

CITY AIRPORT DEVELOPMENT PROGRAMME
(CADP1) S73 APPLICATION

BENEFITS AND MITIGATION STATEMENT

DECEMBER 2022





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LONDON CITY AIRPORT

Benefits and Mitigation
Statement

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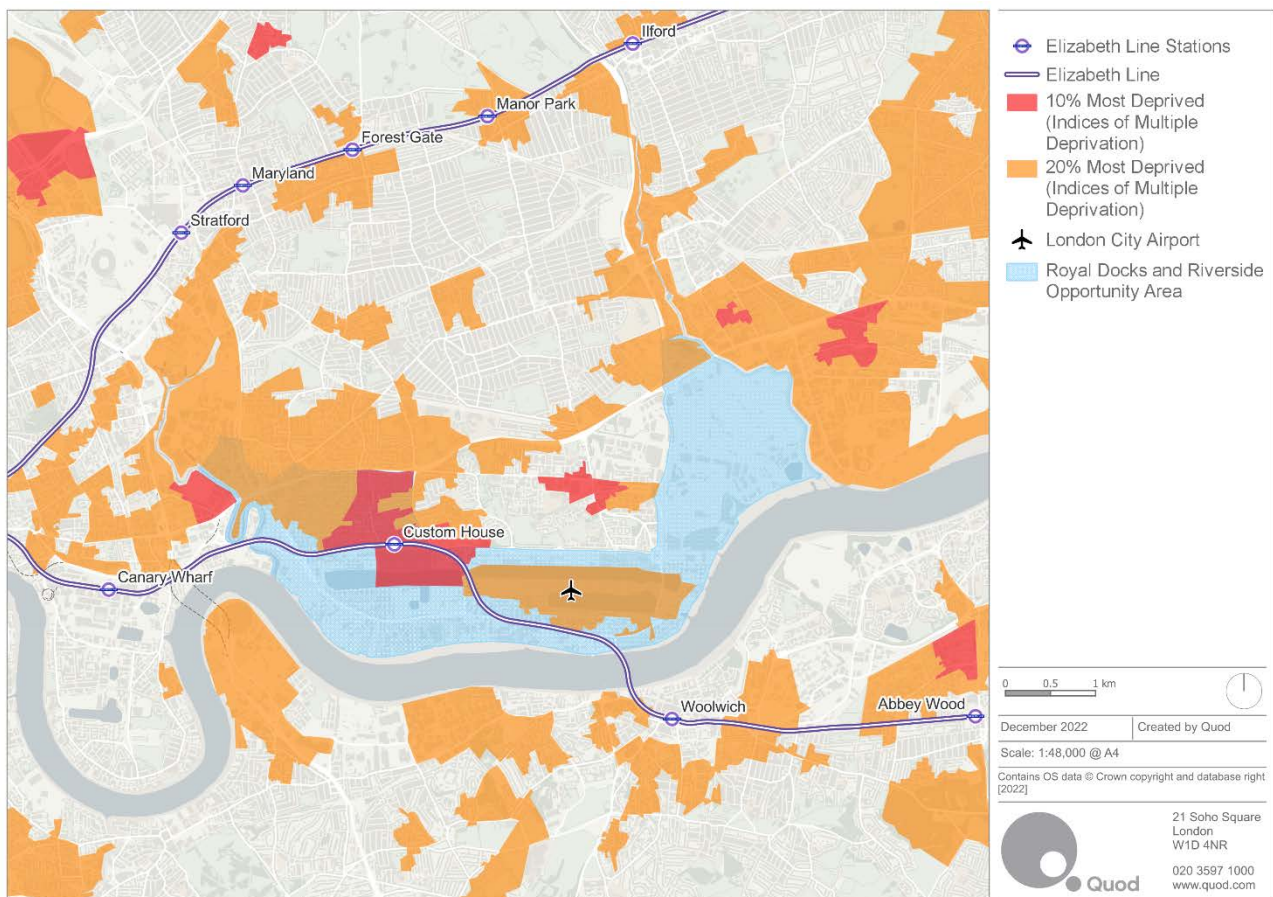
1 Introduction

- 1.1 This report provides an overview of the benefits and mitigation which will be secured as part of London City Airport's (LCY's) proposals to make best use of its consented CADP1 infrastructure. The proposed amendments contained in the 'S73 Application' will increase capacity to 9 million passengers per annum, extend opening hours and make other related changes without new infrastructure or increases to the permitted number of flights. The proposed amendments have been informed by feedback during the extensive 10-week period of public consultation between 1 July and 9 September 2022.
- 1.2 The airport has been at the heart of the growth and regeneration of the Royal Docks and East London since it opened in 1987. The proposed amendments will allow LCY to continue to play a vital role in the local area, in East London and beyond. Government places significant weight on the importance of the economic contribution of the aviation sector and its recovery from the COVID-19 pandemic and seeks to ensure that environmental impacts are addressed and where appropriate mitigated. This statement summarises the economic and other benefits that the proposals will bring as well as the main mitigation measures.
- 1.3 There are already an extensive suite of noise, surface transport and other mitigation measures in place at the airport. The proposals will maintain and enhance these. Consistent with LCY's Sustainability Roadmap, the proposals will also help to secure a step change in the operation of the airport with an objective to become London's first net zero (Scope 1 & 2) emissions airport by 2030.
- 1.4 This report summarises the headlines with respect to the benefits and mitigation measures which are based on the detailed assessments and supporting information accompanying the proposed amendments, with the appendix providing a route map to where the commitments are set out in the S73 application documents. The report is structured as follows:
 - Section 2: Supporting the Local Economy
 - Section 3: Supporting London and the UK
 - Section 4: Carbon and Energy reduction
 - Section 5: Control of Noise
 - Section 6: Surface Access Strategy
 - Section 7: Conclusions

2 Supporting the Local Economy

- 2.1 Despite progress, the London Borough of Newham (LBN) and large parts of East London have high levels of deprivation with particular challenges of low levels of economic activity and high unemployment amongst young people, women and ethnic minority groups.
- 2.2 The Indices of Multiple Data (2019) (IMD) shows that the majority of the LBN is within the 30% most deprived areas in the country. Other East London Boroughs also have high levels of deprivation. Tower Hamlets, Hackney and Barking & Dagenham sit within the bottom 4 most deprived Boroughs in London (Newham is ranked the 6th worst). The airport itself lies within an area that is amongst the 20% most deprived in the UK and is close to significant areas within the 10% most deprived areas with very high levels of deprivation (see Figure 2.1).

