

OBR Targets Assessment

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Our Team



Jason Buckland
Head of Aviation Consultancy and Mobility

M: +44 (0)7736 778 756
E: jason.buckland@arcadis.com



Angus McIntyre
Associate Director

M: +44 (0)7884 115 917
E: angus.mcintyre@arcadis.com

Version Control

Author Chris Kirby
 Checker Orrin James
 Reviewer Angus McIntyre
 Approver Jason Buckland
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This report dated 19 November 2021 has been prepared for the CAA (the "Client") in accordance with the terms and conditions of appointment dated 1 April 2021 (the "Appointment") between the Client and **Arcadis Consulting (UK) Limited** ("Arcadis") for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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Project Objectives

The CAA is seeking a view from Arcadis on whether the service quality targets that HAL has proposed for its “optimal plan” need to be adjusted in view of the capex and opex allowances that the CAA has initially proposed for the H7 period, and therefore whether any adjustments are needed and the potential size of any such adjustments.

Arcadis Scope is to consider:

- (a) HAL’s targets and determine whether the argument / logic / operational reasons used by HAL to determine any degradation in targets is reasonable, could materialise and is reflective of past performance and spending levels; and
- (b) Whether the improved targets HAL proposes in the “Optimal Plan” can be delivered within the allowances the CAA is minded to set

In reaching its view, the CAA expect Arcadis to take account of, among other things:

- the lower service quality targets that HAL has proposed for its “safety only” plan (particularly for security queues and asset availability), any supporting evidence that is available in relation to these, and the credibility of HAL’s case for lower targets
- whether the improved targets HAL proposes can be delivered within the capex and opex allowances CAA are minded to set
- the range of passenger forecasts (medium, high and low) currently being considered by CAA, and the extent to which the CAA’s current expenditure allowances might be expected to be flexed under different outturns (whether through the development to core framework or otherwise)”

For context:

HAL proposed 36 measures in total for H7. A number of these measures do not yet have targets due to the need to gather robust baseline data. Of the targets that have been set, a number are maintained at Q6 levels and a small number show improved targets (ie: higher then previously set). Under the Safety Only Plan, several targets are set at a lower level than both the Optimal Plan and current and historic performance.

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Overall conclusions

Based on the information provided by HAL, considering HAL's historic performance on delivering its targets, and taking an industry level view of how assets perform and degrade over time, Arcadis considers that the targets set in the optimal plan could be delivered based on the allowances the CAA has set in its Initial Proposals. Many of HAL's proposed H7 targets are maintaining existing Q6 targets and there is little evidence that has been shared by HAL that clearly links the level of capex alone with a reduction in asset and service performance.

Arcadis has not seen clear evidence or data that can justify the levels of degradation in service that HAL has set out in the targets in its Safety Only plan. Much of the information presented does not take into account that HAL has been outperforming its current targets both before and during Q6 and since Covid-19. There was little evidence presented by HAL that showed data or evidence that linked degradations directly with capex expenditure. It is therefore difficult at this juncture, based on the evidence supplied by HAL, to accept that the levels of degradation set out by HAL could materialise based on the allowances the CAA has set in its Initial Proposals.

Arcadis understands that there is still assessment work being undertaken by HAL to support some of these degradation levels and recommends that any adjustments that the CAA may consider should be evidence based and supported by data. This evidence should be able to directly map the reduction in capex expenditure to the degradation in service performance over time to justify any adjustment. This evidence would allow the CAA to determine whether any increase in capex is deemed reasonable.

Based on the information reviewed to date, including both historic and recent performance, it is evident that there is scope for a review of the targets proposed by HAL and the potential for some areas of further stretching targets for H7. This is covered later in this report.

