FAO: [redacted]
Civil Aviation Authority

[redacted]
CSR & Future Airspace Director
Manchester Airports Group
6th Floor
Olympic House
Manchester
M90 1QX

By email only: [redacted]

6 June 2022

Dear [redacted],

MANCHESTER AIRSPACE MODERNISATION – CAP1616 ASSESSMENT SCENARIOS

1. We write further to our telephone call of 27th May 2022, to outline our proposed approach to the assessment scenarios to inform the airspace change proposal (**"ACP"**) at Manchester Airport (**"MAN"**).

2. In particular, before we commence substantive assessment work under Stage 2 of the CAP1616 process, we should be grateful if you would confirm agreement that our proposed approach to the assessment scenarios satisfies the requirements of CAP1616. As you will appreciate, establishing the correct approach from the outset is very important, given the ongoing requirement for the assessment of design options as part of the options appraisal process.

3. In order to provide a comprehensive summary of the process we have followed to define our proposed assessment scenarios; this letter first outlines the relevant requirements under CAP1616. It then highlights the key considerations at MAN before describing the proposed assessment scenarios, constituting the do nothing (**"DN"**), do minimum (**"DM"**) and do something (**"DS"**).

CAP1616

4. Paragraph 133 of CAP1616 requires the initial options appraisal (**"IOA"**) to assess "*each option against a 'do nothing' scenario (the 'counterfactual')*". A counterfactual is what would have taken place but for the intervention in contemplation.

5. This requirement is reiterated at:

   5.1. paragraph E8, which restates the requirement for a baseline and confirms that the options appraisal is an iterative process, with the IOA forming the first of three phases of appraisal; and

5.2. paragraph E12, which states that the IOA must fully describe "*the 'do nothing/minimum' option which will act as the baseline for the analysis*". Here, the terms "nothing" and "minimum" are elided.

6. Paragraphs E21 and E22 provide further clarification as to the scenario to be used as the baseline, as follows:

"*E21. In certain cases, doing nothing is not a feasible option in reality. For example, airspace may need to be changed to reflect the UK's international obligations. In such cases, in addition to the 'do nothing' baseline, the change sponsor must set out its informed view of the future and the minimum changes required to address the issues identified – a 'do minimum' option. Assessing the 'do minimum' option against a 'do nothing' baseline allows communities to understand the effect of the 'do minimum' in relation to current circumstances.*"

"*E22. The baseline must be considered in relation to its context, which may be changing. For example, if the change sponsor is aware that a housing development or other such project has been given the go-ahead, this should be factored into the baseline as a potential increase in households affected by noise and pollution. Alternatively, there may be planned changes that have not yet been implemented. These should be included in the baseline from the time implementation is expected so that the benefits/costs of those changes are not double-counted in the proposed change.*"

7. This introduces the concept of the DM scenario, in addition to DN and DS.

8. Appendix B to CAP1616 provides further detail as to environmental metrics and assessment requirements, which is of relevance to the IOA. Paragraph B27 is of particular relevance to the baseline and is reproduced below:

"*B27. A baseline will be required for all environmental assessments. This will be a 'do nothing' scenario and will largely reflect the current-day scenario, although taking due consideration of known or anticipated factors that might affect that baseline, for example a planned housing development close to an airport, forecast growth in air traffic, or expected changes in airlines' fleet mix. Therefore, all environmental assessments must illustrate the difference between a pre-implementation ('do nothing') scenario and a post-implementation scenario, ensuring that the periods are comparable. Note that the baseline will be a 'do nothing' scenario, even if that is a theoretical scenario, i.e., the option to 'do nothing' is not in itself a feasible option for consideration in reality.*"

9. In addition, paragraphs B31 to B34 set out the requirements in respect of the traffic forecasts to be used:

"*B31. Traffic forecasts for a period of at least 10 years from the intended year of implementation, including all intermediate years, are required for all permanent airspace change proposals…*"

"*B32. If the proposed airspace change is expected to have an effect on the number of flights or the types of aircraft utilising the airspace (i.e., the fleet mix) then two sets of traffic forecasts must be provided by the sponsor – one that is based on the 'do nothing' scenario (i.e., assumes the proposal is not implemented) and one that is based on the change option being implemented.*"

"*B33. For example, if one of the aims and expectations of an airspace change proposal is to enable an increase in aircraft movements, over and above what would be expected to occur if the proposal were not implemented, then the traffic forecast must reflect two scenarios:*

the anticipated growth if the proposal was not implemented, and

the anticipated growth if the proposal is implemented."

"*B34. These two sets of traffic forecasts must then be used if forecast environmental impacts are required as part of the assessment, for example for noise contours or CO2 emissions.*"

10. The key points from the above extracts can be summarised as follows:

IOA

11. A baseline is required for the IOA. Ordinarily, this would be DN. However, where DN is not a feasible option, DM must be considered in addition to the theoretical DN.

12. CAP1616 does not state whether DM should be considered as a second baseline or as an option to be assessed.

13. DN should largely reflect the current day scenario taking account of the context, which may be changing, and be projected to the design year for comparison purposes.

14. DM represents an informed view of the future and the minimum changes required to address the issues identified. So, if the DN resulted in a constraint that could be unblocked by an intervention, the intervention may be assumed in the DM.

Traffic forecasts

15. The requirement is for forecasts to cover ten years from implementation, including all intervening years. While not expressly stated in CAP1616, it is logical for the overall assessment to be in line with the traffic forecast periods.

16. Where proposals are expected to affect the number of flights or fleet mix, two sets of forecasts must be provided – DN and DS. CAP1616 does not refer to forecasts in respect of DM. However, it is possible to create forecasts in respect of DM.

