



Heathrow Airport Operational Resilience Plan

Draft for Consultation
July 2014

Heathrow
Making every journey better

Preface from the Chief Operating Officer

At the very heart of Heathrow Airport lies the constant improvement of resilience. Working together as a community is fundamental to achieve effective resilience.

Together, the Heathrow community has made significant progress on improving the airport's resilience in recent years. Punctuality is up from 63% in 2007 to around 80% today and 80%¹ of passengers now rate their experience highly. Risks are better understood and managed, crisis management is more robust, capacity management is more proactive and we have significantly strengthened welfare arrangements for disrupted passengers.

Together we have effectively dealt with numerous challenges like snow, floods and an Olympics. However the June baggage issues in Terminals 1, 2 and 5 illustrate that despite some important resilience and contingency improvements, so much still needs to be further planned, improved, communicated and executed.

Together we have shaped a capital investment programme for Q6 where the majority of our £2-3bn of planned investment is focused on asset replacement and resilience. Our cycle of resilience extends from long term investments in infrastructure right through to day to day operational processes, underpinned by our values.

This draft Operational Resilience Plan is a high level document setting out the principles, policies and procedures by which we collectively seek to deliver operational resilience at Heathrow.

This plan should exploit community expertise and should also be representative of our community approach to resilience. We are planning to use the Heathrow Resilience Partnership as the forum to engage with your organisations and other expert stakeholders on the plan. We will also draw on higher level input from the Heathrow Airport Operations Stakeholder Board (HOASB).

Having incorporated community expertise and guidance we will publish the document at the beginning of October.

Normand Boivin

July 2014

¹ In quarter 1 of 2014, 80% of Heathrow passengers surveyed rated their experience as Excellent or Very Good.

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Section 1: Introduction and Context

Purpose

- 1.1. Heathrow Airport has been reviewing its Operational Resilience Plans and therefore the purpose of this document is to share these plans. Heathrow would welcome airline and other stakeholder feedback in order that we can publish the final Operational Resilience Plans on the 1st October 2014.
- 1.2. The rest of this section provides an overview of operational resilience, governance, consultation timescales, and how you can respond. In the subsequent chapters we describe our transformation to date, the approach to managing risk and the proposed operational resilience plans so that we can further improve resilience.

Passenger context

- 1.3 Heathrow was transformed in Q5 (2009 – 2014), we have strengthened our operational resilience and therefore enter Q6 (2014 – 2018) with a much improved passenger experience. In collaboration with our airlines and NATS Heathrow has focused on improving airfield operations and resilience which included our response to the impact of snow at the airport in 2010. Since 2010 Heathrow and its Stakeholders have made great improvements in the area of Operational Resilience whether during day to day operations or specific events such as the London 2012 Olympic Games.
- 1.4 Passenger satisfaction at Heathrow is high. However, Heathrow recognise that improving resilience at the airport will improve the passenger experience by reducing delays, improving punctuality and by ensuring the welfare of passengers during disruption.
- 1.5 As part of the Q6 Licence granted by the CAA there is an Operational Resilience² requirement “to secure the availability and continuity of airport operation services, particularly in times of disruption, to further the interests of users of air transport services in accordance with best practice and in a timely efficient and economical manner”. To meet this requirement and in line with our values the following principles will drive Operational Resilience at the airport.
 - Doing the right thing: **Heathrow Airport will seek to never close as a result of circumstances under our control, except for immediate safety or emergency threats.**
 - Working together: **The Heathrow community will work collectively to continue to improve operational resilience.**
 - Giving excellent customer service: **Passenger welfare will be delivered to the standards established in the Airport and Airline Welfare Protocols.**
 - Keeping everyone safe: **The Heathrow operation will be compliant with applicable legal and regulatory requirements, including parts of CAP 168 and Q6 Licence obligation.**
 - Improving every day: **Heathrow and the community will seek to ensure that new assets are resilient by design.**
 - Improving every day: **Heathrow will seek to operate by best practice resilience standards in the areas of Command & Control, Crisis Management, Business Continuity and Exercising.**
- 1.6 Heathrow puts passengers at the heart of everything it does and recognises it also has an obligation to care for passengers when required. This commitment has developed into the Welfare Contingency Response File, detailing Heathrow’s response which is supported by a team of 300 people. This includes the provision of catering, transport, accommodation and resource to support our passengers in times of disruption.

² See appendix 1 for CAP 1138 Airport Licence Operational Resilience requirement.

Risk Context

- 1.7 The risk identification process is the starting point in ensuring the airport is resilient. Operational risks need to be identified and understood before a decision can be taken to reduce the risk by capital investment, if appropriate, or mitigate it with operational plans.
- 1.8 As a regulated airport Heathrow engage and consult airport stakeholders on the capital expenditure plan for each quinquennium. Heathrow Airport, through the Q6 Capital Portfolio, plans to spend £1 billion on asset replacement and a further £710 million on improving airport resilience during the next five years.
- 1.9 Should a disruption occur, mitigation plans need to be in place to manage the disruptive event and support a prompt return to business as usual operations. Currently Heathrow has over 600 plans that can be deployed for various disruptive events. Where appropriate these plans should be developed and exercised in conjunction with the relevant stakeholders.
- 1.10 Prior to the mitigation plans being published they are exercised to ensure that those involved in the deployment understand the actions to be taken, the equipment to be used, the processes to be followed and that the plan is fit for purpose. Where the plans involve stakeholders, such as the Emergency Orders, these parties should be fully involved in the exercise. A live deployment of the plans should also be seen as opportunity to learn and further improve the plans. Throughout 2013 Heathrow Airport undertook \gg exercises.
- 1.11 The use of and reliance on Information Technology increases every day and with this comes the challenge of ensuring that resilience is to the forefront when designing systems and applications. Processes should be in place to monitor systems and take the appropriate action if they fail.

Stakeholder Context

- 1.12 Key to ensuring that Heathrow is operationally resilient is engagement with our stakeholders throughout the resilience cycle. Without stakeholder participation Heathrow risks developing solutions that are unaligned and could prevent an effective response during disruption. Only by working with airport stakeholders can Heathrow ensure that the airport succeeds in delivering operational resilience.
- 1.13 The successful delivering of operational resilience is a partnership between the Operational business units and their stakeholders which includes Airlines, Handlers, Border Force, Emergency Services and others. In the event of disruption these teams are the first responders in meeting the expectations of passengers and stakeholders alike.
- 1.14 To successfully manage a disruptive event requires the invocation of the correct level of command and control. All of the Operational business units have on call teams available to support the management of disruptive events which entails over 400 people across the business who are appropriately trained and exercised on an annual basis.
- 1.15 The introduction of the Airport Operating Centre (APOC) in November 2014 will be the realisation of a £17 million capital project and will see a step change in supporting frontline Operational teams in making every journey better. The APOC will be able to see the complete Heathrow picture, offering the right information to the right people at the right time enabling proactive and effective decision making during normal and disruptive operations.
- 1.16 Clear, concise, accurate and aligned communications are critical for passengers, staff and stakeholders in times of disruption. They allow people to make informed decisions and provide assurance to all parties that the airport is doing all they can to resolve the issue.

Regulatory Context

- 1.17 This document has been prepared in accordance with part D2 of Heathrow’s licence obligations for the Q6 period commencing 2014.

Governance Structure

- 1.18 In order to minimise disruption to passengers, all parties need to work together in a timely, efficient and effective manner. That is why Heathrow intend to use the Heathrow Airport Resilience Partnership³ as an appropriate forum to consult stakeholders on the operational resilience plan.
- 1.19 The Heathrow Airport Resilience Partnership (HRP) will be used to consult stakeholders on matters relating to operational resilience such as exercise programmes, post event reviews and any revisions to Heathrow’s Operational Resilience Plan.
- 1.20 Heathrow Airport Operations Stakeholder Board⁴ (HAOSB)

The Heathrow Airport Operations Stakeholder Board will set the strategy for Operational Resilience at the airport.

The HRP will provide an annual report to the HAOSB outlining:

- Updates to the Operational Resilience plan in advance of publication.
- Key findings from post incident reviews and exercises that require additional oversight and discussion.

Consultation Programme

- 1.21 The table below details the consultation programme:

Date	Milestone
24 th June 2014	Initial Heathrow Resilience Partnership meeting to discuss Operational Resilience Plan
18 th July 2014	Heathrow published Consultation document
22 nd July 2014	Formal Consultation meeting at the Heathrow Resilience Partnership
21 st August 2014	Formal Consultation meeting at the Heathrow Resilience Partnership
29 th August 2014	Written responses due from stakeholders
1 st October 2014	Heathrow publishes its Operational Resilience Plan

- 1.22 Heathrow will hold formal Consultation meetings on the 22nd July and 21st August at the Heathrow Resilience Partnership to give stakeholders the opportunity to comment on this document. The meeting will be open to Heathrow Resilience Partnership attendees, other Heathrow airlines and Heathrow stakeholders.
- 1.23 Please let us know if you would like to attend the Consultation meeting using the contact details in the “how to respond” section.

³ See appendix 11 for Heathrow Airport Resilience Partnership terms of reference

⁴ See appendix 12 for Heathrow Airport Operations Stakeholder Board terms of reference

How to respond

- 1.24 Heathrow invites users and Interested Parties to submit written responses to the proposal set out in this document by 29th August 2014. Responses should be sent to: business_resilience@heathrow.com
- 1.25 Alternatively, comments may be posted to:
Ray Fitzgerald
Business Resilience
The Compass Centre
Nelson Road
Heathrow Airport
TW6 2GW
- 1.26 If you have any questions on the Consultation document please contact Ray Fitzgerald on the above e-mail address. We will endeavour to acknowledge receipt of all responses within 5 working days.
- 1.27 All responses received will be considered in Heathrow's final operational resilience plans and confidential material should be clearly marked.
- 1.28 Heathrow representatives are also available to meet with any stakeholders who wish to discuss the proposals during the formal consultation period.
- 1.29 The following chapters in this document set out the operational and regulatory context and Heathrow's proposed Operational resilience Plans.

Section 2: Heathrow's challenge and transformation to date

Introduction

- 2.1 Heathrow today is one of the largest and, according to passengers, one of the best⁵ airports in the world. During the last ten years over £11 billion has been invested to transform Heathrow into a national asset of which Britain can be proud. As a result of snow in 2010 Heathrow have invested significant capital, £37m, and time on improving the resilience of the airport during a snow event. This includes additional equipment, new processes for weather forecasting, enhanced command and control structure supported by ~~XXX~~people on various "on call" teams and a detailed Passenger welfare plan.
- 2.2 As a Hub airport, Heathrow supports frequent and direct long-haul flights, by combining transfer passengers, direct passengers and freight which means airlines are able to fill long-haul aircraft and serve destinations that cannot be served by airports which rely on local demand alone. As the UK's only hub airport, resilience is crucial to passengers' experience. Although Heathrow only accounts for 20% of the flights from the UK it accounts for approximately 80% of long-haul flights, making it a critical asset for the UK economy.
- 2.3 There are only six airports in the world that have more than 50 long-haul routes, Heathrow is one of them. From the point of view of Operational Resilience the greatest challenge faced is that the airfield operates at 98% capacity.

Heathrow Airport Capacity Constraint

- 2.4 In accordance with Terminal 5 Planning Condition A4, the number of air transport movements (ATMs) at Heathrow Airport is limited to 480,000 each year of which approximately 98% of the slots are allocated in any one scheduling season.
- 2.5 When the airport is running smoothly with no issues or disruption, operating at 98% capacity is not a concern. The concerns arise during periods of disruption where the flow of aircraft is not optimal. This means that flights affected by earlier disruption cannot be moved to later in the day because there is no room in the schedule. This in turn leads to delays and flight cancellations.

December 2010 Snow Disruption and Heathrow Winter Resilience Enquiry

- 2.6 The unusual weather conditions experienced at Heathrow in December 2010 caused disruption on a number of fronts. Passengers were unable to travel at an important time of the year; over 4,000 flights were cancelled, causing significant impact to airline schedules globally; and Heathrow Airport's reputation was damaged.
- 2.7 The Heathrow Winter Resilience Enquiry⁶ panel made 14 recommendations to improve resilience and adopt a target that Heathrow Airport never closes as a result of circumstances under its control, except for immediate safety or emergency threats.
- 2.8 Today the response to a snow event at Heathrow is very different to what was experienced in December of 2010. There are now 130 snow clearing vehicles and pieces of equipment available, an increase from 61 in 2010. Stock holding levels of airfield de-icer product stands at 1.8million litres and aircraft de-icing product stands at 1.3million litres. The resource to support the snow plan has significantly increased and now sits at 510 people per shift. Heathrow is the only UK commercial airport that has an on-site Met Office forecaster providing dedicated forecasts for the

⁵ See appendix 2 for recent awards for customer service.