Executive Summary

- Many of the targets in HAL's optimal plan are maintained from Q6 with a small number of improved targets in the areas of baggage, punctuality and the passenger experience. HAL's safety only plan sets out 17 lower targets that it considers could materialise in areas including security and assets.
- Although HAL has set out some rationale for a degradation of targets between the Safety Only and Optimal Plans, there is a lack of substantive data or modelling evidence to support these arguments.
- Data surrounding critical areas such as security, where HAL has indicated a significant potential degradation in service levels, that is required to assist in justifying the levels of degradation is not available and, in this case, detailed modelling and trials have either not yet taken place or concluded. A lack of visibility and data therefore hampers Arcadis' ability to make informed judgements not just when comparing the two business plans but also when compared against current performance metrics.
- HAL needs to share as much information as possible from areas such as the current trials but also manufacturer developments and dialogue that are helping to shape the new products to determine whether a degradation in service, if any, will take place due to the allowances the CAA has proposed. HAL's Updated Capex Plan does not have sufficient detail to allow a clear view between spend levels and degradation to determine the quantum of spend required to deliver the two plans and effect OBR targets.
- The concept of an Enhanced Service Overlay (ESO) is deemed reasonable for asset related measures to ensure the reliable delivery of services and to mitigate against low frequency, but high impact events as is evidenced in baggage system reclaim availability (arrivals), T5 TTS and lifts, escalators and travellers. HAL has presented their thinking behind why there is a requirement for the ESO but there was no detailed evidence to underpin the quantum of opex requested. It should also be noted that the CAA has made an allowance for opex overlays in their Initial Proposals published in October 2021.
- HAL did not provide a detailed breakdown of the Security Programme spend under the Safety Only Plan beyond the £420m total, so it could not be categorically determined whether the H7 targets could be met within the proposed CAA allowances. However, the funding available for security under the safety only programme is deemed more than sufficient for the procurement of the necessary equipment, factoring in both Airline and Arcadis benchmarking data, whilst also being able to contribute to the transformation and compliance spend categories as well. The proposed targets for all security measures under the Safety Only Plan are therefore not deemed reasonable or representative of the possible outcome.

Executive Summary

- Some of the targets proposed for H7 do not offer sufficient stretch or challenge based on historic or current performance and some suggested levels of degradation do not take into consideration the existing (positive) gap between existing performance and current targets nor proposed targets in the two H7 plans. These are analysed later in this report and are accompanied by some suggested ranges that are considered more appropriate.
- Overall, it does not seem that HAL has recognised their historic or current performance levels sufficiently when setting the targets for H7 under either the Optimal Plan or the Safety Only Plan. Current performance levels are almost exclusively above existing SQRB Q6 Targets and proposed targets for both plans, notwithstanding the fact the last two years during the pandemic have not been typical. This is especially apparent when looking at measures such as Wayfinding, Cleanliness and Wi-Fi, with performance levels generally increasing over time. This performance has been measured on an annual basis from QSM data.

Approach

Our approach

- Reviewed Chapter 9.2 Revised Business Plan , 5.3 (capex), 5.4 (opex) and 6.2 (measures, targets and incentives) in Updated Business Plan. This material can be found in the following [link](#).
- Reviewed HAL's targets and supporting rationale in the business plan
- Reviewed relevant extracts from Cepa Taylor Airey (CTA) report regarding relevant opex overlays supplied by the CAA
- Considered HAL's service quality performance in Q6/2019 and the capex/opex HAL spent on service quality in Q6.
- Engaged with HAL to understand methodology, thinking and logic used to determine the difference in targets between 'Optimal' and 'Safety Only' Plans – focussed on the degradation elements.
- Arcadis has undertaken several dissemination sessions with HAL and have been provided with some supporting information as follow-up to these sessions for review.
- To determine how the different forecasts used (High/Medium/Low) feature in how HAL has set its targets:
- We engaged with the airline community to seek their views on HAL's proposed targets including the degradation targets HAL has developed in its "Safety Only Plan" for H7
- We considered the allowances the CAA has set for Initial Proposals and what impact that may have on the targets that HAL has set.
- Recognises the opex overlays that the CAA has put forward in its Initial Proposals which are subject to further consultation as part of the H7 price control decision.

Arcadis has reviewed the documentation and has engaged with HAL in 5 workshop sessions for them to present their rationale regarding the potential degradation in service from the Optimal Plan to the Safety Only Plan. Arcadis has considered this rationale and where HAL has supplied some further information, we have compiled an opinion on whether HAL's position is well reasoned and supported by evidence. Arcadis has also engaged with the airline community to understand their views on HAL's proposed safety only plan targets. Arcadis has analysed HALs QSM data on an annual score basis against target, rather than on a monthly basis, and this is shown in the charts against each measure within the report. It is acknowledged that on some measures, in year monthly performance has dropped below target.

Arcadis has undertaken a detailed assessment of a number of the targets set out in HAL's business plan. The following slides set out the relevant measure and associated target, HAL's evidence and our conclusions based on this information, noting the airlines views. Where no detailed evidence was presented by HAL, we have not been able to assess whether the degradations outlined by HAL could materialise.