Figure 2.1: Indices of Multiple Deprivation 2019 – All domains

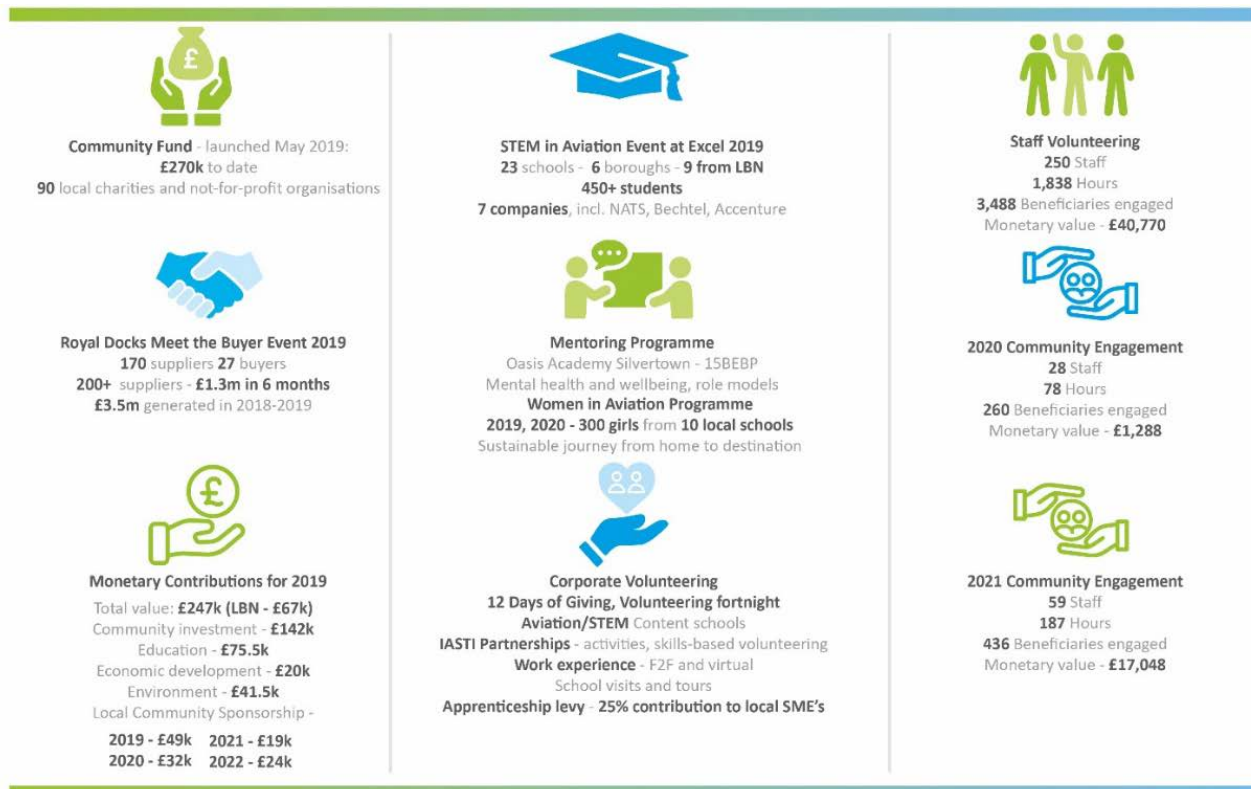


- 2.3 LBN is in the highest priority category for levelling up due to the acute need for regeneration and economic growth, and has already received funding through the Levelling Up Fund. The need for sustainable and well-paid employment opportunities is recognised in LBN's Local Plan (2018).

The role of LCY today

- 2.4 In 2019, there were 2,310 people employed on-site at the airport. Jobs at the airport create long term, sustainable opportunities for local people across a range of jobs and skill levels. It has a mix of part time and full-time jobs, allowing people to work around their lifestyle, and provide pathways of employment for people to progress their careers.
- 2.5 The airport has already delivered on its commitment to becoming a London Living Wage employer since 2019 and is rolling this commitment out to its key direct suppliers. It is also an early adopter of the Mayor of London's Good Work Standard, becoming the first UK airport to achieve both milestones.
- 2.6 Figure 2.2 illustrates some of the wide range of initiatives to deliver skills, jobs, supply chain and community benefits at LCY. In addition to this airport has recently completed *Meet the Buyer* and STEM in Aviation days and is also actively engaged with the local community with, for instance, assistance with foodbanks.

Figure 2.2: LCY skills, jobs and community initiatives



Delivering jobs for Residents of Newham

- 2.7 The proposed amendments will deliver an additional 1,340 jobs (1,170 FTEs) at the airport by 2031 compared to 2019, bringing the total number employed onsite to 3,650 (3,230 FTEs). Of these;

- 330 jobs are expected to be in management, professional and technical roles
- 240 jobs are expected to be in administrative, trade and services roles; and
- 770 jobs are expected to be in sales, process and elementary roles.

Additional Commitments

Funding local education, training and skills initiatives

- 2.8 The airport is committed to ensuring that the potential benefits to Newham residents are maximised and not just through direct employment.
- 2.9 The CADP1 S106 included obligations securing extensive contributions for education (£770,000) and employment initiatives (over £5 million) within Newham. The contributions which are paid to LBN are directly focussed to support skills, training and recruitment activity and create employment opportunities for Newham residents at the airport as part of the CADP1 development.
- 2.10 The proposed amendments will further increase employment at the airport and across Newham. It is therefore proposed to build on the ongoing investment in skills and training, with a further commitment of up to £1.9m additional funding to LBN to support ongoing education, training and assistance in getting more local people into work at the airport.

Enhanced Community Fund

- 2.11 A significant enhancement to the airport's Community Fund is proposed. This will see a total fund of £3.85 million administered over 10 years. The enhanced fund could be used to fund a variety of community interventions that improve amenity in areas local to the airport and along its flight paths, particularly given that proposed change to operating hours on a Saturday PM.

3 Supporting London and the UK

- 3.1 LCY has been at the heart of the growth and regeneration of London. It is central to the 'offer' of East London, to the growing population and workforce and in reinforcing the role of London's globally important clusters of economic activity.
- 3.2 The proposed amendments will allow the airport to continue to play an important role in East London, supporting the wider London and UK economy. As London is disproportionately important to the national economy (it is one of the only two net beneficiaries to the Treasury), locating investment in the capital supports the UK's economy.

