Audit of Service Quality Regulation at Gatwick Airport Limited

October 2016

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It is the responsibility solely of Civil Aviation Authority management to ensure that there are adequate arrangements in place in relation to risk management, governance and control.

Glossary

ACT	Aerodrome Congestion Term
AOC	Airline Operators Committee
ASQ	Airport Service Quality
ASS	Airline Service Standards
CAA	Civil Aviation Authority
CC	Competition Commission
CSS	Core Service Standards
CSS(R)	Core Service Standards
FEGP	Fixed Electrical Ground Power
GAL	Gatwick Airport Limited
HAL	Heathrow Airport Limited
IDAHO	Integrated Database for Air Handling Operations
OPM	Operational Performance Monitoring
QSM	Quality Service Metric
RfQ	Request for Quotation
SEG	Stand Entry Guidance
SQRB	Service Quality Rebate and Bonus Scheme

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1 Background and scope

1.1 Background

Heathrow Airport Limited (HAL) and Gatwick Airport Limited (GAL) are each subject to service quality regulation by which they issue rebates to airlines who pay the airport's aeronautical charges in situations where certain standards are not reached. These standards apply to a range of directly measurable elements that reflect the passenger experience at HAL and GAL.

In 2003, the Scheme of Standards and Rebates (the Scheme) was first introduced as part of the five-yearly regulatory reviews. It followed a public interest finding by the then Competition Commission (CC) that charges did not reflect differences in quality to the extent that would occur in a competitive market. In 2008, the Scheme was extended and modified following a further public interest finding by the CC in its 2007 report to the CAA.

For HAL, the legal basis for the Scheme are the conditions in HAL's economic licence, granted on 13 February 2014 under the Civil Aviation Act 2012 (CAA12). The Scheme is defined in greater detail in the CAA's recent (April 2014) Q6 regulatory decisions for Heathrow Airport.

For GAL, the legal basis is the conditions of GAL's economic licence granted on 13 February 2014 under CAA12. GAL's licence incorporates a number of commitments made by GAL on (amongst other things) price and service quality (the Commitments) which are set out in GAL's Conditions of Use. GAL's service quality regime incorporates the Core Service Standards (CSS) and Airline Service Standards (ASS), and is defined in Schedule 3, Appendix II of the Conditions of Use, forming part of the Commitments. The Airline Service Standards place obligations on third parties (airlines), and thus are not conditions of the Licence. While the CAA has no powers to modify or enforce the Airline Service Standards, we have reviewed these standards as part of CAA's general monitoring obligations.

When the CAA conducted service quality audits in 2009 and 2010, both HAL and GAL were subject to very similar service quality regimes. Since Q6 began, in light of the changes to the form of regulation at Gatwick Airport, there has been a divergence of the service quality regime at Heathrow and Gatwick airports.

Under the CAA12, the CAA has a primary duty to further the interests of users of air transport services. On-going monitoring of airport services, in the form of periodic audits, is important to ensure that the service quality regulation in place continues to achieve its intended purposes and to safeguard the passenger interest. Therefore, Grant Thornton was engaged to conduct audits of service quality at both HAL and GAL on behalf of the CAA. The results of this audit will be used to assist in further development of service quality regimes at both HAL and GAL.

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1.2 Scope

The objectives of this audit were as follows:

- To provide a transparent, independent assessment of whether performance against standards has been measured and reported as intended in the CAA's service quality regulation
- To assess whether best practice has been followed in the documentation of processes
- To review the accuracy and reliability of the calculation of bonuses (where applicable) and rebates, both under normal circumstances and when service quality exclusions apply
- To determine whether HAL's and GAL's interpretation of the licence conditions and the CAA's determination on HAL's service quality protocol are in line with the CAA's interpretation
- To provide objective, unbiased, reliable and robust information on which the CAA can base regulatory financial incentives.

In conducting our audit, we reviewed the key processes relating to the following service standards for GAL (which we evaluated on a sample basis in terms of testing):

Gatwick

- Conditions of Use 2015/16
- Core Service Standards (Version 5, December 2015)
- Airline Service Standards (Version 4, February 2015).

The following service elements were assessed as part of our audit:

Component	Service Element	Element Metric	Target Result
Passenger Satisfaction	Departure lounge seating availability	Moving annual total of 12 monthly QSM scores and is weighted by passenger numbers for country of destination / origin and hour of day.	3.8
	Cleanliness		4
	Way finding		4.1
	Flight information		4.2
Security	Central passenger search	Queue time less than 5mins for 95% of core hours	95%
		Queue time less than 15mins for 98% of core hours	98%
		Day when single time slice is greater than 30 minutes (single event per day triggers rebate)	Single time slice
	Transfer passenger search	Queue time less than 10mins for 95% of core hours	95%
	Staff search (terminals and crew)	Queue time less than 5mins for 95% of core hours	95%
	External control posts search	Queue time less than 15mins for 95% of core hours Performance of the Northern Approach Security Gate.	95%
Passenger Operational and Airline Operational Elements	Jetties	99% availability during core hours	99%
	Fixed electrical ground power	99% availability during core hours	99%
	Passenger sensitive equipment (general)	99% availability during core hours	99%
	Passenger sensitive equipment (priority)	99% availability during core hours	99%
	Arrivals reclaim	99% availability during core hours	99%
	Outbound baggage	**Calendar Month** 99% of bags inputted at check-in at -40mins or greater before the published estimated time of departure will have first attempt to tip at or before -25mins published established time of departure during core hours	99%
		Each Day	97%

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Component	Service Element	Element Metric	Target Result
		97% of bags inputted at check-in at -40mins or greater before the published estimated time of departure will have first attempt to tip at or before -25mins published estimated time of departure during core hours.	
	Inter-terminal shuttle system	99% of the time 1 shuttle (minimum 1 car) is available	99%
		97% of the time 2 shuttles (minimum 1 car each) are available	97%
	Stands	99% availability during core hours	99%
	Pier service	Moving average % of passengers' pier served for a rolling 12 month period.	95%
Airline Service Standards	Arrivals Bag Performance - First and Last Bag Times on Carousel	95% of large aircraft flights to have the last bag delivered within 50 minutes of on chocks time	95%
		95% of small and medium aircraft flights to have the last bag delivered within 35 minutes of on chocks time	95%

In addition to the above, we also assessed the Aerodrome Congestion Term (ACT), rebate calculations and publication requirements.

Our review included the detailed scope of work outlined above and included within the Civil Aviation Authority's Request for Quotation (RfQ) detailed under Appendix A only, and did not include any other areas. Specifically it did not include:

- Airline Service Standard check-in performance queue time element, as measurement of this element was being implemented at the time of our review and was not yet operational.

1.3 Limitations of Scope

Because of the inherent limitations of any internal control structure and the scope and resources limitations of any assurance activity, it is possible that errors or irregularities may occur and not be detected. The matters raised in this report are only those which came to our attention during the course of performing our procedures and are not necessarily a comprehensive statement of all the weaknesses that exist or improvements that might be made.

Our work is performed on a sample basis; we cannot, in practice, examine every activity and procedure, nor can we be a substitute for management's responsibility to maintain adequate controls over all levels of operations and their responsibility to prevent and detect irregularities, including fraud.

Any projection of the evaluation of the control procedures to future periods is subject to the risk that the systems may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate. Recommendations and suggestions for improvement should be assessed by management for their full commercial impact before they are implemented.

We believe that the statements made in this report are accurate, but no warranty of completeness, accuracy, or reliability is given in relation to the statements and representations made by, and the information and documentation provided the CAA, HAL or GAL. We have not attempted to verify these sources independently unless otherwise noted within the report.

During the course of our work there specific testing limitations, as outlined in section two below.

1.4 Acknowledgement

We would like to take this opportunity to thank the people involved in for their co-operation during this review.

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2 Executive summary

2.2 Gatwick Airport Limited

The following table summarises the key observations identified during our review against each of the audit requirements included in the Civil Aviation Authority's Request for Quotation. Key observations have been summarised separately GAL. We have categorised the observations from our review into the following areas:

- Detailed findings – observations that have a direct, or potentially direct, impact on service performance scores, and associated rebates, reported by GAL
- Future considerations (service standard specific) – observations which relate to the content, and interpretation, of the service standards. This includes instances where the service standards are not clear, areas where the service standards could be updated, or issues regarding the interpretation of the service standard by GAL
- Future considerations (airline operational processes) – observations which relate to the way service performance is measured, quality assured and reported by GAL.

Key Themes
On the whole our audit (and targeted testing) identified that data is being mainly collated, analysed and accurately reported (based on scope of our testing) in line with the requirements outlined in the CSS Handbook and ASS. For context, it is important to acknowledge that the way the service standards regime is setup does allow for certain level of discretion and judgement on how measurements are undertaken in respect of each service standards. Discussions with key stakeholders from GAL, the AOC and CAA during the course of this audit identified two connected key themes around strengthening the checks and balances and governance around the service standards regime: • Opportunities to enhance the transparency of how service standards are being implemented, and calculations made. • The Gatwick AOC currently comprises of two individuals, both working in a part time capacity. This limits the ability for the AOC to provide the depth of analysis and challenge to GAL that both they and the CAA, would desire. Consideration should be given to how the AOC can be supported to enhance the level of oversight they provide, and the possibility of broadening representation on this forum. In addition, below we have also detailed some examples of potential improvements to the current CSS and ASS processes which could enable greater transparency: • Introduction of guidance material (such as policies and procedures) to support key operational processes covered by CSS and ASS. This would enable greater understanding of these areas by the AOC. • Enhancements to quality assurance checks conducted by GAL across the different service elements included in CSS and ASS. • Providing further detail and/or clarification within the CSS Handbook regarding how the Standards are measured. For example, whether maze systems should be included as part of security queue times, and whether out of gauge bags should be included as part of the assessment of arrivals bag performance. • Introduction of independent oversight of aerodrome congestion events which require judgement as to whether these are 'material' or not. Our audit also identified a heavy reliance upon spreadsheets by GAL in the end-to-end service metric calculation and reporting process. GAL have commenced a project which aims to systemise as many of these processes as possible, minimising the need for manual intervention and manipulation of data as part of the reporting process. At the time of our audit, this project had only just been signed off, and a supplier was still being selected. In addition, our audit identified a number of enhancements that GAL should consider to ensure that data is captured and adequately analysed to provide a suitable assessment on GAL's performance against CSS and ASS measures. Examples of these are noted below: • Enhancements to the processes used by GAL to monitor and independently validate manual queue times recorded by GAL's outsourced third party, OCS. This includes the

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completeness, and consistency, of recordkeeping by OCS.

- Increased coverage of QSM surveys to assess passenger satisfaction (i.e. offering QSM in other languages and the inclusion of half completed surveys in the monthly results).
- Enhancements to spreadsheet controls used in the calculation of the monthly CSS and ASS results. This includes password protection and the lockdown of key cells.

Our audit identified several minor variances between the reported service elements results and the supporting documentation in place to substantiate calculations. Minor variances were identified for the following service quality components:

- Inbound baggage
- Security queue times
- Asset availability

We have provided a number of recommendations for GAL's consideration aimed at enhancing the current operational procedures in place in order to minimise the possibility of errors when collating, analysing and presenting CSS and ASS results. Further we have provided a number of considerations with regard sto the design of the CSS and ASS requirements for the consideration of the CAA, GAL and the AOC.

General Observations

During our audit, we identified some general observations which do not specifically relate to one or more of the Civil Aviation Authority's Request for Quotation areas. We have summarised these general observations below:

- Airline representation regarding CSS and ASS at GAL occurs through two appointed representatives who form the AOC forum.. These two members both operate in a part time capacity, balancing this role with other operational activities. There is a risk this may impact the ability of the AOC to effectively scrutinise GAL service performance. Additionally, given the small number of representatives forming the AOC, there is a risk of pressure by GAL to pass certain decision and exemptions. We acknowledge however that the AOC does provide challenge over exemptions being sought, and have declined exemptions that have been brought to them for approval.
- Guidance material (such as policies and procedures) was not available in most instances to support key operational processes covered by the CSS Handbook and ASS. We understand that GAL are currently compiling additional guidance material, however this was not available at the time of our review.
- The GAL Finance Analyst provides a critical role in the calculation and publication of CSS and ASS service performance. Whilst other GAL Finance and operational staff are aware of some processes and activities the GAL Finance Analyst performs, we identified an overarching key person dependency risk. Additionally, as noted above, the key activities that the GAL Finance Analyst performs are not currently documented by way of guidance material or process notes.
- Our audit identified that GAL is heavily reliant upon the use of spreadsheets in calculating service performance scores. We identified that these spreadsheets could benefit from improved spreadsheet controls (such as the locking down of formula and password protection).
- Our audit identified inconsistencies regarding how data is being input and updated within key spreadsheets used for CSS calculations. In some instances, data was manually entered, whereas in other instances data is being linked to other spreadsheets. We identified that benefit could be obtained from systemisation of service performance calculations and reporting, which GAL is currently exploring through a systemisation project. Additionally, we identified that spreadsheets could benefit for additional consistency regarding how data is being input and collated.

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Passenger Satisfaction	
Audit requirement Give an objective opinion on whether QSM has been consistently applied according to the licence over time and across terminals based on: • whether the current methodology and application is transparent • whether any changes to update the procedures are well documented with an audit trail and have not in the opinion of the Auditors materially affected the comparability of the results compared to the benchmarks set when the scheme was set up.	
Audit observation	**Reference**
The methodology for conducting the QSM is transparent in that there has been no changes to the QSM questions or design since 2003. Any changes to the methodology would need to be agreed between the AOC and GAL. Any changes to the questions or survey calculations would also need to be shared with ORC (third party who support GAL in calculating monthly QSM results). The QSM process has been consistently adopted across the audit period (January 2015 – December 2015). **Considerations for the future** Service standard specific • Whilst we understand the QSM questions included under CSS have been reviewed, there has been no substantive change since 2003. We acknowledge that reviews of the CSS metrics occurred in 2007/08 and 2012/13. Airport operational processes • We were unable to obtain any evidence of an independent review conducted on the preliminary results for QSM for quality assurance purposes.	**Considerations for the future** Service standard specific 7.1D Airport operational processes 7.2E

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Audit requirement

Review whether in the opinion of the Auditors the methodology and application of the QSM reasonably accord with best market practice and are sufficiently objective, unbiased, reliable and robust to be fit for the purpose of supporting elements of the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport and if not how the QSM could be amended to make it appropriate, and in particular:

- whether sample sizes are statistically adequate to support results to the level of confidence required
- whether the survey questions and processes are well designed to obtain a high quality response taking into account the wide range of passengers involved e.g. UK originating/other end originating/connecting passengers; business/leisure etc., language and cultural differences; male/female
- whether the samples of passengers and weighting adequately reflect the overall mix of passengers
- to what extent any changes designed to overcome concerns about the methodology and application would adversely affect the benefits of consistency.

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Audit observation	Reference
QSM survey quotas for departing passengers are set on a regular basis based on passenger destination trends. QSM survey questions have been designed to focus on key passenger experiences throughout both the North and South terminals. Surveyors target a wide range of passengers with differing demographics, in line with overall GAL passenger demographic. Our audit did however identified some considerations for the CAA and GAL going forward which could further enhance the coverage and transparency of QSM surveys. **Considerations for the future** Service standard specific • QSM surveys are only currently provided in English, there may be an opportunity to provide additional languages and access more feedback. • The current design of the QSM in the CSS Handbook does not include direct measurement, or setting of quotas, for the passengers transfer experience. • While we acknowledge that the scope of the current CSS regime was established following a process of constructive engagement; there is a number of elements of the wider passenger journey that are not currently considered within the QSM (for example, availability of baggage trolleys). • The current methodology for surveying departing passengers presents challenges to capturing passengers using lounges until the time of boarding the flight. The CSS Handbook should be updated to clearly state whether business passengers are within, or excluded, from the scope of QSM surveys. • It should be considered whether the current survey population (0.047% of passengers travelling through GAL) is representative, particularly in light of forecast future growth. We are not advocating an increase in sample in a way that has to be proportionately linked to the passenger numbers, just that there may be value in revisiting the number of passengers sampled. We acknowledge that due to the way statistical survey sampling is conducted, and how surveys are weighted, an increase in sample size may not provide greater insight. Airport operational processes • QSM surveys may not always be completed at the most ideal locations to capture the passenger experience at a point in time (i.e. the passengers security experience is not captured until the passenger is at the departure gates which is well after the passenger has gone through areas such as security). • At present any QSM survey that is incomplete will not be included within the calculation of the overall QSM results for arrivals and departures. • Monitoring of actual surveys completed against target is conducted using a manual quota document, with the risk of calculation error. • Wifi functionality available on PDAs used to conduct surveys is not currently being utilised to upload completed surveys real-time. Furthermore, our walkthrough of the survey process identified one instance where a surveyor did not save the completed survey whilst they are with the passenger, potentially enabling survey results to be altered before these are saved. We acknowledge that this may have occurred as part of demonstrating how a survey is completed during the walkthrough phase of our audit. • Surveys are conducted by GAL staff on zero hour contracts. We acknowledge GAL has considered outsourcing, however this was rejected on the grounds of additional costs. There may be value in considering independent (outsourced) surveys to be requested at less frequent intervals (e.g. say every 2 or 5 year interval), to complement the surveys undertaken by GAL staff.	**Considerations for the future** Service standard specific 7.1C 7.1E – 7.1H Airport operational processes 7.2K – 7.2L 7.2N – 7.2P
Audit requirement Report on whether there are more effective, accurate or robust measures of service performance, including (where appropriate) suggesting proven systems that are used at other airports.	
Audit observation	**Reference**
N/A – Refer to analysis in other sections above	**N/A**

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Audit requirement
The audit shall also compare the results of the QSM to international surveys of airport quality performance (particularly the Airport Service Quality (ASQ) survey conducted by Airports Council International), and identify any apparent anomalies in movements over time and offer any possible explanations.

