Gatwick Airport Northern Runway Project

Appendix B: Response to York Aviation - Capacity and Operations

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1 Introduction

1.1 Purpose of this Document

1.1.1 At Deadline 3, the JLAs submitted an Appendix prepared by York Aviation which itself responded to submissions from the Applicant at Deadline 1 [REP3-117].

1.1.2 The York Aviation document is principally divided between matters relating to forecasts and matters relating to capacity. The below schedule responds to the matters relating to capacity and operations. The response to forecasting matters are set out at **Appendix A: Response to York Aviation – Forecasts** (Doc Ref. 10.24).

2 The Applicant's Response

2.1.1 The schedule sets out the matters raised by York Aviation in response to the **Capacity and Operations Summary Paper** [REP1-053] and the **Airfield Capacity Study** [REP1-054] and GAL's response to those comments.

Ref	York Aviation Response	GAL Response
Capacity And Operations Summary Paper and Appendix		
49.	*Current Conditions – Baseline* At paragraph 1.2.7, it is claimed that the single runway *"reliably"* accommodates 55 aircraft movements an hour. It is clear from representations from some of Gatwick's largest customer airlines **[RR-1256, RR-1493, REP1-196]** that accommodating this level of throughput is not being achieved at standards of service that they deem acceptable.	As per **The Applicant's Response to the Local Impact Reports - Appendix A - Note on the Principle of Development** [REP3-079], GAL has acknowledged that performance has been impacted in recent years by COVID, including ATC resourcing challenges, and that these issues have been resolved for Summer 2024. GAL also acknowledged that there is benefit in work to improve resilience hence the new rapid exit taxiway and planned delivery of reduced departure separation project, optimised sequencing and time- based separation. The representation referenced has also been responded to directly in **Relevant Representations Report** [REP1-048] and

		The Applicant's Response to Written Representations [REP3-072]. Evidence has been provided on the reliability of 55 being achieved prior to COVID in the **Capacity and Operations Summary Paper** [REP1-053] section 3.1. In addition, the Applicant has explained the work being undertaken to consistently enhance the resilience of the 55 movements per hour in section 3.3. **55 movements per hour have been consistently achieved at Gatwick for several years. 55 is confirmed through the slot allocation process, demanded by airlines, scheduled and demonstrably delivered.** Demand at busy times continues to exceed capacity. Whilst the JLAs express concern, the "issue" has no substance when it comes to either achievable capacity or demand.
50.	In terms of considering the level of capacity available, we have focussed on runway (Rwy) direction 26 as this is used for c.70% of the time. It is clear from Figure 11 of **REP1-054**, that although total departure delays may average 9.7 minutes across the day currently (2018) in the Rwy 26 direction **[REP1-053**, Table 2**]**, they peak at an average of over 15 minutes in key peak periods of the day **[REP1- 054**, Figure 11**]**. Delays at this level exceed the normally acceptable level (to the airlines) of 10 minutes average delay in busy periods (typically 3-4 hours) and goes some way to explaining the concerns expressed by the airlines regarding the resilience of the current	GAL agrees with the rationale for the focus on the runway 26 direction as the prevailing direction of operation. **First wave slots at London Gatwick are in high demand as their demand significantly outweighs capacity, hence even with full knowledge of the expected departure holding time, first wave slots remain oversubscribed**. The 2018 peak total departure holding, referenced by York Aviation, is between 0700 & 0759 UTC which is a high demand hour for airlines. In Summer 2024 this hour is declared at 52 movements, in the live schedule (as of 03/05/2024). 0700 UTC on the busy day is fully utilised along with every other Friday between start of June and end of

