AOP2 user manual

Day to day operations

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Prepared by: Harish Krishnan

Updated by: Clive Exton

Status: Under Review

Heathrow
Making every journey better

Contents

1. Document scope

This document is intended as an introduction to the Airport Operating Plan 2 (AOP2). It is suitable for all Team Heathrow members who use AOP2 on an occasional or regular basis and aims to provide a firm foundation for normal day to day operating enquiries and system compliance.

AOP2 is an enhancement to Airport Collaborative Decision Making (ACDM) which has been in place at LHR for several years. ACDM provides a platform whereby all airport users can see and share information relating to flight performance. The system then uses this information to maximise runway utilisation and minimise noise and emissions.

AOP2 takes ACDM to a new operating platform and provides all users with the system ability to predict the impact of NOW (what has already happened) against the future (what this means to the remainder of the schedule).

E.G. If a flight to AMS is slotted at LHR for 25 minutes the system will calculate the impact of that delay through the known aircraft rotations of that aircraft for the rest of the operation and publish this in the system via updates to departure and arrival times and the risk of missed turn-round times and stand requirements.

As AOP2 builds on ACDM this document refers to AOP2 as this is the primary driver of improved performance.

This manual describes the day to day functions available in AOP2. For guidance on using AOP2 administrative functions, or how procedures change during snow, please refer to one of the documents listed below.

Any reference to “he” also refers to “she” by default.

Whilst some background regarding the A-CDM concept and its implementation at Heathrow is included here, detailed information about is available in the CDM Implementation Manual, published by EUROCONTROL, link overleaf.

1.1 Related documents

Document title	Description
A-CDM user manual – admin function [HAL internal use only]	Detailed guidance to the A-CDM administration functions
A-CDM user manual – snow module	Detailed guidance on the system and functionality changes when snow mode is activated
CDM implementation manual [external link, launches a PDF]	EUROCONTROL guidance for the implementation and operation of A-CDM

1.2 Version control

Date	Version	Editor	Comment
28 August 2015	1.0	Louise Allen	First distributed version
16 August 2016	1.1	Harish Krishnan	Changes Introduced as part of the AOP Project
09 October 2018	1.2	Clive Exton	AOP2 roll out

2. Introduction to AOP2

Collaborative Decision Making is a European wide initiative which aims to improve operational efficiency at airports by reducing delays, improving the predictability of events during the progress of a flight and optimising utilisation of resources.

With AOP2 the network is served with more accurate take-off information to derive Air Traffic Flow Management (ATFM) slots. As more airports implement AOP the network will be able to utilise available slots more efficiently and reduce the current buffer capacity.

The improved decision making by the AOP partners is therefore facilitated by the sharing of accurate and timely information and adapted operational procedures, automatic processes and user friendly tools.

AOP enhances the passenger experience by enabling the airport community to operate in an environment with targets rather than estimates and with a commitment to meeting these targets. Operating within a performance based environment enables better quality demand information enabling optimal decision making which will ultimately provide network improvements.

In short, AOP delivers common situational awareness for airline operators, ground handlers, ANSP, airport operators and all third parties such as cleaners, security, contractors etc.

Going forward AOP is the foundation stone of the Single European Sky ATM Research (SESAR) project and a key enabler to the realisation of the ATM Master plan bringing cost, capacity, safety and environmental benefits for all airport partners.

Trials at major European Airports have shown improvements in stand management, resource management and slot adherence leading to reduced costs for all stakeholders and improved accuracy of passenger information.

AOP has been implemented at many large airports around Europe and its rollout continues as more airports join the CDM network.

2.1 AOP at Heathrow

The AOP project at Heathrow Airport Limited is a joint initiative between all airport partners: airlines, ground handlers, air traffic control (ATC)[1], and the airport (HAL).

The objective is for airport partners to work together to facilitate the sharing of timely and accurate operational data which will optimise the turn round process and assure the best possible co-ordination of resources.

The aim is to move away from an operating mode where the pilot calls ATC for start approval when he deems the aircraft is ready to push back, and where estimated departure times are not always updated to truly reflect the situation on the ground.

Most importantly, AOP embraces cultural and behavioural change and re-addressing working practices and relationships.

[1] NATS are the Air Navigation Service Provider (ANSP) for LHR

Our AOP journey at LHR started in 2013 and is part of a continual improvement programme to make the most of airport and airspace resources.

2.2 Benefits of AOP2

If the time that an airline expects to be ready to leave its stand, Target Off Block Time (TOBT), is accurate then this time can be used by ATC to determine a pre-departure sequence for departing aircraft. This time can also be used by the Aircraft Operations Unit (AOU) to assign a stand to an arriving aircraft.

If every aircraft knows its order in the pre-departure sequence (TSAT) then this time can be shared with all relevant parties and the correct priority can be given in order to maintain the sequence. This can enable the optimisation of airport infrastructure and resources, i.e. tugs, stands, runways and holds.

If the outbound taxi time can be accurately determined before the aircraft starts to taxi, this will result in a good quality estimate of the Target Take-Off Time (TTOT). As a result of less waiting time around the airfield taxi times could be reduced which would have a positive improvement on aircraft emission.

Once an accurate take off time can be provided and shared, the whole network can benefit. Capacity in TMA and en-route sectors could be increased through less tactical regulations and minimum departure intervals.

Similarly, for inbound aircraft, if the inbound taxi time can be determined before the aircraft has landed then the estimated time when the aircraft will reach a stand improves. This will result in an appropriate stand being assigned and ground crew being ready.

Potential benefits include:

- Reduction in taxi times and subsequently, fuel burn and engine running time
- Optimisation of ground resources such as staff and equipment
- Greater asset utilisation, e.g. aircraft, stands, airspace
- Better utilisation of existing capacity in Terminal Manoeuvring Area (TMA) and en-route sectors
- Improved situational awareness during disruption
- Improved recovery from disruption
- Provision of a management tool that supports performance monitoring and improvement
- Improved reputation with airport users and passengers

Benefits are not always immediately realisable as it takes time to refine the processes before they can be deemed fully optimised. In large, complex environments such as Heathrow, this can take several years of continual improvement.

The AOP portal is the process management tool that will allow for performance to be monitored. It will enable performance improvement through greater transparency of data, particularly on departures and visibility of start-up delays. The portal will enable real-time operational data to be shared across a large multi-user community.

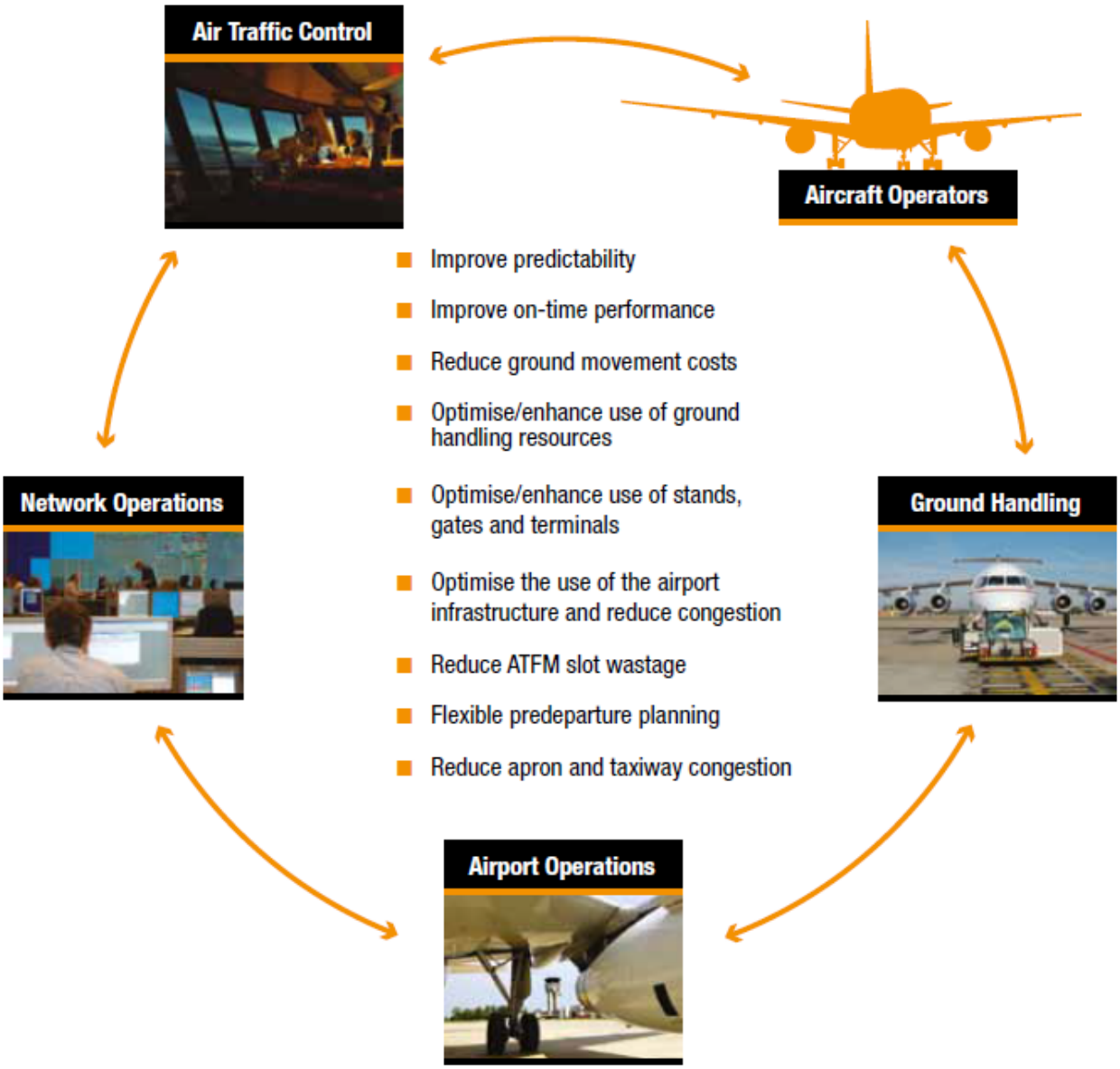


Figure 1: Common AOP objectives (source: Eurocontrol CDM Manual v4)

2.3 The AOP2 milestone approach

AOP is driven by procedures and processes which are linked into a common platform, i.e. the AOP portal. These procedures ensure that those who have the best information regarding the status of a flight are responsible for informing others, and doing it in a timely way that allows all parties to act on the update.

The whole process can be defined through a set of milestones which represent the significant events occurring during inbound flights and the following turn-round. An example of a milestone would be the take-off time at the previous airport or the time when a flight is fully ready to depart from the stand. By monitoring these events and following the process and rules that are defined for each of them, airlines, ground handlers, the airport operator and air traffic co-ordinators can anticipate problems quickly and react as necessary.

The milestone approach aims to achieve common situational awareness by tracking the process of a flight from the initial planning to its take-off.

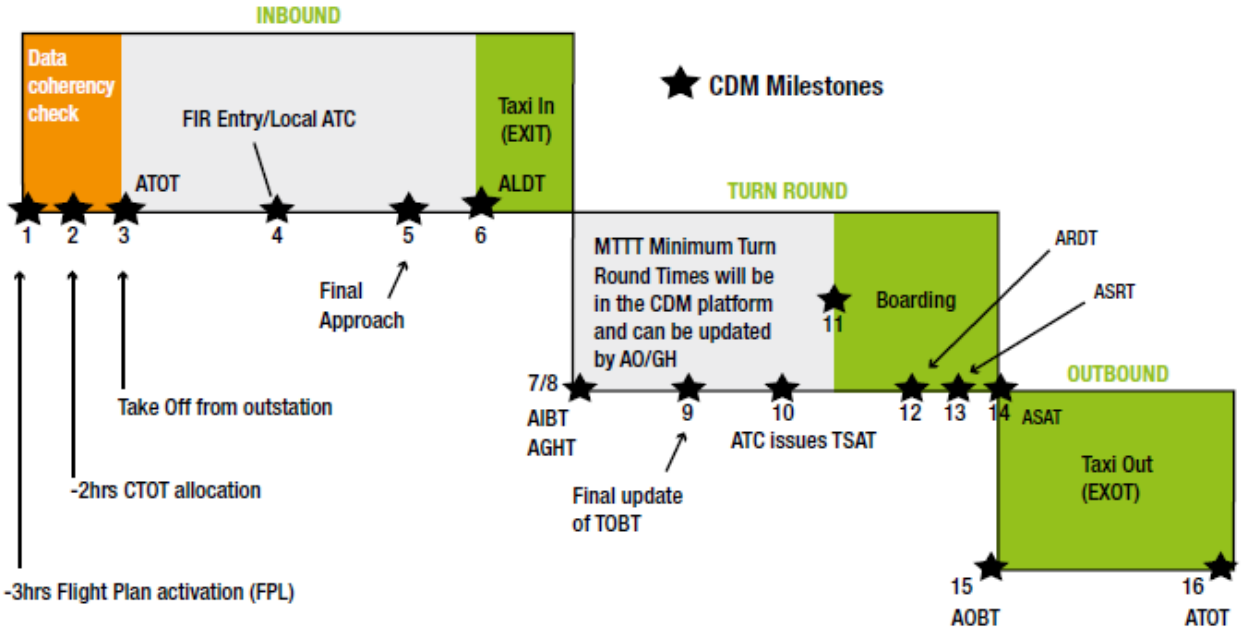


Figure 2: AOP milestones (source: Eurocontrol CDM Manual v4)

The milestones shown above are indicative only and local procedures may dictate that some milestones may not be required. Equally additional milestones could be included, e.g. for non-standard events such as de-icing.

2.4 Key components of AOP2

2.4.1 Target Off Blocks Time (TOBT)

TOBT is the time that an aircraft expects to be fully ready to leave the stand and is a key milestone in the turn-round process. The aim of this target is to provide a timely, accurate and reliable indicator of the aircraft's off block time. It is essential for the calculation of take-off time, en-route predictions and time of arrival at the destination airport.

The TOBT must be maintained to an accuracy of +/- 5 minutes using the usual channels, e.g. standard IATA (ED) estimated departure messages, by the aircraft operator or by the delegated ground handler. These should only be updated if the time that the aircraft will be ready to leave the stand changes. Updates can be made before or after the inbound linked aircraft has landed. Once TSAT has been released at -30 minutes (see Section 2.4.2) TOBT updates should be kept to a minimum to prevent instability in the pre-departure sequence.

If no TOBT has been received the flight will be expected to adhere to its departure time in the flight plan. The compliance window within which the pilot calls for actual start request is +/- 5 minutes.

For a delay of 15 minutes or more a DLA message must be sent by the airline or ground handler to update the flight plan, which will then update the Estimated Off Block Time (EOBT). If

the departure is not linked to an inbound flight, EOBT will become TOBT at -60 minutes if no overriding updates have been entered.

For linked flights, at TOBT - 50 minutes the estimated or actual in block time will be checked against its outbound linked flight and the minimum turn-round time (MTT). If the estimated in block time (EIBT) + the MTT exceeds the current TOBT then it will be deemed to be a flight 'under stress'. The portal will alert the airline or ground handler to recommend that the current TOBT be reviewed. Where there is no TOBT, i.e. no ED has been sent, then the EOBT is used for this check.

An accurate TOBT will enhance operations on the ground and airport partners will have a clear picture of an aircraft's intention. A TOBT count-down is displayed on the majority of SEGS (Stand Entry Guidance System).

2.4.2 Target Start-up Approval Time (TSAT)

TSAT is the time provided by ATC when the aircraft can expect to receive start-up approval by taking into account the TOBT and overall traffic situation. When viewed all together TSATs provide an optimised start-up sequence.

TSAT is calculated by considering TOBT, CTOT (Calculated Take-Off Time), wake vortex, Standard Instrument Departure (SID) routing, variable taxi-times, cul-de-sac demand and inbound aircraft positions. It is the result of a back calculation from an estimated airborne or take-off time.

The TSAT will be displayed on the departures screen of the A-CDM portal for all users to view. TSATs should reduce queuing times at the runway hold whilst maintaining high runway utilisation. ATC will continue to maximise departure rates and the departure order by creating the right mix of traffic.

The TSAT will be generated at TOBT -30 minutes. The airline and/or ground handler can inform flight crew of their TSAT. TSAT is communicated to the pilot over RT and is displayed on the majority of SEGS.

2.4.3 Target Take-Off Time (TTOT)

TTOT is the time that an aircraft is expected to take off from the runway and is calculated by adding an estimated taxi out time (EXOT) to the TSAT. This will be updated with any revisions to the TSAT.

TTOT will become increasingly important as NMOC (Network Manager Operations Centre) will use this information to better estimate the flow of aircraft across Europe.

TTOT will be displayed on the departures screen of the AOP portal for all users to view.

2.5 The departure process at Heathrow

The departure process is only a success if all parties work together:

- Ground Handlers/Turnaround Managers

Work towards getting the aircraft ready to meet its TOBT, irrespective of the TSAT assigned, and update TOBT if required.

- ATC

Allocate start approval by assessing the TSAT, the pre-departure sequence generated, and the overall airport situation.

- Pilot

Make sure aircraft is fully ready to depart at TOBT (window of -5 to +5 minutes). At earliest call ATC at TOBT -5 minutes to request start up approval.

- HAL Aircraft Operations

Keep the stand plan as stable as possible with minimal changes, and ensure changes are communicated in a timely manner.

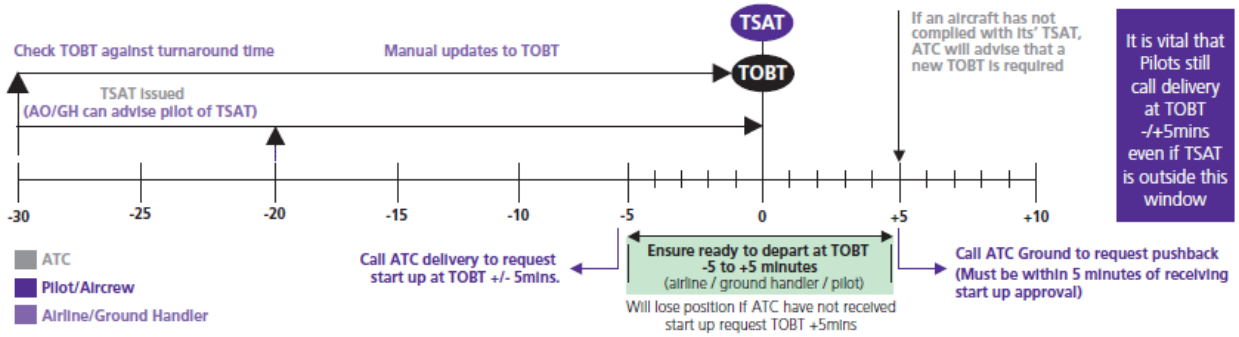


Figure 3: HAL departure process

3. The HAL AOP portal

3.1 System overview

The AOP portal is an IT platform that supports the behavioural and cultural changes that AOP drives. The system provides real-time availability of all the key data points for any flight from/to Heathrow. The portal includes a situational awareness map (SAM) which tracks the real time movement of aircraft around the airfield. A 'snapshot' of the performance status for the operational day is provided via the Landing (front) page of the AOP portal. For some Power users additional performance driven metrics are also available.

Dependant on access rights such information may be filtered to a terminal, carrier or handler basis.

When the outcome of a process within AOP results in an inconsistency, alerts are triggered and shown on screen. Existing processes and systems are then used to change or update the incorrect information or inconsistency.

The portal is a web-based multi-user system with all data being extracted directly via the IDAHO Airport Operating Database which allows stakeholders to continue using and updating via their existing systems and processes.

There is no direct data input into the AOP portal.

The AOP application is best viewed on Internet Explorer 11 or later with Adobe Flash Player v9 or later. You must have pop-ups enabled. AOP can also be viewed on Chrome, Firefox and Safari (although the SAM is not viewable in Safari). It is also recommended that the PC has a minimum of 2GB RAM and your internet connection is at least 2 Mb/s. Historical evidence suggests that Internet Explorer is the least supported platform to operate AOP on.

All data is displayed in Zulu time (UTC/GMT). It is not possible to switch the system into local time.

Some aspects of the system described in this manual are restricted for different user groups. You should not expect to be able to view all the features described in this manual.

If you are using IE10 version in compatibility mode, please remove the compatibility settings as shown below.

Go to Tools -> Compatibility Settings

Ensure that all the Check-boxes are de-selected (unchecked) as shown below.

