

CITY AIRPORT DEVELOPMENT PROGRAMME
(CADP1) S73 APPLICATION

ENVIRONMENTAL STATEMENT

VOLUME 2: APPENDICES
DECEMBER 2022



Pell Frischmann

City Airport Development Programme (CADP1) S73 Application

Volume 2: Appendices

Appendix 3.1 LCY Initial Environment Report

December 2022

INITIAL ENVIRONMENTAL REPORT

LONDON CITY AIRPORT: PROPOSED AMENDMENTS TO PLANNING CONDITIONS

Initial Environmental Report
V10
30 June 2022

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1 INTRODUCTION

The purpose of this environmental report is to inform members of the public and all interested parties of the potential environmental and socio-economic effects associated with London City Airport ('the airport') seeking to vary its existing planning permission to allow for a greater number of passengers in the future and to incentivise the quicker introduction of cleaner and quieter 'new generation' aircraft.

Subject to the outcome of the public consultation on the proposals, a 'minor-material amendment' planning application (known as a section 73 application) will be submitted to the London Borough of Newham (LBN) later this year, to seek permission for:

- 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 and potentially into the evening; but no later than 22:00 hrs and only for cleaner, quieter, new generation aircraft. (Note: a decision on this matter will be made following the outcome of further assessment work and the feedback received during the consultation period).
- Consequential modifications to daily and other limits on flights, including:
 - I. An increase in the number of flights permitted between 06:30 and 06:59 (from 6 to 12) and more flexibility for delayed arrivals and departures in the last half hour of operations (currently limited to 400 per annum); and
 - II. Greater flexibility in the location of the already permitted aircraft to allow for the wider wingspan of new generation aircraft.

There will be no change to the number of aircraft currently allowed to fly from London City Airport each year and no increase in the number of aircraft stands

or other physical infrastructure. The design and layout of the new terminal buildings and further enhancements to the airport campus, which were approved in 2016 under the CADP1 permission, will remain substantially unaltered and these will be built out commensurate with the recovery of passenger demand, albeit at a slower pace than originally envisaged prior to the onset of the Covid-19 pandemic. The major civil engineering works associated with CADP1; namely, the construction of a taxiway parallel to the runway and the creation of a concrete deck over King George V Dock to provide 8 new aircraft stands, were completed in 2019. The parallel taxiway and 4 of the new stands are now fully operational.

The proposals are consistent with the airport's current Master Plan which was published in December 2020. The proposals are also in accordance with the Government's policy to encourage airports to 'make best use' of their existing runways and infrastructure. Moreover, as the aviation industry and the UK economy continues to recover from the Covid-19 pandemic, the future prosperity and resilience of London City Airport is a key local and regional imperative. Its growth to 9 million passengers over the next decade (from a low point of less than 1 million in 2020/ 2021) will result in a range of benefits including new local investment, jobs and training opportunities.

There will also be some environmental effects associated with the proposed changes, both positive and negative. However, provisional analysis shows that there will be no significant adverse environmental effects and, indeed, some effects will be less than predicted when the airport was originally applying for the CADP1 permission. For instance, noise from aircraft is modelled to reduce over coming years due to the influence of more new generation aircraft in the fleet. As such, the 'noise contours' around the airport are now predicted to be less in 2031 than they were previously predicted to be in 2025. This fleet replacement programme would be accelerated by raising the passenger cap and the relaxation of Saturday opening hours which will allow airlines to invest in cleaner, quieter aircraft such as the new Embraer E195-E2.

The airport and its team of expert consultants are currently undertaking a process of Environmental Impact Assessment (EIA) of the proposals, which will act to further quantify the environmental and socio-economic effects of the proposed amendments and help identify mitigation and enhancement

measures where necessary. This is being done in close cooperation with the London Borough of Newham and relevant statutory consultees. The results of the EIA will be reported in an Environmental Statement (ES) submitted with the application.

This assessment is based on the predicted rate of growth of the airport, in terms of passenger numbers and aircraft movements, in both the 'without development' case (i.e., no change to the existing planning permission) and 'with development' case (i.e., with the increased passenger cap and other changes) and then comparing the environmental effects between both scenarios. For the purpose of the EIA, these scenarios are known as the Do Minimum (DM) and Development Case (DC) respectively.

While the full results of the EIA will not be available until later in 2022, this document is intended to provide an initial overview of the likely significant effects of the proposed amendments to the existing planning permission and the measures proposed to mitigate any adverse effects. It is being 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. All pertinent environmental issues raised by members of the public and consultees will be addressed in the ES and/or other documents submitted with the application.

2 PLANNING BACKGROUND

The City Airport Development Programme (CADP1) planning application (13/01228/FUL) was granted planning permission by the Secretaries of State for Communities and Local Government and Transport in July 2016 following a planning inquiry. The 2015 Updated Environmental Statement (UES) for CADP1 was considered at the planning inquiry. Planning permission was granted for the following development:

- a) Demolition of existing buildings and structures;*
- b) Works to provide 4 no. 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;*

REPORT OF INITIAL FINDINGS OF ENVIRONMENTAL ASSESSMENT

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”.

Whilst the new stands, taxiway and other structures (i.e. most of the elements covered by items a to d above) have since been built, the remaining CADP1 works were put on hold in early 2020 due to the outbreak of the Covid-19 pandemic and the adverse effect this had on the airport's business, flights and passenger numbers. This has also resulted in the longer-term retention of various temporary facilities at the airport, including a Temporary Immigration Facility (TIF) and a Temporary Outbound Baggage (OBB) structure. These temporary facilities are required to maintain levels of service and safe operations until the CADP1 works have been fully built out.

At the same time that permission was secured for CADP1, outline planning permission was also granted for a 260 room hotel (CADP2, planning ref. 13/01373/OUT). However, this permission has not been implemented to-date.

In addition, since 2016, a number of specific structures and airfield enhancements have been built out or implemented under the airport's

permitted development rights. These changes are identified on Figure 1 below and include:

- The Digital Air Traffic Control Tower (DATCT) to the south of KGV Dock;
- Temporary decked carpark to the east of the DATCT;
- Runway and taxiway rehabilitation works; and
- Introduction of an Engineered Material Arrestor System (EMAS) at either end of the runway (works due to commence in summer 2022).

Given the pause of construction during the pandemic, it is now anticipated that the remaining CADP1 works (including the new terminal buildings) would be built out over a more prolonged period. It is expected that construction could re-commence by the time that the airport returns to pre-pandemic levels in 2024 and potentially be complete by 2031. This will be subject to a further revision to the Construction Phasing Plan (CPP), in accordance with condition 4 of the CADP1 permission.

REPORT OF INITIAL FINDINGS OF ENVIRONMENTAL ASSESSMENT

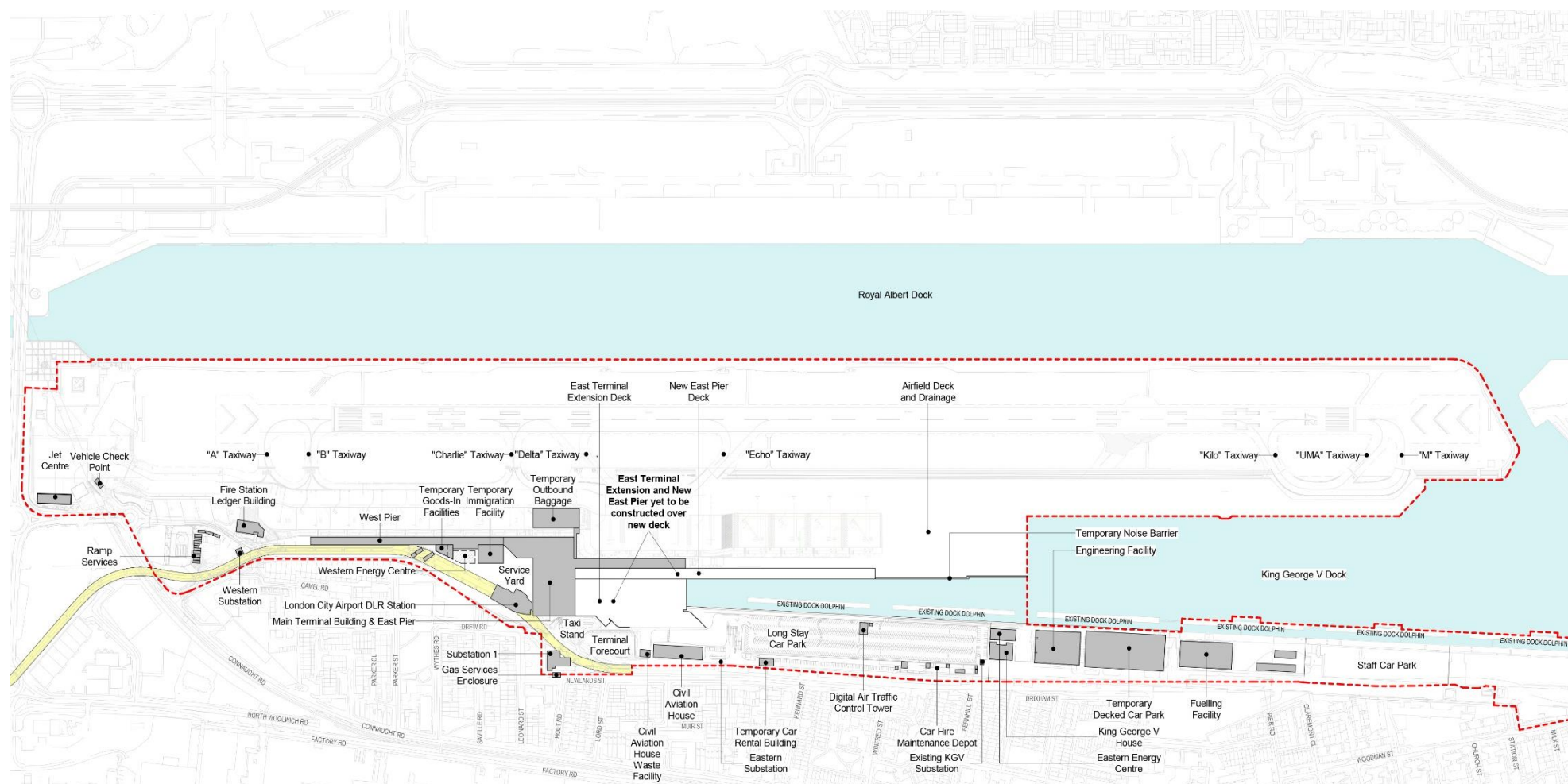


Figure 1: Existing Layout of London City Airport

3 POLICY CONTEXT

National Planning Policy and Guidance

National Planning Policy Framework

Central to the NPPF (2021) is a positive approach to growth and the presumption in favour of sustainable development. Achieving sustainable development means that the planning system has three overarching objectives: an economic objective, a social objective and an environmental objective. These should not be seen in isolation as, for example, economic growth can contribute to higher environmental standards. Specific aviation policies are limited in the NPPF.

National Aviation Policy

The *'Flightpath to the Future'* (FttF) document published on 26 May 2022 comprises Government's overarching aviation policy statement. It includes a 10-point plan, a number of which are directly relevant to the planning system, including:

- Recovering and learning lessons from the pandemic and sustainably growing the sector - including commitments to growth and working together towards a future where the sector can recover, grow and thrive in a way that is sustainable, resilient and connected;
- Supporting growth in airport capacity where justified and ensuring that capacity is used in a way that delivers for the UK. Clear support for airport expansion/growth is found in various sections of the

document (including page 2, 7, 18, 19, 20, 26, 42, 44 and 69). It also includes frequent reference to helping the sector to "build back better" and a desire to support growth in passenger demand;

- Putting the sector on course to achieve 'Jet Zero' by 2050 – with specific targets for 10% Sustainable Aviation Fuels (SAF) by 2030 and zero emissions flights across the UK this decade;
- Strategic context to the Government's Jet Zero plans and how it will set net zero targets for 2050 (page 6 and Sections 2 / 4) - explaining that expansion of any airport must meet its climate change obligations to be able to proceed and making reference to the proposal for airports in England to be zero emissions by 2040; and
- Unlocking local benefits and levelling up - including through trade, air freight, aerospace, investment and tourism, as well as allowing people to benefit from improved connections across the union and regions.

In FttF the Government confirms that addressing detrimental impacts on local communities associated with air quality emissions and noise from aviation are important aspects of a sustainable future (page 35) and that the CAA (which now has the functions of the Independent Commission on Civil Aviation Noise) will create a new Sustainability Panel to provide independent expert advice on a range of environmental issues including carbon, noise and air quality.

FttF advises that existing planning frameworks comprising *'Beyond the Horizon: The future of Aviation: Making best use of existing runways'* (June 2018) and the Airports National Policy Statement (2018)¹ are the most up to date policy on planning for airport development and are material considerations in the determination of planning applications.

¹ The Airports National Policy Statement primarily relates to a third runway at Heathrow Airport and is not directly relevant to London City Airport

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‘Beyond the Horizon – The Future of UK aviation: Making best use of existing runways’ includes key themes of making best use (paragraphs 1.11 & 1.29), sharing benefits with local communities (paragraph 1.22) and demonstrating how mitigation addresses local environmental issues (paragraph 1.26). It also states that as part of their planning applications, airports will need to demonstrate how they will mitigate local environmental issues, which can then be presented to, and considered by, communities as part of the planning consultation process (paragraph 1.24).

The Government has also signalled that it intends to publish further national policy in FttF including its Jet Zero strategy.

In July 2021 the Government published *‘Decarbonising Transport – A Better, Greener Britain’* which includes a series of Government commitments on aviation (page 116 onwards), including to consult on measures to achieve ‘Jet Zero’ by 2050 and fund research to accelerate the sector’s take up of zero emissions technologies. The aviation sector specific ‘Jet Zero Consultation’ was published at a similar time and sought views on a range of measures. On 21 March 2022, the Government published a technical consultation (which ran until 25 April 2022) on updated evidence and analysis on the implications of Jet Zero measures. The airport’s forecasting consultant, York Aviation, has taken this into account in its demand forecasts for the airport (described in Section 4 of this report).

Page 35 of FttF states that the Government will set out a new noise policy framework, with next steps in 2022/3, to provide *“a clearer noise policy framework alongside measures to incentivise best operational practice to reduce noise and measure”*.

Local Planning Policy

The Development Plan for LBN comprises the London Plan (March 2021) and the Newham Local Plan (December 2018).

London Plan

Policy T8 (Aviation) of the London Plan is supportive of the role aviation plays in the economy, with the supporting text requiring best use of existing airport

capacity. The application will need to directly address a number of aspects of policy T8 including:

- Criterion B – which requires development proposals to “include mitigation measures that fully meet their external and environmental costs, particularly in respect of noise, air quality and climate change” and requires expansion scheme to demonstrate “an overriding public interest or no suitable alternative solution with fewer environmental impacts”,
- Criterion E – which requires proposals changing airport operation to take “full account of their environmental impacts and the views of affected communities.”
- Criterion G – requires airports to work with TfL and others to increase the proportion of journeys by sustainable means.

The supporting text will also be important for any application to address, as follows:

“10.8.4. Any airport expansion proposals should only be taken forward on the basis that noise impacts are avoided, minimised and mitigated, and proposals should not seek to claim or utilise noise improvements resulting from technology improvements unrelated to expansion. Nor should expansion result in significant numbers of new people being exposed to new or additional noise harm.

10.8.5 Any airport expansion proposals should not worsen existing air quality or contribute to exceedance of air quality limits, nor should they seek to claim or utilise air quality improvements resulting from unrelated Mayoral, local or national policies and actions. Airport expansion should also incorporate air quality positive principles to minimise operational and construction impacts.”

Newham Local Plan

The Newham Local Plan was adopted on 10 December 2018. The airport is allocated as an 'Employment Hub' (ref. E11) for visitor economy, business and logistics. Policy J1 'Business and Jobs Growth' states that proposals will be supported if they address the spatial strategy which seeks to focus attractions and facilities at employment hubs (which includes the airport).

Supporting paragraph 1.23 states that the airport is a major employer and catalyst for investment that supports London's international role.

Part G of Policy S3 'Royal Docks' states that the Airport will continue to perform an important role in the area's international business and visitor connectivity and as the focus to an employment hub with measures implemented to support the optimisation of existing capacity and further mitigation of its environmental impacts, including improvements to public transport. Policy INF1 'Strategic Transport' states that proposals should address strategic principles and the spatial strategy which for air travel includes: measures to support the optimisation of airport capacity, including access (potentially via a new Elizabeth Line station) and other freight and passenger facilities for operational safeguarding.

4 SCHEME DESCRIPTION, FORECASTS AND EIA

Proposed Amendments to Conditions

London City Airport (LCY) is consulting on proposals to revise planning conditions attached to the CADP1 planning permission pursuant to Section 73 (S73) of the Town and Country Planning Act 1990 (as amended).

Subject to the feedback received during the public consultation period, it is proposed that the S73 application could comprise:

'Application to vary conditions attached to planning permission 13/01228/FUL dated 26 July 2016 (as varied) to allow up to 9 million passengers per annum (currently 6.5 million), flights to take place on Saturday PM, modifications to daily and other limits and changes to temporary facilitating works'

The number of flights will remain limited to 111,000 air transport movements (ATMs) per annum and 45 ATMs per hour as approved under the CADP1 permission and there would be no change to the 8 hour night-time or Sunday morning curfews currently in operation at the airport.

There will be no changes to the number of aircraft stands or to the runway, and no material changes to other infrastructure or the design and layout of the buildings as approved under the CADP1 permission and subsequently varied by several non-material amendment applications.

However, the area to the west of the airfield could be used more efficiently to park new generation aircraft, which have a wider wingspan, which would in turn allow for greater operational resilience at peak times. Minor changes to the area where aircraft can park on the existing apron may therefore be sought. Over time, this may also require the replacement of the existing Corporate Aviation Facility, known as the 'Jet Centre' but that will not form part of any forthcoming S73 application

Where they remain appropriate, all relevant existing environmental and operational controls, strategies and systems approved through the other

conditions attached to the CADP1 planning permission and the associated Section 106 planning agreement will continue to apply (and/or be re-imposed under a new planning permission and Section 106 Agreement with LBN). The airport's recently published Sustainability Roadmap, which sets out the airport's plans to become London's first net zero emissions airport, will be integral to all future development. The proposals in this application will also help deliver and accelerate some of the commitments in the Roadmap, most notably around decarbonising its future heating systems.

ATM and Passenger Forecasts

Previous CADP1 Forecasts and Recent Trends

The S73 planning application is an essential component of the airport's Covid-19 recovery plan to 2031 and beyond and seeks to make best use of the runway and existing and approved infrastructure in accordance with the Government's Making Best Use (MBU) policy.

The original demand forecasts underpinning CADP1 planning application and assessed in the 2015 UES, projected that the airport would reach 6.0 million passengers per annum (mppa) by 2025 in the Core Case and that, if the airlines grew their load factors faster than originally anticipated, the passenger throughput could reach 6.5 mppa by 2025. Pre-Covid 19, the airport was on track to achieve these forecasts, with more than 5.0 mppa handled in 2019 in line with expectations. The airport anticipates being back to pre-pandemic levels between 2024 and 2025.

Changes in the nature of the airlines using the airport, with the demise of Flybe and greater emphasis on British Airways operations, has resulted in more of the larger jet aircraft types being used than were envisaged when the CADP1 demand forecasts were first prepared. Whereas the CADP1 projections expected 5.1 million passengers in 2020 to be handled on 93,000 commercial aircraft movements, in practice this passenger throughput was attained in 2019 with just over 80,000 commercial aircraft movements reflecting the increased capacity of aircraft used and higher passenger load factors. Hence, the consented 111,000 annual aircraft movements can now accommodate many more passengers than initially predicted.

Furthermore, since CADP1 was first planned, the profile of demand using the airport has changed, with a more even balance of business and leisure traffic as well as more airlines basing their aircraft at the airport overnight. The changes in the passenger mix have resulted in changes in airline operating patterns, with relatively less dependence on the traditional peaks of traffic at London City Airport (i.e. inbound in the morning and outbound in the early evening). Also, due to the fact that there are more aircraft based overnight at the airport, this results in some spreading of the peak throughout the day. As a consequence, the CADP1 infrastructure can still meet the morning and evening peak hours passenger demands projected for the future but more use is being made of the available capacity during the inter-peak and off-peak periods. Hence, the permitted CADP1 infrastructure can actually handle more passengers on an annual basis than originally assumed, particularly when the effect of new technologies such as self-service check-in are taken into account.

Current Forecasts

On the basis of the changes to the conditions as proposed, the provisional demand projections for the core Development Case (DC) and fallback/Do Minimum (DM) case have been prepared. The forecasts take into account any prolonged influence of the Covid-19 pandemic and draw upon the latest Department for Transport's UK Aviation Forecasts, as set out in the Jet Zero technical consultation of March 2022 and the revised econometric relationships used to derive these updated air passenger demand forecasts. The forecast future growth rates for UK air passenger demand are derived from these econometric relationships, having regard to the latest post-Covid-19 economic forecasts, projected carbon costs and other factors impacting the cost of air travel. Account is also be taken of local economic growth factors in the areas served by the airport, including the potential increase in population living within the vicinity of the airport. London City Airport's share of the market is 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.

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The resulting passenger forecasts are set out in the graphs below; albeit these may change slightly as the forecasts are further refined. As can be seen by these graphs, in the Development Case it is predicted that the passenger throughput at the airport will grow progressively from 2023 onwards, with numbers reaching 7.0 mppa by 2027 and 9.0 mppa by 2031.

For the fallback scenario, without approval of the S73 application, 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 not be reached until 2030, with consequential delays to airlines re-fleeting with new generation aircraft as well as other disbenefits including a slower rate of job creation and less inward investment and employment overall compared to the Development Case.

Jet Centre aircraft movements are expected to grow from historic levels of around 5,000 movements a year to 9,000 movements a year in the DM/fallback case. However, in the Development Case passenger aircraft movements (PATMs) would continue to increase over time up to the 111,000 annual movements permitted, thereby eventually squeezing out all but a few Jet Centre movements.

In addition to the core Development Case forecasts (considered the 'most likely' outcome for the purpose of the Environmental Impact Assessment), faster and slower growth cases will be set out reflecting current market uncertainties and to illustrate plausible timeframes over which 111,000 annual aircraft movements may be taken up at the airport. The fleet mix associated with each scenario will be set out in the Environmental Statement (ES) submitted with the S73 application.

Implications of the Updated Forecasts

The detailed forecast parameters (prepared by York Aviation on behalf of the airport) have informed the reassessment of capacity provided by the CADP1 scheme and the required phasing to meet the future demand forecasts. This takes into account the current implementation of the project and the provision of the temporary facilities, and it will be demonstrated that the planned works

can accommodate demand up to 111,000 annual aircraft movements based on the expected pattern of airline operations.

