicted future capacity of the services (obtained by use of TfL's Railplan model) including the London Underground (Elizabeth Line), Docklands Light Rail (DLR), Rail and London Bus services.

6.4.12 The modelling undertaken indicates that with the proposed development, there will be ample spare capacity on the public transport network in the vicinity of the airport to accommodate the increase in passenger numbers and that the impact on the wider public transport network will be minimal. The effect of the proposed development is therefore considered to be Slight Adverse and Not Significant when compared to the approved CADP1 scheme (the DM Scenario).

6.4.13 The existing CADP1 Section 106 Agreement includes commitments to publish updated travel plans every three years. Condition 71 of CADP1 requires compliance with the Airport Travel Plan (TP), while the S106 ensures it is kept up to date in consultation with the Airport Transport Forum. The current Travel Plan is

for the period up to 2025 and is currently under review with LBN. A new Framework Travel Plan is included with the TA supporting the proposed amendments (see ES Volume 4) and this will be further developed for the period to 2031 in order to help to achieve the airport's mode share targets. This new Travel Plan is expected to be formally agreed with LBN subject to consent being granted for the proposed amendments.

6.4.14 In order to achieve the targets for improved passenger and staff travel by sustainable modes, further investment is required and the airport is also proposing a new Sustainable Transport Fund (STF). The fund has potential to be subsidised by a levy on car users, e.g. from a proportion of car parking revenue or forecourt charges, and can be used to contribute to surface access projects which support the airport achieving its mode share targets. The STF would operate for a minimum of 7 years and would be managed by the airport in consultation with the Airport Transport Forum, which includes local authorities, transport providers and neighbouring land owners.

6.4.15 A flexible approach is important to ensure that initiatives can respond to how modal share targets are being achieved and can adapt to working with transport providers and others (whose priorities and investment decisions typically change). A fund of at least £2 million per annum could fund a range of projects such as subsidising earlier DLR services, provide better connectivity between the airport and Elizabeth Line Station at Custom House and other initiatives to encourage staff and passengers to use public transport.

6.5 Climate Change

6.5.1 This Chapter of the ES presents an assessment of the likely significant effects of the proposed development with regards to Climate Change. It separately considers;

- the effect of the proposed development on climate change through an assessment of the proposed development's whole life Greenhouse Gas (GHG) emissions; and
- an assessment of the effect of climate change on the proposed development in terms of the resilience of the airport to future changes to the climate, such as extreme weather events.

Greenhouse Gas Assessment

6.5.2 The baseline GHG emissions associated with the airport were calculated using activity data provided by LCY and Government CO₂e emission factors. The baseline GHG emissions in 2019 were 313,578 tonnes CO₂e. Emissions from aircraft account for circa 93% of this total.

6.5.3 The change in GHG emissions resulting from the proposed development from construction and operation have been calculated for the assessment years of 2027, 2031 and in 2050 to inform the assessment of significance.

6.5.4 For EIA purposes, there are no industry-recognised significance criteria or thresholds for GHG emissions that relate to the quantum of emissions released. The approach to defining 'likely significant effects' of the proposed development has therefore been developed to reflect and consider the policy that applies to any change in GHG emissions.

6.5.5 Taking this approach is particularly relevant for an airport since aircraft GHG emissions (i.e. from the landing and take-off cycle and in cruise mode) are managed through national and international Government policy, whilst airport GHG emissions (which include all other sources that are not aircraft, i.e., from construction, energy use, ground transport, operational vehicles etc) are managed at a local level and can be controlled and influenced by LCY. The assessment of significance and the criteria adopted therefore distinguishes between aircraft GHG emissions and airport GHG emissions.

6.5.6 The key criteria used to establish significance for aircraft GHG emissions relate to the policy set out in the Airport National Policy Statement, specifically Paragraph 5.82 which states that:

“Any increase in carbon emissions alone is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the project is so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets, including carbon budgets.”

6.5.7 The assessment finds that the net change in aircraft GHG emissions from the proposed development is a maximum increase of 73,045 tonnes CO₂e in 2031 and then falling to an increase of 9,609 tonnes CO₂e by 2050, when compared to the approved CADP1 scheme.