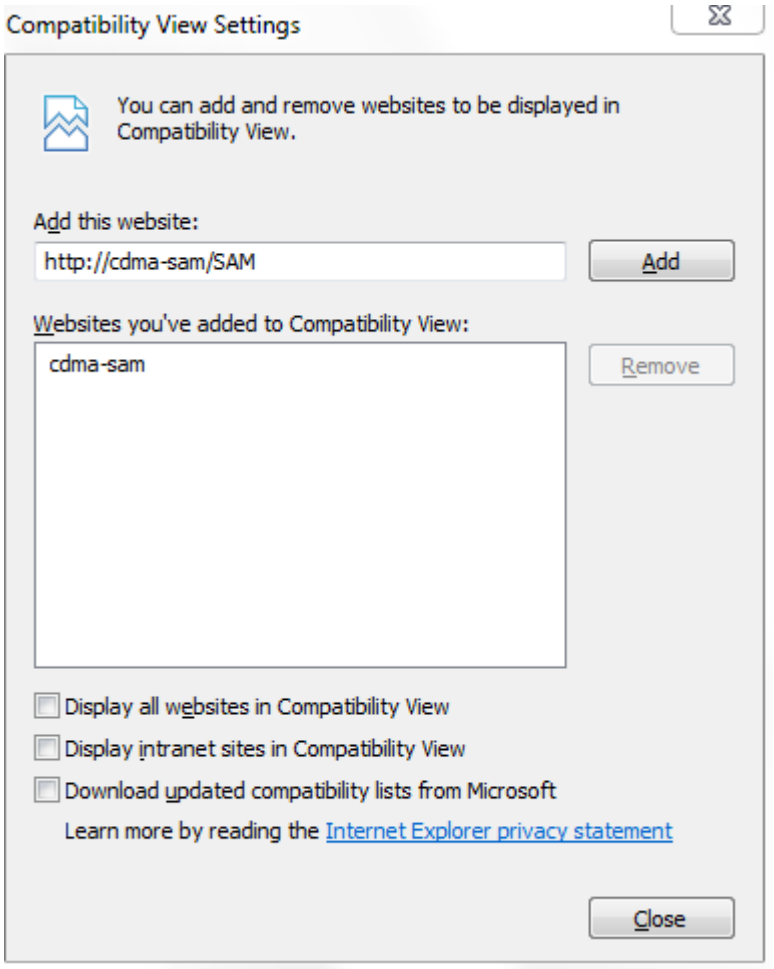


Figure 4: Browser Compatibility settings

Click on close.

3.2 Requesting access to AOP

Access to AOP granted on completion and approval of the access request form available on the AOP website: www.heathrow.com/acdm.

HAL staff should use the MyIT portal on HUB+ to submit their access requests. Please ensure you select the correct form as your submission may be rejected if you choose the wrong option.

3.2.1 Password reset

If you have forgotten your password, you can request a reset by contacting the IT Service Desk. If you are requesting a reset for a generic account, you will need the permission of the nominated account owner.

3.3 Screen navigation – landing page

On first login, you are presented with the AOP dashboard screen:

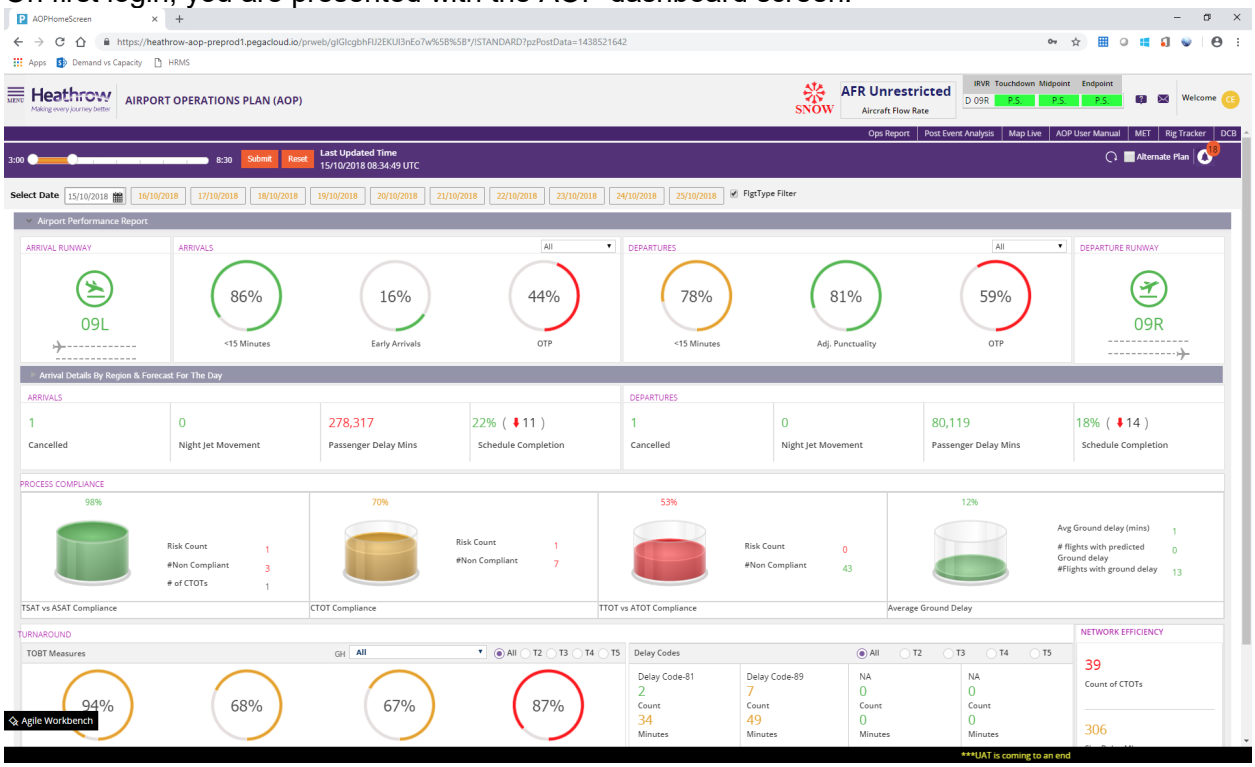


Figure 5: AOP launch/landing page screen

The launch screen contains the main KPIs for the airport. Certain Power users have the ability to break performance down by geographical area or Terminal. In this example below, we see the departures breakdown for Terminal Three only.

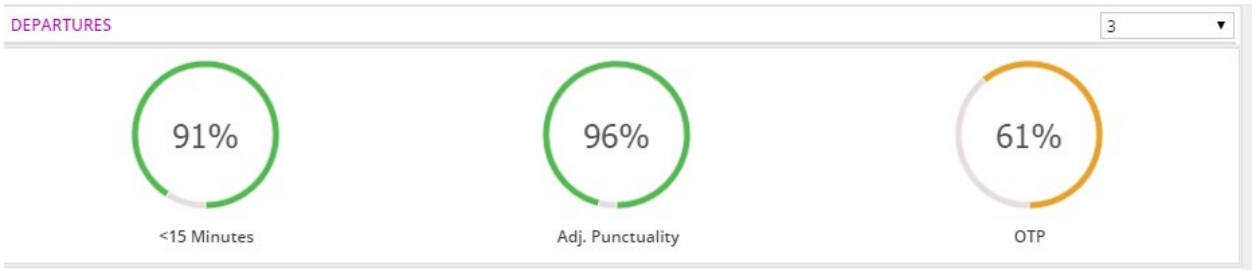


Figure 6: User defined breakdown of KPI

At the top left hand side of the screen you will see a burger menu icon. By clicking on this icon you can access the screens that you require access to.

Figure 7: Burger menu icon

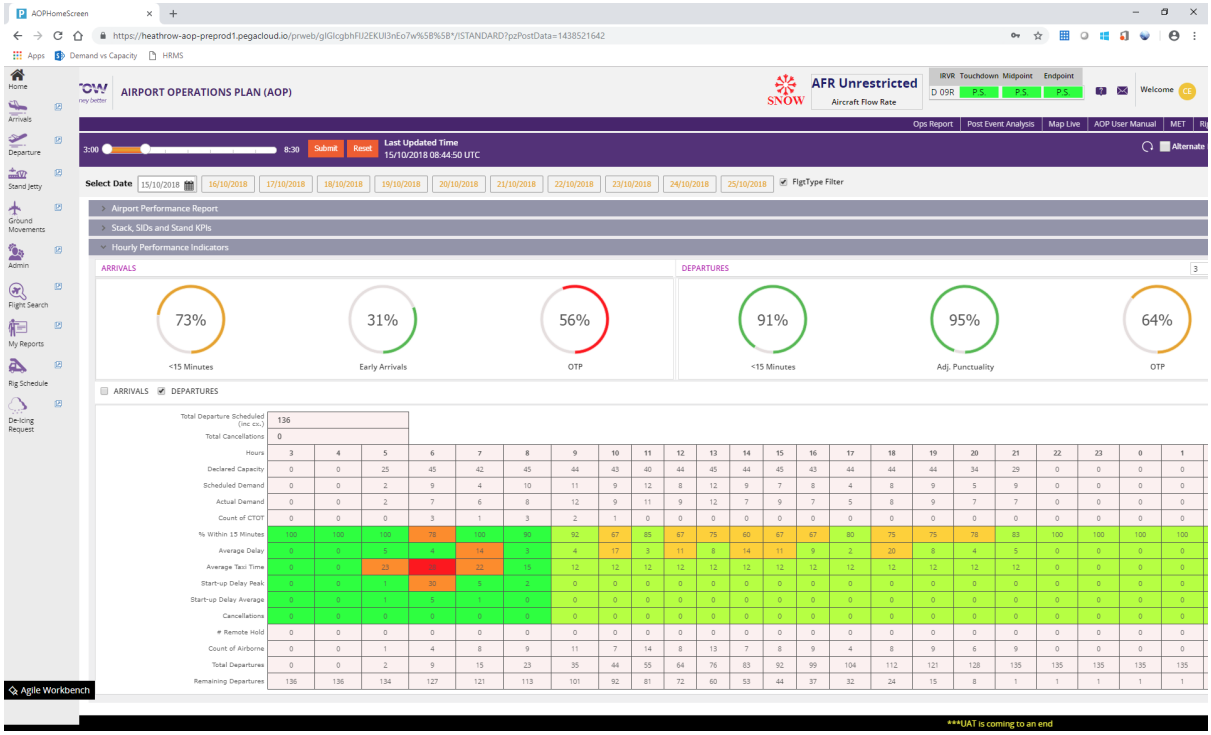


Figure 8: Burger menu icon expanded to show screen selection

The Administration menu is covered in detail in the separate publication, A-CDM User Guide – Admin Functions. This document is only available to HAL staff.

To the top right are:

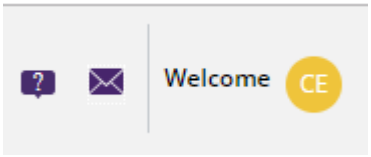
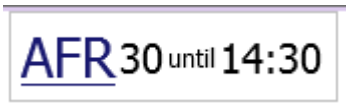


Figure 9: Help and assistance information on screen

The “?”provides a glossary of key terms and conditions that are used in the AOP system;
The envelope provides an email link to the IT service desk, or email lhracdm@heathrow.com;

Select the user profile next to the word “Welcome” to log in/out.

When there is a situation at LHR that means we are unable to land the usual number of aircraft, an Arrivals Flow Regulation (AFR) may be imposed by NATS. This regulated the flow of traffic to the stacks that feed the runways.



Here we can see that only 30 aircraft per hour will be fed to the stacks until 14.30.

Figure 10:Arrivals Flow Regulation (AFR) Information on screen

IRVR	Touchdown	Midpoint	Endpoint
27L	P.S.	P.S.	-1300
27R	=1400	=1300	P.S.

IRVR (Instrumented Runway Visual Range) indicator. This shows the visibility across each third of both runways.

Figure 11: Static information displays

Across the bottom is the scrolling alert bar which contains important operational information. Clicking on the alert will display a pop up box which may contain additional detail.

Figure 12: Alert bar

3.3.1 Dashboard metrics

This will be the default dashboard for all users giving a view of the performance of the Airport for the current operational day. This is available to all users and its purpose is to enable the viewer to see at a glance, any areas that are not operating within prescribed limits.

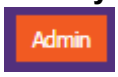
All calculations are from the start of the operational day, 03:00 to the current time on loading of the page. The page is automatically refreshed every five minutes. The default page has 3 collapsible accordions with one of the accordions (Airport Performance Report) being opened by default. Clicking on the other accordions will expand the selected accordion while hiding the previous accordion. The 3 accordions (grouping of key performance indicators) are grouped as follows:

1. Airport Performance Report
2. SIDs, Stacks & Stand KPIs
3. Hourly Performance Indicators.

At the header, the following options are available for the user (again different user groups may be provided access based on their required privileges).

1. **Time Scroller** – Users can select a particular time slice (both start and end time can vary) for which they want to look at the Airport Performance.

2. **Future Visibility –** 10 clickable labels, highlighting the forecasted departure punctuality of the Airport (based on RAG status) for the next 10 days would be made available to the user. Users are able to look at the KPIs for up to 90 days in the past and up to 180 days in the future.

3. **Admin Functionality -** For Admin users, a functionality to change the configurations for the metrics 

4. **Refresh Functionality-** user driven functionality to reload the screen with the KPIs using the latest available data 

5. **Access to DCB -** The single Sign-on login to the Demand and Capacity Balancing Tool (DCB) which provides the forecast for up to 180 days in the future. 

This is not available to all users.

6. **Notifications** - Provide the user with the list of actionable notifications

7. **Flight Type Filter** – Provides a check-box to filter the type of flights which are used to calculate the key performance indicators. This is set by Default.

3.3.2 Airport Performance Report

3.3.2.1 Arrival & Departure Runways

Figure 13: Arrival & Departure Runway

The Arrival & Departure runways by default shows the current runways used for Arrivals and Departures respectively based on the runway configuration plan. The picture diagrammatically, along with the runway number, depicts the direction from which aircrafts depart or arrive at LHR.

The RAG status of the Arrival runway depends on the Average Air-holding (number of minutes on an average the arriving aircraft spends on the stack) for the time-selected in the time-scroller. The RAG status of the Departure runway depends on the Average Start-up Delay

(number of minutes on an average the departing aircraft spends on stand even when ready due to ground delay) for the time-selected in the time-scroller.

The end time in the time-scroller is used to determine the runway in use for Arrivals and Departures.

Clicking on each of the Runway images would show, for each hour, the pattern of flights coming into or departing Heathrow. The flights are sequenced based on their Arrival/Departure times and colour coded based on their wake category (Heavy, Medium, Light). In addition, the sequence of Arrivals/Departures for the next 2 hours is shown for the end user.

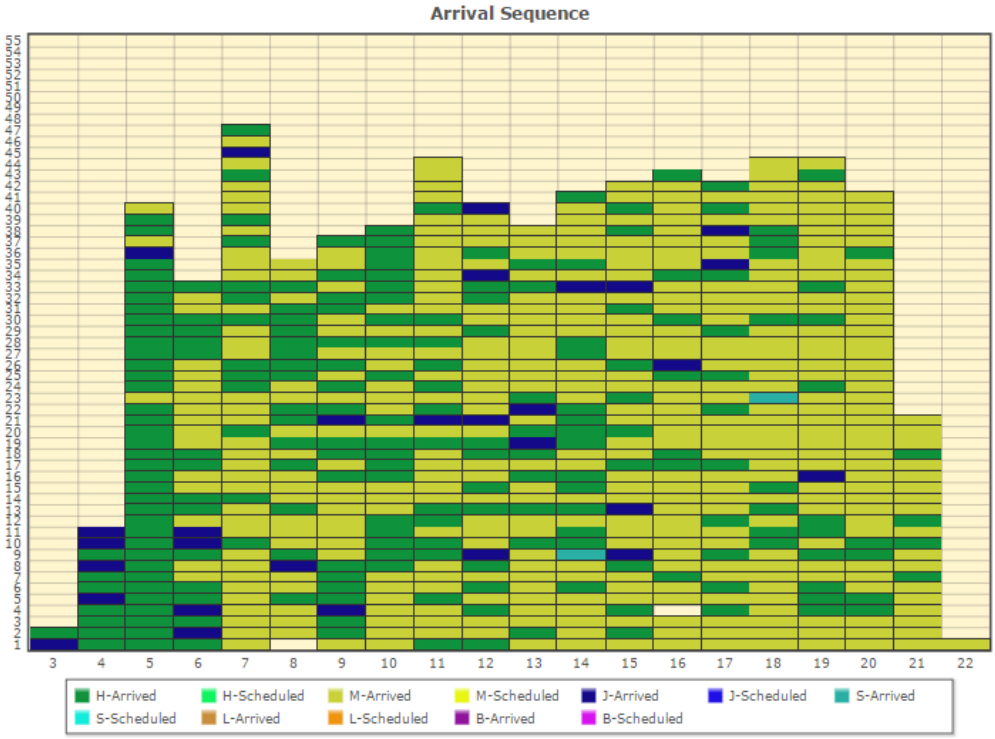


Figure 14: Arrivals breakdown per hour

3.3.2.2 Arrival Punctuality Indicators

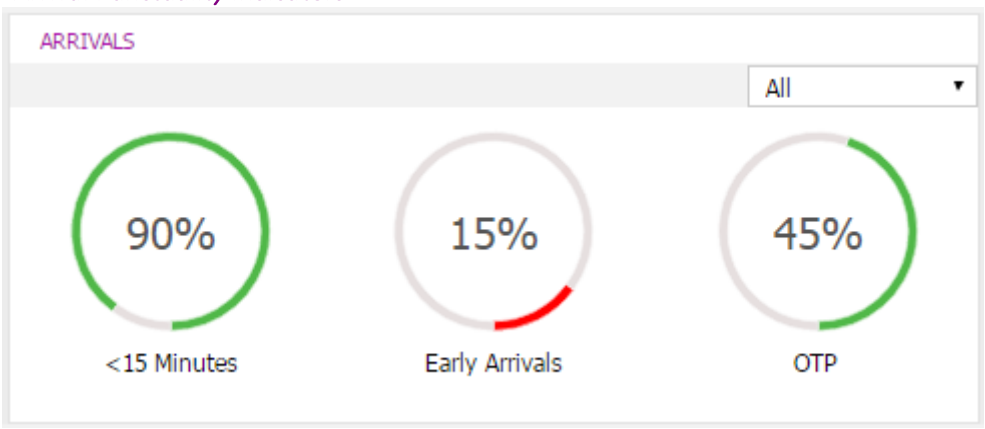


Figure 15: Arrivals KPI Information on screen

Punctuality is expressed in three ways:

- the percentage of flights that operate within +/- 3 (On time Punctuality-OTP) minutes;
- the percentage of flights that operate within +/- 15 minutes of scheduled time, and
- flights which have arrived earlier than scheduled.

Flights scheduled between the times selected in the time-scroller are used for calculating the punctuality indicators. In addition, region-wise calculation of these indicators can be viewed based on the selection using the drop-down. The region is based on the origin airport of the flights which are maintained against the region of origin.

Arrivals punctuality compares AIBT to SIBT. When AIBT is not available, PIBT i.e. the predicted time of the flight is used for calculating the punctuality.

The same RAG thresholds apply to the 3 minute (OTP), Early Arrivals and 15 minute measures:
GREEN – at least 79% of flights operated within 3 or 15 minutes of the scheduled time.

AMBER – between 59% and 79% of flights operated within 3 or 15 minutes of the scheduled time.

RED – less than 59% of flights operated within 3 or 15 minutes of the scheduled time.

