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Appendix 1 – Technical response

Transport

Context

Transport for London (TfL) is responsible for public transport services that serve London City Airport, principally the Docklands Light Railway (DLR), bus services and interchanges at nearby stations on the Jubilee line and the Elizabeth line. TfL is also responsible for London's cycle superhighways, the Mayor's cycle hire scheme, and for regulating taxi and private hire vehicles. TfL is the highway authority for the Transport for London Road Network (TLRN), which includes the A1010 Gallions Roundabout and the A117 Woolwich Manor Way, and exercises oversight over London's Strategic Road Network (SRN), which includes Connaught Bridge and North Woolwich Road. Finally, TfL provides advice to the Greater London Authority (GLA) and the Mayor in respect of strategic transport policy, including drafting and implementing the Mayor's Transport Strategy (MTS) and sections of the London Plan, and advice on strategic planning applications.

The 2013 Aviation Policy Framework (APF) confirms that the primary objective of airport master plans is for airport operators to provide a clear statement of their intent to enable potential future airport development to be given due consideration in local planning processes. The APF also promotes a collaborative approach to transport, and recommends the production of surface access strategies that set out targets for increasing the proportion of journeys made by public transport for airport workers and passengers, as well as including a strategy to achieve those targets.

The central aim of the MTS is that 80% of all trips in London will be made by public transport, walking or cycling by 2041. However, TfL has broken this down by sub-region, and for an inner London location – such as London City Airport – this would entail 99% of trips by sustainable modes to/from central London and 90% of trips to/from other parts of London. The MTS also supports the Mayor's Good Growth principles and promotes Healthy Streets and the health benefits of Active Travel. TfL has also recently updated its Transport Assessment Best Practice Guidance (April 2019) to embed the Healthy Streets approach: <https://tfl.gov.uk/info-for/urban-planning-and-construction/transport-assessment-guide/transport-assessments>.

These targets and policies have been incorporated into the draft London Plan, which has recently passed through its examination stage and is expected to be published in early 2020. Of particular relevance are draft London Plan Policies T1 (Strategic approach to transport), T2 (Healthy streets), T4 (Assessing and mitigating transport impacts) and T8 (Aviation).

Policy 18 of the MTS seeks to integrate regional, national and international transport schemes with London's public transport. Proposal 100 promotes the improved surface links to London's airports and the Mayor expects airport operators to contribute a fair share of required funding.

The draft master plan's objective for an increased number and percentage of airport passengers to use public transport and sustainable transport modes is welcomed in principle, as is the draft master plan's support for the MTS. However, as has been set out, London City Airport should be aiming for at least 90% sustainable mode share for trips within London. London City Airport is already well connected to public transport, which will be further improved on the opening of the Elizabeth line. However, it should also be noted that mode shift may become harder to achieve

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should the airport increase its proportion of leisure passengers as is proposed; notably, they are more likely travelling in family groups and carrying more luggage than business passengers. The means to achieve these targets should be articulated, including the necessary financial commitment. This includes the measures to attract passengers and staff to use public transport and the capacity to accommodate existing flows (alongside background non-airport demand, taking account of crowding and any impacts on capacity at key interchange stations).

As the draft master plan states, TfL continues to work with London City Airport on exploring options for improved access between the DLR and the terminal and on running earlier DLR services. In each case, they would need to be shown to be commercially viable, operationally feasible and beneficial to passengers.

TfL has been briefed on the technical basis of the draft master plan with reference to needs assessments and surface transport demands, but has not been provided with sufficient detail to assess if the draft master plan's transport modelling is sound or in accordance with TfL guidance and best practice advice.

Any planning application that sought to achieve the draft master plan's expansion ambitions would be expected to fully comply with relevant TfL guidance and best practice advice; and any planning permission should be subject to independent audit and oversight by Newham Council as local highway authority and TfL as London's strategic transport authority. In general, TfL would expect any airport transport strategy to fully incorporate Healthy Streets principles and promote mode shift away from car use. It would also need to differentiate between leisure and business travellers and the future workforce – all of whom should be encouraged to use sustainable transport, but each group will require a bespoke package of measures.