6.5.8 In terms of the significance of aircraft GHG emissions the assessment concludes the following:

- With the proposed development, between 2019 and 2031 CO₂e per passenger (pax) falls (i.e. improves) by 27%, and between 2019 and 2050 falls by 93% driven by decarbonisation of aircraft reflecting the high ambition scenario set out through the DfT’s Jet Zero Strategy.
- The net change in aircraft GHG emissions due to the proposed development would amount to less than 0.15% of the Climate Change Committee’s (CCC) planning assumption (37.5 million tonnes CO₂) used to set the 4th and 5th carbon budgets (carbon budgets set the pathway to meeting the UK’s 2050 net zero target);
- The net change in aircraft GHG emissions would amount to only 0.03% of the 6th carbon budget;
- The Government has set a target for UK aviation GHG emissions to be net zero by 2050 in its Jet Zero Strategy published in 2022. Aircraft GHG emissions in the DC Scenario account for 1.08% of the DfT aviation sector trajectory (the trajectory set by government to reach net zero by 2050) in 2031 and falls to 0.18% in 2050, a net increase of 0.21% in 2031 and 0.05% in 2050 relative to the DM Scenario;
- The proposed development is consistent with the growth in capacity at LCY that was considered by the Government’s Jet Zero Strategy;
- In addition to the Government’s net zero goals, the aircraft GHG emissions associated with the proposed development are subject to regulations that have been identified by Government to meet its climate change obligations (specifically 99% are covered by the UK Emissions Trading Scheme); and
- The proposed development is supportive of measures set out by the Government’s Jet Zero Strategy that have been identified to reach net zero emissions by 2050.

6.5.9 In light of the above, it is considered that the net change in aircraft GHG emissions from the proposed development would not result in a material impact on the ability of the Government to meet its carbon reduction targets, including carbon budgets and therefore the effect of the proposed development’s aircraft GHG emissions is considered to be Not Significant.

6.5.10 The assessment of significance of airport GHG emissions has followed IEMA guidance and applied expert judgment on the significance of the proposed development’s airport lifecycle GHG emissions, taking into account their context, compliance with policy, and mitigation measures.

6.5.11 The assessment finds that the net change in airport GHG emissions from the proposed development (airport construction and operational emissions) is an increase of 3,980 tonnes CO₂e in 2031 falling to an increase of 1,947 tonnes CO₂e by 2050, when compared to the DM Scenario.

6.5.12 In terms of the significance of airport GHG emissions, the assessment concludes the following:

- The change in airport GHG emissions associated with the proposed development when compared to the approved CADP1 scheme (the DM Scenario) as a percentage of the 4th, 5th and 6th carbon budgets is 0.003%, 0.004% and 0.001% respectively and is therefore very small. Importantly, the contribution reduces between the 5th and 6th carbon budgets, demonstrating alignment with the Government trajectory towards net zero;
- In terms of consistency with policy the proposed development is fully consistent with applicable existing and emerging climate change and carbon related policy requirements; and
- A range measures have been, and will be, adopted by the airport to mitigate emissions that are in line with good practice design standards for projects of this type.

6.5.13 Using IEMA's guidance the assessment finds that the net change in airport GHG emissions from the proposed development is Minor Adverse and Not Significant.

Resilience to Climate Change

6.5.14 The assessment of resilience of the proposed development to the impacts of climate change has been informed by regional scale information on historic and projected change in climate variables, and other studies undertaken in support of the planning application.

6.5.15 To establish any significant climate resilience effects from the proposed development, the assessment has followed IEMA's EIA guide to Climate Change Resilience and Adaptation.

6.5.16 Following this guidance the assessment finds that there are no significant effects and as such no additional mitigation measures are required.

6.6 Public Health and Well-being

6.6.1 This assessment considers the potential impacts and likely significant effects on population health and well-being. Population health is influenced by factors such as personal choice, location, mobility and exposure. These factors are called 'determinants of health' and they span environmental, social, behavioural, economic and institutional aspects. The proposed development has the potential to change determinants of health, with beneficial and adverse effects, either directly, indirectly or cumulatively.

6.6.2 The methodology for assessing human health follows the most up-to-date industry guidance and good practice. Consideration is given to physical health, mental health and health inequalities, across a broad range of determinants of health.

6.6.3 The health and well-being assessment has been informed by the findings of other technical assessments: Socio-economics; Noise; Air Quality; Surface Access; and Climate Change. The health assessment has also been informed by a review of relevant public health evidence sources, including scientific literature, baseline data, health policy, local health priorities and health protection standards.