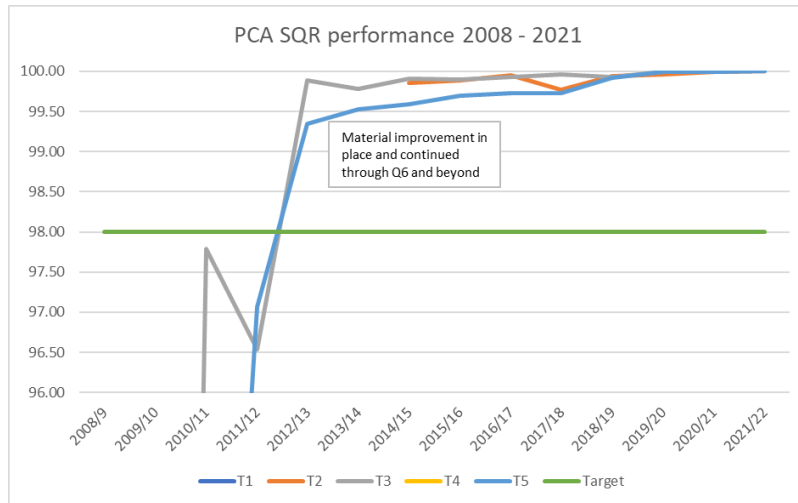
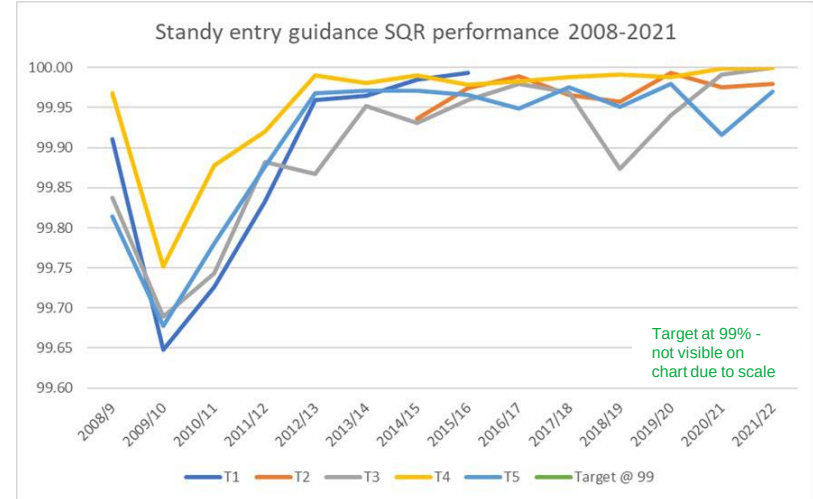
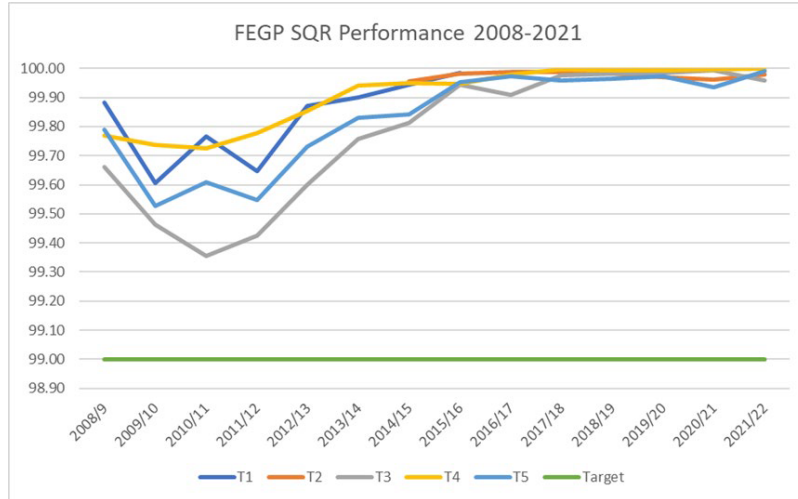
- Stand Facilities
- Wayfinding
- Security including Control Posts
- Cleanliness
- Lifts, Escalators and Travelators/ Passenger Sensitive Equipment (PSE)
- Terminal Track Transit System (TTS)
- Baggage System Reclaim availability (arrivals)
- Wi-Fi performance
- PRM/PRS satisfaction
- Departure flight punctuality
- Pier-served stand usage
- Overall satisfaction