3.3.2.3 Departure Punctuality Indicators

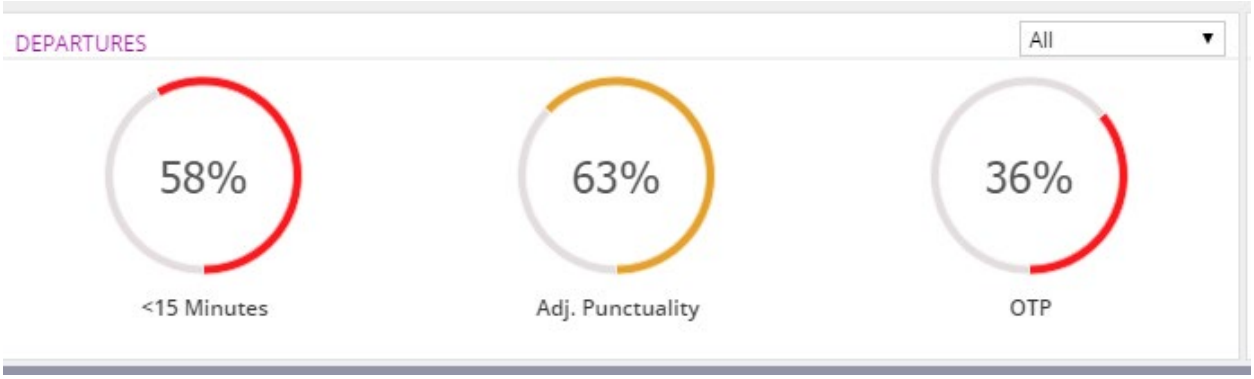


Figure 16: Departures KPI Information on screen

Punctuality is expressed in three ways:

- the percentage of flights that operate within +/- 3 (On time Punctuality-OTP) minutes;
- the percentage of flights that operate within +/- 15 minutes of scheduled time (<15 minutes), and
- the percentage of flights that are within +/- 15 minutes of scheduled time as well as flights which are over 15 minutes of scheduled time but have either been assigned a slot by the network or was delayed because the corresponding inbound was delayed and could not recover within its turn-around time or was delayed due to the airline not requesting start-up to the ATC within 5 minutes of Target Off Block Time (Adj. punctuality).

Flights scheduled between the times selected in the time-scroller are used for calculating the punctuality indicators. In addition, region-wise calculation of these indicators can be viewed based on the selection using the drop-down. The region is based on the destination airport of the flights which are maintained against the region of departure.

Departures punctuality compares AOBT to SOBT. When AOBT is not available, POBT i.e. the predicted time of the flight is used for calculating the punctuality.

The same RAG thresholds apply to the 3 minute (OTP), Adj. Punctual and 15 minute measures:

GREEN – at least 79% of flights operated within 3 or 15 minutes of the scheduled time.

AMBER – between 59% and 79% of flights operated within 3 or 15 minutes of the scheduled time.

RED – less than 59% of flights operated within 3 or 15 minutes of the scheduled time.

3.3.2.4 Cancellations, Night Jets, Schedule Remaining & Passenger Delay Minutes

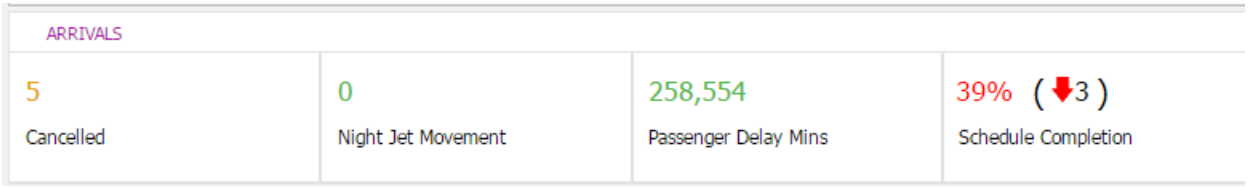


Figure 17: Daily operations information on screen

The Daily Ops section provides a variety of useful statistics:

Flight cancellations	A count of all flights with Cancelled status for the entire day. Click the link to see a list of those flights. This list can be either exported to a pdf or an excel spreadsheet. This is for the entire day of operations.
Schedule Remaining indicator	This provides an indication of how much of the schedule has been completed. The indicative number with the arrow will show the number of flights by which the schedule is over-achieving or under-achieving (Down arrow means less flights than scheduled and up arrow means more flights than scheduled).
Potential night jet movements	A count of all flights expected to operate during the 23:30 – 06:00 night jet period. The flights are categorised as the following: 1. Scheduled between 04:30 and 06:00 for the operational day and arriving/departing between 04:30 and 06:00. These flights are called scheduled flights 2. Scheduled after 06:00 hours and landing/departing before 06:00. These are called Early Running Flights. 3. Scheduled before 23:30 hours for the operational day and landing/departing between 23:31 and 04:30 (next day) – These flights are called Late Running Flights 4. Scheduled before 23:30 hours for the operational day and landing/departing between 04:31 (next day) and 06:00 (next day) – These flights are called Very Late Running Flights This is for the entire day of operations. When the Landing times and Take Off time are not available, the predicted on Block/Off Block times provided by the DCB are used for calculation purposes. Click the link to see a list of these flights. This is for the entire day of operations. This list can be either exported to a pdf or an excel spreadsheet.
Passenger Delay Minutes	This is to display the aggregated number of minutes lost in the day due to the flights not arriving and departing on time. This is the cumulative sum of flight delays (Difference between Actual and Scheduled time) multiplied by the number of passengers in the flight. Clicking on the link provides the passenger delay minutes for each operating airline. On further clicking on the Airline, passenger delay minutes of individual flights operated by the airlines are provided. This list can be either exported to a pdf or an excel spreadsheet.

3.3.2.5 Arrival Route Efficiency & Forecast Punctuality

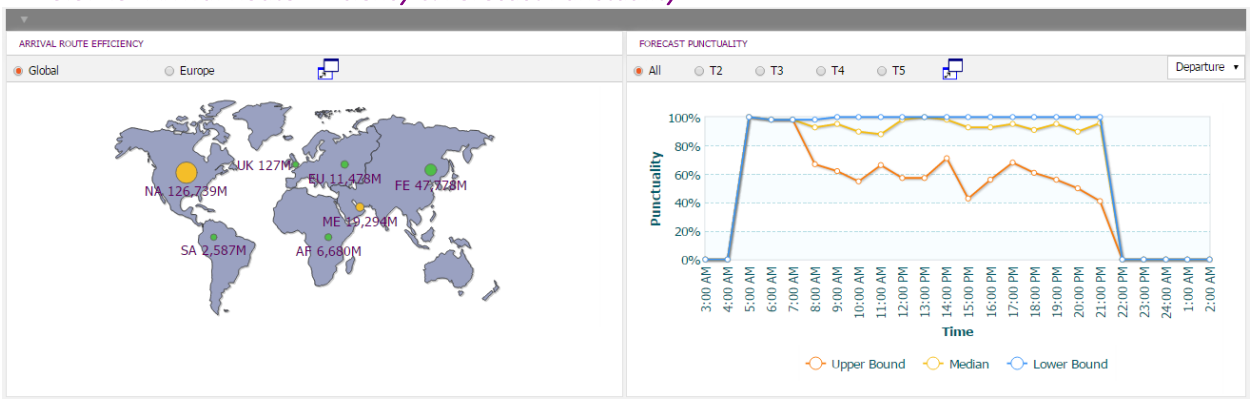


Figure 18:Pictorial Information on screen

Arrival Route Efficiency:

The Arrival route efficiency categorises the punctuality of flights originating from different regions. The user is able to select between the global map and the European map which populates the set of top 25 Airports in Europe. Punctuality calculations is based on the +/- 15 minute punctuality calculations as explained in 3.4.1.1 of this document. The size of the bubble is based on the passenger delay minutes calculated for flights originating from the region. The passenger delay minutes calculations is explained in section 3.4.1.4 of this document.

Clicking on the expansion () button would open a list of the top 25 Airports (by volume of operations) plotted on the global map depicting the punctuality and passenger delay minutes of flights originating from these airports.

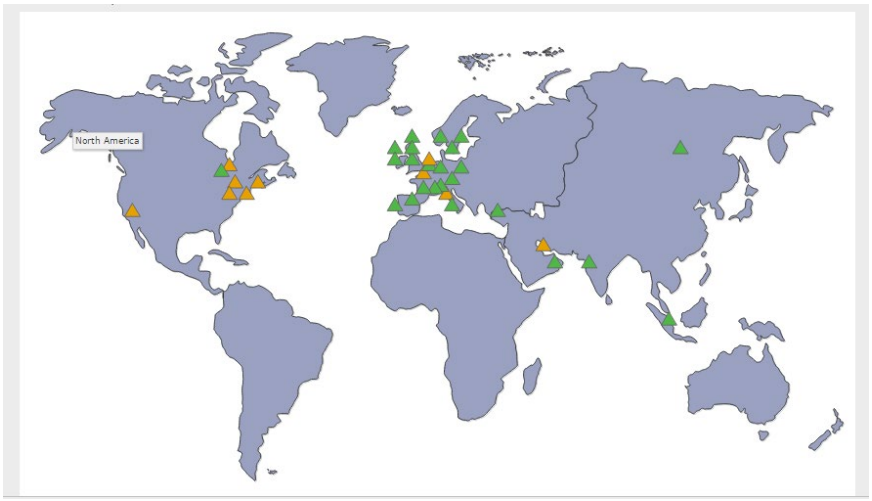


Figure 19: Pictorial Information on screen

Forecast Punctuality:

The Forecast punctuality depicts the punctuality expected at each hour of the operational day. Till current time, Actual Arrivals & Departures data (AIBT/AOBT) is used for the calculation against the schedule. For future hours, the predicted On Block / Off Block times are used to calculate the predictions.

For Future hours, given the confidence in the prediction, the graph plots the punctuality for:

1. The punctuality using the Latest time a flight expected to On Block / Off Block – This line is represented by the line marked Upper Bound.
2. The punctuality using the earliest time a flight is expected to On Block / off Block – This line is represented by the line marked Lower Bound.
3. The punctuality using the most probable time a flight is expected to On Block / off Block – This line is represented by the line marked Median

The closer the three lines coincide with each other, better the quality of prediction for future hours. The user can use the chart to look at the Forecast for both Arrivals as well as Departures. In Addition, they can filter based on the Terminal.

Clicking on the expansion () button would open a scatter chart which will denote the number of minutes by which each flight has missed or expected to miss its scheduled time of operation. The flights are colour coded based on their Port of Call region. The user can click on any region to select or de-select flights on the chart. In addition, clicking on the list view option would provide the same data in a tabular format which the user can download to a pdf or spreadsheet format.

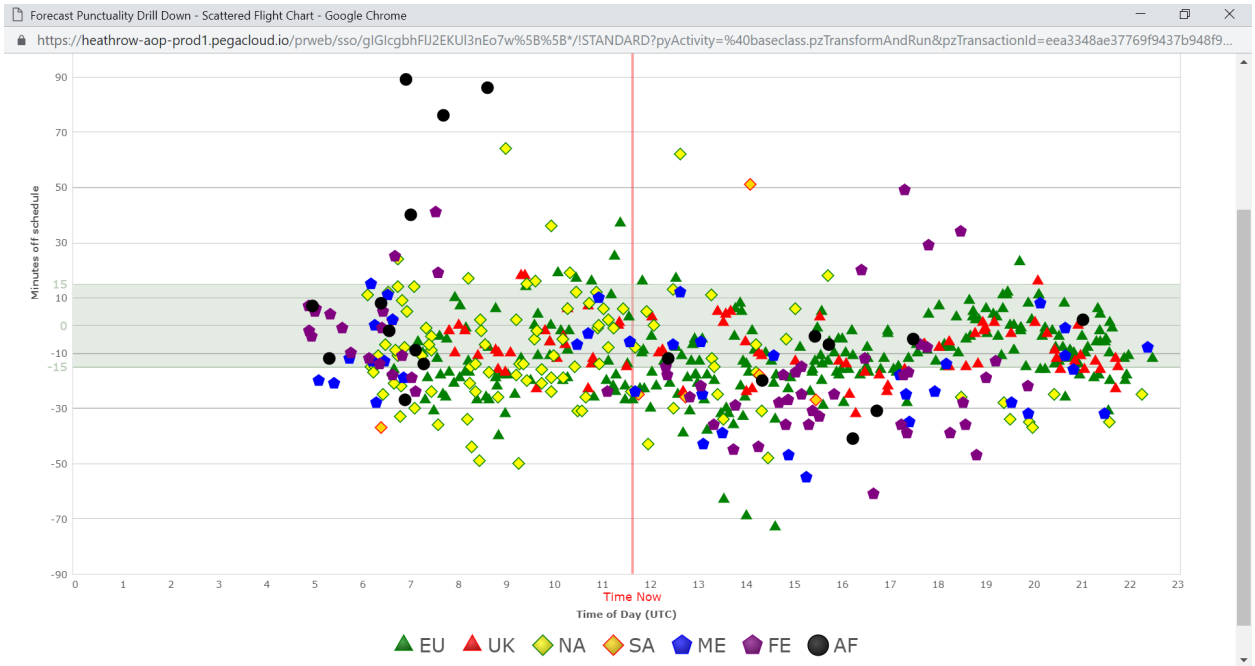
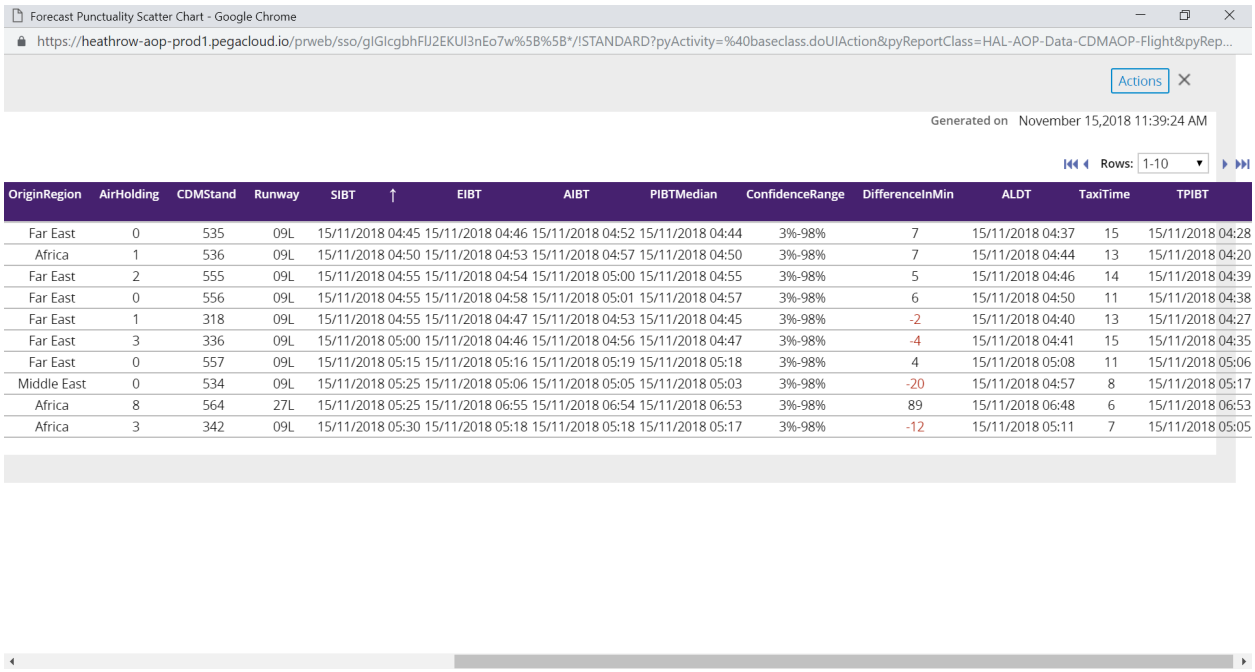


Figure 20: Scattergraph example



OriginRegion	AirHolding	CDMStand	Runway	SIBT ↑	EIBT	AIBT	PIBTMedian	ConfidenceRange	DifferenceInMin	ALDT	TaxiTime	TPIBT
Far East	0	535	09L	15/11/2018 04:45	15/11/2018 04:46	15/11/2018 04:52	15/11/2018 04:44	3%-98%	7	15/11/2018 04:37	15	15/11/2018 04:28
Africa	1	536	09L	15/11/2018 04:50	15/11/2018 04:53	15/11/2018 04:57	15/11/2018 04:50	3%-98%	7	15/11/2018 04:44	13	15/11/2018 04:20
Far East	2	555	09L	15/11/2018 04:55	15/11/2018 04:54	15/11/2018 05:00	15/11/2018 04:55	3%-98%	5	15/11/2018 04:46	14	15/11/2018 04:39
Far East	0	556	09L	15/11/2018 04:55	15/11/2018 04:58	15/11/2018 05:01	15/11/2018 04:57	3%-98%	6	15/11/2018 04:50	11	15/11/2018 04:38
Far East	1	318	09L	15/11/2018 04:55	15/11/2018 04:47	15/11/2018 04:53	15/11/2018 04:45	3%-98%	-2	15/11/2018 04:40	13	15/11/2018 04:27
Far East	3	336	09L	15/11/2018 05:00	15/11/2018 04:46	15/11/2018 04:56	15/11/2018 04:47	3%-98%	-4	15/11/2018 04:41	15	15/11/2018 04:35
Far East	0	557	09L	15/11/2018 05:15	15/11/2018 05:16	15/11/2018 05:19	15/11/2018 05:18	3%-98%	4	15/11/2018 05:08	11	15/11/2018 05:06
Middle East	0	534	09L	15/11/2018 05:25	15/11/2018 05:06	15/11/2018 05:05	15/11/2018 05:03	3%-98%	-20	15/11/2018 04:57	8	15/11/2018 05:17
Africa	8	564	27L	15/11/2018 05:25	15/11/2018 06:55	15/11/2018 06:54	15/11/2018 06:53	3%-98%	89	15/11/2018 06:48	6	15/11/2018 06:53
Africa	3	342	09L	15/11/2018 05:30	15/11/2018 05:18	15/11/2018 05:18	15/11/2018 05:17	3%-98%	-12	15/11/2018 05:11	7	15/11/2018 05:05

Figure 21:Text based breakdown of Scattergraph

3.3.2.6 Turn-Around Measures

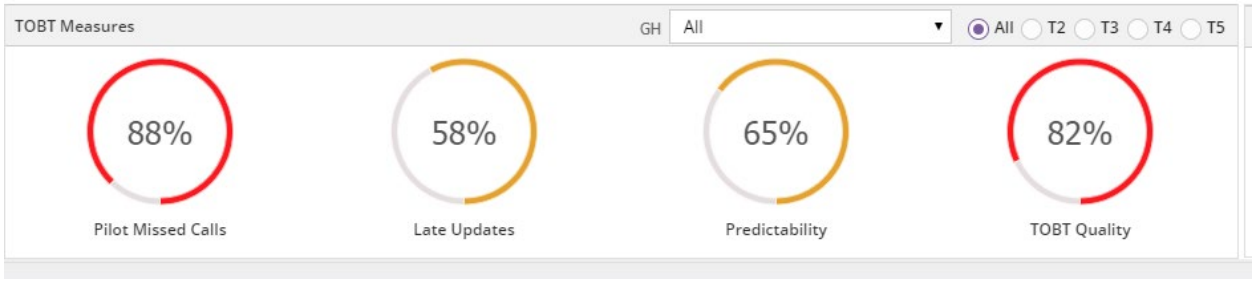


Figure 22 : Turn round visual KPIs

Pilot Missed calls
This measures the % of flights where the pilot called within +/- 5 minutes of the TOBT.

Late Updaters – This measures the % of flights where an TOBT was updated within 10 minutes of the TOBT time.

Predictability –.measures the % of flights with all new TOBT updates giving at least 10 minutes future notice.

TOBT Quality - average of the three measures above. This can be amended should the airport community wish to provide a greater weighting to one of the three areas above than the others.

Delay Codes:

IATA delay codes are used to report commercial flight departure delays by airlines. When entered by the Airline, it provides the code (which provides the cause as well as responsibility of delay) and the duration of the delay.

Users, can see (based on Configuration by Admin) the count of the 4 top-most delay codes that the airport wants to monitor and the total delay these delay codes have caused the Airport. On click of each of the delay codes, a graph populating the count of delay codes associated for each hour will be displayed. This can be filtered based on select airlines who have initiated these delay codes.

Count of CTOTs – Calculated Take-Off Times are issued by the Central Flow Management unit, as a result of tactical slot allocation, at which a flight is expected to become airborne. This is usually assigned to a flight affected by Network Management regulations.

Slot Delay Minutes – calculated as the cumulative sum of minutes lost due to the application of a regulation on a flight .i.e. CTOT – ETOT where CTOT is the calculated take off time assigned by the network and ETOT is the estimate take off time.

3.3.3 Stacks, SIDs & Stand KPIs

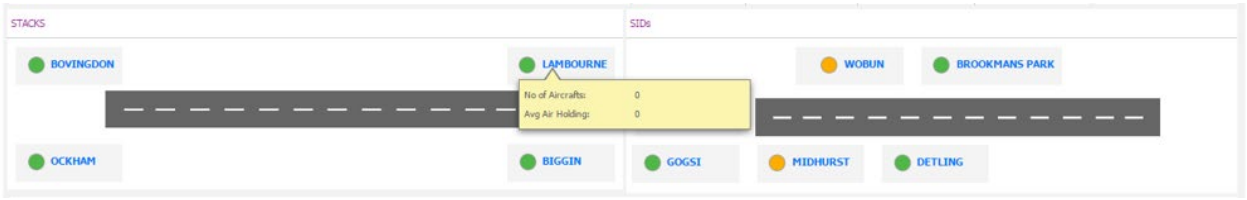


Figure 23: SID and Stack Information on screen

Stacks- Heathrow uses 4 stacks (Aircraft holding areas) for delaying aircraft that have arrived at their destination but cannot land yet because of traffic congestion, poor weather, or runway unavailability (for instance, during snow removal or emergencies). The number of aircrafts using a particular stack and the average number of minutes that an aircraft spends in the stack can be seen on mouse hover.