6.6.4 The assessment looks at the potential impacts on both the general population and vulnerable groups. Vulnerability relates to experiencing effects differently due to age, income level, health status, degree of social disadvantage or ability to access services or resources. The assessment considers localised effects for the population that reside in proximity to the airport, as well as effects to the wider community within LBN and neighbouring boroughs of Greenwich and Tower Hamlets. The assessment also considers the wider effects at the regional level of Greater London, as well as national and international effects.

6.6.5 The health of people in the local study area is varied compared with the England average. Pockets of deprivation are present across the study area and there is sensitivity within the population due to the proportion of children living in low-income families, levels of obesity, and rates of cardiovascular diseases. Air quality is an important local public health issue, particularly in Newham and Tower Hamlets. The effects of the Covid-19 pandemic and of climate change have been taken into account in considering how sensitivity may increase further in the future.

6.6.6 The findings of the assessment of 'likely significant effects' of the proposed development on the health determinants are summarised in Table 6.3. For all health determinants, specific regard is given to vulnerable groups.

Table 6-3: Summary of Effects on Health Determinants

Health Determinant	Assessment of Effects
Use of Open Space	The potential for physical activity and mental wellbeing effects due to changes in operational day-time noise affecting use of public areas of open spaces are considered. The significance of the population health effect for this determinant of health would be Minor Adverse (Not Significant) . The professional

Health Determinant	Assessment of Effects
	judgment is that the scale of change would not cause the population to alter their decisions on the use of public outdoor spaces. Any effect is expected to be offset by use of the LCY Community Investment Fund to provide new or improved inclusive open space and sports facilities that encourage greater participation in physical activity.
Community Identity	The potential for the expanded airport activities to influence how people feel about their community, affecting health and wellbeing is considered. The significance of the population health effect would be Minor Beneficial (Not Significant) in relation to improved community identity associated with employment and travel access. However, there may also be a Minor Adverse (Not Significant) effect where some residents associate the expansion with adverse changes to their community's identity, such as strong feelings about environmental quality. The professional judgment reflects that the airport is already a prominent feature of the local social, economic and environmental landscape. In this context the scale of change has limited potential to alter community identity to an extent that could affect population health.
Transport	The potential changes in road traffic affecting road safety, travel times, accessibility and active/sustainable travel are considered. The significance of the population health effect for this determinant of health would be Minor Beneficial (Not Significant) in relation to improved physical activity associated with active travel and public transport use. However, there may also be up to a Minor Adverse (Not Significant) effect due to the slight reduction in road safety and slight increased journey times associated with increased traffic volumes. The professional judgment accounts for deprived populations already facing more access barriers locally. Increases in the proportion of people accessing the airport by public transport and active travel would benefit population health.
Good Quality Employment	The potential benefits due to socio-economic factors (income and employment), which are strongly correlated with better health outcomes, including for dependent children, are considered. The significance of the population health effect would be Moderate Beneficial (Significant) . The professional judgment is that the scale and nature of employment is expected to be influential in narrowing health inequalities locally, and more generally supporting delivery of health policy to improve local population health. New good quality long-term roles (in terms of remuneration, working hours, working conditions and job security) are considered particularly likely to contribute to long-term population health benefits.
Apprenticeship and Training Opportunities	The potential benefits due to additional upskilling and educational support, which can support health throughout life are considered. The significance of the population health effect for this determinant of health would be Minor Beneficial (Not Significant) . The potential to further target opportunities to vulnerable groups in the local area is considered, which could increase the population health benefit.
Noise	The potential for changes in aviation and road noise to affect population health are considered. Careful public health consideration has been given to the modelling results presented in the Noise chapter. Regard has been given to the timing and scale of the changes, how the changes compare to thresholds associated with health outcomes and measures that indicate how people would experience the changes. Regard has also been given to the noise controls at the airport and to the noise insulation scheme being offered. The significance of the population health effect would be Minor Adverse (Not Significant) . The professional judgment takes into account higher levels of noise experienced by a small minority of the local population, as well as lower levels of noise experienced by a larger proportion of the population. The degree of change in noise levels in both these cases is very small. Measures to further target the noise insulation scheme to vulnerable groups have been proposed to further reduce any effect.
Air quality	The potential health effect from changes in air quality associated with aviation and travel to and from the airport are considered. The health assessment has been informed by the Air Quality ES chapter, which sets out changes in concentration of key pollutants in the local area. That modelling shows the changes in air quality to be well within national health protection standards. The significance of the population health effect would therefore be Minor Adverse (Not Significant) . The professional judgement has regard to the national health protection standards, as well as to the scientific literature and international advisory guidelines that show there may be some health effect at even lower levels. The conclusions take into account local sensitivity to air quality and that the change in air pollutant concentrations would be very small.
Ultra-fine particulates	The potential effect due to very small particles produced by combustion processes, including aviation, are considered. This is an emerging issue within the scientific literature on aviation. The inclusion of this issue is to provide transparency as to the state of public health knowledge and appropriate action. The World Health Organization concluded in 2021 that there is insufficient evidence to establish a guideline against which to judge levels of health effects associated with ultra-fine particles. Despite uncertainties in the recent literature, the significance of the population health effect has been rated as Minor Adverse (Not Significant) rather than Negligible . The professional judgement is that the evidence does not