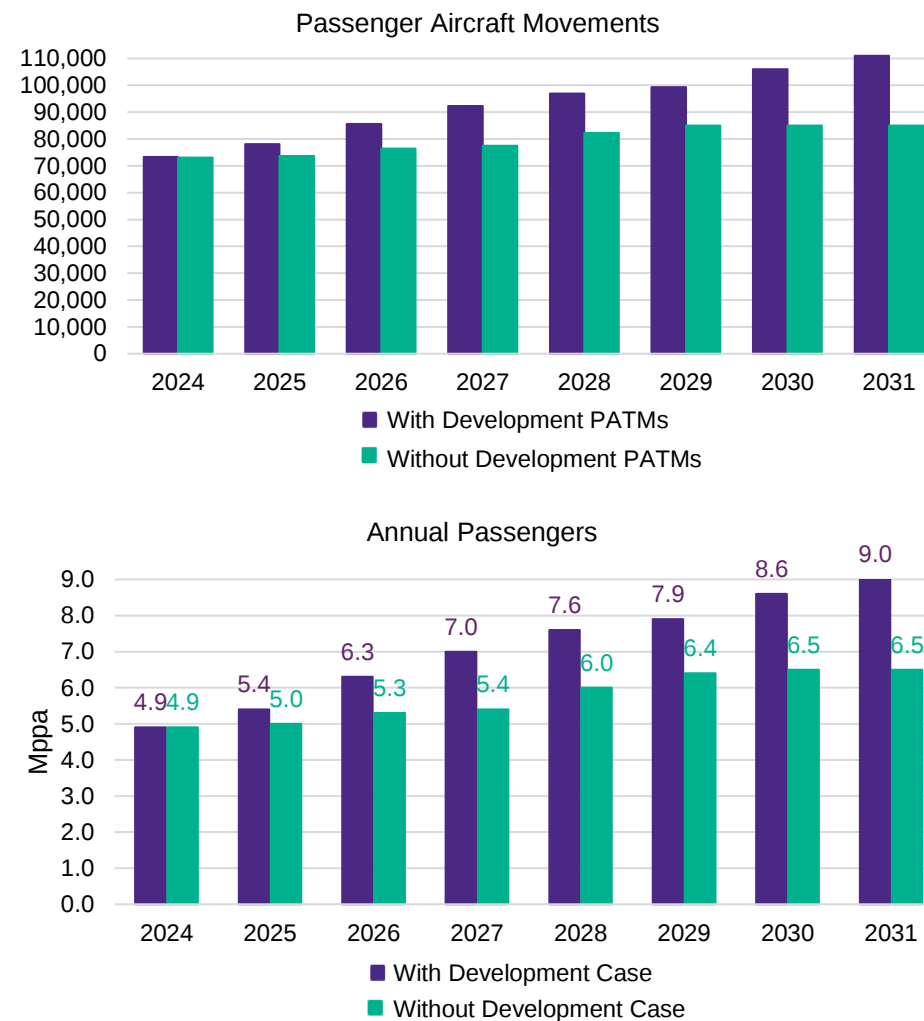


Figure 2: Forecast growth in passengers and aircraft movements with and without the proposed S73 amendments

Environmental Impact Assessment (EIA)

Introduction

This report provides an account of the provisional findings of various ongoing assessment work being undertaken by the airport and its consultant team. It therefore gives an initial overview of the main environmental effects (both positive and negative) which are likely to result from the proposed amendments to existing planning conditions, as well as setting out various mitigation and enhancement measures being considered by the airport. It forms part of a suite of documents to inform the consultation process and to invite comments and views from the public and other stakeholders on the proposals.

This report has been prepared following the ‘scoping’ stage of the Environmental Impact Assessment (EIA) being undertaken in conjunction with the proposals. As described below, EIA is a statutory process for ensuring that the likely significant effects of a new development or, in this case, the amendment to an existing permitted development, are fully identified and taken into account before that development is allowed to proceed. The publication of this initial report is not a prescribed or mandatory step in this EIA process. Instead, it has been undertaken to give all interested parties early sight of the initial findings of the EIA and to explain the next steps in this assessment process.

The Department for Levelling Up, Housing and Communities’ (DLUHC) Planning Practice Guidance states that the purpose of EIA is:

“to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process.”

The proposed variations to the conditions of CADP1 permission are classified under ‘changes and extensions’ in accordance with Schedule 2 (13) of the Town & Country Planning (EIA) Regulations 2017.

As the project has the potential to give rise to significant environmental effects, London City Airport has committed to undertake a thorough EIA. At the conclusion of this process, an Environmental Statement (ES) will be prepared to report the findings of the various component assessments of the EIA and this will be submitted in conjunction with the forthcoming S73 planning application, which is subject to the outcome of the public consultation exercise. This new ES will also provide continuity with and act to update the findings of original EIA, as reported in the CADP1 UES (September 2015). A summary of the findings of this previous EIA (completed between 2012 and 2015) is provided in **Annex 1** of this report.

RPS Planning and Development Ltd. (RPS) and a team of topic specialists (including Bickerdike Allen Partners, Air Quality Consultants, Ecolyse, Steer, Quod and York Aviation) have been commissioned by the airport to prepare the ES in accordance with the EIA Regulations and other relevant guidance and standards.

A draft EIA Scoping Report has already been prepared and submitted to the London Borough of Newham (LBN) for their review. This sets out in detail the technical coverage of the proposed assessments. The scoping process is intended to identify the potential for any significant environmental effects to occur (prior to mitigation) as a result of the proposals and the methods that will be used to assess such effects. It also identifies the aspects of the environment (or ‘topics’) that will be scoped out from any further detailed assessment, as the proposed changes are unlikely to have any material influence on these aspects and/or it is unlikely that there would be significant effects on the environment. A summary of the findings of the EIA Scoping Report is given in the following sections of this report.

Ongoing consultation is being undertaken with both LBN and the statutory bodies (e.g., Natural England, Historic England, Environment Agency, Highways Authority etc.) regarding the proposed technical, geographic and spatial scope of the EIA.

EIA Assessment Years and Scenarios

As illustrated by the summary forecast tables above, the existing 6.5 million passengers per annum (mppa) cap is forecast to have been reached by about 2027 in the Development Case (DC), but only by 2030 in the Do Minimum (DM) scenario.

Whilst the current forecasts may be refined slightly in the coming months, particularly as there are signs that the airport is now recovering more quickly than expected at the beginning of the year, they are nonetheless considered robust for assessment purposes. The assessment years for the EIA have therefore been selected as follows, albeit not all years will be assessed for each topic:

- **2019 – Baseline Year** for the EIA, as this represents the last full calendar year of ‘normal’ operations at the airport prior to the onset of the Covid-19 pandemic. However, where appropriate, data from this year will be supplemented by more recent surveys.
- **2025 – the Future Baseline Year** when airport activity and passenger numbers are confidently predicted to have recovered to (at least) pre-Covid-19 levels; this being a conservative assumption.
- **2024/ 2025 – Worst Case Year for Noise**, as by this point in time the positive influence of re-fleeting with quieter new generation aircraft will not yet have occurred to any significant extent.
- **2027 – the Transitional Year** when 6.5 mppa is predicted to be exceeded in the Development Case.
- **2031 – the Principal Assessment Year** when 111,000 annual aircraft movement cap is expected to be reached and there are predicted to be 9.0 mppa. This will be the main focus of the EIA for comparing the environmental effects between the without development (DM) and with development (DC) outcomes.
- **2024 – 2031 – Revised CADP1 Construction Programme** - being built out in phases to match demand.

Sensitivity tests using alternative forecasts or assessment years will also be undertaken, namely:

- **Slower Growth Scenario** – representing a plausible but less likely scenario of either reaching the ATM cap of 111,000 aircraft movements by 2033, or, the new passenger cap of 9 mppa being reached by 2034.
- **Faster Growth Scenario** – representing a plausible but less likely rapid progression to 9.0 mppa by 2029.

In addition to the above, construction related effects will be assessed over a seven-year timeframe; from 2024, when the CADP1 works could recommence assuming the airport returns to pre-pandemic levels by this time, to 2031 when the last element of the built infrastructure would be expected to be complete if passenger growth occurs as predicted by the core forecasts. This assessment will be informed by a revised construction phasing plan (CPP) which be presented in the Environmental Statement.

Scope of Environmental Statement

The technical topics to be covered in the full Environmental Statement (ES) will be agreed with LBN through the formal scoping process. This report covers those technical topics that the airport currently anticipates will be scoped-in to the ES. These are set out in Table 1 below.

Table 1: Proposed Technical Scope of the EIA

Topics to be Scoped Into the ES	Topics to be ‘Scoped Down’	Topics to be ‘Scoped Out’
Surface Access (Traffic & Transport)	Flood Risk & Drainage	Archaeology and Built Heritage
Air Quality	Ecology and Biodiversity	Ground Conditions
Noise		Townscape and Visual Impact
Socio-economics		Major Accidents and Disasters
Carbon and Climate Change		Vibration
Human Health		Waste

Whereby, topics:

- **‘Scoped In’** for detailed consideration within a dedicated chapter of the ES, as significant environmental effects (either positive or negative) are considered likely prior to mitigation, or, inadequate information existed at this time to definitively conclude that no significant effects would occur;
- **‘Scoped Down’** where the topic is of some relevance but will be largely unaffected by the uplift in passengers and the other proposed changes. As such, there would be no new or materially different likely significant environmental effects. Notwithstanding, further information on these topics will be provided in the ES based on recent baseline surveys, together with previous assessment work contained in the 2015 UES and subsequent Approval of Details (AoD) documents; and
- **‘Scoped Out’** of the EIA on the basis that it is highly unlikely for these topics to exhibit any new or materially different likely significant environmental effects as a result of the proposed changes, especially as there are no physical changes to the approved CADP1 infrastructure.

5 KEY ENVIRONMENTAL CONSIDERATIONS

Socio Economics

Baseline Context

Despite significant employment growth in recent years, East London, including parts of Newham contains some of the most deprived areas in the country as measured using the Government’s Indices of Multiple Deprivation (see Figure 3 below).

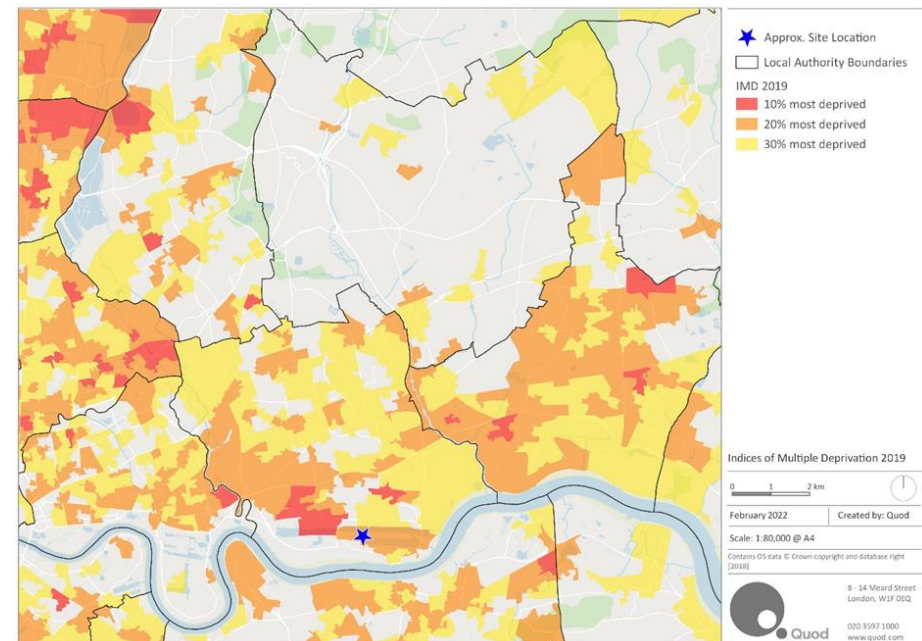


Figure 3: Indices of Multiple Deprivation 2019

As set out below, the area is a high priority for the Government’s ‘Levelling Up’ policies, including the Levelling Up Fund. This recognises the very high

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levels of unemployment with Barking & Dagenham, Waltham Forest, Newham, Tower Hamlets and Redbridge - all in the top 20² for unemployment on the 'Economic Recovery and Growth' indicator. Newham's Unemployment Claimant Count rate in January 2022 was 7.8% compared to 5.6% across London.

Employment is very unevenly distributed across East London. Only Tower Hamlets has more than one job per working age resident (1.3) whilst Barking & Dagenham (0.52), Waltham Forest (0.46), Newham (0.55), and Redbridge (0.45) all have significantly fewer (the average across London is 0.99).

There are also differences in the level of jobs people do, with Barking & Dagenham, Havering and Newham having relatively fewer workers in senior professional occupations (28%, 49% and 49%) compared to London as a whole (62%)

The size of each District's economy varies significantly and, as such, data for Gross Value Added (GVA) has been collected at small output area level. This shows the relatively high level of GVA generated by the airport and its surrounding businesses. Variation however still largely reflects the number of jobs and the sectors they are in.

The three largest sectors in Newham are retail, education, and business administration and support services. Between them they account for 37% of all employment. The dominant sectors at the local level are shown in the Figure 5 below.

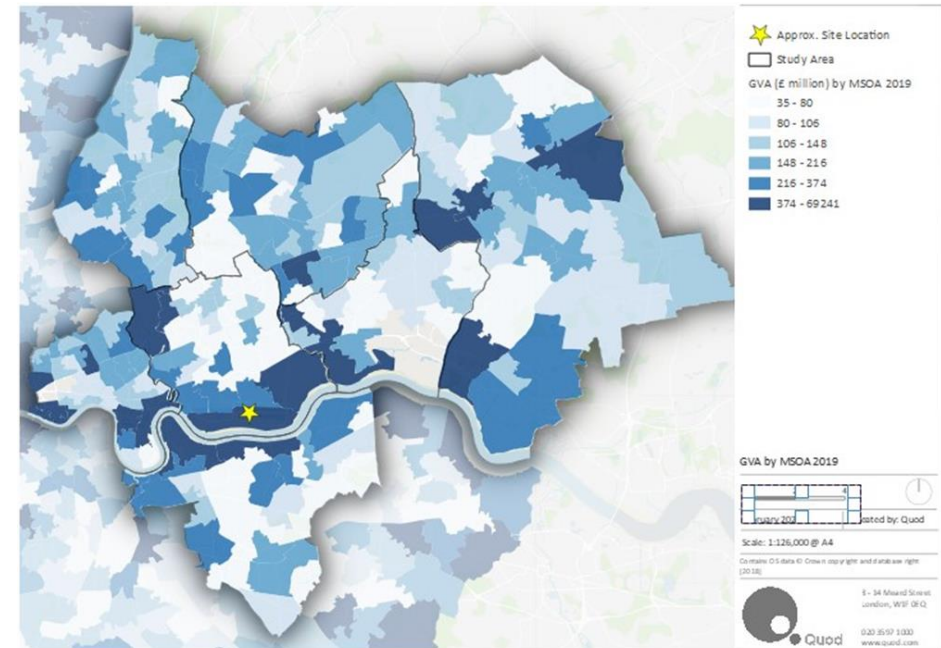


Figure 4: Wider Study Area GVA 2019

² Ranked 2nd, 7th, 15th, 19th and 20th respectively

REPORT OF INITIAL FINDINGS OF ENVIRONMENTAL ASSESSMENT

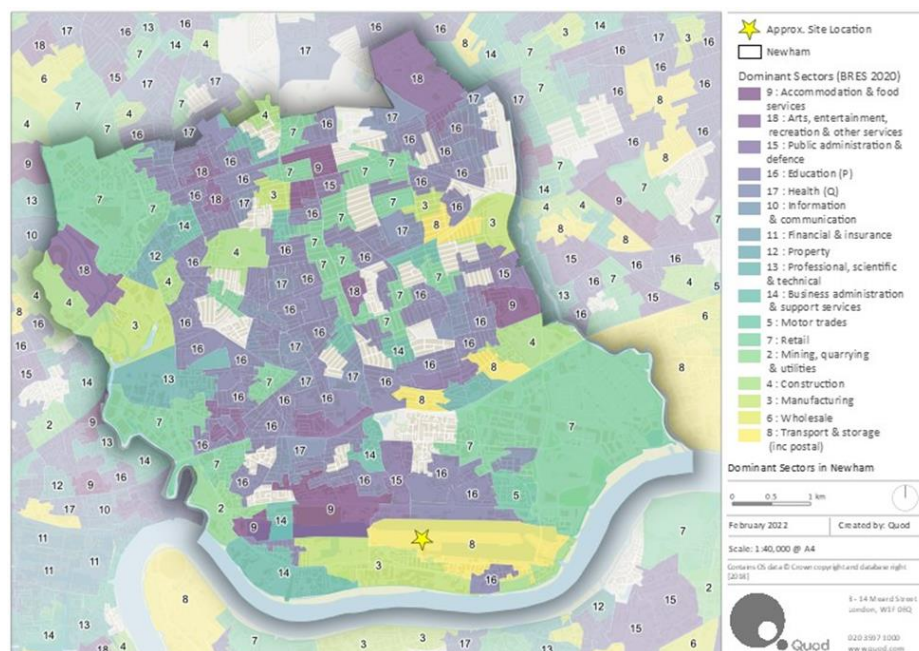


Figure 5: Largest Sector at Local Level

The retail, education, and business administration and support services are all significant across East London, but slightly smaller than the health and professional, scientific and technical sectors, both of which have also grown more quickly.

Table 2: Jobs Growth 2009-2022 by Sector

Employment Sector	2009	2020	% Change	Change
1 : Agriculture, forestry & fishing (A)	170	190	11.8%	20
2 : Mining, quarrying & utilities (B,D and E)	3,575	6,450	80.4%	2,875
3 : Manufacturing (C)	27,250	21,500	-21.1%	-5,750
4 : Construction (F)	27,250	36,000	32.1%	8,750
5 : Motor trades (Part G)	7,900	6,150	-22.2%	-1,750
6 : Wholesale (Part G)	19,000	25,750	35.5%	6,750
7 : Retail (Part G)	54,500	75,000	37.6%	20,500
8 : Transport & storage (inc postal) (H)	28,500	42,000	47.4%	13,500
9 : Accommodation & food services (I)	32,250	52,000	61.2%	19,750
10 : Information & communication (J)	29,450	53,000	80.0%	23,550
11 : Financial & insurance (K)	73,650	76,500	3.9%	2,850
12 : Property (L)	13,750	18,650	35.6%	4,900
13 : Professional, scientific & technical (M)	45,000	96,750	115.0%	51,750
14 : Business administration & support services (N)	60,500	83,000	37.2%	22,500
15 : Public administration & defence (O)	31,250	40,000	28.0%	8,750
16 : Education (P)	62,000	77,000	24.2%	15,000
17 : Health (Q)	72,000	104,000	44.4%	32,000
18 : Arts, entertainment, recreation & other services (R,S,T and U)	26,000	30,250	16.3%	4,250
Total	613,995	844,190	37.5%	230,195

Existing Initiatives at the Airport

London City Airport is a committed neighbour and has supported the local community through a variety of different ways including community investment, educational programmes, volunteering, and sponsorships. With regards to education and volunteering initiatives, these include:

- London City Helpers Programme launched in 2020
- Youth Mentoring Programme launched 2021
- Air and Space Training Institute (IASTI) partnership
- Science, technology, engineering and maths (STEM) in aviation
- Women in aviation
- Volunteering through '12 days of Giving' and 'Volunteering fortnight'
- Updated Volunteering Policy to include 2 days of volunteering for all airport staff to be launched summer/autumn 2022

The London City Helpers programme, delivered in partnership with the East London Business Alliance (ELBA) and with support from other community partners, provides bespoke engagement activities in the community to tackle unemployment and address inequality, raise the aspiration of disadvantaged young people and support the mental health and wellbeing of residents in Newham and across East London. A bespoke mentoring scheme has also been launched to raise young people's aspirations and support their mental health and wellbeing. In partnership with 15BillionEBP, volunteers from the airport have been mentoring Newham school students at risk of becoming not in education, employment or training (NEET) due to the impact of the pandemic, via online/face to face workshops and other engagement activities aimed at fostering resilience and motivation and breaking the cycle of deprivation and low attainment. The programme has supported 15 students since September 2021, which will recommence in July 2022.

The airport launched its flagship programme, STEM in Aviation, at an event in 2016 with the aim to inspire the next generation of innovators and entrepreneurs in the advancements that are shaping the aviation industry – from sustainable fuels to Artificial Intelligence (AI). There continues to be a

complex challenge in encouraging the education pipeline to produce enough people with the right STEM skills for aviation and many other sectors. The airport has worked in partnership with Excel and a range of STEM and aviation companies including NATS, Bechtel, Accenture, British Airways, BAM Nuttall, and Wideroe who hosted sessions for the pupils, showcasing how important STEM-based skills are to the future of the sector. The STEM event has reached over 1,100 students and 73 schools in East London since launching and will host the event again in 2022 since the pause of the programme due to the pandemic.

Improving the gender balance of the aviation industry is a priority for the industry and policymakers, with the DfT's Aviation 2050 green paper setting out that more needs to be done to tackle the gender associations in certain roles. This led to London City Airport launching its 'Women in Aviation' Programme to help guide more women into the Aviation industry, by learning more about it and exciting them of the prospects within the industry. This programme, delivered by charity partner 15billionebp, is part of the airport's wider agenda to create a better gender balance across the business, and show how the sector offers an attractive career path for young women, including those from BAME communities. To-date this programme has enabled 600 young women to get an insight into the aviation industry and spark an interest in aviation roles.

The airport launched its Community Fund in May 2019 and have awarded Grants totalling more than £270k to 90+ local charities and not-for-profit organisations. This Fund builds on the success of the 30th anniversary £30K Community Fund, where 15 recipients received grants up to £3,000. In response to the COVID-19 pandemic, the airport also provided an additional £50,000 to help nine foodbanks across Newham, Greenwich, Tower Hamlets and Barking & Dagenham, which play a critical role in getting essential supplies to vulnerable people and families.

The airport met its commitments to roll out the London Living Wage from July 2019 to key direct suppliers, following accreditation to this scheme in March 2019. It is also an early adopter of the Mayor of London's Good Work Standard, becoming the first UK airport to achieve both milestones.