	operation, notwithstanding that we do understand that GAL has been clear of the delay implications in declaring capacity available at the current levels.	September, demonstrating the popularity of this hour despite higher holding time than other hours. The holding times airlines should expect throughout the day are fully detailed as part of the declaration process hence **this is not considered 'delay' but rather 'holding' which should be accounted for in block times.** Block times are the time between scheduled departure from stand at the origin airport and scheduled arrival on stand at the destination airport. As well as the flight time the block time should include taxi time and expected holding time for both departure and arrival. As per note 49 above, GAL still seeks to improve holding times and has initiated a number of performance improvement initiatives to support reduction in holding times and improved resilience. However, due to the inherent lack of capacity, these projects won't deliver the same level of improvements that will be possible through NRP. In the baseline case, the addition of the new RET (which is fully in place) reduces peak total departure holding time to 13.6 minutes at 0700 UTC, and 12.1 minutes at 0600. All other hours remain below 10 minutes. **Given that in the baseline the peak total departure holding reduces compared to 2018**, the levels of holding are not expected to hinder London Gatwick's ability to fill the baseline schedule. In addition, London Gatwick's low cost to operate for airlines, compared to other nearby airports, and high passenger demand, especially in a constrained scenario where

		increased capacity is not delivered through the proposed development, means that the baseline capacity is expected to be filled.
51.	We understand that these delays are being mitigated to some degree now that the new rapid exit taxiway is in operation enabling many arriving aircraft to clear the runway more quickly. However, we understand from the documents that it is not GAL's intention to make further increases to peak hour declared capacity and to allow airlines to realise the benefits in terms of reduced delay. At paragraph 3.3.2 of **REP1-053**, GAL suggests that there are further enhancements that could be in prospect to improve the resilience of the operation. However, as we note below, these enhancements have been assumed not just to add resilience in the case of dual runway operations with the NRP but to be factors enabling higher capacity to be delivered and usable by the airlines. We have doubts that this is robust at this stage as GAL, itself, acknowledges that the real impact of these on the operation and how much capacity gain they might deliver is not yet known.	GAL has assumed the availability of the new rapid exit taxiway (RET) in all scenarios due to it already being in operation and delivering benefits to the operation. The initial performance of the new RET is in line with the benefits assumed in the modelling for the baseline case, improving reliability of performance and giving the equivalent benefit of +1 ATM/H. GAL has also accounted for well-developed future initiatives such as reduced departure separation (RDS) and optimised sequencing that will primarily improve resilience against sub-optimal fleet mix and SID allocation. GAL has refrained from making assumptions regarding any future initiatives in their infancy, such as time-based separation. RDS technical implementation is completed and the process of embedding the new process into the operation will take place over the remainder of 2024, resulting in improvements materialising in 2025. Optimised sequencing is planned for delivery in 2025. Given the mature stages of implementation of RDS and optimised sequencing the future scenarios should factor in the impact of these projects. However, for transparency, the **Capacity and Operations Summary Paper Appendix: Airfield Capacity Study** [REP1-054] section 5, 6 & 7 present the simulation results **based both on current performance and with the phased introduction of reduced departure separation and optimised sequencing** (for

		NRP only), so the impact of the future initiatives can be clearly seen. As per the results, RDS provides limited benefit in the baseline case as the single runway capacity limits departure rates. RDS provides improved average departure taxi time by 1.4 minutes across the day. Optimised sequencing has limited impact on average holding, however it supports by reducing the outlier holding times by 40%.
52.	At paragraph 1.2.8 of **REP1-053**, GAL presents an entirely theoretical calculation of how 108 movements per hour could be achieved – 60 departures and 48 arrivals - in the airspace around Gatwick assuming there were no practical constraints on how it operates its existing runway or two runways in future and taking no account of the realities of having to interleave arriving and departing aircraft, the mix of destinations and departure routes required and the variations in the fleet mix. This is simply not relevant to establishing the capacity deliverable with or without the NRP save to make the point that airspace of itself is not expected to be a constraint. As is made clear at paragraph 2.10.1, attaining 60 departures an hour requires a theoretical perfect mix of aircraft in terms of all being of a single wake vortex category and a perfectly balanced alternation of flights onto divergent departure routes. To achieve this perfect mix, air traffic control necessarily has to hold and sequence aircraft onto the runway or, indeed, two	As stated in the document, the 108 (60 departure and 48 arrivals) referenced is a '*theoretical airspace maximum capacity'* and has not been claimed as runway capacity. This theoretical airspace capacity is a relevant part of the story as it demonstrates that there is unutilised capacity in the local airspace and that the runway is the constraint at London Gatwick, which will be addressed through the NRP. This point is directly recognised by York Aviation in their paragraph 56. As mentioned by York Aviation, GAL have clearly stated this is a theoretical constraint with a number of caveats. The runway schedules take full account of all constraints listed by York Aviation, hence why capacity in the baseline does not exceed 55 and in NRP does not exceed 69.