The RAG status on the stack is based on the Average Air Holding value (in minutes) for the stack.

SIDs – Standard Instrument Departure (SIDs) is a procedure optimized for air traffic control route of flight and strikes a balance between terrain and obstacle avoidance, noise abatement (if necessary), and airspace management considerations. The average hourly throughput, which measures the average number of flights using the SID for a particular hour can be seen on mouse hover. The RAG status on the SID is based on the average hourly throughput.

The SIDs WOBUN and GOGSI change their name to BUZAD and GASGU respectively when the departure runway in use changes from 27(L/R) to 09(L/R).

Stand Availability Look-Up for Next Hour

Figure 24:Forthcoming stand availability Information on screen

The stand availability look up provides the nearest estimate of the number of stands available in each terminal based on the stand capacity (for different stand codes) in each terminal.

The stand availability is calculated based on:
Capacity for each stand type – (Number of flights that have landed and would require stands of the same stand type + Number of flights that are expected to land in the next 1 hour and which would require stands of the same stand type + Number of departing flights which are expected to use the stands in the next one hour which would require stands of the same stand type).

On click of each terminal, a list of flights fulfilling the above parameter with their details will be made available.

3.3.4 Hourly Performance Indicators

This section presents an hourly breakdown of arrivals and departures performance. It is possible to drill down to view performance for a specific terminal by using the drop-down options:

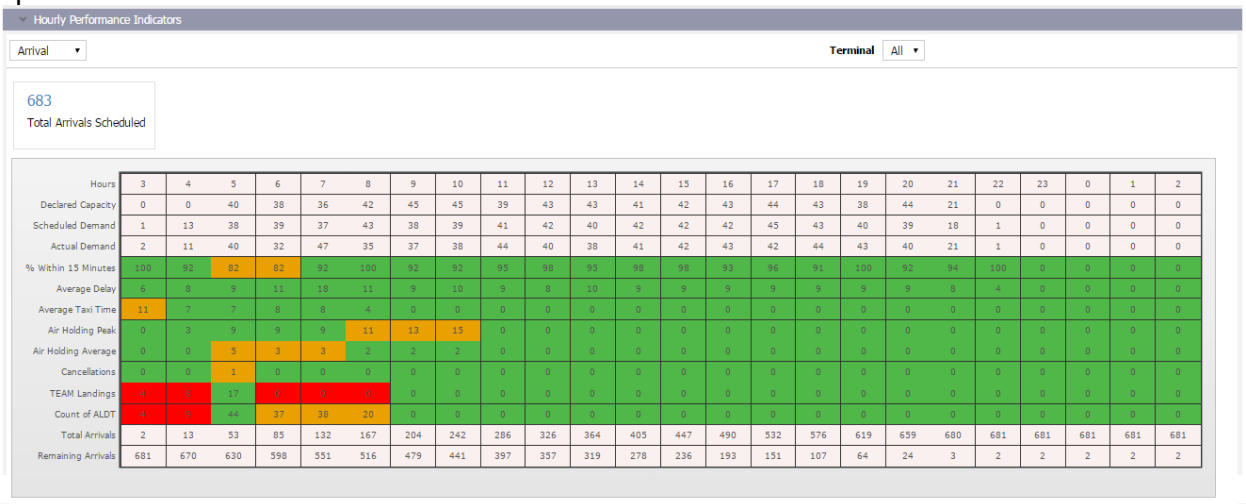


Figure 24: Arrivals metrics

The arrivals chart consists of the following:

Declared Capacity	The number of flights which the airport can accommodate in a particular hour based on season
Scheduled Demand	The number of flights which are scheduled in a particular hour based on ACL excluding cancellations
Actual Demand	The number of flights which have actually In-Blocked/On Stand in a particular hour
% within 15 minutes	The percentage of flights in the hour where they arrived within 15 minutes of SIBT

Average delay	The average AIBT – SIBT value for the hour
Average taxi time	The average time between ALDT and AIBT for the hour
Air holding peak	The maximum air holding time prior to landing for the hour
Air holding average	The average air holding time prior to landing for the hour
Cancellations	Count of flights with Cancelled status with SIBT in the hour
TEAM landings	Count of flights landed on the departure runway in the hour
Count of ALDT	Count of flights which have landed in the hour
Total arrivals	Cumulative counts of arrivals since first landing per hour
Remaining arrivals	Remainder of schedule still to go on blocks.

The departures chart displays similar performance indicators:

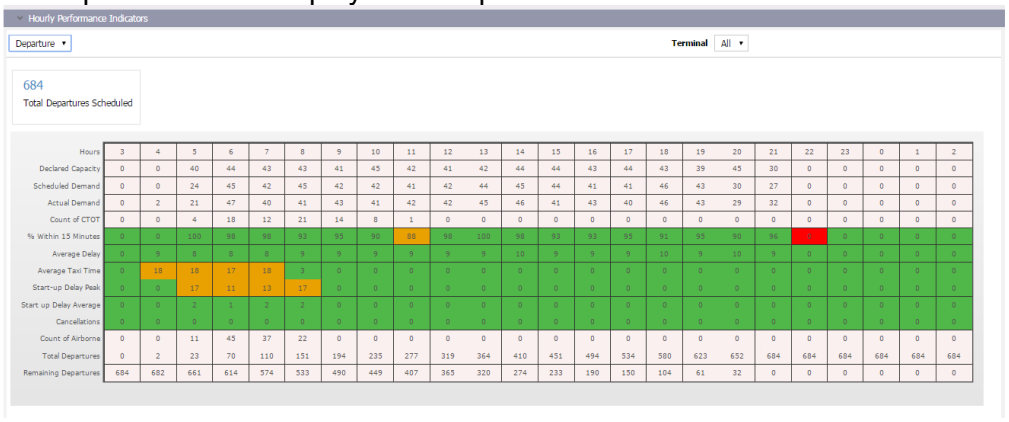


Figure 25: Departures metrics

It consists of the following fields:

Scheduled Demand	The number of flights which are scheduled in a particular hour based on ACL excluding cancellations
Actual Demand	The number of flights which have actually In-Blocked/On Stand in a particular hour
% within 15 minutes	The percentage of flights in the hour where they arrived within 15 minutes of SOBT
Count of CTOT	Shows how many flights have been subject to a CTOT
Average delay	The average AOBT – SOBT value for the hour
Average taxi time	The average time between AOBT and ATOT for the hour
Start-up delay peak	The maximum start-up delay (TSAT – TOBT) in the hour
Start-up delay average	The average start-up delay (TSAT – TOBT) in the hour
Count of CTOT	Count of flights which have been assigned a slot /regulation by the Network in the hour
Remote holds	Number of flights that have pushed and are subject to a remote hold (per hour)
Count of Airborne	Count of flights which have gone Airborne in the hour
Total departures	Cumulative counts of departures (off block) since first departure per hour
Cancellations	Count of flights with Cancelled status with SOBT in the hour

3.4 Flight information menu

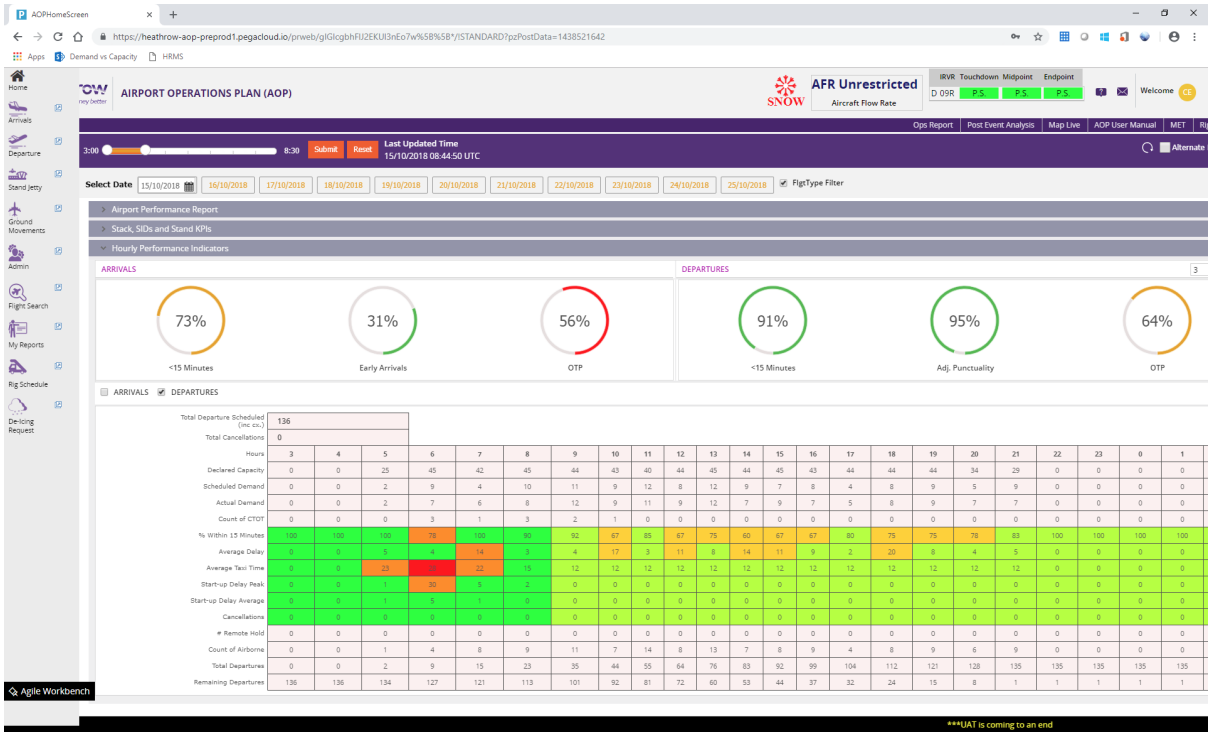


Figure 27: Flight information menu

This menu is expanded once the burger menu icon is selected. It contains the majority of the operational screens used on a day to day basis. Clicking on this menu item produces a list of options:

Which options you see is dependent on your level of access.

De-Icing Request, Rig Schedule and Rig Tracker are described in detail in the A-CDM Snow Module User Guide and are not covered here.

All options now have the ability to be opened in a new window, giving users more flexibility. To open in a new window, click on the window icon next to the selection you wish to open.

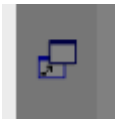
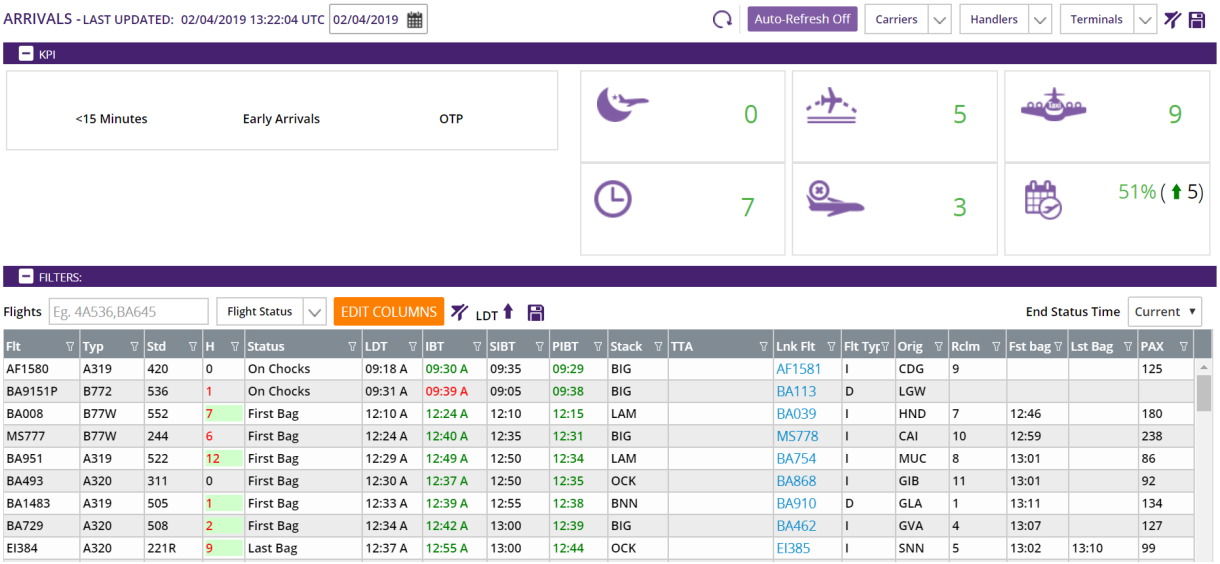


Figure 28: New window icon.

3.4.1 Arrivals

On selecting **Arrivals** from the menu bar, the following screen is displayed:



Flt	Typ	Std	H	Status	LDT	IBT	SIBT	PIBT	Stack	TTA	Lnk Flt	Flt Typ	Orig	Rclm	Fst bag	Lst Bag	PAX
AF1580	A319	420	0	On Chocks	09:18 A	09:30 A	09:35	09:29	BIG		AF1581	I	CDG	9			125
BA9151P	B772	536	1	On Chocks	09:31 A	09:39 A	09:05	09:38	BIG		BA113	D	LGW				
BA008	B77W	552	7	First Bag	12:10 A	12:24 A	12:10	12:15	LAM		BA039	I	HND	7	12:46		180
MS777	B77W	244	6	First Bag	12:24 A	12:40 A	12:35	12:31	BIG		MS778	I	CAI	10	12:59		238
BA951	A319	522	12	First Bag	12:29 A	12:49 A	12:50	12:34	LAM		BA754	I	MUC	8	13:01		86
BA493	A320	311	0	First Bag	12:30 A	12:37 A	12:50	12:35	OCK		BA868	I	GIB	11	13:01		92
BA1483	A319	505	1	First Bag	12:33 A	12:39 A	12:55	12:38	BNN		BA910	D	GLA	1	13:11		134
BA729	A320	508	2	First Bag	12:34 A	12:42 A	13:00	12:39	BIG		BA462	I	GVA	4	13:07		127
EI384	A320	221R	9	Last Bag	12:37 A	12:55 A	13:00	12:44	OCK		EI385	I	SNN	5	13:02	13:10	99

Figure 29: Arrivals screen

This screen displays arrival flight information for the current operational day.

The screen will refresh every 30 seconds if auto-refresh is set to on Auto-Refresh On . Click this button to toggle auto-refresh on or off.

If auto-refresh is off, click the manual refresh button to update the page. It is recommended to keep auto-refresh on.

Target Time of Arrival (TTA) is currently being used to manage the flow of traffic to the airpoort by smoothig out hot spots. It does not apply to long hiul traffic and will no be applied unless there is a forecast of air holding that is sub optmal.

Click on the help icon for a summary of the terms used on the page and an explanation of the colour coding used for Air Holding and IBT values.

In Addition, you can select a date in the future (up to 180 days) to see the list of flights scheduled for the day and their predicted time of arrivals. However, not all attributes listed below would be available for the future days.

The flight number will be coloured red if it is on Final Approach or Amber when it is Zoning.

BA665	BAW665	GEUYA	A320	515	*	Final Approach
AT800	RAM800F	CNRGI	B738	425		Final Approach
LH914	DLH2WE	DAIQT	A320	224		Zoning
CA937	CCA937	B2033	B77W			Zoning

Figure 30: Flight number shading

Data that has been updated will be shaded yellow. The shading will remain for 30 seconds to help highlight the change:

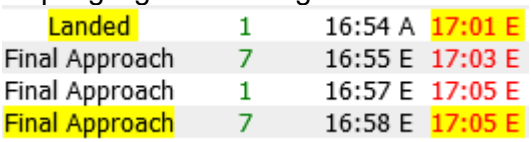
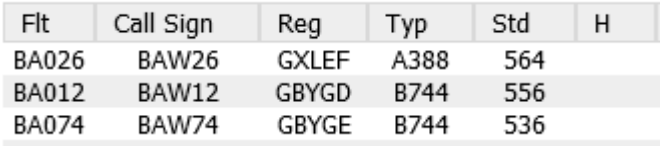


Figure 31: Update shading

The default sort order is by landing time. This can be changed by clicking any of the column headings.

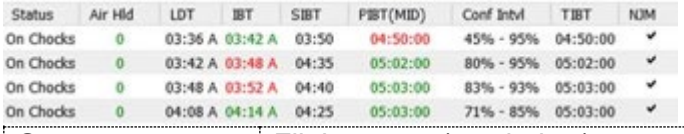
3.4.1.1 Arrivals flight display

The arrivals screen contains the following columns available to all levels of access:



Flt	Call Sign	Reg	Typ	Std	H
BA026	BAW26	GXLEF	A388	564	
BA012	BAW12	GBYGD	B744	556	
BA074	BAW74	GBYGE	B744	536	

Flt	IATA flight number
Call Sign	ICAO flight number
Reg	Aircraft registration
Typ	Aircraft type
Std	Assigned stand
TTA	Target Time of Arrival -only populatse is TTA is accepted.
H	Stand holding; H = currently holding for a stand (aircraft may not yet be landed), * = was holding for a stand



Status	Air Hld	LDT	IBT	SIBT	PIBT(MID)	Conf Intvl	TIBT	NJM
On Chocks	0	03:36 A	03:42 A	03:50	04:50:00	45% - 95%	04:50:00	✔
On Chocks	0	03:42 A	03:48 A	04:35	05:02:00	80% - 95%	05:02:00	✔
On Chocks	0	03:48 A	03:52 A	04:40	05:03:00	83% - 93%	05:03:00	✔
On Chocks	0	04:08 A	04:14 A	04:25	05:03:00	71% - 85%	05:03:00	✔

Status	Flight status (see below)
Air Hld	Number of minutes air holding (actual or estimated, depending on whether the aircraft has landed)
LDT	Landing time; A = actual, E = estimated
IBT	In-blocks time; A = actual, E = estimated
SIBT	Scheduled In-Blocks Time
PIBT (MID)	Predicted In-Block Time (median Value)
Conf Intvl	Range of confidence in the prediction
TIBT	Target In Block Time (Time at which the Plan was agreed to operate to)
NJM	Potential Night Flight (Predicted)

The IBT RAG status gives a quick visual indication of any schedule shift. Values are colour coded according to their variance away from SIBT:

- Where IBT is +/- 15 minutes compared to SIBT the time will be shown in green.
- Where IBT is +/- 16 to 29 minutes compared to SIBT the time will be shown in amber.
- Where IBT is +/- 30 minutes compared to SIBT the time will be shown in red.

The PIBT RAG status gives a quick visual indication of the confidence / correctness of the prediction. Values are colour coded according to the difference between the confidence intervals

- Where confidence interval varies within 20% the time will be shown in green.
- Where confidence interval varies between 20% and 40% the time will be shown in amber.
- Where confidence interval varies more than 40% the time will be shown in red.

Flight status will take one of the following values, according to its progress:

Scheduled	Flight details are as per the seasonal schedule
Estimated	Flight plan has been filed
Expected	En-route flight planning data has been received (does not confirm airborne)
Zoning	Aircraft is in the local TMA, within 20 minutes of landing
Final Approach	Aircraft is lined up for landing
Landed	Aircraft has landed
On Chocks	Aircraft in on stand
First Bag	First bag time received (turn-round in progress)
Last Bag	Last bag time received (arrival process complete)

Stack	Rwy	Lnk Flt	Flt Typ	Orig
OCK	27L	BA285	I	ACC
BIG	27L	EK008	I	DXB
OCK	27R	VS045	I	JFK

Stack	Holding stack the aircraft passed through (or will pass through)
Rwy	Runway the aircraft landed on (or will land on)
Lnk Flt	Linked outbound flight (click to view outbound flight details)
Flt Typ	Type of flight; I = international, D = domestic
Orig	Originating airport

Rclm	Fst bag	Lst Bag
9	08:02	08:31
08	08:05	08:31
5	08:08	08:33

Rclm	Assigned baggage reclaim belt
Fst bag	Timestamp of first bag onto reclaim
Lst bag	Timestamp of last bag onto reclaim

The following columns are restricted and not visible to all users:

PAX	PAXT	WC	UM
306			
157	13	1	2
491	16		

PAX	Total number of passengers on board
PAXT	Number of transfer passengers
WC	Number of wheelchair passengers (PRMs)
UM	Number of unaccompanied minors

3.4.1.2 Filtering data

There are many ways to filter the list of flights. It is recommended to turn off auto-refresh before applying a filter as the screen may refresh before you have selected all your options and, when using the drop-down menus, you may lose your selections.