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The wide range of community, education and employment initiatives is summarised in Figure 6 below:

London City Airport - Employment Strategy

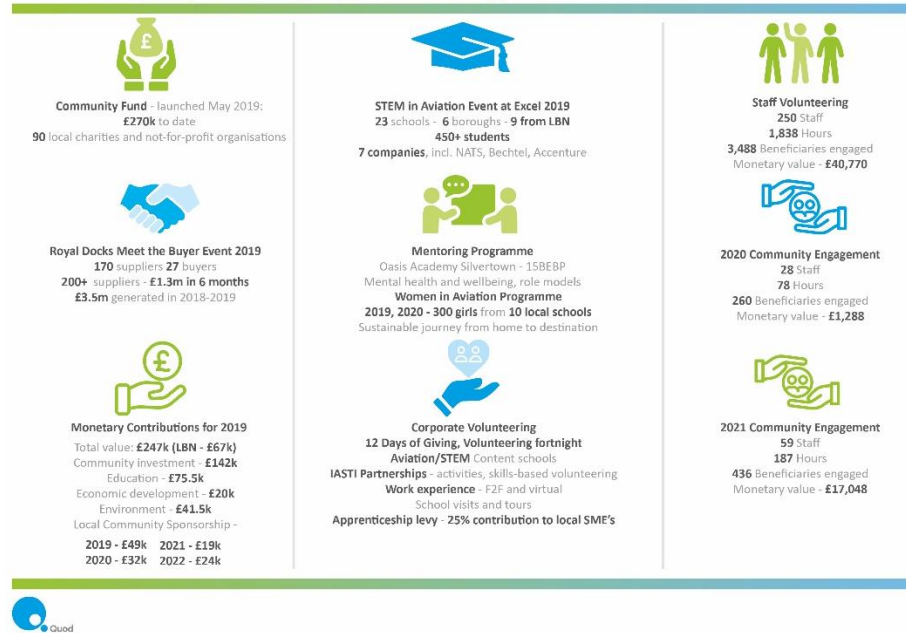


Figure 6: London City Airport Community and Employment Initiatives

Policy Context

The Covid-19 pandemic has placed a premium on initiatives aimed at stimulating recovery in the UK economy. The principles of this were set out in 'Build Back Better' supporting the vision for a Global Britain. The need for aviation connectivity is founded in the Government's priorities for economic growth as articulated in Build Back Better: Our Plan for Growth (2021): Development of infrastructure is seen one of the three key pillars of Build Back Better:

"High quality infrastructure is crucial for economic growth, boosting productivity and competitiveness. More than this, it is at the centre of

*our communities. Infrastructure helps connect people to each other, people to businesses, and businesses to markets, forming a foundation for economic activity and community prosperity. Well-developed transport networks allow businesses to grow and expand, enabling them to extend supply chains, deepen labour and product markets, collaborate, innovate and attract inward investment."*ⁱⁱ

Aviation connectivity has long been recognised as a key driver of economic growth through:

- direct, indirect and induced employment and GVA through their operations;
- acting as a stimulus to FDI and trade;
- supporting the labour markets by attracting talented individuals and supporting lifestyle choices;
- delivering productivity and agglomeration benefits; and
- supporting tourism.

Levelling up is a key part of the Government's Build Back Better strategy. Levelling up is not just about the regions but improving the economic prospects and productivity of all underperforming parts of the country. The Levelling Up White Paper recognises that disparities in the performance of areas within cities can be just as great as disparities between regions and seeks to address economic underperformance wherever it arises:

*"Even in high productivity cities, such as London, there are areas with low productivity"*ⁱⁱⁱ

East London is a priority area for levelling up:

- Four local authorities are in the highest priority category for levelling up (Newham, Barking & Dagenham, Hackney and Waltham Forest) and three in priority 2 (Havering, Redbridge and Tower Hamlets);
- East London is a higher priority now than last year (four of the seven authorities have moved up in priority);

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- The high priority is driven primarily by unemployment/lack of jobs – five of the seven authorities are in the top 20 for highest unemployment; and
- The Government has backed this with money - £40m for Newham and £10m for Tower Hamlets in Round 1 of the Levelling Up Fund.

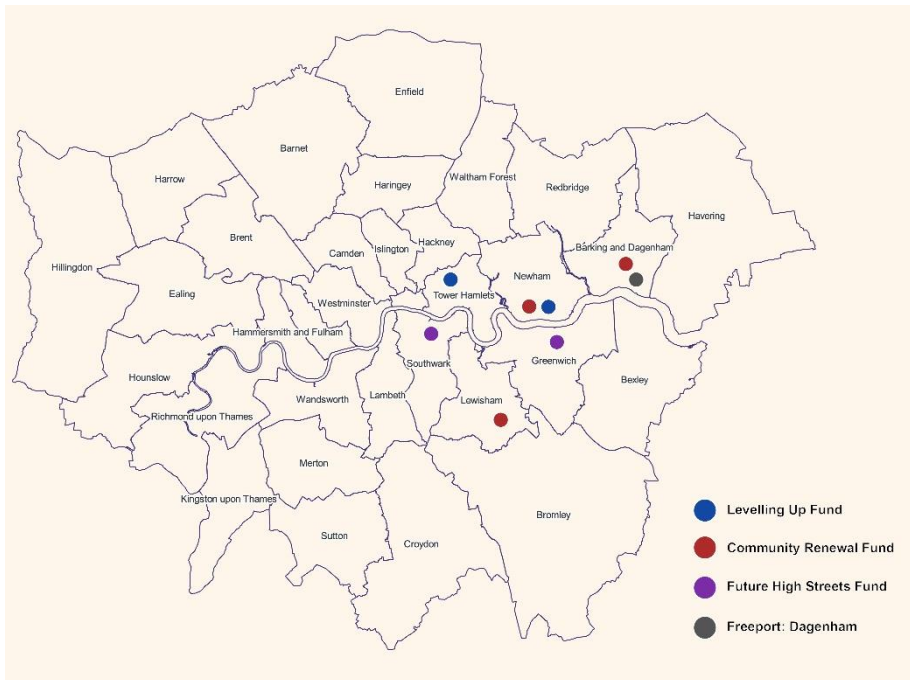


Figure 7: Levelling Up Interventions in East London

London City Airport has an important role to play in delivering aviation connectivity vital to supporting the growth in areas of London that need to grow and deliver improved productivity. The growth of the airport will contribute directly to levelling up through the employment and income that it brings to the local area and also by providing more local air connections making the area more attractive for investment and driving productivity growth. Enhanced local air connections will also contribute to attracting talented individuals to live

locally so enhancing the local talent pool to support innovation and growth more generally.

As noted in Chapter 3, the Newham Local Plan was adopted on 10 December 2018. The airport is allocated as an 'Employment Hub' (ref. E11) for visitor economy, business and logistics within the Newham Local Plan, which states that proposals will be supported if they address the spatial strategy which seeks to focus attractions and facilities at employment hubs (which includes the airport). The Plan notes that the airport is a major employer and catalyst for investment that supports London's international role.

In relation to the Royal Docks area, the Plan states that the airport will continue to perform an important role in the area's international business and visitor connectivity and as the focus to an employment hub. More recently, in February 2022, the Mayor of London consulted on the Royal Docks and Beckton Opportunity Area Planning Framework. This recognised London City Airport as one of the key "anchor economic assets", which are of regional and international importance (section 1.1). The framework relies, to an extent, on leveraging the value of these assets, including the airport, to secure growth.

In terms of realising the economic potential of the Opportunity Area, the airport is clearly shown as positioned at the heart of a global enterprise and innovation district, "building on its existing international connections" to attract more creative and innovation businesses and foreign owned enterprises to the area. This will require enhancement of the international connectivity that the airport can offer.

Potential Effects of Proposed Amendments

In 2019, there were 2,300 people employed on-site at the airport or 2,060 full-time equivalent (FTE) jobs. This direct on-site employment contributed over £170 million in gross value added (GVA) to the local economy. Although there has been some reduction in employment during the pandemic, the number of people employed at the airport is expected to recover to pre-pandemic levels as demand recovers.

The operation of the airport also supported additional economic activity in the area through its supply chain and secondary rounds of spending, which

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supported a further 730 FTE jobs in the local study area³ or 1,190 FTE jobs across London. In turn, these jobs contributed an additional £75 million and £130 million of GVA to the study area or London economy respectively.

Estimates of future employment have been prepared based on the airport expanding to handle 9 mppa by around 2031 in the Development Case (DC). These can be compared to those if the airport was constrained to handling 6.5 mppa based on its CADP consent in the without development (DM case). The estimates of direct and indirect/induced employment (on a full-time equivalent basis), and GVA with and without development in the study area are shown in Figures 8 and 9 below.



Figure 8: Predicted Employment in Study Area, with and without development

³ The study area is the same as the 'Local Area' defined in the current S106 Agreement, namely the London Boroughs of Barking and Dagenham, Bexley, Greenwich, Hackney, Havering,

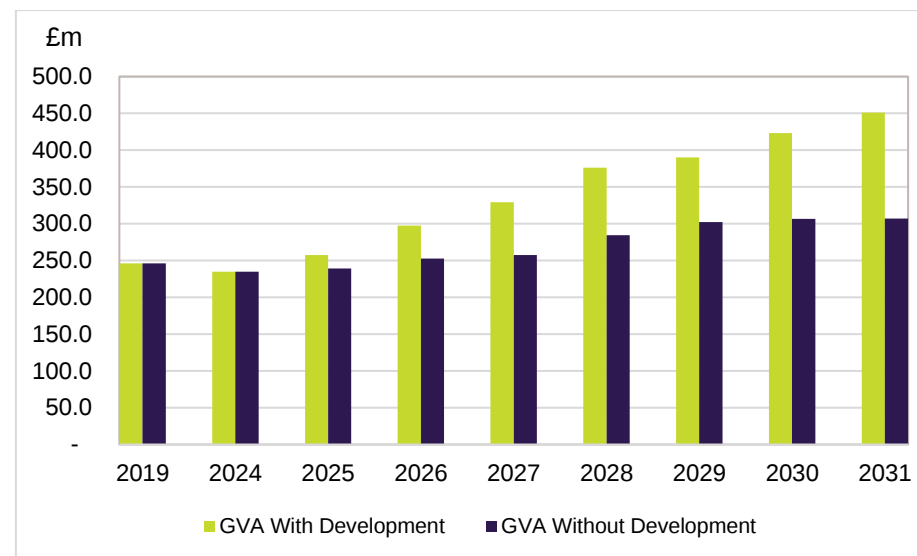


Figure 9: Predicted GVA in Study Area, with and without development

The ES supporting the forthcoming application will set out further analysis of the wider economic benefits that growth of the airport to 9 mppa will bring including:

- the impact on inward investment and location decisions;
- trade effects;
- business productivity effects;
- socio-economic welfare effects, including journey time savings; and
- overseas tourism spend (business and leisure) in the local area.

Lewisham, Newham, Redbridge, Southwark, Tower Hamlets, and Waltham Forest, as well as the District of Epping Forest

Potential Future Benefits & Enhancements

The proposals would allow the airport to increase direct on-site employment by over 1,150 full-time equivalent (FTE) jobs. That could translate into an additional 1,250 workers on-site given shifts and part-time working etc. An additional 850 jobs (750 FTEs) will be created across London, of which the majority will be within in the local study area, through the airport's supply chain and through secondary rounds of spending.

Assuming that the current local employment targets remain in place that could provide around 40% of these FTE jobs (533) for Newham residents and up to 70% (860) in the Local Area. Around half the jobs will be entry level and suitable for those returning to work requiring relatively few pre-existing skills whilst other jobs will more highly skilled; both being supported by the airport's 'Take off to Work' programme and other training initiatives.

London City Airport will work with local training providers to help match residents with the chance to gain new skills and then work at the airport. Newham College has a range of courses including customer services and retail as well as specific aviation-related courses including for cabin crew, travel and tourism and aviation operations.

For higher level aviation jobs (for both new and existing staff who want to upskill), the airport has a partnership with the International Air and Space Training Institute (IASTI) and the London Design & Engineering University Technical College. This offers training for Ground Operations and Aircraft Maintenance.

The airport is also proposing a much larger Community Fund that will grow as passenger numbers increase so that local residents benefit from that growth. The airport will consult its neighbours on how it is spent, but it is expected that it will continue to support:

- Building stronger, safer and healthier communities;
- Creating more sustainable and greener communities;
- Raising aspirations of East Londoners; and
- Creating pathways into employment.

Surface Transport

Baseline Context

London City Airport is the UK's best performing airport for sustainable transport use. Since the opening of the airport's DLR station in 2005, it has developed a reputation for offering a quick and reliable passenger experience and has the highest public transport use amongst passengers of any UK airport, with only 9% arriving by private car. The current Airport Surface Access Strategy sets ambitious short-term targets to achieve 75% of passenger journeys by public and other sustainable transport modes and fewer than 40% of staff travelling by single occupancy car by 2025. This is supported by the Travel Plan which is currently being updated and which will include targets for managing the impacts of the airport's staff and passengers on the local road network.

Docklands Light Railway

The airport has its own Docklands Light Railway (DLR) station. This station has step-free access and provides direct connections to/from the City, Stratford and Woolwich. 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.

Passengers can get from the DLR to their gate in 20 minutes and from aircraft to DLR in 15 minutes. This speedy and efficient service is an important part of the airport's ongoing passenger proposition.

As part of the Section 106 Agreement associated with the 2016 CADP planning permission, financial contributions totalling over £5M were paid to Transport for London (TfL) in 2017 towards the purchase additional DLR rolling stock and to enhance services.

Separate to the forthcoming S73 planning application, the airport has outlined in its 2020 Master Plan, future requirements for TfL to implement earlier starting times of DLR services to help staff and passengers access the airport in the early morning.

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Buses

TfL operate two regular bus services, both of which stop in the airport forecourt. Figure 10 shows the current bus routes:

- Route 474 operates between Canning Town and Manor Park on a 24/7 basis at frequencies of up to 5 buses per hour in each direction. From May 2022, Route 474 has been diverted to provide a direct link between London City Airport and Custom House station to coincide with the opening of the Elizabeth Line, with an advertised travel time of 7 minutes; and
- Route 473 operates between Stratford and North Woolwich every day, from early morning until beyond midnight at frequencies of up to 5 buses per hour in each direction.

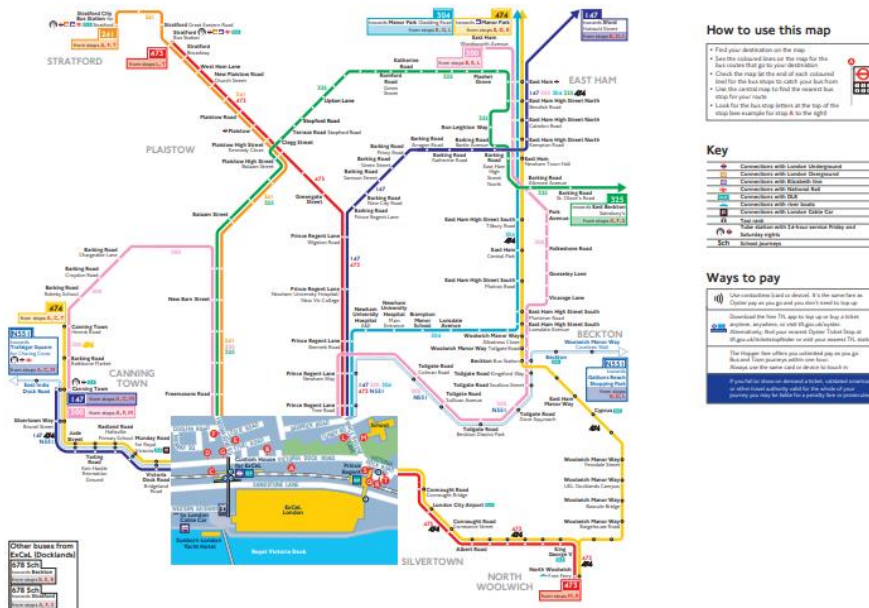


Figure 10: Current Bus Routes

Unrelated to the proposed S73 planning application, it is understood that TfL will also be enhancing bus services to/from the airport from south of the River

Thames following opening of the Silvertown Tunnel in 2025, as illustrated in 11.

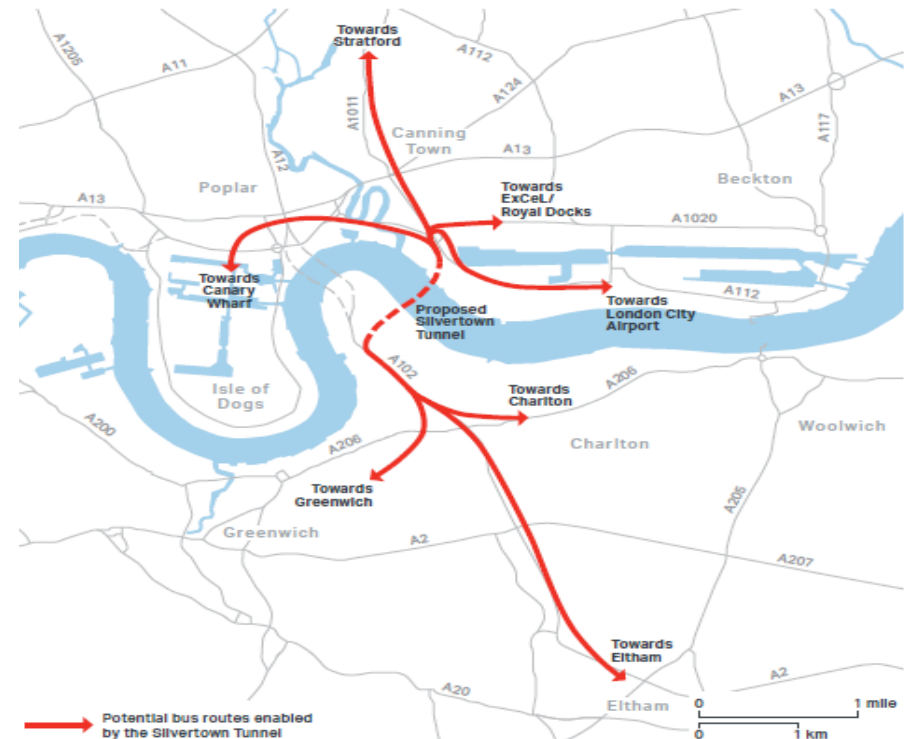


Figure 11: Silvertown Tunnel – Potential New Bus Routes (Source 2018 Mayor's Transport Strategy)

Elizabeth Line

The Elizabeth Line commenced operation in May 2022, with frequent trains operating between Abbey Wood and Paddington and serving Custom House station which is located some 2.5km northwest of the airport. Once the line is fully operational, there will be a train every 5 minutes in each direction at Custom House, linking destinations as far west as Reading and Heathrow.

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There are clear opportunities for encouraging public transport travel via the Elizabeth Line either via Stratford and the DLR or via Custom House and a bus link. Initial discussions with TfL have been held around the principle of promoting the latter link either through planned new bus services or via a dedicated shuttle bus service in combination with wayfinding and publicity/promotion of the station as a key surface access point for the airport.

Figure 12 shows the public transport population catchments of the airport after the opening of the Elizabeth Line. With the opening of the Elizabeth Line, 6.1 million residents will be within a one-hour public transport journey of the airport compared with 5.8 million residents previously, i.e. a 5% increase in catchment.

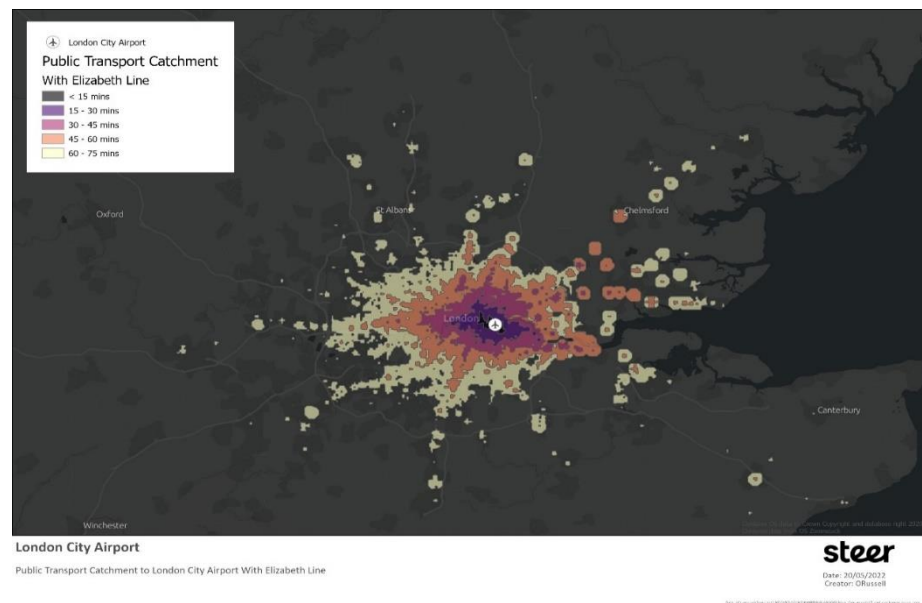


Figure 12: Public Transport Catchments after opening of Elizabeth Line (AM Peak Period – 0700 to 1000 hours)

Highways

The airport is accessed from the west via Hartmann Road. Hartmann Road connects with the A112 Connaught Road at a traffic signal junction.

As part of the permitted CADP scheme, Hartmann Road will be opened up at its eastern end to connect with the already constructed traffic signal junction at the A117 Albert Road and Fishguard Way. It will remain a private road but following its opening under the terms of the CADP Section 106 Agreement there will be permitted access for the public, TfL buses and taxis.

The 2022 consultation document on the draft Royal Docks and Beckton Opportunity Area Framework (OAPF) has identified that the highway network surrounding the airport currently operates without any significant capacity constraints. It is also located within the Ultra Low Emission Zone (ULEZ).

TfL are in the process of constructing the Silvertown Tunnel. This will remove the congestion caused at the current Blackwall Tunnel and will open in 2025.

Figure 13 shows the population catchments of the airport by road after the opening of the Silvertown Tunnel. With the opening of the Silvertown Tunnel, 9.9 million residents will be within a one-hour drive time of the airport compared with 9.7 million residents previously, i.e. a 2% catchment increase.

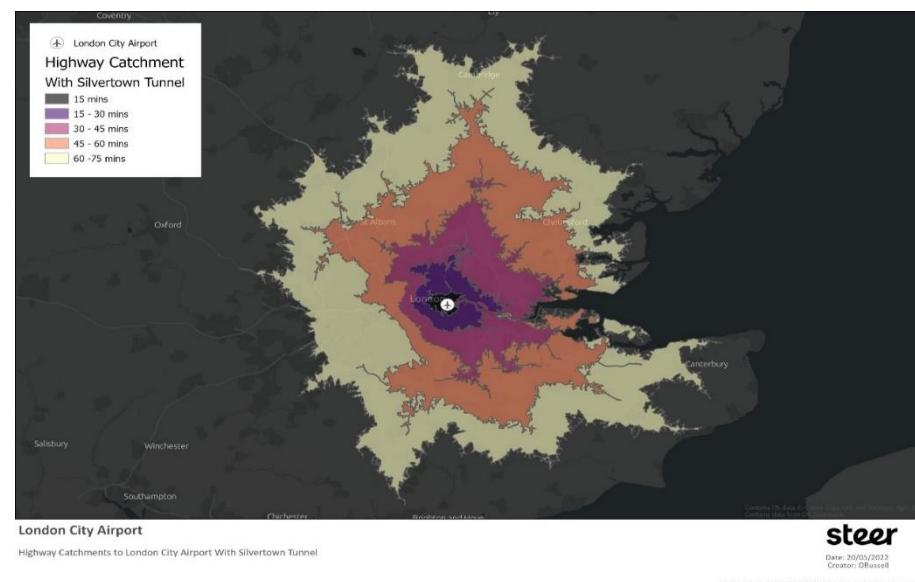


Figure 13: Driving Catchment after opening of Silvertown Tunnel (AM Peak Period – 0700 to 1000 hours)

Pedestrians and Cyclists

Roads in the vicinity of the airport are provided with footways and cycle facilities. Nevertheless, the draft Royal Docks and Beckton OAPF highlights the need for further enhancements to encourage walking and cycling within the area.