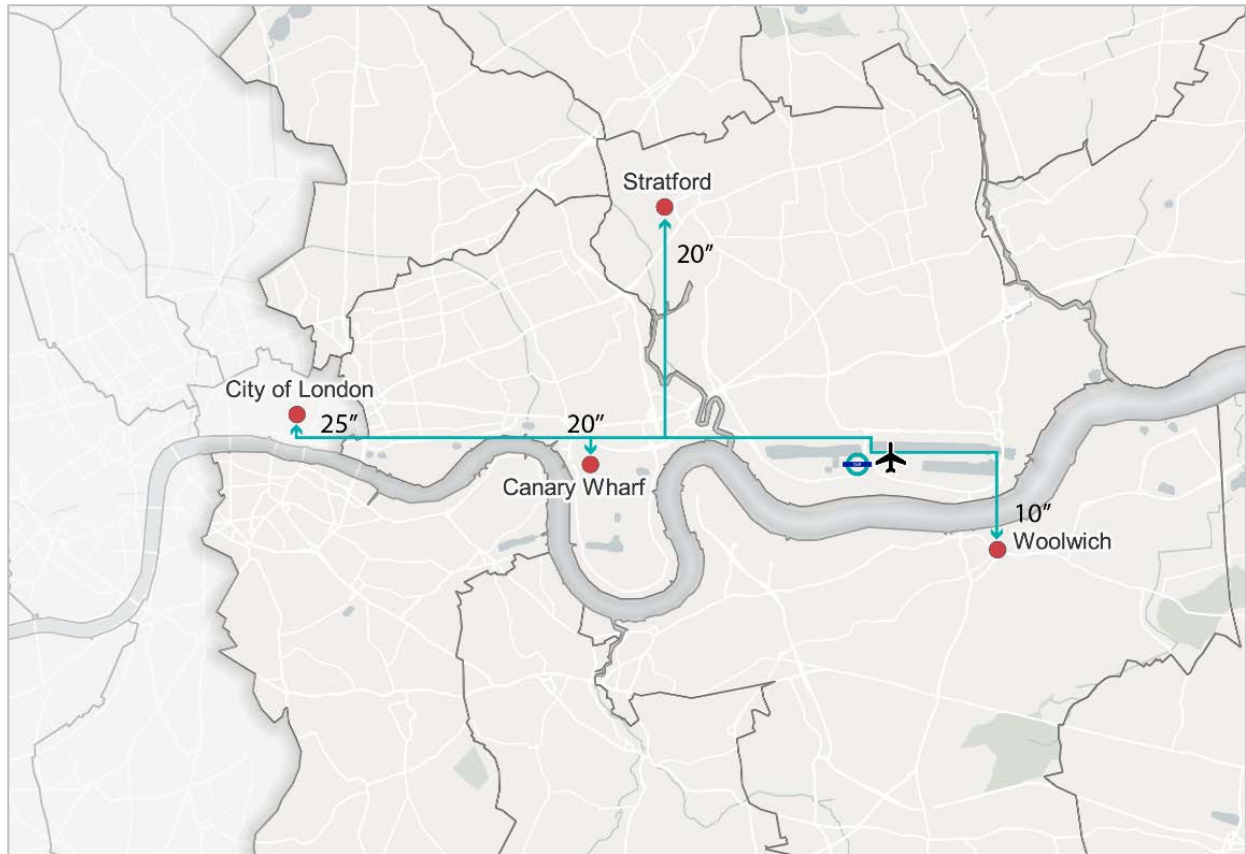
Ensuring London maintains its reputation as a global city

- 3.3 By the end of 2040 the total Gross Value Added (GVA) across all key industries in London is projected to reach close to £700 billion, which is among the largest city economies across the globe (GLA Economics, August 2016). GLA Economics' paper in 2016 states that London's total GVA in 2014 is the world's fifth largest city economy. This is strengthened by London's several advantages in retaining talent, economic diversity and strategic/geographical position in the global economy. The analysis suggests that the Information and Communication sector will be the fastest growing and will have grown by 224% by the end of 2040. Financial and Insurance will be the largest sector by 2040, accounting for 16% of London's total GVA.
- 3.4 LCY helps these sectors benefit from lower market barriers, a greater pool of talent, access to knowledge and innovation, and a bigger customer base through air connectivity.
- 3.5 LCY is the airport of London's business travellers – it has the highest share of business passengers of all airports in London region (46% of all passengers are business passengers¹). The airport with the second highest share of business passengers is Heathrow (25%).
- 3.6 The availability of direct flights to other European business centres and fast and reliable public transport links from LCY to the City of London, Canary Wharf and other business centres in London contributes to its strategic importance in the regional and national economy.
- 3.7 The airport is crucial to the success of London as a global city and is only 25 minutes from the City of London and 20 minutes from Canary Wharf (by DLR). This means the airport plays a key connectivity role for high value and high growth industries located in the London's' most productive and important clusters.
- 3.8 It contributes to London's image as a global city, helping to attract Foreign Direct Investment and Global Headquarters, and high-end tourism.

¹ Civil Aviation Authority (CAA), 2019; https://www.caa.co.uk/media/1yujnckv/t02_2019.pdf

3.9 International connectivity, provided by the presence of successful airports is key to the success of the wider UK economy. It helps to facilitate trade in goods and services, supports companies to access markets and drives business innovation and investment.

Figure 3.1: London City Airport - Connectivity in the Local Area



Supporting economic growth

3.10 The proposed amendments will result in 4,470 additional jobs (3,750 FTEs) across London by 2031 compared to 2019, as well as £702m in additional GVA². This is made up as follows:

- 1,340 addition jobs onsite, supporting additional GVA of £144m
- 830 additional jobs through supply chain and spending effects, supporting additional GVA of £105m
- 2,300 further jobs through catalytic effects (supported as a result of increased inbound tourism and increases in business productivity), supporting £453m of additional GVA.

² GVA is the local equivalent of Gross Domestic Product (GDP)

Table 3.1 Growth in employment and GVA 2019 to 2031

	East London			London		
	FTE	Jobs	GVA	FTE	Jobs	GVA
Direct jobs	1,170	1,340	£144m	1,170	1,340	£144m
Indirect & Induced jobs	340	780	£45m	720	830	£105m
Catalytic effects	490	600	£132m	1,860	2,300	£453m
Total	1,990	2,720	£321m	3,750	4,470	£702m

3.11 This increased economic activity will bring LCY's total annual GVA contribution to over £1.6 billion (an increase of £702m over 2019 levels).

Supporting growth in East London

3.12 East London is growing faster than any other area in London. Both the population and workforce are expected to grow significantly over the next two decades.

3.13 The GLA employment growth forecast by borough projects that the number of jobs in LBN is going to increase to 176,000 in 2031 (this is 61% growth since 2015, compared to 17% in London)

3.14 LBN has the second highest housing target in the London Plan (after neighbouring Tower Hamlets), see Figure 3.2. The three London boroughs with highest housing targets – Newham, Tower Hamlets and Greenwich are very well connected to the airport.

3.15 Over a fifth of passengers (22%) who use LCY originate from or are going to East London³ – when Greenwich, Lewisham and Bexley and Bromley are included this increases to almost a third (32%).