TfL would also expect London City Airport to promote active travel among staff and passengers, and its latest Transport Assessment guidance: <https://tfl.gov.uk/info-for/urban-planning-and-construction/transport-assessment-guide/transport-assessments> sets out a methodology for assessing Active Travel Zones, which TfL recommends should be followed. Effective engagement with Newham Council, other stakeholders and community groups will be essential.

Public transport and active travel should be always be placed ahead of provision of new or replacement car parking, and TfL would not support the increase in on-site car parking outlined.

Impacts on protected groups need to be considered – with the needs of disabled passengers being given particular attention.

Elizabeth line service

The draft master plan includes recognition of the role of the Elizabeth line (Crossrail) in facilitating access to the airport via interchanges at Custom House, Poplar-Canary Wharf and Stratford. The draft master plan also mentions its promotion of a new station at Silvertown on the future Elizabeth line (Crossrail) route. TfL's position, as relayed to the airport on a number of occasions, is that the airport would need to demonstrate a business case for the scheme should it wish for its station proposal to be taken seriously.

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Construction impacts

If taken forward, the expansion envisaged by the draft master plan would need careful planning and management to ensure, inter alia, that impacts on the local area, in particular on residents and sensitive uses, are minimised to acceptable levels. TfL would also expect transport infrastructure and services to be protected during any works. The use of docks and waterways for transporting construction materials and demolition waste should be maximised, building on its approach for the City Airport Development Programme (CADP). The airport should aim to be exemplary in minimising environmental and safety impacts and maximise its use of the Thames for transporting construction and demolition materials.

Climate change and ecology

Carbon

London City Airport's commitment to a net zero carbon target for its airport operations in the draft master plan is welcomed. However, the GLA would expect to see a detailed action plan underpinning this target, with an assessment of the airport's total carbon impact (including from international aviation emissions), the actions that will be taken to reduce these emissions and how it will be monitored. This would be an important framing document for future development at the airport, if agreed. The GLA would also want to see a detailed carbon analysis of how the additional passengers and air traffic movements would contribute to the airport's carbon footprint and the actions the airport would take to minimise these. This would also need to be done in the context of the direction of travel of the Government's emissions cap for the aviation sector (currently 37.5MtCO_{2e} – but the Committee on Climate Change (CCC) has advised a new figure of 30MtCO_{2e}, which the Government is expected to respond to later this year).

For example, emissions from domestic aviation only were included in the UK's net carbon account for the purposes of the Climate Change Act, and in its advice to the Government on the net zero target in June 2019, the CCC said that the net zero target should cover all sectors of the economy, including international aviation. This is something that London City Airport should therefore be planning for, as these emissions account for the vast majority of the airport's impact. Given this, the GLA would therefore expect to see that carbon emissions from international aviation emissions are incorporated into London City Airport's trajectory to net zero carbon by 2050, along with an explanation of how they believe their plans can be achieved, in light of this new target, in order to fully assess carbon impacts of the draft master plan proposals.

The draft master plan refers to the Carbon Offsetting Scheme for International Aviation's (CORSIA) role in offsetting an airport's carbon impact. However, the credibility of offsetting via CORSIA is overstated as it is not global in coverage and currently only extends to 2035. It is also not aligned with the long-term objectives of the Paris Agreement in limiting warming to 1.5°C above pre-industrial levels. Furthermore, the CCC has concluded that CORSIA is not compatible with achieving net zero globally, and relying on reductions elsewhere to offset international flights is risky and places an unfair burden on other nations.

Plans for supporting infrastructure to facilitate a shift to biofuel use (and how biofuel will be transported to site) should be clarified and form part of future-proofing. The airport should set out a strategy for the sourcing of sustainable biofuels that would see the proportion of biofuels blended into the kerosene supply to the airport increase over time.

Finally, London City Airport should set out how it will drive airlines to use more efficient and lower carbon aircraft over time, e.g. through the use of landing charges.