⁶ See appendix 3 for a link to the Heathrow Winter Resilience Enquiry report

airport. They are based in the air traffic control tower and operate 24 hours a day, 365 days a year.

- 2.9 Heathrow Airport works to the UK standard of Integrated Emergency Management for disruptive events. In line with this standard Heathrow and many of the airport stakeholders operate a Bronze, Silver and Gold Command structure.
- 2.10 There are now clear escalation triggers and lines of communication within the structure which is supported by over 300 staff that form various “on call” teams. These teams are trained and exercised on an annual basis to ensure their knowledge is current.
- 2.11 The development of the single Airport Command Centre (APOC) is underway and due to open in November 2014. This will improve our current ways of working and ensure that during disruption all parties have access to the most current information in order to make the best decisions, see Section 12.

London 2012 Olympic Games

- 2.12 The 2012 Olympic Games was a further opportunity for Heathrow and its stakeholders to improve operational resilience particularly during a period of intense public, media and political focus. The planning and engagement for the Games demonstrated that by working together for a commonly recognised purpose the airport could be resilient.
- 2.13 These works included:
- Introduction of an enhanced command and control structure for key dates during the Games period.
 - New ways working to address the specific challenges of the Games including the large number of passengers of reduced mobility during the Paralympics.
 - Introduction of the Heathrow Volunteers who are now deployed to support passengers during peak operational periods and other specific events such as airline moves.
 - Construction of a Games Terminal to manage the departing Olympic teams the day after the closing ceremony.

Continuous Improvement

- 2.14 Heathrow will continue to improve and develop its Operational Resilience by engaging with Stakeholders and ensuring that best practice and post event learning is used to drive these improvements.
- 2.15 Recent improvements include:
- Snow clearance of a runway can now be completed in less than 20 minutes.
 - Completion of a snow base facility which includes storage capacity for one million litres of de-icing stock.
 - Introduction of the Demand v Capacity process to address an event of a specific duration and timescale (e.g. St Jude day storm).
 - The Command and Control structure has been strengthened with the Operational Duty Director taking on the role of Bronze Commander during an activation of the Bronze Incident Management Team.
 - The production of the Heathrow Airport Welfare protocol and Airlines Welfare protocol which details a minimum standard for welfare and communications provision during disruption.

Section 3: The Resilience Cycle

Heathrow Operational Resilience Principle

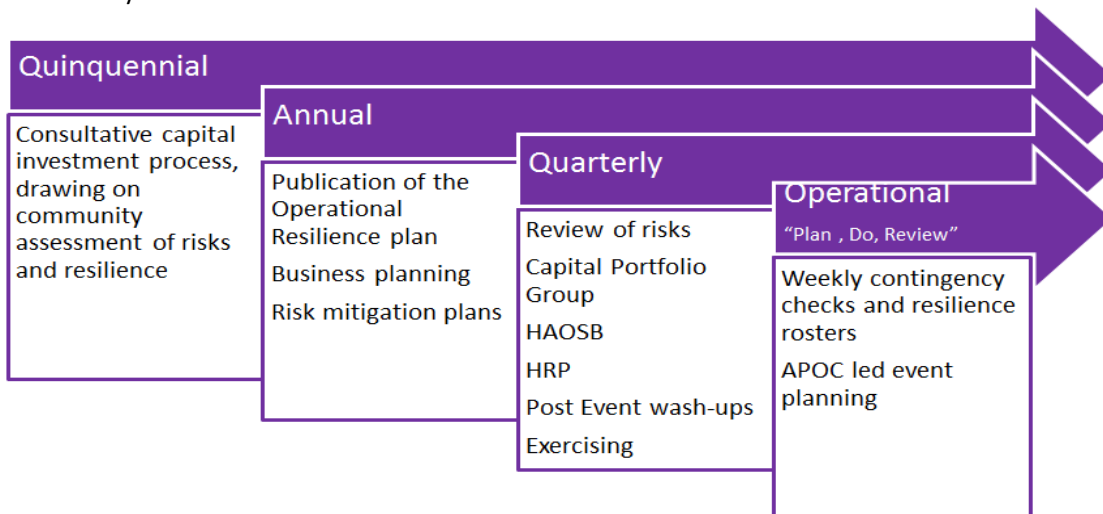
Keeping everyone safe: The Heathrow operation will be compliant with applicable legal and regulatory requirements, including all parts of CAP 168 and Q6 Licence obligations

Introduction

- 3.1 Heathrow recognises the importance and value of being a resilient airport. Every improvement made to the airports' resilience results in less disruption to the passenger journey and better performance for the Airport and its Stakeholders.
- 3.2 This in turn gives passengers the confidence that the Airport and its Stakeholders can successfully run the airport and that during disruptive events all are working to ensure that disruption is minimised; that passengers receive the information and care they require; that the airport return to a state of business as usual as rapidly as possible.
- 3.3 Operational Resilience is central achieving our vision of becoming the UK's direct connection to the world and Europe's hub of choice by making every passenger journey better. These intents are:
- Improve airport operations every day.
 - Make Heathrow the preferred choice for passengers.
 - Focus people and teams on service and results.
 - Run the airport responsibly, safely and securely.
 - Succeed through airline success.
 - Transform the airport.
 - Win support for our vision.
 - Deliver the business plan.

Review Cycle

- 3.4 To ensure that operational resilience is correctly focused, Heathrow implements a sequence of activity as detailed below.



- 3.5 **Quinquennial**
The Q6 Business Plan sets out the capital portfolio which will be delivered during the quinquennium. The capital portfolio consists of around 60 business cases each setting out the justification for investment to deliver defined benefits. The business cases are grouped into a number of strategic programmes, one of which is Airport Resilience.
- 3.6 The capital portfolio will be adjusted as the needs of the airport and airlines change during the quinquennium, and rebalanced as necessary to target the performance commitments. Heathrow Airport's risk process will help to inform the review and any subsequent adjustment of those business cases relating to Airport Resilience.
- 3.7 **Annual**
Heathrow Airport will review and republish the Operational Resilience plan on an annual basis following consultation with our stakeholders. This is to ensure that the plan remains relevant and captures changes and learning that have taken place in the previous 12 months.
- 3.8 Involvement in the planning for new facilities or new processes across the airport campus as well as planning for major events which could impact the airport either directly or indirectly.
- 3.9 The mitigation plans are to be reviewed annually. The accountable person in each Operational Business Unit will be required to accept and sign off all plans that are relevant to their area.
- 3.10 **Quarterly**
Given the rapidly changing nature of the Airport environment there is a formal review of known risks and potential uncertainties in the face of which Heathrow aims to be resilient. This process may mean that there is a need to adjust or reprioritise the capital portfolio during the quinquennium. The decision to reallocate the capital portfolio will be taken by the Capital Portfolio Group.
- 3.11 The Heathrow Resilience Partnership will meet on a quarterly basis, as detailed in the Terms of Reference. As part of these meetings the following will be undertaken:
- Post event / exercise reviews will be shared and discussed with agreement by the group to any actions or changes that need to take place.
 - The annual exercise strategy will be reviewed to ensure that it is on track with a plan and timescale to recover any "lost" exercises agreed by the group.
- The Heathrow Airport Operations Stakeholder Board will review the output of the Heathrow Resilience Partnership and set the strategy to further improve Operational Resilience.
- 3.12 **Operational "Plan, Do, Review"**
The introduction of APOC in November 2014 will see a change in the daily operation of the airport. Over time APOC will be able to see the complete Heathrow picture, offering the right information to the right people at the right time, in turn enabling more proactive and effective decision making, making better use of our capacity.
- 3.13 The approach of 'operating to plan', with the APOC at its heart, will have real benefits for passengers, airlines and the wider Heathrow community. By better controlling the flow of aircraft passenger delays will be reduced, delivering a better passenger experience.

Section 4: Stakeholder Engagement

Heathrow Operational Resilience Principle

Working together: The Heathrow community will work collectively to continue to improve operational resilience

Introduction

- 4.1 For Heathrow to be operationally resilient Stakeholder engagement needs to take place during all parts of the process whether this is consultation on capital expenditure, plan development or the response during a disruptive event and subsequent post event wash-up.
- 4.2 Over time a number of different forums and meetings have been established to ensure that airport stakeholders are involved in ensuring the airport is more resilient.

Forums and Meetings

- 4.3 These forums and meetings are in place throughout the Heathrow Airport organisation and include capital expenditure, emergency planning and airfield operations⁷, please note that the list below is not exhaustive and that additional forums exist
- 4.4 A summary of these forums and meetings is below:

Subject Matter	Forum
Development & Capital Expenditure	XXXXXXXXXX
Operational Resilience	XXXXXXXXXX
	XXXXXXXXXX
Security	XXXXXXXXXX
	XXXXXXXXXX
	XXXXXXXXXX
Emergency Planning	XXXXXXXXXX
	XXXXXXXXXX
Airfield	XXXXXXXXXX
	XXXXXXXXXX
	XXXXXXXXXX
	XXXXXXXXXX

Stakeholders

- 4.5 The Stakeholders involved in these forums include:
- Airlines
 - Handling Agents
 - Airline Operators Committee
 - Emergency Services – Metropolitan Police, Fire Service and Ambulance Service
 - National Air Traffic Services
 - Airport Coordination Limited
 - Border Force
 - Local Authorities
 - CAA & Department for Transport

⁷ See appendix13 for further details of these forums and meetings.

Section 5: Resilience across the Passenger Journey

Heathrow Operational Resilience Principle

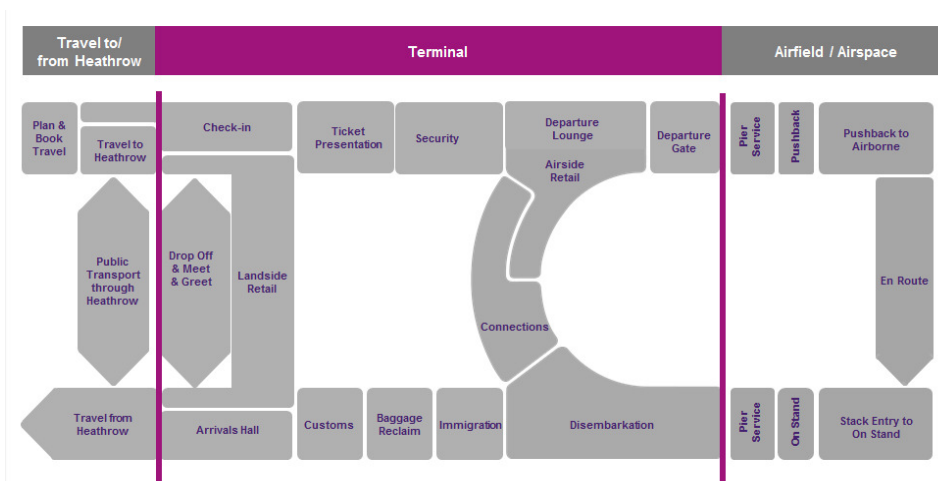
Doing the right thing: Heathrow Airport will seek to never close as a result of circumstances under our control, except of immediate safety or emergency threats

Introduction

- 5.1 Every day an average of 198,000 passengers use Heathrow Airport. For the vast majority this is a seamless journey and positive experience with no interruption or disruption. This is evidenced by recent awards and recognition that Heathrow Airport received during 2013:
- Being awarded Europe's Best Airport, with over 25 million passengers, from Airports Council International (ACI),
 - In the Airport Service Quality survey, directed by ACI, 75%⁸ of Heathrow passengers surveyed rated their experience as "Excellent" or "Very Good", beating the previous score of 73% on 2012.
 - Terminal 5 was named the World's Best Airport Terminal for the second consecutive year.
 - Being named among Skytrax top 10 global airports for the first time.
- 5.2 To achieve and improve such success the Operational Business Units work in a collaborative and customer focused manner with all airport stakeholders.

Passenger Journey

- 5.3 The chart below summarises the main stages of the passenger journey at Heathrow Airport. The task of the Operational Business Units is to ensure the smooth flow of traffic, passengers and aircraft every day of the year. This is achieved by working with Development colleagues and Stakeholders to identify key areas that require capital expenditure to improve daily resilience and work more collaboratively during disruptive events.



- 5.4 During disruption these teams have access to over 300 mitigation plans to support the passenger and business recovery. This activity is coordinated by the respective Incident Response Team in each Operational Business Unit.

⁸ In quarter 1 of 2014, 80% of Heathrow passengers surveyed rated their experience as Excellent or Very Good.