Audit observation	Reference
Our audit compared results from the QSM and the ASQ survey in 2015 to understand whether there was an apparent anomaly. We identified that these two surveys differ with regards to the questions asked, calculations applied, methodology used, use different scales and are therefore not directly comparable. During 2015 there were variances in the results between the two surveys with the QSM survey results consistently higher than the ASQ. Below is a summary of the survey results which we note may not be directly comparable given the use of different methodology, calculations and scale.	**Considerations for the future** Airport operational processes 7.2M

Measure	QSM (2015 average)	ASQ (2015 average)
Departure Lounge Seating	4.05	3.52
Cleanliness	4.08	4.04
Way finding	4.18	4.11
Flight Information	4.37	4.16

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Security and Control Posts	
Audit requirement The audit shall focus on these security elements in the SQRB scheme at Heathrow Airport: Central search, Transfer search, Staff search, Control posts (CTA, Cargo, Eastside, Southside, Terminal 5). The audit shall focus on these security elements in the CSS (R) scheme at Gatwick Airport: Central passenger search, Transfer search, Staff search (Terminals and Crew), External control posts search. The robustness of the current queue measurement systems and procedures in each terminal and their fitness for purpose in providing the source data for the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport, including within this assessment the questions that have been raised regarding the consistent measurement of the end of passenger security queues.	
Audit observation	**Reference**
Our audit identified that there is a mix of manual and automated processes being used to record security queue time. We encountered a number of difficulties independently verifying security queue times recorded by OCS against CCTV footage. Our review also identified a number of considerations for the future to further enhance the measurement of the queue times at GAL. **Detailed findings** • We identified opportunities for GAL to enhance the independent validation and monitoring processes used over the third party provider (OCS) who captures manual queue times. • OCS records of queue time were not available for all time segments we sampled, despite these falling within the core hours of the CSS Handbook. We note that these times were at the beginning and end of each day. While we understand from GAL that these may relate to instances where there were no passengers, this has not been noted on the queue time forms OCS retains. • Vehicles using the Northern Approach Gate are waiting in the road outside of the security area, creating longer queues at the external control gate. This impacts upon the security queue time recorded in this location. • Uni-queue systems used to manage the flow of passengers through the North Terminal general security area have been included as part of unimpeded transit time calculations during the period of North Terminal construction. This does not align with the CSS Handbook which requires these uni-queue systems to be avoided as part of unimpeded transit time calculations. • Five minor discrepancies were identified in reported security service metric scores between published information and information retained by GAL in supporting documentation. **Considerations for the future** Service standard specific • Premium security is currently included within the central security queue calculation which could lead to queue times being captured that are not representative of the average queue time per passenger across GAL. Airport operational processes • As part of our testing, we identified some issues regarding the availability and accuracy of a security monitoring tool used by GAL which could be used for quality assurance checks on security times. We acknowledge that the affected system is at the end of its life and we understand that this is being replaced in 2016 as part of GAL's capital investment programme. While this is an important issue and therefore we have highlighted this to GAL management, it is out of the scope of the service standards. Details of these issues have been provided to, and discussed with, GAL. However, due to the security implications associated with this observation, the specific details have not been presented in this report. • The process for calculating unimpeded transit time is based on the time taken for a member of the AOC to walk the transit area. This may not be representative of the walking speed of the average passenger • Activities included as part of the general passenger security area (such as passport checks and preparation areas for screening) differ between	**Detailed findings** 6.1 6.3 – 6.5 6.7 **Considerations for the future** Service standard specific 7.1I Airport operational processes 7.2Q – 7.2Y

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the North and South Terminals, impacting upon comparability. We acknowledge that this reflects a temporary location of security areas during construction in the North Terminal. • Real time monitoring of service elements during the month is only available for the general passenger security area in the South Terminal (which uses an automated system). GAL should consider additional real time monitoring of other service elements to enhance operational oversight. • A centralised system is not being used to record all security queue times, impacting upon central oversight by GAL. • We identified errors in the data entry of security queue times into calculation spreadsheets. We note that this did not impact upon the overall calculation of the service measure for the month, or rebate calculations. • However, as part of wider review and upgrade of CCTV functionality at GAL, consideration should be given to extending the use of CCTV footage to enable independent monitoring of security queue times and asset availability. The Information Commissioners Officer should be consulted regarding the use of CCTV for this purpose to ensure that this is aligned with their requirements.	
Audit requirement Whether the current grouping of control posts at Heathrow Airport is (i) balanced in terms of usage, (ii) reasonable in terms of substitutability of individual control posts, and (iii) able to maintain incentives on HAL to maintain control post performance levels across the campus in order meet the operational needs of the airlines/passengers.	
Audit observation	**Reference**
N/A – HAL specific measure.	**N/A**
Audit requirement Whether there are more effective, accurate and robust measures of service performance, including (where appropriate) suggesting proven systems that are used at other airports.	
Audit observation	**Reference**
N/A – Refer to analysis in other sections above.	**N/A**

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Passenger Operational and Airline Operational Elements	
Audit requirement The audit will consider the procedures and systems for measuring availability of the assets set out in the SQRB scheme at Heathrow Airport. This includes the following aspects: Passenger sensitive equipment (general), Passenger sensitive equipment (priority), Arrivals baggage carousels, Track transit system, Stands, Jetties, Fixed electrical ground power, Stand entry guidance, Pre-conditioned air, Pier-served stand usage. The audit will consider the procedures and systems for measuring availability of the assets set out in the CSS(R) scheme at Gatwick Airport. This includes the following aspects: Passenger sensitive equipment (general), Passenger sensitive equipment (priority), Arrivals reclaim, Inter-terminal shuttle system, Outbound baggage, Stands, Jetties, Pier service, Fixed electrical ground power. The audit shall give an objective opinion on: • whether the procedures and systems in each terminal are fit for purpose • whether they are transparent, well documented and have been consistently applied • whether the application of the processes by which specific assets are excluded from the scheme when service quality exclusions apply (e.g. planned maintenance) have been consistent with the specification in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport • whether there are more effective, accurate or robust measures of service performance in this area, including (where appropriate) suggesting proven systems that are used at other airports.	
Audit observation	**Reference**
GAL has established procedures to capture and calculate monthly asset downtime, and associated availability, for each asset class included within the CSS Handbook. The calculation methods used were inconsistent across different asset classes both in regards to availability calculations, and the capture of asset downtime/availability. A separate spreadsheet has been created for use in calculating availability for each asset class, again creating inconsistency in the approach adopted across the different asset types. All exemptions require documented approval from the AOC, evidenced through documented meeting minutes. Our audit identified minor errors in the calculation of asset downtime for stands. Furthermore, we identified minor discrepancies between CSS scores reported on the GAL website against supporting documentation and calculation models used by GAL. There are also further opportunities for GAL to enhance the recording and calculation of asset availability measures at GAL. **Detailed findings** • Our audit identified minor errors in the calculations used in the stand availability spreadsheets for March 2015 and July 2015. These calculation errors did not impact upon the rebate payable by GAL. • Our audit further identified a minor variance between the asset downtime as per the monthly supporting calculation and the downtime recorded within Maximo (GAL's asset management system). • Minor discrepancies were identified between reported asset availability data reported on the GAL website and supporting documentation retained by GAL. **Considerations for the future** Service standard specific • Exclusions are available for major refurbishment work, re-lifting work, major investment projects and replacements; however there is no definition as to what constitutes work of this nature. • Guidance in the CSS Handbook for inter-terminal shuttles is currently unclear and could be read as requiring no shuttle to be available outside of core hours. We acknowledge that GAL are not currently interpreting the CSS Handbook in this manner, but rather are ensuring one shuttle is available at all times.	**Detailed findings** 6.6 6.8 6.9 **Considerations for the future** Service standard specific 7.1J 7.1K Airport operational processes 7.2E 7.2Y – 7.2AC

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Airport operational processes • Documentation to evidence that quality assurance checks are performed was not available for all asset types covered by the CSS Handbook. Furthermore, we identified opportunities to enhance the nature of quality assurance checks being performed by GAL. • At present CCTV footage is not being used to substantiate asset availability and it is not the purpose of such a system. • The majority of all assets downtime is captured via Maximo, however we identified that opportunity for further asset types to also be monitored via Maximo (for example, shuttle downtime is currently captured in a manual logbook and excel spreadsheet). • Reports showing asset availability during CSS Handbook core hours (from Maximo) are not currently being prepared on a frequent basis to be used for operational management. • The pier service model used by GAL is currently complex and requires several different data inputs and manipulations. We have identified opportunities for this to be simplified to reduce the risk of calculation error. • There are currently two long standing pier service exemptions at GAL, which are obtained on a rolling basis from the AOC. Consideration should be given to incorporating these exemptions into the CSS Handbook to minimise administration time by GAL and the AOC.	

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Aerodrome Congestion	
Audit requirement The audit shall give an objective opinion on: • whether the data collection and communication have been performed subject to adequate processes and procedures to ensure that they are accurate and complete • whether the airport has reasonably identified the full list of "material events" as defined in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport • whether the airport has reasonably identified the full list of such events with a "material operational impact" as defined in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport • whether the airport has reasonably applied the "exceptions" as defined in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport.	
Audit observation	**Reference**
GAL maintains a Super Log which captures all potentially material events that occur each day. This Super Log is updated by the Airside Operations team as part of the roles and responsibilities of their shift and includes sufficient detail on the nature of any events. The CSS Handbook provides guidance on what is considered a 'material event' and 'material operational impact'. This guidance is referred to by the Airside Operations team as part of categorisation of all potentially material events. Whilst guidance is available in the CSS Handbook, categorisation of events requires judgement and we identified improvements to ensure that quality assurance checks are performed over this decision making. **Considerations for the future** Airport operational processes • There is no independent review of quality assurance over the classification of events to assess whether these are 'material' in nature, and therefore fit the definition included within the aerodrome congestion term.	Airport operational processes 7.2E
Audit requirement Whether in the opinion of the Auditors the airport operator has: • made reasonable assumptions about the number of expected arrivals and/or departures during material events with a material operational impact • the airport operator has made reasonable judgements based upon explicit criteria where there have been contributing causes beyond its control.	
Audit observation	**Reference**
Aerodrome congestion is calculated using a spreadsheet which captures actual and expected arrivals and departures, extracted from the core GAL airport database. As noted above, we have identified improvements to ensure that quality assurance checks are performed over judgements made as part of aerodrome congestion decision making. **Considerations for the future** Airport operational processes • There is no independent review or quality assurance over the classification of events to assess whether these are 'material' in nature, and therefore fit the definition included within the aerodrome congestion term.	Airport operational processes 7.2E

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Audit requirement Whether subject to the above the rebates have been properly calculated.	
Audit observation	**Reference**
Refer to the rebates section below.	**N/A**
Audit requirement Whether there are more effective, accurate or robust measures of service performance, including (where appropriate) suggesting proven systems that are used at other airports.	
Audit observation	**Reference**
As noted above, independent review aerodrome congestion term decision making needs to be implemented by GAL. This should include oversight from the AOC.	Airport operational processes 7.2E
Audit requirement As part of the above assessment, the Auditors will investigate and report on the transparency of the decision-making process for the operation of this measure, and on the extent to which the views of stakeholders are appropriately captured and considered.	
Audit observation	**Reference**
Classification of events regarding aerodrome congestion are made by the Airside Operations team. We identified an opportunity to enhance visibility, and independent challenge of aerodrome congestion calculations through opening this decision-making process to a broader audience. **Considerations for the future** Airport operational processes • Regular reports and information on potentially material events are not provided by GAL to the AOC and CAA for their review and consideration.	Airport operational processes 7.2AD

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Airline Service Standards (Gatwick Airport only)	
Audit requirement The effectiveness of the monitoring of arrivals bag performance, in particular the robustness of data collection and calculation of airline performance.	
Audit observation	**Reference**
Airline bag performance is calculated based upon Ground Handler notification of aircraft arrival (on chocks time) and delivery of the last bag. We identified an automated data input of on chocks time which could be used by GAL to reduce the possibility of manual data recording error. Our audit also identified a further area for clarification within the CSS Handbook to ensure consistent measurement of this performance measure. **Detailed findings** Our audit identified four minor discrepancies between published inbound baggage scores and supporting documentation retained by GAL. Furthermore, we were also unable to reconcile flight data from the inbound baggage service metric spreadsheet to the rebate calculation spreadsheet for four of five months. As a result, we were unable to obtain comfort over the accuracy of rebate calculations for these months. **Considerations for the future** Airline operational processes • Quality assurance review of last bag time is not currently being undertaken, for example using CCTV footage. In addition, in chocks time is automatically captured within a system as the aircraft arrives however, this automatic data feed is not currently being used as part of calculations.	**Detailed findings** 6.2 **Considerations for the future** Airport operational processes: 7.2E

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Audit requirement The provision of adequate information to airlines and to the CAA on the amounts paid and the dates of payments.	
Audit observation	**Reference**
Service performance information (on both CSS and ASS performance measures) is provided to the CAA by way of reports published on the external GAL website, and through information provided to the AOC on a monthly basis. This information provides a summary of ASS performance for the month, including any targets that have not been met. Our audit identified that adequate information appears to be provided by GAL to the CAA regarding ASS performance.	**N/A**
Calculation and Payment of Bonuses (Heathrow Airport only) and Rebates	
Audit requirement The robustness of the calculations of bonuses (Heathrow Airport only) and rebates, including the consistent rounding of figures to the appropriate number of decimal points.	
Audit observation	**Reference**
Rebates are calculated using a spreadsheet which pulls in performance for each service element that month, broken down by terminal. Rebate calculation methodology applied by this spreadsheet appears to align with requirements per GAL's Conditions of Use and the Core Service Standards. An annual rebate wash-up calculation is conducted at year end to reflect variations between estimated and actual aerodrome charges and airline use. We identified that further training and awareness of this calculation would be beneficial. **Considerations for the future** Airport operational processes • There is a key person dependency regarding the annual rebate wash-up calculation. Whilst the GAL employee who conducted this wash-up in 2014 is still employed by GAL, their role no longer includes this activity and training has yet to be provided to the new GAL Finance Analyst. • Calculation of rebates does not reflect the mid-year reforecast of passenger numbers, impacting upon the accuracy of rebate calculations during the year.	**Considerations for the future** Airport operational processes: 7.2H 7.2J
Audit requirement The robustness of the calculations of rebate reduction due to airlines not meeting the airline service standards (Gatwick Airport only).	
Audit observation	**Reference**
Rebate calculations are based on monthly CSS performance of each service element. Where a CSS performance target has not been met, the GAL rebate calculation model will check whether each airline has achieved their ASS targets and will only pay a rebate if these ASS targets have been met. Our audit did not identify any areas for improvement regarding the robustness of calculations with regards to airline service standard reductions.	**N/A**

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Audit requirement The provision of adequate information to airlines and to the CAA on the amounts of rebates paid by HAL and GAL , the bonuses earned by HAL, the amount of rebate reduction (Gatwick Airport only), and dates of payments.	
Audit observation	**Reference**
A summary of rebate exposure and rebates paid is presented on the GAL website. Published rebate information was not available for 2014/15 at the time of our audit, but was subsequently republished. We also identified areas where the type of rebate information reported by GAL on their website could be enhanced. Airlines are provided their rebate by way of a credit note with a high level description of the period and service element the rebate covers. As identified by GAL, there is a need to provide additional information to airlines to enhance their understanding of rebate calculations. **Considerations for the future** Airport operational processes • The format of rebate information presented on the GAL website varies between 2014/15 and 2015/16 , with one year presented in table form and the other in paragraph form. In addition, published rebate information does not reflect any changes to the rebate exposure or rebates paid as a result of the annual rebate wash-up. • Details of how rebates have been calculated has not historically been provided to airlines with their rebate credit note. GAL intends to provide additional information to airlines going forward, however as rebates had not recently been paid at the time of our review we were unable to sight this.	**Considerations for the future** Airport operational processes: 7.2G 7.2I

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Publication of Service Performance	
Audit requirement The audit shall give an objective opinion on the publication of performance, and (where appropriate) make suggestions for possible ways of improving transparency of information to passengers and other airlines.	
Audit observation	**Reference**
As part of our audit, we conducted testing over the accuracy and completeness of published service performance information on GAL's website. GAL publish monthly service performance reports of service performance. Information included in these service performance reports clearly sets out service performance for each GAL terminal, both for the month and 12 month period. However, we identified the following further areas which could enhance reporting on service performance. **Considerations for the future** Service standard specific: • Service performance reports had not been published for 2016 at the time of our audit fieldwork due to on-going consultation with the AOC. Furthermore, there was no timescale for service performance report publication in the CSS Handbook. Airport operational processes: • Quality assurance checks of service performance reports by GAL are not currently documented and therefore we were unable to assess these were being performed as part of our audit. • Updates to service performance reports on the GAL website are not clearly communicated to end users via an explanation on the website notifying them of the change and the nature of amendments made.	**Considerations for the future** Service standard specific: 7.1B Airport operational processes: 7.2E 7.2F

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Limitations

During our work, we identified that CCTV footage was used by GAL for the purposes of passenger safety and security. As a result this impacted our ability to independently assess:

- The accuracy of start and finish times of work orders raised to record planned/routine maintenance and ad hoc/reactive maintenance for assets covered by the asset availability measures. This impacted our ability to independently assess whether asset downtime for each asset had been accurately recorded by engineers and contractors at Gatwick.
- The accuracy of manually recorded security queue times (for general security, transfers, staff, and external control posts) over the period January 2015 – December 2015. This impacted our ability to independently assess whether security queue times had been accurately recorded by OCS, the third party contracted by Gatwick to record security queues.
- The accuracy of automated security queue times (for general security) at Gatwick's South terminal. The automated security queue system applies a number of rules and calculations to determine the queue time that is recorded.

Furthermore, we were unable to verify asset availability against original system records due to limitations on the length of time system records are retained by GAL:

- The accuracy of start and finish times of asset downtime in the following systems as records are only retained for a period of 99 days:
    - SEGS ('on chock time' which is used as part of the inbound baggage performance measure)
    - IDAHO (used as part of the measurement of several asset types under the asset availability performance measure).

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3 Summary of Key Findings

The following tables below provides a summary of the detailed findings ratings and considerations for the future for each service component for GAL.

	Detailed Findings			Future Considerations	
Component	**High**	**Medium**	**Low**	**Service Standard Specific**	**Airline Operational Processes**
General Observations	-	-	-	1	5
Passenger Satisfaction	-	-	-	6	6
Security & Control Posts	-	2	3	1	9
Passenger Operational & Airline Operational Elements	-	-	3	2	5
Aerodrome Congestion	-	-	-	-	1
Airline Service Standards (Gatwick only)	-	1	-	-	-
Calculation & Payment of Bonuses (Heathrow only) & Rebates	-	-	-	-	4
Publication of Service Performance	-	-	-	1	1
Total	**-**	**3**	**6**	**11**	**31**

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Within our reports, every finding is given a rating providing a high level view of the adequacy of the internal control environment. These ratings are described in the tables below. This rating system allows for objective monitoring and comparison of reports and further provides indication to the level of control weaknesses in place. Whilst we have documented some of the key features below as a guide towards the rating provided this list is not comprehensive and other factors may have been taken into consideration. The below table provides example features which are considered when providing ratings to our findings throughout this report.

Finding rating	Description	Potential Rating Features	Service Standard Audit Commentary
High	Findings that are fundamental to the management of risk in the business area, representing a weakness in control that requires the immediate attention of management	• Key control not designed or operating effectively • Potential for fraud identified • Non-compliance with key procedures / standards • Non-compliance with regulation	In the context of our audit, we typically identified that high priority findings were of a nature where controls were not designed appropriately and/or not working effectively in practice.
Medium	Important findings that are to be resolved by line management.	• Impact is contained within the department and compensating controls would detect errors • Possibility for fraud exists • Control failures identified but not in key controls • Non-compliance with procedures / standards (but not resulting in key control failure)	In the context of our audit, we typically identified that medium priority findings were of a nature where enhancement were identified to the way controls had been designed and/or the way in which controls work in practice.
Low	Findings that identify non-compliance with established procedures or opportunities to further enhance the service quality framework.	• Minor control weakness • Minor non-compliance with procedures / standards • Opportunities or observations surrounding the service quality framework	In the context of our audit, we typically identified that low priority findings were of a nature where observations for future enhancement were identified to the way controls had been designed and/or immaterial control weaknesses were identified.

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4 Approach

4.1 Service element overview and walkthrough

We obtained an overview of how each service element operates at GAL. This involved meeting with key stakeholders responsible for the oversight and delivery of each service element. We also met with stakeholders at GAL who collated and published the service element results on a monthly basis.

During this process we conducted site visits to GAL and sighted key operational activities that supported the collation and analysis of data for the service element. We also obtained and reviewed key documentation relevant to each service element.

4.2 Audit procedures

Based upon our understanding of each service element, we developed an audit procedure specific to GAL. These audit procedures guided our testing approach in the following areas:

- Review of calculations, models and systems
- Validation of data inputs
- Reasonableness of calculations
- Recalculating rebate/bonus payments
- Publication of service standard results.