If you wish to make your filter permanent, so it does not need resetting each time you launch AOP, click the save icon Save Filter when you are happy with your selections (remember to turn auto-refresh on before saving).

The filters described below can be used independently or together. Care should be taken as too many concurrent filters may not produce the expected result.

FLIGHTS

Flights

Type in one or more IATA flight numbers, separated by a comma, and press Enter to view only those flights:

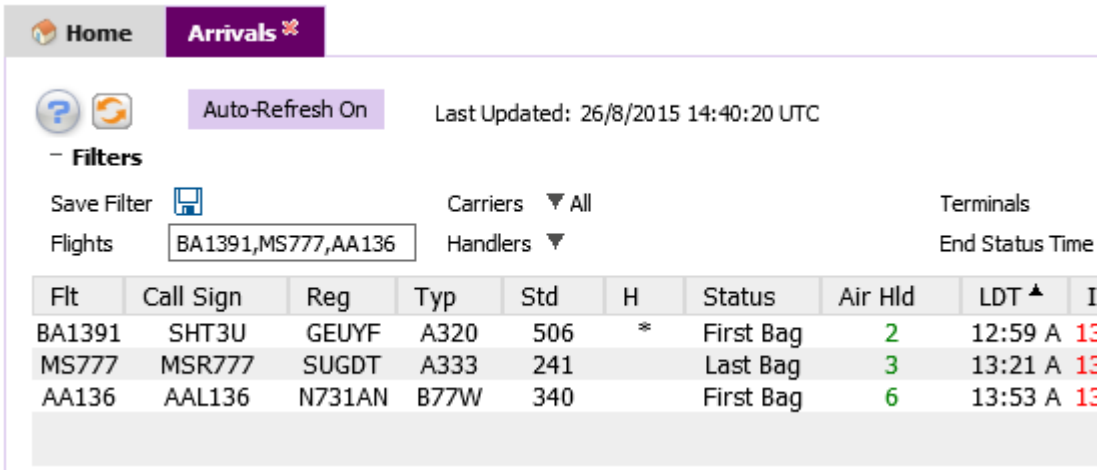
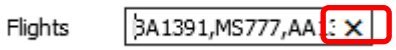


Figure 32: Flights filter

This is also a useful way to search for a flight operating today. If you do use it for searching, you will obtain more complete results if End Status Time is set to 00:00 (see below for more information).

To clear your selection, click once in the Flights field and click the **x**



Then press Enter.

CARRIERS

The carriers filter is a multi-select, searchable list:

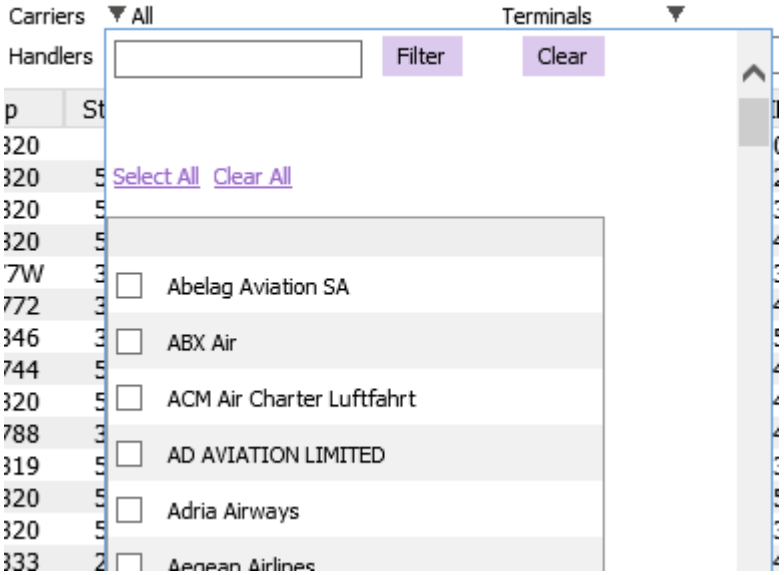


Figure 33: Carriers filter

You can select one or more airlines by scrolling through the list and ticking the ones you wish to list. There is also an intelligent filter that will start to work out the airline you are selecting once you have inputted the first three letters of the full airline name.

At the very bottom of the list click OK to confirm your selection, or Cancel to return without making any changes:

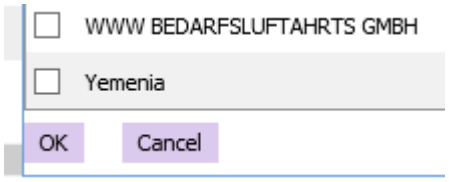


Figure 34: Confirm selection

If you wish to remove your filter, click Clear All at the top, then scroll to the bottom and click OK.

To search the list, enter one or more search terms separated by a comma and click Filter:

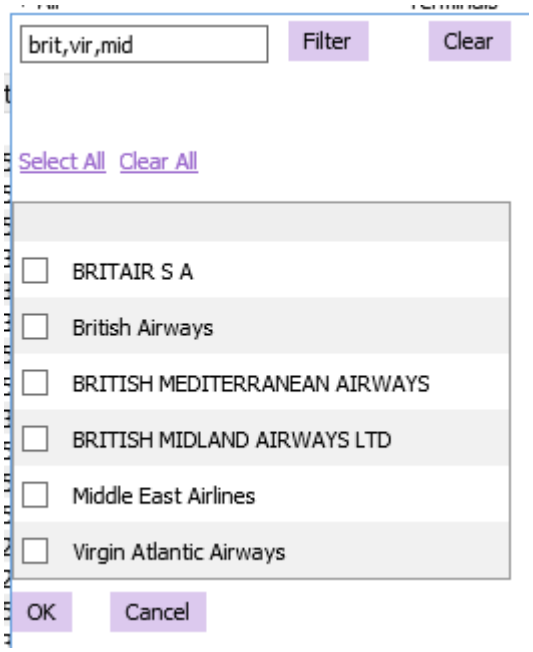


Figure 35: Keyword filter

The list will then display those airlines that contain the search terms you have entered.

As before, tick those you want to see and click OK.

To add more airlines to your filter, simply select them using one of these methods.

HANDLERS

The Handlers filter functions in exactly the same way as the Carriers filter.

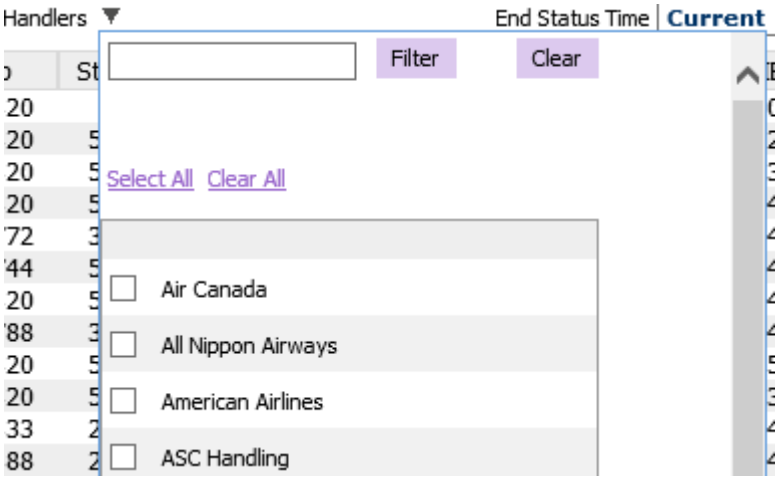


Figure 36: Handlers filter

If you select one or more handlers, the display will only show flights for airlines assigned to those ground handlers. This relates to below-wing handling, where multiple handlers are used by an airline.

TERMINALS

Should you only be interested in flights arriving to a specific terminal, you can select those using this filter:

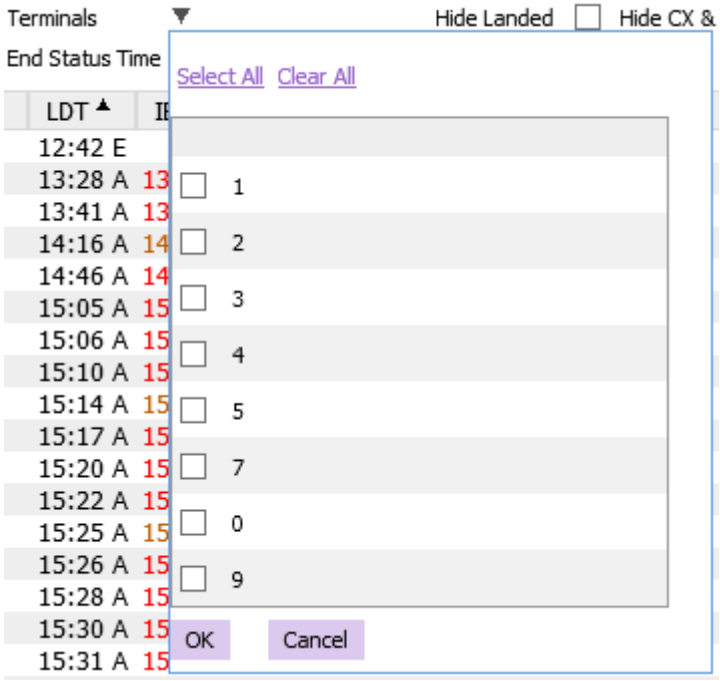


Figure 37: Terminal filter

Select the terminal(s) you require and click OK.

END STATUS TIME

This allows you to start the display of flights from a specific time of day. Earlier flights will not be shown.

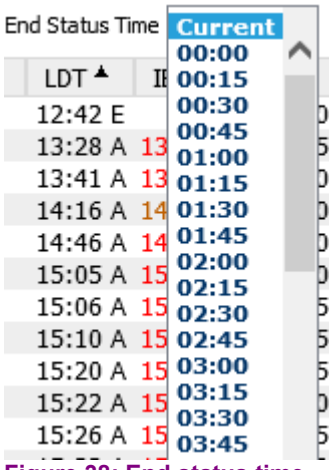


Figure 38: End status time

The default setting is ‘Current’ which shows flights where Last Bag time was within 15 minutes of the current time.

If you changed the setting to 06:00, you would see all flights where Last Bag time was from 05:45 onwards.

Changing the setting to 00:00, recommended if using the Flights field to search, you will see all flights from the start of the operational day.

This does not work if you have 'Hide In-Block' or 'Hide Landed' ticked (see below) as these settings override the selected time value.

ADDITIONAL FILTER OPTIONS

AOP allows you to filter your screen dependant on the status of the flight. To action this from the Arrivals screen simply select the Flight Status box and select the flight status(es) you wish to see:

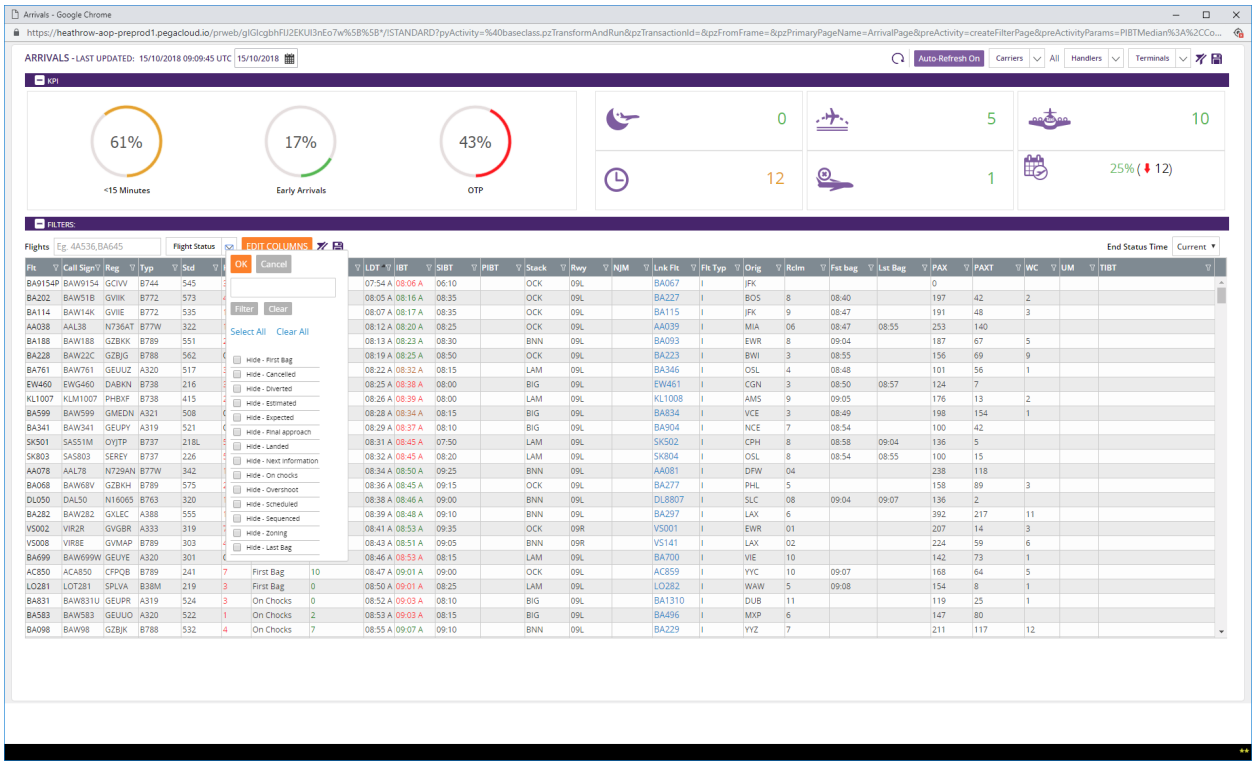


Figure 39: Additional filter options

3.4.1.3 Viewing flight details

A quick summary of the flight information is available by right-clicking the flight row. A pop-up box will display:

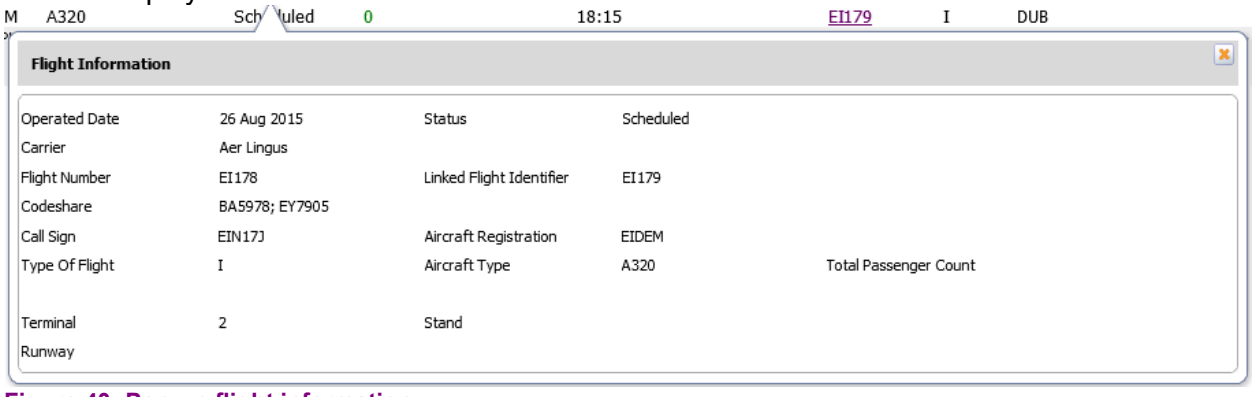


Figure 40: Pop-up flight information

Click the **x** to the top right of the box to close it.

If additional information is required, left-click once and a new tab within A-CDM will open:

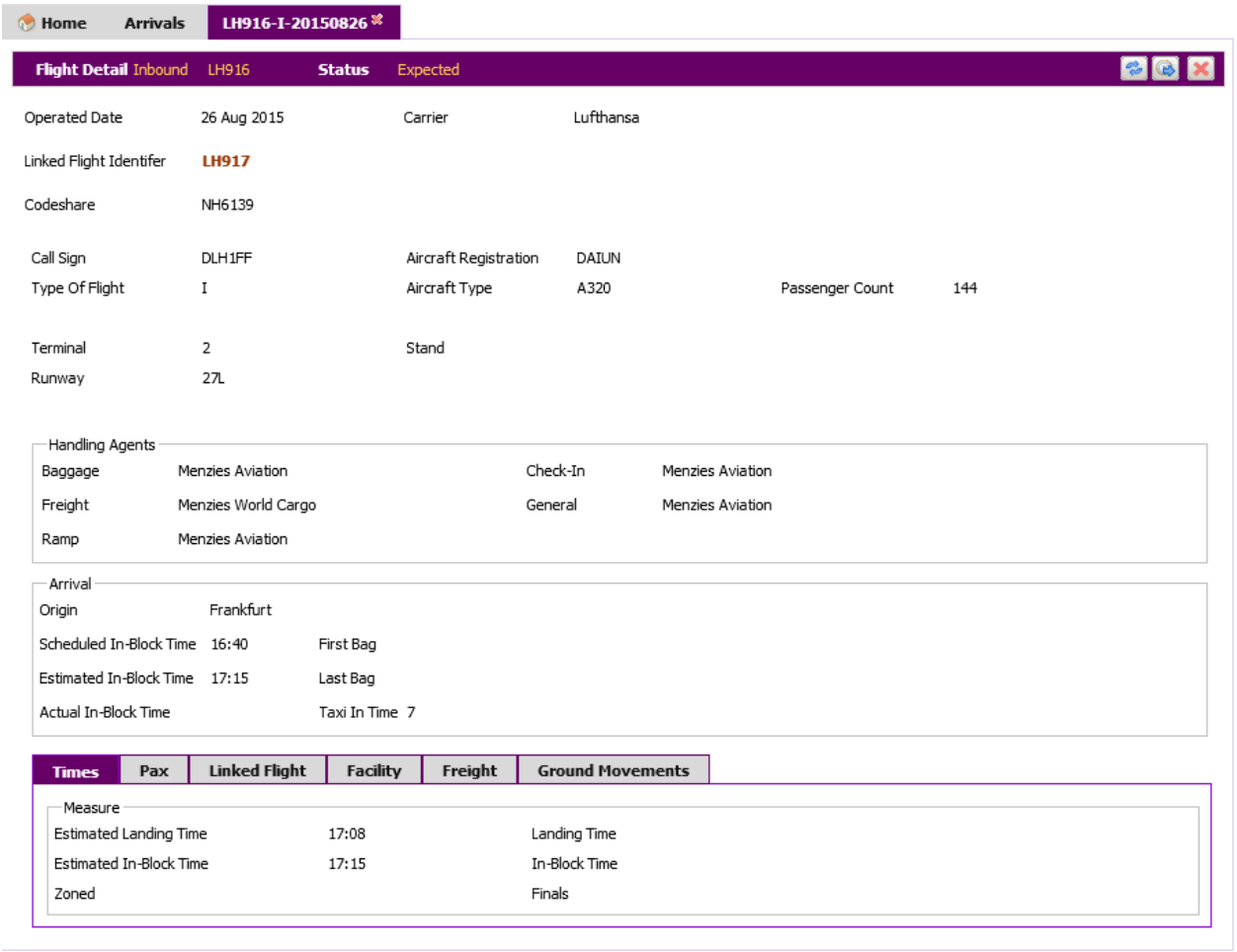


Figure 41: Flight details page

The tabs you can see at the bottom of the screen is dependent on your level of access.

The page will not automatically update. To see the latest data click the refresh  icon to the top right.