Active Travel Zone Assessments are taking place to identify the walking and cycling improvements which would be of most benefit to staff and passengers accessing the airport.

Parking

The airport currently has 974 car parking spaces and has plans to increase provision up to 1,251 car parking spaces as part of the CADP1 build out. Passengers pay for car parking and staff are required to apply for permits to park at the airport.

Parking is also provided for motorcycles and cycles. As part of the CADP1 planning permission, it is proposed to increase the amount of motorcycle parking to 22 spaces and the amount of cycle parking to 70 spaces.

Drop-Off

The airport has an operational forecourt which makes provision for black taxis, private hire vehicles and private pick-up/drop-off. This is supplemented by a black taxi park located further east on Hartmann Road.

The forecourt will be enhanced as part of the existing CADP1 permission and further minor enhancements are proposed as part of the forthcoming S73 planning application.

Policy Context

The following policy documents are relevant to surface transport to/from London City Airport:

- National Planning Policy Framework (2021);
- London Plan (March 2021);

- Mayor's Transport Strategy (March 2018); and
- Newham Local Plan (December 2018).

A common theme of the national, London and Newham policy documents is the encouragement of access to take place by sustainable transport modes, such as walking, cycling and public transport and by low-emission vehicles.

Policies of particular relevance to this project include:

- London Plan Policy T4 (Assessing and mitigating transport impacts), which requires development proposals to provide mitigation against any adverse transport impacts of new development;
- London Plan Policy T8 (Aviation), which requires airport operators to work with TfL and other transport providers to increase the proportion of trips undertaken by sustainable modes. This is supported by the more general aims of National Planning Policy Framework paragraph 112, which seeks to prioritise the use of sustainable modes;
- Mayor's Transport Strategy Policy 1, which seeks to reduce Londoner's dependency on cars in favour of active, efficient and sustainable modes with the central aim of 80% of all trips in London to be made on foot, by cycle or using public transport by 2041. Although not directly quoted in the policy, the Mayor sets a target of 83% of trips within Newham to be made on foot, by cycle or using public transport by 2041, with LBN required to provide annual reports on progress towards reaching this target;
- Newham Local Plan Policy INF1 (Strategic Transport), which includes support for proposals which encourage the use of sustainable transport modes and optimise the use of existing airport capacity; and
- Newham Local Plan Policy INF2 (Sustainable Transport), which includes support for enhancements to local public transport services and pedestrian and cycle networks and greater management of parking.

Potential Effects of Proposed Amendments

Compared to the consented CADP1 scheme, the majority of the additional travel demand associated with the proposed amendments is expected to occur outside of the weekday morning and evening peak periods. During these periods, there is unused capacity on the surrounding public transport and highway networks.

By increasing the range of flights, particularly for leisure trips, it is expected that London City Airport will attract passengers who would otherwise drive to more distant airports. This will assist with reducing the average length of journeys to airports in the region.

Potential Future Benefits & Enhancements

The airport has set the target of increasing the proportion of passengers travelling to/from the airport by sustainable modes (as defined in the National Planning Policy Framework) to 80% by the time 9 mppa is achieved in the early 2030s.

Taking into account the opening of the Elizabeth Line and already proposed enhancements to local bus services, a greater proportion of passengers and staff are expected to travel by public transport in any case. Additional encouragement of public transport will be assisted through measures including potential further enhancements to bus services, enhancements to bus stops and enhanced wayfinding.

In consultation with the London Borough of Newham (LBN) and TfL, it is proposed to review local transport priorities, particularly focussing upon walking and cycling, to complement proposals being advanced by LBN and TfL. The details of the measures to be funded by the airport will be determined from the Active Travel Zone Assessment.

No further car parking is proposed above that already consented under CADP, which will help constrain the number of car trips to/from the airport. In addition, it is proposed to enhance facilities to encourage the use of low or zero emission vehicles, including the ongoing roll-out of further electric vehicle charging points.

The Airport Travel Plan is being updated to further encourage passengers and staff to use sustainable travel modes. The updated Travel Plan will include detailed measures which are expected to include the provision of enhanced cycle parking and facilities for electric vehicle charging.

Noise

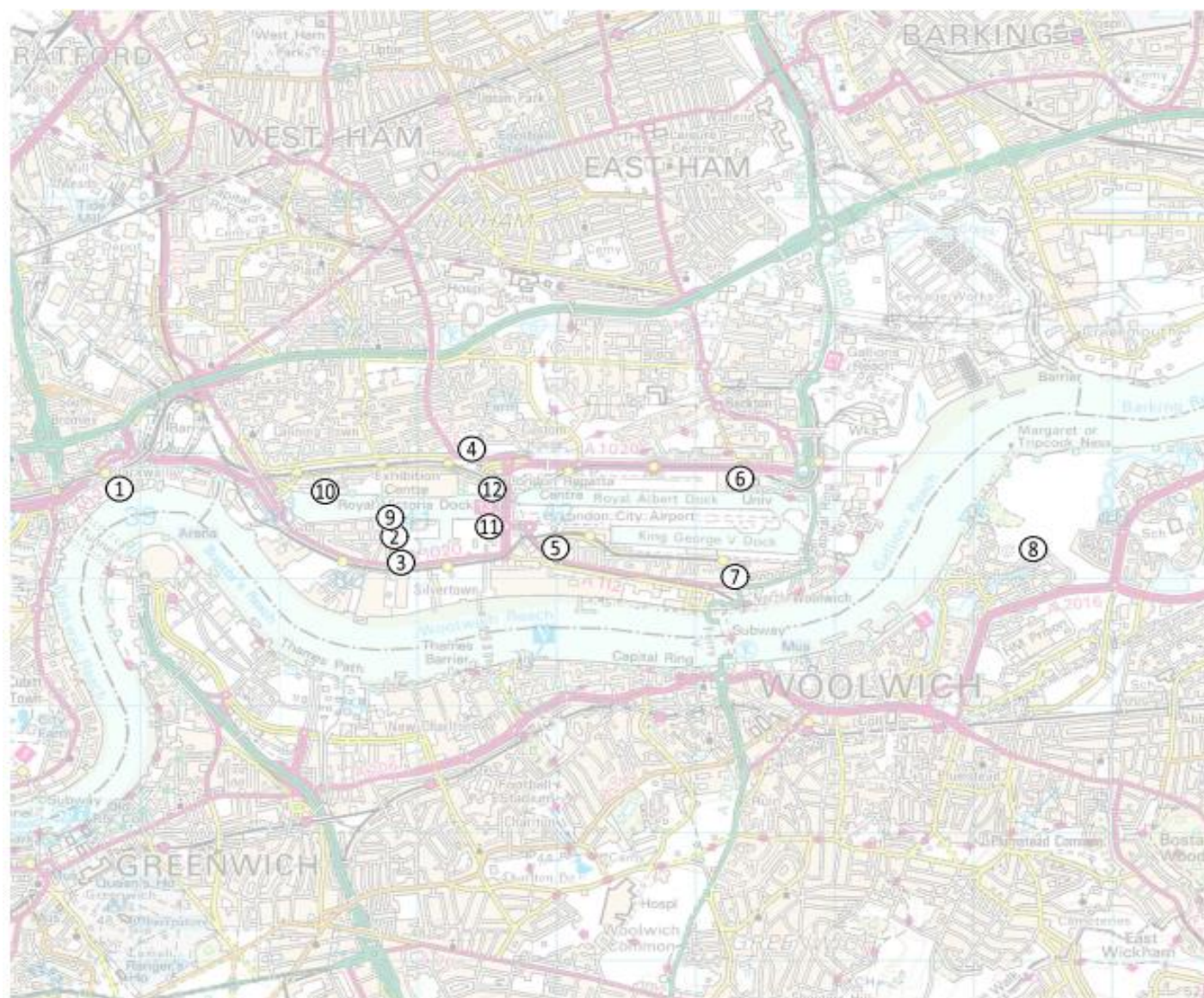
Baseline Context

Noise from aircraft landing and taking off from the runway (known as 'air noise') is the dominant source of noise from the airport and therefore the main focus of any assessment. The total air noise to which local communities are exposed over a given period depends on the noise emitted by individual aircraft and the total number of aircraft movements (arrivals and departures) in that period. The most commonly used method of portraying aircraft noise impact in the UK is the L_{Aeq} noise exposure contour. Noise exposure contours comprise a set of closed lines on a map and each contour shows places where people get the same amount of noise from aircraft, measured using the L_{Aeq} metric and expressed in a unit called dB which stands for 'decibel'.

Noise exposure is generally used to indicate the noise environment averaged over a time interval. For London City Airport, activity has generally been assessed for the whole operating period, which is from 06:30 to 22:30. Consistent with other UK airports, noise contours are produced for the 92-day summer period (16th June to 15th September) as this is normally the busiest period of the year and therefore represents a worst case.

Due to the fact that air traffic at the airport was severely impacted by the Covid-19 pandemic throughout 2020 and 2021, air noise data from the 92-day summer period for 2019 has been used to represent the baseline for the noise assessment. Various noise data from this year is summarised in Table 3 below, with the location-specific noise receptors shown in Figure 14. The 57dB L_{Aeq} noise contour for this baseline year is also shown as a black line on the future predicted noise contours provided at Figures 16 to 18 (see later).

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LEGEND:

(X) Assessment Location

REVISIONS

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London City Airport
Extended Operating Hours

Air Noise Assessment Locations

DRAWN: DR CHECKED: DC

DATE: May 2022 SCALE: 1:40000@A4

FIGURE No:

A11407_02_DR019_1.0

Figure 14: Air Noise Assessment Locations

Table 3: Summary of Noise Data and Population Exposure for 2019 Baseline Year

2019 Summer Daytime Noise				
Noise Contour, dB L _{Aeq,16h}	Area, km ²	Population ^[1]	Specific Locations	Noise Level, dB L _{Aeq,16h}
54	14.2	90,500	(1) Blackwall / A1261	59
57	8.0	37,400	(2) Britannia Village	64
60	4.2	14,400	(3) Silvertown / A1020	61
63	2.1	3,550	(4) Custom House	59
66	1.1	600	(5) Camel Road	65
69	0.6	0	(6) Royal Albert Dock (north)	63
			(7) North Woolwich (north)	59
			(8) Thamesmead	60
			(9) Eastern Quay Apts, Britannia Village	65
			(10) Coral Apts, Western Gateway	62
			(11) Silvertown Quays	68
			(12) Ramada Hotel	65

Existing Noise Controls at the Airport

The airport operates in a manner that seeks to minimise the impact of noise emissions on the local community. This is achieved through a combination of physical noise control measures, such as the use of noise barriers and also soundproofing to dwellings and community buildings; operational controls such as steep approaches and noise abatement procedures; and noise management measures including noise limits and incentives, noise monitoring and flight track monitoring. Some of the key noise controls include:

- a limit of 111,000 annual aircraft movements and separate daily and weekly movement limits;
- an 8-hour curfew on night flights;
- operating within a fixed noise contour envelope limit that is checked annually. This envelope relates to the 57 dB L_{Aeq,16h} noise contour and has an area limit of 9.1 km²;
- operating within a noise quota count annual budget, which is based on the noise performance of individual aircraft types. This scheme also ensures that no noisier aircraft than are currently allowed to operate will do so in future and was the first of its type in the UK for managing daytime noise;
- operating a comprehensive Sound Insulation Scheme (SIS) for residential dwellings and public buildings, with over 3,000 properties treated to date. The scheme has three tiers based on the 57 dB, 63 dB and 66 dB L_{Aeq,16h} contours. The tiered scheme ensures that those closest to the airport and most affected by noise receive a 100% grant for a high level of sound insulation treatment;
- requiring all landing aircraft to approach at a glide slope of 5.5 degrees. The normal approach angle adopted at most UK and international airports is 3 degrees. This ensures aircraft are kept higher for longer, reducing the noise impact on local communities under the arrival flight paths; and,
- operating an Incentives and Penalties Scheme to manage how aircraft fly day to day and encourage airlines to operate aircraft more quietly, by awarding credits to aircraft that are operated quietly and penalties to those that exceed the upper noise thresholds. The money from any penalties (£600 per dB

^[1] The populations have been determined using data supplied by CACI Ltd. This data is based on census information factored up to 2019 and consists of population by postcode.

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exceedance) is added to the Community Projects Fund. The noise thresholds are more stringent than any other UK scheme for daytime operations. Good performance is rewarded by publishing a league table each year.

These measures are supplemented by a comprehensive noise monitoring system which includes six fixed monitors and is supported by additional monitoring which can be placed in the community as required. Noise levels are available through the aircraft noise tracking system called Travis on the airport website. Each year the airport also publishes an annual report documenting their progress on managing aircraft noise impacts.

Policy Context

The Noise Policy Statement for England 2010 (NPSE) introduced the concept of Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL). The LOAEL is *“the level above which adverse effects on health and quality of life can be detected”*. For air noise, 51 dB $L_{Aeq,16h}$ has been set by Government as the LOAEL. The SOAEL is *“the level above which significant adverse effects on health and quality of life occur”*. For air noise, 63 dB $L_{Aeq,16h}$ is generally used as the SOAEL.

In the 2003 Air Transport White Paper, 57 dB $L_{Aeq,16h}$ was defined as marking the approximate onset of significant community annoyance, and this was reaffirmed in the Government’s 2013 Aviation Policy Framework (APF). Following the Survey of Noise Attitudes 2014: Aircraft (SoNA) the onset level is now considered to be at 54 dB $L_{Aeq,16h}$.

The APF describes 69 dB $L_{Aeq,16h}$ as the level at which the Government expects airports to offer people effected financial assistance with moving home and describes 63 dB $L_{Aeq,16h}$ as the level at which the government expects airports to offer acoustic insulation or other mitigation. The airport’s existing sound insulation scheme already extends down to 57 dB $L_{Aeq,16h}$.

In the Aviation 2050 consultation (2018) the Government consulted on a range of matters including whether to lower the threshold at which mitigation should be offered to 60 dB $L_{Aeq,16h}$. In 2019 the Government published a consultation

response, but this was limited to legislation for enforcing the development of airspace change proposals (ACPs) alongside an impact assessment.

Given the unprecedented challenges that the aviation sector has faced as a result of the coronavirus (Covid-19) pandemic, the Government has decided to not publish a further formal response to the remaining parts of the consultation. Instead, in May 2022, it published Flightpath to the Future (FtF), a strategic framework that builds upon the consultation responses received.

FtF classes noise as one of the localised impacts of aviation and references the new policy proposals in the Aviation 2050 consultation. However, no comment is made on whether any of those proposals will become policy. This may follow when the Government set out their next steps, which they have said they will do in 2022/23.

The relevance of absolute noise levels is summarised in the table below:

Table 4: Relevance of Absolute Noise Levels

Noise Level, dB $L_{Aeq,16h}$	Relevance	Existing Sound Insulation Scheme
51 dB	Lowest Observed Adverse Effect Level (LOAEL)	
54 dB	Onset of significant community annoyance	
57 dB		Tier 1
60 dB		
63 dB	Significant Observed Adverse Effect Level (SOAEL) and the level at which the government expects airports to offer acoustic insulation or other mitigation	Intermediate Tier
66 dB		Tier 2
69 dB	The level at which the government expects airports to offer people effected financial assistance with moving home.	

In addition to the absolute noise levels, the magnitude of any change in a noise level is also relevant to any impacts likely to be experienced. When it comes to changes in noise level, between the LOAEL and the SOAEL, a value of 3 dB

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is to be adopted as the threshold for a significant change. For receptors above the SOAEL, a lower value of 2 dB is to be adopted.

For those above the SOAEL, this is more stringent than the level applied in the EIA supporting the original CADP1 application, which required a change of at least 3 dB for them to be considered significant, irrespective of the noise level. It considered change of less than 2 dB of no significance and those from 2 to 3 dB of minor significance. This more stringent approach accords with advice in Planning Practice Guidance and was adopted in the recent Bristol Airport Inquiry.

The approach above is proposed for “air noise”, which refers to noise from aircraft that are either airborne or are landing or taking off on the airport’s runway. The approaches proposed for the other sources of noise, such as aircraft on the ground, generally follow a similar approach.

Potential Effects of Proposed Amendments

Air Noise

Summer daytime air noise contours have been produced for three years:

- 2025, the year that the airport is forecast to recover to pre-pandemic activity levels (at the latest).
- 2027, the year passengers are forecast to exceed the current limit of 6.5 million per year (the Transitional Year).
- 2031, the Principal Assessment Year when 111,000 annual aircraft movement cap is forecast to be reached and there are predicted to be 9.0 mppa.

For each year, noise contours have been prepared for the core forecasts of the Development Case (DC) and the Do Minimum (DM) scenario without the proposed amendments to the CADP1 permission. In the ES, consideration will also be given to the faster and slower growth forecasts, which are expected to result in slight variations in the size of the contours. This would ensure a realistic worst case scenario is given due consideration and accounted for in the ES.

The areas of the noise contours and the number of people they are forecast to contain are shown in the Tables 5 and 6, whilst Figure 15 provides a graphical representation of how the 57dB $L_{Aeq,16\text{ hr}}$ noise contour is predicted to change in size over time with and without the proposed amendments.

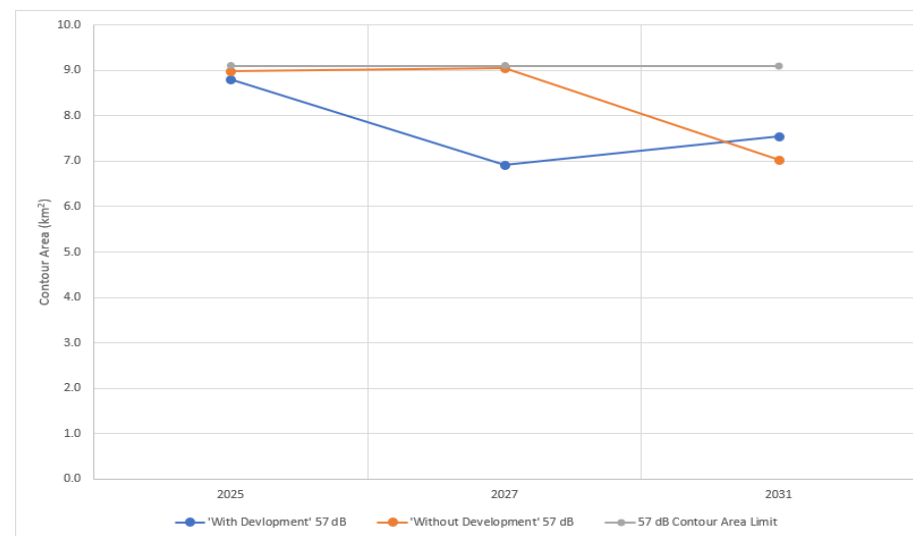


Figure 15: Predicted Changes in 57dB Summer Daytime Air Noise Contour Areas, With and Without Development

Table 5: Forecast Noise Contour Areas

Noise Contour, dB $L_{Aeq,16h}$	Summer Daytime Noise Contour Area, km ²					
	2025 DM	2025 DC	2027 DM	2027 DC	2031 DM	2031 DC
51	27.2	26.9	27.5	21.7	22.0	23.4
54	15.8	15.6	16.1	12.6	12.7	13.6
57	8.9	8.8	9.1	6.9	7.0	7.6
60	4.7	4.6	4.8	3.6	3.6	3.9
63	2.4	2.3	2.4	1.8	1.8	2.0
66	1.2	1.2	1.2	0.9	1.0	1.0
69	0.7	0.7	0.7	0.5	0.5	0.6

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Table 6: Forecast Number of People Exposed to Noise

Noise Contour, dB L _{Aeq,16h}	Population ⁴					
	2025 DM	2025 DC	2027 DM	2027 DC	2031 DM	2031 DC
51	201,000	198,650	202,800	151,000	156,050	161,250
54	114,100	111,550	115,400	81,000	82,750	88,200
57	51,450	49,450	52,000	34,700	36,500	40,950
60	18,450	18,300	18,750	13,300	13,900	15,350
63	5,050	4,700	5,250	2,150	2,300	2,650
66	800	650	800	650	650	650

These noise contours are plotted in Figures 16, 17 and 18 below, which compare the Do Minimum and Development Case 57 dB L_{Aeq,16h} noise contours for each year. The figures also show the actual noise contour for 2019 (as a black line) for reference.

All of the contours fit within the currently permitted 57 dB contour area limit of 9.1km².

Figure 16 illustrates that by 2025 the Development Case (DC) and Do Minimum (DM) contours are very similar in size and shape, although the DC contours are slightly smaller due to the early influence of airlines beginning to re-fleet with quieter new generation aircraft.

Figure 17 illustrates that in 2027 the noise contours are notably larger in the without development (DM) case than in the Development Case (DC). This is due to the rapid transition to quieter new generation aircraft which would be stimulated by the proposed amendments to the CADP1 planning permission. As such, the Development Case noise contour is smaller despite there being more aircraft movements by this time.

Figure 18 illustrates that by 2031, when an even greater proportion of the fleet is forecast to be quieter new generation aircraft in the Development Case, the

noise contour will be smaller in area than it was in the 2019 Baseline Year or predicted to be in 2025. This is despite the fact that there will be considerably more aircraft movements than in either of these two previous years. This phenomenon is also illustrated in the Figure 15.

The 2031 Development Case contour contains more people than the 2031 Do Minimum contour but remains below that forecast for 2025 – with 11,400 fewer people falling within the 57dB contour, as shown in Table 6 above.

By 2031 it is forecast that some re-fleeting will also have occurred in the without development/ Do Minimum case. Coupled with the fact that there will be curtailed growth in aircraft movements under this scenario, the 2031 Do Minimum contours are marginally smaller than the Development Case contours by this time.

In summary, the noise contour areas are forecast to reduce from 2025 onwards in Development Case due to the influence of airlines re-fleeting with quieter new generation aircraft such as new Embraer E195-E2. The noise contour areas are then forecast to increase between 2027 and 2031 but will remain below the 2025 areas. Without the proposed amendments, the area of the noise contours will reduce more slowly, due to the slower transition to new generation aircraft, albeit by 2031 the noise contours will be slightly smaller overall because of the curtailed number of aircraft movements at this time.

⁴ The populations have been determined using data supplied by CACI Ltd. This data is based on census information factored up to 2018 in the case of 2019, and 2021 for the future years, and consists of population by postcode.