Travel to / from Heathrow – Landside Operations

- 5.5 Landside Operations are responsible for the road and transport infrastructure that passengers and staff use when coming to and leaving the airport.
- 5.6 With over 80 miles of roads, forecourts, car-parks and pedestrian areas it is the department that provides passengers with the first and last impressions of the airport.
- 5.7 The team proactively manage the peaks in infrastructure usage to ensure that traffic flows smoothly throughout the day. This is done through the use of traffic light systems, engagement with the “road owners” (e.g.: Transport for London, Highways Agency, etc.) surrounding the airport and if required the deployment of staff.
- 5.8 During disruption it is critical that this infrastructure is open and moving in order to get staff and resources to the airport and allow passengers to leave should they wish. The Landside Operations team have \ggg contingency plans to deal with the consequence of disruptive events.

Terminal – Security and Customer Relations

- 5.9 Within the Terminal areas passengers will engage and interact with Heathrow Airport staff, these are the areas where passengers spend most of their time prior to departing and when there is disruption.
- 5.10 Given the complexity of these operations, which span five terminals, include 85 airlines and their handlers as well as other stakeholders such as Border Force, retail concessionaires, and the Emergency Services, this area is split into two operational areas.
- 5.11 **Terminal Security**
This team are responsible for the passenger and staff security search areas within all of the terminals. Their activity is crucial in ensuring that the Q6 Licence obligation relating to security search times are met, these include ensuring that 99%⁹ of passengers queue for 10 minutes or less at our Central Search Areas.
- 5.12 **Customer Relations**
This team are responsible for the end to end customer relationship management for airlines, Border Force, retail concessionaires and others within the Terminal areas but excluding the Security areas. With regards to the Q6 Licence this team deliver the passenger satisfaction element, for example Cleanliness and Availability of Seating QSM (Quality of Service Management) measures.
- 5.13 In the event of disruption the Terminals have up \ggg contingency plans that could be deployed to deal with the consequence of the event. Both the Terminal Security and Customer Relations Teams support each other during disruption in the Terminals.

⁹ This requirement is effective from 2015.

Baggage Operations

- 5.14 Baggage processing at Heathrow is a complex operation with responsibility shared among several parties. The Heathrow baggage system has three main activities:
- To deliver bags from check-in to the baggage handlers for loading onto aircraft.
 - To deliver bags from one gate to another during transfers.
 - To deliver bags to arriving passengers in the baggage reclaim area.
- 5.15 The airline or its handling agent is responsible for:
- Inputting bags into the baggage system at check-in.
 - Screening bags.
 - Collecting security screened bags and loading them on to aircraft.
 - Retrieving bags from arriving aircraft.
 - Loading bags onto baggage reclaim belts in the terminals.
- 5.16 Heathrow is responsible for providing and operating the sophisticated mechanical baggage system, which transports, security screens and sorts the bags.
- 5.17 As a result of the complexity and size of this operation the Baggage Operations team has a suite of ~~SCSC~~ contingency plans which could be deployed during disruption.

Airfield / Airspace – Airside Operations

- 5.18 The Airside operation is a fast moving and dynamic environment which manages over 1,300 aircraft movements a day.
- 5.19 When the airfield is running smoothly with no issues or disruption the capacity of the airfield is not a concern. The concerns arise during periods of disruption where the flow of aircraft is not optimal. This means that flights affected by earlier disruption cannot be moved to later in the day because there are no gaps in the schedule which in turn leads to delays and possibly flight cancellations.
- 5.20 In the event of disruptive events, such as snow, fog or industrial action, the Airside Operations team have a number of options which they can implement.
- 5.21 **Minor disruption:**
Implemented when any 'on the day' disruption is forecast to last less than 4hrs and arrivals flow rates are greater than 28 movements per hour. ~~SCSCSCSCSCSCSCSC~~
- 5.22 **Managing Short Term Airfield Capacity Reductions**
During 2013 Heathrow Airport, in collaboration with NATS, the Met office, the CAA and airline representatives developed a new approach to managing short term reductions in runway capacity.
- 5.23 As a result a systematic process has been established that enables the Heathrow Operational Efficiency Cell (HOEC) to determine a specific and targeted number of cancellations to be implemented by those airlines operating during the affected period.

5.24 ✂✂✂✂✂✂✂✂✂✂

5.25 ✂✂✂✂✂✂✂✂✂✂

5.26 This then allows airlines to develop plans to reduce their schedule and minimise overall passenger disruption. Later that same day the HOCC will review the reduction plans to assess if they deliver the required outcomes

5.27 **HADACAB (Local Rule 4¹⁰)**

Codified under Local Rule 4, the objective of HADACAB is to balance available capacity with demand, equitably for airlines and in the interests of passengers, during a period of anticipated sustained disruption usually lasting more than 24 hours and where the capacity reduction is anticipated to be greater than 10%.

5.28 The HADACAB Group can be called together by any airline, the Heathrow AOC, NATS, ACL or Heathrow Airport Limited. Once convened the Group would first establish the likelihood and consequence of the event in question and the scale of disruption that might be caused. Having established this, the Group must agree the appropriate level of demand constraint to maintain the reduced level of activity on an equitable basis without exacerbating operational delay and with a view to minimising passenger disruption.

5.29 In the event of disruption the Airside Operations team have a suite of ✂✂ contingency plans which can be deployed.

Engineering Operations

5.30 Engineering Operations are responsible for ensuring that all parts of the Heathrow infrastructure are managed and working correctly. This includes:

- Life safety systems such as fire alarms and emergency lighting.
- Utilities, including water, gas and power.
- Passenger equipment, including lifts, travelators, air conditioning.

5.31 During disruption Engineering Operations have a suite of ✂✂ contingency plans which can be deployed. In the event of significant disruption and congestion they are responsible for the coordination and deployment of facilities to support passenger welfare.

Campus Security

5.32 Campus Security is responsible for ensuring the security of the airport campus outside of the terminal areas. They ensure that:

- Staff or vehicles entering this area are security screened to the required standards.
- Monitor and patrol the Critical Part of the Security Restricted Area (CPSRA) and other airside areas including the perimeter fence.

5.33 During disruption Campus Security have a suite of ✂✂ contingency plans which can be deployed, they can also support the Terminal Security Operation with resource if required and vice versa.

¹⁰ See appendix 4 for link to the HADACAB process codified under Local Rule 4

Operational Contingency Plans

- 5.34 The table below lists the number of contingency plans that each Operational Business Unit can deploy during disruption, these plans total over ~~XXXX~~. As plans are reviewed on a regular basis this number may increase or decrease.
- 5.35 This list does not include standard operational procedures (SOP's) that are used in daily operations and during minor disruption.

Business Unit	No. of plans
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Section 6: Risk Process

Heathrow Operational Resilience Principle

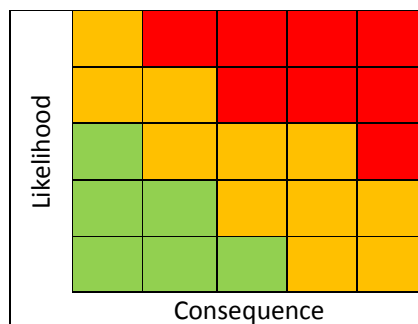
Working together: The Heathrow community will work collectively to continue to improve operational resilience

Overview of the Heathrow Corporate Risk Process

- 6.1 In 2012 Heathrow updated the framework within which it reviews the effectiveness of its risk management arrangements. Heathrow understands that it is not always possible or economically desirable to fully remove the likelihood or the consequence of a risk. Heathrow also recognise that simple compliance with legislative or regulatory frameworks only provides a basic level of protection and, at times, may seek to go beyond this.
- 6.2 Therefore the Heathrow Airport Risk Management Policy is to:
- Identify those risks which could prevent the airport from achieving the Q6 Strategic Intents.
 - Identify and implement measures to manage these risks to an acceptable level.
 - Regularly review the level of risk faced and the effectiveness of the key control measures put in place.
 - Maintain registers of identified risks.
 - Regularly review at the Executive Committee the effectiveness of the controls over Heathrow's key risks.

Risk Assessment

- 6.3 Aligned with best practice Heathrow sees risk assessment as the combined processes of risk identification, analysis and evaluation that are carried out in order to prioritise risks for actions to reduce their likelihood and minimise their consequences. In line with other organisations Heathrow Airport uses a 5x5 matrix to prioritise the measures required to reduce these risks.

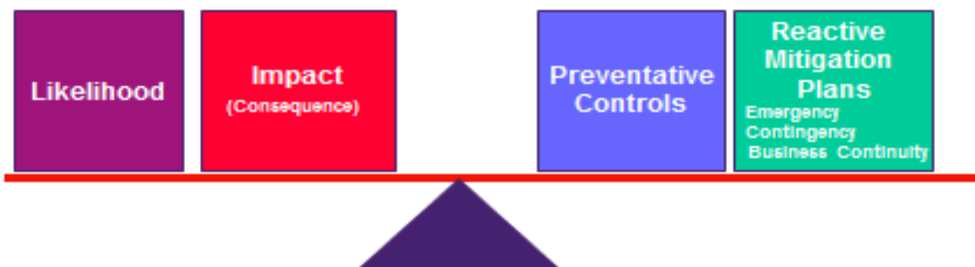


- 6.4 Risk identification is carried out in relation to Heathrow's strategic intents and priorities, the National Risk Register and the World Economic Forum's global risk report. Internal guidance suggests sources of risk that should be considered as well as strategic tools such as SWOT and PESTLE analyses. Specifically the guidance says that "The identification of risks needs to reflect the external and internal context for both Heathrow Airport Holdings Limited and the area concerned. Risks arise from a range of sources both within and outside of our control."

- 6.5 Risk analysis and evaluation are carried out to consider sequences of events and their range of consequences to help identify the most appropriate point to interrupt the sequence, reduce the likelihood or minimise the consequence, and then prioritise interventions for action. The prioritisation is in accordance with an internal scale of likelihood and consequence which has been externally benchmarked.
- 6.6 The process of determining the likelihood and potential consequence of a risk involves internal and external stakeholders as relevant and is subject to central internal challenge with the aim of ensuring consistency.
- 6.7 The objective is to establish the most effective and efficient balance between controls to reduce the likelihood and plans to mitigate the consequences should the risk / event still happen. The greater the likelihood and consequence the greater the control and mitigation effort needs to be.

Risk Mitigation

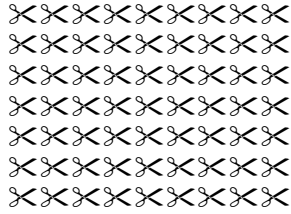
- 6.8 Where it is considered necessary to take actions to reduce either the likelihood or consequence of a risk to a level that is acceptable to Heathrow and stakeholders, then the most cost-effective and efficient combination of actions should be identified to:
- Prevent it or reduce the likelihood of the event happening.
 - Predict and promptly identify when it might or has happened.
 - React in a way to reduce or mitigate the subsequent consequences.



- 6.9 The likelihood of some risk events may not be fully within our influence: for example the acts or omissions of third parties, the longer term impacts of climate change or the short term effects of the weather. What Heathrow can do in these instances is choose how to balance the efforts to, for example, monitor and identify when the event may be getting closer and mitigate the consequences of the events and engage with 3rd parties who have greater or even direct influence over the likelihood of the event and:
- Clearly communicate as part of commercial agreements the levels of service expected and required and what they will be held responsible for.
 - Understand the effectiveness of their preventive and detective processes and procedures.
 - Understand their mitigating processes and when these were last tested.
- 6.10 One of the key risk areas identified is that Heathrow or third party assets, infrastructure, human and electronic processes or systems may fail by accident or deliberate act and this could negatively impact airport operations, passenger experience or the running of Heathrow as a business.
- 6.11 As a consequence, if a service or operation is interrupted and Heathrow are unable to effectively cope with the disruption, the reputation of the airport will suffer and Heathrow may not be the preferred choice for passengers.

Current high level Operational Risks

- 6.12 Below are examples of some operational risks identified by Heathrow.
This is an illustrative list of the larger risks focused on through the process outlined above.
Specific risks will be discussed in confidence as part of the stakeholder engagement process.



- 6.13 These risks are managed in the short term through a combination of preventive monitoring, active process intervention and surveillance, 3rd party liaison and maintaining up-to-date mitigation plans. In the longer term both the likelihood and consequence of some of the events can also be mitigated through capital investment where this is cost-efficient and agreed by the airlines.

Risk Policy Roles and Responsibilities

- 6.14 To support Heathrow's policy there are clearly defined roles and responsibilities for the identification, assessment and review and reporting on the effectiveness of actions taken to identify and mitigate risks. The effectiveness of these is regularly reviewed by both the Executive Committee and Heathrow's Audit Committee.