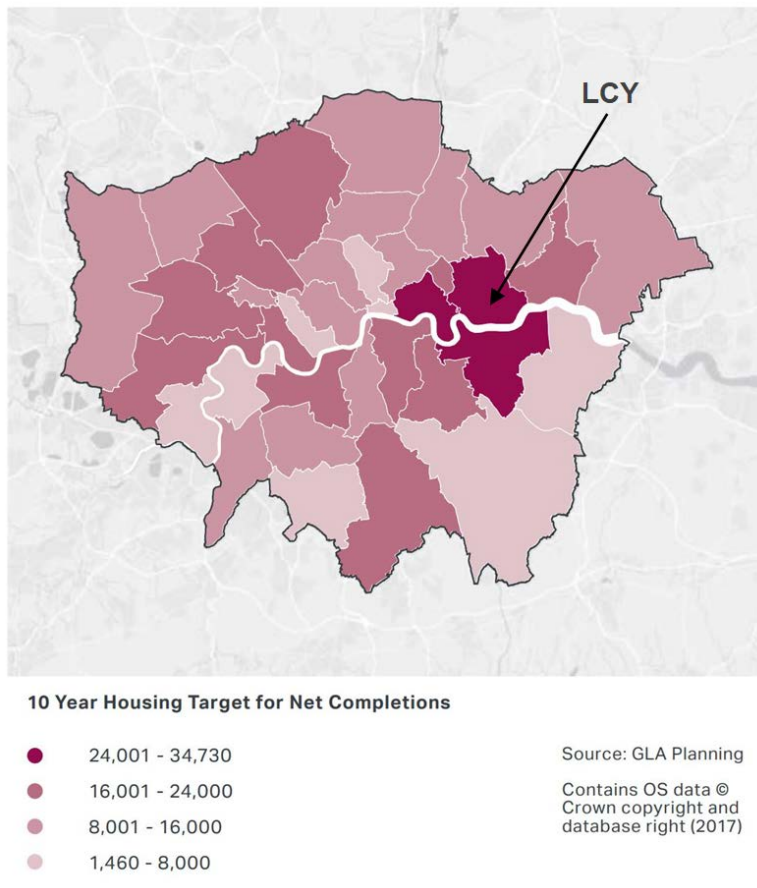
3.16 In 2019 LCY served 11 of the most important world cities⁴ (out of 17 in Europe). These cities provide advanced services that link major economic regions and states into the world economy and included Amsterdam, Milan, Frankfurt, Zurich, Dublin, Luxembourg and Prague. The airport also served major “second tier” cities including Berlin, Dusseldorf, Budapest, Geneva, Antwerp and Rotterdam.

3.17 It also plays a critical role in domestic connectivity, serving Aberdeen, Dundee, Edinburgh and Glasgow in Scotland, plus Belfast and the Isle of Man.

³ East London comprises: Hackney, Waltham Forest, Tower Hamlets, Newham, Redbridge, Barking and Dagenham and Havering

⁴ As defined by the Globalisation and World Cities Network (GaWC)

Figure 3.2: 10 Year Housing Target for Net Completions⁵



Providing East London passengers with more choice

- 3.18 The proposed amendments will allow the airlines to grow their route network, increasing frequencies of service to existing destinations and services to new destinations.
- 3.19 Specifically, longer operating hours on Saturdays would create more opportunities for local residents to use their local airport for leisure as well as business purposes, with a greater range of holiday destinations available at weekends, to places such as the Eastern Mediterranean, including the Greek Islands, or the Canary Islands, which currently cannot be served on Saturdays as the airport shuts too early for the return flight to operate.
- 3.20 Importantly, the changes will also allow better connections to hubs, such as Amsterdam, to provide onward connections to global points facilitated by increased early morning and Saturday afternoon operations. By 2031, around 2.7 million passengers at the airport are expected to be travelling to or from East London, up from around 1.5 million passengers in 2019. This reflects the greater range of services that will be offered by the airport with growth and increased operational flexibility.

⁵ The London Plan 2021, p.164

4 Carbon and Energy Reduction

- 4.1 As part of the CADP1 development, the airfield infrastructure to accommodate the new generation of cleaner, quieter aircraft is already in place. Along with investing in new stands, the airport is participating in a UK-wide programme to modernise UK airspace, which will result in more efficient, direct flight routes and associated reductions in carbon emissions.
- 4.2 The airport recently published its Sustainability Roadmap ['Above and Beyond: Our Roadmap to a Sustainable Future'](#) (the Roadmap). The Roadmap sets out plans for LCY to become one of the most sustainable airports in Europe and to become London's first net zero emissions airport by 2030. The Roadmap has identified 'three pillars' which are at the heart of the Airport's ambitions.
- 4.3 This proposed amendments are central to the successful delivery of the Roadmap and accelerating commitments. As explained in the Need Case they will further incentivise airlines to re-fleet and transition more quickly to efficient modern quieter aircraft⁶ with lower carbon emissions.
- 4.4 The proposed amendments will result in Green House Gas emissions per passenger falling by up to 27% by 2031⁷. New generation Embraer aircraft being introduced at the airport produce 17% less carbon emissions per passenger than the aircraft they are replacing.
- 4.5 The airport recognises that it has a particular responsibility to reduce Green House Gas (GHG) emissions, particularly Scope 1 and 2 emissions which it can control. It also wishes to meaningfully influence Scope 3 emissions (see Figure 4.1 for definitions).

Scope 1: These include emissions from **activities owned or controlled by the airport** that release GHG emissions into the atmosphere. They are known as direct emissions and can be controlled by the airport.

Scope 2: These include emissions released into the atmosphere **associated with the airport's consumption of purchased electricity, heat, steam and cooling**. These are indirect emissions that are a consequence of the airport's activities. Whilst the airport does not directly emit these emissions it can control them through its energy management and purchasing decisions.

Scope 3: These include emissions that are associated with the airport but occur from sources which are not owned or controlled by the airport, the largest contributor being aircraft in flight followed by passenger transport. These are indirect emissions; the airport can influence these emissions but not control them.

Figure 4.1 Types of GHG emissions

- 4.6 The airport has outlined five core commitments in the Roadmap:
- Becoming a net zero carbon airport by 2030 (Scope 1 and 2).
 - Be one of the first airports in the UK to facilitate zero emission flight (Scope 3).

⁶ See section 5

⁷ Figures extrapolated from comparison between DC and DM assessment in Chapter 11 (Climate Change) of the ES

- Support local people by creating more opportunities, increasing investment for community groups, and requiring all on-site partners to pay the London Living Wage by 2026 (Scope 1).
- To be the best-connected airport in the UK with 80% of all passenger journeys to the airport to be made by sustainable transport modes by 2030 (Scope 3).
- Eliminate all avoidable single-use plastics within the airport by 2025 and be a zero-waste airport by 2030 (Scope 1)

4.7 In 2019 over 90% of LCY's total emissions were associated with aircraft flying. These Scope 3 emissions are primarily the responsibility of the airlines, who are required to drastically reduce their emissions in accordance with Government climate change commitments and targets contained in the Government's Jet Zero Strategy. As figure 4.2 shows, the Government's strategy seeks to half emissions by 2050 with the residual to be offset or removed (creating net zero aviation).