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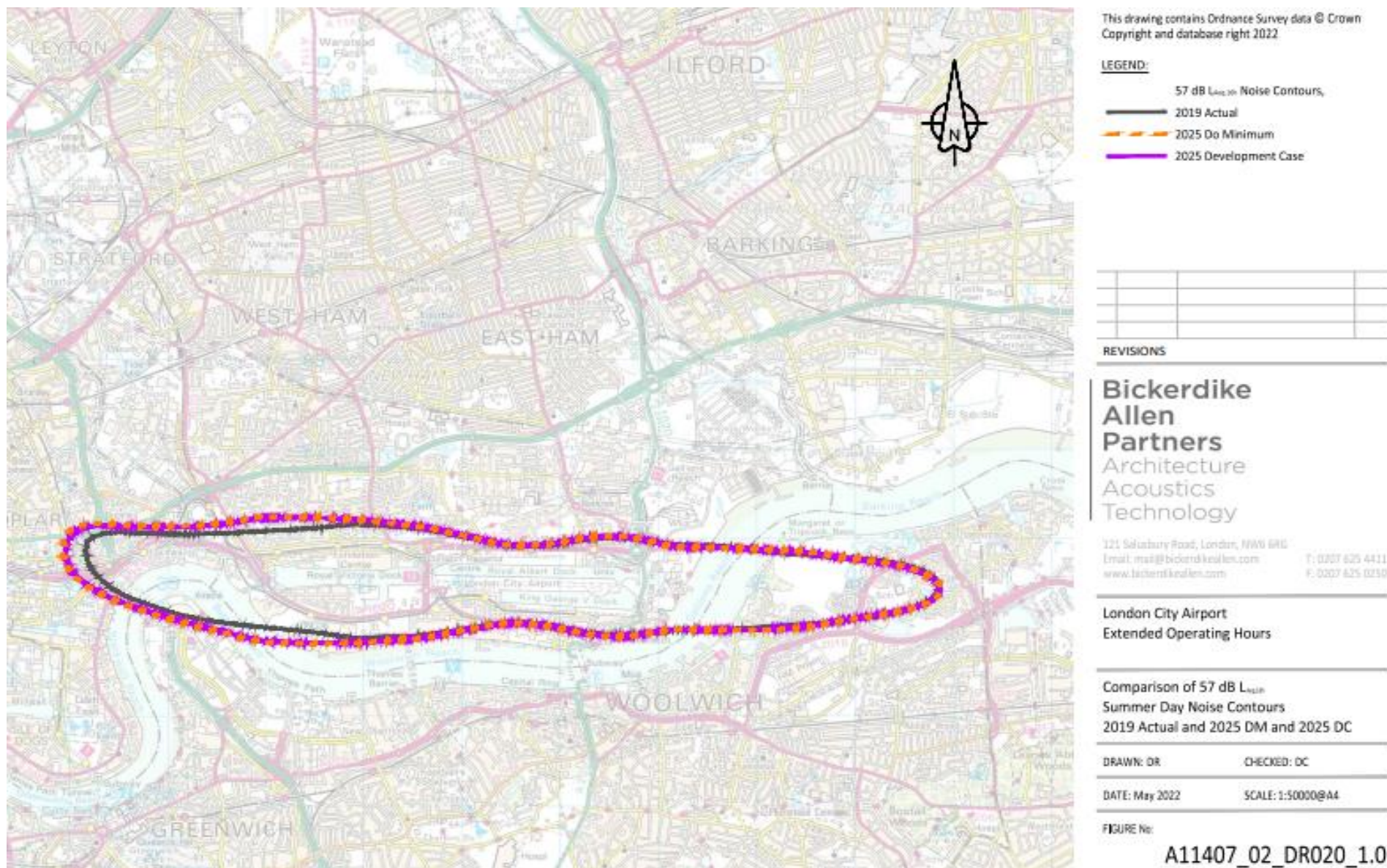


Figure 16: Comparison of 57dB L_{Aeq} Summer Day Noise Contours – 2019 Actual and 2025 DM and 2025 DC

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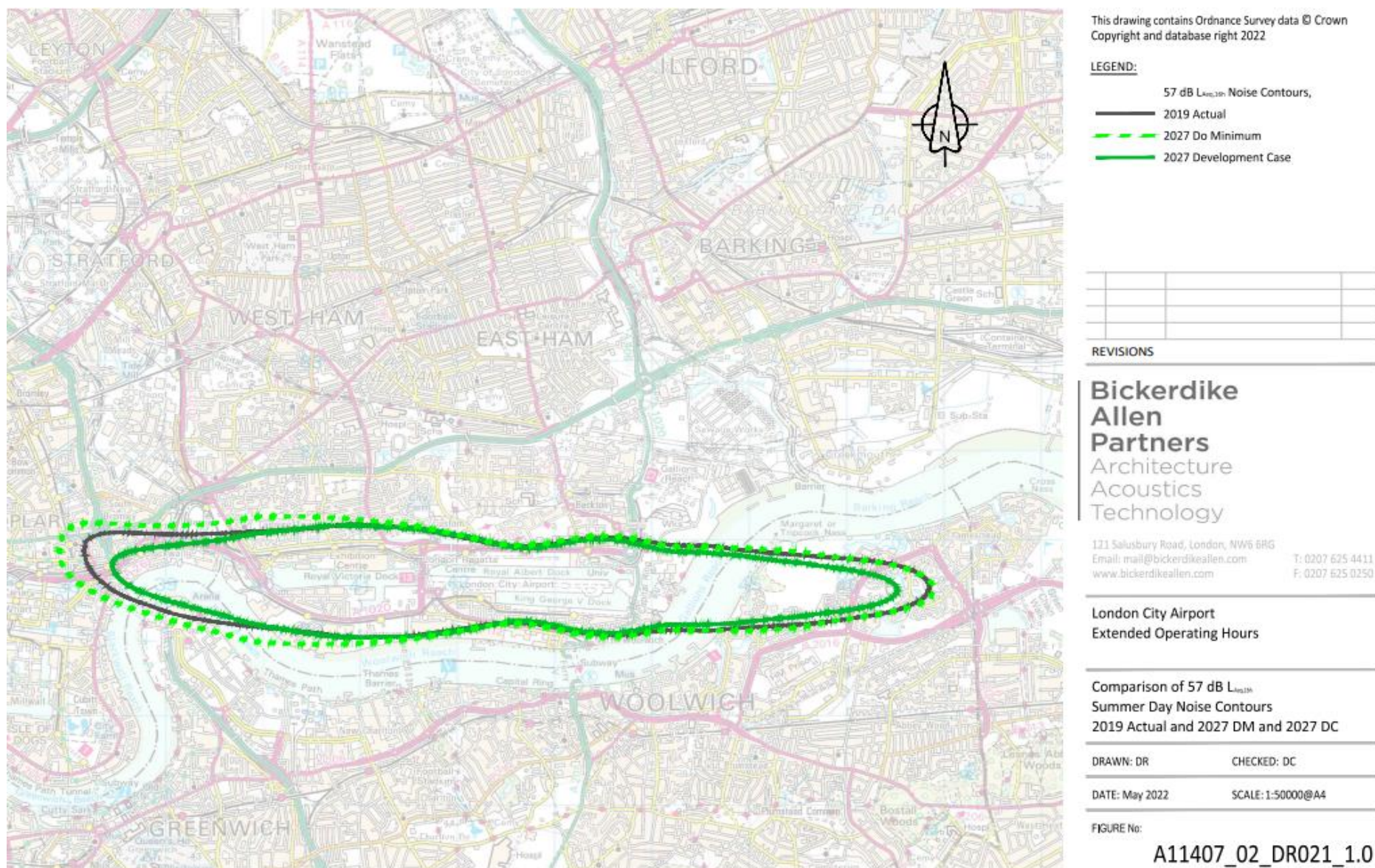


Figure 17: Comparison of 57dB LAeq Summer Day Noise Contours – 2019 Actual and 2027 DM and 2027 DC

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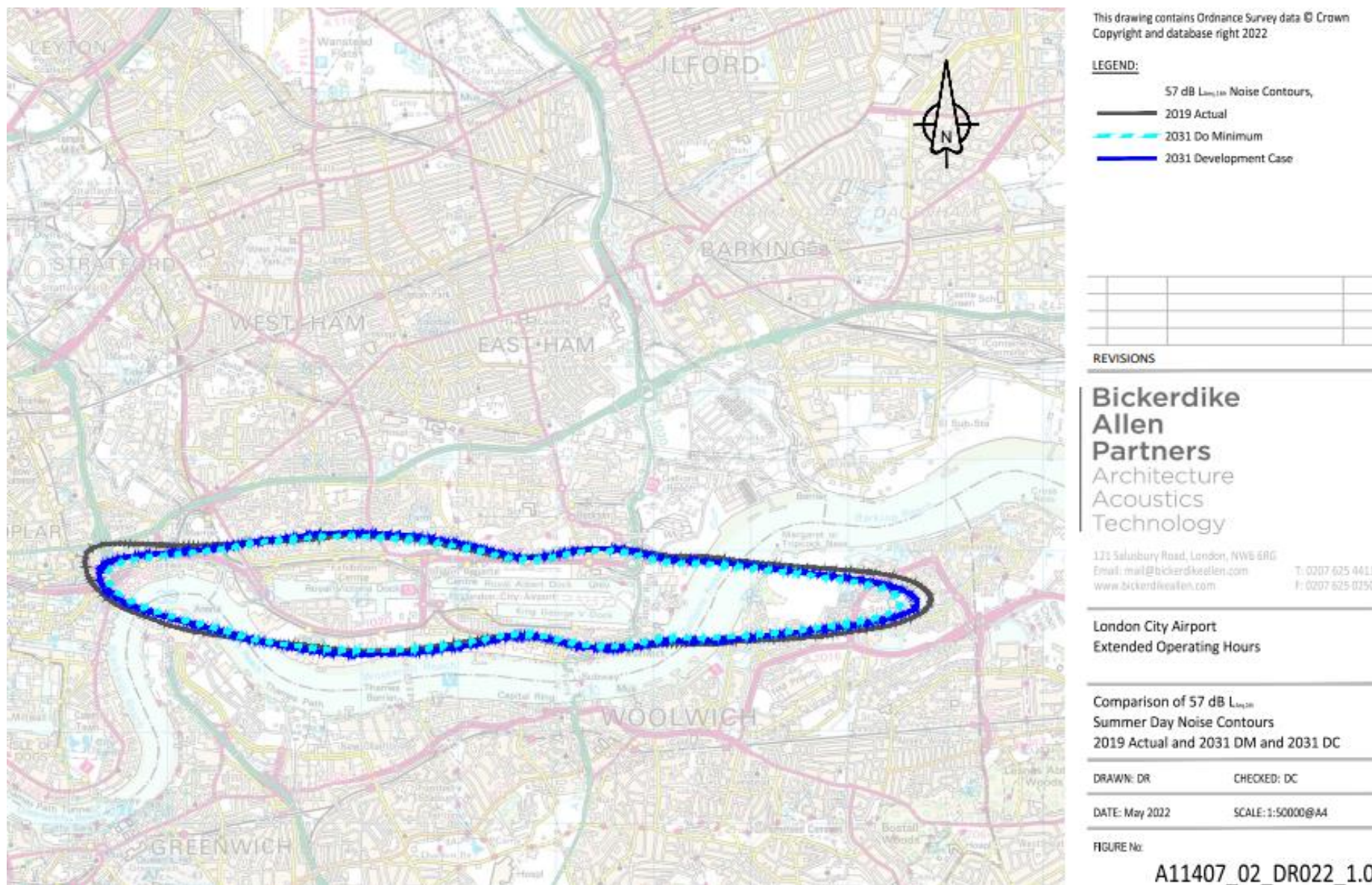


Figure 18: Comparison of 57dB LAeq Summer Day Noise Contours – 2019 Actual and 2031 DM and 2031 DC

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Location-specific Noise Predictions

To provide information on the forecast changes, noise levels have been predicted for a series of locations as shown on Figure 14 at the beginning of this section. These were the same locations as used during the CADP1 noise assessment.

As illustrated in Table 7, by location the noise levels are similar across all the scenarios with ranges no greater than 2 dB which suggests no significant impacts.

Table 7: Forecast Summer Day Noise Levels by Location

Location	Summer Daytime Noise Level dB $L_{Aeq,16h}$					
	2025 DM	2025 DC	2027 DM	2027 DC	2031 DM	2031 DC
(1) Blackwall / A1261	59	59	59	58	58	58
(2) Britannia Village	64	64	64	63	63	63
(3) Silvertown / A1020	61	61	61	60	60	61
(4) Custom House	59	59	59	58	58	59
(5) Camel Road	66	66	66	65	65	66
(6) Royal Albert Dock (north)	63	63	64	63	63	63
(7) North Woolwich (north)	59	59	60	59	59	59
(8) Thamesmead	60	60	60	59	59	59
(9) Eastern Quay Apts, Britannia Village	65	65	66	64	64	64
(10) Coral Apts, Western Gateway	63	63	63	61	62	62
(11) Silvertown Quays	68	68	68	66	67	67
(12) Ramada Hotel	66	65	66	64	64	65

Weekend Noise

Given the proposed changes to the operating hours on Saturday afternoons and potentially into the evening period, noise contours have also been prepared based on summer daytime activity only at the weekends. These are not a standard assessment metric but are intended to show how noise at the weekend could change over time with the proposals.

Summer weekend air noise contours have been produced for 2025, 2027 and 2031 based on the flights forecast to occur at the weekend only. The areas of the noise contours and the number of people they are forecast to contain are shown in the Tables 8 and 9, whilst Figure 19 provides a graphical representation of how the 57dB $L_{Aeq,16h}$ weekend noise contour is predicted to change in size over time with and without the proposed amendments. A further analysis of weekend noise levels at specific locations is provided in Table 10.

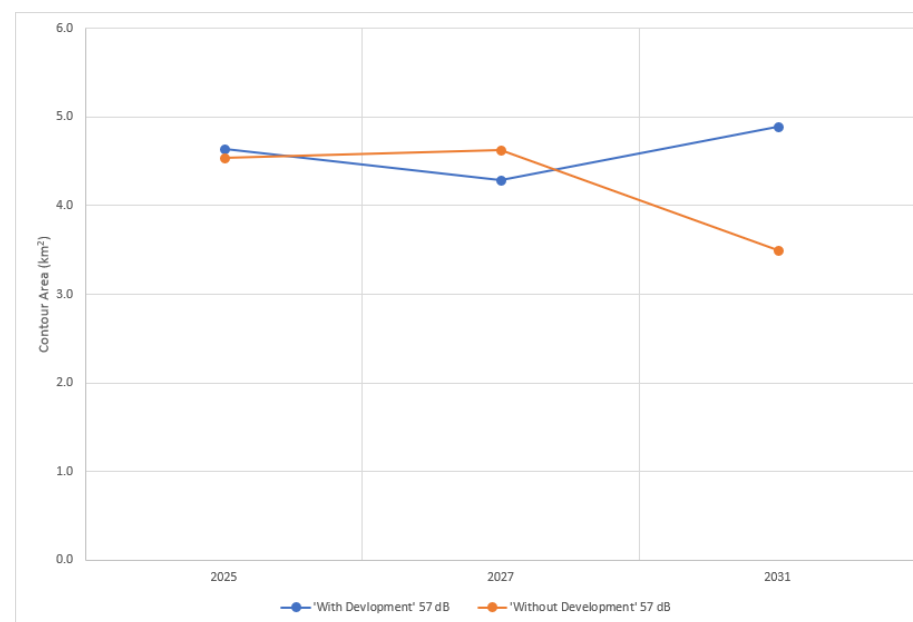


Figure 19: Predicted Changes in Summer Weekend 57dB Air Noise Contours Area, With and Without Development

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Table 8: Forecast Weekend Noise Contour Areas

Noise Contour, dB L _{Aeq,16h}	Summer Weekend Noise Contour Area, km ²					
	2025 DM	2025 DC	2027 DM	2027 DC	2031 DM	2031 DC
51	15.3	15.6	15.6	14.7	12.3	16.4
54	8.6	8.8	8.8	8.2	6.8	9.3
57	4.5	4.6	4.6	4.3	3.5	4.9
60	2.3	2.3	2.3	2.2	1.8	2.5
63	1.2	1.2	1.2	1.1	0.9	1.3
66	0.6	0.7	0.7	0.6	0.5	0.7
69	0.4	0.4	0.4	0.4	0.3	0.4

Table 9: Forecast Number of People Exposed to Weekend Noise

Noise Contour, dB L _{Aeq,16h}	Population ⁵					
	2025 DM	2025 DC	2027 DM	2027 DC	2031 DM	2031 DC
51	110,150	110,800	111,400	95,300	79,750	105,850
54	47,450	49,000	49,150	45,550	33,400	52,450
57	17,550	18,500	18,050	16,950	13,350	20,100
60	4,500	4,700	4,700	3,100	2,050	4,650
63	650	650	650	800	650	1,000
66	0	0	0	0	0	0
69	0	0	0	0	0	0

As can be seen from the tables, the weekend noise contours are much smaller than the noise contours based on activity over the whole week, and this is forecast to remain the case with the proposed extension to Saturday operating hours. Aircraft noise at the weekend is currently lower than on an average weekday and will remain so in the future, on account of the fact that no aircraft will operate on Sunday morning and because only next generation aircraft will be permitted to operate in the extended hours on Saturday.

Overall, the weekend noise contours with the proposed amendments initially reduce in area up to 2027 along with the number of people they contain, as the

proportion of quieter new generation aircraft increases rapidly. By 2031 most of the aircraft are forecast to be quieter new generation types and therefore the forecast increase in aircraft movements results in increases in contour area. By location, the noise levels are similar across all the scenarios with ranges no greater than 2 dB, which suggests no significant impacts will occur as a result of any extended operations on a Saturday.

Table 10: Forecast Weekend Noise Levels by Location

Location	Summer Weekend Noise Level dB L _{Aeq,16h}					
	2025 DM	2025 DC	2027 DM	2027 DC	2031 DM	2031 DC
(1) Blackwall / A1261	56	56	56	56	55	56
(2) Britannia Village	61	61	61	60	60	61
(3) Silvertown / A1020	58	58	58	58	57	59
(4) Custom House	56	56	56	56	55	57
(5) Camel Road	63	63	63	63	62	64
(6) Royal Albert Dock (north)	60	60	60	60	59	61
(7) North Woolwich (north)	56	56	56	57	55	57
(8) Thamesmead	57	57	57	56	56	57
(9) Eastern Quay Apts, Britannia Village	62	62	62	62	61	62
(10) Coral Apts, Western Gateway	60	60	60	59	58	60
(11) Silvertown Quays	65	65	65	64	63	65
(12) Ramada Hotel	62	62	62	62	61	63

Early Morning Flights

The proposed amendments to the CADP1 planning permission include an increase in the limit on flights in the early morning period (06:30-07:00) from 6 to 12 movements. This early morning slot is technically in the night-time period and therefore should be assessed against the more onerous noise criteria that

⁵ The populations have been determined using data supplied by CACI Ltd. This data is based on census information factored up to 2021 and consists of population by postcode.

apply to night-time operations. Notwithstanding, due to the increased use of quieter new generation aircraft and the limited number of flights in the night period at London City Airport, significant impacts are not predicted.

Ground Noise

Ground noise will be assessed in detail as part of the Environmental Impact Assessment (EIA) being undertaken in conjunction with the forthcoming S73 application. However, as there is no increase in permitted aircraft movements proposed, significant impacts are not currently expected. Noise barriers will be installed as required to mitigate any impacts that arise due to reconfiguration of the airport buildings or stands.

Surface Access Noise

Surface access noise will be assessed in detail as part of the EIA. However, no additional car parking is proposed as part of the application, to encourage the use of sustainable modes of transport. As such, significant impacts related to changes in road traffic noise are not currently expected.

Construction Noise

No significant construction is proposed as part of the application, beyond those components of the approved CADP1 scheme which are yet to be built out. It is worth noting that the piling and deck works, which was the construction activity with the greatest potential to create noise nuisance, including at night, has now been completed. These works were governed by policies and procedures set out in an approved Construction Environmental Management Plan (CEMP) and minimal disruption or complaints were received during this time. Future construction activities will have a much lower potential to generate high levels of noise, as they will not entail any significant percussive activity and will largely take place in the daytime. Notwithstanding, any properties forecast to be exposed to significant construction noise, beyond those already treated for work to date, will be treated under the airport's existing construction sound insulation scheme (CSIS).

Potential Future Benefits & Enhancements

Overall, noise is forecast to decrease compared to what is currently permitted. In addition, the proposed changes include several key elements of built-in mitigation, with further mitigation being developed. The mitigation is expected to include:

- All flights in the additional Saturday operating hours will be quieter new generation aircraft.
- All additional flights in the early morning period will be quieter new generation aircraft.
- Due to airlines having to use the quieter new generation aircraft at specific times, this will drive their use at other times, tying growth at the airport to the benefits for the local community.
- The airport will enhance the existing Sound Insulation Scheme (SIS), details of which are being developed at the time of writing this report. This will potentially include increasing the accessibility of works, and also offering enhanced measures.
- In addition, as described under the Socio-Economic Section of this report, the airport is also proposing a much larger Community Fund that will grow as passenger numbers increase so that local residents benefit from that growth. The airport will consult its neighbours on how it is spent, but some funds could be directed towards helping to mitigate impacts related to any loss of outdoor amenity at the weekends.

Air Quality

Baseline Context

The London Borough of Newham has designated a whole-borough Air Quality Management Area (AQMA) for exceedances of the air quality objectives for nitrogen dioxide and particulate matter (PM₁₀); by definition, London City Airport lies within this AQMA. The airport operates a comprehensive air quality monitoring network, which currently consists of two automatic stations and 16

nitrogen dioxide diffusion tube sites, both onsite and offsite. The pollutants recorded include nitrogen dioxide, fine particulate matter (PM₁₀) and very fine particulate matter (PM_{2.5}). There have been no recorded exceedances of the air quality objectives for these pollutants at any site relevant to public exposure since monitoring commenced in 2006.

Importantly, levels of nitrogen dioxide are steadily decreasing, as shown in Figure 20. While there is year-to-year variation, largely driven by changing meteorological conditions, a detailed analysis confirms that there is a statistically significant downward trend at all sites since 2007.

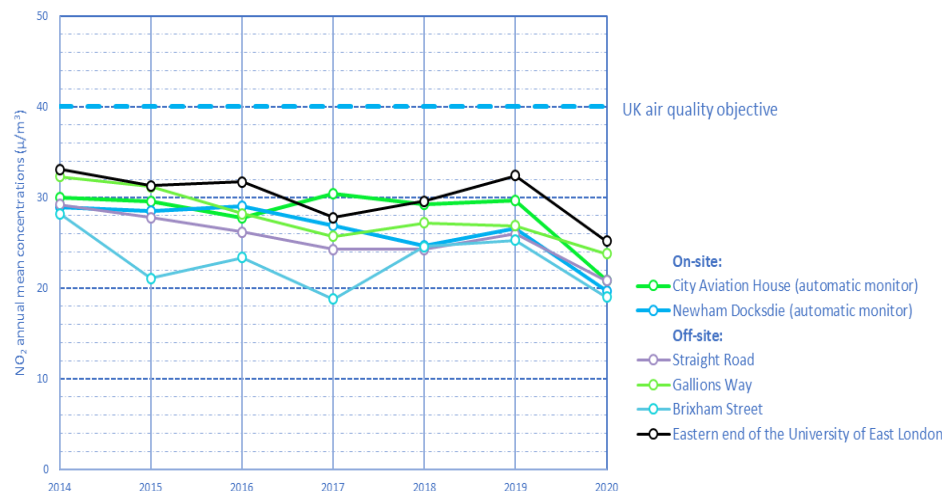


Figure 20: Trends in Annual Mean Nitrogen Dioxide Concentrations in the Vicinity of London City Airport (2014 – 2020)

Existing Controls at the Airport

Emissions from aircraft at altitude (above a few hundred metres) have very little impact on ground-level pollutant concentrations. The focus on controls is, therefore, related to ground-based aircraft operations, the use of Ground Support Equipment (such as vehicles that operate airside), and traffic on the local road network.