Health Determinant	Assessment of Effects
	support the scale of change in ultra-fine particulates being likely to result in a significant population health effect. Monitoring is considered appropriate. Ultra-fine particulates are likely to reduce as aviation shifts towards alternative fuels including sustainable aviation fuel, and electric or hydrogen.
Climate change	The contribution to health inequalities associated with climate change, including due to population displacement, food insecurity, shifts in communicable illness ranges and exposure to extreme weather conditions is considered. The significance of the population health effect for this determinant of health would be Minor Adverse (Not Significant) . The professional judgment is that the changes would have a very limited effect on the global or national health baseline, even accounting for long-term effects. The strategic national level agendas of Net Zero and Jet Zero, as well as the LCY's Sustainability Roadmap, are the mechanisms through which effects would be reduced.
NHS Routine Service Planning	The potential for effects to NHS services due to changes in numbers of passengers arriving at the airport are considered. The significance of the population health effect would be Minor Adverse (Not Significant) . The professional judgment is that there would be a slight increased demand on local services by people outside out their usual NHS catchment area. Such demand is normal and forms part of routine NHS service planning. The effect is reduced by the airport supporting such routine planning by sharing information and appropriately scaling its onsite support for airport health activities.

6.6.7 Overall, the proposed development is not anticipated to give rise to any new or materially different significant population health effects from the approved CADP1 scheme (DM Scenario). There are no new significant population health effects that would change the implications for public health.

6.7 Other Environmental Topics

6.7.0 This chapter of the ES considers the environmental topics which were examined at the EIA scoping stage and were determined to be unlikely to be affected by the proposed amendments or to have the potential to give rise to new or materially different significant environmental effects from those identified in the UES.

6.7.1 Therefore, the topics have been grouped together and presented within this chapter in accordance with the environmental 'factors' listed in the EIA Regulations, namely:

- Townscape (including visual impacts);
- Water Resources and Flood Risk;
- Ecology and Biodiversity;
- Land and Soil (including contamination);
- Cultural Heritage (including archaeology and built heritage assets);
- Waste; and
- Major Accidents and/or Disasters.

Townscape and Visual Impacts

6.7.2 The airport is surrounded by infrastructure, including the DLR, hotels, offices, car parks and emerging commercial and residential developments. An established residential community of predominantly terrace houses and flats are situated directly to the south of the airport. The A112, Hartmann Road, Connaught Bridge and the A1020 route around the airport with the DLR running along the south.

6.7.3 The 2015 UES included an assessment of Townscape and Visual Effects. This concluded that the proposed new terminal buildings delivered through CADP1 would enhance the setting of the Docks and improve the aesthetic quality of the airport, with only a few minor to moderate adverse effects on the north side of Royal Albert Dock and to a small number of apartments with north facing 2nd or 3rd floor windows located within 100m of the airport within Silvertown.

6.7.4 The proposed amendments to the approved CADP1 scheme do not include any physical changes to the approved airport buildings and infrastructure or maximum flight numbers. The reconfiguration of some

existing stands to the west of the airfield to accommodate larger Code C aircraft will entail minor surface level works (e.g. re-painting stand markings) in an area of the airfield that is visually screened by the existing noise barrier and terminal buildings. This part of the airfield is not visible in any of the viewpoints identified by the Townscape and Visual Impact Assessment (TVIA) contained in the 2015 UES. These works, and the larger aircraft that would subsequently be parked there following completion, are therefore unlikely to be especially visible to any sensitive visual receptors outside of the airport boundary.