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Flood risk

The Airport should develop a detailed Climate Adaptation Plan or Strategy that sets out how its proposals will address climate change – in particular flood risk, flood management, drought and rising temperatures. Given its location within Flood Zone 3, the airport should particularly consider and develop proposals to address residual Thames tidal flood risks, flood resistance and resilience measures, and consider the need for emergency procedures and potential impacts on flood defences.

Urban greening, ecology and biodiversity

The draft master plan Environmental Appraisal identifies issues for further assessment on urban greening, biodiversity and ecology. The GLA is mindful of bird safeguarding requirements around airports; however, London Plan Urban greening factor policies would nevertheless apply to any planning application and should provide additional urban greening, improve the area's biodiversity, and mitigate surface water flood risk and, where possible, reduce urban heat effects. Any further expansion into the dock would also result in a loss of blue cover, contrary to the London Plan, and may adversely impact the dock's biodiversity, fish habitat and water quality. Specific proposals and commitments should therefore be developed, should the draft master plan proposals move forward.

Water consumption

Whilst the draft master plan acknowledges the need to reduce water consumption, any planning application to deliver the proposed additional airport capacity should meet or exceed London Plan requirements and minimum BREEAM water credits. London City Airport should also maximise water reuse, and the GLA would expect London City Airport to fully incorporate grey or rainwater systems in any future upgrade of its facilities and adopt best practice as applicable at the time of construction.

Water quality

A detailed drainage strategy that sets out how surface water would be managed and discharged would be expected as part of any planning application. Such a strategy should set high standards and targets and the means by which they would be achieved. It should also include how such systems would incorporate water quality measures – with priority given to green Sustainable Urban Drainage Systems (SuDS) measures. Any Dock discharges should ensure water quality would be maintained or improved. Specific measures to reduce water quality risk from de-icing activities and development in the docks should be included, should the draft master plan proposals move forward.

Noise

The suggested loosening of existing operational early, late and weekend restrictions would expose residents and communities across east London at times when they are not currently impacted by aircraft noise. The current restrictions were deemed necessary by the Secretaries of State for Transport and Communities and Local Government following a protracted public inquiry in 2016 for up to 111,000 flight movements per year. The substantial increase in flights the draft

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master plan proposes (to 151,000 flight movements per year), combined with a relaxation of these restrictions, would be likely to lead to additional adverse noise impacts to existing and future residents.

Furthermore, a planning condition attached to CADP requires that London City Airport submits a Noise Contour Strategy to the local planning authority within 5 years of implementation that defines the methods it will use to reduce the area of the noise contour by 2030, with further reductions required every 5 years. Based on the information provided in the draft master plan, London City Airport is predicting it could operate an expanded airport within the existing 9.1 km² LAeq,16h dB noise contour. However, no reduction in the noise contour is envisaged until 2035 and this possible reduction would also be totally reliant upon the introduction of new (quieter) aircraft. Any new Airport Master Plan should recognise this very important requirement and show how it would secure additional reductions in the size of this contour, rather than presume it could operate within it until 2035; and at the moment the draft master plan does not correctly acknowledge or demonstrate compliance with the CADP consent.

The draft master plan notes that incentives are in place to encourage the uptake of quieter aircraft. However, no commitment to improve this scheme is set out in the draft master plan, and whilst the introduction of quieter aircraft may allow lower operating noise thresholds to be adopted, it is not clear how this will be secured by the airport. Further details about how the uptake in new aircraft will be achieved in practice should be included in any final Master Plan. For example, a tiered landing charge system based on noise certification could incentivise the uptake of new quieter aircraft. In addition, the updated Master Plan should set out a programme for reaching the proposed capacity increase and set out the interim capacity milestones against time periods. Each capacity milestone should include targets for percentage of new aircraft that should be met before progressing to the next milestone.

London City Airport should therefore show how it would secure a reduction in the area of the noise contour under the existing maximum permitted actual aircraft movements using the forecast aircraft fleet for 2035, so that the full impact of any proposed additional aircraft movements can be fully understood and disaggregated.