	runways in order to maximise the runway movement rate. This, in essence, requires a permanent queue of aircraft from which controllers can pick to optimise performance, which necessarily gives rise to some aircraft being delayed. Ultimately, the number of aircraft that can be scheduled to use an airport each hour has to be moderated between optimising throughput and ensuring that delays are not excessive.	
53.	Paragraph 2.8.5 sets out the impact of aircraft following the same departure route on the achievable separation between departing aircraft. Although the majority of departure routes from Gatwick on Rwy 26 proceed straight ahead, such that 60 second separations between departing aircraft cannot be attained, as shown on Figure 5 of **REP1-053**, Routes 1, 7 and 8 do diverge further out from the Airport. On this basis, GAL has estimated that the average attainable separation between aircraft departing on these three routes is 106 seconds rather than 120 seconds as would normally be required on aircraft following the same route. Assuming this is correct, the effect is already reflected in the current performance of the single runway but is material to the updated modelling presented in **REP1-054**, which differs from that presented in the Needs Case **[APP-250]**. We note that the effect of this and of the new rapid exit taxiway is included in the modelling of the baseline case, as set out in **REP1-054**	**It is helpful that York Aviation recognise that the modelling supplied to the examination demonstrates reduced delay. That recognition, however, should in fairness be recognised in other concerns raised.** As per Gatwick's Manual of Air Traffic Services Part 2 'Subject to wake vortex and speed group, where 2 minutes separation is specified a departure interval of at least 5nm may be used as an alternative between aircraft on similar or diverging tracks' this rule is followed by London Gatwick, as with other airports in the UK. 5nm results in separations of approximately 90 seconds. Given London Gatwick's departure route set up, which will include requirements for 120 seconds same exact route, an average of 106 seconds separation is achieved for same wake aircraft departure separations travelling on similar routes. This is set to improve with the reduced departure separation project lowering the average separation to 90 seconds for similar route departures of the same wake turbulence category, as detailed

	and provides some explanation as to why delays in the baseline are expected to fall compared to 2018 actual levels. The updated modelling of the NRP case is discussed further below.	in the **Capacity and Operations Summary Paper Appendix: Airfield Capacity Study** [REP1-054] section 4.4. As requested by York Aviation, all simulations were re-run. The baseline results were not significantly different from submission referenced in **Needs Case** [APP-250], although not identical due to the change in departure separation parameters and randomisation used in the re-run. As per the current operation, the 106 second separations are minimised in practice through optimised sequencing between departure routes and between arrivals and departures, minimising the impact on results. Hence the holding times in the baseline are modelled and expected to fall compared with 2018.
54.	Although GAL asserts, at paragraph 2.10.2 of **REP1-053** that it would be theoretically possible to attain 53 departures an hour, this does not seem feasible with the distribution of aircraft by departure route shown in Table 5 of **REP1-054**. With 34% of aircraft following the fully divergent Route 4, perfect sequencing would mean that 60 second separations could only be attained for 68% of movements, the remaining 32% would require 106 seconds on average, with some risk that 120 seconds might actually be required. This would imply, at best, an average of 75 seconds between departures, resulting in a ceiling on departure capacity of 48 movements an hour, which is the peak departure capacity assumed with the NRP **[**Forecast Data Book **APP-075**, Annex 7, page 6**]**. At worst, with 120 second separations between aircraft	It appears that York Aviation has misunderstood or misinterpreted the information presented. The 34% of aircraft using Route 4 referenced is the aggregate for both runway directions across the full day of operation. Solely looking at Runway 26, this increases to 38% of departures using Route 4 when in Runway 26 direction operations. However, a departure route imbalance has the most significant impact in departure heavy hours where there are limited arrivals to sequence out the increased departure separation requirements of similar route departures. In the peak departure hour of 0500 UTC, in August 2019 46% of runway departures used Route 4 and the remaining 54% used Routes 1, 7 or 8 (which are all similar routes). This split allowed for the majority of consecutive departures to be on alternate routes thus