Figure 4.2 Government CO₂ reduction targets (Page 16 Jet Zero Strategy, July 2022)

4.8 To achieve the interim targets shown, the Jet Zero Strategy includes a mandatory target for sustainable aviation fuel to be 10% of the UK fuel mix by 2030, domestic flights to be net zero by 2040 and is targeting airport operations to be zero emission by 2040. The airport is committed to help facilitate the transition. It will have the infrastructure in place to meet the target of 10% sustainable aviation fuels by 2030 or earlier, it is actively participating in initiatives to enable zero emissions flights in the longer term consistent with climate change commitments (see below) and will aim to meet the 2040 target for zero emission operations.

4.9 The Revised Energy and Low Carbon Strategy in support of the proposed amendments demonstrates that the improvements to the previously approved CADP1 plans can meet and go beyond the Part L2 2021 Building Regulations and the London Plan 2021 requirements. In doing so, the improved Energy Strategy will achieve a 46% reduction in carbon emissions compared with the consented scheme (11% betterment of the 35% reduction requirement in the London Plan 2021). This can be achieved because LCY is committing to a number of significant enhancements to the previously approved CADP1 energy strategy, including improved efficiencies in the terminal design; a move away from gas fired CHP to a

development wide heat network supplied by air source heat pumps; safeguarding for heat exchangers to allow connection to district heating; and enhanced use of photovoltaic panels.

- 4.10 The airport is also targeting 80% of passenger journeys to and from the airport to be on sustainable transport modes by 2030. The initiatives explained in section 6 of this statement explain how its ambitious targets will also contribute to reducing carbon emissions.

Additional Commitments & Mitigation

Airport Operations (Scope 1 & 2)

- 4.11 The Sustainability Statement accompanying the application explains how the airport is responding responsibly to social, economic and environmental sustainability and drawing on this document, the Sustainability Road Map and the Climate Change chapter of the Environmental Statement, including the Outline Carbon and Climate Change Action Plan, set out the measures that the airport is committed to deliver as part of the proposed amendments. It is anticipated that a planning condition would require a (full) Carbon and Climate Change Action Plan to be agreed in due course and kept under review to deliver the commitments.
- 4.12 This Action Plan will be the means by which the airport can demonstrate progress to achieve net zero emissions from airport operations (Scope 1 and 2) by 2030. It will also commit to a feasibility study to enable the airport to generate zero emissions by 2040. Specific measures to meet short term targets up to 2030 beyond the Road Map include committing to transitioning to zero emission vehicles (subject to replacements being commercially available).

Facilitating Sustainable aviation (Scope 3)

- 4.13 The Government has set a mandatory target of 10% SAFs by 2030. Because SAFs are blended with existing aircraft fuel, subject to minor modifications, existing infrastructure at the airport can be used to meet this target. The airport will work with its airlines should there be a possibility of achieving this target earlier.
- 4.14 The airport is a member of Project NAPKIN (New Aviation Propulsion Knowledge and Innovation Network) which along with Heathrow Airport, three universities and aviation industry leaders including Rolls Royce, have been exploring the feasibility of zero emission aircraft including the necessary infrastructure needed to ensure that it is successful. In the longer term the aviation industry is expected to use sustainable energy with Project NAPKIN anticipating the adoption of hydrogen power. Beyond 2030, LCY's characteristics and focus on smaller aircraft and European and regional destinations mean that airlines based at the airport could be early adopters of the zero emission technologies. Initial studies show potential for the airport's domestic network could be zero emission by 2040.
- 4.15 As one of the first mainstream airports to offer a zero emission flight schedule it will need to be a leader in the field with opportunities for knock on benefits for other industries and in turn a more rapid transition to net zero. Going forward, LCY wants to create opportunities in skills and research and develop these locally so that it is a leader in zero emissions flying. By doing so it can create a focal point for the green economy in the Royal Docks.

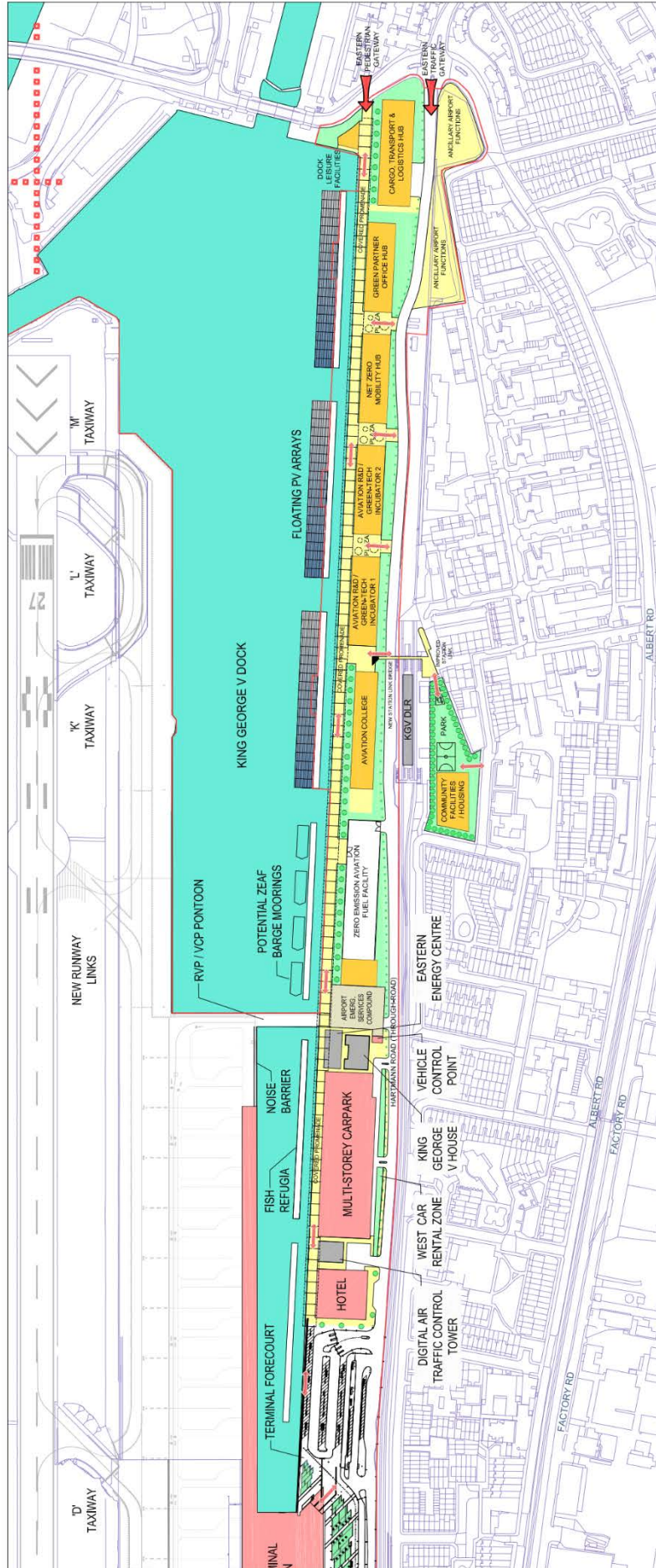
- 4.16 The medium to long-term timescales for zero emission aircraft mean that it is premature to make firm plans for zero emission infrastructure in the timeframes of the S73 application, not least because future commercial and technological progress is needed to better understand what infrastructure is needed. The illustrative masterplan below therefore shows how space could be safeguarded for future sustainable aviation infrastructure and shows the potential for hydrogen facilities and moorings, should this prove feasible.
- 4.17 Sustainable aviation infrastructure and innovation is part of a wider vision to make better use of under utilised land on the dockside which the airport owns. Building on the transformation of the Royal Docks and the current Newham Local Plan employment allocation (logistics and transport), subject to consolidating existing functions and securing necessary permissions in future, there is potential for:
- Infrastructure to support and accelerate LCY's transition to Net Zero, while also supporting the aviation sectors carbon reduction plans (such as a Zero Emission Aviation Fuel Facility and/or potential photovoltaic arrays either in the KGV Dock or on any new buildings);
 - Employment opportunities for the wider industry to support the journey to net zero, including research and development, green technology and other airport related jobs;
 - Education partnerships to train up local residents into the next generation of jobs in aviation and supporting industries;
 - Logistics and Transport Hub including potential for green technologies as well as supporting office space; and
 - Improved public realm, community facilities and pedestrian connectivity.
- 4.18 The illustrative masterplan below shows potential to deliver an education/innovation centre next to the King George V (KGV) Docklands Light Rail (DLR) Station. Given the LCY's developing expertise in sustainable aviation, there is a significant opportunity to partner with leading research and education institutions who specialise in aviation or work with London universities on knowledge development. This could be delivered alongside more traditional employment uses. The airport also own a site south of KGV DLR Station that it currently under-utilised and could be used for a range of educational or community purposes with the potential to be better integrated with the LCY site and the DLR Station access.