4.3 Review of calculations models and systems

We inspected the key Excel workbooks that are used for each service element calculation to assess the integrity of data and calculation methods used. This included an assessment of:

- Security controls in place to prevent unauthorised access or accidental modifications to the spreadsheet (e.g. password protection)
- Change controls in place to ensure modifications are appropriate and authorised (e.g. change logs)
- Formula accuracy, macro (automated routines) and external links assessment using a specialist Excel auditing tool called 'XL Audit'.

Furthermore, we have tested the methodology used by third parties to weight the QSM scores by passenger numbers by independently re-performing the weighting for a sample month and comparing to the outputs provided to the airport. This has been performed using our data analytics software, IDEA, by taking the raw passenger data and QSM survey inputs and transforming it using the algorithm rules.

4.4 Validation of data inputs

Applying a sample testing approach, we validated key data inputs for each service element. This validation included the review of:

- Maximo work orders raised for asset downtime
- CCTV footage for both security and control post queue times

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- Material event documentation, to support aerodrome congestion calculations.

4.5 Accuracy of calculations

We reviewed key supporting calculation models and spreadsheets for each service element to assess whether these had been designed appropriately (in line with service quality requirements) and were operating effectively in practice. Testing in this area included activities such as:

- Tracing data inputs through from data input to the externally published service performance results – including where different spreadsheets are used as part of the service element calculation
- Testing key formulae within calculation models/spreadsheets to assess whether these are in line with the requirements of the service standard calculations
- Obtaining supporting documentation for any exemptions / exclusions, including evidence of approval from the AOC and other relevant parties.

4.6 Recalculation of rebate / bonus payments

As part of our review of the reasonableness of service element calculations, we took a sample based testing approach to recalculate a sample of rebate/bonus payments throughout of audit period. This included:

- Testing key formulae within rebate/bonus payments models/spreadsheets to check these are in line with requirements calculations within the service standards
- Testing to ensure rebates/bonuses have been calculated based on reported service quality results for the relevant period (including Airline Service Charges for GAL)
- High level review of annual rebate wash-up process.

4.7 Publication of service standard results

For each service element, we compared a sample of service element results across our testing period to published results of the external websites of GAL.

4.8 Comparison to good practice

Throughout our review, we considered the operational practices at GAL compared to other good practice we have observed elsewhere within the sector, similar organisations and other regulators.

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5 Service Element Overview

Passenger satisfaction

Passenger satisfaction is measured via Quality of Service Monitor (QSM) surveys, which use a pre-defined set of questions to assess passenger satisfaction across the following elements:

- Departure lounge seating availability
- Cleanliness
- Way-finding
- Flight information.

Surveys are conducted by GAL staff using hand held devices. The surveys take place across both the North and South Terminals, in either a departure lounge for departure passengers, or within the arrivals concourse for arrivals passengers.

Survey quotas are prepared on a regular (usually monthly) basis to target passengers that are surveyed. Quotas include both the total number of passengers to be surveyed for the month, along with the destination they are travelling to (for surveys of departure passengers).

Completed surveys are downloaded to the GAL network at the end of each surveyor's shift. GAL Market Research staff review and spot check survey results during the month to ensure data quality. At month end, survey data is sent by GAL to a third party (ORC), who specialise in business intelligence. ORC apply a weighting factor to survey results to ensure results for the month reflect actual passenger numbers travelling through each terminal, and the percentage of passengers using particular services (such as toilets). Further weightings and calculations are applied based on flight destination, time and other agreed factors (including any approved exemptions).

Passenger satisfaction scores are presented for the month and on a moving annual total basis. Final scores are reviewed by the GAL Market Research team each month.

Security and control posts

GAL measures security queue times across both North and South terminals for:

- Central passenger search
- Flight connections
- Staff search
- External control posts (Northern approach gate).

Central passenger search

GAL is currently utilising two different approaches for measuring and monitoring central passenger search queues in the airport. Queue times are manually recorded by a third party (OCS) in the North Terminal, whereas an electronic system is used to monitor queue times in the South Terminal. We understand that GAL intend to roll out the electronic queue management system in the South Terminal as part of the current development works that are taking place.

GAL security conduct random checks of security queue times (on a weekly basis) to verify the accuracy of queue times recorded by OCS or via the automated queue management system.

North Terminal

Within the North Terminal, GAL have contracted a third party (OCS) to manually record security queue times during core hours. One passenger is selected at random each 15 minute period during core

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hours as they enter the screening area. Queue timing commences when the passenger enters the security area, or another point as agreed by the AOC. The OCS queue timer continues to manually record the queue time until the passenger reaches the start of a roller bed, and are in a position to retrieve a tray to place their belongings in for security screening.

OCS staff record queue times on a manual document and call these through to the GAL Control Centre every 15 minutes. The GAL Control Centre are responsible for manually recording queue times within the OPM system. A daily summary of security queue times from OPM is provided to management for review.

The GAL Finance Analyst calculates CSS security queue times each month based on information entered within OPM. Allowable exclusions (where AOC approval has been provided), and unimpeded walk time are removed as part of these calculations.

South Terminal

GAL utilises an automated security queue system (QSM system) to measure passenger security queues within the South Terminal.

All passengers departing from the South Terminal must scan their boarding pass at an electronic gate as they enter security, which records an image of the passengers face (with an accompanied time stamp). Due to system limitations, these is not a 100% success rate on photo capture for all passengers, however a large proportion of passengers are being included.

Secondary cameras are in place in each security lane which capture passengers when they reach the start of the roller bed and are in a position to be able to retrieve a tray for their belongings. The QMS system calculates the security queue time for the 15 minute segment on the security queue time of the fifth passenger that passes through a security lane. This ensures that security queue times are based on security lanes that are being actively used throughout the 15 minute period.

Security queue times are automatically recorded in the QSM system, and can be tracked using real-time monitoring software in the security area. Queue times recorded in the QSM system have automatically removed unimpeded walk time.

The GAL Finance Analyst calculates CSS security queue times each month based on information in the QSM system.

We understand that GAL would conduct manual queue timing if the system went down, or if queues extended beyond the electronic gates at any time during core hours.

Flight connections

GAL have contracted OCS to manually record queue times for flight connections, across both the North and South terminals. Given the low volume of passengers who use flight connection facilities, GAL are not currently exploring systemisation in this area.

OCS staff select one passenger at random each 15 minute period during core hours as they approach the transfer area. Queue timing commences when the passenger presents their boarding card to the security officer in the transfer area, and concludes when the passenger reaches the start of a roller bed, being in a position to retrieve a tray to place their belongings in for security screening.

OCS staff record queue times on a manual document throughout the day. At the end of each day, the OCS Administrator manually enters these queue times into a queue time spreadsheet and submits this to the GAL Finance Analyst.

Staff search

Staff security queue times are measured across five different areas within the North and South terminals, as follows:

- North Terminal – Staff (Departures Hall)

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- North Terminal – Staff (Arrivals Hall)
- North Terminal – Jubilee House
- South Terminal – Staff
- South Terminal – Atlantic House.

OCS manually measure staff security queue times on behalf of GAL. Similar to flight connections, the low volume of staff who pass through these search areas means there is no current plans for systemisation in this area.

OCS staff select one staff member in each of the five different staff search areas at random each 15 minute period during core hours. The location at which the queue timing starts differs between each staff search area, however in each case has been agreed with the AOC. Security queue times conclude for all staff search areas when staff are in a position to retrieve a tray to place their belongings in for security screening.

OCS staff record queue times on a manual document throughout the day. At the end of each day, the OCS Administrator manually enters these queue times into a queue time spreadsheet and submits this to the GAL Finance Analyst.

External Control Posts – Northern approach gate

As with flight connections and staff search, GAL have contracted OCS to manually record security queue times for the northern approach gate external control post. The CSS Handbook currently only requires security queue times to be measured for the northern approach gate.

OCS staff select one vehicle at random each 15 minute period during core hours. Queue timing commences when the vehicle turns off the main road, towards the control post. The OCS staff member continues to record the queue time until the vehicle is fully within the control 'pen' and has stopped moving. Where no vehicles enter the external control post during the 15 minute period, this is recorded as a nil queue time by OCS.

In line with processes for flight connections and staff search, OCS staff record queue times on a manual document throughout the day. At the end of each day, the OCS Administrator manually enters these queue times into a queue time spreadsheet and submits this to the GAL Finance Analyst.

Passenger operational and airline operational elements

The CSS Handbook requires GAL to measure the availability of a number of assets, across both the North and South terminal, as follows:

- Asset availability (jetties, fixed electronic group power, passenger sensitive equipment, and arrivals reclaim)
- Outbound baggage
- Inter-Terminal shuttle system
- Stand availability
- Pier service.

Asset availability (jetties, fixed electronic group power, passenger sensitive equipment, and arrivals reclaim)

GAL has established asset maintenance plans for each asset, which include planned dates when different maintenance activities are performance. Any assets requiring corrective maintenance are notified to the GAL fault team through a notification line.

Asset availability at GAL is managed via Maximo, an asset management system. All maintenance work, whether planned or reactive, is recorded as a work order within Maximo. Engineers, and contractors, are allocated Maximo work orders and are responsible for performing maintenance and work required. Engineers, and contractors, are required to close work orders directly in Maximo, which then automatically calculates downtime for that asset.

The GAL Finance Analyst generates a Maximo extracts each month (or more regularly where time allows), which shows asset downtime by asset and downtime type (corrective maintenance, planned maintenance etc.). These reports are incorporated into an asset availability spreadsheet

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(maintained separately for each asset type) which calculates all downtime for the asset over the month.

Asset availability spreadsheets are sent by the GAL Finance Analyst to the GAL Engineering Managers for their review. Any amendments required (due to data entry errors etc.) are manually applied by the GAL Finance Manager in the asset downtime spreadsheets, as amendments cannot be made directly within the Maximo system.

Outbound baggage

GAL operates an automated baggage system (SAC), from passenger drop off of bags at check-in to delivery of bags to Ground Handler's trolleys. Baggage is scanned throughout its route (including at check-in, or when the bag first enters the baggage system), allowing for real-time baggage tracking through the SAC system.

An automated daily data upload of baggage information occurs between the SAC system and a system managed by a third party (ENGIE). ENGIE analyse baggage information to report daily performance against CSS targets. The algorithms run by ENGIE as part of this analysis have been presented to, and agreed by, the AOC. The Engineering Services team review baggage performance daily, and follow up any unusual results with ENGIE, as required.

Inter-Terminal shuttle system

GAL operates an inter-terminal shuttle service between the North and South Terminals for passengers. As these shuttles are classed as a 'train' under Office of Rail and Road regulation, a shuttle logbook is maintained which captures all downtime, and the associated cause, on a daily basis.

The Shuttle Engineering team manually enters information from this shuttle logbook into a Shuttle Performance Dashboard spreadsheet each day. As part of this data entry, the shuttle downtime is classified to reflect whether this occurs within core hours (per the CSS Handbook) and whether downtime relates to a single or double shuttle outage. The Engineering Manager conducts an independent review of the Shuttle Performance Dashboard spreadsheet to the shuttle logbook to ensure data accuracy.

Stand availability

GAL stand availability is monitored real-time by the Gatwick Control Centre through the Stand Planning system. All stands that are closed (either due to planned or reactive maintenance) are logged in the Stand Planning System to prevent aircraft from inappropriately being directed to these locations when they land.

The GAL Airside Operations Team also maintain a Stand Availability spreadsheet, which captures all stand closures and the associated reason for closure. Various formulae are applied to this spreadsheet to identify whether the stand outage occurred during core hours, and the total duration of the closure. All stand closures are reviewed by the Airside Operations team on a monthly basis back to planned work plans, and known reactive outages.

Pier service

GAL calculates the number of passengers using pier service stands, compared on remote stands, manually using a dedicated pier service spreadsheet.

GAL Flight Planners record real-time the stand used by each aircraft, along with reasons why a aircraft used a remote stand (where applicable). On a monthly basis, the GAL Finance Analyst extracts a number reports and extracts from different GAL systems which set out flight and stand information, as follows:

- System extract showing the reasons why aircrafts used remote stands
- Details of flights, and associated passenger numbers, that used remote stands during the month
- Number of passengers coached from remote stands.

The GAL Finance Analyst analyses the various data inputs to determine which aircraft, and passenger numbers, were served from remote stands. For each of these aircraft, the reason for use of remote stands is

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reviewed to determine whether this fits within allowable exclusions (per the CSS Handbook). The pier service calculation also includes further AOC approved exemptions (where applicable), that represent particular events that took part during the month.

Pier service scores are presented both for the month, and on a moving annual total basis.

Aerodrome Congestion

GAL are required, under the CSS, to pay rebates to airlines where selected 'material events' occur that cause a 'material operational impact' to airport movements.

GAL Duty Managers, and their team, record all potential material events into a superlog spreadsheet on a daily basis. The GAL Assistant Airside Compliance Manager reviews all potential material events recorded in the superlog each week to determine whether these meet the requirements of a 'material event', and to consider whether these have a 'material operational impact'. Guidance on what constitutes a 'material event' and 'material operational impact' are provided in the CSS Handbook.

A monthly analysis of all 'material events' is conducted to determine the maximum cumulative arrival movement deferred, and therefore the impact the 'material event' has on passengers. The analysis is completed based upon the actual aircraft flows, compared to the reference flows. Only where these is a different between these flows is a rebates payable to airlines.

Airline service standards

The GAL Airline Service Standards include the following two service elements:

- Check-in performance: Queue time
- Arrivals bag performance: First and last bag times on carousel.

Check-in performance: Queue time

At the time of our review, GAL were still determining the methodology to be used in measuring check-in queue times. As such, formal tracking of this measure had yet to commence.

Arrivals bag performance: First and last bag times on carousel

GAL records the 'on chocks' time for aircrafts through manual notification from Ground Handlers to the Gatwick Control Centre, and through an automated time stamp from 'SEGS' (the system that records when an aircraft is on the stand, or 'on chocks'). This 'on chocks' time forms the start of the time period measured under this service element.

Ground Handlers are responsible for transporting baggage from aircraft to the reclaim belts (both normal baggage and out of gauge items) and for contacting the Gatwick Control Centre to record the time the last bag is delivered. The GAL Gatwick Control Centre log this last bag time in IDAHO.

The GAL Finance Analyst analyses arrivals bag performance each month using a DIDFLY IBB spreadsheet. This spreadsheet incorporates IDAHO extracts (of 'on chocks' time and last bag time) with information on the aircraft type to assess whether bags were delivered in line with agreed timelines. Any AOC approved exceptions are manually applied in this spreadsheet by the GAL Finance Analyst.

Publication of service performance

The GAL Finance Analysis is responsible for collating all CSS and ASS service performance results each month from operational staff responsible for each service area. Monthly results (for both CSS and ASS service measures) are captured in a 'CSS Performance Tracker' spreadsheet. Any allowable exclusions (i.e. where AOC approval has been provided) are removed by the GAL Finance Analyst as part of final performance calculations for each service measure.

GAL uses an external agency to format the final service performance results for each month. An internal review of this publication occurs by the GAL Finance Analyst, and another member of the Finance team, to

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ensure data accuracy before these results are uploaded onto the GAL external website.

Calculation and payment of rebates

The Gatwick Conditions of Use sets out the nature of rebates payable to airlines where CSS targets are not met. GAL's total annual rebate exposure is capped at 7% of revenue from core service charges. Rebates are calculated on a monthly basis, with separate calculations performed for the North and South Terminal.

GAL's rebate exposure for each month is calculated within the CSS performance tracker. Rebate exposure for each month is based on total estimated core service charges, estimated passenger numbers and the total rebate exposure for each service elements (per the Conditions of Use). This rebate exposure is further broken down by airline based on their share of core service charges and passenger numbers for the terminal.

The GAL Finance Analyst collates monthly CSS and ASS compliance within the CSS performance tracker on a monthly basis. Where a service element has been breached, the rebate payable is calculated within the Rebates spreadsheet. This spreadsheet links into the CSS performance tracker to identify breaches of CSS and ASS targets, and calculates the rebate payable based upon each airline's share of core service charges and any discounts payable (generally through variations to rebate calculations agreed by Gatwick and the airline in their bilateral contracts). Rebates are only payable to airline where they have paid core service charges to GAL and they have met ASS targets.

Rebate calculations are performed by the GAL Finance Analyst are reviewed by an independent member of the Finance team. Rebates are calculated on a monthly basis and are paid to airlines (by way of a credit note) on a quarterly basis.

At the end of the financial year, the GAL Finance team completes a wash up exercise to determine the actual rebate payable to each airline based on the actual passenger traffic and core service charges. The variance in the calculation of the annual rebate compared to rebates paid during the year are made via a wash-up credit note / invoice to each airline.

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6 Detailed findings

The following observations were identified during our review as having a direct, or potentially direct, impact on service performance scores, and associated rebates, reported by GAL.