	on Routes 1, 7 and 8, the rate would drop to 45 departures an hour. This demonstrates, that based on current rules and procedures, the capacity claimed for the NRP is at the theoretical maximum of what might be attained if air traffic control could sequence aircraft perfectly. As noted above, however, it is the delay consequences of this that will determine whether the capacity is actually capable of being declared and, if declared, taken up by airlines willing to accept the potentially high level of delay implied. Currently, peak scheduled departure rates are 37 and 36 departures an hour[1].	reducing the separation required between departures to 60 seconds. The key hours where departure capability is relevant are 0500, 0600, 0700 and 0800 UTC as these hours have a higher proportion of departures than arrivals. In these hours in August 2019, when in Runway 26 direction operations, 41% of departures used Route 4 and the remaining 59% used Routes 1, 7 and 8. This would result in an average separation requirement of 67 seconds between departures when assuming current performance of 106 seconds. 68 seconds separation between departures delivers 53 departure movements in an hour. When taking into account the Reduced Departure Separation project, the similar route separation is expected to reduce to 90 seconds, resulting in an average separation requirement of 65 seconds, delivering 55 departure movements in an hour. As GAL stated under point 53, 120 seconds is not required between Routes 1, 7 and 8 as assumed by York Aviation in its calculation of the 45 departures referenced.
55.	Paragraph 3.1.5 of **REP1-053** further explains the mathematics of how 55 movements per hour can only be obtained from the single runway with a perfect balance of arriving and departing aircraft, again requiring precise sequencing by air traffic control. We accept that there will always be circumstances, for example in good	Paragraph 3.1.5 of the **Capacity and Operations Summary Paper Appendix: Airfield Capacity Study** [REP1-054] **does not state 55 is only obtainable in a 'perfect balance'**, it describes how 55 ATM/hour is achievable when the hour is balanced and continues to state '55 ATM/hours can still be achieved with small variations in the proportion of arrivals and departures.

[1] Airport Coordination Ltd, Gatwick Summer 2024 Season Capacity Declaration.

	weather conditions or with a favourable mix of aircraft movements when the sustainable capacity of a runway can be exceeded, as noted at paragraph 3.1.7 but this does not impact on the sustainable declarable movement capacity which is the basis for airlines scheduling their operations and, ultimately, the passenger throughput.	Consecutive departures in alternating directions will allow a movement every 60 seconds increasing throughput'. The traffic mix was accounted for in previous declarations, hence why there were only 5 of the 17 core hours declared at 55 movements per hour (mph). The performance detailed is in reference to the operation prior to the new RET. **The new RET reduces arrival runway occupancy time allowing reduced separations between arrivals enabling 55 mph to be delivered in a greater range of scenarios and increases the 55 mph maximum capability to 56 mph. As the baseline schedule remains declared at a maximum of 55mph the additional movements can be accommodated without performance degradation due to the new RET.**
56.	Achieving increases in runway capacity do, of course, depend on the assumption that airspace is modernised such that overall congestion does not become a constraint in the longer term. As is made clear at paragraph 2.3.7 of **REP1-053**, this is simply not relevant to considering the capacity deliverable by the single runway in baseline conditions. Currently, the single runway is more constraining than the airspace.	GAL agrees with the statement that **the single runway capacity is more constraining than the airspace in the baseline case.**
57.	We note that paragraph 1.2.12 of **REP1-053** does assume that airspace modernisation across the London area is achieved by Q1 2027. Given the levels of airspace congestion generally, as shown on page 12 of Annex 7 to the Forecast Databook **[APP-075]**, this does highlight some risk to the	The airspace modernisation to the south of London Gatwick, known as London Airspace South, is a discrete project scheduled for deployment in Q1 2027. The schedule for the deployment of modernised airspace across the remaining London airspace is later. **The dual runway capacity throughput modelled did not assume the delivery of**