The airport has produced an Air Quality Management Strategy that has been approved by the London Borough of Newham. The Strategy, and progress that is made each year, is reported through the website⁶. Some of the key measures include:

- All diesel Mobile Ground Power Units (dMGPU)s were phased out in June 2021 and have been replaced with battery powered MGPU)s (eMGPU)s;
- Provision of fixed electrical ground power (FEGP) or eMGPU)s on all stands;
- Minimising the use of Auxiliary Power Units (APUs) on aircraft;
- Development of an airport-wide strategy to increase the use of low or zero emission airside vehicles, operated by both the airport and third-party operators; and
- Requiring all vehicles issued with a new airside pass to comply with the latest emissions standards (Euro standards) for road vehicles, and emissions testing for airside vehicles

Measures to control traffic on the local road network are being delivered by the Travel Plan and other surface access initiatives, as described under Surface Access. These measures will assist to minimise any impacts associated with road traffic emissions.

⁶ <https://www.londoncityairport/corporate/Environment/Air-Quality>

Policy Context

The National Planning Policy Framework (NPPF) states (paragraph 186):

“Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan”.

The Aviation Policy Framework (2013) sets out the Government’s high-level strategy and overall objectives for aviation. With regards to air quality, the policy is to seek improved international standards to reduce emissions from aircraft and vehicles, and to work with airports and local authorities to improve air quality, including encouraging transport operators to introduce fewer polluting vehicles. The Framework places a particular importance on areas where the EU Limit Values and air quality objectives are exceeded but recognises that nitrogen oxides (NOx) concentrations from aviation-related activities reduce rapidly beyond the immediate area of the runway, and places emphasis on reducing emissions associated with surface access. In particular, the preparation of Airport Surface Access Strategies (ASASs) is strongly encouraged, together with the development of targets to reduce the air quality impacts of surface access.

Aviation 2050: The Future of UK Aviation was published as a consultation document in 2018. The Government proposed the following measures to address the potential impacts of aviation’s contribution to air quality:

- *Improving the monitoring of air pollution, including ultrafine particles;*

- *Ensuring comprehensive information on aviation-related air quality issues is made available to better inform interested parties;*
- *Requiring all major airports to develop air quality plans to manage emissions through local air quality targets;*
- *Validation of air quality monitoring to ensure consistent and robust monitoring standards that enable the identification of long-term trends;*
- *Supporting the industry in the development of cleaner fuels.*

Flightpath to the Future (FttF, 2022) sets out a strategic framework for the recovery of the aviation industry from the Covid-19 pandemic and recognises that, whilst many of the issues considered through Aviation 2050 remain relevant, a clear plan of action for the sector is required. The document recognises that in addition to being committed to delivering a green sector for the future, the Government also needs to tackle more localised impacts of aviation, including air quality.

The London Plan (GLA, 2021) sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years. The key policy relating to air quality is Policy SI1 Improving air quality, Part B1 of which sets out three key requirements for developments:

Development proposals should not:

- *lead to further deterioration of existing poor air quality*
- *create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits*
- *create unacceptable risk of high levels of exposure to poor air quality.*

Policy SC5 of the Newham Local Plan (2018) deals with air quality, and notes that proposals that deal with the following strategic principles, special strategy and design criteria will be supported. Relevant policies are:

All developments should be at least Air Quality Neutral, supporting a net decrease in specified pollutants and making design, access, energy and management decisions that minimise air pollution generation.

Development will support implementation of Newham's Air Quality Action Plan.

Development along major roads or in other locations that experience air quality exceedances (of the objectives and EU limit values) should be configured to improve the dispersal of identified pollutants and reduce exposure.

Developments should only deploy combustion-based energy sources (including CHP) as a last resort.

Potential Effects of Proposed Amendments

A detailed air quality assessment is to be carried out and will form a chapter of the Environmental Statement to be submitted with the forthcoming S73 application. This will be based on a detailed emissions inventory and dispersion modelling and will quantify the air quality impacts of the proposed amendments, and will address other issues identified in the London Plan and the Local Plan (e.g. Air Quality Neutral and Air Quality Positive).

For reasons described above, the principal impacts associated with the proposed amendments will be associated with changes to traffic on the local road network.

As described in the Baseline section above, concentrations of the principal pollutants of concern (nitrogen dioxide, PM₁₀ and PM_{2.5}) are currently well below the air quality objectives in the vicinity of the airport, and at locations in close proximity to both Hartmann Road East and Connaught Road.

A detailed air quality assessment was carried out to support the 2020 Master Plan. This was based on an assumption of 151,000 ATMs by the mid to late 2030s and, consequently, much higher traffic flows on the local road network than would occur with the current cap of 111,000 ATMs which is predicted to be reached by 2031 with the current proposals. Even with the higher

assumption of 151,000 ATMs, the study concluded that concentrations of all pollutants would be well below the objectives.

Based on the current pollutant concentrations and the predicted changes to traffic flows, it can be reasonably concluded that there will be no exceedances of the objectives with 9.0 mppa in 2031.

Potential Future Benefits & Enhancements

As described above, the airport is confident that it can implement the proposed amendments to the CADP1 planning permission without causing any exceedances of the air quality objectives, and without causing any significant adverse air quality effects. Nonetheless, the airport is committed to minimising any air quality impacts and will continue to implement the measures set out in the Air Quality Management Strategy. In addition, the airport has recently published its Sustainability Roadmap which sets out measures to decarbonise the airport, and many of these measures will help to further reduce any air quality impacts, including:

- A revised Energy Strategy that is focused on renewable sources and which will remove the need for Combined Heat and Power (CHP) plant, as originally envisaged under the CADP1 proposals;
- Working with the airlines to explore the potential to expand the use of reduced thrust during taxiing, and the potential to introduce electric taxiing systems; and
- As vehicles reach the end of their working life, the airport is replacing them (where possible) with zero carbon powered versions, with the aim of having an entirely zero carbon powered fleet by 2030

For the reasons stated above, the potential for the greatest impacts is associated with road traffic, and the potential additional measures described under Surface Access are very relevant. In particular, the following are most likely to be beneficial in air quality terms:

- Greater provision of electric vehicle charging points at the airport;

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- Working with partners to introduce a direct connection for passengers using the Elizabeth Line to access the airport;
- Targets to achieve 80% of journeys by sustainable and public transport modes by 2030; and
- Enhancements to walking and cycling provision in the vicinity of the airport.

Climate Change

Baseline Context

London City Airport has a long track record of monitoring and managing its Greenhouse Gas (GHG) emissions⁷, having joined ACI's Airports Carbon Accreditation Scheme in 2013. Since then, the airport has been reducing the emissions it directly controls (known as scope 1 and 2 emissions as defined through the global GHG Protocol standard) on per passenger basis every year, such that by 2019 it emitted 63% fewer GHG emissions per passenger than in 2013, as illustrated in the Figure 20 below. This coincided with a 50% increase in passengers using the airport.

Consistent with other assessment topics, the baseline chosen to assess the effects of proposed amendments is 2019 since this is the last year that was truly unaffected by travel restrictions associated with the Covid-19 pandemic. Table 11 and Figure 21 below summarise the airport's 2019 GHG emissions by source and scope.

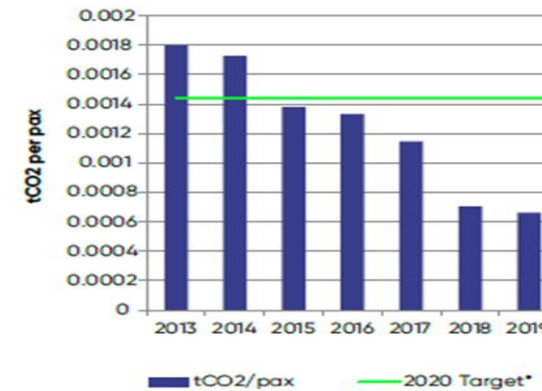


Figure 20: Recorded Annual Reductions in CO₂ Emissions per passenger at London City Airport (2013 – 2019)

The airport doesn't just measure and manage its own emissions but is committed to managing all GHG emissions over which it can have influence. Emissions that are not directly controlled by the airport are known as 'scope 3' emissions and include sources such as:

- From transporting passengers and staff to and from the airport;
- From aircraft as they taxi, take off and depart to their destinations;
- From use of energy by the airport's tenants;
- From staff business travel; and
- Process emissions from waste, water and use of refrigerants.

Figure 21 shows that emissions from aircraft are by far the single largest source, making up 95% of the airport GHG footprint. By contrast, the emissions the airport directly controls (scope 1 and 2) are 1% of all emissions.

⁷ It should be noted that where the term 'carbon' is used within this section, it should be assumed to have the same meaning as 'GHG'.

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Table 11: London City Airport GHG Emissions in 2019 by source

Scope	Sources	Tonnes CO ₂ e
Scope 1	Fuel used in airport company vehicles and airfield equipment Fuel used in buildings (e.g. gas for heating and hot water) Fuel used in fire training exercises Process emissions from de-icing/Glycol	1,056
Scope 2	From the airport's use of electricity	2,321
Scope 3 (excluding aircraft)	Staff and passenger travel Electricity used by tenants Fuel used by 3rd party vehicles and airfield equipment Business travel by airport employees Process emissions from water/and waste	12,289
Scope 3 (aircraft)	From aircraft landing and take-off up to up to 3000ft (LTO) From aircraft departing climb out, cruise and descent (CCD) From aircraft Auxiliary Power Unit (APU) ⁸ use	289,2692
Total		304,935

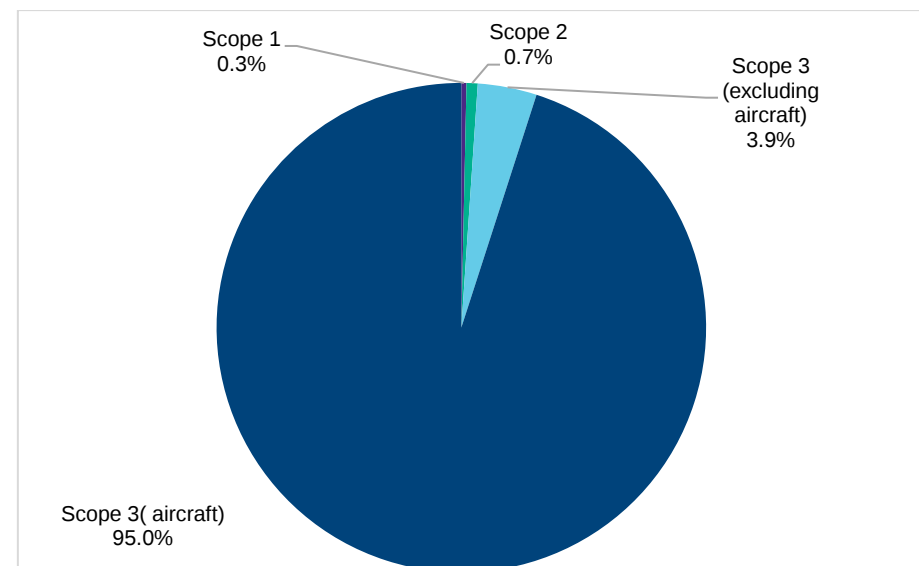


Figure 21: London City Airport GHG Emissions by GHG Protocol Scope in 2019

Existing Controls and Commitments at the Airport

The airport has a comprehensive and robust Carbon Management Plan and is committed to achieving net zero operational GHG emissions (scope 1 and 2) by 2030. In meeting this target, the airport has already put in place a number of carbon management measures including:

- Moving to LEDs for runway lighting;
- Generating renewable energy onsite, using solar electricity panels;

⁸ APUs are small jet engines in the tail of aircraft used to provide power for aircraft systems on the ground (these are typically used during engine start up on departure and engine shutdown on arrival).

- Beginning the process of decarbonising the airport's fleet of vehicles and ground service equipment, through for example replacement with electrified vehicles and equipment;
- Procuring 100% of electricity from certified renewable sources;
- Using HVO (Hydrotreated Vegetable Oil Fuel) for the airport's substation back-up generator which reduces net CO₂ emissions by up to 90% compared to diesel; and
- Procuring high-quality GHG offsets certified under Gold Standard, Verified Carbon Standard (VCS), and Clean Development Mechanism schemes to cover the remaining emissions from the airport's operations that have not yet been eliminated.

The measures described above mean the airport had already achieved Level 3+ (carbon neutrality) under the Airport Carbon Accreditation programme by 2019.

Legislation and Policy Context

The 2015 Paris Agreement is a legally binding (unincorporated) treaty on climate change set within the United Nations Framework Convention on Climate Change (UNFCCC). Most importantly it set a long-term temperature goal of limiting global warming to no more than 2 degrees above pre-industrial levels and requires participating states to set Nationally Determined Contributions (NDCs) towards meeting that long term goal. This remains the foundation for much subsequent legislation and guidance. The UK's NDCs are, in effect, delivered through the mechanism of the Climate Change Act (CCA) 2008^{iv} which legislates for a target of net-zero carbon emissions by 2050.

The pathway to the 2050 target is set through a series of 5-year carbon budgets, the latest of which, the 6th carbon budget^v, requires national carbon emissions to fall by 78% by 2035 relative to a 1990 baseline. The sixth carbon

budget is also the first time that emissions from international flights have been explicitly included within carbon budgets.

The UK government has a legal duty under the CCA to 'ensure' that the carbon budgets and targets are met. To meet this duty, the government has put in place specific legislation and policies that relate to aviation emissions and which are designed to ensure the sector decarbonises consistent with meeting the UK's 2050 net zero target.

In this respect the UK government has recently legislated for the UK Emission Trading Scheme^{vi} (ETS). This provides a mechanism to manage emissions from major emitting sectors, including all flights from the UK to the European Economic Area⁹ (EEA) and domestic flights. The Government has made clear that the level of permits under the UK ETS will be set at a level that is consistent with meeting the 6th carbon budget and the UK's transition to net zero by 2050.

In terms of controlling emissions from flights to destinations outside the EEA the UK works through the International Civil Aviation Organisation (ICAO) which is accountable to the UNFCCC for establishing controls over international aviation emissions consistent with international climate agreements such as the Paris climate agreement. Specifically, the UK has legislated to adopt ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) which is the international agreement requiring no net increase in international aviation emissions from 2020 through to 2035^{vii}.

Alongside the legislative framework outlined above, the UK Government has a number of policies for managing UK aviation emissions, including:

- The '*Flightpath to the Future*' (FtF) document published on 26th May 2022 comprises Government's overarching aviation policy statement^{viii}. It sets a strategic framework for the aviation sector, a 10-point plan and establishes the DfT's ambitions and commitments

⁹ Including Gibraltar

for aviation over the next 10 years. Point 4 is relevant to the assessment of GHG emissions and states that

“Put the sector on course to achieve Jet Zero by 2050 – as set out in the Jet Zero Consultation, this will include delivering on our aspiration for zero emission flights across the UK this decade. We will also seek to deliver our ambition for 10% SAF¹⁰ to be blended into the UK fuel mix by 2030, supported by £180 million of new funding in 2022-2025 and a SAF mandate under development. This will require extensive collaboration between Government and industry, including through the Jet Zero Council. We will also continue to work with the sector to reduce the localised impacts of aviation from noise and air pollution”.

The FttF also confirms that Beyond the Horizon - Making Best Use of Existing Runways (see below) is the most up-to-date policy on planning for airport development.

- Beyond the Horizon - Making Best Use of Existing Runways^{ix} contains relevant policy on aviation and climate change. In summary, it states that any increase of carbon emissions from airport development is a matter that needs to be dealt with at a national level, and that government is supportive of airports beyond Heathrow making best use of their existing runways.

The Airports National Policy Statement^x whilst primarily concerned with decision-making relating to expansion at Heathrow, as well as other Nationally Significant Infrastructure Projects, also provides guidance to establishing the significance of any increase of carbon emissions from airport expansion. Specifically, paragraph 5.82 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.”

The Government has also recently carried out a consultation on its Jet Zero strategy for net zero aviation^{xi}, including a further technical consultation^{xii}. The aim of the government’s Jet Zero strategy is for *“aviation to decarbonise in a way that preserves the benefits of air travel and delivers clean growth of the UK sector by maximising the opportunities that decarbonisation can bring”*. The strategy is underpinned by 3 principles:

- Clear goal, multiple solutions: we will focus on achieving net zero aviation by 2050 – or Jet Zero – whilst being flexible over the pathway to achieve it;
- International leadership: the vast majority of UK aviation emissions are from international flights; tackling these needs global agreement and UK leadership; and,
- Delivered in partnership: achieving Jet Zero requires all parts of the sector to work together to develop, test and implement the solutions we need.

The strategy also proposes a net zero target for UK domestic aviation by 2040, and that all airport operations in England should be zero emission by 2040 (scope 1 and scope 2 emissions).

The management of non-aviation sources is covered through other policies including Decarbonising Transport: A Better, Greener Britain^{xiii} which sets climate change policy for all transport sources including road and rail transport, and the government’s Net zero strategy: Build back better^{xiv} which sets out policies and proposals for decarbonising all sectors of the UK economy in the

¹⁰ SAF stands for sustainable aviation fuel. It’s produced from sustainable feedstocks (for example cooking oil and other non-palm waste oils from animals or plants) and has very similar in its

chemistry to traditional fossil jet fuel. Using SAF results in a reduction in carbon emissions compared to the traditional jet fuel it replaces over the lifecycle of the fuel.

light of the requirement to achieve Net Zero by 2050. In relation to aviation, the Net Zero strategy follows the approach of the Jet Zero consultation.

The National Planning Policy Framework (NPPF)^{xv} also sets climate change policy relevant to non-aviation emissions. Specifically, it seeks to ensure that development proposals mitigate, and are resilient to the impacts of, climate change. Paragraph 150 states that:

“New development should be planned for in ways that:

a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards”.

In terms of regional and local policy, the London Environment Strategy, published in May 2018^{xvi}, sets out an action plan for environmental improvement in London up to 2050 and covers a range of core environmental aspects including energy and climate change, air quality, green infrastructure, waste and noise. The strategy sets a series of targets, including the aim to make London a zero-carbon city by 2050; reiterating the same commitment as is included in the London Plan^{xvii}.

Since its publication, the Mayor of London has committed to bring forward London’s net zero target from 2050 to 2030^{xviii}. At the time of publication of the London Environment Strategy, the UK’s ambition was to achieve an 80% reduction in emissions by 2050. Since then, both national and local climate ambition has increased. At a national level, the UK has committed to reach a 68% reduction in emissions by 2030 (relative to 1990 levels) and to reach net zero emissions by 2050.

The London Plan sets out the Mayor’s spatial development strategy for London. Of particular relevance to greenhouse gas emissions, the London

Plan describes that *“the Mayor is committed to London becoming a zero-carbon city”*. It also explains that *“Carbon’ is used in the London Plan as a shorthand term for all greenhouse gases”*.

The London Plan also requires London Boroughs to ensure that all developments maximise opportunities for on-site electricity and heat production from solar technologies (photovoltaic and thermal) and use innovative building materials and smart technologies. This approach will reduce carbon emissions, reduce energy costs to occupants, improve London’s energy resilience and support the growth of green jobs.

At a local level, the Newham Local Plan 2018 sets a number of policies relevant to climate change including SC1 on Environmental Resilience, and SC2 on Energy and Zero Carbon. These policies require developments to comply with a number of principles including the requirements to demonstrate consistency with the London Plan’s zero carbon targets and demonstrate their resilience to future climate change risks.

Potential Effects of Proposed Amendments

A climate change assessment is being prepared as part of the Environmental Impact Assessment (EIA) of the proposed amendments to the CADP1 planning permission. This will assess:

- the effects of the development on climate change through consideration of its whole life GHG emissions, and
- the effects of climate change on the development through consideration of its resilience to future climate change risks

The whole life GHG emissions of the development will include consideration of GHG emissions resulting from airport operations (e.g., fossil fuel and electricity

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consumed by the airport's fixed infrastructure and operational vehicles), from transport of staff and passengers to the airport and from aircraft flights¹¹.

The assessment will calculate the emissions resulting from the proposed amendments (the Development Case) and compare those to the scenario should the amendments not occur (the Do Minimum case). The significance of any net change in emissions will be established by reference to IEMA guidance^{xix} and, where appropriate, to any change in emissions relative to the UK's net zero target and carbon budgets.

As indicated earlier, the most significant source of GHG emissions from the airport relates to aircraft and therefore the calculation of those emissions has been prioritised.

Figure 22 below summarises the GHG emissions from aircraft in 2019 and in 2031 with and without the proposed amendments (including all LTO cycle emissions and APU emissions, and CCD emissions for departures). To identify a reasonable worst case at this stage, the assessment has conservatively assumed zero uptake of Sustainable Aviation Fuel (SAF)¹² by 2031, even though the government has committed to achieving an 10% uptake by 2030.

GHG emissions are expressed as CO₂ equivalent (CO₂e) which is the standard metric for GHG reporting. Figure 23 presents the same data but on a per passenger km basis which is a measure of GHG efficiency of flights.

Figure 22 shows that aircraft GHG emissions in 2031 will increase from the 2019 baseline in both the with (DC) and without (DM) development scenarios. However, the increase with the development is somewhat higher during this assessment timeframe as a result of a greater number of movements by 2031

and a shift to new generation aircraft which, whilst more fuel efficient, also have a longer destination range.

As well as the Principal Assessment Year of 2031, the assessment of aircraft emissions will also consider the evolution of emissions out to 2050 taking into account DfT's views on the role of future aircraft fuel efficiencies, take up of Sustainable Aviation Fuel (SAF) and penetration of zero emission aircraft into the fleet. The effect of these measures will be to reduce emissions in the with development case between 2031 and 2050.

The effect of newer, more fuel-efficient aircraft can already be seen in Figure 23 below which shows that, in terms of GHG efficiency, the Development Case will be the most efficient scenario by 2031 in terms of CO₂e/passenger km. This reflects the increased uptake of more fuel-efficient new generation aircraft that will be incentivised as a consequence of the additional flexibility afforded to airlines if the proposed amendments are approved. The use of new generation aircraft means that the flights from the airport will be approximately 15% more carbon efficient than in the 2019 baseline and 10% more efficient than the Do Minimum/ 'without development' case.

As indicated earlier, the UK Government has a duty to meet its legal obligations under CCA and in doing so has put in place legislation and policies that will control UK aviation emissions consistent with carbon budgets and the 2050 net zero target.

In terms of London City airport, it is instructive to note that in 2031 >99% of emissions are from flights covered by the UK ETS and, therefore, emissions from those flights are capped at a UK national level. Importantly, the purpose of the cap is twofold - First, it provides a clear signal and financial incentive, through the carbon price, for airlines to invest in technologies to reduce their

¹¹ This covers the landing and take-off cycle (LTO) up to 3000ft, departure climb out, cruise and descent (CCD) to the destination airport, and emissions from APUs on the ground

¹² SAF stands for sustainable aviation fuel. It's produced from sustainable feedstocks (for example cooking oil and other non-palm waste oils from animals or plants) and has very similar in its

chemistry to traditional fossil jet fuel. Using SAF results in a reduction in carbon emissions compared to the traditional jet fuel it replaces over the lifecycle of the fuel.