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Consumer Outcome	Measure	Optimal Plan	Safety Only Plan
Predictable and Reliable	Stand Availability	99%	98%
	Provision of Stand Facilities	99%	97.25%
	Availability of Stand Entry Guidance System (SEGS)	99%	98%
	Pre-Conditioned Air (PCA)	98%	95% / 97% - subject to sustainability investment profile
	Fixed Electrical Ground Power (FEGP)	99%	98%
	Air Passenger Boarding Bridges (APBB) Availability (Jetties)	99%	98%

- The optimal plan includes the Enhanced Service Overlay that HAL says it needs to protect service levels for H7 and minimise the impact on H8.
- Stand availability – the Optimal Plan target is 99% compared to the Safety Only Plan of 98%.
- Provision of stand facilities combines and measures the average availability of four SQRB measures – SEGS, PCA, FEGP and APBB (Jetties). The overall target is 99% (Optimal Plan) and 97.25% (Safety Only Plan).
- The Safety Only Plan contains £1.5bn of prioritised capital spend on asset management but no increased Opex allowance for increased inspection and maintenance compared to Q6.
- The Optimal Plan provides £1.5bn of capital spend and additional capital for the renewal of PCA under the carbon and sustainability programme, as well as the increased Opex allowance for Enhanced Service Overlay (ESO) to allow for an increase in the inspection and maintenance regime.
- Because the Safety Only Plan does not include the ESO, HAL has set lower targets. HAL says this is because of the expectation that assets may be out of service more frequently due to increasing age and the inability to increase the frequency of inspection and maintenance services.

OBR Target Assessment | Stand Facilities



- It is clear that based on historical performance data, HAL has generally been outperforming their targets between 2008-2021.
- FEGP and SEGS SQR performance has been above 99%. Except for T3 and T5 performance in 2010-2012, the SQR performance for PCA has been above its target of 98% though we note that airlines consider that, notwithstanding the high availability scores, the current PCA product is suboptimal.
- As the target is already at 99% there is little scope for stretch on these measures.

Source: HAL data, Arcadis analysis

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Evidence Appraisal	Conclusion
HAL says most assets were close to mid-life at the start of Q6. It is anticipated that all 4 asset groups will be at end of life by 2026 (end of H7). The rationale for an increase in the inspection and maintenance regime via the Enhanced Service Overlay is deemed reasonable by HAL on the premise of: • The continuing increase in the average age of critical SQRB asset life which presents an increase risk of simultaneous failure during H7 • The current regime has limited availability to allow for dead banding of assets such as APBB (jetties) – these have never received “major” maintenance interventions during their operational life • Increased safety driven alleviations and passenger driven service	Having engaged with HAL to understand the rationale behind this, it would be reasonable to conclude that HAL would need some additional opex (Enhanced Service Overlay) to provide resilience for its older stand assets. HAL argue that by not having the Enhanced Service Overlay, there would be compounded reductions in service levels that continue through to H8. This would explain the degradation between the Optimal and Safety Only plans if it is anticipated that assets would be out of service at a greater frequency due to them becoming unserviceable and requiring intervention. However the enhanced opex allowance should provide the necessary means to achieve the optimal plan targets.
According to HAL, the majority of APBB (jetties) and PCA units will exceed the end of asset life by middle of H7. The rationale behind this is that the risk of major maintenance intervention increases requiring more inspection and servicing. Targeted maintenance extends the asset life.	Whilst there is logic behind this, we would highlight that the assets should not just be assessed in years but also the mode and frequency of operation for each individual unit. HAL is also aware of this and appears to be prioritising its highest risk assets for replacement.
HAL says assets such as the SEGS and FEGP will require maintenance throughout H7. The SEGS is deemed medium risk with upgrades through H7 not within the optimal plan. For FEGP, the asset replacement programme only includes funding to start replacement of T5 units only. For PCA, the asset replacement plan includes limited investment to address life expired and unsupported units in T5, as well as those stands which have the highest utilisation.	Through our sessions with HAL, we understand that their strategy is a “Safety Plan Plus” approach in asset management. This implies that there is a requirement for opex to facilitate the maintenance regime. The Safety Only Plan would address those stand assets which are at highest risk of failure and need replacement. However, there is the risk that those assets classified as a lower priority could require more maintenance intervention based on continued usage and/or increasing age, which the Safety Only Plan does not cover.