	attainment of the totality of capacity uplift at an early date if airspace modernisation is delayed or not delivered. As highlighted at paragraph 23 of Appendix F to the Joint West Sussex LIR **[REP1-069]**, this does pose some risk that greater use of WIZAD SID may be required in future, accepting that this would require a modification to the Manual of Air Traffic Services.	**airspace modernisation to the south of Gatwick nor the increased use of WIZAD.** The project would benefit from the deployment of London Airspace South, but it is not a prerequisite or enabler for the project. If a change to the use of the WIZAD SID routes were required, this would constitute a deliberate decision to redistribute traffic and would require the development of a Level 1 Airspace Change Proposal in accordance with CAP 1616 under the Planned and Permanent Redistribution (PPR) of air traffic provision set out in the Air Navigation Guidance (Amendment 2019).
58.	In relation to baseline capacity then, we consider it prudent to assume that there is unlikely to be scope to materially increase the declared capacity of the single runway above summer 2024 levels. For the reasons set out in paragraphs 10 and 17 above, we doubt that GAL will be able to achieve an additional 20 movements on a busy day in baseline conditions as claimed at paragraph 3.4.2 of **REP1-053.**	**The additional 20 movements is not above the 2024 declared level but rather an increase compared to Summer 2018 busy day scheduled demand** (incl. all flight types). **Between 0500-2159 UTC the 2038 baseline has 13 movements less than the number of movements declared for 2024 and 11 movements less by 2047.**
Northern Runway Project		
59.	We accept that the NRP will provide efficiency improvements and enable increased runway movements but the focus of GAL's analysis appears very much on optimising number of movements handled on the runways themselves in terms of the runway service rate (the theoretical maximum hourly capacity that can be handled), regardless of implications on the	The full aircraft journey at the airport (from stand to local airspace and vice versa) has been fully modelled using fast time simulation and the results are presented in the **Capacity and Operations Summary Paper Appendix: Airfield Capacity Study** [REP1-054]. The simulation results clearly indicate on stand holding, taxi delays, and runway holding in Para 5.2.2. Table 9. Whilst the

	ground, i.e. delays prior to departure (or arrival). The capacity of the airfield system as a whole requires consideration of both aspects as ultimately capacity has to be delivered at a level of service acceptable to users. This means that commercially acceptable capacity is likely to be below the theoretical maximum.	distribution of where aircraft holding may take place between stand, taxi and runway may differ, the total holding will remain the same. As detailed by the simulation results in the **Capacity and Operations Summary Paper Appendix: Airfield Capacity Study** [REP1-054] Para 5.2.2. Table 9, the service level delivered by the NRP is equivalent or improved compared to 2018.
60.	At the time of the original consultation in 2021, we had some doubt about operational and safety aspects of the proposed dual runway configuration. At paragraph 4.2.3 of **REP1-053**, it is stated that there is a Statement of Common Ground in place with the CAA covering Safety and Operations and we await consideration of this before commenting on whether there are any residual safety concerns.	The Applicant submitted the **Statement of Common Ground between Gatwick Airport Limited and the Civil Aviation Authority** [REP3-068] at Deadline 3.
61.	We note that in section 4.2 of **REP1-053**, GAL cites Dubai as an example of an airport operating a similar runway configuration safely. However, it is not strictly comparable as the use of the runways in segregated mode optimises both arrival and departure sequences. We are also aware that the operation at Dubai can involve long taxi times and high levels of delay. To some degree these are absorbed in the longer turnaround times inherent in the mainly longer haul operations at that airport. This is not feasible for an airport, like Gatwick, with a preponderance of operations by low fare airlines that rely on fast turnaround times and optimising	GAL agrees that Dubai is not an identical operation. However, as with most airports there is no perfect comparator. Dubai is a useful close comparison to London Gatwick's proposed dual runway 2038 operation, because: 1. The airspace route structure of the two runways is coupled due to the short distance between the runways, so a departing aircraft cannot be given a clearance when an arriving aircraft is close to the threshold due to risk of aircraft being in close proximity in the event of the arrival needing to go around (like London Gatwick's proposed dual runway operation).