6.7.5 The proposed development is not anticipated to give rise to any new or materially different significant effects in relation to townscape and visual impacts. The residual effects of the proposed development therefore remain as reported in the 2015 UES.

Water Resources and Flood Risk

6.7.6 The airport is located between the Royal Albert Dock and KGV Dock, comprising two of the three Royal Docks. The KGV Dock joins the Gallions Reach section of River Thames at the entrance lock to the Royal Docks, approximately 400 m east of the airport. The gate provides flood protection to the impounded area of the docks.

6.7.7 A flood risk assessment (FRA) was undertaken by RPS in 2013 in support of the CADP1 planning application. The FRA concluded that there was a negligible risk of tidal and fluvial flooding. An updated FRA has been prepared as part of this ES which demonstrates that the probability of tidal flooding to the site has not increased.

6.7.8 The 2015 UES concluded the following:

- There would be a negligible effect on flood risk on site and surrounding area during the construction and operational phases;
- The proposed surface water drainage strategy would result in a moderate beneficial effect on the sewer network through reduced discharge flow rate;
- There would be a negligible effect from surface water run-off on water quality once CADP1 is built and during construction; and
- There would be a negligible effect on potable water demand.

6.7.9 The proposed amendments to the approved CADP1 scheme do not result in any changes in the area of hardstanding or airport infrastructure. Accordingly there would be no increase in flood risk or surface water run-off and no new or materially different significant effects from those identified in the 2015 UES. An updated FRA using the most up-to-date data has been undertaken in support of the S73 application. The updated FRA concludes that with the existing approved drainage system in place, no additional attenuation is required.

6.7.10 The water quality of KGV Dock is monitored regularly by the Royal Docks Management Association (RoDMA). Samples are mainly taken for health and safety reasons but provide an indication of the water chemistry of the KGV Dock including salinity levels, oxygen and nutrient availability. The proposed development will not result in any new or materially different effects with respect to water quality in the docks and other surface water features. The construction activity which posed the greatest risk to water quality in the docks was piling associated with the construction of the new deck over KGV Dock. These piling works are now complete. The remaining CADP1 construction works will be undertaken in accordance with the agreed CEMP which sets out measures to reduce the risk of water pollution occurring during construction.

6.7.11 Water consumption at the airport will inevitably increase as a result of the proposed increase in the number of passengers passing through the airport. However, the airport has a relatively low water consumption per passenger by comparison to other UK airports and has a range of measures in place to reduce the volume of water consumed. Additional water efficiency measures will be introduced to reduce water demand at source, including through the design and specification of water fixtures and fittings within the new CADP1 building infrastructure. The airport will continue to monitor water use at the airport and will explore further opportunities to increase water efficiency. In light of this, the increase in total water demand associated with the increased

number of passengers would be partly offset by future reductions in water consumption per passenger and no significant effects on potable water supplies are considered likely.

Ecology and Biodiversity

6.7.12 An updated Preliminary Ecological Appraisal (PEA) has been produced based on an updated desk study and Phase 1 Habitat Survey undertaken in April 2022.

6.7.13 The site is not located within or adjacent to any statutory designated sites for nature conservation. The nearest Site of Special Scientific Interest (SSSI) is Gilbert's Pit, approximately 1.5 km south of the site. However, this site is designated for its geological rather than ecological features. The nearest Special Area of Conservation (SAC) is Epping Forest, the southernmost extent of which is located approximately 8km north of the site. The Royal Docks, located adjacent to the airport, is designated as a non-statutory Site of Borough Importance for Nature Conservation and adjoins at the eastern end with the River Thames Site of Metropolitan Importance for Nature Conservation.

6.7.14 The airport site is urbanised in nature, dominated by airport infrastructure including the terminal building, forecourt, runway, ancillary buildings and car-parking space. The majority of the land therefore consists of buildings and hardstanding with very limited vegetation. Accordingly, the ecological value of the site is considered to be low, as confirmed by the updated PEA.