<u>Particular considerations at MAN</u>

Statement of need

17. In addition to references to phasing out ground based navigational aids, our statement of need (**"SoN"**) includes the below statements:

"*it is important that as airspace changes the growing operational needs of the airport are accommodated in airspace redesign…*"

"*The airspace change process needs to deliver an airspace design that will enable Manchester Airport to continue to grow to make best use of its available runway capacity…*"

18. This makes clear that a key aspect of the ACP is the facilitation of growth and making best use of existing runway capacity.

LISTO – southbound departures from runways 23L and 23R

19. At present there are two departure routes that can take traffic to the south. There is the SANBA 1R/1Y departure. and the LISTO 2R/2Y.

20. The initial track of the SANBA departure is also used by aircraft using three other SIDs, specifically the SONEX, EKLAD and KUXEM. Having a common track for the first part of the flight means that the separation between subsequent departures cannot be reduced to the minimum of 1 minute. This has a detrimental effect on runway flow and results in delays for aircraft that are following. However, because it turns south earlier, the LISTO departure does not interact with any other departure route, and therefore does not usually have an impact on runway flow.

21. If the ACP were not to proceed, we anticipate that alternative changes would be necessary to respond to passenger growth and increases in ATMs, requiring an increase in the maximum runway flow. Putting aside the ACP, the most likely change to achieve this would be an amendment so that a wider range of aircraft could make use of the LISTO departure route. This would have the effect of reducing the number of flights that are delayed by the current interactions.

22. The route via LISTO is not subject to any external constraint, such as a planning agreement or condition, but is not currently fully utilised. Voluntarily, we limit the use of LISTO to aircraft of less than 35 tonnes. This voluntary arrangement is applied because of sensitivities towards local communities potentially overflown were the use of LISTO to be intensified. Allowing the use of LISTO by a greater proportion of aircraft would facilitate a similar level of maximum runway flow to the ACP.

CAP1781

23. We intend to follow the process under CAP1781 to allow the substitution of the current routes using PBN (specifically RNAV), and do not expect this to lead to any significant changes in aircraft tracks. By following this process, any reliance on the DVOR network will have been removed before the ACP is implemented. While an extension could be sought, the process under CAP1781 provides a temporary, five-year solution only.

<u>Assessment scenarios</u>

24. Drawing on the above summary of the requirements under CAP1616 and taking account of the particular considerations at MAN, we propose to define the DN, DM and DS assessment scenarios as set out below.

Do nothing

25. The DN would reflect the actual routes currently flown. It would not take account of proposed infrastructure improvements, although it would be assumed that CAP1781 would be taken advantage of and potentially extended beyond its current assumed expiration. This reflects the requirement under CAP1616 for DN to largely reflect the current day scenario while taking account of the context. As recognised at E21 of CAP1616, in noting that CAP1781 provides for a temporary solution only, it would be made clear in the Stage 2 documentation that the DN is not a feasible solution – such that a DM scenario is required.

26. As a result, while making clear that DN was not feasible, CAP1781 would provide the basis for all DN traffic forecasts. In line with CAP1616, these would be provided for each of the ten years from the intended year of implementation

27. While there is no restriction on the use of LISTO as matters stand, for the purposes of understanding how current operations would be projected forward, DM (rather than DN) would incorporate the amendment or removal of the existing restrictions voluntarily applied to LISTO. This allows DN to provide a clear comparison to current operations.

Do minimum

28. CAP1616 requires that the DM represents an informed view of the future and the minimum changes required to address the issues identified.

29. CAP1616 does not provide a further explanation as to the issues being referred to at E21. However, logically, the requirement would be for DM to address both the issues with the DN that mean "*doing nothing is not a feasible option in reality*" and the issues identified in the SoN. At MAN, this means that the DM should consider the temporary nature of reliance on CAP1781, the phasing out of ground based navigational aids and the requirement to "*deliver an airspace design that will enable Manchester Airport to continue to grow to make best use of its available runway capacity*".

30. With this in mind, our "*informed view of the future*" to address the issues with the DN and the issues identified in the SoN incorporates the replication of the current procedures using R-NAV, the amendments to LISTO and the necessary infrastructure improvements to facilitate best use of available runway capacity. As such, this forms the DM scenario at MAN.

31. While the existing LISTO restrictions are self-imposed, it is possible that their amendment or removal would constitute a PPR under CAP1616. If this process is required to be followed, it provides a further justification for the changes to LISTO being included in the DM but not the DN.

Do something

32. The third assessment scenario is DS. This will be formed by the design options presented within the IOA, with each option forming an alternative DS scenario. As for DM, to enable a reasonable worst-case assessment, the DS scenarios would incorporate the necessary supporting physical infrastructure.

Summary

33. By way of summary, our proposed assessment scenarios are as follows:

    33.1. **DN** – the actual routes currently flown, incorporating the assumption that CAP1781 would be taken advantage of and potentially extended beyond its current assumed expiration.

    33.2. **DM** – the replication of the current procedures using R-NAV, incorporating the amendment or removal of the existing restrictions on LISTO and the necessary infrastructure improvements to facilitate best use of available runway capacity.

    33.3. **DS** – the design options presented within the IOA, incorporating the necessary supporting physical infrastructure.

34. We should be grateful if you would confirm that the approach to assessment scenarios outlined in this letter is accepted by the CAA as being in compliance with the requirements of CAP1616.

35. Please do not hesitate to contact me [redacted] should you have any queries.

Your sincerely

[redacted]

[redacted]

CSR & Future Airspace Director