Section 7: Mitigation Process

Heathrow Operational Resilience Principle

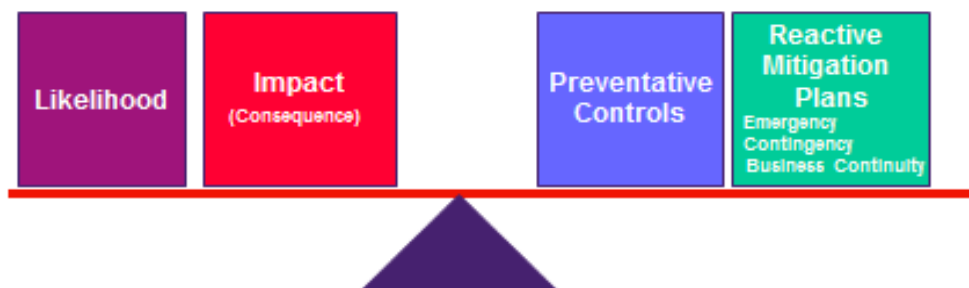
Improving every day: Heathrow will seek to operate by best practice resilience standards in the areas of Command & Control, Crisis Management, Business Continuity and Exercising

Introduction

- 7.1 Even with detailed resilience and risk reduction measures in place, disruptive events that impact the Operation can still take place. In the event of such disruption, there is a requirement to have appropriate mitigation / contingency plans in place to minimise the impact and support business recovery as efficiently and effectively as possible. To support this process Heathrow follows the model of Plan – Do – Check – Act as set down in ISO 22301¹¹, the Business Continuity standard.
- 7.2 These plans should provide the user with the information, tools and resources required to manage the disruption effectively and return to a state of business as usual as soon as possible.

Risk Process

- 7.3 As discussed in Section 6 the risk assessment process will identify a number of risks that cannot be avoided through capital expenditure and as such may require contingency plans to mitigate the risk. The detail and complexity of these plans are dependent on the impact of the risk involved.



- 7.4 The greater the impact to the operation following an incident, the more detailed the mitigation plans will need to be. These plans are summarised below.

Mitigation Plan Types

- 7.5 Heathrow Airport has developed a series of plans that could be deployed in the event of disruption based on a combination of long term experience, the risk assessment process and assurance that the plans are resilient by design (ease of use, reliant on roles not individuals, etc.)

¹¹ See appendix 5 for link to ISO 22301 Business Continuity

7.6 **Emergency Orders**

As part of the Airfield Licence, CAP 168¹², there is an obligation to produce plans called the Emergency Orders for a series of predefined emergencies. These emergencies are:

- ✂✂✂✂✂✂✂✂✂✂
- ✂✂✂✂✂✂✂✂✂✂
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- ✂✂✂✂✂✂✂✂✂✂

7.7 The development of the Emergency Orders involves the collaboration and participation of all agencies involved in the response to a listed incident. These agencies are:

- Air Traffic Control
- Metropolitan Police
- London Ambulance Service
- ✂✂✂✂✂✂✂✂✂✂
- Airport Fire Service
- London Fire Brigade
- Airlines / Handling Agents
- ✂✂✂✂✂✂✂✂✂✂

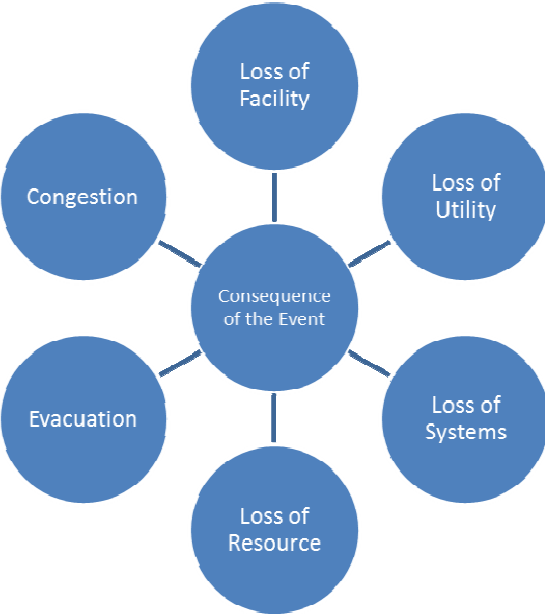
7.8 The Emergency Operations Group is the forum used to coordinate the planning of these agencies which is chaired by a senior manager from Airside Operations.

7.9 Each of the Emergency Orders contain a separate section for each agency involved in responding to the incident. The Orders focus the attention of all agencies on a rapid coordinated response to the incident where priorities are to save lives, provide medical care to the injured and remove the injured to a safe place.

7.10 **Contingency Plans**

Where a risk cannot be reduced sufficiently through preventative measures there may be a need to develop a contingency plan. A contingency plan is put in place to manage the consequences of an incident whilst ensuring that unaffected parts of the operation continue with minimal knock-on disruption.

7.11 Heathrow has a suite of contingency plans that would be deployed during disruptive events. The objective of these plans is to deal with the consequence of the disruption through common response types as opposed to seeking to remedy the cause.



¹² See appendix 6 for link to CAP 168 – Licensing of Aerodromes – CAA

- 7.12 The Contingency Plans are developed by the Operational Business Units and the Business Resilience team. Depending on the plan being developed other airport stakeholders may be involved in this process. Each plan consists of a summary document, checklists for those involved and the appropriate appendices if required.
- 7.13 On completion, the plans are exercised by means of desk-top or live exercise play prior to being loaded onto the Heathrow Airport intranet. Hard copies of the plans are also stored within the relevant Operational Business Units. The plans are reviewed on an annual basis or following any significant change within the Business Unit.
- 7.14 Each Operations business unit is accountable for their own contingency plans with persons identified for the delivery of these plans. These persons are required to sign off the plan at development and during the annual review cycle.
- 7.15 The opening of the Airport Operating Centre (APOC) will see the consolidation of the business as usual standard operating procedures and contingency plans into one location. This will allow for better monitoring during normal operations and more efficient deployment of contingency plans during disruption.
- 7.16 **Business Continuity Plans**
A business continuity plan is a plan developed to ensure that a proportion of the operation is delivered in the event of a significant event such as fire, flood or loss of IT / facility / infrastructure.
- 7.17 Heathrow has a number of business continuity plans that have been developed to address key operational incidents. Whilst contingency plans will be deployed to deal with the immediate consequence of an incident, the business continuity plans are deployed in order to maintain a level of operational performance.
- 7.18 These plans are:
- ~~XXXXXXXXXXXXXXXXXXXX~~
 - ~~XXXXXXXXXXXXXXXXXXXX~~
 - ~~XXXXXXXXXXXXXXXXXXXX~~
 - ~~XXXXXXXXXXXXXXXXXXXX~~
 - ~~XXXXXXXXXXXXXXXXXXXX~~
 - ~~XXXXXXXXXXXXXXXXXXXX~~
- 7.19 On completion, the plans are exercised with the relevant stakeholders prior to being published on the Heathrow intranet. Copies of the plans are available within the command and control rooms as deployment of these plans would sit with the Incident Management or Crisis Management Teams. These plans are shared with the relevant stakeholders involved.
- 7.20 The Airside Operations team have a number of processes that can be deployed to ensure airfield operations continue during disruptive events. These are processes are:
- ~~XXXXXXXXXXXXXXXXXXXX~~
 - HADACAB¹³ (Heathrow ATM Demand and Capacity Balancing Group)

Further details of these processes can be found in Section 5.

¹³ See appendix 4 for link to the HADACAB process codified under Local Rule 4.

Plan Review

- 7.21 All plans are subject to review on an annual basis. However in the case of significant changes the plans will be reviewed sooner and reissued accordingly. The major changes that could trigger such a review include:
- Infrastructure changes
 - Organisational changes
 - Changes to roles / responsibilities
 - Procedural changes
 - Post event review

Future Systems

- 7.22 The Incident Reporting and Information System (IRIS), which is currently in development, will provide increased functionality for the users of Heathrow's mitigation plans. This functionality includes date and time stamping of actions, e-signature acceptance of those accountable for plans and reminders for review. IRIS is due to go live from late 2014.
- 7.23 All plans will follow a standard format with access provided to those responsible for completing the plans.

Stakeholder Engagement

- 7.24 Stakeholder engagement on plan development, exercising and sign off is critical. Various forums exist at Heathrow to enable stakeholders to engage. A summary of the various forums and stakeholders is listed in Section 4.

Section 8: Information Technology Resilience

Heathrow Operational Resilience Principle

Improving every day: Heathrow will seek to operate by best practice resilience standards in the areas of Command & Control, Crisis Management, Business Continuity and Exercising

IT Resilience Overview

- 8.1 Heathrow is a technology enabled airport, many of the key operations and processes that form the customer journey are underpinned by information technology and communication systems. Due to the interconnected nature of our airport operations, the systems that support these activities are also extremely interrelated and complex.
- 8.2 As a result an assessment takes ~~XXXXXXXXXXXX~~ to rationalise and provide focus on the most important elements of the IT estate. As a result of ~~XXXXXXXXXXXX~~ applications have been identified as important to the passenger journey and the day to day operation of the airport. These key applications have been mapped to the corresponding part of the customer journey where directly applicable.
- ~~XXXXXXXXXXXX~~
- 8.3 ~~XXXXXXXXXXXX~~ applications identified its resilience capability has been reviewed and recovery documentation produced or updated to ensure the swift restoration of the application and data within an agreed timeframe.

IT Resilience Risk Management

8.4 The overarching IT resilience and availability of key applications is directed via Heathrow's corporate risk management process. The risk has been assessed and appropriate management actions have been taken. These are routinely monitored and reported on at the appropriate risk management forums. Controls to address the IT Resilience risk are split into two distinct categories.

- Activities that reduce the likelihood of an incident or event that could affect the availability of key operational systems.
- Contingencies that reduce the impact if an incident or event occurs.

Key Proactive Controls (Reduce Likelihood)

8.5 System availability requirements for applications are captured at the design stage of the project lifecycle and follow the "resilient by design" philosophy. An application's ability to be recovered is classified ~~XXXXXXXXXXXX~~. With the most important systems having a higher recovery time objective (RTO) and recovery point objective (RPO) capability.

8.6 Where an application sits within the five Tiers is measured by a combination of the criticality of the application and the impact the loss will have on the operation.

~~XXXXXXXXXXXX~~

8.7 Recoverability / failover timescales are influenced by the business impact of the application but are limited by the technology available. Typically these recoverability / failover timescales for individual components that constitute applications fall into the following categories:

- Instantaneous
- 15 minutes
- 24 hours
- Greater than 24 Hours.

- 8.8 However due to the interconnected nature of the technology underpinning key airport operations and processes an application's components may have been designed for instantaneous failover but the flow of information into and out of the application may have to be reconnected and reinitialised which takes additional time when attempting to restore a key service or application for the business.
- 8.9 To complement the "resilient by design" philosophy, components of important applications are split across two primary Data Centres. Both data centres have dual power and networking feeds, with strict change and access management regimes enforced.
- 8.10 Physical Testing of applications is the preferred and most effective way of ensuring recoverability of key applications. Testing takes place at three different levels (component, service and scenario based). Individual component testing of the applications is the most basic and the most frequent form of testing. Service Testing requires a degree of planning and tests a collective group of components for a specific application at the same time.
- 8.11 Finally, scenario based testing assumes a loss or outage of a core segment of the IT estate. This requires detailed planning and typically a desktop test is executed before the physical test.
- 8.12 When a critical application cannot have a full physical resilience test due to operational commitments, Desktop "walk through" Testing is utilised to provide a level of assurance that the recovery documentation used by the IT Support teams is valid and up to date.
- 8.13 Operational Change Management Procedures also provide a "control wrapper" around the IT estate where any proposed changes to the applications or core systems is checked, reviewed and approved before the activity is allowed to be carried out.

Key Reactive Contingencies (Reduce impact)

- 8.14 Each key application has detailed recovery documentation which details the exact Process and Procedures steps to be taken to recover the application within the agreed RTO and RPOs. These are maintained and regularly reviewed by IT technical teams.
- 8.15 IT Service Management and Incident Management Procedures (aligned with Heathrow Airport Command and Control Structure) have been deployed using industry best practice (Information Technology Infrastructure Library¹⁴).