6.7.15 A range of ecological enhancement measures are in place at the airport to reduce the impacts on biodiversity on-site and enhance biodiversity off-site. These include:

- The installation of artificial fish refugia in the KGV Dock (installed in 2017);
- Implementation of a Sustainability and Biodiversity Strategy which is reviewed every three years and sets out new targets, actions and initiatives to enhance biodiversity off-site;
- Implementation of a Landscape Strategy as the remaining elements of CADP1 get built out, which includes the planting of indigenous plant species which contribute towards biodiversity; and
- Commitment to a new Biodiversity Fund as part of LCY's 2022 Sustainability Roadmap.

6.7.16 The 2015 UES concluded that there would be no significant adverse effects on ecological receptors or designated sites during either construction or operation of the CADP1 scheme. There will be no additional habitat loss or direct impacts to any on- or off-site habitats as a result of the proposed development, and no additional significant effects on sensitive ecological receptors. The effects of the proposed development will therefore remain as reported in the 2015 UES.

Cultural Heritage

6.7.17 The airport is located within an Archaeological Priority Area designated by LBN. The airport is not located within or adjacent to any designated Conservation Area and there are no Scheduled Ancient Monuments within a 1km radius of the centre of the site. There are 8 listed buildings located on the north and south sides of the Site.

6.7.18 The UES submitted in 2015 included a comprehensive assessment of the CADP1 scheme on archaeology and built heritage. The assessment concluded that there would be a minor beneficial effect on the setting of the KGV Dock as a result of mitigation embedded into the design of the CADP1 which will positively affect the way the asset is appreciated, including the installation of historic information boards for people to better understand the history of the Docks.

6.7.19 The majority of direct effects on the individual structural components of KGV Dock and the associated pontoons (known as 'Dolphins') were considered to be Minor Adverse, but mitigation in the form of "historic building recording" and the publication of the results of this exercise would enhance knowledge of this heritage asset. The effects on buried archaeological assets as a result of piling and excavation for foundations and drainage infrastructure were mitigated through the placing of archaeological planning conditions on the CADP1 planning permission. This mitigation will remain in place for all future works.

6.7.20 The proposed amendments to the approved CADP1 scheme do not include any physical changes to the approved CADP1 buildings and infrastructure or new areas of hardstanding. Accordingly, the proposed development is not considered likely to give rise to any new or materially different significant effects on either below ground or above ground heritage assets and the residual effects remain as reported in the 2015 UES.

Waste

6.7.21 The majority of airport waste is produced by airlines, tenants and retail concessions. The airport currently recycles a range of waste materials with waste being segregated on site at a central storage area and removed by a waste contractor on a daily basis to prevent the attraction of birds and vermin.

6.7.22 In the past few years, the airport has also achieved many notable successes related to its waste management. These include a 27% reduction of waste per passenger in 2019 against the 2013 baseline, a reduction in the use of single-use plastics by banning plastic straws and stirrers across the airport, and installing a bottle refill point for passengers in the departure lounge, thereby reducing the disposal of bottles. Various initiatives to increase recycling rates have recently been implemented at the airport, including the transfer of waste using clear bags to assist in the identification of waste types.

6.7.23 Recycling rates at the airport have increased from 57.0% in 2017 to 61.4% in 2022. Waste generated per passenger has also reduced from 0.28kg per passenger in 2017 to 0.18kg per passenger in 2022.

6.7.24 LCY's Sustainability and Biodiversity Strategy, reviewed every three years, includes targets and initiatives to: minimise operational waste production and promote sustainability by monitoring waste leaving the airport more closely, raise awareness to staff of recycling, and develop ways to monitor how and where waste is generated at the airport.

6.7.25 The proposed amendments to the approved CADP1 scheme do not alter the approved physical buildings and infrastructure associated with CADP1. Accordingly, there are no anticipated changes in the volume or composition of construction waste. Construction waste arising from the CADP1 development works is managed in accordance with a Waste Management Strategy which will remain in place.

6.7.26 The 2015 UES identified a Negligible to Minor Adverse effect from waste produced during the operational phase of CADP1. The increase in passengers associated with the proposed development would likely increase the volume of waste generated at the airport. However, the volumes of waste are relatively small when compared to the predicted figures for waste generation and proposed waste management capacity within Newham and London as a whole. The additional waste is therefore not considered likely to give rise to any significant adverse effects.