6.1	Medium	Independent validation and monitoring of security queue times

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding GAL currently contracts a third party, OCS, to manually record queue times for all areas covered by the core service standards, except South Terminal general search (which utilises an automated queue time system). GAL Security Team Leaders conduct independent spot checks of queue times recorded by OCS. These spot checks occur over all security areas where manual queue times are recorded, and across different time segments. The outcome of these spot checks enable GAL to monitor queue timers on an on-going basis via Security Team Leaders generating their own security queue times and comparing these with the third party. As part of our audit, we selected a sample of 45 time slices (within the CSS core hours) across February 2016 and March 2016 to independently recalculate OCS recorded queue times. Our sample was spread across all security screening areas, being North Terminal passenger central search, North and South Terminal passenger flight connections, North and South Terminal staff search and external control posts. We were unable to validate OCS manual queue times retrospectively in 30 of the 45 time slices selected for testing.	We support GAL's decision to implement facial recognition software for passenger search in the North Terminal. Once in place, this will remove the need for OCS to manually record security queue times in this area. GAL should review the methodology adopted to independently spot check queue times recorded by OCS. Consideration should be given to increasing the number of spot checks conducted to ensure that OCS are correctly recording manual queue times across GAL. As part of this, formal requirements should be in place to evidence spot checks have occurred and the results of these.	*Gatwick monitors the performance of our queue timing contractor very closely to ensure good performance by undertaking spot checks of the times generated. Good performance of this contractor is very important for our ability to effectively roster our staff. In our view this method of monitoring is effective.* *In the short term we also note that the technology used for capturing queue times in the North Terminal will move to an automated system.* *With regard to the recommendation that checks may not operate effectively due to few checks being undertaken early in the morning or late at night our systems of forecasting passenger flows and rostering means that we have a very good picture of expected passenger flow, and if the passenger throughput profile changes then we would expect to undertake more tests early in the morning.* *As is good practice we suggest we continue to use a risk based approach to validation and*

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6.1	Medium	Independent validation and monitoring of security queue times

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
We acknowledge that GAL are implementing facial recognition software for passenger search in the North Terminal. Once implemented, this will remove the need for OCS to manually record security queue times in this area. **Implication** There is a risk that manual security queue times recorded by OCS do not accurately reflect the queue times passengers face, impacting upon the accuracy of service reporting. Furthermore, our testing identified a risk that independent spot checks of OCS manual queue times conducted by GAL may not be designed or operating effectively. For example, few checks are currently occurring during early morning or late at night.		*target our spot checks at times when passengers are using the facility in sufficient numbers.* *A final observation is that this testing was undertaken using CCTV system as the chosen method for testing. This is not the intended function of this system and it was not suitable for retrospectively testing queue times (This does however not affect its primary function). This meant the testing results cannot be treated as conclusive. It is therefore not clear that additional controls are needed.* *Date Effective: Implementation of the automated security measurement system in NT is currently anticipated in Autumn of 2016* *Owner: Peter Lederer* **AOC comment:** *The North Terminal is moving to automated queue measurement from August 2016 at this point the recommendation is no longer valid.* **GAL note:** *no further update needed*

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6.2 Medium — Inbound baggage score discrepancies

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding The inbound baggage service metric was first introduced in April 2014. Since its introduction, GAL have made several changes and enhancements to the way in which this service metric is calculated, including a full review of the calculation methodology being applied one year after this was implemented. Our audit identified six discrepancies between inbound baggage service element scores as per the published results and the supporting documentation retained by GAL. We tested a sample of five months' calculations of inbound baggage performance scores and compared these against scores that had been externally published. Our testing identified four variances between the internal calculation spreadsheet used by GAL to calculate the service measure, and the published service performance results (on the GAL website). We understand that amendments have been made by GAL to their inbound baggage score calculation model, which have led to variations between internal calculations and information published on the GAL website. Refer to Appendix F for further details. We also reviewed how inbound baggage service metric scores are used as part of rebate calculations. For four of the five months we reviewed, we were unable to tie flight data from the inbound baggage service metric spreadsheets into the rebate calculation spreadsheet. Investigation of these variations by GAL identified that these discrepancies are due to errors in a pivot table used to calculate total flight numbers (airlines that do not fly on a regular basis were not being picked up within the pivot table). We acknowledge that as Airline Service Standard results reduce rebates payable by GAL, the variations identified as part of our testing indicate that GAL may have overpaid rebates to airlines, rather than additional rebates now being payable.	We support the initiative taken by GAL to introduce quality assurance checks of all service element scores prior to these being published. The nature of checks conducted as part of this review should be reviewed in light of the variances identified to ensure that sufficient checks are being conducted. GAL should retrospectively update any input variances within the rebate spreadsheet and the published results to reflect the actual results. GAL should explore the systemisation of inbound baggage score and rebate calculations as part of the wider system improvement project.	*In relation to where differences existed between what was published on the GAL website and the supporting documentation, these have now been updated to reflect the correct IBB scores. Going forward further quality assurance reviews will take place to reduce the likelihood of this issue re-occurring.* *In relation to the second point, that being where the rebate calculation model did not pick up all the flights in the IBB model, this highlighted a very minor discrepancy which resulted in a very small number of flights being missed out of the rebate calculation (to the rebate value of £432). To eliminate the risk of this re-occurring, a simple check has been implemented whereby the total number of flights in the rebate model is cross checked to the total number of flights in IBB model.* *Date Effective: 01.06.16* *Owner: Mark Browse* **AOC comment:** *No further comment* **GALnote:** *No further update*

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6.2	Medium	Inbound baggage score discrepancies

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Implication There is a risk that inaccurate service element scores are reported, which would result to either financial loss (via rebates payable) or reputational damage. Furthermore, there is a risk that rebates are inaccurately calculated, leading to either financial loss for GAL. We acknowledge that the materiality of this is low, with GAL's recalculation of rebates showing that the total value of this variation was £432 over a six month period. We acknowledge that the top 20 airlines at GAL represent the majority of all traffic through the airport. This observation relates only to airlines that do not use GAL on a regular basis, and therefore are do not comprise a material impact upon operations, or rebate calculations.		

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6.3	Low	Manual queue time records captured during core hours

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding GAL has contracted OCS to conduct manual queue times on their behalf for all areas included in the CSS Handbook, except the South Terminal general passenger security search (which utilises an automated queue time system). OCS capture all queue times on manual documents, which are input into a queue time spreadsheet each day by an OCS Administrator. As part of our review, we selected a sample of queue times that OCS have manually recorded to tie OCS documentation into GAL queue time calculation models, and back to CCTV records. In all 15 samples selected relating to North Terminal general passenger security search we identified time periods that fall within the CSS Handbook core hours that did not have a queue time recorded. These are as follows: • 17 February 2016 – No queue times have been recorded between 2.30am – 3.15am, and 8.30pm – 10.30pm • 23 February 2016 – No queue times have been recorded between 8.30pm – 10.30pm • 1 March 2016 – No queue times have been recorded between 7.45pm – 10.30pm. Discussions with GAL staff noted that the above blank records are due to no passengers going through security during these times. However, this is not noted on the OCS manual queue forms. Furthermore, our review of passenger numbers for February 2016 (as recorded in the OPM system) identified that a small number of passengers were going through during this time. GAL staff noted that these passengers were likely to be GAL staff or cleaners who had inappropriately been captured as	GAL should remind OCS of the need to note down where no passengers pass through security during core hours.	*Gatwick will undertake a training refresher of OCS to ensure the process matches requirements as defined in the CSS handbook and the queue timing contract, including noting periods when not passengers use a facility. GAL believes that their current method of checking the third part queue timing company, OCS, is valid and relevant and does not propose to alter this process.* *Date Effective: 01 07 2016* *Owner:* Peter Lederer **AOC comment:** *The introduction of automated queue measurement will replace this recommendation.* **GAL note:** *No further update*

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6.3	Low	Manual queue time records captured during core hours

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
passengers. **Implication** There is a risk that published security queue times do not represent actual security queue times were OCS are not maintaining full records during core hours.		

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6.4	Low	External control post queue time

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding Queue times for the Northern Approach Gate are included as part of the CSS Handbook. OCS carry out manual queue times for this external control post, on behalf of GAL. The Northern Approach Gate has a number of different lanes, each with a security pen blocked at both ends by a barrier arm. Before the barrier arm there is a waiting area which is designed to be used by vehicles waiting to be screened / enter the security pen. As part of our review of CCTV footage during this audit, we identified that vehicles using the Northern Approach Gate are not currently using the waiting areas at the start of each security pen. Instead, vehicles are waiting on the road outside the Northern Approach Gate until a security pen becomes free and will then drive directly inside. This queuing methodology created a line of vehicles on the road in each of the three instances we looked at as part of our testing. Based on the queuing methodology in the CSS Handbook, this line of vehicles will be counted as part of the overall external control post queue during each time segment. **Implication** There is a risk that vehicles queuing in the road outside the Northern Approach Gate will create longer recorded queues for each time segment, and may lead to GAL not meeting their service metric targets.	GAL should remind security staff working in the Northern Approach Gate area that vehicles are to queue in the waiting area at the start of each security pen. These GAL security staff should remind vehicles of this requirement where they queue on the road and a waiting area is free.	*The purpose of this audit was to identify whether the queue timing process from a start point to a finish point was clearly defined and undertaken in line with the aforementioned process. This finding details the method of operation of one of our security posts, rather than whether the timing from point A to point B is performed as it should be.* *Gatwick does not consider that any action is required, but will review if needed for operational purposes.* *Date Effective: 01 06 2016* *Owner: Peter Lederer* **AOC comment:** *[non provided]* **GAL note:** *No further update*

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6.5	Medium	Unimpeded transit time – maze systems

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding Uni-queue and maze systems are used in the North Terminal to manage the flow of passengers who pass through central passenger search areas. We understand from GAL that these queue systems will be removed as part of the current construction activity taking place, and will only be used where security queues extend beyond newly implemented electronic barriers. The CSS Handbook requires that uni-queue or maze systems are not included in the calculation of unimpeded transit time for central passenger search. Our walkthrough of the security screening areas at the GAL North Terminal identified that uni-queue systems were in place within one security screening area. As further construction has occurred within the North Terminal since our walkthrough, other uni-queue systems may also be in place. We understand through discussion with the Gatwick AOC that recent measurements of unimpeded transit time in the North Terminal have included walking any uni-queue systems that are in place. This differs from the calculation of unimpeded transit time in the CSS Handbook which requires these uni-queue systems to be avoided. **Implication** All uni-queue systems change the distance and route walked by passengers, increasing the distance passengers need to walk and the associated unimpeded transit time. As a result, this will have the effect of reducing security queue times in areas that are using uni-queue systems.	GAL, in consultation with the AOC, should update the CSS Handbook to make it clear whether requirements in this area relate to temporary and/or permanent maze systems.	*GAL, in conjunction with the AOC, have always included the uni-queue system in these calculations and we consider this to be the correct way to undertake the calculation.* *The reference in the handbook will be updated to clarify this in consultation with the AOC.* *Date Effective: 01 10 2016* *Owner: Peter Lederer/Maureen Spence* **AOC comment:** *GAL is correct and the AOC has always included tensa barrier queue's within queue timings. We also agree that the CSS handbook will be updated to reflect this in future* **GAL note:** *No further update needed*

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6.6	Low	Stand availability spreadsheet error

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding The GAL Finance Analyst calculates overall stand availability for the month using a 'Stand Availability' Excel spreadsheet. As part of our audit, we reviewed the 'Stand Availability' spreadsheet used by GAL as part of CSS calculations. Our review identified a manual error in March 2015, whereby one asset was not captured as part of stand availability calculations. As a result, downtime for this asset was not included as part of overall stand availability calculation for March 2015. We noted that this particular asset was subject to an exemption in March 2015, and therefore there is no impact arising from this manual calculation error. Furthermore, our testing of stand availability reporting identified that for July 2015, the calculation was incorrectly applied, inflating downtime reported for the month. In this particular instance, this did not impact upon the rebate payable. **Implication** Errors in stand availability calculations has the risk of understating asset availability for the month.	GAL should explore the systemisation of data and calculations required to be undertaken each month to measure service performance against the CSS Handbook. As an interim measure, GAL should review and further develop its service performance calculation models to minimise manual data entry and manipulation.	*Reducing the volume of spreadsheets is priority for the team. A management information and data insight project is already underway with funds approved. As part of the scope of this project it will address the issues raised here, a key objective being to push more data into a data warehouse and business rules applied thus limiting the future need for Excel spreadsheets and complex formulae in order to calculate stand availability. It is not expected that this project will deliver these benefits before the end of the calendar year.* *A number of internal reviews are already in place in relation to checking the existing Stand Availability spreadsheet, however in the interim period GAL will look to ensure that additional checks are carried out.* *Date Effective: Mark Browse* *Owner: 01.06.16* **AOC comment:** *The AOC does not believe that the GAL response is adequate to rectify this issue as it contains no clear commitment on what it will do in the short term.* **GAL note:** *The Stand Availability spreadsheet was revised in December 2015 and re-issued with guidance notes for input.*

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6.6	Low	Stand availability spreadsheet error

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
		The calculations that present the scores are now more automated with the use of pivot tables. *We will now apply protection to all formula driven cells. This will be complete by 15th July 2016. The Finance Analyst also liaises with the Airfield Analyst each month to ensure that the data has been reviewed by someone technically competent from Airfied Ops with email confirmation that this has been done.*

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6.7	Low	Security score discrepancies

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding Our audit identified five minor discrepancies in transfer and staff search security service element scores as per the published results and the supporting documentation retained by GAL. Our testing of 20 published security service performance scores against internal calculation spreadsheets during the period January 2015 to December 2015 identified the following: • Four variances between the internal calculation spreadsheet used by GAL to calculate the service measure, and the published service performance results (on the GAL website). These variations appear to be due to calculation error, or the transition between different calculation models used by GAL. Refer to Appendix D for further details. • One variance between the internal performance tracker spreadsheet used by GAL to collate all service scores prior to publication, and the published service performance results (on the GAL website). These variances is likely due to rounding errors. Refer to Appendix E for further details. There was no rebate implication as a result of the above variances as these did not lead to a breach of the service element. **Implication** There is a risk that inaccurate service element scores are reported, which would result to either financial loss (via rebates payable) or reputational damage.	We support the initiative taken by GAL to introduce quality assurance checks of all service element scores prior to these being published. The nature of checks conducted as part of this review should be reviewed in light of the variances identified to ensure that sufficient checks are being conducted. GAL should retrospectively update any input variances within the rebate spreadsheet and the published results to reflect the actual results. GAL should review security queue time calculation spreadsheets to ensure these are fit-for-purpose. Consideration should be given to how to simplify these spreadsheets, and minimise manual input and calculations required to determine monthly service scores.	*Further quality checks are now in place and calculations have been reviewed and corrected where necessary. The calculations have also been simplified and cross checks added to reduce the risk of any future errors.* *Date Effective: 01.06.16* *Owner: Mark Browse* **AOC comment:** *The AOC notes that GAL has not explained the process for cross checks and therefore we cannot comment on the suitability of this solution.* **GAL note:** *All CSS and ASS data is cross-checked with tracker spreadsheet before being published on the website. The checks are done by the Finance Planning and Reporting Manager who confirms by email that the reports are OK to be published.*

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6.8	Low	Asset downtime discrepancies

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding Our audit identified minor discrepancies between asset availability and downtime recorded in the Maximo asset management system, and in calculation models used by GAL to determine service element scores. Our testing included reviewing a sample of 25 instances of downtime, split over five months between January 2015 and December 2015. This testing identified the following discrepancies: • Maximo downtime work order changes – In one instance (of the 25 downtime items reviewed) we noted that downtime was amended with no supporting documentation retained. We understand from the GAL Finance Analyst that the downtime amendment is likely to be due to the work order not being closed correctly within the Maximo system, however evidence to support this was not available. Further detail is provided in Appendix G. • Downtime calculation error – In one instance we identified downtime which had not been included in the overall monthly availability calculation due to oversight. This downtime was for a total of 1.5 hours and therefore was immaterial in overall downtime calculations. Further detail is provided in Appendix H. • FEGP downtime - In two of the five months selected for testing, we were unable to identify downtime for FEGP in the Maximo system extracts. We understand from GAL that an internal review (conducted in November 2015) identified improvements in how FEGP downtime is measured. This review identified that Maximo reports were not capturing FEGP downtime historically, with reliance instead being placed on Airfield Management to extract this downtime manually for CSS Handbook calculation purposes. This issue has since been	GAL should implement the following controls to improve the data integrity within spreadsheets that assist calculation in the CSS scores: • Spreadsheet files should be protected with access controls • Non input related spreadsheet fields should be password protected. We support the initiative taken by GAL to introduce quality assurance checks of all service element scores prior to these being published. The nature of checks conducted as part of this review should be reviewed in light of the variances identified to ensure that sufficient checks are being conducted. GAL should retrospectively update any input variances within the rebate spreadsheet and the published results to reflect the actual results. GAL should review asset downtime calculation spreadsheets to ensure these are fit-for-purpose. Consideration should be given to how to simplify these spreadsheets, and minimise manual input and calculations required to determine monthly service scores.	*GAL will implement changes that will limit the access to certain spreadsheets by protecting cells and adding passwords.* *A management information and data insight project is already underway with funds approved. As part of the scope of this project it will look to address some of the issues raised here, a key objective being to push more data into a data warehouse and business rules applied thus limiting the future need for Excel spreadsheets and complex formulae. This will also reduce the risk of data discrepancies, such as described here, happening too. It is not expected that this project will deliver these benefits before the end of the calendar year.* *A replacement or upgrade to Maximo is also planned for later this year. A key requirement of any future system will be to make the recording and extraction of data easier.* *Date Effective: 01.06.16* *Owner: Mark Browse* **AOC comment:** *No further comment* **GAL note:** *No further comment*

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6.8	Low	Asset downtime discrepancies

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
rectified, and we could sight FEGP downtime on later months included in our sample. However, there is a risk regarding the accuracy of downtime for FEGP reported historically given the manual nature of calculations. There was no rebate implication as a result of the above variances. **Implication** There is an inherent risk of human error with spreadsheets especially where manual data entry is required. In addition, if inaccurate scores are reported this may result to either financial loss (via rebates payable), reputational damage or understated/overstated service element scores.		

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6.9	Low	Asset availability discrepancies

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
Finding Our audit identified minor discrepancies between the asset availability service element scores between published results on the GAL website and the supporting documentation/calculations in place. Our testing included reviewing reported asset availability scores for a sample of five months between January 2015 to December 2015. This testing identified the following discrepancies: • Jetties: For the months of February 2015 and July 2015, the overall calculation for jetties availability varied between the internal calculation spreadsheet and overall results published on the GAL website. In both instances, these variations are likely due to rounding errors. Further detail is provided in Appendix C. • Arrivals Reclaim: For the month of February 2015, the calculation of arrivals reclaim for the North Terminal varied by 0.01% between the spreadsheet used for internal calculations and the score published on the GAL external website. This variation appears to be due to rounding error. Further detail is provided in Appendix C. • Outbound Baggage: For the month of July 2015, the calculation of the monthly service element for the North Terminal varied by 0.01% between the spreadsheet used for internal calculations and the score published on the GAL external website. This variation appears to be due to rounding error. Further detail is provided in Appendix C. There was no rebate implication as a result of the above variances. **Implication** There is an inherent risk of human error with spreadsheets	GAL should implement the following controls to improve the data integrity within spreadsheets that assist calculation the CSS scores: • Spreadsheet files should be protected with some form of access control • Non input related spreadsheet fields should be password protected. We support the initiative taken by GAL to introduce quality assurance checks of all service element scores prior to these being published. The nature of checks conducted as part of this review should be reviewed in light of the variances identified to ensure that sufficient checks are being conducted. GAL should retrospectively update any input variances within the rebate spreadsheet and the published results to reflect the actual results.	*Further quality checks are now in place and calculations have been reviewed and corrected where necessary. The calculations have also been simplified and cross checks added to reduce the risk of any future errors.* *GAL will implement changes that will limit the access to certain spreadsheets by protecting cells and adding passwords.* *A management information and data insight project is already underway with funds approved. As part of the scope of this project it will look to address some of the issues raised here, a key objective being to push more data into a data warehouse and business rules applied thus limiting the future need for Excel spreadsheets and complex formulae. This will also reduce the risk of data discrepancies, such as described here, happening too. It is not expected that this project will deliver these benefits before the end of the calendar year.* *A replacement or upgrade to Maximo is also planned for later this year. A key requirement of any future system will be to make the recording and extraction of data easier.* *Date Effective: 01.06.16* *Owner: Mark Browse* **AOC comment:** *No further comment*

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6.9	Low	Asset availability discrepancies

Finding and Implication	Proposed action	Agreed action *(Date / Ownership)*
especially where manual data entry is required. In addition, if inaccurate scores are reported this may result to either financial loss (via rebates payable), reputational damage or understated/overstated service element scores.		**GAL note:** *No further comment*

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7 Future considerations

7.1 Service standard specific

The following observations were identified during our review which relate to the content, and interpretation, of the service standards. This includes instances where the service standards are not clear, areas where the service standards could be updated, or issues regarding the interpretation of the service standard by GAL.