¹⁴ See appendix 20 for link to Information Technology Infrastructure Library

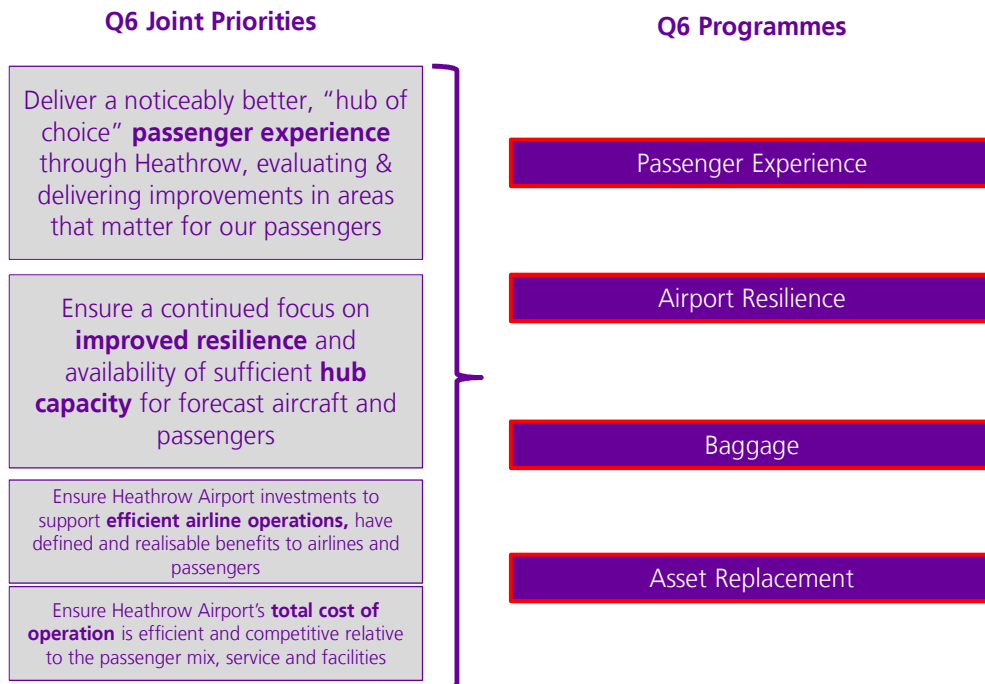
Section 9: Development and Asset Replacement Overview

Heathrow Operational Resilience Principle

Improving every day: Heathrow and the community will seek to ensure that new assets are resilient by design

The context for Heathrow Capital Investment

- 9.1 The Q6 Business Plan sets out the vision and priorities for the next 5 years and describes the outcomes Heathrow wants to achieve. The capital investment portfolio for Heathrow will introduce many new capabilities to the business. It is delivered via Strategic Programmes which aim to optimise the projects and thereby maximise the benefits delivered.
- 9.2 The Capital Portfolio for Q6 consists of approximately 60 business cases each setting out the justification for investment to deliver defined benefits in each Q6 joint priority area. The Asset Replacement Programme will spend up to £1 billion whilst the Airport Resilience Programme is planning to spend up to £710 million over the quinquennium on improving the resilience of Heathrow.
- 9.3 These works include £17m on the Airport Operations Centre which will improve the day to day efficiencies of the airport, £117m on improvement works to the Central Terminal Area & Cargo Tunnels and £32m to improve Airfield Efficiency and resilience.



Improving Resilience in Q6

- 9.4 As a joint priority identified by Heathrow and the Airlines for Q6, improved resilience features prominently in each of the strategic Programmes and their constituent business cases.
- **Passenger Experience** – the programme will deliver a better passenger experience through additional security capacity, terminal restoration and improved technological solutions.
 - **Baggage** – the Resilience of the baggage system across Heathrow will be bolstered by a range of investments to deliver European hub leading end-to-end baggage performance.
 - **Airport Resilience** – has been formed to take accountability for delivering transformational change in operational airfield and airspace resilience.
 - **Asset Replacement** – will optimise asset base for cost, risk and performance, improving the resilience of many thousands of critical assets.
- 9.5 Business cases are matured jointly with the airlines throughout the project gateway lifecycle to ensure resilience benefits are understood and maximised. The current Q6 Airport Resilience Programme Business Cases

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Investment Decision Making

- 9.6 The Heathrow Executive Sponsors for each strategic programme chair a monthly Sponsor Group. It is for these multi-directorate groups to take decisions on how investments should be taken forward in collaboration with the airline community. Collaboration and decision making with the airline community takes place at Stakeholder Programme Boards and Capital Portfolio Group meetings.

A flexible Q6 Portfolio

- 9.7 In Q6, a more flexible approach to capital planning has been adopted. This is so that Heathrow in consultation with the airlines can amend the capital portfolio as required to reflect changes in business needs.
- 9.8 This flexibility could allow Heathrow and the airline community to react in the event of an unforeseen resilience issue coming to light which requires a capital investment solution.

Risk Management Drivers

- 9.9 The established risk management process within Heathrow routinely reviews where risks might impact our business and in particular where impacts to our operational resilience may result.
- 9.10 In some cases it may be appropriate to make a business case for capital investment, or to change an investment already in the portfolio, to help control a specific risk to the resilience of the airport.
- 9.11 The following is an excerpt from the Asset Replacement programme business case which highlights how risk management is informing investment business case decisions:
- The impacts of unplanned outages and performance failures from the IT Infrastructure can quickly generate significant operational problems within terminals or across the airport. With terminal capacity increasingly constrained, appropriate investment is required to maintain operational service resilience protecting service restoration times.

Asset Management Programme

- 9.12 Asset Management is defined by ISO55000 as the “coordinated activity of an organisation to realize value from assets”. For Heathrow Airport, the assets are the physical assets that enable the delivery of service to airlines and passengers and they include baggage systems, runways and airfield pavements, terminal buildings, lifts, escalators etc.
- 9.13 With a capital investment of £600m per annum and running costs of circa £300m per annum, it is vital to customers and stakeholders that Heathrow maximise the value of this investment.
- 9.14 During Q6, it is Heathrow’s intention to improve its current performance and become a sector leading asset management organisation by continuously improving capability in three key areas:
- Develop and embed an Asset Management System that describes how Heathrow will direct, coordinate and control the asset management activities. Through the management system, Asset Strategies and Plans will be created that will demonstrate how Heathrow intends to maximise the value for its assets over the short, medium and long term. This will bring consistency and structure to the asset decision making process.
 - Create the leadership, culture and motivation that supports the Asset Management System. In order to make better decisions Heathrow need aligned leadership, common objectives, share information and use the same language so that communication across functions is effective and efficient.
 - Ensure that Heathrow has the information systems that provide the right information to the right people at the right time. Within the Q6 Capital Plan, money has been allocated to develop and improve system integration.

Asset Management Programme and Improving the Management of Risk

- 9.15 The Asset Management programme is addressing the risk the assets pose to the business in a number of specific ways.

- 9.16 The programme is assessing the importance of all Heathrow assets in achieving the strategic business objectives. This is known as the criticality of an asset. The criticality helps Heathrow to focus asset management activities on the assets that are essential to the business.

- 9.17 It is putting in place processes that ensure that Heathrow understand the level of risk the assets pose to the business. This is being done by defining how Heathrow measure the condition of assets, then defining the condition required, and then reviewing actual condition.

- 9.18 Where an asset's condition is not in accordance with the condition requirement the level of risk this creates to the business will be assessed, based on the criticality of the asset, and plans will then be put in place to mitigate the risk.

- 9.19 The operational team have looked at how Heathrow's assets might impact operational resilience should they fail. The programme will build on this work and develop the understanding of the impact of assets on all of the business objectives.

- 9.20 The programme has created a tool called the value measurement framework to allow different types of risks posed by the assets to our business to be financially assessed. This allows Heathrow to develop business plans to prioritise investment in asset repair or replacement.

- 9.21 The current Q6 Asset Replacement Programme Business Cases

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Section 10: Exercising & Post Incident Review

Heathrow Operational Resilience Principle

Improving every day: Heathrow will seek to operate by best practice resilience standards in the areas of Command & Control, Crisis Management, Business Continuity and Exercising

Introduction

- 10.1 Heathrow Airport aims to ensure that all roles involved in the deployment of mitigation plans are fully prepared for this eventuality. Integral to this is the practising and testing of all elements of the plans which has seen the delivery of 200 exercises in 2013 and 103 in 2014 (to 1st July).
- 10.2 Furthermore, Heathrow is obliged under CAP 168¹⁵ to undertake a full scale exercise of an aircraft related accident every two years whilst the Civil Contingencies Act 2004 requires Heathrow Airport (as a Category 2 responder) to share and exercise plans with other Category 1 and 2 responders.
- 10.3 In the event of a deployment of mitigation plans it is critical that a post incident review is undertaken with the relevant stakeholders. It should review the incident response, the effectiveness of the plans, identify areas for improvement and preventative measures so that future deployments do not experience the same issues.
- 10.4 In developing its exercising process Heathrow follows the guidance from PD 25666¹⁶ which gives appropriate guidance on performing exercising, including testing activities, for resilience activity.

Purpose of Exercising

- 10.5 Planning for disruptive events cannot be considered reliable until plans and those involved are exercised and proven to be effective.
- 10.6 At Heathrow exercising has three main purposes:
 - To validate plans ensuring that they are fit for purpose.
 - To develop staff and give them practice in carrying out their roles as detailed in the plans. Exercising is not about catching people out, it should make them feel more comfortable in their role, build confidence and engage them in the development of the plans.
 - To test well-established procedures and locations. This includes the Command & Control process, Incident & Crisis Rooms, communications and other aspects such as Welfare.

Stakeholder Engagement

- 10.7 Stakeholder engagement in exercising is dependent on the plans being exercised. For some exercises and plans the engagement and commitment is significant (e.g.: major live exercises such as the Aircraft Accident) for other the engagement is less onerous.

¹⁵ See appendix 6 for link to CAP 168 – Licensing of Aerodromes - CAA

¹⁶ See appendix 8 for link to Published Document 25666 Guidance on Exercising

Types of Exercises

10.8 Heathrow undertakes three forms of exercise formats dependent on the complexity of the plan, individuals being exercised and scenario being tested. The formats used are Work shop exercises, Table top exercises and Live rehearsal exercises.

10.9 Workshop exercises

Workshop exercises are normally used at the start of the plan development process or with an audience who are not very familiar with the plans. It is an opportunity to discuss the plan and ensure that the content is correct in advance of more robust exercising.

10.10 Recent workshop exercises have exercised the following:

✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂

10.11 These exercises take place on a regular basis within the operational business units and will normally last for less than two hours. When it is relevant airport stakeholders are invited to participate in these exercises.

10.12 Table top exercises

These exercises are based on a simulated situation, involving a realistic scenario and associated timeline. This timeline may be in real time or sped up depending on the scenario and exercise objectives.

10.13 Unlike a workshop exercise those involved in a table top are expected to know the plan and are invited to test how the plan works as the scenario unfolds.

10.14 Recent table top exercises have tested the following scenarios:

✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂

10.15 These exercises take place on a quarterly basis and will involve airport stakeholders. For example the participants at the Mass Evacuation exercise included Metropolitan Police, Air Traffic Control, London Fire Brigade, London Ambulance Service, Heathrow Travelcare, Local Councils and Heathrow Airport.

10.16 Large scale and small scale Live rehearsal exercises

These exercises are a live rehearsal of the plan, they are particularly useful for testing logistics, communications and physical capabilities.

10.17 These exercises should “stress test” the processes, people and facilities involved in the plan. Those involved must be knowledgeable of the plan and confident in execution of their activity, these are not training opportunities.

10.18 Recent live exercises have exercised the following scenarios:

XXXXXXXXXXXXXXXXXXXX

10.19 XXXXXXXXXXXXXXXXXXXX

10.20 Airport stakeholders are involved in these major exercises, for example at a recent XXXXXXXXXXXXXXXXXXXX exercise over 200 participants from 8 agencies were involved.

Exercise Planning and Delivery

10.21 Critical to the success of an exercise is the level of planning and engagement that has takes place in advance of the actual exercise. This will vary depending on the exercise that is being undertaken however at Heathrow the common principles which apply, whether the exercise is a work shop or live event, are listed below.

10.22 Principles for Exercise Planning

- Agree objectives for the exercise. If undertaking a multi-agency exercise there may be two types of objectives, the first is the main exercise objectives for all agencies, the second will be agency specific objectives.
- Deliver the exercise measuring delivery against objectives.
- Undertake a post exercise review against the objectives to capture the learning and issues from the exercise and agree an action plan for closure and resolution of issues.

Recent Exercise activity

10.23 Over the past two years Heathrow has undertaken many exercises which are detailed below:

XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX

Post Incident Review

- 10.24 In the event of mitigation plans being deployed a post incident review should take place to ensure that any learning and issues are captured and dealt with in the appropriate manner.
- 10.25 At Heathrow, these reviews entail a “hot wash-up” immediately following the exercise or event followed by a “cold wash-up” no more than six weeks after the event. The purpose of the “hot wash-up” is to capture and immediate concerns whilst the “cold wash-up” gives those involved the time to reflect on the incident and their response.
- 10.26 Heathrow endeavours to complete the reviews sooner than the timescale detailed above however a significant event or exercise involving a multi-agency response may take this long (e.g. major baggage failure). The findings of these reviews should be published and shared with the stakeholders involved.
- 10.27 The findings from these reviews are then used to improve the plans and response to subsequent events.