6.7.27 Furthermore, the proposed mitigation measures and the long-term commitment and initiatives adopted by LCY to reduce waste generation, are likely to result in residual effects being less significant than predicted in the 2015 UES.

6.7.28 In light of the above, it is not considered likely that the proposed development would give rise to any new or materially different effects with regard to waste management. The effects of the proposed development remain, broadly, as reported in the 2015 UES.

Ground Conditions and Contamination

6.7.29 Based on the British Geological Survey (BGS) mapping (1:50,000 scale) and previous intrusive site investigation reports carried out between 2001 and 2013, the airport is underlain by Made Ground, Alluvium, River Terrace Deposits, Lambeth Group and Thanet Sand Formation. There are no existing or recommended Regionally Important Geological Sites (RIGS) or Locally Important Geological Sites (LIGS) within the LBN.

6.7.30 Site investigations carried out at the airport over the past 15+ years have only encountered localised areas of hydrocarbon and metal contamination within the Made Ground underlying the site. Widespread

contamination has not been detected and the investigations carried out to date have not revealed a likely significant impact to the wider environment.

6.7.31 The 2015 UES included a comprehensive assessment of the potential impacts of the CADP1 development on ground conditions and concluded that there would be no significant adverse effects during either construction or operation, subject to appropriate mitigation measures being adopted.

6.7.32 The proposed amendments to the approved CADP1 scheme do not include any physical changes to the approved airport buildings and infrastructure or any new areas of hardstanding. There are no changes to, or additional construction activities proposed, and no additional contamination risks during the operation of the airport.

6.7.33 The proposed development is therefore not anticipated to give rise to any new or materially different significant effects on ground conditions and the residual effects remain as reported in the 2015 UES.

Major Accidents and Disasters

6.7.34 The EIA Regulations 2017 require that, where applicable, the potential likely significant effects resulting from, and relating to, major accidents and disasters relevant to a development to be considered in the EIA process.

6.7.35 In respect to airports, this topic can be largely captured under the heading of 'Third party risk', which includes, *inter alia*:

- The fatality risk to people on the ground from the effects of aircraft accidents; and
- Birdstrike risk, i.e. risk of collisions occurring between aircraft and large birds.

6.7.36 The airport suffers no exceptional climatic conditions or significant flood risk that regularly affect its operations.

6.7.37 All construction works will be managed in accordance with the CEMP, approved in December 2019 and relevant regulations such that the risk of a major accident occurring is considered to be extremely low and similar to other ongoing activities at the airport. The Obstacle Limitation Surfaces (OLSs) in place at the airport would not be breached at any time during construction, unless essential and only during out-of-operational hours (OOOH). The actual likelihood of an accident occurring as a result of the construction activity is therefore minimal.

6.7.38 As with all airports, LCY adopts all possible precautionary measures to ensure the safety of construction and operations. The airfield is governed by a rigorous safety regime, licensed by the CAA. Therefore, the risk of a major aviation safety breach, accident or related disaster involving an aircraft determined to be negligible. As the proposed development does not alter the existing natural features in or around the airport, it is unlikely to affect the probability of bird strikes occurring.

6.7.39 In regard to other potential 'major accidents and/or disasters' (e.g. terrorism incident, fire or explosion), the proposed development would not alter the existing controls that exist across the aviation industry in accordance with UK and international law and CAA mandated standards.

6.7.40 In light of the above, it is not considered likely that the proposed development would give rise to any significant effects with regard to major accidents and disasters.

7 Cumulative Effects

Inter-project Cumulative Effects

7.0.0 A scoping exercise was undertaken to identify the likely foreseeable future developments in proximity to the airport that have the potential to give rise to significant cumulative effects in combination with the proposed development. The list was refined in accordance with a set of criteria and the planning and development status of each scheme.

7.0.1 The traffic model used for the TA, which in turn informs the assessments of road traffic noise and emissions, takes account of planned and consented developments in the vicinity of the airport by considering the predicted traffic flows associated with all such developments. These assessments therefore inherently consider the potential impacts associated with cumulative traffic.

7.0.2 Similarly, all future committed residential developments and their estimated populations which will be contained within the projected air noise contours, are taken into account in the noise assessment. Accordingly, the impact of the proposed development of future surrounding developments is already assessed in the noise assessment.