It is also noted that the modelled noise contours presented within the draft master plan have been produced using INM 7.0d software. INM 7.0d was replaced in 2015 by AEDT, which is now the industry standard noise modelling software and INM has not been supported since it was replaced. Although it relates to assessment of airspace changes, CAP 1616 can be considered to represent best practice for the assessment of aircraft noise and it explicitly states that modelling should be undertaken using AEDT or ANCON (which is the CAA in-house noise modelling software). It is therefore expected that the required update to the Noise Contour Strategy is in line with the latest CAP 1616 guidelines on modelling and analysis of aircraft noise.

The draft master plan suggests that the impact of additional flights might be reduced through the introduction of quieter aircraft into operational fleets. However, it appears that the proposed increase in capacity has been maximised based only on improvements in aircraft technology. This approach is not in-line with national policy requirements, which require improvements to be shared with local communities. The updated Master Plan will, therefore, need to demonstrate how any improvements in aircraft technology would be shared with local communities in accordance with draft London Plan Policy T8 (Aviation) and national aviation policy.

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Existing mitigation measures are not considered sufficient, and details of how these might be improved should be set out. For example, the draft master plan states that future mitigation could include improvements to the current sound insulation scheme, but there are no commitments in the document. The GLA would therefore welcome confirmation of the additional improvements and mitigation measures that London City Airport is considering, as well as a clear strategy for how it will actively manage the programme to ensure a full uptake amongst those who would be impacted. Further information on how the current programme is performing, including the number of identified properties and uptake numbers, should be provided, as this information is not currently included within the draft master plan nor the London City Airport Noise Action Plan.

Finally, whilst subject to separate consultation, the concentrated flight paths aircraft currently use to arrive at and depart from the airport adversely impact communities across large areas of north east and south east London. These impacts are also closely entwined with aircraft operating from Heathrow Airport and wind direction. Any planning application to further expand the airport should fully set out these impacts so that their geography can be fully understood and assessed.

Air quality

Toxic air remains a critical challenge for London and Londoners. Over two million Londoners live in areas that exceed legal limits for NO₂, of which over 400,000 are children, and our modelling suggests that all of London currently exceeds World Health Organization targets for PM_{2.5}. Thousands of Londoners die prematurely each year because of toxic air pollution. It is stunting the growth of children's lungs, is a cause of cancer, and increases the risk of asthma, stroke and dementia. Air pollution is also an issue of fairness, with the most deprived Londoners most likely to be exposed to air pollution, and yet least likely to contribute to the problem.

As set out in the transport section of this response, sustainable surface access improvements will be key to ensuring that the airport plays its full part in improving air quality. The draft master plan acknowledges this issue, but the airport should demonstrate more ambition on surface access and air quality and pay due regard to the Mayor's ambition for London to have the best air quality of any major world city, which would mean continuing to seek improvements even where legal minimum standards are met.

Air quality assessment

The consulted air quality assessment contains significant omissions that mean it is not possible to understand what the impact of the projected growth of the airport on air quality would be if planning permission were granted. As it stands therefore, the assessment does not meet the requirements for effective consultation, such as providing sufficient information for consultees to understand the project.

The most significant issue with the assessment is the absence of a future baseline scenario in the model. Specifically, it is accepted practice in air quality assessments to provide at least three scenarios: a "current baseline" scenario, which allows the model to be tested and verified against a recent year's monitoring data; a "future baseline" or "do nothing" scenario, which assess the likely air pollution in the expected opening year without the development; and an "as built" or "do something" scenario, which describes the impact of the development.

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The consulted air quality assessment is missing the “do nothing” scenario, and as this scenario is the only basis for comparison against which any expansion proposals can be understood, the assessment therefore fails to provide meaningful information about the development proposals, thereby preventing robust scrutiny.

As a direct result of this omission the assessment has drawn the conclusion that, as air quality will be better in 2035 than 2017, there should be no concerns about impacts from growth of operations at the airport. Not only is this an incorrect conclusion, it effectively seeks to claim ownership of improvements in air quality secured by the actions of the Mayor and others to support expansion. The Mayor has taken bold steps, such as the introduction of the Ultra Low Emission Zone (ULEZ) and transforming London’s bus fleet to improve air quality. At the same time, many individual Londoners and businesses have invested in improved vehicles or changed the way they travel in response to the Low Emission Zone (LEZ) and ULEZ, many more will do so as the ULEZ expands and the LEZ tightens. Londoners are entitled to expect to enjoy the health and quality of life benefits that their efforts and investment have provided. It is entirely unjust that these benefits should be eroded in the interests of expanding the airport.