Examples of Post Incident Review action plan

10.28 Ethiopian 787 Fire 12th July 2013

CONCERN	COUNTERMEASURE	RAG Status	COMMENTS
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX X	XXX XXX XXX	XXXXXXXXXXXXXXXX X
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX X	XXX XXX XXX	XXXXXXXXXXXXXXXX X
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX X	XXX XXX XXX	XXXXXXXXXXXXXXXX X

10.29 TSA Emergency Amendment 4th August 2013.

CONCERN	COUNTERMEASURE	RAG Status	COMMENTS
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXXXXXXXXXX

Section 11: Command & Control

Heathrow Operational Resilience Principle

Improving every day: Heathrow will seek to operate by best practice resilience standards in the areas of Command & Control, Crisis Management, Business Continuity and Exercising

Introduction

- 11.1 Heathrow Airport works to the UK standard of Integrated Emergency Management for disruptive events. In line with this standard Heathrow and many of the airport stakeholders operate a Bronze, Silver and Gold Command structure. Heathrow also follows the frame work for crisis management contained in BS 11200 Crisis Management – Guidance and Good Practice¹⁷.
- 11.2 In advance of a known/planned event, the levels of Command required are assessed and activated accordingly. This assessment is based on the scale of the event, the likely impact to Heathrow and the level of management control over the event.
- 11.3 Similarly during a dynamic event, the Commander at each level will agree when escalation to the next level is required. Whilst the Command and Control Book provides guidance on types of events and suggested command level, each event should be assessed independently and the appropriate teams deployed.
- 11.4 In the past number of years Heathrow has seen the number of activations of our Silver and Gold teams decrease. This is the result of increased resilience capability of our Bronze and Operational Teams and their ability to deal with more significant events which was previously dealt with by the Silver and Gold teams.

Levels of Response

- 11.5 Within Heathrow the scale of the event and impact will dictate the response level required. The Levels of response are:

Command Level	Mobilisation	Focus	Commander
Bronze	Operational Business Unit Incident Response Teams (IRT)	Operational	Senior Manager from the Business Unit
Bronze	Incident Management Team (IMT)	Technical / Operational	Operations Duty Director
Silver	Crisis Management Team (CMT)	Tactical / Coordination	A nominated Heathrow Director
Gold	Executive Crisis Management Team (ECMT)	Strategic	CEO or nominated Deputy

11.6 Incident Response Team (IRT)

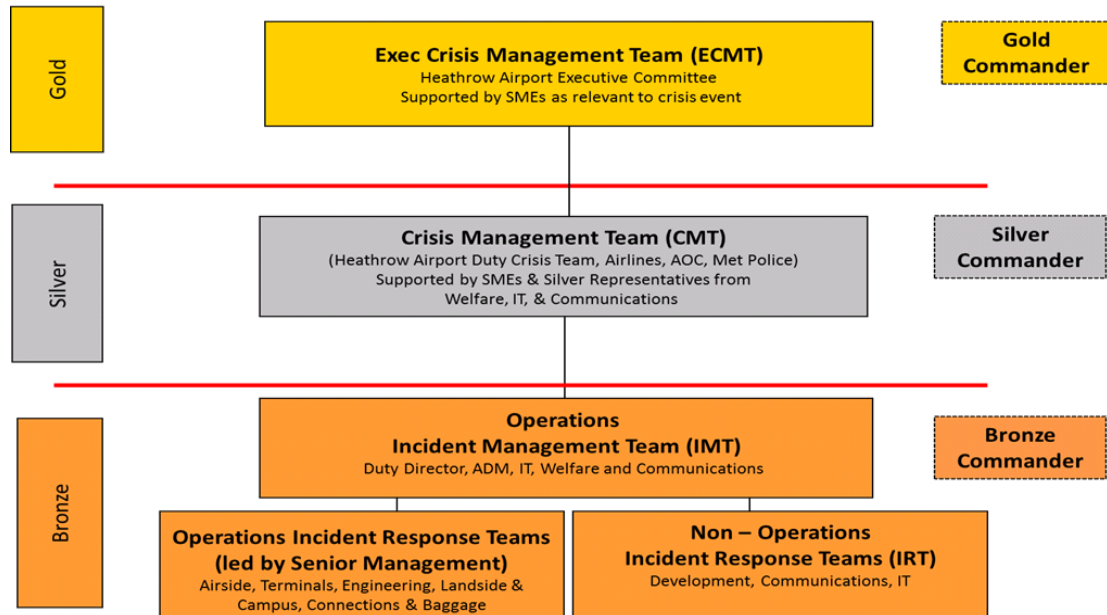
The Incident Response Teams are the first line Operational response within the command and control structure. The main objective of the IRT is to assist the Duty Team to manage the incident and recover the Operation. This will involve providing support to those involved in the incident,

¹⁷ See appendix 9 for link to BS11200 Crisis Management – Guidance and Good Practice

- providing a communications link to the Incident Management Team (if active), updating Business Unit stakeholders and overseeing a structured return to normal operations.
- 11.7 The IRT becomes the information hub for the actual events underway within the impacted location and co-ordinates both immediate and mid-term response activity. There should be robust and regular exchange of information between the IRT and the Incident Management Team and their immediate business unit stakeholders.
- 11.8 **Incident Management Team (IMT)**
In the event of a pan-airport incident or an incident impacting more than one business area; the Incident Management Team (IMT) will be formed. The main objective of the IMT is to maintain a pan airport overview of the incident and support the recovery of the Operation. This will involve providing support to those involved in the incident, providing a communications link to the Bronze Commander, IRT's / Crisis Management Team (if active) & Airport stakeholders and directing a co-ordinated and structured return to normal operations post incident.
- 11.9 The IMT becomes the information hub for the events underway and co-ordinates both immediate and mid-term response activity. There should be robust and regular exchange of information between the IMT and the IRT's / Crisis Management Team (if active). The Incident Management Team takes overall accountability for the incident management and resolution. This includes communications with passengers and the airport community as well as the deployment of passenger welfare is required.
- 11.10 **Crisis Management Team (CMT)**
In the event of a pan-airport crisis which requires significant stakeholder engagement to manage the event and subsequent response the CMT will be formed.
- 11.11 The main objective of the CMT is to maintain a campus wide overview of the incident, minimise the impact of the incident on unaffected parts of the airport and inform the recovery of the crisis. This will involve setting the tactical response to the incident, providing a communications link to the Gold Commander and Airport stakeholders and directing a co-ordinated and structured return to normal operations post incident.
- 11.12 The Crisis Management Team take overall tactical view and focus on supporting Bronze response, planning for business recovery, liaison with non-Operations areas and providing information and support to the Executive Crisis Management Team and external stakeholders.
- 11.13 **Executive Crisis Management Team (ECMT)**
In the event of an event requiring senior stakeholder engagement and strategic guidance / direction the Exec Crisis Management Team will be formed.
- 11.14 The main objective of the ECMT is to maintain a strategic overview of the incident and where necessary engage with airport stakeholders at a senior level. This engagement could include airlines, local and national government, police, etc.

Heathrow Airport Command and Control Structure

- 11.15 The diagram below outlines the Heathrow Airport Command and Control structure. This structure, which involves 300 people, will be deployed during disruptive events to support the operation and business recovery.
- 11.16 Command and Control teams are resourced from Operational teams and non-operational teams based in the Compass Centre.



Command & Control Mobilisation Process

- 11.17 The decision to activate the IRT will be taken either by the Airport Duty Manager, Local Management Team or, when prompted, by the Bronze Commander. This decision will be based on a number of factors including the incident, projected timescale and assessment of the Early Warning Indicators.
- 11.18 The Command and Control mobilisation matrix on the following page provides examples of events and the appropriate command and control structure that should be activated.
- 11.19 On agreeing the activation of an IRT the Duty Team will need to contact the IRT members and inform them of the need to attend. When an IRT is activated the Bronze Commander places the IMT on standby, this is managed through the automated alerting system.
- 11.20 The decision to activate the IMT will be made by the Bronze Commander. Mobilisation of this team is managed through an automated alerting system, this also places the CMT on standby.
- 11.21 The decision to activate the CMT will be made by the Bronze Commander in consultation with the Silver Commander. When the CMT is activated the ECMT is placed on standby. The exact response will be unique to each incident, however frequent dialogue between Bronze and Silver Commanders will ensure that efforts and resources are best utilised.

11.22 ✂✂✂✂✂✂✂✂✂✂

✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂
✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂	✂✂✂✂✂✂✂✂✂✂

Command and Control Teams

- 11.23 The command and control teams are staffed by operational and non-operational staff. The IRT recruitment takes place within the Operational Directorate whilst recruitment of the IMT and CMT take place within non-operational departments. All members of the command and control structure undergo training and familiarisation prior to their commencement on the relevant roster.
- 11.24 The Bronze and Silver teams have access to Subject Matter Experts should additional expertise be required. This includes representatives from Communications, IT and Welfare who are activated at the same time as the core IMT and CMT teams.

Command Level	Number of teams
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX

XXXXXXXX staff from across the company make up the Command and Control structure.

Command and Control Rosters

- 11.25 Availability of the appropriate command and control teams is critical to the response of a disruptive incident. At Heathrow most of the command and control teams, with the exception of XXXX operate a XXXX roster. During a prolonged disruptive event all teams will be called upon to support the response.
- 11.26 The on call period for these rosters runs from XXXX. As part of the on-call requirement all members must respond to an incident within XXXX minutes of notification.

Command and Control Facilities

11.27 Each level of the command and control structure has dedicated locations and the appropriate equipment / systems required to manage the incident. These systems include:



11.28 These systems will be available in the new Airport Operating Centre (APOC) and its secondary location when it opens.

11.29 These locations and equipment are tested on a weekly basis by the on-call duty team, the purpose of which is to ensure equipment functionality and familiarisation of team members. Each primary command and control location has a fall back location for resilience.

Recent Command & Control Activations and Exercises

11.30 In the past two years the command and control teams have been activated for a number of disruptive events. The events requiring activation of the command and control teams have been:

Level of Command and Control	2012	2013	2014 – to 01 July
Gold**	2 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ 	2 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ 	1 Events <ul style="list-style-type: none"> • ✂✂✂✂
Silver*	11 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ 	6 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ 	3 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂
Bronze	18 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ 	17 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂ 	3 Events <ul style="list-style-type: none"> • ✂✂✂✂ • ✂✂✂✂ • ✂✂✂✂
Total	18 Events	17 Events	3 Events

* Silver events are inclusive of Bronze events.

** Gold events are inclusive of Silver and Bronze events.

Command and Control Facilities

11.37 Below are images of various Command and Control locations across the airport campus. All of the command and control locations are dedicated facilities in a permanent state of readiness to enable efficient incident response.

Crisis Management Room



Incident Management Room



Incident Response Room



Section 12: Airport Operating Centre (APOC)

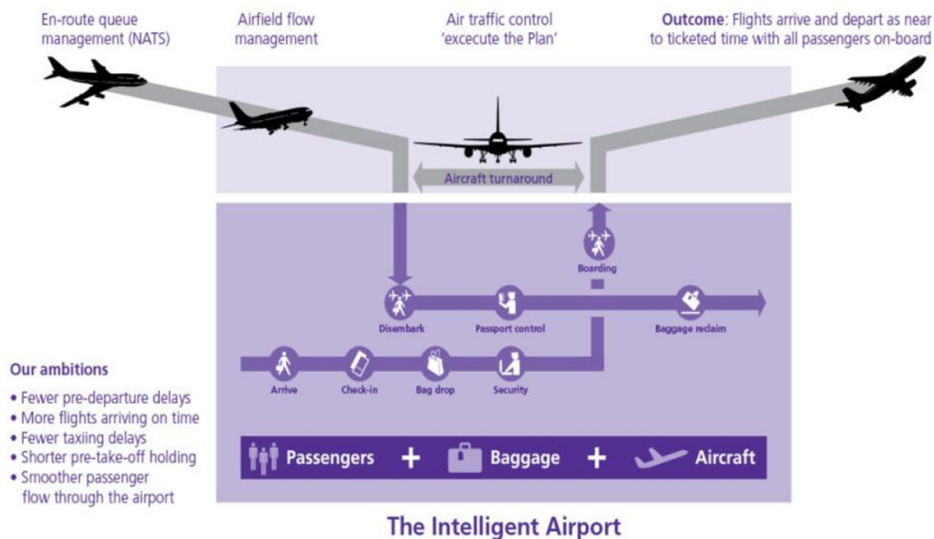
Heathrow Operational Resilience Principle

Doing the right thing: Heathrow Airport will seek to never close as a result of circumstances under our control, except for immediate safety or emergency threats

Introduction

- 12.1 Following snow in 2010 one of the recommendations from the Heathrow Winter Resilience Enquiry report was the creation of a single airport control centre, this has now developed to become the Airport Operating Centre (APOC) which will become operational in November 2014 following an investment of £17m.
- 12.2 The operational framework for APOC harmonises with European standards by following the four-layer European Commission Airport Operations Management Framework.