Ref	Service element	Observation and Recommendation	Rating	Management comments
7.1A	All	AOC representation and analysis Airline representation regarding CSS and ASS at Gatwick Airport occurs through the AOC who nominate two representatives (one for South Terminal and one for North Terminal), who make decisions for the full AOC regarding the CSS/ASS scheme. Both AOC appointed representatives conduct this role in a part time capacity, balancing this with their wider roles and responsibilities. GAL prepares reports for AOC which include detailed information for each service element, including any exemptions being sought. There is a risk that robust analysis and challenge of this information is not currently occurring due to limited time availability of AOC members. This is a reflection of AOC representatives balancing this role with other day-to-day activities. We are aware of a number of areas where the AOC would like to receive further information, or conduct more in depth analysis into, however given current time constraints they have been unable to do so. Furthermore, given the small number of representatives appointed by the Gatwick AOC, there is a risk that GAL may apply pressure for certain decisions or exemptions to be passed. We acknowledge that the AOC has declined exemptions in the past where insufficient information has been made available, or where the required notice has not been provided in advance of the event. The Gatwick AOC and the CAA should review AOC representation to ensure that this is fit-for-purpose (given the scale of the organisation, CSS Handbook complexity, and complexity of systems and processes) and allows for challenge of GAL's CSS and ASS service performance. Consideration should be given to how to broaden the number of members appointed by the AOC, along with how to ensure AOC representatives have sufficient time to analyse and challenge GAL service performance, particularly as this relates to CSS and ASS targets.	**Medium**	***GAL Response:*** *The AOC is an airline body independent of GAL, and in the first instance resourcing of the AOC function in relation to the service quality regime at Gatwick is a matter for the AOC to decide upon.* *Gatwick understands that the CSS/ASS system is important to our airline customers to ensure that we operate the airport as intended and delivers the outcomes our customers need.* *We are always happy to explore*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
				how the operation of the scheme can be improved with the AOC. ***AOC comment:*** *The AOC agree with the Grant Thornton recommendation and will discuss this further as part of the on-going CAA quarterly meetings.* ***GAL note:*** *No further comment*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
7.1B	Publication of Service Performance	**Publication of service performance** GAL publishes reports on service performance on their external website. At the time we conducted fieldwork for this audit (March 2016), no service performance reports had been published for 2016. We understand that GAL are working with the AOC in relation to exemptions which is delaying January 2016 and February 2016 final results and that the delays are with the AOCs understanding. The CSS Handbook does not currently set out a timescale in which service performance reports should be published after month end. This is an area of good practice we have seen in other similar organisations. We acknowledge that GAL have an internal target to publish service performance reports on the GAL website by work day 13 of each month. There is a risk that without clear timeframes for the publication of service performance, CSS and ASS results are not shared with the general public in a timely manner each month. GAL and AOC should include a provision within the CSS Handbook to publish according to set deadlines and revise the initial publication once exclusions have been agreed.	**Medium**	***GAL Response:*** *The service quality regime operating at Gatwick is dependent on a number of arrangements between the airport and its airlines which can affect the scores calculated. This sets Gatwick aside from the arrangement in place at most (if not all) organisations with similar schemes (such as Network Rail).* *The January and February reports where delayed due to ongoing discussions with our airline customers, and not illustrative of the normal publication timescales.* *Gatwick has now adopted a publication deadline during the spring of 2016, with the policy being to revise reports once results are finalised.* *We therefore consider that including a strict*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
				timetable is unnecessary. *Finally we note that enhancements to the Airline Service Standards are being explored which are likely to introduce a number of exemptions to the inbound baggage and check in queueing metrics.* *We therefore consider that it is appropriate for Gatwick and the AOC to discuss the correct approach to publication to strike the right balance between publication according to a strict timetable and the risk of potentially causing reputational damage by publishing data not yet finalised.* ***AOC comment:*** *The AOC agree with the Grant Thornton recommendation that results should be published to an agreed timetable. Where results were in-dispute or subject to change these should be annotated as such*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
				and the interim result not provided. ***GAL note:*** *We are happy to implement the approach suggested by the AOC.* *We have adopted a timetable for publishing the information on the website based on our internal deadline (eg Weekday 13).* *Where figures are not available we will note this. Where an exemption is being sought but not yet confirmed we will publish results as they currently stand, with a note to clarify that it might change.*
7.1C	Passenger Satisfaction	**Language of QSM** The QSM survey for arrivals and departures passengers is only currently provided in English. As there are passengers who depart and arrive at GAL whom do not speak English as a first language, the QSM results may not be representative of the full traveling population. The GAL retail profiler demographic analysis completed for the year ended September 2015 identified that 31% of all departing passengers are foreign residents. GAL should consider delivering the QSM in multiple languages so that greater feedback can be obtained across all traveller profiles.	**Low**	***GAL Response:*** *Currently the PDA based technological solution used for the QSM survey does not support multiple languages.* *We estimate that 69% pax in 2015 were from UK. Add to that substantial populations form Ireland; USA;*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
				Canada & majority is English-speaking (not to mention Dutch & Scandinavian pax and business pax from elsewhere, who are content to be interviewed in English. Given this it is unlikely to have any effect on the results. *We will however consider this recommendation as part of potential future changes to technology.* ***AOC comment:*** *The AOC believe it would be beneficial to all users if the number of languages that the QSM is available in is increased* ***GAL note:*** *This suggestion will be taken on board when the technology used for data collection is refreshed. Gatwick currently have a project to examine future solutions for the front and back end of the survey work, including a*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
				move to tablet technology which would serve as an enabler for multiple languages.

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Ref	Service element	Observation and Recommendation	Rating	Management comments
7.1D	Passenger Satisfaction	**Regular review and update of QSM questions** GAL commenced surveying passengers using a QSM survey in 2003, with survey questions designed with, and agreed by, the CAA. Current QSM survey questions have remained unchanged since this initial design in 2003. We acknowledge that any changes to QSM questions will impact the comparability of current and historical QSM data. However, there is a risk that without a periodic, formal review of QSM questions these may no longer be suitable to provide feedback on the key elements of the passenger experience. We understand that QSM questions included under CSS have been reviewed as art of the Constructive Engagement in 2007/08 and 2012/13, with no substantive change. There is merit in designing a formal review plan and timeline for QSM questions to ensure that these continue to be formally assessed on a regular basis. This review should be timed to coincide with the end of regime periods.	**Low**	***GAL Response:*** *The scope of the Service Standards (including QSM) where reviewed as part of constructive engagement in both 2007-8 and 2012-13.* *Questionnaires remaining unchanged is a strength for continuous research aimed at tracking trends.* *The QSM has changed considerably over the years, but the questions relating to the CSS/SQRs have remained constant as defined by the original CAA SRQ regime and reviewed as part of Constructive Engagement in 2008 and 2013.* ***AOC comment:*** *The AOC is not aware that QSM questions were reviewed prior to the beginning of the regulatory period. We believe it would be useful to review these in future and that consistency*

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				with historical questionnaires is not justification for not updating these in future. The AOC believe the questions need to be current and relevant ***GAL note:*** *The scope of the QSM was discussed as part of a CE working group August – December 2012, including discussion whether to amalgamate some of the QSM metrics. The CAA's statistical expert on the subject (Judith Corbyn) also attended these meetings.* *We do not disagree that the QSM questions and metrics should be reviewed to ensure that they remain relevant. However, since the QSMs are perception based metrics, changing the questions is the same thing as changing the service quality metric. Furthermore, since historic trends are*

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				particularly important in this type of data, and even seemingly superficial changes could affect comparability we would stress the need for caution. *In the old legislative framework this review would have happened every 5 years as part of the regulatory reviews (as part of constructive engagement). The legal context and form of regulation has however changed and under contracts and commitments the service quality framework is a key contractual term defining the product the airport offers to our customers.* *As in any commercial environment we happy to discuss the form the metrics take and to negotiate changes if the AOC wishes. Such discussions would form a natural part of potential future discussions to extend or refresh*

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				the Commitments. We also note that the Commitments framework makes it possible for airlines to approach us if they feel they want different service or rebate levels as part of bilateral agreements.
7.1E	Passenger Satisfaction	**QSM for transfer passengers** Current questions included within the GAL QSM survey, and the methodology employed by GAL in conducting these surveys, does not explicitly include an assessment of the wider journey elements of the passenger flight connection experience, or include questions that directly relate to the experience of connecting passengers. We acknowledge that GAL incorporate the flight connection experience as part of other surveys conducted and used for internal operational performance monitoring purposes. Furthermore, QSM surveys of departing passengers will include some passengers who transferred within GAL who will provide their views on the transfer experience e.g. way finding. However, QSM quotas do not specifically require transferring passengers to be targeted as part of survey completion and there is a risk that these passengers are not being appropriately represented in QSM survey results. The CAA and GAL should investigate whether the Passenger Satisfaction service element could be expanded to include an explicit requirement that QSM surveys include a quota of transferring passengers, to assess the passenger flight connection experience.	**Low**	***GAL Response:*** *GAL does currently 'explicitly include an assessment of the passenger flight connection experience' **and it** 'include questions that directly relate to the experience of connecting passengers'.* *However, this is only done in the context of the content of the CSS measures – i.e. Cleanliness; Wayfinding; FIDS & Seat availability. Our survey in 2015 had 5.2% of all respondents who were transfer pax, and so their views have been appropriately & proportionately incorporated in the overall scores. Our Retail Profiler picks up 5.5% transfer;*

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				whereas CAA survey claims 7.9% for provisional 2015 data. ***AOC comment:*** *The AOC agree with the Grant Thornton recommendation to widen the QSM to include transfer passengers.* ***GAL note:*** *As outlined above the QSM does explicitly include an assessment of the passenger flight connection experience.* *Our analysis furthermore suggests that transfer passengers are sampled in roughly the same proportion as their share of total passengers.*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
7.1F	Passenger Satisfaction	**Inclusion of wider passenger experience elements in the QSM** The QSM service element is focussed on departing and arriving passenger experience across four specific focus areas (departure lounge seating, cleanliness, way finding and flight information). While we acknowledge that the scope of the current CSS regime was established following a process of constructive engagement, other areas of the passenger experience, which may be of equal or greater importance to passengers, are not currently captured under the current structure of the QSM service element. As a result, the QSM service element may not act as the best reflection of a passenger's overall experience and satisfaction at GAL. GAL, and other airports, are also measured on passenger satisfaction via an independent survey of airport service quality (ASQ) which consider a number of passenger satisfaction elements that are not currently assessed via the QSM. The CAA and GAL should consider broadening the QSM service element to include further passenger satisfaction measures, such as: courtesy and helpfulness of security staff, thoroughness of security inspections, availability of parking facilities, availability of baggage carts / trolleys, speed etc. This review could be included as part of the broader review of QSM questions, included in observation 7.1.2D above.	**Low**	***GAL Response:*** *See comment to 7.1.2D above. The scope of regime was revised as part of constructive engagement (i.e. reviewed by the CAA as part of the regulatory review to ensure it was in the passenger interest).* *We also note that this recommendation effectively suggests an expansion of regulation to other areas, while providing no evidence in support (beyond saying that it is possible).* *The CAA has a duty to only regulate where it is needed and not to regulate for pre-cautionary purposes. We therefore consider that additional evidence will be needed for such substantial change to the regime is demonstrated to be appropriate.* ***AOC comment:*** *The AOC believe that widening the scope of the QSM*

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				during a regulatory period would require further discussion with the CAA before the AOC could make a recommendation ***GAL note:*** *See GAL note to 7.1D regarding making changes to the QSM scope or questions.*
7.1G	Passenger Satisfaction	**Equal representation of passengers surveyed** The current methodology followed by GAL in conducting QSM surveys may not be representative of the broad range of passengers who travel through the airport. As departure QSM surveys are conducted at departure gates, passengers who use airport lounges prior to their flight are less likely to be surveyed. We acknowledge that all passengers are called to the departure gate at a set time, however due to the frequency of airport travel by lounge passengers and/or a desire to use the lounge facilities, these passengers are less likely to promptly arrive in the departure gate than other passengers. Without an appropriate spread of passengers surveyed to analyse passenger satisfaction there is a risk that data capturing is not adequately designed to provide representative data. GAL should investigate other options for ensuring that passengers who use airport lounges are proportionally represented in surveys conducted. This may include conducting surveys in lounges, or at the entrance or departure of a lounge.	**Low**	***GAL Response:*** *This issue was developed in an earlier audit of the CSS/SQR process and has previously been refuted by Gatwick. We appreciate that this might be a real issue at LHR where legacy carriers each has their own Lounge facility in which traditional business passengers might stay until the last minute content that their airline will await their late arrival to gate.* *However, at Gatwick a close gate room and call to gate systems means that passengers need to*

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				arrive at the gate rooms at a set time irrespective to whether they travel for business or leisure. *The predominance of LCCs (and BA working in a different way on the routes it serves from here), and with Lounge users being mainly leisure passengers (who are less self-assured) they are consequently less likely to arrive late to gate.* *'GAL should investigate other options for ensuring that business passengers are proportionally represented in surveys conducted'* *In 2015 we interviewed 17.5% all QSM respondents were travelling on Business (cf. 16.9% on Retail Profiler and 16.7% on CAA). We have enough business pax and therefore this suggestion is unnecessary.*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
				AOC comment: *The AOC do not support GAL's statement that passengers act differently at lounges in Gatwick versus other airports. We also note that GAL's inference that closed gate rooms and an automated call to gate system require passengers to be at the gate earlier is incorrect. Lounge passengers are an important and sizeable percentage of Gatwick passengers and therefore they should be proportionately represented in survey data.* ***GAL note:*** *Please see comment above highlighting that Business passengers are not sampled at a lower rate than non-business passengers.* *We furthermore note that the use of*

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				close gate rooms reduce the chance of any population sampling issues of the type identified, and in any case the weighting that is done as part of the methodology means such variations are not relevant. *No further update required.*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
7.1H	Passenger Satisfaction	**Survey population fit for purpose** GAL flight data for 2015 shows that 40.27m passengers arrived and departed from GAL. The annual QSM survey quota therefore represents 0.047% of all passengers who passed through GAL during 2015. The total number of passengers travelling through GAL is anticipated to rise in the future. As a result, without increasing the number of passengers required to be surveyed on a regular basis, there will be a slip in the proportion of overall passengers surveyed under QSM overtime. We acknowledge that due to the way statistical survey sampling is conducted, and how surveys are weighted, an increase in sample size may not provide greater insight. The CAA and GAL should reconsider whether 19,000 QSM surveys per annum is an appropriately number of surveys to conduct given the number of passengers passing through the airport each annum. Consideration should also be given to conducting this review of the total number of surveys to be conducted on a regular basis in order to align this with GAL growth. We are not advocating an increase in sample in a way that has to be proportionately linked to the passenger numbers, just that there may be value in revisiting the number of passengers sampled.	**Low**	***GAL Response:*** *he monthly sample sizes are kept consistent in order that each month we can have the same degree of confidence in the data and therefore track trends. The original sample sizes were chosen in order to allow a certain amount of slicing of the data into sub-samples which would remain significant enough to stand alone. Statistical robustness is aligned to sample size rather than sampling fraction. The sample sizes might be increased at some point in the future, driven by the need for greater granularity (i.e. sub-sample analysis), not simply passenger population size.* *mple weighting has always been used in order to recognise higher pax numbers at peak periods in, inter alia, the MAT calculations.*

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				AOC comment: *The AOC support the recommendation that sample sizes should be increased to allow for the significant growth in passenger volumes.* ***GAL note:*** *Please see summary note on statistical significance and statistical properties of the QSM.* *In summary, as indicated above additional passenger volumes are not in themselves a reason to increase the sample size.* *The sample size is kept under review and will be expanded if needed to ensure the statistical validity. The driver of this is however not passenger volumes directly, but is more likely to be the facilities needed to accommodate these passenger volumes.*

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7.1I	Security	**Premium security** GAL offers premium security lanes within both terminals. We observed that central search security queue times include measurement of queue times in these premium lanes. In the North Terminal, the OCS security queue timer interviewed as part of this audit noted that they will select the passenger as they are entering one of three security queue areas (premium security, security area one or security area two). We understand from the OCS security queue timer interviewed as part of our review that the spread of passengers they select to queue time is roughly even across the different security queue areas e.g. 33% of all security queue measurements in the North Terminal are of the premium security lanes. We acknowledge this differs from GAL's analysis which indicates that only 5% - 6% of total passengers use this lane. As a result, the volume of passengers using this service is proportionately low in relation to overall passenger numbers. It should be noted that GAL are introducing facial recognition software in the North Terminal, which will remove the need to OCS to conduct manual queue timing in this area in the future. In the South Terminal, queue time will be based on a premium security lane if this is the first lane that five passengers utilise during the time segment. The inclusion of premium security queues has the potential to reduce the overall average queue time across central search as passengers going through these areas will generally have a faster security queue experience than other security areas. The CAA and GAL should consider removing premium security from the central security queue calculation. The premium security lane could either be considered separately within the Core Service Standards or removed all together as this is an airline driven initiative. Furthermore, GAL should train all OCS security queue timers to ensure that they are aware of the proportion of passengers to be selected from each security queue area.	**Medium**	***GAL Response:*** *The proportion of passengers using the NT Premium, is by is, by GAL's calculation approximately 6%, and from our calculation the sampling rate is less than 1%* *The figure of 33% is taken from an individual and likely derived from there being three separate security areas available to use in NT and the assumption being made that sampling is split evenly.* *The introduction of facial recognition software into the NT will ensure the premium lane is timed using exactly the same methodology at ST currently.* ***AOC comment:*** *The nature of the future security layout and process will capture both premium and non-premium passengers. Therefore the AOC see no reason to separately monitor*

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Ref	Service element	Observation and Recommendation	Rating	Management comments
				premium lanes. ***GAL note:*** *No further comment needed.*

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7.1J	Passenger and Airline Operational Elements	**Definition for capital works** The CSS Handbook provide exclusions for "major investment projects", "replacement", "major refurbishment work" and "re-lifting work". However, there is no definition for what constitutes work of this nature. As a result, there is a risk that a consistent definition of these terms is not being applied as part of granting CSS Handbook exclusions. GAL, the AOC and the CAA should develop an industry definition for what constitutes a major works of this nature, to provide guidance on which circumstances require AOC approval. This will enable consistency in the application and decision making of exemptions in these areas by the Gatwick AOC.	**Low**	***GAL Response:*** *Gatwick has initiated a discussion with the AOC about how to take this forward.* ***AOC comment:*** *The AOC confirms that this is being discussed with GAL* ***GAL note:*** *No further comment needed.*
7.1K	Passenger and Airline Operational Elements	**Inter-Terminal Shuttle CSS Handbook Guidance** The current wording within the CSS Handbook regarding the Inter-Terminal Shuttle service element is unclear, and could be interpreted differently by stakeholders. For example, the current CSS Handbook wording could be interpreted as requiring no shuttles to be in use outside the core hours, which differs to the current interpretation at GAL of one shuttle being available at all times, regardless of core hours. GAL and the CAA should review the currently wording of the CSS Handbook regarding the inter-terminal shuttle service element and consider amending this to make it clear that one shuttle must be available at all times, regardless of core hours.	**Low**	***GAL Response:*** *GAL will review the wording and interpretation of inter-terminal shuttle CSS and agree clearer guidance along with the AOC* ***AOC comment:*** *The AOC agree with the Grant Thornton recommendation to review the wording contained within the handbook. However, we believe the review should initially be between GAL and the AOC and not*

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				GAL and the CAA. ***GAL note:*** *No further comment needed.*

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7.2 Airport Operational Processes

The following observations were identified during our review which relate to the way service performance is measured, quality assured and reported by GAL.