Therefore, any further consultation should, as a minimum, include an air quality assessment that incorporates a “future baseline” scenario so that the impact of the proposals can be properly understood.

Given the significance of this omission, the remaining comments on air quality are limited and no comment is provided on the acceptability or otherwise of the scheme and its impacts on air quality. The absence of more detailed comment does not imply support for the scheme.

Policy and guidance

The air quality assessment considers the impact of a range of policies and guidance on the development, including Newham and Greenwich’s local plans, the national clean air strategy and the Airports National Policy Statement.

What are not mentioned are any of the Mayor’s policies or strategies that are relevant to both the development and air quality: these include the London Plan and draft London Plan, the London Environment Strategy, the Mayor’s Transport Strategy and the Mayor’s Health Inequalities Strategy.

Also omitted is any mention of Air Quality Management Areas (AQMA) and associated Air Quality Action Plans (AQAP). The presence of an AQMA indicates that there is an existing breach, or a risk of a breach, of legal air quality limits, which may be exacerbated or prolonged by major developments. The National Planning Policy Framework is clear that, where a development is within an AQMA, or may affect one, the AQAP is a material consideration. There are AQMAs in Tower Hamlets, Barking and Dagenham and Bexley that may be relevant to City Airport, as well as Greenwich and Newham.

In any further consultation, these Mayoral strategies and the AQAPs on the development must be considered as part of the air quality assessment, which should also consider how these policies affect the development and describe the steps that London City airport will take in order to comply with them.

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Amongst other policies, the draft London Plan places the World Health Organization's target for PM_{2.5} on a similar footing to legal limits for other pollutants, so London City Airport should consider how its PM_{2.5} emissions affect London's ability to meet this standard (10 µg/m³ annual mean) alongside the other policies.

Emissions assumptions

It is usual practice to include aircraft emissions for the full Land and Take Off Cycle cycle in air quality assessments, and this has been done in the London Atmospheric Emissions Inventory and other airport planning applications. It is therefore surprising that London City Airport has chosen to exclude emissions above 457.2 metres from the assessment, instead of the usual 1,000 metres. This is not normal practice and is likely to under-estimate the impact of the airport on local air pollution and should be addressed in any further iterations of the air quality assessment.

Surface access transport emissions are often a key factor in the impact of airport growth and operation on the surrounding environment. It is not clear from the assessment to what extent increase in transport associated with growth has been incorporated into the air quality assessment. Any further iterations of the air quality assessment will need to show that the modelled traffic increases reflect the transport assessment and have been fully incorporated into the air quality model.

Given the availability of appropriate monitoring, model verification should be performed separately for particulate matter and NO₂. Verification of the model should also include appropriate source apportionment, taking into account airside emissions sources and aircraft emissions as well as road transport.

Finally, a few of the assumptions show the limited ambition of the project in terms of reducing emissions: for instance, all ground power units are assumed to be Stage IIIA emissions, as is much of the ground servicing equipment. All new non-road mobile machinery is required to meet the tighter stage V limits from 2019. This assumption therefore indicates an area where more ambitious proposals must be provided to further reduce emissions.

Proposals

The draft master plan documents include measures committed in the CADP as well as the proposed scheme. Current commitments include fixed electrical ground power for all stands, a strategy to increase the use of low and zero emission airside vehicles and controlling the use of Auxillary Power Units and ground running as well as emissions tests. These measures should be assumed as the baseline for the Master Plan as they are expected with or without the Master Plan in place.

Future commitments include fixed ground power for all new stands, all airport owned vehicles to be minimum ULEZ compliant by December 2020, all airside vehicles to be zero emission by 2030 increased EV charging provision in the car park and to working with aircraft operators to "encourage" improvements in aircraft performance.