To view the flight message history click the history icon  . A new window or tab will open in your browser:

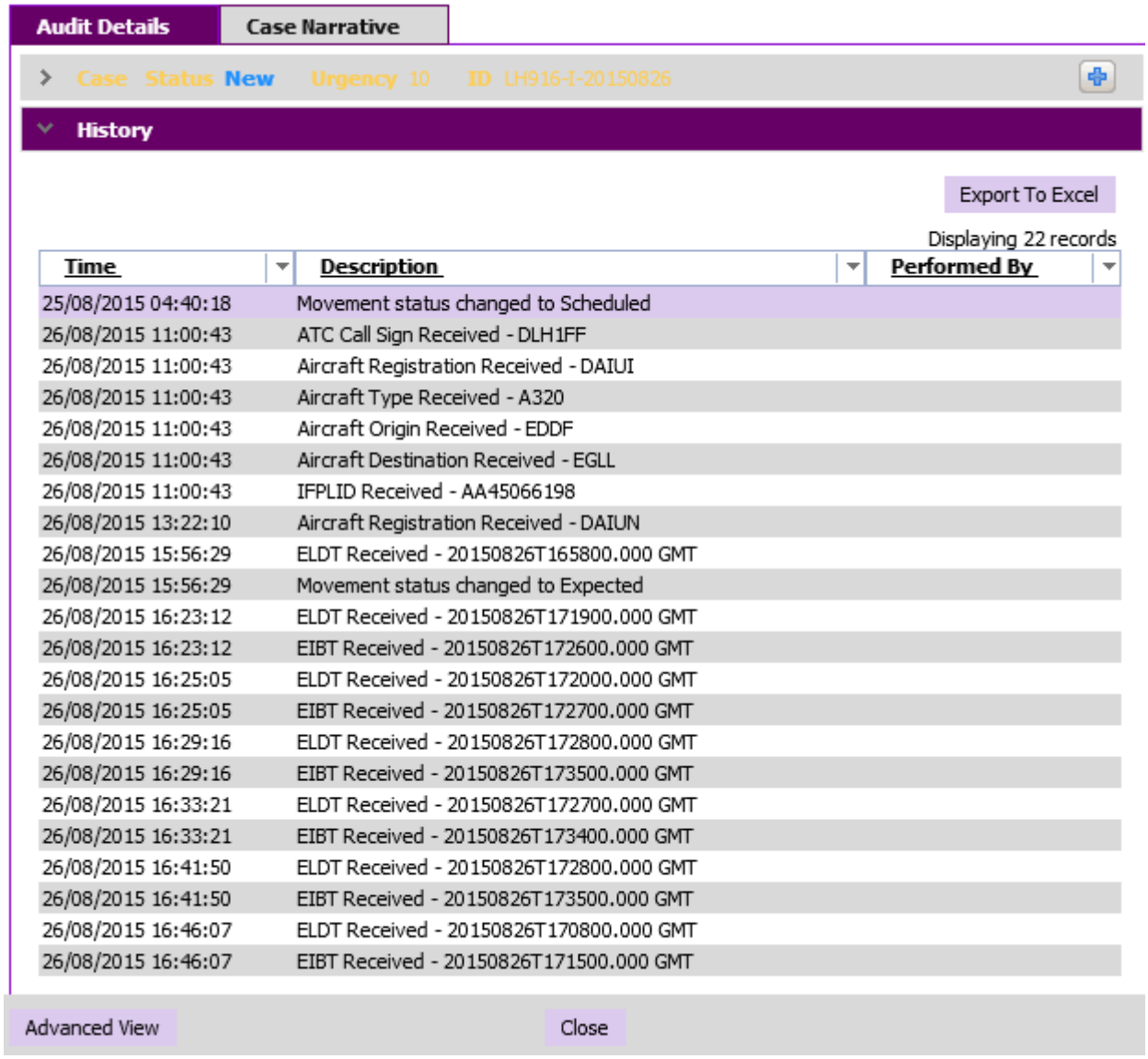
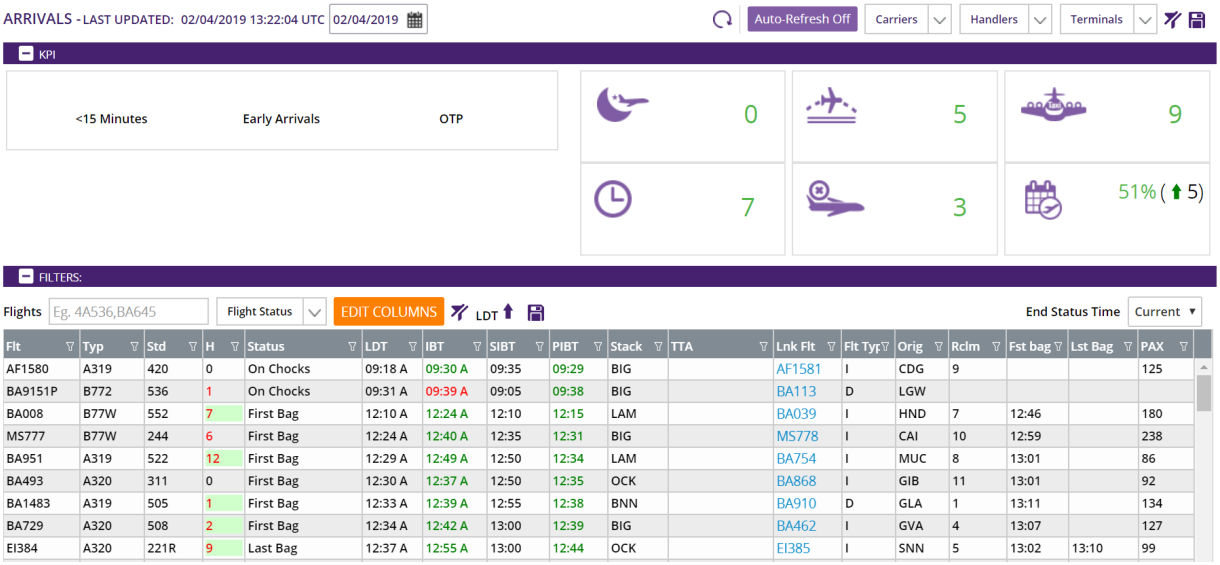


Figure 42: Flight history

You can click on the Export To Excel button to save the data in Excel format (see Appendix x).

3.4.2 Departures

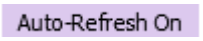
On selecting **Departures** from the menu bar, the following screen is displayed:



Flt	Typ	Std	H	Status	LDT	IBT	SIBT	PIBT	Stack	TTA	Lnk Flt	Flt Typ	Orig	Rclm	Fst bag	Lst Bag	PAX
AF1580	A319	420	0	On Chocks	09:18 A	09:30 A	09:35	09:29	BIG		AF1581	I	CDG	9			125
BA9151P	B772	536	1	On Chocks	09:31 A	09:39 A	09:05	09:38	BIG		BA113	D	LGW				
BA008	B77W	552	7	First Bag	12:10 A	12:24 A	12:10	12:15	LAM		BA039	I	HND	7	12:46		180
MS777	B77W	244	6	First Bag	12:24 A	12:40 A	12:35	12:31	BIG		MS778	I	CAI	10	12:59		238
BA951	A319	522	12	First Bag	12:29 A	12:49 A	12:50	12:34	LAM		BA754	I	MUC	8	13:01		86
BA493	A320	311	0	First Bag	12:30 A	12:37 A	12:50	12:35	OCK		BA868	I	GIB	11	13:01		92
BA1483	A319	505	1	First Bag	12:33 A	12:39 A	12:55	12:38	BNN		BA910	D	GLA	1	13:11		134
BA729	A320	508	2	First Bag	12:34 A	12:42 A	13:00	12:39	BIG		BA462	I	GVA	4	13:07		127
EI384	A320	221R	9	Last Bag	12:37 A	12:55 A	13:00	12:44	OCK		EI385	I	SNN	5	13:02	13:10	99

Figure 43: Departures screen

This screen displays departure flight information for the current operational day.

The screen will refresh every 30 seconds if auto-refresh is set to on 

. Click this button to toggle auto-refresh on or off.

If auto-refresh is off, click the manual refresh button  to update the page. It is recommended to keep auto-refresh on.

In Addition, you can select a date in the future (up to 180 days) to see the list of flights scheduled for the day and their predicted time of arrivals. However, not all attributes listed below would be available for the future days.

Click on the help icon  for a summary of the terms used on the page and an explanation of the colour coding used for EOBT, TOBT, TSAT, AOBT, at TOT values.

If a flight has an active alert, the whole row will be shaded yellow (see Section 3.4.2.4)

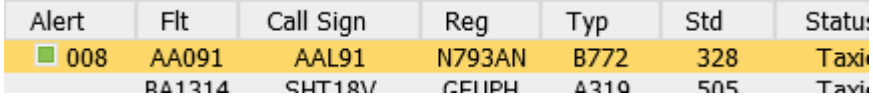


Figure 44: Flight alert shading

Data that has been updated will be shaded yellow. The shading will remain for 30 seconds to help highlight the change:

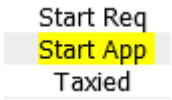
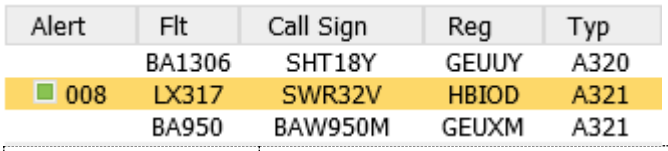


Figure 45: Update shading

The default sort order is by SOBT. This can be changed by clicking any of the column headings.

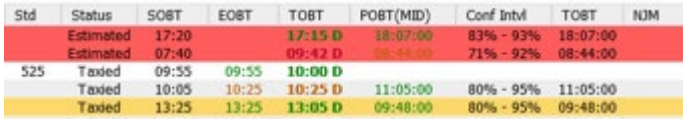
3.4.2.1 Departures flight display

The departures screen contains the following columns. Where colour coding is used, this helps to indicate shifts in the schedule and/or ground delay:



Alert	Flt	Call Sign	Reg	Typ
	BA1306	SHT18Y	GEUUY	A320
008	LX317	SWR32V	HBIOD	A321
	BA950	BAW950M	GEUXM	A321

Alert	Indicates a flight alert is active (see Section x.x)
Flt	IATA flight number
Call Sign	ICAO flight number
Reg	Aircraft registration
Typ	Aircraft type



Std	Status	SOBT	EOBT	TOBT	POBT(MID)	Conf Intvl	TOBT	NJM
	Estimated	17:20		17:15 D	18:07:00	83% - 93%	18:07:00	
	Estimated	07:40		09:42 D	08:44:00	71% - 92%	08:44:00	
525	Taxied	09:55	09:55	10:00 D				
	Taxied	10:05	10:25	10:25 D	11:05:00	80% - 95%	11:05:00	
	Taxied	13:25	13:25	13:05 D	09:48:00	80% - 95%	09:48:00	

Std	Assigned stand
Status	Flight status (see below)
SOBT	Scheduled Off Blocks Time
EOBT	Estimated Off Blocks Time (flight plan) Colour coded in comparison to SOBT: **Green** +/- 15 minutes **Amber** +/- 16 – 29 minutes **Red** +/-30 minutes
TOBT	Target Off Blocks Time Colour coded in comparison to SOBT: **Green** +/- 15 minutes **Amber** +/- 16 – 29 minutes **Red** +/-30 minutes
POBT (Mid)	Predicted Off Block time (median Value)
Conf Intvl	Range of confidence in the prediction
TIBT	Target In Block Time (Time at which the Plan was agreed to operate to)
NJM	Potential Night Flight (Predicted)

Flight status will take one of the following values, according to its progress:

Scheduled	Flight details are as per the seasonal schedule
Expected	Flight plan has been filed
Estimated	Additional flight planning data has been received
Gate Open	Departure gate is open
Boarding	Aircraft boarding in progress
Last Call	Gate closing
Start Req	Pilot has requested start-up approval
Start App	ATC have given start-up approval
Taxied	Aircraft is off blocks, taxiing
Remote Hold	Aircraft is waiting at a remote hold location for their departure slot (e.g. during lengthy regulation to keep stands clear)
Airborne	Aircraft has taken off

Next Information	There is an issue with the flight and the turn-round process has been temporarily halted

Strt Req	TSAT	AOBT	TOT
	08:16	08:19	08:33 T
	08:12	08:12	08:35 T
	08:15	08:17	08:39 T

Strt Req	Start request indicator; Green flag = start requested, Red flag = start request no received within TOBT + 5 minutes, Number (-5 to +5) = TOBT count-down timer
TSAT	Target Start-up Approval Time Colour coded in comparison to TOBT: **Green** +/- 1 – 5 minutes **Amber** +/- 6 – 14 minutes **Red** +/-15 minutes or more
AOBT	Actual Off Blocks Time Colour coded in comparison to SOBT: **Green** +/- 15 minutes **Amber** +/- 16 – 29 minutes **Red** +/-30 minutes
TOT	Take-Off Time; A = Actual, T = Target, C = Calculated (regulation/slot)

If the airfield status has been set to SNOW/Winter Operations columns relating to aircraft anti-icing appear on the departure screen. These are addressed in the Winter Operations manuals including the Heathrow Snow Plan Airside (HSPA) and Heathrow Airport De-icing Plan (HADIP).

Rwy	Lnk Flt	Dest	SID
27L	BA443	TLS	MID3G
27L	BA433	BGO	BPK7G
27L	BA327	STR	DET2G

Rwy	Runway aircraft took off from (or will take off from)
Lnk Flt	Linked inbound flight (click to view inbound flight details)
Dest	Destination airport
SID	Standard Instrument Departure – the departure route filed

3.4.2.2 Filtering data

There are many ways to filter the list of flights. It is recommended to turn off auto-refresh before applying a filter as the screen may refresh before you have selected all your options and, when using the drop-down menus, you may lose your selections.

If you wish to make your filter permanent, so it does not need resetting each time you launch A-CDM, click the save icon Save Filter when you are happy with your selections (remember to turn auto-refresh on before saving).

The filters described below can be used independently or together. Care should be taken as too many concurrent filters may not produce the expected result.

FLIGHTS

Flights

Type in one or more IATA flight numbers, separated by a comma, and press Enter to view only those flights:

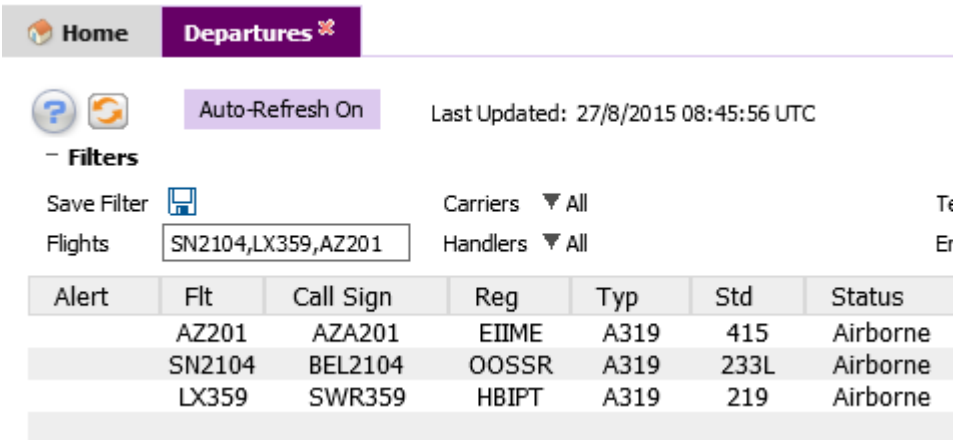
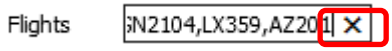


Figure 46: Flights filter

This is also a useful way to search for a flight operating today. If you do use it for searching, you will obtain more complete results if End Status Time is set to 00:00 (see below for more information).

To clear your selection, click once in the Flights field and click the **x**



Then press Enter.

CARRIERS

The carriers filter is a multi-select, searchable list:

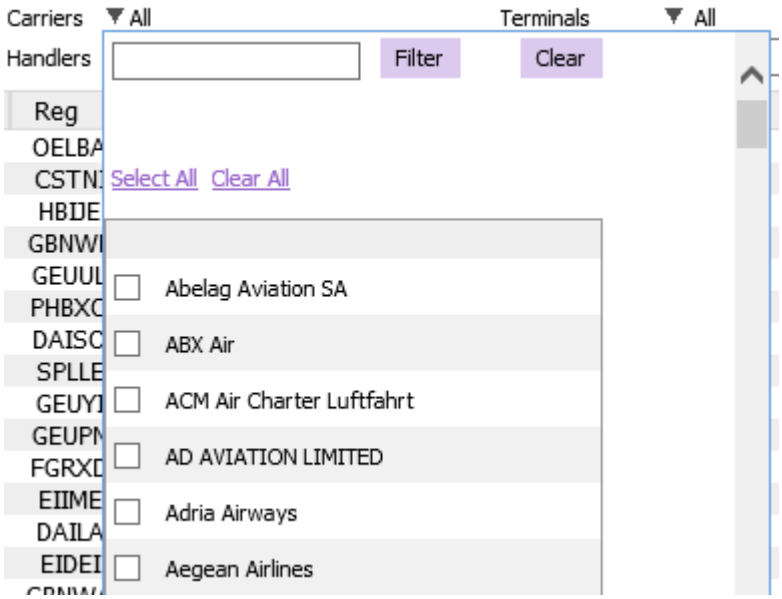


Figure 47: Carriers filter

You can select one or more airlines by scrolling through the list and ticking the ones you wish to list.

At the very bottom of the list click OK to confirm your selection, or Cancel to return without making any changes:

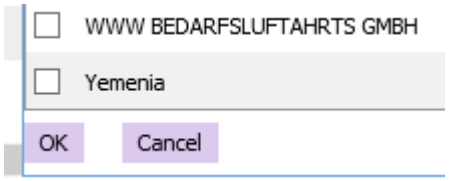


Figure 48: Confirm selection

If you wish to remove your filter, click Clear All at the top, then scroll to the bottom and click OK.

To search the list, enter one or more search terms separated by a comma and click Filter:

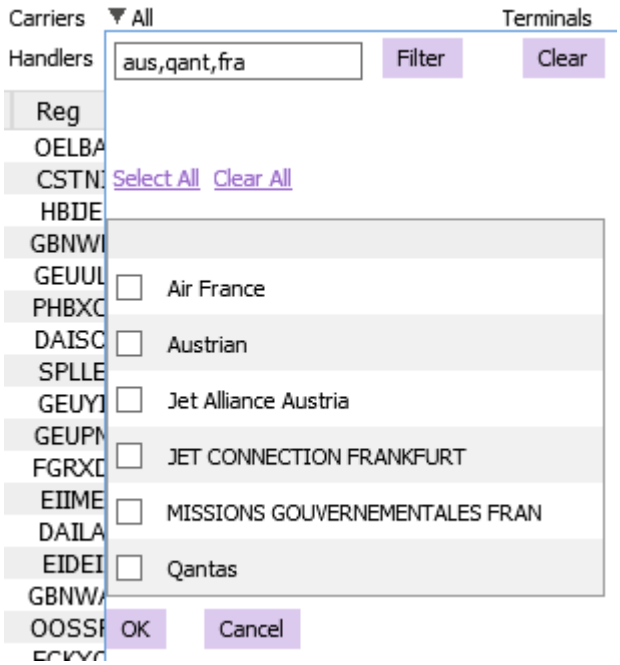


Figure 49: Keyword filter

The list will then display those airlines that contain the search terms you have entered.

As before, tick those you want to see and click OK.

To add more airlines to your filter, simply select them using one of these methods.

HANDLERS

The Handlers filter functions in exactly the same way as the Carriers filter.

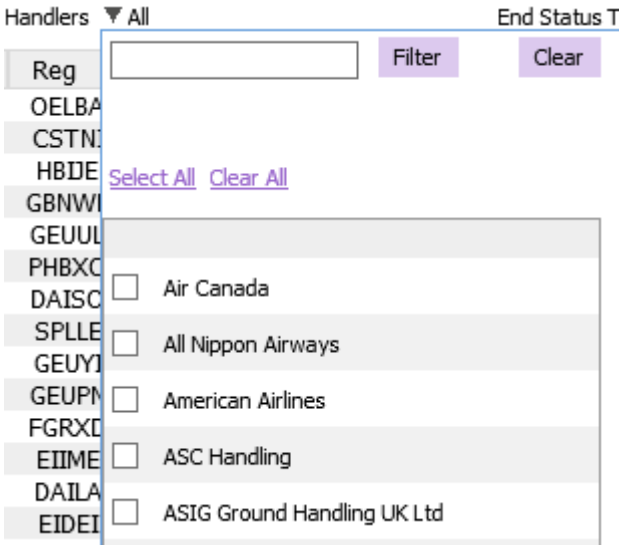


Figure 50: Handlers filter

If you select one or more handlers, the display will only show flights for airlines assigned to those ground handlers. This relates to below-wing handling, where multiple handlers are used by an airline.

During Winter Operations it is also possible to filter via De-icing Service Providers (DSP).