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emissions and, secondly, it provides certainty to Government that nationally emissions from aviation are consistent with carbon budgets and the trajectory to net zero by 2050.

CORSIA which applies to flights outside of the EEA would act as a further control for the very limited flights (contributing less than 1% of emissions) not covered under the UK ETS.

The significance of any changes in aviation GHG emissions in 2031 and by 2050 will take account of IEMA guidance and, where appropriate, the test set out in the ANPS (para 5.82). By way of context, the maximum increase in GHG emissions from the development would account for 0.1% of the annualised 6th carbon budget.

In terms of other emission sources, as set out earlier and detailed in its Sustainability Roadmap, the airport is committed to net zero emissions from its operations by 2030. Therefore, the net effect of the proposed amendments on operational emissions is neutral. The effects of any change in ground transport emissions will be managed through the airport's Surface Access Strategy and Travel Plan which are seeking to increase the mode share of sustainable low carbon transport (see section on Surface Access).

The climate change assessment will also present measures adopted by the airport to ensure its continued resilience to future climate change risks.

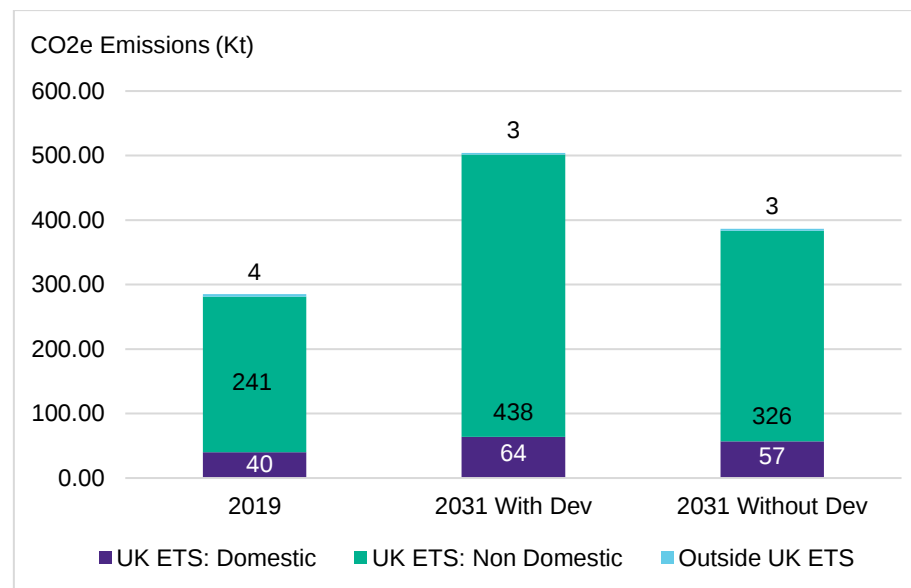


Figure 22: GHG Emissions from Aircraft

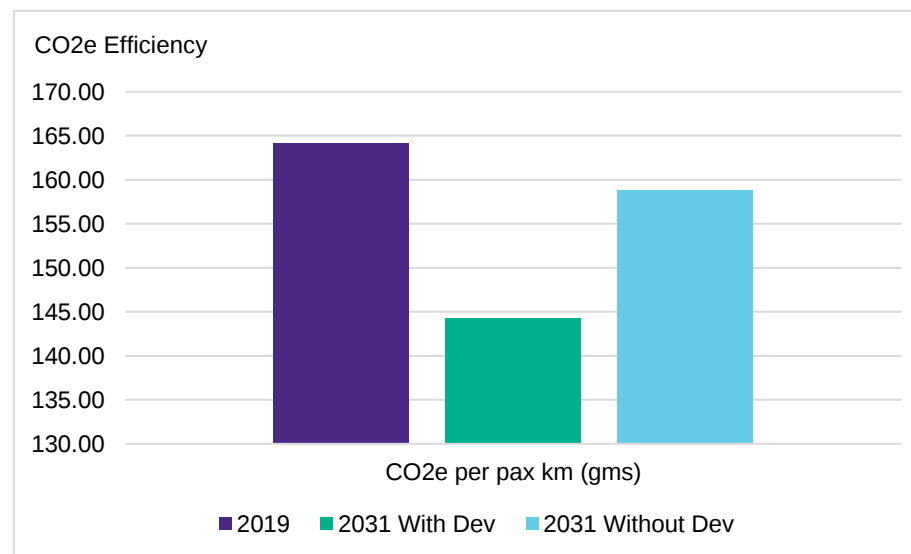


Figure 23: GHG Emissions from Aircraft per Passenger km

Potential Future Benefits & Enhancements

Measures that the airport has identified and plans to implement to meet its 2030 net zero airport target for scope 1 and 2 operational emissions include:

- Full procurement of renewable electricity from 2020 and explore further solutions and partnership opportunities to increase use of renewable sources, including solar panels;
- Continue to raise awareness and actions to minimise energy use and future power demand and improve efficiency through the use of equipment and technology, including optimising the airport's Building Management System's controls;
- Review the airport's Energy Strategy so that heating options through renewable energy technology such as air, ground and water source heat pump technology and/or a district heat network system could be progressed, subject to viability;
- Continue to look for opportunities to maximise on-site generation and storage of renewable energy sources including use of solar panels;
- Continue to minimise emissions from sources such as fire training and de-icing and work in partnership to reduce them if zero carbon solutions are not yet available on the market; and
- Upgrade the airport's vehicles and equipment to be zero carbon by 2030, including working with suppliers to identify innovative solutions where technology advancement is not yet available, for example, some winter operation vehicles and fuelling fleets.

For scope 3 emissions, the measures that the airport will adopt include:

- Emissions from aircraft operations on the ground have been reduced through the provision of fixed electrical ground power to aircraft at stands and replacement of diesel Mobile Ground Power Units with electric versions;
- Steps to further reduce emissions from aircraft during the landing and take-off (LTO) cycle will be considered as part of the

developing operational strategy. For example, single/reduced engine taxiing, electric towing, review/minimise use of auxiliary power units (APU), reduce emissions due to aircraft idling and on hold;

- Work with aircraft operators to encourage near future fleet replacement, resulting in reductions in emissions associated with use of more fuel efficient, next generation aircraft;
- Participation in the airspace modernisation programme, which allows an opportunity to reduce carbon emissions by improving the efficiency of the airspace around the airport (i.e. reducing the track distance for departures and/or stacking and holding of arrivals);
- Participation in the Future Flight Consortium, which is a collaboration between a number of major UK aviation businesses to accelerate the development and introduction of low and zero-emission aircraft;
- Encouraging the take up of sustainable aviation fuels (SAF) and newer aircraft through operating policy/strategy. The airport has set a target to be one of the first airports in the UK to facilitate zero emission flights;
- Increased use of public transport by passengers and employees. The airport's ambition is to maintain its status as the most sustainably connected airport in the UK, with a target to achieve 80% of all journeys to and from the airport to be made by sustainable and public transport modes by 2030; and
- Where private cars are used, the airport will encourage low/zero carbon private transport options e.g., electric vehicles.

In addition to the above, the airport is continuing to work with the CAA on its airspace modernisation programme, which will lead to various carbon benefits from the adoption of more direct and efficient flightpaths, and to participate in the Future Flight consortia to further develop the prospect of low/zero carbon flights.

Human Health and Wellbeing

Baseline Context

The east-west alignment of the airport means that populations in Newham, Greenwich and Tower Hamlets are of particular interest to the health assessment. The health of people in these Boroughs is varied compared with the England average. The presence of vulnerable groups and pockets of deprivation is noted.

As set out in the Socio-Economics Section of this report, all of these authorities have areas within the 20% most deprived districts/unitary authorities in England and about 20% of children live in low-income families. Between 25% and 28% of children in Year 6 are classified as obese. There are issues of adult physical activity, excess weight and cardiovascular risk. Compared to the England average, the rates of under 75 mortality from cardiovascular diseases are worse in Newham and Tower Hamlets, but similar to the England average in Greenwich. In Newham and Greenwich, the rates of those killed or seriously injured on roads are better than the England average, whilst in Tower Hamlets the rates are worse than the England average.

Existing Controls at the Airport

London City Airport fosters good health for its staff and the local population through employment and training opportunities and other community initiatives, as summarised in Figure 6 (London City Airport Community and Employment Initiatives) provided earlier in this report.

Policy Context

The National Planning Policy Framework (NPPF) states (paragraph 92):

Planning policies and decisions should aim to achieve healthy, inclusive and safe places which... promote social interaction... are safe and accessible... and enable and support healthy lifestyles, especially where this would address identified local health and well-being needs....

The London Plan 2021, policy GG2 – ‘Creating a healthy city’, notes that:

To improve Londoners’ health and reduce health inequalities, those involved in planning and development must: ... assess the potential impacts of development proposals ... on the mental and physical health and wellbeing of communities, in order to mitigate any potential negative impacts, maximise potential positive impacts, and help reduce health inequalities, for example through the use of Health Impact Assessments

LBN Local Plan 2018, policy SP2 Healthy Neighbourhoods, notes that:

The Council supports health care partners’ efforts to promote healthy lifestyles and reduce health inequalities and recognises the role of planning in doing so through the creation of healthy neighbourhoods and places... [and requires] major development proposals to be accompanied by a health impact assessment....

Health Impact Assessment in spatial planning 2020^{xx}, (page 28 final paragraph):

First, establish whether the project is subject to EIA. If yes, follow health in EIA process.

The Airports National Policy Statement notes that (paragraph 4.72):

... where the proposed project has likely significant environmental impacts that would have an effect on human beings, any environmental statement should identify and set out the assessment of any likely significant health impacts.

There is a specific correlation between human health and wellbeing and the prevailing environmental and socio-economic conditions in an area and the legal standards which underpin the assessment of such effects, especially with regards air quality and noise – as discussed in the proceeding sections.

In the health assessment that will be undertaken in conjunction with the EIA for the forthcoming S73 application, a population health approach will be applied in conjunction with other technical chapters of the ES. For each determinant of health, the assessment will identify relevant inequalities through consideration

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of the differential effect to the 'general population' of the relevant Study Area and effects to 'vulnerable sub-population' of that Study Area; the vulnerable sub-population being comprised of relevant sensitivities for that determinant of health. This is in line with guidance and good practice.

The following population groups are present and will be considered:

- the 'general population' including residents, passengers, workers, service providers, and service users; and
- the 'vulnerable sub-population' including potential vulnerability due to: young age, older age, low income, poor health status, social disadvantage, restricted access or geographic proximity to airport activities

The health analysis will be informed by project-wide consultation with the LBN and other stakeholders. The approach to assessment will ensure that Health Impact Assessment (HIA) is embedded within the EIA in line with good practice.

The following data sources will be used:

- Office of Health Improvement and Disparities (OHID) Fingertips, Local Health data sets to show most sensitive Wards (small areas) in proximity to the airport. Relevant indicators will be selected from datasets titled 'our community', 'behavioural risk factors and child health', 'disease and poor health' and 'life expectancy and causes of death';
- Office of National Statistics (ONS) and official labour market statistics (NOMIS) statistics. If available, 2021 census data will be included;
- Indices of deprivation mapping 2019, including 'Index of multiple deprivation' and individual sub-domains;
- Google Earth Pro 2021 aerial and street level photography review; and
- Local Joint Strategic Needs Assessment (JSNA) and Health and Wellbeing Strategy (HWS) data. Local health priorities will be

identified and additional information on relevant vulnerable groups may be extracted as appropriate.

The following health and wellbeing strategies will be considered, which set public health priorities for this population.

- 'Well Newham 50 Steps to a Healthier Borough' - Health and Wellbeing Strategy 2020-2023;
- The Royal Borough of Greenwich Health and Wellbeing Strategy 2019-2024; and
- Tower Hamlets Health and Wellbeing Strategy 2017-2020.

The health assessment methodology will use best practice, such as that published by the Institute of Public Health (IPH), the International Association for Impact Assessment (IAIA), the European Public Health Association (EUPHA) and the Institute of Environmental Management and Assessment (IEMA).

Potential Effects of Proposed Amendments

The health assessment will consider the public health implications of the conclusions of the other technical assessments described in this initial Environmental Report. In so doing the health assessment will consider whether there are likely to be significant population health changes linked to:

- Use of public areas of green space, which may affect physical activity and mental health.
- Changes in community identity, which may affect community cohesion and social isolation.
- Road safety and travel mode, including opportunities to promote walking and cycling.
- Benefits of good quality employment, including opportunities to target vulnerable groups.
- Benefits of upskilling and training, including opportunities to target vulnerable groups.

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- Noise disturbance, including both localised and more distributed effects of small changes.
- Air quality, including consideration of small changes below health protection standards.
- The health effects of climate change, including global inequalities and national policies.
- Health service implications of increased passengers and data to support routine planning.

- The airport will enhance the existing Sound Insulation Scheme to further mitigate any air noise impacts.
- The future introduction of zero emission renewable energy technology such as air, ground and water source heat pump technology or a hydrogen-powered district heat network system.

The full health assessment will be reported in the Environmental Statement (ES) supporting the forthcoming S73 planning application. However, based on the preliminary findings described above, no significant adverse effects on population health are anticipated as a consequence of the uplift to passenger numbers and other proposed variations to the existing CADP1 planning permission

Potential Future Benefits & Enhancements

Positive health outcomes to airport staff and the wider local population are expected to be derived from existing and proposed initiatives described earlier in this report, in particular:

- London City Airport will work with local training providers, including Newham College, to help match residents with the chance to gain new skills and then work at the airport – with benefits to their physical and mental wellbeing resulting from such employment.
- An enhanced Community Fund that will grow as passenger numbers grow so that local residents benefit from that growth, including financial support for building stronger, safer and healthier communities and creating pathways into employment at the airport.
- Additional encouragement of the local use of public transport through measures including potential further enhancements to bus services, enhancements to bus stops and enhanced wayfinding as well as contributing towards enhancing local walking and cycling facilities.

6 OTHER ENVIRONMENTAL TOPICS

For the sake of context this section describes other environmental topics that, whilst important, are unlikely to be materially affected by the proposed amendments to the CADP1 planning permission. The forthcoming Environmental Statement will include a composite chapter on these non-significant issues, providing further information on these topics where necessary.

Water Resources and Flood Risk

Flood Risk

The airport is located between the Royal Albert Dock (30 hectares) and King George V (KGV) Dock (24 hectares), comprising two of the three Royal Docks. These are manmade waterbodies which were constructed between the 1880's to 1920, with an average depth of approximately 10 – 11 metres. The water level within the Royal Docks is maintained within this range by pumping from the River Thames; this being the responsibility of Royal Docks Management Authority (RoDMA). The George V Dock joins the Gallions Reach section of River Thames by the KGV gate, located 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.

Whilst the airport is located within an area at risk of tidal flooding, primarily within Flood Zone 3 (which corresponds with an annual probability of over 1 in 200 (0.5%)), the risk is categorised as 'residual' based on the presence of the River Thames flood defences, including the Thames Barrier and dock gates to the east of the airport. The EA flood map for surface water indicates that the majority of the site is at 'very low' risk of surface water flooding but there are areas of 'low' to 'high' risk alongside the existing terminal buildings.

A flood risk assessment was undertaken by RPS in 2013 in support of the CADP1 planning application in order to assess the potential impacts of all sources of flooding to the airport. This flood risk assessment (FRA) outlined the potential for the airport to be impacted by flooding, the impacts of the proposed CADP1 on flooding in the vicinity of the airport (up to 2025), and the

proposed measures which could be incorporated into the development to mitigate the identified risk. The 2013 FRA was produced in accordance with the guidance detailed in the National Planning Policy Framework (NPPF) at the time and took account of the CIRIA SuDS manual (C697), and the 2010 LBN Strategic Flood Risk Assessment (SFRA).

The FRA concluded that there was a negligible risk of tidal and fluvial flood in the area – mainly on account of the fact that it straddles the Thames Barrier, so has a high level of protection from storm surges by the Barrier, by the dock gate and by raised walls downstream.

A review of the updated 2017 SFRA, which includes the most recently published Environment Agency tidal breach modelling (May 2017) for upstream of the Thames Barrier, suggests that the Royal Docks retain a negligible risk of flooding in the 'non-breach' scenario. However, it is noted that the GLA suggest that further analysis is required in due course, in particular through updated SFRA's and site-specific FRA's.

The 2015 UES concluded that there would be a negligible effect on flood risk on site and the surrounding area. The proposed surface water drainage strategy also identified a moderate beneficial effect on the sewer network through reduced discharge flow rate. Condition 69: Sustainable Drainage Systems attached to the CADP1 planning permission, which requires a Surface Water Drainage Scheme to be submitted and approved by LBN prior to construction, has since been discharged.

An addendum to the 2013 FRA was prepared by RPS in 2017 to support the submission of a Section 96a (non-material amendment) application for variations to the original consent. This assessment was undertaken using the updated Thames Tidal Upriver Breach Inundation Modelling (May 2017). A Flood Management Plan was also produced by RPS in 2017.

The proposed changes being brought forward in this S73 application will not result in any changes to the area of hardstanding or airport infrastructure and accordingly would not result in an increase in flood risk or surface water run-off. Accordingly, the proposed amendments will not result in any new or materially different likely significant environmental effects from those identified in the UES. Nevertheless, an updated flood risk assessment using the most

up-to-date data, including the Thames Tidal Downriver Breach Inundation Modelling (June 2018), will be undertaken in support of the S73 application. This will account for changes in climate change factors and any update to the Environment Agency, GLA and Newham's policies including revisions to the 2017 SFRA. This FRA will then inform any necessary revisions to the existing surface water drainage strategy, including establishing new attenuation factors and identifying options for additional SuDS if required (e.g., the capture and discharge of clean water to the Dock).

Water Quality

The bio-chemical quality of the water in the Docks is influenced by water pumped into it from the tidal Thames. A number of activities at the airport also have the potential to affect water quality. However, through utilisation of the airport's Environmental Management System (which is certified to ISO14001:2014), the impact of such activities is considerably reduced and effectively monitored.

Suitable infrastructure has been present for many years at the airport to minimise the risk of accidental discharges to the Docks as well as the volume of surface run-off overall. RoDMA undertakes water quality sampling and continuously monitors pollution in the Docks, as well as removing litter and detritus on a regular basis. The airport itself also monitors and reports on water quality as part of its ongoing sustainability and environmental commitments and reports the results in its Annual Performance Report (APR).

The methods of piling associated with the piling and deck works in KGV Dock (now completed) were selected to avoid pollution of the underlying groundwater and to minimise the disturbance of dock sediment and bed material as far as reasonably possible, thus reducing the risk of adverse effects on water quality. Regular monitoring of the water in the docks during these deck works showed no significant deterioration in bio-chemical conditions compared to baseline readings taken before the works commenced.

The remaining CADP1 construction works will all occur on the landside parts of the airport and therefore the risk of pollution to the docks is much reduced, especially accounting for the pollution control measures set out in the approved Construction Environmental Management Plan (CEMP).

It is not envisaged that the changes to the CADP1 scheme sought through this S73 application will result in any new or materially different likely environmental effects with respect to water quality in the Dock and other surface water features.

Water Consumption

The airport has a relatively low water consumption per passenger by comparison to other UK airports (in 2015 this was approximately 6.2 litres passenger) and in recent years it has implemented an increasingly comprehensive water efficiency programme. For example, it has installed low water fittings throughout the terminal building and associated offices. These include:

- Waterless urinals;
- Low water use soffits in taps;
- Sensor taps; and
- Low flow toilets.

The airport will continue to monitor water use at the airport and will implement further metering in areas of high usage, especially within the terminal. Through the phased development of future works associated with CADP1, 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. All new main buildings will achieve a BREEAM 'Very Good' or 'Excellent' rating. The Sustainability and Biodiversity Strategy, submitted in accordance with Condition 56 of the CADP1 permission and approved by LBN, sets targets for reducing water use per passenger.

However, it is unlikely that the airport will be able to continue to significantly reduce water consumption through efficient water appliances alone, and so other measures to reduce water consumption are being explored, including options for substituting potable water with non-potable alternatives where appropriate. Rainwater harvesting, for example, may present an opportunity for this in the future.

High level consultation will be undertaken with Thames Water in order to explore the capacity of their network to supply the airport based on the projected passenger numbers.

Ecology and biodiversity

The ecological value of the airport site is generally considered to be low. None of the plants present on site are listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) or are otherwise of conservation interest, nor is it considered that the site contains habitat suitable to support statutorily protected species or species of conservation interest. The potential to increase biodiversity on site is also severely constrained by the need to discourage birds and other species that would present a risk to aircraft or otherwise conflict with the Civil Aviation Authority (CAA) safety requirements.

Notwithstanding, in accordance with Condition 36 of the CADP1 permission, an approved landscaping scheme will be implemented at the airport, including the planting of indigenous plant species which contribute towards biodiversity whilst minimising bird attraction. These new landscaping areas will be monitored and managed to ensure their successful establishment.

Condition 56 of the CADP1 permission also requires the Airport to develop and implement a Sustainability and Biodiversity Strategy. The Strategy is reviewed every 3 years, with the latest iteration produced in 2021 setting out new targets, actions and initiatives to enhance biodiversity off-site and to promoting access to, and the appreciation of, biodiversity in the wider community.

The 2015 UES concluded that there would be no significant adverse effects on terrestrial ecological receptors subject to the aforementioned mitigation measures being implemented. However, as this assessment was based on an ecological survey of the airport site completed in 2013, a further Preliminary Ecological Appraisal (PEA) will be undertaken in advance of the application.

The PEA will comprise a desk study and Phase 1 Habitat Survey. As part of the desk study, Greenspace Information for Greater London CIC (GiGI) will be contacted for details of non-statutory designated sites and records of protected and notable species within 1km of the site. Information about statutory

designated sites within 5km would be gathered from freely available sources such as the MAGIC website.

A Preliminary Ecological Appraisal Report (PEAR) will be provided with the ES which will confirm whether the site now supports any protected or notable habitats or species, and whether it has the potential to do so. This is expected confirm the findings of the UES 2015 i.e. that the airport has no intrinsic habitat value and the impacts of the construction of the remaining elements of CADP1, and the S73 changes will have a negligible effect on terrestrial ecology and biodiversity.

The regard to aquatic ecology, the KGV Dock wall was surveyed in 2013 during which an abundance of aquatic invertebrates was recorded which are likely to be a food source for fish. The Royal Docks support a variety of fish species such as Grey Mullet (*Chelon labrosus*), Tench (*Tinca tinca*), Pike (*Esox lucius*) and Sea Bass (*Dicentrarchus labrax*). This constitutes a relatively unusual mix of both sea and freshwater fish species, arising as a result of the docks location being transitional between saline seawater and freshwater. To mitigate against the loss of part of the KGV dock wall associated with the construction of the new deck, artificial fish refugia were installed in the dock in 2017. Periodic checks on the refugia are planned to take place to monitor their successful colonisation, including by survey scheduled in June 2022.