Aside from the ground power for new stands, it is not clear why any of these measures are contingent on the Master Plan to be delivered; for instance, having a ULEZ compliant fleet would be expected for a business located within the zone, as City Airport is. Indeed, the overall trajectory for London is to move to a zero-emission fleet of road vehicles by 2050, and we would expect large businesses such as City Airport to be planning for this transition already.

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If London City Airport proceeds to a planning application, it will need to be clearer about what is genuinely new and, for measures that are not obviously contingent on a successful planning application, it should also be clear about whether they would be delivered without the grant of permission and if not, why not.

Opportunities

Notwithstanding the above, any development proposal provides opportunities to reduce pollutant emissions. If the airport pursues the Master Plan, it should seek to identify these opportunities and describe how they would be put in place. The most obvious opportunities are:

- Incentivising the use of lower emission aircraft: some other airports use tiered fees or other incentive structures to promote the use of more modern, less polluting, aircraft, and London City Airport should examine which approach is most effective and put it in place.
- Replacement or transition away from the use of gas engine CHP on site. Gas engine CHP is generally more polluting than the alternatives, and changes to the grid make this technology less attractive as a means of reducing carbon impacts. City Airport should examine whether the Master Plan provides an opportunity to move to less polluting technology, such as heat pumps, or to integrate with the proposed Royal Docks district heating network.
- Use of pre-conditioned air for aircraft at stands can further reduce the use of APUs.
- EV charging at the car park and staff parking. The proposed provision at 1 in 5 spaces may not be sufficient in the future as EV numbers are expected to increase. City Airport should also consider opportunities for smart charging and storage in long-stay parking spaces and whether sufficient provision is being made for taxis and mini-cabs – where Mayoral policies are rapidly increasing the numbers of hybrid and electric vehicles.

Requirements in any future planning application

If a full planning application were made, the GLA would expect to see a robust analysis of the potential impacts of the scheme on local air quality, and whilst such an analysis would be subject to a scoping report and detailed scrutiny during the planning process, it is strongly recommended that all the issues identified above should be urgently addressed.

It is acknowledged that the introduction of renewable fuels has carbon saving advantages, but can have adverse impacts on air quality. This interrelated issue should therefore be fully acknowledged in any final master plan. The wide use of electric charging points is supported in principle, but more detail would be required as part of any planning application to secure consent for the proposals.

Spatial impacts on east London

The draft master plan is a summary document and therefore it is not possible to fully understand the impacts of the suggested expansion on the Docks by comparison to a 2035 without expansion position. However, in broad terms, the proposals in the draft master plan will have mixed impact on development. For example, the suggested increases in flight numbers and changes to hours of operation will have a generally negative impact on the attractiveness of residential development in the area. Conversely, the additional connectivity the proposals suggest

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may increase business interest in the area, although the forthcoming opening of the Elizabeth line will significantly improve connectivity to other airports, and Heathrow Airport in particular, which may reduce this potential benefit.

London City Airport is located within the Royal Docks and Beckton Riverside Opportunity Area as envisaged by the London Plan and draft London Plan where many of the Royal Docks' and surrounding development sites are phased to come forward over a number of years. In the meantime, proposals for interim uses and events are being developed which are, to a degree, targeted at the current weekend airport closure period when the use of land and airspace is much less restricted. The changes the draft master plan presents may therefore undermine this activity, which was a key objective of the Enterprise Zone Delivery Plan agreed between the Mayor of London and Mayor of Newham in August 2018.

The revised Master Plan should therefore look at its implications for development sites and identify opportunities to improve local connectivity and access. Engagement with the GLA on the Royal Docks Opportunity Area Planning Framework is also recommended.

London City Airport and its associated spatial restrictions already constrain the development potential of large areas of east London, which any increases to the airport's existing Public Safety Zones or Protected Surfaces would exacerbate. The draft master plan, for example, shows a potential extension to the airport's western Public Safety Zone that would extend over parts of Thameside West and the Silvertown Tunnel's northern portal. It is therefore suggested that London City Airport commissions a suitably qualified independent study to look at these aspects of its proposals that would examine the need for changes to the airport's current spatial restrictions and any consequential impacts on the development potential of sites in the Royal Docks, Woolwich and Thamesmead.