1 Masterplan Vision (Illustrative) - CGI View Toward South-West
NTS



2 Masterplan Vision (Illustrative) - CGI View Toward North-East
NTS



3 Masterplan Vision (Illustrative) - Site Plan & Connectivity
2020

5 Control of Noise

- 5.1 The airport is committed to minimising the noise impact of its operations on the local area. Many of the airport's noise mitigation measures benefit everyone who experiences noise from aircraft operations, both those within and those outside of the air noise contours.
- 5.2 In addition to limits on the overall number of aircraft movements and noise contour, and other controls, the CADP1 Permission includes a comprehensive set of established mitigation measures:
- **Noise Management and Mitigation Scheme (NOMMS)** - As required by the existing Condition 31 of the CADP1 planning permission, LCY have produced the NOMMS which is a framework to provide a robust system of noise monitoring and mitigation. This includes the measurement and monitoring of a range of different airport operations that generate noise, such as aircraft arriving and departing and APU usage.
 - **Incentives and Penalties Scheme** - The airport operates a scheme of incentives and penalties based on departure noise levels. The penalty limits are the most stringent of any UK airport for daytime operations. Under the penalties part of the scheme a fixed penalty for exceeding upper noise limits is charged at a rate of £600 per dB of exceedance. The money from any penalties accrued is added to the Community Fund.
 - **Control of Ground Noise** - In accordance with Condition 8 of the CADP1 planning permission, aircraft maintenance and repair work and ground running of aeroplane engines is restricted to specific hours and locations and the time of any engine ground running on the apron for maintenance is monitored.
 - **Sound Insulation Schemes** - As part of the CADP1 permission, LCY operates a three tier sound insulation scheme (SIS) for residential properties which offers sound insulation treatment to eligible properties within the 57 dB LAeq,16h (Low Tier), 63 dB LAeq,16h (Middle Tier) and 66 dB LAeq,16h (High Tier) noise contours. Eligible community buildings such as schools and community centres are also eligible under the scheme with works developed and agreed on a case-by-case basis.
 - **Aircraft Noise Categorisation Scheme (ANCS)** - LCY operates an Aircraft Noise Categorisation Scheme (ANCS) based on a noise quota count (QC) system. Under the ANCS each aircraft type is assigned a separate quota count (QC) for arrivals and for departures, based on their certification noise levels and categorised into 1 dB bands. The quota count system is similar to that operated at many UK airports at night but operates during all the operational hours.
 - **Noise Barriers** - As part of the CADP1 permission both temporary (during construction) and permanent noise barriers are required to protect proximate residents from aircraft noise when parking on stands.

Effect of the Proposals

- 5.3 The noise analysis of the proposals shows that the overall amount of noise (taken as the area of the 57 dB $L_{Aeq,16h}$ contour) is forecast to be lower in the future, being less than occurred in 2019 and over 20% less than the currently permitted limit. The benefit of this has been estimated by comparing the expected population in 2031 with the proposed amendments with the population that could arise if the contour area was at the currently permitted limit. This finds a reduction in people of over 30,000.
- 5.4 With the proposed amendments, the airport's air noise contour or footprint is predicted to reduce. Condition 33 of the CADP1 Permission requires the area enclosed by the 57dB $L_{Aeq,16hr}$ contour not to exceed 9.1km² (with a requirement for this to be reviewed). With the proposed amendments this is expected to fall to 7.2km² by 2031 due to fleet modernisation and no increase in the permitted number of flights.
- 5.5 Due to the greater use of quieter new generation aircraft by 2031, weekend noise levels are expected to remain broadly similar to 2019 despite the extended operating hours. While people are forecast to experience an increase in weekend noise levels in 2031 all of the changes in weekend noise are forecast to be negligible.
- 5.6 Predictable periods when the airport is closed would reduce from 72 to 64/65 hours per week (a change of around 10%). In addition to the predictable periods of respite when the airport is closed, many of the people affected by aircraft noise are only overflown by either westerly or easterly operations, not both. For those who are only overflown by westerly operations, this occurs around 70% of the time on average, which equates to around 30 additional hours of respite per week. For those who are only overflown by easterly operations, this only occurs around 30% of the time on average, which equates to around an additional 70 hours of respite per week.
- 5.7 Due to the proposed increase in early morning movements from 6 to 9 between 0630 to 0659, overall there is expected to be an increase in the properties exposed to noise in the night-time (2300-0659) period. However the relatively small number of people's dwellings exposed to greater than low levels have all already been treated by the high tier of the Sound Insulation Scheme and so allowing for this sound insulation good internal night-time noise levels should still arise.
- 5.8 Notwithstanding these improvements, it is recognised that changes to operating hours and population growth around the airport mean that noise from aircraft remains an important issue and therefore the airport proposes to comprehensively enhance its noise mitigation strategy.
- 5.9 The proposed amendments will also further incentivise airlines to re-fleet and transition more quickly to efficient modern aircraft with lower carbon emissions which are quieter. In terms of noise improvements, Table 5.1 below compares new generation aircraft noise levels to the Embraer E190 which is the most common type of aircraft currently flying at the airport. Based on noise certification data it shows how the more modern versions can be 3.2 dB quieter on arrival and 5.4 dB on departure.