	aircraft utilisation over a day, for whom the implications of high levels of airfield congestion and delay can be more commercially damaging.	2. The airport's capacity is constrained by its runway configuration (like London Gatwick). While they are not identical operations, the theoretical capacity (if both airports had the same types of aircraft) would be similar. As Dubai has a fleet mix which is more challenging to efficiently integrate, this reduces its capacity to below that which London Gatwick would be able to deliver with the dual runway operation. Dubai's more challenging fleet mix requiring increasing wake vortex separation between aircraft creates losses in runway throughput capacity efficiency. During these efficiency losses, multiple aircraft might cross the runway from the taxiway between runways to reduce the impact on taxi times. - To its system efficiency benefit, London Gatwick has a fleet mix that may be more efficiently integrated and its runway system is designed with runway crossings factored into the standard concept of operations, avoiding significant system efficiency losses. - To its system efficiency detriment, London Gatwick expects many long haul aircraft departures to operate from the Main Runway, essentially reducing arrivals throughput capacity compared to Dubai's segregated runway modes (one servicing all arrivals and one servicing all departures). - The combination of these two effects is that in periods with an optimal fleet mix, London Gatwick can outperform Dubai's runway system efficiency, but when there are peaks in the proportion of large aircraft the system

		efficiency in terms of runway throughput, capacity reduces. This effect has already been accounted for in the forecast capacity releases. The average increase in flights, between 0500-2159, from NRP compared to Summer 2024 declaration is 9.5 slots, however the maximum slot release is 17 and the minimum is 3. The maximum release occurs in a well-balanced arrival/departure hour with a low proportion of wide body aircraft, whereas the lowest increase occurs when there is a poorer arrival/departure split and/or high number of wide body flights. Dubai can have long taxi times. There are many reasons for this, including airport layout. - The distance to travel between the runway and terminal is sometimes much greater than at London Gatwick and having terminals on both sides of the runway system makes for higher natural variation in taxi times than London Gatwick will naturally see. - London Gatwick's proposed busy day schedule is not as pressured as Dubai's 2023 when comparing runway system capability vs scheduled demand. - London Gatwick expects to operate its proposed dual runway operations at levels of congestion that are similar to or below London Gatwick's 2018 congestion levels, as has already been demonstrated in the modelling, and which airlines are already accepting by continuing to operate from (and in many cases requesting more slots at) London Gatwick.

62.	As with the Needs Case, Table 2 of **REP1-053** presents only delay data averaged over the whole day when it is delays in specific busy periods, particularly in the departure heavy hours early in the morning that may be more impactful on the commercial viability of operations at least by airlines seeking to base aircraft at Gatwick.	As stated by York Aviation, the summary of performance across the full day is provided in the **Capacity and Operations Summary Paper** [REP1-053] to give an overview of performance impact from the project for readers looking for a high-level view**.** Readers looking to understand further details of the modelling, are directed in the **Capacity and Operations Summary Paper** [REP1-053] to read the **Airfield Capacity Study** [REP1-054]. **This paper includes modelling results by time of day in graph format and summarised into the key periods of interest,** 0500-0900 UTC, 1200-1600 UTC, 0600-2200 UTC & across the 24 hour period. **The time-of-day results demonstrate NRP performance improvements are throughout the day whereas the baseline improvements are outside of the first wave.**
Appendix: Airfield Capacity Study [REP1-054]		
63.	This Appendix sets out in more detail the updated fast time simulation modelling undertaken in relation to the baseline and NRP cases.	
64.	We are assuming that the schedules modelled are the same as those set out on pages 3 and 6 of Annex 7 to the Forecast Data Book **[APP-075]**. From discussion with GAL, it would appear that the schedules were derived from an initial, off-model, estimate of the capacity that could be made available to which the commercial team at the Airport developed busy day schedules, in line with Annex 6 of the Forecast Data Book, which were then tested for the delay implications through the fast time	The 2038 schedule is consistent with Annex 7 to the **Forecast Data Book** [APP-075]. The 2029 schedule modelled is not stated in Annex 7 to the **Forecast Data Book** [APP-075]. The method described is correct.