Operating to plan to reduce delay and improve flow



APOC Management scans the wider horizon continually for optimum course of action and, if necessary, rebalances the Airport Operations Plan for example by issuing 'required time of arrival'.

Improving our operational performance

- 12.3 APOC will be the focus of the Heathrow operation supporting frontline operational teams in making every journey better. It will oversee a rolling operating plan that becomes more refined and accurate, readjusting as events materialise. The APOC will be able to see the complete Heathrow picture, offering the right information to the right people at the right time, in turn enabling more proactive and effective decision making, making better use of the available capacity.
- 12.4 The approach of ‘operating to plan’, with the APOC at its heart, will have real benefits for passengers, airlines and the wider Heathrow community. By better controlling the flow of aircraft and passengers delays are reduced, delivering a better passenger experience.
- 12.5 For passengers, spending less time ‘holding’ in an aircraft or flowing more smoothly through the terminals will deliver a better experience of Heathrow. Airline stakeholders should also realise cost benefits, for example lower fuel costs as a result of less holding both on the ground and in the air.
- 12.6 Together we will be managing airport operations more collaboratively to reduce delay across the passenger’s end to end journey through Heathrow.

Managing airport operations collaboratively

- 12.7 **Proactive not reactive**
By seeing the complete picture APOC will seek to avert problems before they happen, and it manages airport performance in a collaborative way with stakeholders. With multiple stakeholders contributing to the decision-making process, APOC produces results that are best for the airport as a whole.
- 12.8 **Instant mobilisation of Bronze Command**
When APOC is fully operational, it becomes Bronze Command as needed. When the unexpected happens, APOC will manage the incident from the outset, ensuring that Heathrow are immediately in control of any incident, (today it can take up to 90 minutes to fully mobilise incident teams), reducing the duration and impact of disruption. It will enable us to draw on the latest information at all times and by looking ahead, ensuring a planned recovery.

A new operational framework

- 12.9 APOC marks a big and positive change for Heathrow because it alters the way Heathrow and its stakeholders work together. When everyone understands the benefits and how ***we can work even better together***, implementation becomes much easier.
- 12.10 The operational framework for APOC harmonises with European standards by following the four-layer European Commission Airport Operations Management Framework. The four process layers are:
- Airport performance steering sets the overall strategic direction and the performance standards and goals that describe the type of airport Heathrow wants to be.

- Airport performance monitoring compares airport performance against the standards set by airport performance steering. It provides observations, forecasts, alerts and warnings based on events that affect performance.
- Airport performance management assesses the severity of any potential deviations from plan to find ways of averting or mitigating problems, and to trigger the appropriate collaborative response. Using a range of simulation and decision-support tools, stakeholders can choose an optimal response – the response that maintains the best airport performance and the speediest recovery.
- Post-operations analysis and feedback loop uses data from the planning and execution phases to compare the plan against actual events, assess the effectiveness of responses and develop better procedures for dealing with future events.

Controlling the flow

12.11 Matching capacity with demand

An airport that reacts to events cannot be efficient. Each time something unexpected happens, there is a rush to recover and catch up. APOC takes a different approach by continually course correcting and looking ahead.

12.12 Seeing the complete picture

APOC brings people together from across the airport to give a complete view of airport operations. Together these agencies will manage the pinch-points to increase efficiency, reduce costs and minimise income losses. APOC will support front-line operational teams by giving them the information and resources they need ahead of time, anticipating readjustments to the plan.

12.13 As APOC stabilises representatives from NATS, Border Force, Met Office and airlines will be invited to join APOC. Their input will give a fully joined up view of airport operations. By working even closer together new levers become available to manage the total operation more proactively, more quickly and more precisely.

Airport Operations Plan

12.14 Due to the changing nature of airport operations the Airport Operations Plan is a flexible tool for creating a more refined view of operations. The Airport Operations Plan will look six months ahead of the seasonal schedule, when the first reliable picture of flight demand is available.

12.15 Three fundamental characteristics of the Airport Operations Plan:

- A single reference for all stakeholders.
- Accurate and up to date.
- The principal tool for improving airport and network integration.

12.16 Comparing capacity with demand

The Airport Operations Plan is a practical tool for comparing capacity – runways, manpower, equipment etc. – with rolling demand. For example if an airline plans to operate a larger aircraft e.g. an A380 in place of a B777 plans can be adjusted. Analysis of the pinch points will allow for the mobilisation of resources to ease pressure before it starts.

12.17 Operational resource plan

With each operational day a plan for the efficient use of resources is required to ensure the airport is run effectively. It's not a simple one-to-one relationship because airport resources are multi-layered – security manpower, vacant aircraft stands, wheelchairs etc. – with numerous interdependencies and stakeholders.

12.18 Managing aircraft flows

Because the airport is operating almost at capacity, delays to arrivals or departures can quickly escalate into more serious problems. To enable Heathrow to intervene sooner and more effectively, a better demand/capacity balancing tool will be introduced. The tool will warn of impending capacity pressures and allow what-if scenarios to be developed for a variety of interventions, helping to make the best possible decisions to keep the operation flowing smoothly and efficiently.

12.19 Managing passenger and baggage flows

To avoid queues and congestion, the airport has to know what is happening in real time or sometimes before it happens. To make the step change in efficiency that passengers will notice, data has to be relevant, targeted, available in real time and presented in a meaningful way that drives decision making and actions.

12.20 Heathrow has to work collaboratively with airlines to share data and combine it with information from other sources: car park entrances automated boarding-card readers, archway metal detectors, retail outlets and automated gate-room entrances.

12.21 Asset management

Heathrow will monitor the asset-management system and through more collaborative working with all involved ensuring that faults impacting the flow of aircraft, passengers or bags are dealt with promptly.

12.22 Integration of stakeholders

APOC will support better airport integration. It encourages everyone to work more closely – to work for the best shared outcome. Airlines and other stakeholders will have a single, central point of information – a single airport truth – to rely on.

12.23 First-line response

Over time APOC will become the source of the most up-to-date information; it will also be home to Heathrow's first-line response team. The team will deal with anything that needs an immediate response, such as emergency calls, faults, fire and security systems activations. Their actions feed straight back into APOC which keeps operational teams and others informed and the impact to the operation.

Section 13: Passenger Welfare Resilience

Heathrow Operational Resilience Principle

Giving excellent customer service: Passenger welfare will be delivered to the standards established in the Airport and Airline welfare protocols

Introduction

- 13.1 Heathrow puts passengers at the heart of everything it does and recognises its own obligation to care for passengers when required. During periods of disruption Heathrow is prepared and ready to ensure passengers are looked after and provided with up to date information throughout the event. However the best passenger welfare response is reliant on all parties and stakeholders working together.
- 13.2 This activity includes a detailed welfare plan and significant stock holding of essential items including 3000 bottles of water, 3000 portions of baby food / baby milk and if required the deployment of up to 3000 Heathrow Reservists to support passengers during disruption.

Passenger Welfare Overview

- 13.3 Heathrow has publicly committed to providing information and communication, welfare provisions and facilities, Reservist and third party resource support and to developing, maintaining and continuously improving passenger welfare plans.
- 13.4 Heathrow's welfare role in the event of disruption is to facilitate the airlines response as they meet their passenger obligations under EC261¹⁸.
- 13.5 In conjunction with airlines, Heathrow Airport has developed a passengers charter which recognises the commitment to helping passengers when they need it most – during times of disruption.
- As an airport community we will work together to try to keep any disruption to a minimum.
 - Together we will keep passengers informed about the disruption and what we are doing to improve it, which will assist you to make informed decisions about your journey.
 - Together we will help you stay in touch.
 - Together we will look after you and assist with access to meals and refreshments as appropriate.
 - As an airport community we will prioritise assistance to vulnerable passenger groups.

¹⁸ See appendix 10 for link to EC261

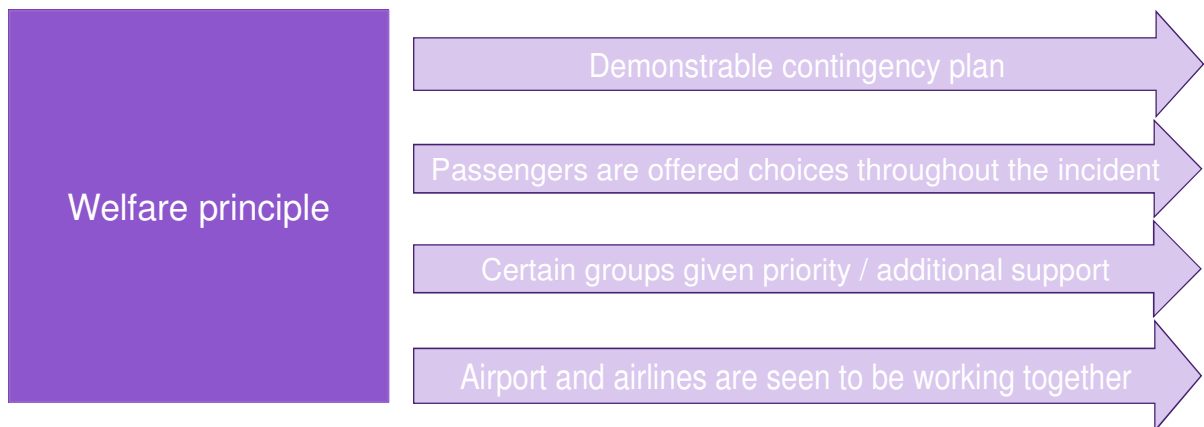
- 13.6 Occasions where Heathrow may be required to provide passengers with comfort and care assistance include:
- Instances of severe congestion within a terminal as a result of flight cancellations, systems failures or industrial action.
 - Weather conditions which impact the airlines schedule and punctuality.
 - Failure of the airline to provide a welfare provision or where airlines are still formulating plans and require support.

Welfare principle

13.7 Key areas of passenger welfare were originally identified in the Heathrow Winter Resilience Enquiry in 2011. This evaluated passenger needs and researched best practice in other airports and organisations throughout the world. From this work the Heathrow Welfare Contingency Response File was developed.

13.8 ✂✂✂✂✂✂✂✂✂✂

13.9 However passenger needs and expectations continually develop, along with external developments and changes within the airport and operation. To reflect these changes the Heathrow Welfare Contingency Response File is reviewed on a continuous basis to ensure improvement of Heathrow’s welfare response. Post incident review sessions, passenger feedback, stakeholder feedback and research and insight facilitate this review process.



Protocols

13.10 Heathrow and its airlines have worked to develop Welfare Protocols which outline each parties’ commitment to passenger welfare during times of mass disruption.

13.11 **Heathrow Welfare Protocol**

Heathrow has committed to providing information and communications, welfare provisions and facilities, Reservist and third party resource support and to developing, maintaining and improving passenger welfare plans.

13.12 Below is a summary of the activity covered under the Heathrow Airport Welfare Protocol.

XXXXXXXXXXXX

13.13 **Airline Welfare Protocol**

Under best endeavours and included in the Airlines 'Conditions of Use' all Heathrow airlines have signed up to an Airline welfare protocol in the event of significant disruption. This covers resources, facilities and provisions and communication and information. Airlines are still required to meet their obligations under EC261.

13.14 Below is a summary of the activity of the covered by the Airline Welfare Protocol.

XXXXXXXXXXXX

Welfare Plan

13.15 To support the commitments detailed in the Airport Welfare Protocol Heathrow’s welfare plan identifies the areas that are significantly impactful to passengers, considering the sustainability of the welfare provision and anticipating future operational and passenger demands.

13.16 Each welfare process has detailed recovery documentation which sets out the exact process and procedural steps to be taken. These are maintained and regularly reviewed by the central welfare team and in collaboration with welfare subject matter experts who are accountable for their area of welfare.

13.17 Welfare contingency plans are devised with necessary service level agreements in place so they can be activated 24 hours a day, 365 days a year. Broadly welfare plans and processes cover the following areas:

13.18 **Welfare essential items**

Heathrow maintains, manages and mobilises a central welfare stock holding of essential contingency items. The available stock holding of these items is detailed below:

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13.19 **Catering and retail**

Plans include the extension of operating hours of catering outlets during disruption and the direct provision of refreshments to passengers. Protocols have also been established with key retailers such as Boots, so passengers are able to obtain essential supplies. The Welfare Team also have access to ✂✂✂✂✂✂✂✂✂✂ catering vouchers which can be given to passengers for use in the terminal catering outlets.

13.20 **Hotel and accommodation**

These plans cover three distinct areas:

- Assist airlines in sourcing hotel rooms.
- British Hotel Reservation Centre (BHRC) protocol to provide BHRC facilities and staff in all terminals.
- Organisation and deployment of overnight accommodation facilities in local hotels.