Table 5.1 New Generation Noise Levels Compared to current Embraer E190

Aircraft Type	Change in Noise Level (SEL) compared to Embraer E190, dB (A)	
	Arrival	Departure
Airbus A220-100	-2.8	-5.1
Airbus A220-300	-2.0	-4.0
Embraer E190-E2	-3.2	-5.4
Embraer E195-E2	-2.9	-4.6

Noise Mitigation

- 5.10 The proposed noise mitigation seeks to respond to the changes to the respite periods and improve the effectiveness of the Sound Insulation Scheme.

Restriction to modernised aircraft types for Saturday PM and new operating periods

- 5.11 The airport is proposing a commitment that only cleaner, quieter, new generation aircraft will be allowed to operate in any newly extended hours on a Saturday as well as the three additional flights in the first half hour of the day (0630-0659). This will require airlines to replace their older fleets with cleaner, quieter, new generation aircraft in order to benefit from any increased flexibility. This, in turn, will result in the benefits of quieter aircraft being felt by local residents throughout the week.

Enhanced Sound Insulation Scheme

- 5.12 It is proposed to significantly enhance the scope and effectiveness of the airport's residential Sound Insulation Scheme (SIS). A revised scheme will lower the noise threshold for eligibility so that more residents affected by noise receive a higher specification of treatment in their homes as follows:

High (Tier 2)

- 5.13 The existing Tier 2, to be renamed High Tier, already provides the full cost of high acoustic performance double glazing and mechanical vents for those exposed to the highest levels of daytime noise (dwellings exposed to at least 66 dB $L_{Aeq,16h}$). This has proved effective with eligible properties being treated and will be retained with eligibility regularly reviewed so any properties that become eligible in the future are offered treatment.
- 5.14 In response to the proposed increase in permitted movements in the early morning (06.30 - 06.59), this tier will be enhanced with eligibility also being available to those exposed to the highest noise levels at night (dwellings exposed to at least 55 dB $L_{Aeq,8h}$). The enhanced scheme will provide for the full cost of high acoustic performance double glazing and mechanical vents for these properties.

Middle (Intermediate Tier)

- 5.15 The existing Intermediate Tier provides dwellings within the 63 dB $L_{Aeq,16h}$ daytime contour the full cost of secondary glazing and mechanical vents or a grant of £3,400 towards high acoustic performance double glazing.
- 5.16 It is proposed that the Middle Tier will be enhanced with additional eligibility to those exposed to the highest noise levels at the weekend, with a weekend noise threshold of 60 dB $L_{Aeq,16h}$. Subject to the proposed amendments being approved, it is also proposed to reduce the existing daytime criterion from the current level of 63 dB $L_{Aeq,16h}$, which is equal to where significant observed adverse effects begin to occur, to the lower noise level proposed for weekends over time.
- 5.17 As part of the improvements associated with the proposed amendments, the airport propose to manage and carry out the works in eligible properties going forward so as to reduce the administrative burden on residents. On the works offered, currently if a resident prefers to have high performance double glazing they can receive a grant of £3,400. It is proposed to change this grant to a contribution based on the cost of fitting equivalent secondary glazing to the specific property which has been budgeted at £8,000.

Low Tier (previously Tier 1)

- 5.18 This tier already extends further than Government guidance requires or has proposed. It will therefore continue to offer the full cost of mechanical vents to all dwellings within the 57 dB $L_{Aeq,16h}$ summer daytime noise contour and provide secondary or standard double glazing where only single glazing is currently fitted, with installation managed by the airport and carried out by its contractors. Based on properties treated to date the airport have budgeted for a cost of £5,000 per property. However, if the costs for a property are higher, the airport will pay the extra so there will be no cost to residents.
- 5.19 This will ensure that everyone exposed to air noise above the SOAEL in the daytime, night-time or weekend is eligible for sound insulation works from commencement.

Community Fund with an overall value of £3.85 million

- 5.20 Significant enhancements proposed to the Community Fund will see it increasing to £3.85million, administered over a 10 year period. The enhanced fund is specifically designed to target investment in amenity in areas close to the airport and overflown by aircraft, particularly given the proposed changes to operating hours on a Saturday afternoon.
- 5.21 Candidates for the fund could include parks/open space both inside and outside the contour as well as initiatives support quality of life and health and wellbeing. It is anticipated that the Community Fund would be run by a board of trustees, drawn in part from the airport's consultative committee.

6 Surface Access Strategy

- 6.1 LCY is the UK's best performing airport for public transport use by its passengers. It has already published its surface access strategy for up to 2025 and has ambitious longer term targets in its 2020 master plan.
- 6.2 The current CADP1 Section 106 Agreement includes commitments to publish updated travel plans every three years. Condition 71 of CADP1 requires compliance with the Airport Travel Plan (TP), while the S106 ensures it is kept up to date in consultation with the Airport Transport Forum. This will help the airport to achieve its sustainable mode share targets as set out in its Sustainability Roadmap (80% sustainable mode share for passengers by 2030) while also meeting the London Plan mode share target by 2041.
- 6.3 The CADP1 Section 106 Agreement also included contributions of over £5m towards additional DLR rolling stock and £300,000 towards DLR station staffing costs as well as funds towards local improvements to walking and cycling infrastructure.

Effect of the proposed amendments

- 6.4 There is no change in the number of proposed car parking spaces at the airport as a result of the proposed amendments despite a proposed increase of 2.5 million passengers annually. The primary focus of the application is to promote sustainable travel patterns, both by staff and passengers. Whilst there would be additional passengers at weekends, the overall net effect of the additional demand has been shown to be minimal across the network because the forecast growth is likely to occur outside of the traditional early morning and evening peaks due to the changing profile of the airport which now serves a more equal split of business and leisure passengers.
- 6.5 The airport is well served by existing and proposed future public transport with capacity to absorb additional demand associated with the proposed increase in passenger numbers from 6.5mppa to 9.0mppa.
- 6.6 Because of a higher proportion of off-peak leisure trips and no additional car parking being proposed, the proposed amendments is not expected to significantly change peak hour transport movements and in turn alter traffic conditions or public transport capacity at the most important peak times.