	simulation modelling.	
65.	Table 7 summarises the assumptions made by GAL in its latest capacity modelling. Whilst the new rapid exit taxiway has been allowed for in both the baseline and NRP cases, we understand from elsewhere in the documents that there is no expected capacity gain in the NRP case.	It is correct that, when operating in dual runway operations, it has not been assumed that the rapid exit taxiway will provide capacity gain and it is not required to achieve the scheduled busy day demand. GAL has always been aware that the angle the new RET meets the Northern runway does not meet CAA safety requirements for crossing a live runway, and it was not designed for that purpose.
66.	However, not only has the capacity modelling been adjusted by reference to the actual achieved separation between departures following the same initial departure route (see paragraph 53) in the cases based on current performance, GAL presents results for future performance on the assumption that technology will allow it to attain 90 second separations between departures following the same route (Reduced Departure Separation) and has made further off model adjustments to reflect enhanced sequencing capability that it claims will further reduce delays.	GAL has illustrated how each of the performance initiatives improves the airfield performance through modelling detailed in **Capacity and Operations Summary Paper** [REP1-053]. As stated in response to point 65, the RET was not utilised in the dual runway operation modelling. The 90 seconds departure separation is purely a result of the RDS project and has no reliance on the new RET. **Please also note modelling results have been provided with and without the benefits of RDS** in the **Airfield Capacity Study** [REP1-054] Para 5.2.2. Table 9.
67.	We are currently concerned at the robustness of assuming that these potential technological enhancements will necessarily deliver the capacity uplift/reduction in delay, at the movement rates tested, as assumed by GAL. This is not least because of the caveats stated at paragraph 4.4.9 as to the extent to which they will assist capacity on 'normal' operating days.	**York Aviation should recognise that the modelling results have been presented with and without enhancements on current practices** in the **Airfield Capacity Study** [REP1-054] Para 5.2.2. Table 9. The statement regarding the benefit of RDS on a 'normal' day has been considered when determining the reduction in minimum similar route departure separation from 106 seconds

	Our view is that, for the present, the modelled 'future performance' outputs should be given less weight than those based on 'current performance', contrary to the view expressed by GAL at paragraph 5.1.1	to 90 seconds. On non-standard days the departure separation will offer improved control over the departure separation resulting in the 90 seconds being maintained in a wider range of conditions compared to the 106 seconds. GAL still maintains the position that the future performance results, which include the benefits of RDS, represent the lead scenario. **RDS has been implemented at London Gatwick, as of January 2024**. Performance improvements from it are expected to materialise late in 2025 after the operational implementation phase is complete. GAL has been reasonable in its future baseline assumptions and has not included time based separation due to the uncertainty of the benefits on peak days. **However, both with and without these future performance assumptions the dual runway operation, resulting from NRP, provides improved overall performance compared to current performance and the future baseline.** As demonstrated in the **Airfield Capacity Study** [REP1-054] Para 5.2.2. Table 9, **by the 4.3 minute improvement in departure taxi time across the day modelled with current performance parameters and 5.7 minute improvement including the future performance initiatives.**
68.	We are also seeking clarification as the validity of the reductions in modelled delay more generally compared to previous model results shared with us by GAL as shown at Figure 3 of Appendix F to the JLA's LIR **[REP1-069]**, which we had understood to have	Following feedback from York Aviation, the capacity modelling was rerun as requested to include similar route departure separation to align more closely with 208/19 operational performance. The addition of the similar route departure separation constraint required sequencing of similar departures, as a result

	been based on the attainment of 60 second separations between all departures. Currently, we cannot account for why the modelled delays are so much lower than previously modelled and we are seeking further clarification and discussion with GAL to understand the reasons for the changes and the implications for the attainable capacity over the longer term from the NRP.	a greater focus was placed on improving the modelled runway allocation rules to improve sequencing, as would be performed in practice by the air traffic controller with the assistance of the tools available in the air traffic control tower. The main improvement in performance is seen outside of the first wave peak, as the original modelling underutilised the Northern runway. Limited focus was placed on optimising this period in the original modelling as departure holding times were already lower than current performance levels. The adjustments made to the simulation models increase alignment to 2018/19 operational performance assumptions and air traffic control capability.