The construction works within KGV Dock (i.e. the piling and deck to provide the new stands and parallel taxiway) are now complete and there are no proposed changes to the remaining, as yet unbuilt, CADP1 buildings and infrastructure. The proposed changes to the CADP1 application and the subject of this S73 application are therefore not anticipated to give rise to any new or materially different likely significant effects on sensitive ecological receptors.

Townscape and Visual Effects

The site of the airport has undergone dramatic change in visual character and appearance since the last commercial maritime operations ceased in 1983, morphing from a port and industrial based landscape (with associated

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warehouse, jetties, cranes and associated infrastructure) to a dedicated modern airport and transport hub.

The airport is now surrounded by infrastructure closely aligned to its operations, including the Docklands Light Railway (DLR), hotels, offices, car parks and emerging commercial developments such as the ABP Royal Albert Dock scheme to the north. An established residential community of predominantly terrace houses and flats are situated directly to the south of the airport, with the Tate and Lyle factory dominating the skyline to the southwest. Further new residential developments are being built to the west, north and east, including major developments such as Silvertown Quays and Gallions Quarter. The A112, Hartmann Road, Connaught Bridge and the A1020 route around the airport with the DLR running along the south.

The area generally consists of urban development contrasting with the open areas of water of the Docks and the River Thames. Some isolated landscaped areas exist; however, in most locations there is relatively little vegetation.

The extensive urban area provides a night-time character which is strongly influenced by artificial light from buildings and street lighting. Illumination from outside the airport results in a strong night sky glow to the west. The illuminated buildings of Canary Wharf and central London are prominent night-time features.

The existing airport terminal is a relatively discrete flat roofed building, of approximately 12.8m in height with the air traffic control (ATC) tower at a maximum height of 14.87m (20.36m AOD), located at the western end of the KGV Dock. The ATC Tower is due to be demolished now that Digital Air Traffic Control Tower (DATCT) has been constructed on the southern dockside.

The runway is located on a spit of land to the north and east of the terminal which separates Royal Albert Dock from KGV Dock. The existing aircraft stands (with lighting masts at 12m height) are located between the runway and terminal, serviced by piers which extend west and east from the terminal building. The existing East Pier is 9m high and extends along the south side of aircraft stands 21-24, ending in a short length of noise barrier (8m high) which screens aircraft from residents to the south of the airport.

The 2015 UES included an assessment of Townscape and Visual Effects. This concluded that the proposed new terminal buildings would generally enhance the setting of the Docks and improve the aesthetic quality of the airport, with only limited non-significant adverse effects on local residents. A further Visual Impact Assessment completed by RPS in 2016 in support of proposed DATCT also determined that there would be no significant adverse effects from this new structure at any of the selected key views.

The S73 application is not proposing any physical changes to the approved airport buildings and infrastructure or maximum flight numbers. The proposed changes to the CADP1 application are therefore not anticipated to give rise to any new or materially different likely significant townscape and visual effects.

Archaeology and built heritage

The airport is located within a borough level designated Archaeological Priority Area. As part of its updated Local Plan, LBN published an evidence-based report: Archaeology Priority Areas (Public Consultation Version 2, February 2015). This identifies the site as being located in a Tier 3 Archaeological Priority Area (Newham APA 3.3: Royal Docks) (Tier 1 being the most archeologically sensitive and Tier 4 being least sensitive).

There are no Scheduled Ancient Monuments within a 1km radius of the centre of the site, although there are eight listed buildings. The Royal Docks are not listed and are not within a designated Conservation Area.

The UES submitted in 2015 included a comprehensive assessment of the CADP1 proposals on archaeology and built heritage. Condition 62: Archaeology attached to the CADP1 planning permission, which required the implementation of a programme of archaeological evaluation in accordance with a Written Scheme of Investigation (WSI), has since been complied with and discharged. The WSI was agreed with the Council's Archaeological Adviser (GLAAS) and approved by LBN. The works have included geo-archaeological boreholes with sub-surface topographic modelling plus a 'Level 2' photographic record of KGV Dock.

The airport is also mindful of the need to preserve and reflect elements of the history of the Docks. Whilst not a formally listed heritage feature, the KGV

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Dock and its surviving pontoons (known as ‘Dolphins’), dock wall and adjoining dockside features, such as sections of old railway tracks, do have some heritage value. Therefore, the airport has invested considerable time and resources in surveying and recording these features

There would be no changes to infrastructure or new areas of hardstanding at the airport associated with the forthcoming S73 application. Accordingly, it is considered highly unlikely that there would be any new or materially different significant effects on both below ground and above ground heritage assets.

Ground Conditions and Contamination

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 stratigraphic sequence beneath the airport comprises Made Ground, Alluvium, River Terrace Deposits, Lambeth Group and Thanet Sand Formation. There are no recommended or potential Regionally Important Geological Sites (RIGS) or Locally Important Geological Sites (LIGS) within the LBN.

The airport site is predominantly comprised of hard surfaces. Some limited soft standing exists to the north-west of the site, in the vicinity of the fire training ground. Numerous former industrial land uses were present approximately 100m to the south of the site. A former gas works was located approximately 100m to the south of the site from at least 1873, and to the east of this a sewage works and chemical factory, from 1896.

Existing sources of potential contamination relate to bulk fuel storage and aircraft maintenance, including refuelling and de-icing. However, the areas of fuel storage, aircraft maintenance and fire training ground are well maintained and managed with surface run-off draining to dedicated interceptors.

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 both construction and operation, subject to appropriate mitigation being adopted. Condition 39: Contamination of the CADP1 Permission requires that further ground conditions investigations are undertaken prior to commencement of each phase of construction and that

an appropriate remediation strategy be submitted to and approved by LBN. These investigations have since been undertaken and so this condition has been partially discharged.

There would be no changes to infrastructure or new areas of hardstanding at the airport associated with the forthcoming S73 application. There are no additional risks of contamination associated with the proposed changes. Accordingly, it is not considered that there would be any new or materially different likely significant effects on ground conditions.

Waste

The majority of airport waste is currently produced by airlines, tenants and retail concessions. This includes in-flight waste, terminal waste, aircraft maintenance waste, catering waste and general waste from passengers. Furthermore, waste is produced by airport staff, tenants (office waste) and retail concessions.

The airport currently recycles a range of waste materials including paper, cardboard, cans, and plastic packaging. This is segregated on site at a central storage area (‘the waste hub’) and removed by the waste contractor on a daily basis.

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. Furthermore, a number of workshops have been run to increase waste recycling awareness amongst staff, concessions and the waste contractor.

Construction waste arising from the CADP1 development works is managed in accordance with the Waste Management Strategy, submitted to and approved by LBN in accordance with Condition 70 of the CADP1 planning permission. The changes sought by the S73 application are not anticipated to result in any increase to the volume or composition of construction waste generated by the remaining elements of CADP.

The 2015 UES identified a negligible to minor adverse effect from waste produced during the operational phase of CADP. Waste production at the airport will inevitably increase under the revised proposals due to the increase

in the number of arriving and departing passengers. However, the volume of waste generated by these additional passengers is still considered to be relatively modest in the context of all waste produced within Newham and London as a whole. The East London Waste Authority, which manages the disposal of waste from Newham and three neighbouring Boroughs, has constructed two major Mechanical Biological Treatment (MBT) plants as well as upgraded the four primary Reuse and Recycling Centres, with further initiatives planned to increase recycling rates. The additional waste generated by the airport is not likely to adversely affect the function or capacity of this existing and proposed waste infrastructure.

Condition 56 of the CADP1 permission requires the airport to develop and implement a Sustainability and Biodiversity Strategy. The Strategy is reviewed every 3 years, with the latest iteration produced in 2021. The Strategy includes targets and initiatives to minimise operational waste production and promote sustainability by monitoring waste leaving the airport more closely, raise awareness to staff on recycling, and develop ways to monitor how and where waste is generated at the airport.

Major Accidents and Disasters

The risk of 'Major Accidents and/or Disasters' has been introduced as a potential consideration under the EIA Regulations 2017 and, where applicable, requires 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.

A major accident is defined for the purposes of this report as an occurrence resulting from an uncontrolled event caused by a man-made activity or asset leading to serious damage or destruction of receptors. The term 'disaster' is used to describe a natural occurrence leading to serious damage or destruction of receptors. In both cases, the occurrence could be either immediate or delayed.

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;
- birdstrike risk, i.e. risk of collisions occurring between aircraft and large birds; and
- the risk of wake vortex damage generated by aircraft in flight to properties.

With regard to fatality risk, it should be noted that the number of aircraft accidents worldwide is extremely low in comparison to other modes of transport and industrial activities. Notwithstanding, in proximity to the ends of airport runways the Government has established Public Safety Zones (PSZ) in order to reduce even further the number of people on the ground exposed to such risk. Under the PSZ policy, the Secretary of State regards the area closest to the runway as a Public Safety Restricted Zone (PSRZ).

Regardless of the number of commercial aircraft movements/ flights, the PSRZ is set at 500 metres from the landing threshold at each end of the runway (75 metres from the runway centre line) and there is a general presumption against development and people should not be expected to live or have their workplaces within such areas.

Government Policy also defines a Public Safety Controlled Zone (PSCZ) extending to 1,500 metres from the landing threshold (140 metres from the runway centre line), where the presumption against development still applies but there are two types of exceptions i) extensions or alterations or changes of use to properties where the number of people occupying the property do not increase beyond the existing or consented position; and ii) certain forms of new or replacement development which involve a low density of people living, working or congregating.

Under government policy, there would be no change to the PSRZ or PSCZ because of the project. The highest risk areas remain within these zones and where there would continue to be a presumption against development within them.

Against these PSZ policy criteria, the estimated changes to fatality risk derived from the proposed development is considered to be negligible and not

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significant. Moreover, no additional aircraft movements are sought (beyond the approved 111,000 per annum cap) and the PSZ was previously considered in the UES.

The level of bird strike risk has the potential to be changed by any development that alters the number of birds likely to be present, the bird types seen or their movement patterns by way of increasing or reducing the attractiveness of a particular area to birds. However, as the CADP scheme and the proposed amendments to the conditions do not alter the existing natural features in or around the airport, there is no likelihood that it will have any significant effect on the existing number, type or movement patterns of birds in the area.

Due to steep angle of take off at London City Airport and the low density of properties under the immediate flightpaths, the incidence of wake vortex damage to buildings is currently very low. The PSZ policy limits the potential for development in these areas, therefore limiting the number of properties that could be exposed to any additional risk in the future. Even accounting for higher proportion of large aircraft, it is highly unlikely that there will be any increase in the incidence of wake vortex damage.

The potential effects of natural disasters on the airport include, for example, extreme weather and flooding. As described above, effects associated with flood risk will be considered in an updated Flood Risk Assessment (FRA) submitted with the planning application, whilst climate change impacts will be considered in a dedicated chapter of the ES. In summary, the airport suffers no exceptional climatic conditions or significant flood risk that regularly affect its operations.

Construction of the remaining CADP1 structures could in theory be the cause of major accident, for example indirect effects on the existing fuel storage tanks (e.g. collision with construction vehicle) leading to an explosion or significant pollution of the Docks. However, all construction works will be managed in accordance with the approved Construction Environment Management Plan (CEMP) and relevant regulations such that the risk of such effects occurring is considered to be extremely low and similar to other ongoing activities at the airport.

In regard to other potential 'major accidents and/or disasters' (e.g. terrorism incident, fire or explosion), London City Airport, like all modern airports, operates to very stringent standards of safety and security in accordance with UK and international aviation law and the relevant CAA mandated standards for design and operation. The proposed development has no bearing on these existing controls.

7 CONCLUSIONS

London City Airport is seeking approval to revise planning conditions attached to the 2016 CADP1 planning permission pursuant to Section 73 (S73) of the Town and Country Planning Act 1990 (as amended). This application will be accompanied by an Environmental Statement (ES) which will report on the detailed findings of a process of Environmental Impact Assessment (EIA). The full EIA will be completed over the coming months in order to accurately assess and quantify the environmental effects associated with the proposed uplift to 9.0mppa, extended operating hours and other consequential changes to the existing planning conditions.

Whilst the full results of the EIA process will be reported in the ES that accompanies the airport's planning application, this environmental report is intended to provide an initial overview of the likely effects of the proposed planning amendments. As set out in the preceding sections of this report, at this stage it is not envisaged that any significant adverse environmental effects will occur and that any effects that do arise can be appropriately mitigated; there will be no new or materially different adverse effects as a result of the proposed changes when compared to the existing CADP1 planning permission.

This report is being published in conjunction with other consultation materials, to enable the public and interested parties to understand the potential effects of the proposals and provide feedback on our proposals. All important and relevant environmental issues that are raised by members of the public and consultees will be addressed in the ES and/or other documents submitted with the application.

ANNEX 1: SUMMARY OF CADP1 UES

Introduction

The original Environmental Impact Assessment (EIA) and resulting Environmental Statement (ES) were completed and submitted with the CADP1 planning application in July 2013. The ES was subsequently updated in support of an appeal against the Mayor of London's direction to the London Borough of Newham (LBN) to refuse planning permission (Ref. APP/G5750/W/15/3035673). This Updated Environmental Statement (UES) took into account the passage of time since the original assessment work was undertaken and was founded on a revised set of aviation forecasts produced at that time.

The UES was submitted to the Planning Inspectorate (PINS) in September 2015 in advance of the CADP1 Planning Inquiry, which took place in April/ May 2016. The Inspector subsequently recommended that the appeal be allowed, and that planning permission should be granted. The Secretaries of State for Transport and Communities and Local Government endorsed this recommendation and granted planning permission for the CADP1 scheme on 26th July 2016.

The scope and findings of the UES are summarised within this Annex for the purpose of providing some context to the current EIA being undertaken in conjunction with a forthcoming Section 73 (S73) 'minor-material amendment' application to vary certain conditions of the CADP1 planning permission.

The 2015 UES remains a valid and relevant account of the predicted physical environmental effects associated with the build out of the remaining elements of CADP1 scheme. This is because the current proposals do not seek to introduce any significant new infrastructure or to alter the design and layout of the new terminal buildings and other enhancements to the airport campus, which were approved in 2016 under the CADP1 permission. These approved buildings will now be built out commensurate with the recovery of passenger demand, albeit at a slower pace than originally envisaged prior to the onset of the Covid-19 pandemic.

Summary of Findings of UES

The UES included an assessment of the potential impacts and likely significant effects associated with the following environmental topics:

- Socio Economics;
- Noise and Vibration;
- Air Quality;
- Townscape and Visual Impact;
- Surface Transport and Access;
- Water Resources and Flood Risk;
- Ecology and Biodiversity;
- Cultural Heritage;
- Waste;
- Ground Conditions and Contamination; and
- Climate Change.

Topics that were scoped-out of the EIA, in agreement with LBN, included: Safeguarding; Daylight, Sunlight and Overshadowing; Telecommunications Interference; and Electromagnetic Radiation.

A brief summary of the findings of each of the 'Scoped-in' technical assessments is provided in the following sections.

Socio Economics

The UES concluded that the proposed CADP1 would deliver substantial beneficial effects from direct onsite employment, induced employment and Gross Value Added (GVA) in the study area. The construction phase alone was assessed as having a moderate beneficial effect associated with construction employment. The impact of additional retail provision at the airport on retail businesses in Woolwich was judged not to be significant.

Noise and Vibration

Construction activities associated with CADP1 were anticipated to give rise to a negligible impact during daytime operational hours and minor adverse impact during out-of-operational hours (night-time and weekends). The greatest risk

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of noise impacts to surrounding residents was considered to occur during piling and the construction of the deck over KGV Dock; works which have now been complete. However, all future construction works are to be subject to noise mitigation measures including the adoption of a Construction Environmental Management Plan (CEMP) to safeguard the amenity of the surrounding community.

Following the development of CADP1, there was predicted to be a small change in all forms of noise, with an increase of less than 1.0 dB. However, more people were predicted to become affected by aircraft noise in the 'with development' case, with a maximum 57dB contour area of 9.1 km² and an increase of 0.9% of people affected with CADP1 in place than without it.

Taken as a whole, the UES concluded that the air noise impacts associated with the CADP1 would be of a minor adverse nature. For those properties closest to the airport, and thus most affected by noise, protection has already been afforded through the Sound Insulation Scheme (SIS). This scheme has been provided for many years by the airport and was enhanced as part of the CADP1 planning permission.

The overall ground noise effect of CADP1 was assessed as negligible to minor adverse with a small number of properties exposed to significant adverse increases in ground noise. Increases in road traffic noise were expected to give rise to negligible adverse impacts with the exception of properties on Woodman Street. These latter properties would benefit from the airport's SIS and would be exposed to a minor absolute level of road traffic noise.

Air Quality

The UES predicted that dust from construction related activities such as the demolition, earthworks and track-out activities was likely to occur and therefore recommended the adoption of a range of dust suppression and other mitigation measures be included in the CEMP. No other significant sources of air pollution were identified for the construction phase. Accordingly, the overall impacts of the construction works were judged not to be significant.

During operation, a large number of properties would experience imperceptible increases to pollutant concentrations whilst, with the introduction of the new

eastern access to Hartmann Road, properties at the western access point (close to Camel Road) would experience a reduction in concentrations. The impacts were concluded to be negligible to slight adverse at all receptors.

The CADP1 proposals were predicted to generate an increase in airport-related NO_x emissions broadly corresponding to the increase in the number of passengers and scheduled aircraft movements. However, a large proportion of emissions from aircraft are released at height (up to 915 metres) and will have very little, if any, influence on ground-level concentrations.

Townscape and Visual

The UES predicted that during construction most visual receptors would experience a negligible to minor adverse impact, with temporary construction noise barriers shielding many residents from views of the works. A small number of residents on the north side of Silvertown were anticipated to experience a substantial adverse effect but this would mainly occur during the piling and deck works which are now complete.

Once constructed, the new CADP1 buildings will be clearly visible from Dockside areas and from residential areas including areas in relatively close proximity at Silvertown to the south. The UES concluded that significant effects are likely from publicly accessible locations on the north side of the Royal Albert Dock and a small number of residential properties in Silvertown. The majority of receptors, however, would experience a negligible and minor to moderate adverse effect. None of the effects on townscape character, including those on the Royal Docks Conservation Area, were regarded as significant.

Surface Transport and Access

As with the initial phases of construction, a Construction Logistics Plan (CLP) will be in place which will provide appropriate mitigation measures to minimise the impacts associated with construction traffic on the local road network. This specifies designated construction traffic routes to / from the airport, as well as proposed dust and noise suppression measures.

The effect of construction activity associated with CADP1 on surface transport networks surrounding the airport was considered to be temporary and minor adverse.

During the full operation of CADP1 (with 6.5 million passengers per annum), the transport assessment identified an increase in traffic on some highway links and a reduction in traffic on others due to the creation of an additional vehicle access point to the airport and consequential redistribution of airport-related traffic. Accordingly, the effect associated with changes in traffic flows was concluded to vary from moderate adverse to minor beneficial. The effect on public transport was concluded to be minor beneficial.

The likely residual 'environmental' effects on Severance and Driver Delay were expected to be minor adverse, with negligible effects on Pedestrian Delay and Accidents and Safety, and minor beneficial effects on Pedestrian Amenity and Fear and Intimidation.

Water Resources and Flood Risk

Following the implementation of an effective CEMP and water quality monitoring regime during the piling works in KGV Dock, the UES concluded that the residual effects associated with surface water runoff and water quality would be negligible. These works have since been completed without any significant or lasting effect on water quality in the Dock

The airport is located within an area at risk of flooding in the event of a breach of local flood defences; however, this risk is 'residual' due to the presence of and maintenance of the Thames Barrier and other River Thames defences. There would be no loss in floodplain storage and no alteration of flood flow routes as a result of the development of CADP1.

Existing surface water flow rates would be reduced through the proposed Surface Water Drainage Strategy, which has since been approved by LBN and the Environment Agency. CADP1 would also incorporate flood mitigation measures and a Flood Management Plan as detailed within the submitted Flood Risk Assessment. Accordingly, it was considered that CADP1 would have a negligible effect on flood risk and a moderate beneficial effect on the local drainage network associated with the reduction in discharge flow rates.

Ecology and Biodiversity

As assessed in the UES, the piling and deck component of the CADP1 construction resulted in the direct loss of dock wall habitat which was predicted to have a minor adverse impact on the aquatic invertebrates and fish fauna. To compensate for the loss, and in accordance with the recommendations in the UES, replacement habitat in the form of 'fish refugia' were installed in the KGV Dock in 2019.

For all other ecological receptors, the UES concluded that there would be no likely significant residual effect assuming that appropriate mitigation measures were adopted in the CEMP.

During operation of CADP, the UES concluded that there would be no significant effects on any ecological receptors or habitats.

Cultural Heritage

The magnitude of impact on the heritage and character of KGV Dock was assessed to be moderate, with the overall effect on its setting being a minor effect. The majority of direct effects on the individual structural components of KGV Dock were considered to be minor, although the effects on buried archaeological remains were considered to vary from negligible to high. Any archaeological deposits and remains were expected to vary from low to medium significance, leading to an effect that could vary from neutral to moderate.

In agreement with Greater London Archaeology Advisory Service (GLAAS) and LBN, mitigation was implemented before the commencement of the CADP1 construction works, comprising historic building recording and archaeological boreholes to enhance knowledge of heritage assets and the LBN Archaeological Priority Area.

Operational impacts on the setting of statutory designated heritage assets in the Study Area were assessed as being of minor significance, with the effect on locally listed buildings and structures being neutral.

Waste Management

The one-off volume of demolition, earthworks, piling and foundation spoil, and other construction waste produced during construction of CADP1 results in an increase in waste arisings relative to baseline waste volumes. However, the UES concluded that this would not significantly impact the existing and proposed waste management infrastructure and with measures in place to re-use, segregate and recycle waste, the residual effects from waste produced during the construction phase were considered to be negligible to minor adverse.

Operational waste production at the airport would inevitably increase under CADP1 due to the increase in the number of arriving and departing passengers; however, volumes of waste generated as a result of this growth were considered to be relatively small and unlikely to adversely impact existing and proposed waste infrastructure. The residual effects associated with operational waste arisings were considered to be negligible to minor adverse.

Ground Conditions

The UES concluded that during different phases of the construction of CADP1, there are some potential risks to sensitive receptors (e.g., construction workers, end users and controlled waters) from the disturbance and mobilisation of ground contamination. However, these can be appropriately mitigated through the implementation of the Site Waste Management Plan, CEMP and other best practice procedures. Furthermore, any residual near surface contamination identified during the construction works will be removed. Therefore, the residual effects were considered to be negligible.

During operation, the residual effects arising from ground conditions at the site were considered to be of negligible significance

Climate Change

When calculated on a per passenger basis, the UES predicted that total Greenhouse Gas (GHG) emissions would be lower with the CADP1 in place in 2025 than for the previous baseline year (2015). This was due to a combination of projected decarbonisation of grid electricity generation and the predicted

change in the composition of the aircraft fleet at the airport in future years, with gradual introduction of more fuel-efficient aircraft types.

Overall, the UES predicted a 25% increase in passengers with CADP1 compared to without CADP1, while also leading to a minor decrease in total GHG emissions per passenger because the new 'Code C' which can carry more passengers over greater distances and have proportionately lower emissions throughout the full flight cycle than older aircraft.

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