Additional Commitments

- 6.7 A Framework Travel Plan is included with the proposed amendments and this will be further developed for the period to 2031 (the current Travel Plan to 2025 is currently under review with LBN) and this will help to achieve the airport's mode share targets.
- 6.8 However, to achieve the targets for improved passenger and staff travel by sustainable modes, further investment is required and the airport is also proposing a new Sustainable Transport Fund (STF). The fund has potential to be subsidised by a levy on car users, e.g. from a proportion of car parking revenue or forecourt charges, and can be used to contribute to

surface access projects which contribute to the airport achieving its mode share targets. The STF would operate for a minimum of 7 years and would be managed by the airport in consultation with the Airport Transport Forum, which includes local authorities, transport providers and neighbouring land owners.

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

7 Conclusions

- 7.1 The proposed amendments will increase capacity to 9 million passengers per annum, extend opening hours and make other related changes without new infrastructure or changes to the permitted number of flights. The ES demonstrates that changes in noise, carbon and surface transport impacts will be limited and capable of mitigation.
- 7.2 The airport is proposing a comprehensive mitigation package to address residual impacts and ensure that the proposed amendments respond positively to planning policy requirements. Key aspects of the mitigation include:
- The implementation of the airport's Sustainability Roadmap and beyond. Through a carbon and climate change action plan the airport is committed to beating the Government's zero operations target for airports and helping to facilitate zero emission flights in the long term. LCY's route network and characteristics make it ideally suited to be a pioneer in zero emissions flights. Its long term vision shows how it intends to lead and innovate.
 - A step change in noise mitigation, with a significantly enhanced sound insulation scheme with many more people eligible for higher specification noise insulation which will not only address small increases in noise but will also enhance take up. An enhanced Community Fund will help to compensate for the reduction in respite on Saturday PM.
 - An enhanced travel plan underpinned by a Sustainable Transport Fund – to flexibly respond to the target of 80% passengers using sustainable modes and improve staff travel on sustainable modes.
- 7.3 The proposed amendments will bring many economic benefits which extend far beyond additional jobs and wealth creation in the local area. It will help to make Newham and East London better connected and provide additional choice to local people. It will make London more competitive and with further investment in education and employment initiatives, direct and indirect benefits for the local area will be maximised.

8 Mitigation Summary

Measure	Summary of Measure	Reason for Measure	Expected Benefits	Where explained in application	How will Measure be secured?
Noise					
Restriction to new generation aircraft types for Saturday PM and new operating periods	Ensuring that only cleaner quieter next generation aircraft are operating on Saturday PM and the additional morning slots between 6.30 to 6.59	To incentivise airlines to refleet more quickly because these newer aircraft will also be used in other periods	Limits noise in additional periods and incentivise refleeing	Planning Statement and ES	S106 or planning condition
New noise insulation scheme	Significantly enhance the scope and effectiveness of the airport's noise insulation scheme	To further reduce noise from the airport and share the benefits of growth	Ensure that noise insulation will become more effective and is comparable to schemes agreed recently at other airports	This document and ES	S106
Community Fund	Fund with an overall value of £3.85 million administered over 10 years separate from noise insulation scheme	Compensate for the reduction in the respite period particularly on Saturday PM	Quality of life benefits for the local community	This document and Planning Statement	S106
Carbon and Emissions (Carbon and Climate Change Action Plan)					
Airside vehicle emissions	As airside vehicles reach the end of their natural life, they are replaced, wherever possible, by zero carbon versions, with the aim of a zero carbon fleet by 2030	The principal reason for the measure is to reduce on-site carbon emissions, but there will also be benefits in reducing emissions of NOx and Particulate Matter	Reduced emissions associated with airside vehicles	CCAP	Planning condition
Encourage uptake of SAFs	Working with partners to adapt the infrastructure and operating environment to facilitate the use of Sustainable Aviation Fuels (SAFs)	In the medium term, the use of SAFs offers great potential to reduce aircraft carbon emissions. However, studies have shown that the use of SAFs also reduces emissions of Particulate Matter and Ultrafine Particles from aircraft engines	Reduced emissions from aircraft operations	CCAP	Planning condition
Encourage use of zero emission aircraft	Continuing to work with partners to deliver greater scalability in the medium term on	In order to deliver the longer-term goal of zero emissions from aircraft, the use of alternative fuels	Reduced emissions from aircraft	CCAP	By planning condition

Measure	Summary of Measure	Reason for Measure	Expected Benefits	Where explained in application	How will Measure be secured?
	the short and medium-haul flights of relatively smaller aircraft that LCY specialises in	(such as hydrogen or electricity) is required.			
Energy Strategy	The revised Energy Strategy for the Eastern Energy Centre will utilise on-site heat pumps and photovoltaics or will connect to a District Heating Heat Pump option	The Energy Strategy sets out the rationale for the revisions to meet the minimum GLA requirements and the on-site regulated energy 'Net Zero' aspiration	The 2015 UES in support of the CADP1 application calculated NOx emissions from the Eastern Energy Centre to be 1,130 kg/annum based on CHP/gas boilers. This will now be reduced to zero.	Energy Strategy	Planning condition
Air quality					
Ultra Fine Particle (UFP) Monitoring	Work with LBN to develop a monitoring and reporting regime for UFPs, potentially linked to the airport's AQMS	Whilst the ES has identified that no additional mitigation is required, this is a developing area of study and LCY consider that monitoring is appropriate	Monitoring of UFPs which could have health impacts	Environmental Statement (Public Health and Wellbeing Chapter)	Planning condition
Transport (Framework Travel Plan and STF)					
No increase to on-site car parking	No further car parking is proposed above that already consented under CADP1	Discourage the use of private car trips to the airport in favour of more sustainable options	Reduced emissions associated with private vehicle trips	Transport Assessment	As consented under CADP1.
Encourage use of sustainable transport options	A target has been set to achieve 80% of staff and passenger and staff journeys by sustainable modes (as defined in the NPPF) by 2030 funded by a Sustainable Transport Fund(STF)	To reduce the impact of private car journeys and decrease carbon and pollution emissions.	Reduced emissions associated with private vehicle trips	Transport Assessment	S106 & new Travel Plan to 2031
Encourage use of public transport	Additional uptake of public transport will be encouraged through STF	To reduce the impact of private car journeys and decrease carbon and pollution emissions.	Reduced emissions associated with private vehicle trips	Transport Assessment	S106 & new Travel Plan to 2031
Employment					
Employment and Training obligations	Up to £1.9m to fund education, training and assisting getting people back to work	Build on existing CADP1 measures	Improved local skills, productivity and educational attainment	This document, Socio Economic Chapter of ES	S106