Ref	Service Element	Observation and Recommendation	Rating	Management Comments
7.2A	All	**Guidance documentation** The CSS Handbook and Airline Service Standard currently set out the high level processes followed for each service element. This guidance also includes an overview of the calculation to be applied when calculating CSS and ASS scores. We understand from GAL staff interviewed during our review that additional guidance material (including policies and procedures) are currently being compiled for each service element. However, at the time of our review, guidance material was not available for the majority of service measures. This creates a business continuity risk if key staff responsible for each service element are not available. GAL should ensure that guidance materials are developed for each service element included in CSS and ASS, including rebate calculations and publication of service performance, to aid in business continuity. This guidance material should include: • Process maps of the end-to-end process followed, including data collation, manipulation, quality assurance, and publication • Roles and responsibilities across the end-to-end process • Calculation formulae used across the end-to-end process, or reference to other documents if this is held elsewhere • An overview of the operational process for each service element i.e. how the operation works in practice and how data is generated. GAL should ensure that guidance material is regularly reviewed and updated to ensure this remains up-to-date.	**Medium**	***GAL Response:*** *High level process maps and procedural notes already exist for the majority of the CSS measures* *We accept that further improvements and depth of detail could be made to these documents. This work will be undertaken during the autumn of 2016 and will also be subject to our own internal audit review process.* ***AOC comment:*** *The AOC is unclear on what constitutes the guidance material that GAL have stated. We also believe that the work required to be undertaken to improve documentation is time limited and not open ended.* ***GAL note:*** *A technical document exists*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				which describes each measure, details how the CSS score is calculated and outlines the reporting process that is followed to derive these scores. *Process maps exist for each metric.* *A control sheet and accountability matrix is in place and has recently been updated to reflect recent structural changes within the business.* *Improved documentation will be available by August/September 2016.*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
7.2B	All	**Key person dependency** The GAL Finance Analyst provides a critical role in the calculation and publication of CSS and ASS service performance. The GAL Finance Analyst will generate data input for some service element based on information received from third parties, or GAL system extracts. Operational areas across GAL rely upon this information being provided on a regular basis to monitor and manage their own operations (for example, asset downtime reports). The GAL Finance Analyst is also responsible for collating all service performance results, across each CSS and ASS service element, on a monthly basis. As part of this collation of service performance, the GAL Finance Analyst will also provide a general 'sanity check' of all results against previous months and her knowledge of airport operations. The GAL Finance Analyst is also responsible for checking service performance reports prior to these being published on the GAL website. Rebates are also calculated by the GAL Finance Analyst on a monthly basis. We acknowledge that another Finance team member was involved in the year-end rebate wash-up process and therefore has an understanding of monthly rebate calculations. We also identified further key person dependencies across GAL, impacting the collection and analysis of input data used as part of CSS and ASS service metrics. We acknowledge that a control sheet, setting out key roles and responsibilities has been developed which helps to identify and resolve this. A key person dependency creates a business continuity risk if key staff responsible for the calculation of service performance are not available. GAL should ensure that the GAL Finance Analyst documents all activities they are responsible for regarding CSS and ASS service performance in guidance material and process notes. Furthermore, GAL should ensure that the GAL Finance Analyst has trained another staff member who could perform her role if she was not available including knowledge of key risk areas etc.. We are not suggesting that a further staff member is employed by GAL, unless required for effectiveness and efficiency reasons. GAL should also review how key person dependences in other areas of the business can be addressed, including the introduction of training additional staff, and documentation of core processes and activities.	**High**	***GAL Response:*** *This is an area already identified by Gatwick's own business assurance process. It is being addressed through a combination of up-skilling additional staff to provide cover, improved documentation and a project to increase automation of key data flows.* *These steps will help significantly reduce the key person dependency risk within the finance team, although there is a balance to be struck with regards to the efficiency use of resources.* ***AOC comment:*** *The AOC agree's with Grant Thornton's recommendation and believe that the recommendation should be time limited and not*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				open ended. ***GAL note:*** *The steps above have been implemented.*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
7.2C	All	**Design of key spreadsheets used to assist calculating service element scores** Our audit identified that spreadsheets used by GAL throughout the calculation of CSS and ASS elements could benefit from improved spreadsheet controls. For example, we found an absence of password protection over spreadsheets, and an absence of lockdown of key cells within spreadsheets to prevent these from being amended. GAL utilises spreadsheets in the calculation of all service elements under the Core Service Standards and Airline Service Standards. These spreadsheets are used for a variety of purposes, including the capture of raw data, raw data extracts from systems, and the calculation of service elements. Examples of the spreadsheets used for each service element are captured in Appendix B. It is now widely accepted that errors in spreadsheets are both common and potentially dangerous. Data integrity is key to ensure data is reliable and accurate and without proper access controls and change management, data in spreadsheets can easily become corrupt or manipulated by end users. We acknowledge that GAL intend to undertake a data project, focussing on systemising the end-to-end service performance calculation and reporting process. At the time of our review, a supplier was still in the process of being selected to deliver this project. In the interim, there are many controls that can be implemented to ensure data integrity within spreadsheets. These are: • Creating spreadsheet versions for all spreadsheet changes • All changes to a spreadsheet are reviewed and approved. • The validity of spreadsheet inputs should be ascertained • Spreadsheet files should be protected with some form of access control • Non input related spreadsheet fields are password protected.	**High**	***GAL Response:*** *This is an area already identified by Gatwick's own business assurance process. It is being addressed a project to increase automation and a rolling programme of work undertaken by our business assurance function.* *The timescales of this is sufficiently ambitious that the interim measures are unlikely to be practical in all cases but GAL will undertake to tighten up controls wherever appropriate.* ***AOC comment:*** *The AOC agree's with Grant Thornton's recommendation and believe that the recommendation should be time limited and not open ended.* ***GAL note:*** *Version control is*

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				currently in place. *Password protection and cell lock down will be applied in full by the end of August 2016.* *The GAL Finance Analyst is currently working on an interim solution to further automate the collation and reporting of both Inbound Baggage (ASS) and Pier Service Levels (CSS) as access to Business Objects and relevant data sources are now available to facilitate this approach.*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
7.2D	All	**Updates to spreadsheets** Our audit identified a number of inconsistencies regarding how data is being input and updated within key spreadsheets used for CSS calculations. For example, within the CSS Performance Tracker (used to collate scores for each CSS and ASS element each month) we identified that some data was manually entered into the spreadsheet (through copying and pasting), whereas other data was linked to additional spreadsheets. We acknowledge that in some instances, hardcoding of cells has been used by GAL to reduce the need for multiple spreadsheets to be opened when completing service metric calculations. There is a risk that changes in source data may impact other spreadsheets used for calculations and publications. For example, a change in a spreadsheet or file used for data entry may not be identified and the new data copied and pasted into the CSS Performance Tracker. Alternatively, changes to data input linked into the CSS Performance Tracker will flow through automatically and may not be picked up by the GAL Finance Analyst. As a result, this may lead to modifications to current or historical information captured within the CSS performance tracker. Currently, key spreadsheets used as part of CSS Handbook calculation are saved into an access restricted location, accessible only by GAL Finance. This helps to prevent changes being made to input data which may impact upon service element calculations. We acknowledge that GAL plan to undertake a data project, focussing on systemising the end-to-end service performance calculation and reporting process. At the time of our review, a supplier was still in the process of being selected to deliver this project. As part of this data project, GAL should also investigate the systemisation of service performance reporting, such as moving towards capturing more data within systems to limit the number of data inputs required as part of service performance reporting. In the interim, GAL should review the use of different input methods for key spreadsheets, such as the CSS Performance Tracker and Rebates spreadsheet. Consideration should be given to linking as many spreadsheets into these key files as possible.	**Medium**	***GAL Response:*** *This is an area already identified by Gatwick's own business assurance process. It is being addressed through a project to increase automation and a rolling programme of work undertaken by our business assurance function.* *The timescales of this is sufficiently ambitious that the interim measures are unlikely to be practical.* ***AOC comment:*** *The AOC agree's with Grant Thornton's recommendation and believe that the recommendation should be time limited and not open ended.* ***GAL note:*** *The CSS tracker has been reviewed and is now fully linked as per the recommendation.*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				The links in the Rebates file are deliberately broken after the month has been closed, as not doing so would result in performance issues. *Also see comments to 7.2C*

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7.2E	All	**Quality assurance** Throughout our testing as part of this audit, we identified a number of instances where documentation evidencing quality assurance checks being conducted was not available. We acknowledge that GAL has recently implemented a number of quality assurance checks across the service performance calculation and reporting process (including the introduction of a control sheet with roles and responsibilities for each service metric, and an annual internal audit focussing on CSS and ASS performance). The purpose of these quality checks is enable the GAL Finance Analyst to obtain confirmation from each operational area across GAL that information being captured as part of service performance calculations is accurate and complete. However, further refinement regarding the scope, and documentation, of quality assurance is still required. Some particular examples we identified as part of this audit include: • Service performance publication: We understand that an independent member of the Finance team conducts a review of the monthly service performance reports, prior to these being published on the GAL website. Evidence to demonstrate that this quality assurance check is being completed was not available at the time of our audit. As a result, we were unable to verify that quality assurance checks of this nature were being performed by GAL prior to the publication of service performance information. • Passenger satisfaction: GAL utilises the services of a third party, ORC, to assist in calculating survey results and determine the overall QSM score for the month. We understand that the overall survey results for the month are reviewed by the Market Research Team to ensure these align with their preliminary review of completed surveys, and other anecdotal feedback they have received from passengers during the month. However, our testing has identified that this quality assurance review by the Market Research Team is currently not being documented. • Passenger and airline operational: Repairs and maintenance to assets at GAL are performed by a mix of GAL employees and contractors, depending on the asset type and GAL staff availability. While we understand that the GAL Engineering team regularly review asset downtime and work orders (to demonstrate that information entered into Maximo appears to be accurate and complete), in general evidence of these regular reviews were not available at the time of our audit. • Pier service: There was no evidence of quality assurance checks being conducted over key data inputs and calculations within the pier service calculation model. Specifically: There was no documentation available to show that the correct stand number, and reason for use of a remote stand, are entered into IDAHO by Flight Planners. We understand that this data is checked on a sample basis by the Airside Data Analyst based on his knowledge of airport operations, but this check is not currently documented. Stands used by aircraft are automatically recorded by the Stand Entry Guidance System. However, we understand that this automatic data record is not being	**Medium**	***GAL Response:*** *GAL has introduced quarterly reviews of different service elements under the CSS Handbook. This comprises a full assessment of the metrics in question. This is included in the annual audit plan for the Gatwick Business Assurance teams.* *We were instructed by the CAA to not share the detail of our own assessment with Grant Thornton in order to make sure that theirs was done with an open mind.* *We therefore consider that an additional layer of quality control exist which Grant Thornton has not been able to assess.* *We will however ask our business assurance team to consider these specific recommendations*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
		reviewed against stand numbers recorded in IDAHO by Flight Planners to ensure accuracy. • Aerodrome congestion: The Assistant Airside Compliance Manager is responsible for determining whether any potentially material events captured by Engineers each day in the Super Log meet the definition of a 'material event' per the CSS Handbook. As noted in the CSS Handbook, this decision making process requires judgement to be exercised to determine the classification to be used. At present, there is currently no independent review or quality assurance completed over the classification of events which are on the borderline of being classed as 'material' to ensure these appropriately reflect CSS Handbook guidance. • Inbound baggage: GAL should consider introducing an independent quality assurance review of last bag times as currently these are based on Handlers manually notifying these times. Furthermore, the time an aircraft arrives is based on the 'on chocks' time notified by Ground Handlers. This 'on chocks' time is also automatically captured in SEGS when an aircraft arrives on a stand. There is currently no regular reconciliation between on chocks time notified by Ground Handlers to the time captured in SEGS. GAL should ensure that quality assurance checks are taking place across all service performance measures. These quality assurance checks should be documented to enable independent review. GAL has introduced quarterly reviews of different service elements under the CSS Handbook. We understand that GAL intends for their reviews to consider the end-to-end calculation of service metrics, including review of supporting documentation retained by operational staff.		*and make sure they are taken into account in the data insights project.* ***AOC comment:*** *The AOC are concerned that there is a lack of systemisation of the GAL data and that many aspects may be recorded due to a subjective view of an individual.* *Quality assurance provides some level of assurance but ultimately we believe this needs to be an automated solution wherever possible.* ***GAL note:*** *The nature of some of these metrics means that in some cases classification and data will be based on the judgements of individuals. We are aiming to avoid this wherever possible, however in some instances it is difficult to avoid.* *We believe our data insights*

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				project (aimed at automation) in combination with the rolling audits undertaken by our business assurance function are designed to mitigate against risk in this area going forward.

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7.2F	Publication of Service Performance	**Updates to publications** Monthly service performance reports are published on the external GAL website for review by the public, airlines and the CAA. On rare occasions, changes are required to be made to published information due to amendments of raw data, exemptions and calculations. We understand that in these instances, service performance reports on the GAL website will be replaced with an updated version. There is currently no notes section on the service performance section of the GAL website to explain that an amendment has been made to a service performance report and a new report has been issued. There is a risk that changes to service performance reports that are not appropriately notified to readers may impact upon comparability of reports and understanding of service performance. GAL should include an explanation on the GAL service performance website page, and, where required, at the start of the relevant service performance report, to explain that an amendment has been made to a service performance report, and a short description of the reason for this change.	**Medium**	***GAL Response:*** *Going forward GAL will ensure that notes are added to any CSS publication on its website to reference any changes made to a CSS score along with an explanation as to why.* ***AOC comment:*** *The AOC have no further comment* ***GAL note:*** *No further comment*
7.2G	Rebates	**Rebate reporting** GAL publishes details of their rebate exposure, and actual rebates paid, on their external website. At the time of our review, rebate information on Gatwick website was not available for 2014/15. We acknowledge that this rebate information was subsequently republished on the GAL website during our review, however this has been published differently to rebate information for 2015/16. GAL also noted that existing rebate information published on the Gatwick website is updated to reflect changes as a result of the annual wash-up. There is currently no notes section, either on the GAL service performance website page, or at the start of published rebate reports, to explain that an amendment has been made to published rebate information. There is a risk that changes to rebate information that is not appropriately notified to readers may impact upon comparability of reports and the understanding of rebate calculations. GAL should consider publishing rebate information in a consistent format between different years. This would enable enhanced comparability by readers. GAL should include an explanation on the GAL service performance website page, and at the start of the rebate publication, to explain that an amendment has been made and	**Medium**	***GAL Response:*** *Going forward GAL will ensure that the rebates summary is comparable in format with previous years.* *Where relevant an explanation will be added if an amendment is made to the rebate summary.* ***AOC comment:*** *The AOC have no*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
		the reason for this change.		*further comment* ***GAL note:*** *No further comment*

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7.2H	Rebates	**Key person dependency** At the time of our review, the GAL Finance Analyst had yet to perform an annual wash-up for rebates, due to not having been in their role at the time the last wash-up was performed. The GAL Finance team member who performed the last wash-up is still employed by GAL, however their current role does not include conducting this rebate wash-up activity. This creates a business continuity risk if key staff responsible for performing rebate washup calculations are not available. GAL should ensure that the rebate annual wash-up process is documented in guidance material and process notes. Furthermore, GAL should ensure that the GAL Finance Analyst has been trained on how to perform this wash-up ahead of this task having to be completed.	**Medium**	***GAL Response:*** *GAL will ensure that another member of the Finance team is multi-skilled in performing this task, and also that the process is sufficiently documented.* ***AOC comment:*** *The AOC have no further comment* ***GAL note:*** *No further comment*
7.2I	Rebates	**Rebate information provided to airlines** Rebates are paid quarterly by GAL, via a credit note issued to each airline. We understand that airlines have previously raised queries regarding how rebates were calculated, due to very limited information being provided on, or accompanied by, their credit notes. We understand that going forward, GAL intends to include additional information on rebate calculations with each credit note, however as GAL had not incurred, or paid, recent rebates at the time of our review, we were unable to observe that this additional information was now being provided to airlines. Where airlines are not provided with a clear breakdown of how rebates have been calculated, there is a risk that they cannot challenge the accuracy and appropriateness of GAL's rebate calculation. GAL should ensure that airlines are provided with details of how rebates have been calculated with their credit notes.	**Medium**	***GAL Response:*** *GAL now adds (from Jan-16) on to any credit note issued to an airline narrative explaining the breakdown of the rebate they have received. Any queries raised by an airline will be directed back to the Gatwick Finance team.* ***AOC comment:*** *As stated no*

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				rebates have yet been payable to understand if sufficient information is being supplied. However other non CSS related rebate information has not been updated to show improved levels of supporting detail ***GAL note:*** *The GAL Finance Analyst identified the gap in this process towards the end of 2015. The GAL Finance Analyst approached the Financial Operations Team Lead to ensure this gap was closed by supplying rebate information on each credit note. As such, airlines no longer contact the GAL Finance Analyst to request further information.* *Rebates credit notes, relating to Q4 of 2015/16 (South Terminal outbound baggage ex-gratia payment) have been issued.*

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				An explanation was put on the credit note, and to date we have had no queries asking what the credit notes were for.
7.2J	Rebates	**Passenger numbers used in rebate calculations** The GAL calculation of rebates for each month are based on a number of different data inputs, including each airline's share of passenger numbers. Total passenger numbers, and how these are split by each airline, are forecast by GAL as part of the annual budget setting process at the start of the financial year. These forecast passenger numbers are updated mid-year based on more up-to-date flight forecasts and historical data. However, this mid-year reforecast is not currently incorporated into the GAL rebate exposure and calculation spreadsheets. We acknowledge that all rebates are reviewed at year end as part of the annual wash-up process. This wash-up process includes comparison of actual vs. forecast passenger numbers for each airline. However, where the most up-to-date forecasts of passenger numbers are not used as part of monthly rebate calculations, there is a risk of a larger wash-up figure at year end. GAL should update the rebate spreadsheet to incorporate the most up-to-date passenger forecast when this becomes available.	**Low**	***GAL Response:*** *The current rebate process (budgeted numbers used during the year with an annual wash up in April) has been agreed with the airlines. After due consideration GAL believe that the current process remains the most appropriate.* ***AOC comment:*** *The AOC has no objection to GAL retaining the existing rebate calculation methodology* ***GAL note:*** *No further comment*

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7.2K	Passenger Satisfaction	**Location of QSM surveys** The methodology used by GAL when conducting QSM surveys has led to surveys not always being completed in a location that best enables the surveyor to capture the passenger experience at a point in time. For example, a passenger's experience when going through security is not captured until the passenger is at their departure gate, which for some passengers may occur a significant period of time after the passenger has gone through the security area. There is a risk that a negative passenger experience at one stage of the passenger journey may impact upon the overall survey results passengers provide. GAL should review QSM survey methodology to consider conducting surveys in key locations to the overall passenger journey. This may enhance QSM survey results by ensuring passengers surveyed can remember their true experience at a point in time.	**Low**	***GAL Response:*** *We consider that the current practice of conducting interviews in the gaterooms to continue to be appropriate.* *Interviews are all completed in gaterooms for a number of reasons:* *1. Passengers are relaxed with little distraction and therefore very open to taking part;* *2. Passengers have completed all touchpoints of the airport passenger experience with the exception of Boarding (but we are unable to interview on-board) and are better-placed to rate the overall experience & the relative performance at different touchpoints;* *3. Passengers find it convenient to answer all questions at once*

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				rather than have their progress through the airport consistently impeded by interviewers. *We accept that 'There is a risk that a negative passenger experience at one stage of the passenger journey may impact upon the overall survey results passengers provide', because this is fair and human nature – if we antagonise someone with sub-optimal service provision at one touch-point, then they are right to hold it against us and use this as a filter for rating subsequent touchpoints. This is likely to impact downwards on some of our scores. By capturing all touchpoints for each interviewee we are able to cross-analyses ratings at one touchpoint by another, which we couldn't if surveys were conducted in*

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				different locations. ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*
7.2L	Passenger Satisfaction	**Inclusion of part completed surveys to calculate monthly passenger satisfaction QSM score** At present, any survey conducted by GAL that is partially completed or abandoned will be deleted and will not be included within the calculation of the overall QSM results for arrivals and departures. As a result, the time spent by surveyors is not being reflected through insight captured and included in QSM analysis. GAL should include the results from partially completed or abandoned surveys to ensure that all passenger experiences are captured and assessed.	**Low**	***GAL Response:*** *Partial surveys were originally excluded because they prevent the use of sub-group analysis since most classification data (gender; age; purpose of travel; etc.) are captured at the end of the survey, since they are less demanding for pax to answer.* *The sample size if sufficiently large for inclusion of this data to be unlikely to be of material benefit and data without the classification data presents challenges in terms of applying the weighting methodology used.* ***AOC comment:***

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				The AOC has no further comment ***GAL note:*** *No further comment*

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<table>
<tr><th>Ref</th><th>Service Element</th><th>Observation and Recommendation</th><th>Rating</th><th>Management Comments</th></tr>
<tr>
<td>7.2M</td>
<td>Passenger Satisfaction</td>
<td>
ASQ scores
GAL, like other airports, are measured on passenger satisfaction via an independent survey of airport service quality (ASQ). This ASQ survey is provided to customers in hard copy format, which is then returned for independent analysis.