7.0.3 The following significant inter-project cumulative effects have been identified:

- Significant beneficial effects on the local job market associated with cumulative increases in employment opportunities;
- Significant beneficial effects on public health and wellbeing associated with increased jobs and training opportunities; and
- Moderate significant adverse effects on a small number of road links (e.g. Hartmann Road) in terms of increased traffic flows and severance.

Intra-project Cumulative Effects

7.0.4 A review of the residual effects presented in this ES was undertaken against each individual receptor or receptor group to determine the potential for cumulative effects to occur.

7.0.5 The public health and well-being assessment inherently considers the combined impacts on human health receptors from all other technical disciplines assessed in this ES, the conclusions of which are presented above. The effects arising from GHG emissions are assessed on a global scale with no specific receptor or group of receptors identified as being susceptible to potential significant effects. Accordingly, GHG emissions would not give rise to interactive effects with other technical disciplines.

7.0.6 During construction there is the potential for air quality, traffic, noise and socio-economic effects to interact. However, the majority of effects in relation to these disciplines have been identified as being of Negligible significance, with Minor Adverse (not significant) effects identified for construction noise at night only. Accordingly, there are unlikely to be any significant intra-cumulative effects associated with the construction works.

7.0.7 Following completion of the proposed development, all air quality effects associated with the operational phase have been assessed as being of Negligible significance and accordingly are not considered likely to give rise to any significant cumulative effects in combination with other topics. There is however the potential for traffic, noise and socio-economic effects to interact. Moderate adverse effects have been identified on the highway network in terms of traffic flows and severance on the roads immediately adjacent to the airport, and minor adverse effects have also been identified in terms of both air noise and ground noise.

7.0.8 Operational socio-economic effects are assessed as being of Negligible to Major Beneficial significance.

8 Summary

8.1.1 The proposed development is consistent with the airport's current master plan, published in December 2020, which sets out the longer-term vision for the airport campus over the next 15 or so years.

8.1.2 The proposed development will enable the airport to make best use of its infrastructure and to meet passenger demand to 2031 in a sustainable way. This aspiration directly accords with national planning policy with regard to aviation growth whilst maintaining compliance with the UK Government's commitment to Net Zero Carbon by 2050.

8.1.3 Delivering growth to meet the needs of local passengers and provide benefits to the local community requires the conditions to be created for the airlines to both modernise and grow their fleets of aircraft based at LCY. This requires extended operating hours on a Saturday to reduce the existing inefficiencies. The proposed development will accelerate the transition to cleaner, quieter, 'new generation' aircraft, which is key to delivering real noise benefits and see noise levels reduce on average compared to current levels, even with growth.

8.1.4 The proposed development will also allow the airlines to grow their route network, increasing frequencies of services to existing destinations and services to new destinations. This will deliver substantial benefits to the economy of London and the areas around the airport in particular. Additionally, greater flexibility for the airlines to operate on Saturday afternoons would secure the economic benefits from faster growth in activity at the airport, creating valuable job opportunities for local people. This will deliver benefits to passengers and the wider economy locally and is entirely consistent with the identified need to 'level up' economies in East London, including Newham, whose economic performance has been lagging behind.

8.1.5 The ES concludes that the proposed development would give rise to the following significant beneficial effects:

- Significant moderate beneficial effects at the local and regional level from direct, indirect and induced operational employment and associated GVA impacts;
- Significant major beneficial effects at the borough level and moderate beneficial effects at the local and regional level on the local jobs market in terms of employment opportunities for different skills levels;
- Significant moderate beneficial effects at the regional level in terms the catalytic impacts on inward investment and location decisions (which are reflected in increased business productivity) and inbound tourism spend (business and leisure); and
- Significant moderate beneficial effects on public health and wellbeing of the general population and vulnerable population group due to good quality employment and training opportunities associated with the proposed development.

8.1.6 No significant adverse effects have been identified. Non-significant effects can be summarised as follows:

- Noise effects in relation to construction noise, air noise, ground noise and road traffic noise range from minor adverse to minor beneficial and are all considered to be not significant;
- All air quality effects would be negligible and not significant.
- Effects associated with surface access would range from neutral to moderate adverse but are all considered to be not significant;
- Effects associated with GHG emissions and climate change would be minor adverse and not significant; and
- Impacts on public health and wellbeing, with the exception of the moderate beneficial effects identified above, would range from minor adverse to minor beneficial and are all considered to be not significant.