13.21 **Transport**

In-conjunction with transport partners, Heathrow has established processes to support passengers during times of disruption. This includes a reduction or waiver of car parking charges; free local travel vouchers and extended operating hours for the Hotel Hoppa and Heathrow Express.

13.22 **Internet, telecoms and media**

Wi-Fi restrictions can be lifted to enable passengers who need to use the internet during disruption periods. In addition internet desks can be also be enabled for free use.

13.23 **Additional Resource**

During disruption additional resource is advantageous in supporting the distribution of welfare items, to support frontline operational activity, airline disruption plans and provide passenger assistance. This resource entails the following groups.

13.24 Passenger Service and Sales Ambassadors

The most efficient way to secure this extra resource is by utilising existing third party agency relationships within Terminals. This is managed locally by duty operational teams and overseen centrally to ensure a balanced agency resource across the airport.

13.25 Passenger Service Ambassadors operate at all Terminals and are multilingual and skilled in general passenger service and assistance. During disruption, they are re-briefed to provide disruption support and service level agreements are in place to increase resources to support the operation. Passenger Service Ambassadors have undertaken disruption training designed by Heathrow and the third party provider, Omniserv.

13.26 Passenger Sales Ambassadors similarly operate at all Terminals and are highly skilled with very extensive language ability. Plans are in place for this team to switch into 'care' roles during incidents or disruption with the ability to increase resource.

13.27 In incidents where all agency routes have been exhausted and there is still a requirement to provide support to the front line, then resource is secured from additional sources.

13.28 Volunteer Ambassadors

Volunteer Ambassadors are Heathrow's successful legacy of the 2012 Olympics. The volunteers regularly support the operation and their programme of support is aligned to peak passenger periods. Volunteer Ambassadors have received disruption training and if present during an incident at Heathrow, plans are in place to integrate their resource into re-briefing with Passenger Sales Ambassadors. ✂✂✂✂✂

13.29 Reservists

Heathrow has invested time and resource in training office based, non-operational staff to be ready to support during times of major disruption. Reservists are aligned to support specific terminals, are easily identified by their purple 'Here to Help' uniform and are provided with information, I-pads and Blackberrys.

13.30 A communication and mobilisation programme, supported by the welfare team, is in place so that Reservists can be called upon out of normal business hours. Many of the Reservists are also bi-lingual. ✂✂✂✂✂

Welfare Resilience Management

13.31 Welfare resilience is routinely monitored and assessed to ensure that the response is proportionate and meets the needs of the passenger.

13.32 After all Welfare team activations a post event review is undertaken to identify further activities, plans and processes that will improve the passenger experience and facilitate an improved response by the airline or handling agent. Further improvements to the plan are made in line with innovative opportunities such as equipment and processes.

Section 14: Heathrow Corporate Affairs and Crisis Communication

Heathrow Operational Resilience Principle

Working together: The Heathrow community will work collectively to continue to improve operational resilience

Introduction

- 14.1 Within Heathrow Airport the Corporate Affairs Directorate covers the functions of Media and PR, Public Affairs and Internal, Airport and Passenger Communication and Digital and Social Media.
- 14.2 This Directorate is responsible for communicating with Heathrow staff, airport stakeholders and passengers during normal business as well as disruptive events.

Communication during Disruptive Events

- 14.3 Within the Corporate Affairs Directorate there is the recognition that during a disruptive event the requirement for information from staff, stakeholders and passengers increases significantly. In this instance the principles that guide the communication process are:
- Provide reassurance to Heathrow's stakeholders.
 - Provide tangible examples of what Heathrow is doing to resolve the situation.
 - Ensure there is an integrated and coordinated approach between the Operations and Corporate Affairs.
 - Ensure that the communications and message is relevant to the audience.
- 14.4 During such an event the communication objectives are:
- **Enable passengers to make good decisions.**
 - Give up to date and accurate information on flight delays and cancellations.
 - Give advice on travelling to the airport.
 - Give information on welfare / security arrangements.
 - **Ensure that information and messages are consistent and correctly aligned.**
 - Identify and correct misinformation.
 - Identify and respond to stakeholder concerns.
 - Assist stakeholders in understanding and supporting the operational response.
- This involves coordination:
- Between internal teams of Heathrow Airport Limited.
 - With our airport community stakeholder, including airlines, handlers, Border Force, etc.
 - With third party stakeholders, including local and national government and emergency services.
- **Support the Operation.**
 - Give clear messages to passengers, Heathrow staff and airport community stakeholders both directly and by coordinating with 3rd parties such as Transport for London.
 - Engage with stakeholders to secure support for exceptional operational measures.

- 14.5 Various forms of communication designed to ensure that all parties (internal Heathrow staff, community stakeholders and passengers) are kept informed during the disruption are deployed. This will include situational reports, conference calls, social media, email updates and press releases.

Heathrow Communications Command and Control

- 14.6 During a disruptive event the Crisis Communication Team will activate their Incident Response Teams and have membership within the Bronze, Silver and Gold teams.

- 14.7 At the delivery level, the Crisis Communication Team is organised into four Incident Response Teams, reflecting the business-as-usual structure: Passenger; Internal and Airport Community; Policy / Political and Media.

14.8 Communications Incident Response Teams

Team	Role
Passenger	<ul style="list-style-type: none"> - Deliver accurate, clear and timely information to passengers, allowing them to make informed decisions. - Respond with agility to social media comment, enquiry and sentiment by carefully selecting the right channels depending on the situation. - Support the Heathrow Welfare team in delivering appropriate messages and advice to passengers. - Advise passengers on their rights and next steps regarding claims under EC261 – if appropriate.
Internal and Airport Community	<ul style="list-style-type: none"> - Deliver accurate, clear and timely information to Heathrow employees and the airport community, including airlines and other on airport stakeholders. - Provide relevant information so that audiences can make well-informed decisions or respond appropriately to calls for support and action. - Support the relevant Heathrow Command & Control Commander to draft messages for dissemination to staff and stakeholders.
Policy / Political	<ul style="list-style-type: none"> - Deliver accurate, clear and timely information to key external stakeholders and shareholders. - Facilitate site visits by key stakeholders. - Identify areas where key stakeholders can support recovery.
Media	<ul style="list-style-type: none"> - Deliver accurate, clear and timely information to the media. - Ensure strong alignment of messages with airport stakeholders which include airlines, handlers, Border Force and others. - Protect the reputation of Heathrow by responding with agility to a changing news agenda and social media. - Continually assess reporting to ensure it is accurate. - Prepare spokespeople for interview. - Facilitate media access where appropriate.

Outline communication plan

- 14.9 Bronze and silver communication Situation Reports (Sit Reps) provide the foundation and ‘one source of truth’ for the communications teams and contain the key messages that can be shared across all relevant audiences. The Communication Sit Reps are produced after each bronze / silver conference call. They include:

- Reinforcement of the three tenets of crisis communication – care, concern, control – and what Heathrow is doing to demonstrate these.
- up to date information on the operational situation including what has changed since the last Sit Rep.
- Communications actions to be taken.
- Current line to take.

Audience group activity plan

14.10 Passenger, Social media and Digital

Audience	What?
Twitter / Facebook	<ul style="list-style-type: none"> • Holding Tweet and line current / emerging situation – as appropriate advising passengers and links to more information / advice
Website	<ul style="list-style-type: none"> • Homepage advisory and link to relevant information and advice – update as required
Twitter / Facebook	<ul style="list-style-type: none"> • Rapid response to Tweets / posts about the situation – providing advice and links were appropriate • ReTweet useful information from airport partners involved in the incident
Twitter / Facebook	<ul style="list-style-type: none"> • Monitoring activity escalation and sentiment – using rapid response to rebut inaccurate reporting
FIDs / Monoliths / tannoy	<ul style="list-style-type: none"> • Passenger information and advice using FIDs, mobile screens, monoliths and tannoy – updated as required
Twitter / Facebook	<ul style="list-style-type: none"> • Promote control of the situation and when appropriate return to normal operations

14.11 Airport community

Audience	What?
Heathrow Leadership Group	<ul style="list-style-type: none"> • Heathrow leadership phone calls - depends on severity of disruption
Key Airlines	<ul style="list-style-type: none"> • COO or Terminal Customer Service and Relationship Managers call key senior airline ops advising of situation
Airport Community	<ul style="list-style-type: none"> • Conference call – led by Duty Director – depends on severity of disruption
Airport Community	<ul style="list-style-type: none"> • Email summary of call / summary of situation and any actions required of community and actions by Heathrow
Airport Community	<ul style="list-style-type: none"> • Regular conference calls • Follow up emails

Section 15: 2014 / 2015 Resilience Agenda

Heathrow Operational Resilience Principle

Improving every day: Heathrow will seek to operate by best practice resilience standards in the areas of Command & Control, Crisis Management, Business Continuity and Exercising

Introduction

- 15.1 Operational Resilience will be of strategic importance to Heathrow with significant deliverables over the coming years. Over the next 12 months operational resilience will be the focus as a number of key events and activities take place. These include the opening of the Airport Operations Centre (APOC) and the introduction of the Terminal 3 Integrated Baggage system.
- 15.2 The Operational Resilience agenda for the next 12 months is categorised under the following headings:
- Stakeholder engagement
 - New Facility / New Function / Major Event
 - Command and Control
 - Mitigation Plans
 - Exercising

Stakeholder engagement

- 15.3 Heathrow will engage with stakeholders on various aspects of the resilience cycle to ensure the whole community is participating in improving operational resilience.
- 15.4 This will include engagement in:
- Identification of operational risks and the actions to take to reduce / minimise these risks
 - Development of plans
 - Exercising
 - Post event reviews

New Facility / New Function / Major Event

- 15.5 Between now and early 2015 Heathrow will introduce a number of new facilities and there is a requirement to ensure that these facilities and the mitigation plans are resilient. This preparation will entail the development and exercising of plans, the teams involved in the deployment of these plans and the facility itself. As well as new facilities and functions Heathrow will continue works to improve resilience.

- 15.6 These works include:
XXXXXXXXXXXXXXXXXXXX

Command and Control

- 15.7 With the introduction of new facilities and functions comes the requirement of ensuring that the appropriate level of the command and control structure is in place and that the teams are aware and have been correctly familiarised with the new facilities, functions and ways of working.
- 15.8 The opening of APOC will see a transition to an improved command and control process. This includes new locations for the Incident and Crisis Management Teams as well as the introduction of new process to ensure they align with APOC and deliver a better response.

Mitigation Plans

- 15.9 The new facilities and functions require Heathrow to review its current mitigation plans (Emergency Order, Contingency Plans and Business Continuity Plans) to ensure they reflect the changes and provide further opportunity to enhance them further.
- 15.10 Plans will be updated in line with changes and as part of continuous improvement following deployment of plans during disruptive events or exercises.
- 15.11 Heathrow will continue to engage with stakeholders on the following plans:
XXXXXXXXXXXX.

Exercising

- 15.12 The introduction of new facilities / functions or major events will entail an appropriate level of exercising to ensure that:
- Plans are correct and fit for purpose.
 - Those deploying the plan are aware of their actions and activity to undertake during a disruptive event.
 - Facilities or equipment are suitable.

Appendices

Appendix 1 – Link to CAP 1138

www.caa.co.uk/cap1138

Appendix 2 – Recent Customer and Industry awards

http://www.worldairportawards.com/Awards_2014/best_airport_terminal.htm

<http://www.airlinequality.com/AirportRanking/lhr.htm>

Appendix 3 – Link to Heathrow Winter Resilience Enquiry

http://www.heathrowairport.com/static/HeathrowAboutUs/Downloads/PDF/BeggReport220311_BAA.pdf

Appendix 4 – Link to Local Rule 4 (HADACAB)

<http://acl-uk.org/default.aspx?id=54>

Appendix 5 – Link to International Standards Organisation and ISO22301 Business Continuity

http://www.iso.org/iso/catalogue_detail?csnumber=50038

Appendix 6 – Link to CAP 168 – Licensing of Aerodromes

<http://www.caa.co.uk/docs/33/CAP168.PDF>

Appendix 7 – Link to Information Technology Infrastructure Library

<http://www.itil-officialsite.com/>

Appendix 8 – Link to British Standards Institute website and Published Document 25666 – Guidance on exercising and testing

<http://shop.bsigroup.com/ProductDetail/?pid=000000000030203702>

Appendix 9 – Link to British Standards Institute website and BSI 11200 – Crisis Management Guidance and Good Practice

<http://shop.bsigroup.com/ProductDetail/?pid=000000000030274343>

Appendix 10 – Link to EC261

<http://www.caa.co.uk/default.aspx?catid=2226&pageid=15601>

Appendix 11 – Heathrow Airport Resilience Partnership terms of reference

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Appendix 12 – Heathrow Airport Operations Stakeholder Board terms of reference

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Appendix 13 – Overview of forums and meetings

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