We conducted an analysis of GAL survey results across 2015 for both QSM and ASQ surveys. The results of this analysis is presented in the table below, which we note may not be directly comparable given the use of different methodology, calculations and scale.:

<table>
<tr><th>Measure</th><th>CSS Target</th><th>2015 Average QSM Score</th><th>2015 Average ASQ Score</th></tr>
<tr><td>Departure Lounge Seating</td><td>3.8</td><td>4.05</td><td>3.52</td></tr>
<tr><td>Cleanliness</td><td>4.0</td><td>4.08</td><td>4.04</td></tr>
<tr><td>Way finding</td><td>4.1</td><td>4.18</td><td>4.11</td></tr>
<tr><td>Flight Information</td><td>4.2</td><td>4.37</td><td>4.16</td></tr>
</table>

Our analysis shows that in all instances, QSM survey results were higher than ASQ results. Furthermore, for two of the QSM elements (departure lounge seating and flight information), ASQ survey results for 2015 area below the CSS target. We acknowledge that the survey methodology, calculations, measurement scale and questions asked differ between the QSM and ASQ surveys which may contribute to the variation in results between these two surveys.
GAL should conduct an internal review of ASQ results on a periodic basis against results from QSM and other internal surveys. This review should assess whether there any new trends, or passenger feedback, that can be gained from ASQ survey results.

Furthermore, GAL should compare ASQ and QSM survey result trends across time, giving consideration to potential insight that may be gathered from one survey but not reflected in the other.
</td>
<td>Low</td>
<td>
We urge the use of caution in comparison of QSM & ASQ data for a number of reasons.

1. The 2 surveys are administered differently which will have an effect – self-completion vs. personal interview

2. The 2 surveys use different scales. ASQ is an asymmetric scale with 'Very Good' between 'Good' & 'Excellent'. If a service is 'Good' this reason alone generates a higher score on QSM

3. The questions are far from comparable and on ASQ they are individual ratings but on QSM the CSS measures are compound scores. Overall Cleanliness (ASQ) might get a higher score than those specific ratings
</td>
</tr>
</table>

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				that contribute to the overall CSS score. QSM measures 'Availability of IDL seating' whereas ASQ rates 'Comfort of waiting/ gate areas'. *4. Sample sizes are very different – QSM 19,000 per annum vs. 2,800 on ASQ* *These reasons can be used to explain all variation between scores rather than 'acknowledge that the survey methodology, calculations and questions asked differ between the QSM and ASQ surveys which may contribute to the variation in results between these two surveys'.* *Gatwick's research team constantly review and compared the results from the two surveys, and consider the*

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				results to be well understood. ***AOC comment:*** *The AOC support the recommendation that GAL should periodically compare the QSM & ASQ scores to understand why there may be differences and take learnings from these.* ***GAL note:*** *This is already established practice.*
7.2N	Passenger Satisfaction	**Systemisation of QSM quota process** At present, GAL surveyors are required to manually transcribe the number of passengers surveyed during their shift onto the monthly quota spreadsheet. This enables a running total of surveys completed for the month to be maintained, and shows surveys the number of passengers that remain outstanding for each category. Given the manual nature of this data entry there is risk of input or calculation error by surveyors, which may input total surveys completed each month. GAL should require surveyors to update the surveys completed into an electronic quota spreadsheet. This spreadsheet should contain algorithms to calculate total surveys completed and outstanding. GAL should also investigate the systemisation of QSM survey and quota process. This could include the use of a system that automatically records the number of surveys completed when these are uploaded.	**Low**	***GAL Response:*** *We accept that there is a risk of clerical transcription & computational error. However, this but this is mitigated by quota sheets being checked by Senior Interviewers in advance of month end (in order that any under-sampling can be corrected).* *Moving to an electronic quota spreadsheet would*

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				however not eliminate all transcription errors. *We aim to migrate the QSM system to use tablets in the future which should permit the development of a 'system that automatically records the number of surveys completed when these are uploaded'.* ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*

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7.2O	Passenger Satisfaction	**Survey data capture** GAL surveyors will enter survey data onto handheld PDAs on behalf of passengers. We acknowledge that passengers can see the information being entered into the PDA and can therefore check real-time the accuracy of data entry. During our walkthrough, we observed a surveyor who edited the flight number of a passenger being surveyed after they had completed the survey (due to initial input error). Whilst the data that was amended did not include specific scores for survey questions, there appears to be functionality for these to be edited by surveyors before the survey is submitted. We acknowledge that this may have occurred as a result of demonstrating the survey process to us as part of our audit. Furthermore, we understand that PDAs used by GAL surveyors have Wi-Fi functionality, enabling surveys to be uploaded in real-time. However, this functionality is not currently being used. As a result, there is a risk that surveys may be lost if something happens to the PDA during a shift. GAL should remind surveyors that all surveys should be saved/submitted in front of the passenger to ensure that survey data cannot be changed once a survey is completed. GAL should utilise the Wi-Fi functionality on PDAs to automatically upload surveys in real-time.	**Medium**	***GAL Response:*** *Passengers regularly view the answers being input on our PDAs as they complete the questioning. The software used on our PDAs will only permit one interview to be open at a time, so even though 'GAL surveyors do not save/submit surveys whilst they are with passengers', this individual interview will need to be closed before engaging another respondent in the next gateroom.* *Most edit changes are administered later by the office team based upon information collected by interviewers on their shift reports. This is designed to discourage interviewers from editing responses.* *t is true that 'PDAs used by GAL surveyors have Wi-Fi functionality, enabling surveys to be uploaded in*

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				real-time. However, this functionality is not currently being used'. This functionality is not used because there are many pockets of limited Wi-Fi signal coverage around the airport. Work is being undertaken to improve this coverage and this functionality will be utilised once proven universally-available. *However, it is wrong to conclude that 'As a result, there is a risk that surveys may be lost if something happens to the PDA during a shift'. These PDAs have considerable memory capacity and could be used for several shifts between uploading data onto the system, should the need arise. There has been no incidents of losing shift data in this way.*

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				GAL guidelines already do 'remind surveyors that all surveys should be saved/submitted in front of the passenger to ensure that survey data cannot be changed once a survey is completed' ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*
7.2P	Passenger Satisfaction	**Independence of surveyors** QSM surveys are conducted by GAL staff on zero hour contracts. Survey results are reviewed by members of the GAL Market Research team, who are also GAL employees. It is good practice for surveys such as QSM to be conducted by independent personnel from the organisation the survey relates to. We have seen examples where surveyors are either fully independent, or a proportion of all surveyors are independent. There may be value in considering independent (outsourced) surveys to be requested at less frequent intervals (e.g. say every 2 or 5 year interval), to complement the surveys undertaken by GAL staff.	**Low**	***GAL Response:*** *This was explored by GAL in 2010 - and at that time costs were prohibitive. The possible potential perceptual benefit was hugely outweighed by higher cost and lower flexibility. Currently all QSM/ CSS data analysis is outsourced to an independent 3rd party, ORC.* ***AOC comment:*** *the AOC agree that GAL staff should not be*

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				involved in the collection of QSM data as this risks the impartiality of the results. ***GAL note:*** *As noted above we examined this in the past and it was found not to be cost effective.* *It is important to note that unlike some of the other regulated companies Gatwick is a customer facing organisation subjected to competition. We therefore do a significant amount of survey work outside of the regulatory activities. Running a separate outsources QSM survey would therefore result in lost efficiencies and full outsourcing was found to be expensive.* *We will however consider re-examining outsourcing this activity once the current data*

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				insights project (which includes a new technological solution to be used by the surveyors) has been implemented (i.e. probably next financial year).
7.2Q	Security	**Security monitoring tool** As part of our testing, we identified a number of issues regarding the availability and accuracy of a security monitoring tool used by GAL which could be used for quality assurance checks on security times. We acknowledge that the affected system is at the end of its life and we understand that this is being replaced in 2016 as part of GAL's capital investment programme. While this is an important issue and therefore we have highlighted this to GAL management, it is out of the scope of the service standards. Details of these issues have been provided to, and discussed with, GAL. However, due to the security implications associated with this observation, the specific details have not been presented in this report.	**Medium**	***GAL Response:*** *Gatwick does not agree that "issues regarding the availability and accuracy of a security monitoring tool" has been established by this process.* *The tool in question, while at the end of its useful life, fulfils its purpose and is not a compliance issue.* *This finding is due to an attempt by the Grant Thornton to use it for a purpose it was not intended.* ***AOC comment:*** *The AOC are not aware of what security monitoring tool GAL is using and therefore we cannot comment*

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				on specifics. We do believe that whatever tool is used it should be available to the AOC and CAA in the event that they request data to be checked. ***GAL note:*** *GAL does not use our CCTV footage for the purpose of undertaking quality assurance checks on manual queue timers as it is not the purpose it has been installed for and doing so may cause privacy concerns.* *In the exceptional cases when it has been used to generate security queue times (in line with the CSS handbook) the data is retained.*

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7.2R	Security	**Unimpeded walk time** The CSS Handbook includes an allowance for unimpeded transit time in the calculation of queue times for central passenger search. GAL agree all unimpeded transit times with the AOC, with this based on the time it takes a member of the AOC to walk the relevant distance. We note that this agreed unimpeded transit time is not based on an industry standard walk time per metre and therefore may not be reflective of the average passenger. GAL should calculate the unimpeded transit time based on the industry standard walk time per metre, rather than the time it takes an AOC member to walk the relevant distance.	**Low**	***GAL Response:*** *We will discuss an appropriate way forward with the AOC.* *We do however observe that walking times can vary depending on the circumstance, route and distractions encountered by the walker, so multiplying a standard time by a distance may not provide a more accurate reflection than the AOC/GAL agreed number.* ***AOC comment:*** *The AOC and GAL agree walk times jointly and have had no historical disagreements on this matter.* ***GAL note:*** *No further comment*
7.2S	Security	**Security areas** At the time of our review, the central passenger search area in the North Terminal includes passport checks and the preparation area for screening. These two events are not currently reflected in 'unimpeded transit time'. Queue times in the South Terminal exclude passport checks (as this occurs at the electronic gates) and the preparation area for screening (which is located before the electronic gates). As a result, this limits the comparability of queue times across the North and South terminals.	**Low**	***GAL Response:*** *This is a temporary effect due to the large scale construction work being undertaken to build a new security area in*

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		As part of wider development works being undertaken in the North Terminal, GAL should standardise the activities being included within each central passenger search area across the North and South Terminals.		*North Terminal.* *These temporary arrangements have been consulted on with the AOC before it was implemented.* *Once the construction in completed the activities will be standardised (as was always the plan).* ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*
7.2T	Security	**North terminal central search - real time monitoring** Central passenger search security queue times for the North Terminal are recorded in OPM. OPM security times do not exclude the 'unimpeded transit time' and therefore cannot be effectively used for real-time monitoring of CSS security queue times. We acknowledge that the Security Team Leader is responsible for managing security queue times across the day. However, this real time monitoring is based on observational information, and could be further enhanced through systemised data. Furthermore, GAL are currently undertaking significant development in the North Terminal. As part of this development, there is an intention for central passenger search to move to using the same automated system that is currently used in the South Terminal. GAL should continue to explore moving to automated monitoring of central passenger search security queue times in the North Terminal. This would enable real time monitoring of security queues against CSS targets.	**Low**	***GAL Response:*** *GAL are currently constructing a new central passenger search area in the NT, this will be completed for Summer 2016.* *As part of this new build, NT security will move over onto automated queue timing driven by facial recognition. This system will negate the need for the*

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				current OPM system and will remove the process highlighted in this recommendation. ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*

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7.2U	Security	**Flight connections, staff search and external control posts – real time monitoring** Security queue times for flight connections, staff search and external control posts are captured in a spreadsheet maintained by OCS, and provided to GAL on a daily basis. As a result, real time monitoring of security queues in these areas cannot take place (except where this is evidenced by operational staff on the ground). We acknowledge that OCS are required to inform GAL of any queue exceeding 15 minutes, to enable GAL to immediately investigate. We acknowledge that the Security Team Leaders are responsible for managing security queue times across the day. However, this real time monitoring is based on observational information, and could be further enhanced through systemised data. GAL should investigate the use of a centralised system to monitor security queue times across all areas included in the CSS Handbook. This centralised system should enable real-time security queue monitoring to take place. As part of this investigation, consideration should be given to benefits gained from the introduction of such a system, given the low volume of individuals passing through these security areas.	**Low**	***GAL Response:*** *As referenced in this recommendation, due to the low volume of individuals passing through these areas, the financial investment needed to install and maintain an automated system is unjustified.* *Given the past performance of these areas, specifically the fact that no monthly CSS targets have ever been breached, making changes to the process currently in place in these locations is not justified.* ***AOC comment:*** *The AOC agree with the Grant Thornton recommendation particularly for use in staff search and crew security areas. The AOC have previously and continue to raise our concerns that the CSS published data is not reflective of the*

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				experience that many crews face during peak operational times. ***GAL note:*** *We have discussed this issue with the AOC Chair and have agreed to review the lane opening hours at the affected point. This will align the service level to the airline needs.We also note that the low volume of throughput at these points is insufficient for the technical solution used in central search to operate effectively.*
7.2V	Security	**Inconsistent use of OPM** Central passenger search security queue times for the South Terminal are automatically captured in the QMS system. These security queue times are then manually entered by the GAL Control Centre into the OPM system to enable central passenger search queue times to be tracked in one place for both the North and South terminals. OPM is not currently being used to record queue times in areas other than central passenger search (for example, flight connections, staff search and external control posts). We understand from GAL that this reflects the low throughput of data in this area, and current resourcing constraints of the Gatwick Control Centre who input other queue times into OPM. As a result, GAL must currently make reference to a separate spreadsheet to monitor security queue times in these areas. We understand that a review of the OPM system is currently being undertaken by GAL to identify potential system upgrades and/or developments to address known system functionality weaknesses. As part of the wider OPM system review, GAL should investigate whether an automatic	**Low**	***GAL Response:*** *Please see previous response detailing both current performance in these areas, combined with the level of investment needed to install and maintain an assets alluded to in the recommendation.* *OPM is a legacy BAA system and*

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		data flow can be created between the QMS and OPM, to automatically upload central passenger search queue times into OPM. GAL should work with OCS to investigate the use of automated capture of queue times into OPM e.g. through the use of iPads or similar technology. GAL should investigate the use of a centralised system to monitor security queue times across all areas included in the CSS Handbook.		*will be taken out of use when automated queue measurement is commissioned in the new North Terminal security area later this year.* ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*

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7.2W	Security	**Systems used to track queue times** GAL are currently using OPM to record security queues for central passenger search at both the North and South Terminal, not other security queues such as transfers, staff or external control posts. As a result, there is currently no central system where all security times can be centrally monitored. GAL should investigate the use of a centralised system to monitor security queue times across all areas included in the CSS Handbook. This centralised system should enable real-time security queue monitoring to take place.	**Low**	***GAL Response:*** *Please see earlier response.* ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*
7.2X	Security	**Manual security queue time data entry** As part of our audit, we conducted testing across a sample of manual queue times to ensure these had been accurately entered into GAL calculation models. Security queue times are entered by the GAL Finance Analyst into a 'CSS Queue Report', used to calculate overall queue times against the CSS Handbook each month. Our testing of data captured in this 'CSS Queue Report' identified variations in how data was being captured. In some instances, queue times are recorded for the time segment they relate to, others are recorded for the time segment before, and others for the time segment after (e.g. 0630 may be recorded under the time segment 0615, 0630 or 0645). As service metrics are calculated on a daily and monthly basis, variations in data entry of this nature have not impacted overall service performance and rebate calculations. Furthermore, in one instance we identified errors in queue times captured by OCS in their daily queue time spreadsheet. These errors were identified and remediated by the GAL Finance Manager and therefore did not impact the calculation of overall security queue times, or rebates paid. We acknowledge that the introduction of facial recognition software in the North Terminal general search area will address this risk, as security queue times will be automatically captured in the security time system. In the interim, GAL should ensure that all queue times are consistently entered into spreadsheets used for calculation purposes. GAL should also implement a quality assurance check over a sample of OCS queue times recorded each month to ensure that these align with supporting manual queue time forms.	**Medium**	***GAL Response:*** *GAL will undertake training refreshment with the current third party queue timing company, OCS, in order to ensure consistency of process as defined within the CSS handbook and the Queue Timing contract.* *GAL also agrees to add an assurance check over a sample of OCS spreadsheets specifically compared to their manual recorded counterparts, this will be a monthly occurrence.* ***AOC comment:*** *The AOC has no further comment* ***GAL note:***

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				No further comment
7.2Y	Security / Passenger and Airline Operational	**Availability of CCTV to substantiate security queue times and asset availability** At present, GAL CCTV footage is only available for a period of 30 days. We acknowledge that the purpose of CCTV footage is for passenger security and safety, not operational monitoring of service metrics. However, as part of wider review and upgrade of CCTV functionality at GAL, consideration should be given to extending the use of CCTV footage to enable independent monitoring of security queue times and asset availability. The Information Commissioners Officer should be consulted regarding the use of CCTV for this purpose to ensure that this is aligned with their requirements. This would enable GAL to have evidence should there ever be challenges from the AOC, or audits on the accuracy of the security queue times or asset availability/downtime.	**Medium**	***GAL Response:*** *GAL would like to reinforce the position that CCTV is utilised and installed at the airport specifically for the purpose of maintaining the safety and security of passengers, staff and visitors.* *We do not consider routinely observing our contractors to be an appropriate use of CCTV systems as there are less intrusive measures available to monitor and manage contractor performance.* ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further comment*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
7.2Z	Passenger and Airline Operational	**Inconsistent approach to analyse asset downtime.** Our audit identified an inconsistent approach for calculating asset availability across different classes of assets requiring CSS measurement. Currently downtime for the following classes of assets is recorded in Maximo: • Jetties • Fixed electrical ground power • Passenger sensitive equipment • Arrivals reclaim. Discussions with GAL stakeholders responsible for inter-terminal shuttles has identified that there is the possibility that this could also be managed via Maximo. However, the volume of outages (typically due to minor incidents such as items being jammed in doors), and current Gatwick Control Centre resourcing, has led to shuttle downtime not being entered into Maximo, and therefore a spreadsheet being used to monitor downtime instead. However, we acknowledge that outbound baggage and stand availability will need to continue being managed using separate systems. GAL should introduce a consistent methodology across all assets (where possible). GAL is aware of this and has identified the standardisation as an improvement opportunity to focus on as part of the broader system improvement project which is currently in the planning phase.	**Low**	***GAL Response:*** *The assets that are managed by the Maximo system are all consistently analysed for downtime.* *The following exceptions however exist: The Outbound baggage system is monitored through a separate system using automated with bar code scanners and an IT system.* *A separate system is also used to analyse Stand Availability. Since this information is used as input to the day to day operation of the stand plan it is live and therefore cannot be practically managed via Maximo.* ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *No further*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				comment
7.2AA	Passenger and Airline Operational	**Maximo asset downtime reports** The GAL Finance Analyst is responsible for extracting a report showing all asset downtime that has occurred during the core CSS hours. This report is currently being generated approximately once per month and sent to GAL Engineering Managers, and relevant third parties (such as KONIE) for their review. The frequency of generation of this report reflects current time availability of the GAL Finance Analyst. As this report provides a key monitoring tool for the business regarding asset downtime during core hours, it would be beneficial if this report was provided on a more regular basis. We acknowledge that other Maximo reports are available that enable operational management of asset downtime, however these are not focussed on downtime that occurs within CSS core hours only. GAL should review time availability of the GAL Finance Analyst to ensure that she has sufficient time to perform all key activities of her role, including the regular creation of the Maximo asset downtime report. Alternatively, GAL should investigate whether the Maximo report being prepared by the GAL Finance Analyst could be prepared by the Maximo reporting team, who are responsible for other Maximo reports.	**Low**	***GAL Response:*** *Conversations have begun regarding how this function should be organised between the finance and engineering functions at Gatwick.* ***AOC comment:*** *The AOC believe that GAL should provide a more complete response than that offered.* ***GAL note:*** *Grant Thornton recommended Gatwick should investigate whether the report could be done by Maximo reporting team. The GAL Finance Analyst has approached the Head of Engineering to schedule a date for a meeting whereby hand-over of this reporting will be discussed and a hand-over date agreed.* *A resolution is*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				expected during August/September 2016.