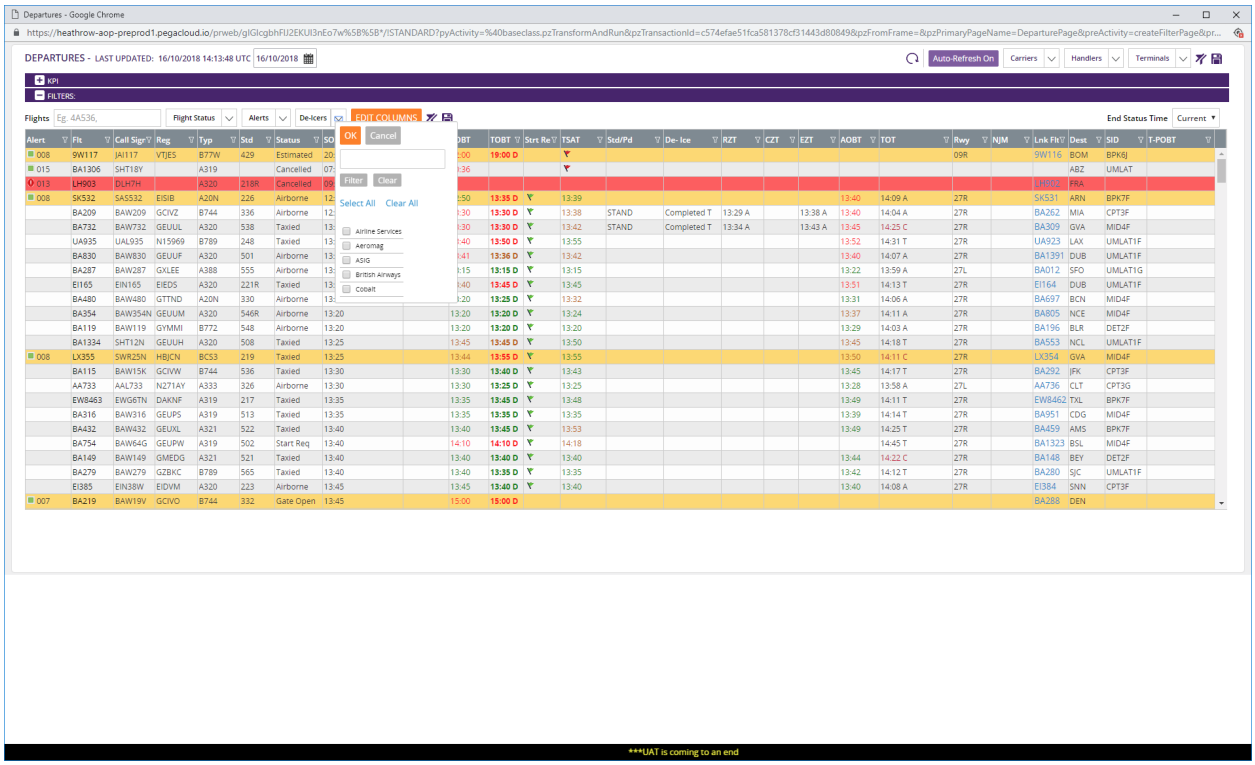


Figure 51: DSP filter

TERMINALS

Should you only be interested in flights arriving to a specific terminal, you can select those using this filter:

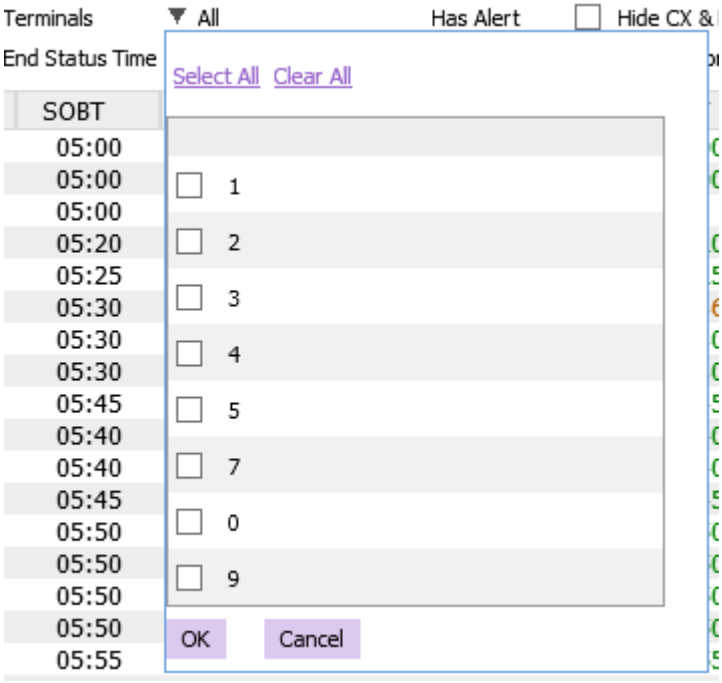


Figure 526: Terminal filter

Select the terminal(s) you require and click OK.

END STATUS TIME

This allows you to start the display of flights from a specific time of day. Earlier flights will not be shown.

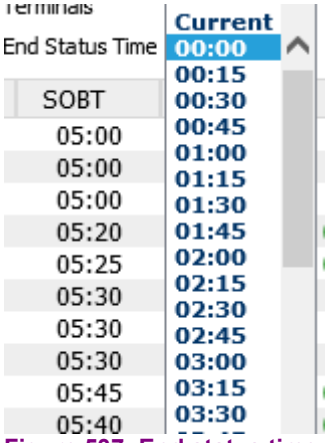


Figure 537: End status time

The default setting is ‘Current’ which shows flights where ATOT (Actual Take-Off Time) was within 15 minutes of the current time.

If you changed the setting to 06:00, you would see all flights where ATOT was from 05:45 onwards.

Changing the setting to 00:00, recommended if using the Flights field to search, you will see all flights from the start of the operational day.

This does not work if you have ‘Hide Off-Block’ or ‘Hide Airborne’ ticked (see below) as these settings override the selected time value.

ADDITIONAL FILTER OPTIONS

AOP allows you to filter your screen dependant on the status of the flight. To action this from the Departures screen simply select the Flight Status box and select the flight status(es) you wish to see:

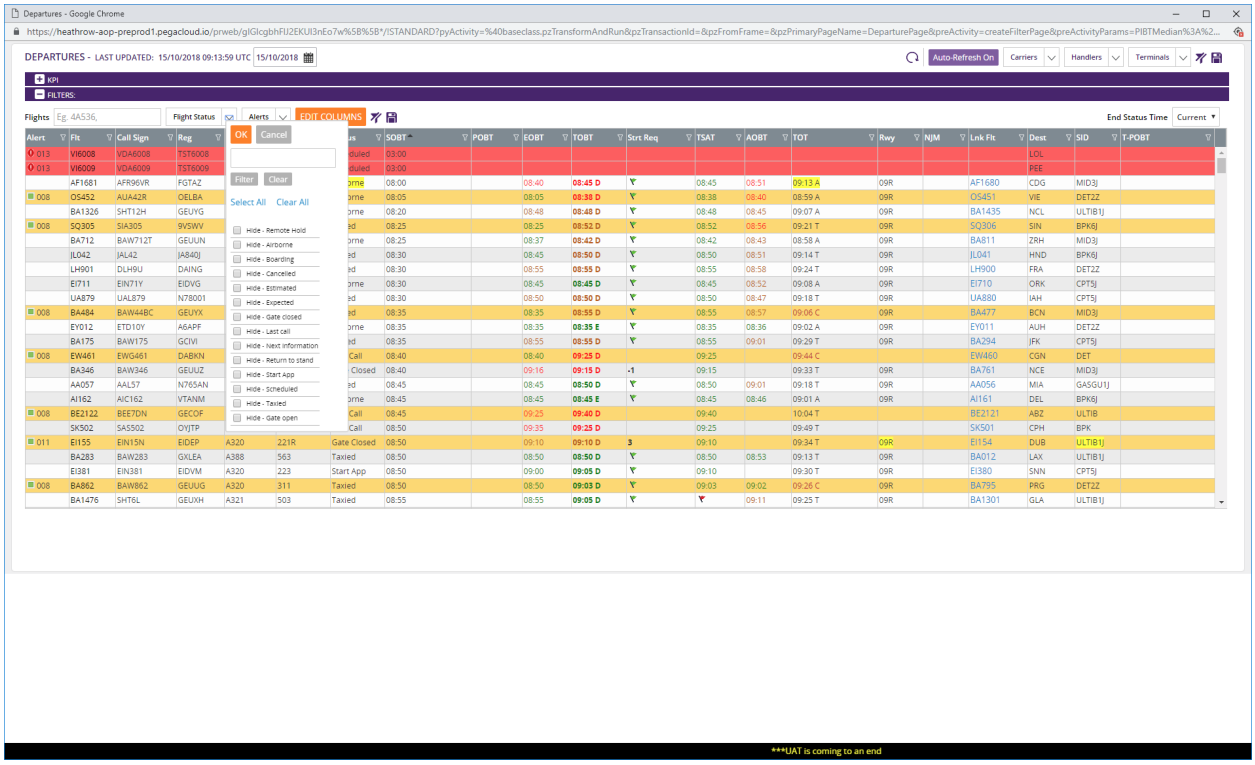


Figure 54: Additional filter options

3.4.2.3 Viewing flight details

A quick summary of the flight information is available by right-clicking the flight row. A pop-up box will display:

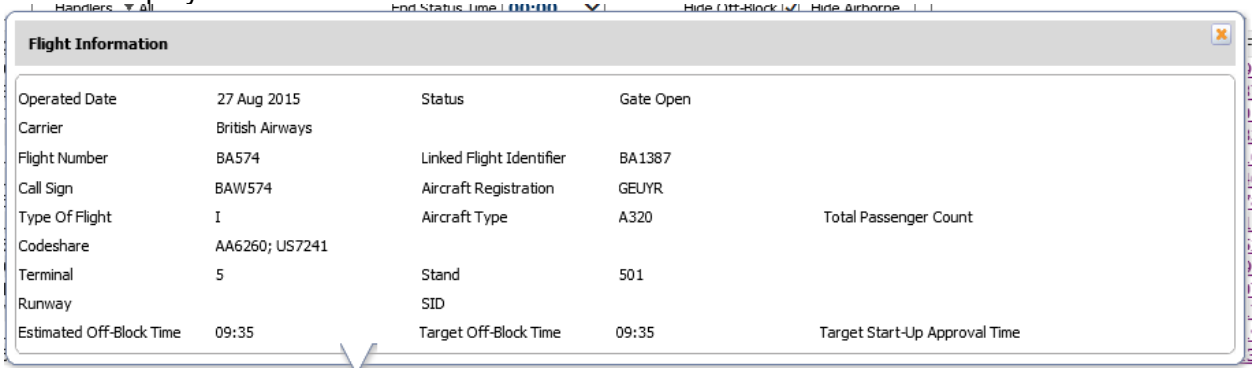


Figure 558: Pop-up flight information

Click the **x** to the top right of the box to close it.

If additional information is required, left-click once and a new tab within A-CDM will open:

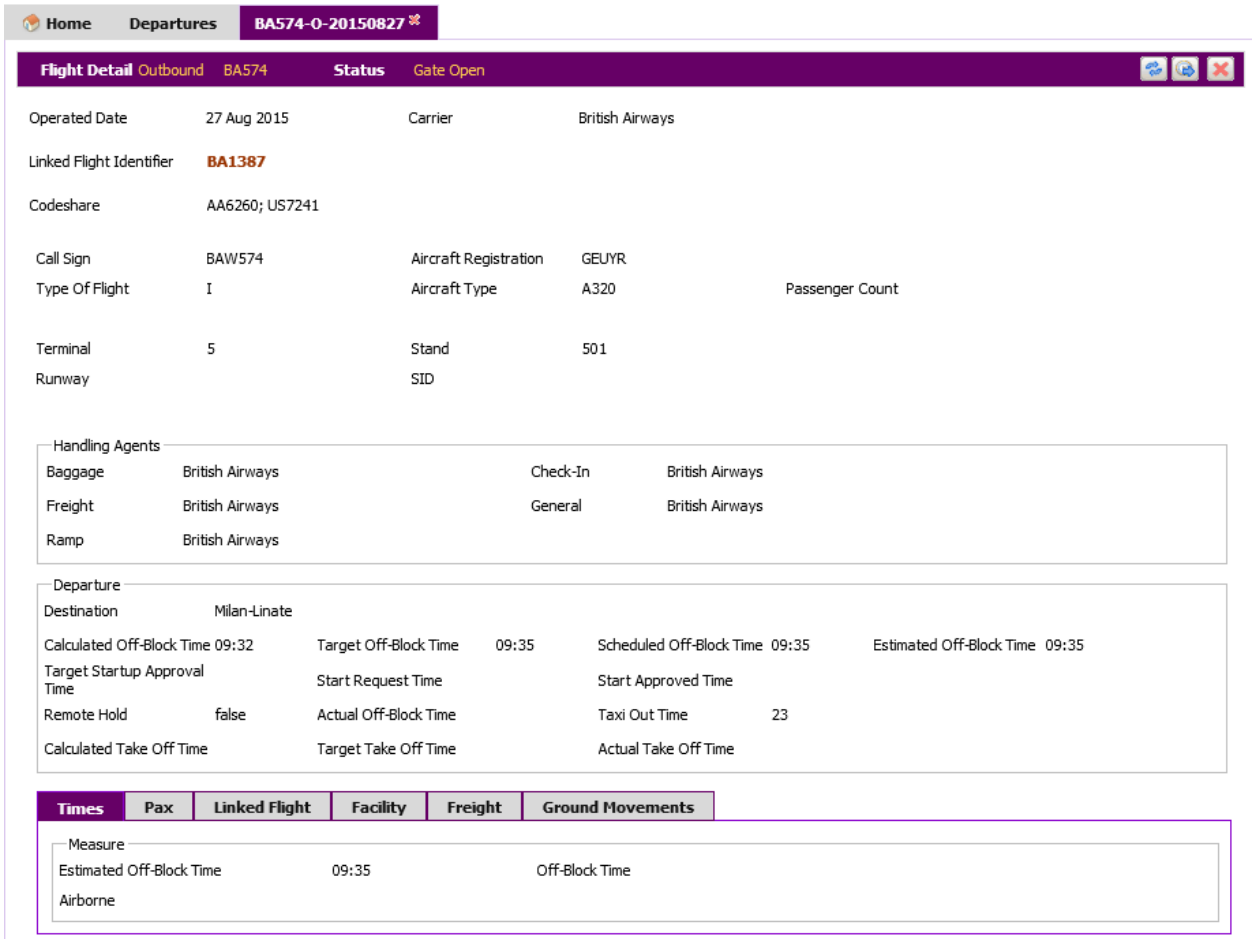
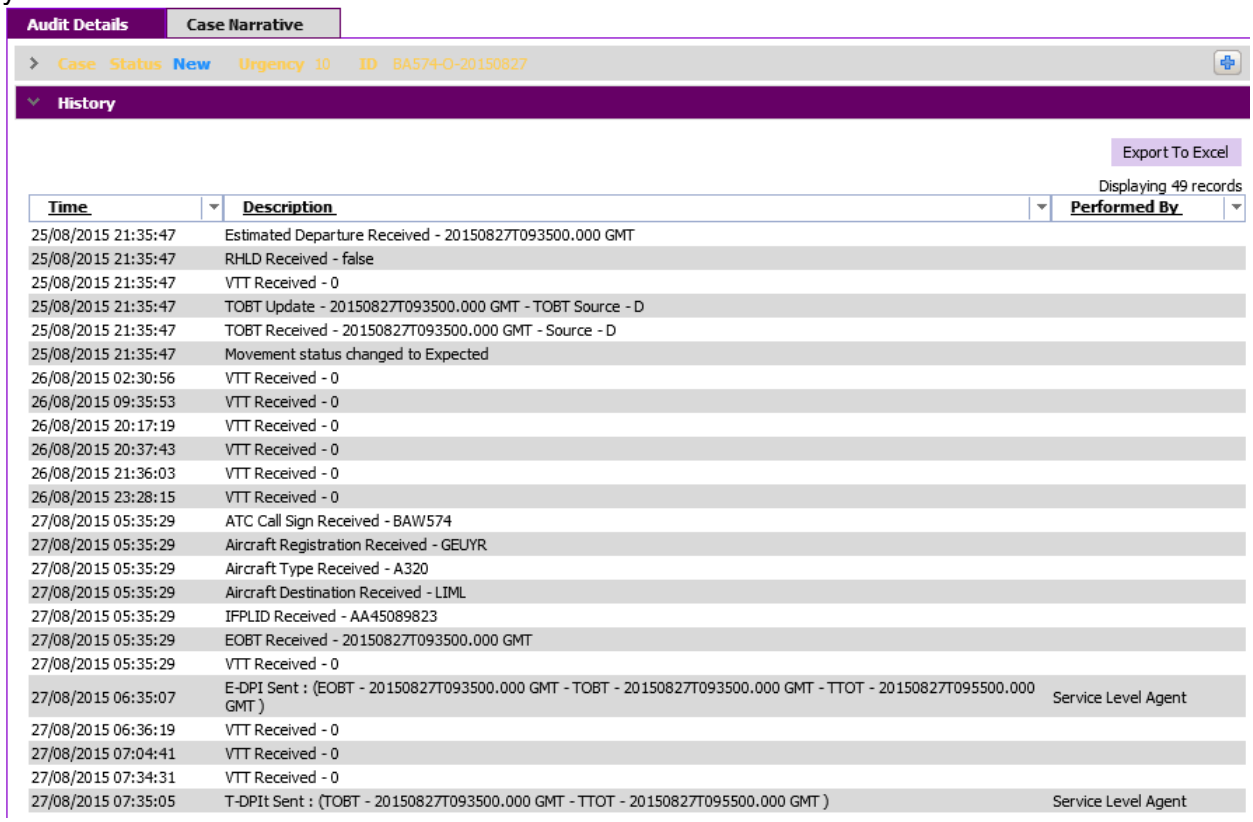


Figure 56: Flight details page

The tabs you can see at the bottom of the screen is dependent on your level of access.

The page will not automatically update. To see the latest data click the refresh icon to the top right.

To view the flight message history click the history icon. A new window or tab will open in your browser:



Time	Description	Performed By
25/08/2015 21:35:47	Estimated Departure Received - 20150827T093500.000 GMT	
25/08/2015 21:35:47	RHLD Received - false	
25/08/2015 21:35:47	VTT Received - 0	
25/08/2015 21:35:47	TOBT Update - 20150827T093500.000 GMT - TOBT Source - D	
25/08/2015 21:35:47	TOBT Received - 20150827T093500.000 GMT - Source - D	
25/08/2015 21:35:47	Movement status changed to Expected	
26/08/2015 02:30:56	VTT Received - 0	
26/08/2015 09:35:53	VTT Received - 0	
26/08/2015 20:17:19	VTT Received - 0	
26/08/2015 20:37:43	VTT Received - 0	
26/08/2015 21:36:03	VTT Received - 0	
26/08/2015 23:28:15	VTT Received - 0	
27/08/2015 05:35:29	ATC Call Sign Received - BAW574	
27/08/2015 05:35:29	Aircraft Registration Received - GEUYR	
27/08/2015 05:35:29	Aircraft Type Received - A320	
27/08/2015 05:35:29	Aircraft Destination Received - LIML	
27/08/2015 05:35:29	IFPLID Received - AA45089823	
27/08/2015 05:35:29	EOBT Received - 20150827T093500.000 GMT	
27/08/2015 05:35:29	VTT Received - 0	
27/08/2015 06:35:07	E-DPI Sent : (EOBT - 20150827T093500.000 GMT - TOBT - 20150827T093500.000 GMT - TTOT - 20150827T095500.000 GMT)	Service Level Agent
27/08/2015 06:36:19	VTT Received - 0	
27/08/2015 07:04:41	VTT Received - 0	
27/08/2015 07:34:31	VTT Received - 0	
27/08/2015 07:35:05	T-DPIt Sent : (TOBT - 20150827T093500.000 GMT - TTOT - 20150827T095500.000 GMT)	Service Level Agent

Figure 57: Flight history

You can click on the Export To Excel button to save the data in Excel format (see Appendix x).

3.4.2.4 Departure flight alerts

As an output of the 16 key milestone flight events there are a series of automated actions and alerts that are activated to inform Airport CDM Partners of inconsistencies within provided information and update NMOC if milestone events do not occur at the predicted moment.

The milestone processes are linked to the Departure Planning Information (DPI) messages that supply the NMOC and its partners with reliable data concerning the progress of any outbound flight from Heathrow. Specifically, the DPIs will update the Estimated Take Off Time (ETOT) commencing at -3hrs and then at regular intervals prior to take off. These are based on the milestones of the flight where Target Take Off Times are calculated.