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
7.2AB	Passenger and Airline Operational	**Pier service calculation model** GAL uses a spreadsheet model to calculate performance against the pier service element each month, and across a rolling 12 month period. This model is complex, with 18 separate tabs used to capture raw data and manipulate this in different ways to reach the end metric for the month. We have observed models used by other similar organisations which are significantly more simple, and are based on data extract from system(s), with minimal manual manipulation. The calculations required within the model to obtain the end service metric are complex due to the many exclusions that need to be adjusted for. Refer to observation 6.2.2E regarding quality assurance of exclusions within the pier service calculation model. The calculation model also requires data inputs from several different systems and data sources. In some instances, these data inputs are not used for the purpose of calculating the CSS pier service metric, but rather are used for other operational calculations that also utilise the same calculation spreadsheet. The inclusion of this additional data within the spreadsheet (for example, passenger coaching data from coaching companies) may lead to confusion regarding how calculations are to be performed, and increases the risk of calculation error due to excess data present within the spreadsheet. GAL should review the pier service calculation model with the intent of simplifying this, where possible. Consideration should be given to: • Removing raw data and calculations that do not directly relate to the pier service metric. This information should be captured in separate spreadsheet(s) • Reviewing and expanding the data captured within GAL systems so greater reliance can be placed on system extracts, rather than manual manipulation within the calculation spreadsheet • Clearly documenting any areas where judgement has been exercised (such as the identification and application of exemptions), and capturing documented evidence of independent review of each judgement made. Longer term, GAL should look to systemise the pier service element calculation.	**High**	***GAL Response:*** *A management information and data insight project is already underway with funds approved. As part of the scope of this project it will address some of the issues raised here, a key objective being to push more data into a data warehouse and business rules applied thus limiting the future need for Excel spreadsheets and complex formulae in order to calculate pier service level. It is not expected that this project will deliver these benefits before the end of the calendar year.* *The analysis of passenger coaching data from the coaching company does perform a role in the calculation of the Pier Service Level. We need to*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				analyse passengers that were pier served but still coached to the reclaims areas for operational reasons. ***AOC comment:*** *The AOC is supportive of any change that simplifies this process and or removes subjective decision making on how data should be applied.* ***GAL note:*** *The GAL Finance Analyst will streamline this process as much as reasonably possible with the use of new data sources within the Business Objects reporting universe. This will be an interimpart automated solution until such time that the Data and Insights project is completed.* *The GAL Finance Analyst believes that this improved interimprocess will*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				significantly reduce manual preparation and will provide only that data that is necessary for the purposes of calculating PSL scores. This will be complete by the end of July 2016.

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
7.2AC	Passenger and Airline Operational	**Pier service exemptions** Discussions with GAL staff have identified the following long-term exemption regarding pier service: • Arrivals into Pier 3 are currently excluded (under a rolling AOC approval), due to current infrastructure being unable to accommodate separation of arrivals and departures. As a result, arrivals are often taken to remote stands. Despite this exemption being long term in nature, it is not currently included in the CSS Handbook. We understand that this is due to the AOC wishing to receive regular progress updates regarding this service element area. GAL should discuss with the AOC whether the above long term exemption regarding pier service should be captured in the CSS Handbook as part of the next Handbook update.	**Low**	***GAL Response:*** *We understand that the current arrangement with extendable exclusions for this particular project is the preference of the AOC, and appears to be working well.* *We are happy to discuss this with the AOC if they wish to amend it further.* ***AOC comment:*** *The AOC are not aware of any exclusion that directly relates to arrivals on Pier 3. However we think this may have become confused with an exemption for arriving flights from Common Travel Area destinations. The AOC provided GAL with the exemption to provide GAL with sufficient time to allow GAL to investigate an optimal solution to this problem. Without an exemption we felt that GAL would be*

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Ref	Service Element	Observation and Recommendation	Rating	Management Comments
				forced into providing a quick solution that was not in the interests of passengers or airlines. At the point that GAL begins construction on a long term solution it is expected that the AOC will provide a long term exemption to cover the build phasing ***GAL note:*** *No further comment*
7.2AD	Aerodrome Congestion Term	**Airline, AOC and CAA notification of aerodrome congestion** At the time of our review, there had been no aerodrome congestion that had occurred during 2015. These stakeholders are not provided with the Super Log on a regular basis, nor a list of potentially material events for their review, consultation and challenge. Furthermore, one member of the Gatwick AOC were not aware that a Super Log was being maintained by GAL and the type of information this captures. We understand from the Assistant Airside Compliance Manager that information regarding aerodrome congestion is available to be shared with airlines, the AOC and the CAA but this has not been requested by these parties to date. GAL should share the Super Log, and associated aerodrome congestion information with airlines, the AOC and the CAA on a regular basis. The purpose of sharing this information is to enable independent review and challenge of the classification of events which are borderline 'material events' and therefore may impact on the assessment of aerodrome congestion.	**Medium**	***GAL Response:*** *We will explore this area with the AOC to determine how to best enhance transparency around the Aerodrome Congestion Term.* ***AOC comment:*** *The AOC has no further comment* ***GAL note:*** *It is worth noting that a failure of this metric has now occurred as a result of a runway "breakout" in June 2016.*

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Appendix A –Audit requirements

The Request for Quotation received from the Civil Aviation Authority included the following audit procedures, which were performed as part of our review.

Objectives of the audit

The objectives of the audit were:

- To provide a transparent, independent assessment of whether performance against standards has been measured and reported as intended in the CAA's service quality regulation
- To assess whether best practice has been followed in the documentation of processes
- To review the accuracy and reliability of the calculation of bonuses (where applicable) and rebates, both under normal circumstances and when service quality exclusions apply
- To determine whether HAL's and GAL's interpretation of the licence conditions and the CAA's determination on HAL's service quality protocol are in line with the CAA's interpretation
- To provide objective, unbiased, reliable and robust information on which the CAA can base regulatory financial incentives.

Audit procedures

Passenger Satisfaction

The audit shall focus on the QSM measurement of the elements in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport:

Heathrow	Gatwick
Departure lounge seating availability, Cleanliness, Way-finding, Flight information, Security, Wi-fi	Departure lounge seating availability, Cleanliness, Way-finding, Flight information

The audit shall:

- give an objective opinion on whether QSM has been consistently applied according to the licence over time and across terminals based on:-
  - whether the current methodology and application is transparent
  - whether any changes to update the procedures are well documented with an audit trail and have not in the opinion of the Auditors materially affected the comparability of the results compared to the benchmarks set when the scheme was set up
- review whether in the opinion of the Auditors the methodology and application of the QSM reasonably accord with best market practice and are sufficiently objective, unbiased, reliable and robust to be fit for the purpose of supporting elements of the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport and if not how the QSM could be amended to make it appropriate, and in particular:
  - whether sample sizes are statistically adequate to support results to the level of confidence required
  - whether the survey questions and processes are well designed to obtain a high quality response taking into account the wide range of passengers involved e.g. UK originating/other end

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originating/connecting passengers; business/leisure etc., language and cultural differences; male/female
  - whether the samples of passengers and weighting adequately reflect the overall mix of passengers
  - to what extent any changes designed to overcome concerns about the methodology and application would adversely affect the benefits of consistency

- report on whether there are more effective, accurate or robust measures of service performance, including (where appropriate) suggesting proven systems that are used at other airports.
- The audit shall also compare the results of the QSM to international surveys of airport quality performance (particularly the Airport Service Quality survey conducted by Airports Council International), and identify any apparent anomalies in movements over time and offer any possible explanations.

Security and Control Posts

The audit shall focus on these security elements in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport:

Heathrow	Gatwick
Central search, Transfer search, Staff search, Control posts (CTA, Cargo, Eastside, Southside, Terminal 5)	Central passenger search, transfer passenger search, Staff search (Terminals and Crew), External control posts search

The audit shall report on:

- the robustness of the current queue measurement systems and procedures in each terminal and their fitness for purpose in providing the source data for the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport, including within this assessment the questions that have been raised regarding the consistent measurement of the end of passenger security queues
- whether the current grouping of control posts at Heathrow Airport is (i) balanced in terms of usage, (ii) reasonable in terms of substitutability of individual control posts, and (iii) able to maintain incentives on HAL to maintain control post performance levels across the campus in order meet the operational needs of the airlines/passengers
- whether there are more effective, accurate or robust measures of service performance, including (where appropriate) suggesting proven systems that are used at other airports.

Passenger Operational and Airline Operational Elements

The audit will consider the procedures and systems for measuring availability of the assets set out in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport.

Heathrow	Gatwick
Passenger sensitive equipment (general), Passenger sensitive equipment (priority), Arrivals baggage carousels, Track transit system, Stands, Jetties, Fixed electrical ground power, Stand entry guidance, Pre-conditioned air, Pier-served stand usage	Passenger sensitive equipment (general), Passenger sensitive equipment (priority), Arrivals reclaim, Inter-terminal shuttle system, Outbound baggage, Stands, Jetties, Pier service, Fixed electrical ground power

The audit shall give an objective opinion on:

- whether the procedures and systems in each terminal are fit for purpose
- whether they are transparent, well documented and have been consistently applied
- whether the application of the processes by which specific assets are excluded from the scheme when service quality exclusions apply (e.g. planned maintenance) have been consistent with the specification in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport

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- whether there are more effective, accurate or robust measures of service performance in this area, including (where appropriate) suggesting proven systems that are used at other airports.

Aerodrome Congestion
The audit shall give an objective opinion on:

- whether the data collection and communication have been performed subject to adequate processes and procedures to ensure that they are accurate and complete
- whether the airport has reasonably identified the full list of "material events" as defined in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport
- whether the airport has reasonably identified the full list of such events with a "material operational impact" as defined in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport
- whether the airport has reasonably applied the "exceptions" as defined in the SQRB scheme at Heathrow Airport and in the CSS(R) scheme at Gatwick Airport
- whether in the opinion of the Auditors the airport operator has:
  - made reasonable assumptions about the number of expected arrivals and/or departures during material events with a material operational impact
  - the airport operator has made reasonable judgements based upon explicit criteria where there have been contributing causes beyond its control
- whether subject to the above the rebates have been properly calculated
- whether there are more effective, accurate or robust measures of service performance, including (where appropriate) suggesting proven systems that are used at other airports.

As part of the above assessment, the Auditors will investigate and report on the transparency of the decision-making process for the operation of this measure, and on the extent to which the views of stakeholders are appropriately captured and considered.

Airline Service Standards (Gatwick Airport only)
The audit shall give an objective opinion on:

- the effectiveness of the monitoring of arrivals bag performance, in particular the robustness of data collection and calculation of airline performance
- the provision of adequate information to airlines and to the CAA on the amounts paid and dates of payments.

Calculation and Payment of Bonuses (Heathrow Airport only) and Rebates
The audit shall give an objective opinion on:

- the robustness of the calculations of bonuses (Heathrow Airport only) and rebates, including the consistent rounding of figures to the appropriate number of decimal points
- the robustness of the calculations of rebate reduction due to airlines not meeting the airline service standards (Gatwick Airport only)
- the provision of adequate information to airlines and to the CAA on the amounts of rebates paid by HAL and GAL, the bonuses earned by HAL, the amount of rebate reduction (Gatwick Airport only), and dates of payments.

Publication of Service Performance
The audit shall give an objective opinion on the publication of performance, and (where appropriate) make suggestions for possible ways of improving transparency of information to passengers and other airlines.

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Appendix B – GAL: Examples of spreadsheets used by GAL

Element	Spreadsheets
Passenger Satisfaction	• Mayfly Sheets (Planned/estimated flights and passenger numbers) • Actual flights and passenger numbers • QSM Quota Sheets • SQR Spreadsheet (Monthly QSM Scores) • QSM CSS Graphs (Monthly QSM Graphs)
Security and Control Posts	• Q Analysis (Calculates queue time against CSS targets) • OPM Reports (Showing queue times, image numbers and passenger numbers) • OCS Queue Time Reports (Daily spreadsheet setting out queue time for each time interval)
Passenger Operational and Airline Operational Elements	• Asset maintenance plan (Available for each asset type) • Maximo reports (Reports showing Maximo work orders) • Availability Model (Separate model used to calculate availability for each asset) • Maximo Manual Amendments (Capturing manual amendments to asset availability) • Shuttle Performance Dashboard (Captures downtime of inter-terminal shuttle) • Outbound Baggage Tables (Report showing outbound baggage performance) • Stand Availability Spreadsheet (Captures stand downtime)
Aerodrome Congestion Term	• GDW Extract (Actual aircraft movements) • Superlog (Daily superlog file) • Aerodrome Congestion Term (Monthly spreadsheet capturing 'material' events)
Airline Service Standards	• DIDFLY (Flight data including 'on chocks' time, first bag time and last bag time) • File Merger Tool (Merges daily DIDFLY data) • DIDFLY IBB Calculator (Inbound baggage calculation model)

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Element	Spreadsheets
Rebate Calculations	• Pax Forecast by Model (Forecast passenger numbers) • Actual Passenger and Aerodrome Charges • CSS Performance Tracker (Captures whether CSS and ASS targets have been met / failed) • Rebate Calculation Model • CSS Rebates – End of Year Review (Annual wash-up spreadsheet)
Publication of Service Performance	• NT 1st Draft (Collates CSS and ASS performance for the North Terminal) • ST 1st Draft (Collates CSS and ASS performance for the South Terminal) • CSS Performance Tracker (Overall CSS and ASS performance tracker)

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Appendix C – GAL: Asset availability variances against internal calculation spreadsheet

Sample Month	Terminal	Element	Metric	Target Score	Score per Internal Calculation Spreadsheet	Published Score
Feb 15	North Terminal	Jetties	99% availability during core hours	99%	99.90%	99.88%
Feb 15	North Terminal	Arrivals Reclaim	99% availability during core hours	99%	99.92%	99.91%
Jul 15	North Terminal	Jetties	99% availability during core hours	99%	99.87%	99.93%
Jul 15	North Terminal	Outbound Baggage	**Monthly:** 99% of bags inputted at check-in at -40mins or greater before the published ETD will have first attempt to tip at or before -25mins published ETD during core hours **Daily:** 97% of bags inputted at check-in at -40mins or greater before the published ETD will have first attempt to tip at or before -25mins published ETD during core hours	99% and 97%	**Monthly:** 99.70%	**Monthly:** 99.69%

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Appendix D – GAL: Security queue variances against internal calculation spreadsheet

Sample Month	Sample Terminal	Element	Metric	Target Score	Score per Internal Calculation Spreadsheet	Published Score
Apr 15	North Terminal	Transfer passenger search	Queue time less than 10mins for 95% of core hours	95%	99.70%	99.69%
Apr 15	North Terminal	Staff search	Queue time less than 5mins for 95% of core hours	95%	99.85%	99.95%
Jun 15	North Terminal	Staff search	Queue time less than 5mins for 95% of core hours	95%	99.97%	99.95%
Nov 15	North Terminal	Staff search	Queue time less than 5mins for 95% of core hours	95%	99.87%	100%

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Appendix E – GAL: Security queue variances against performance tracker spreadsheet

Sample Month	Sample Terminal	Element	Metric	Target Score	Score per Internal Performance Tracker Spreadsheet	Published Score
Apr 15	South Terminal	Staff search	Queue time less than 5mins for 95% of core hours	95%	98.86%	98.33%

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Appendix F – GAL: Inbound baggage variances against internal calculation spreadsheet

Sample Month	Sample Terminal	Element	Metric	Aircraft Size	Target Score	Score per Internal Calculation Spreadsheet	Published Score
Apr 2015	North and South Terminal	Inbound Baggage	95% of small and medium aircraft flights to have the last bag delivered within 35 minutes of on chocks time.	S/M	95%	90.25%	89.92%
Apr 2015	North and South Terminal	Inbound Baggage	95% of large aircraft flights to have the last bag delivered within 50 minutes of on chocks time.	L	95%	93.00%	95.85%
July 2015	North and South Terminal	Inbound Baggage	95% of small and medium aircraft flights to have the last bag delivered within 35 minutes of on chocks time.	S/M	95%	87.57%	86.98%
July 2015	North and South Terminal	Inbound Baggage	95% of large aircraft flights to have the last bag delivered within 50 minutes of on chocks time.	L	95%	96.58%	96.39%

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Appendix G – GAL: Maximo work order change

Sample Month	Asset Type	Work Order	Downtime Date	Maximo Reported Downtime	Downtime Spreadsheet Reported Downtime	Comments
Feb 2015	Arrivals Reclaim	02-8231469	18 Feb 2015	0:46	120:36	Downtime has been amended to 00:46 (from 120:36). There is no supporting documentation available regarding this amendment, as the GAL Finance Analyst was not in the role at this time, and the previous employee was not consistently retaining documentation during this period. The GAL Finance Analyst noted that this is likely due to a work order not being appropriately closed down within Maximo.

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Appendix H – GAL: Downtime not captured in calculation model

Sample Month	Asset Type	Total Downtime (Per Maximo Report)	Total Downtime (Per Calculation Model)
Oct 2015	FEGP	7.5 hours	6.0 hours

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Appendix I - Definition of ratings

Within each report, every finding is given a rating providing a high level view of the adequacy of the internal control environment. These ratings are described in the tables below. This rating system allows for objective monitoring and comparison of audit reports across the alliance and similarly allows for easy comparison to previous reports.

Finding rating	Description	Features
High	Findings that are fundamental to the management of risk in the business area, representing a weakness in control that requires the immediate attention of management	• Key control not designed or operating effectively • Potential for fraud identified • Non-compliance with key procedures / standards • Non-compliance with regulation
Medium	Important findings that are to be resolved by line management.	• Impact is contained within the department and compensating controls would detect errors • Possibility for fraud exists • Control failures identified but not in key controls • Non-compliance with procedures / standards (but not resulting in key control failure)
Low	Findings that identify non-compliance with established procedures.	• Minor control weakness • Minor non-compliance with procedures / standards

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