Alerts are an important result of information sharing and processing. Where information on the A-CDM platform is found to be outside the parameters set up within the system or an inconsistency has been detected the user is alerted. If flight data on the arrivals or departures screen is highlighted then the user is prompted to take action.

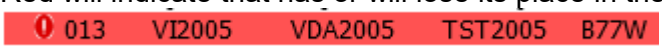
The following alerts are available within A-CDM, although not all are in active use:

Alert Reference	Description	Impact
CDM0001 No Airport Slot Available or slot already correlated	The flight plan does not correspond to an airport slot.	The CDM Process will be suspended and no TSAT request will be made until this is resolved. The aircraft may be refused permission to depart
CDM0002 SOBT vs. EOBT discrepancy	The flight plan does not correspond with the scheduled departure time	This is a warning that the flight is operating outside of its agreed slot
CDM0003 Aircraft type discrepancy	The aircraft type in the flight plan does not correspond with the type registered in the airport database (AODB)	If not resolved by TOBT-30 minutes, the CDM Process will be suspended and no TSAT request will be made until this is resolved
CDM0004 Aircraft Registration discrepancy	The aircraft registration in the flight plan does not correspond with the registration registered in the AODB	This is a warning to indicate that either the flight plan or AODB has not been updated
CDM0005 First Destination discrepancy	The aircraft destination in the flight plan does not correspond with the destination registered in the AODB	This is a warning to indicate that either the flight plan or AODB has not been updated
CDM0006 Non Airborne	The aircraft has not taken off from the outstation at the expected time	This is a warning to indicate a potential late inbound flight that could affect the linked outbound flight
CDM0007 EIBT + MTTT discrepancy with EOBT	The EIBT indicates that there is insufficient time to turn the aircraft and meet its EOBT	This is a warning that inbound flight EIBT and turn-round MTTT is later than EOBT +15 minutes, and could affect the outbound leg
CDM0007a EIBT + MTTT discrepancy with TOBT	The EIBT indicates that there is insufficient time to turn the aircraft and meet its TOBT	This is a warning that inbound flight EIBT and turn-round MTTT is later than TOBT +5 minutes, and could affect the outbound leg
CDM0008 EOBT Compliance Alert	The confirmed TOBT is outside EOBT ± 15 minutes Window	This is a warning that the TOBT is not compliant with the flight plan.
CDM0009 Boarding Not Started	Aircraft boarding has not started within an agreed time before TOBT	This is a warning that there is a risk of TOBT not being met due to late boarding.
CDM0010 TOBT Rejected or Deleted	The maximum number of TOBT updates has been exceeded	TSAT will not be automatically issued due to an excessive number of TOBT updates. The flight's position in the departure sequence may be penalising
CDM0011 Flight Not Compliant with TOBT / TSAT	TOBT is within +/-5 minutes of TSAT. ASRT must occur within this window	This is a warning that TSAT may be lost and the flight will lose its position in the departure sequence

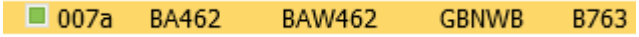
Alert Reference	Description	Impact
CDM0011a Flight not compliant with TOBT for de-icing	Where TOBT is used to plan start of de-icing, the ASRT is an indicator of ready to start de-icing	This is a warning that TSAT may be lost if de-icing is delayed due to a late start request
CDM0012 TSAT not respected by ATC	Flight has not been started/pushed within the TSAT tolerance window	This is a warning to ATC that start approval was not in line with TSAT
CDM0013 No ATC Flight Plan Available	Indicates that the flight plan has been cancelled during the turn-round phase (e.g. for rerouting)	This is a warning that no flight plan exists and no TSAT will be generated
CDM0014 TOBT may result in CTOT re-issue	If TOBT for a regulated flight is varied by more than 10 minutes, there is a risk that a CTOT change will occur	This is a warning that the TOBT received may result in a change to CTOT
CDM0015 Flight Plan Cancelled	Indicates that the flight plan has been cancelled	This is a warning that there is no flight plan and no TSAT will be generated
CDM0040 Aircraft not ready for de-icing	The flight has not recorded ARZT within ERZT + 5 minutes	This is a warning to indicate potential late start of de-icing
CDM0041 De-Icing not confirmed	The flights has requested de-icing but, by a configurable time before TOBT, no rig has been allocated	This is a warning to indicate an aircraft may be delayed due to lack of de-icing
CDM0042 Hold Over may not be in safe margin	The flight's hold over time (HOT) is not sufficient to meet TTOT	This is a warning to indicate a risk of the aircraft returning to stand to repeat the de-icing process
CDM0043 De-Icing scheduled before TOBT	The ECZT is prior to TOBT. The TOBT may have been updated to a later time, outside the tolerance window	This is a warning to indicate a risk that the aircraft may not be ready in time for the planned start of de-icing
CDM0044 De-Icing Not Compliant with TSAT	An improvement in TSAT results in the EEZT being after TSAT	This is a warning to indicate there is a risk that de-icing will not be finished in time to meet the updated TSAT
CDM0050 Flight not airborne	The flight has not departed by the end of the operational day	This is a warning that the flight has not departed on its scheduled day of operation

A flight with an active alert will be highlighted on the A-CDM portal with a colour band corresponding to the severity of the alert:

- Red will indicate that has or will lose its place in the departure sequence

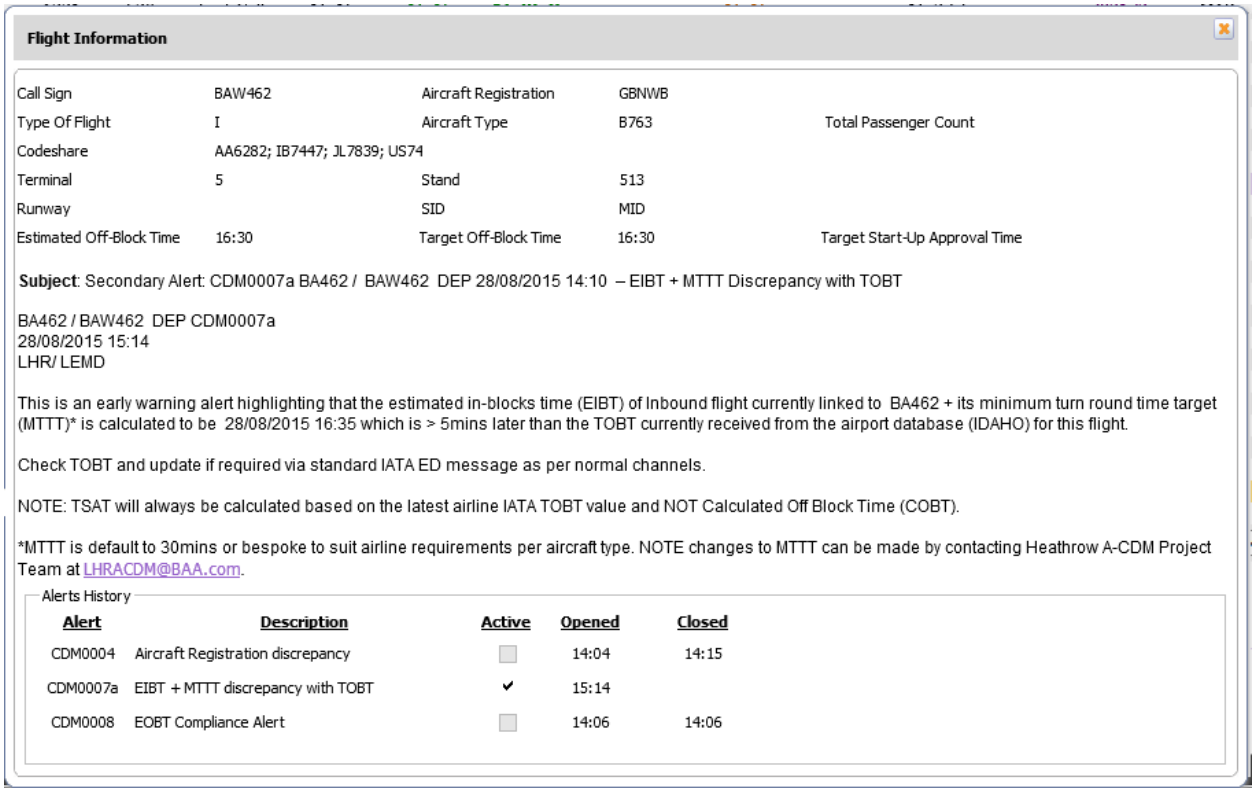


- Amber is a warning that action may be required



Where more than one alert is active the most penalising alert will be displayed first i.e. the primary alert. As the alerts are linked to the sequential milestone process of the flight they should generally be resolved in a sequential way.

You can view the flight alert details by selecting the flight in question from the Departures Page. A new window will open with further details accessible from tabs at the bottom of the newly opened window.



Flight Information

Call Sign	BAW462	Aircraft Registration	GBNWB	
Type Of Flight	I	Aircraft Type	B763	Total Passenger Count
Codeshare	AA6282; IB7447; JL7839; US74			
Terminal	5	Stand	513	
Runway		SID	MID	
Estimated Off-Block Time	16:30	Target Off-Block Time	16:30	Target Start-Up Approval Time

Subject: Secondary Alert: CDM0007a BA462 / BAW462 DEP 28/08/2015 14:10 – EIBT + MTTT Discrepancy with TOBT

BA462 / BAW462 DEP CDM0007a
28/08/2015 15:14
LHR/ LEMD

This is an early warning alert highlighting that the estimated in-blocks time (EIBT) of Inbound flight currently linked to BA462 + its minimum turn round time target (MTTT)* is calculated to be 28/08/2015 16:35 which is > 5mins later than the TOBT currently received from the airport database (IDAHO) for this flight.

Check TOBT and update if required via standard IATA ED message as per normal channels.

NOTE: TSAT will always be calculated based on the latest airline IATA TOBT value and NOT Calculated Off Block Time (COBT).

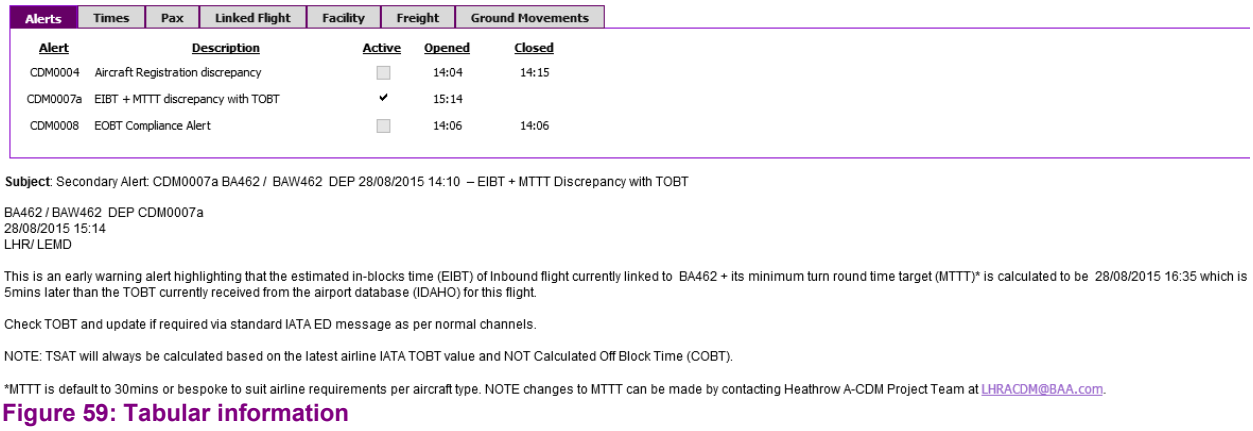
*MTTT is default to 30mins or bespoke to suit airline requirements per aircraft type. NOTE changes to MTTT can be made by contacting Heathrow A-CDM Project Team at LHRACDM@BAA.com.

Alerts History

Alert	Description	Active	Opened	Closed
CDM0004	Aircraft Registration discrepancy	☐	14:04	14:15
CDM0007a	EIBT + MTTT discrepancy with TOBT	✔	15:14	
CDM0008	EOBT Compliance Alert	☐	14:06	14:06

Figure 58 Click through flight information from main departures screen

The information available in the tabs at the bottom of the click through window depends on your read and access rights to the system.



Alerts | Times | Pax | Linked Flight | Facility | Freight | Ground Movements

Alert	Description	Active	Opened	Closed
CDM0004	Aircraft Registration discrepancy	☐	14:04	14:15
CDM0007a	EIBT + MTTT discrepancy with TOBT	✔	15:14	
CDM0008	EOBT Compliance Alert	☐	14:06	14:06

Subject: Secondary Alert: CDM0007a BA462 / BAW462 DEP 28/08/2015 14:10 – EIBT + MTTT Discrepancy with TOBT

BA462 / BAW462 DEP CDM0007a
28/08/2015 15:14
LHR/ LEMD

This is an early warning alert highlighting that the estimated in-blocks time (EIBT) of Inbound flight currently linked to BA462 + its minimum turn round time target (MTTT)* is calculated to be 28/08/2015 16:35 which is 5mins later than the TOBT currently received from the airport database (IDAHO) for this flight.

Check TOBT and update if required via standard IATA ED message as per normal channels.

NOTE: TSAT will always be calculated based on the latest airline IATA TOBT value and NOT Calculated Off Block Time (COBT).

*MTTT is default to 30mins or bespoke to suit airline requirements per aircraft type. NOTE changes to MTTT can be made by contacting Heathrow A-CDM Project Team at LHRACDM@BAA.com.

Figure 59: Tabular information

HANDLERS

The Handlers filter functions in exactly the same way as the Carriers filter.

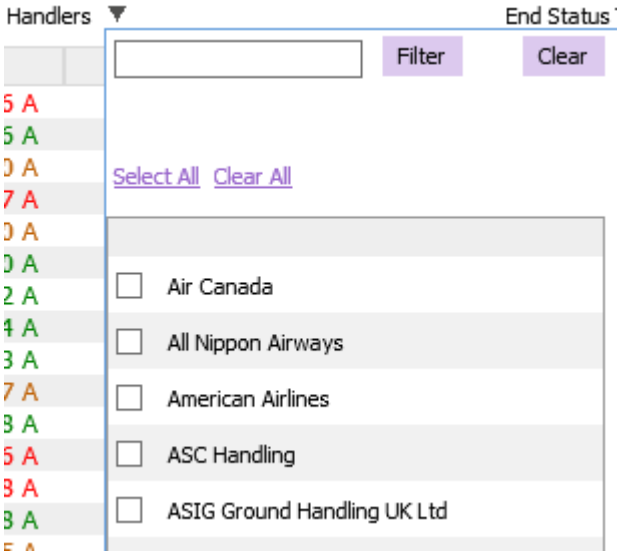


Figure 60: Handlers filter

If you select one or more handlers, the display will only show flights for airlines assigned to those ground handlers. This relates to below-wing handling, where multiple handlers are used by an airline.

TERMINALS

Should you only be interested in flights arriving to a specific terminal, you can select those using this filter:

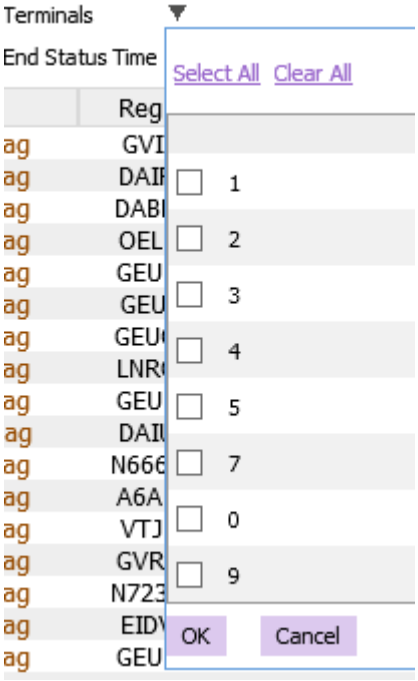


Figure 61: Terminal filter

Select the terminal(s) you require and click OK.

END STATUS TIME

This allows you to start the display of flights from a specific time of day. Earlier flights will not be shown.

Figure 62: End status time

The default setting is ‘Current’ which shows flights where ATOT (Actual Take-Off Time) was within 15 minutes of the current time.

If you changed the setting to 06:00, you would see all flights where ATOT was from 05:45 onwards.

Changing the setting to 00:00, recommended if using the Flights field to search, you will see all flights from the start of the operational day.

3.4.3 Stand Charts

On selecting **Stand and Jetty** from the menu bar, the following screen is displayed:

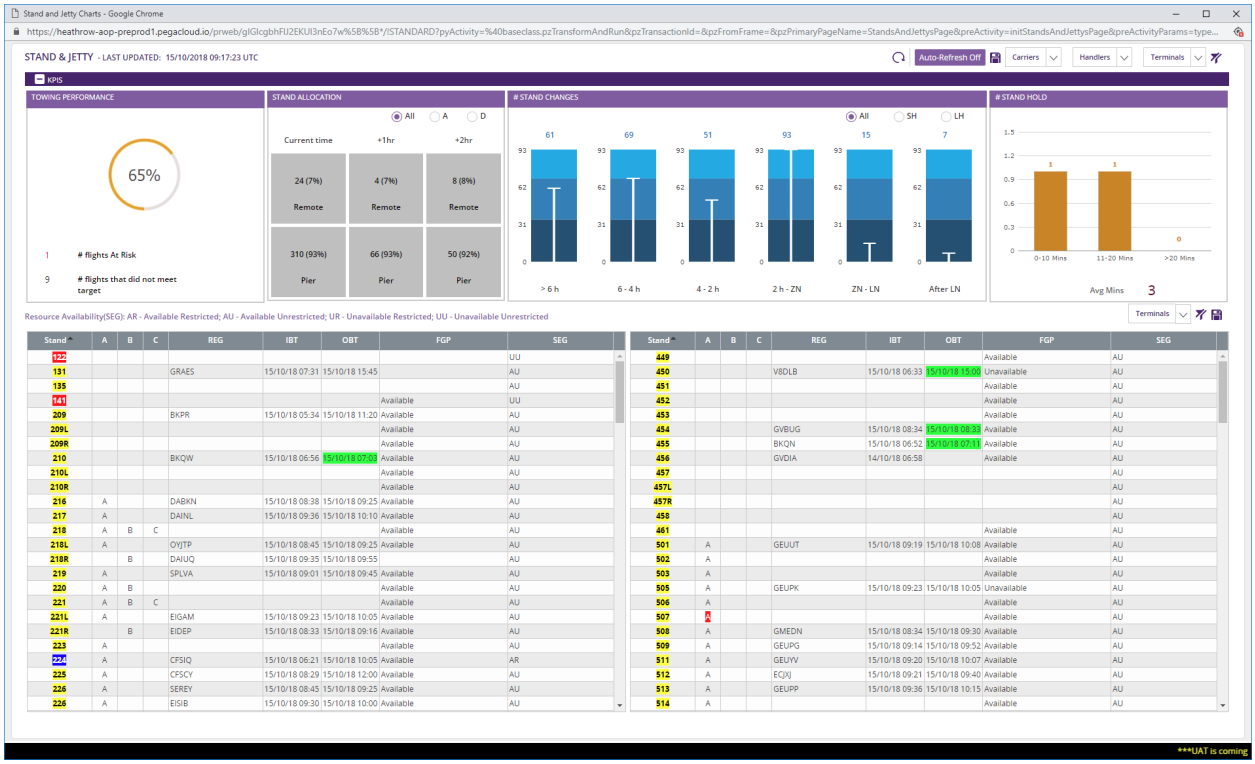


Figure 63: Stand charts

The stand charts page displays the status of each stand, the available jetties, and which aircraft is on which stand, with the actual/planned in-blocks and off-blocks times.

Information is also provided about the serviceability of asset on the stand, mainly Fixed Electrical Ground Power (FEGP) and Stand Entry Guidance Systems.

The KPI screens on the top of this screen grab are only available to Power Users only as they are in trial mode.

3.4.3.1 Stand charts display

The stand charts screen contains the following columns:

Stand	A	B	C	REG	IBT	OBT	FGP	SEG
122								UU
131				GRAES	15/10/18 07:31	15/10/18 15:45		AU
135								AU
141							Available	UU
209				BKPR	15/10/18 05:34	15/10/18 11:20	Available	AU
209L							Available	AU
209R							Available	AU
210				BKQW	15/10/18 06:56	15/10/18 07:03	Available	AU
210L							Available	AU
210R							Available	AU
216	A			DABKN	15/10/18 08:38	15/10/18 09:25	Available	AU
217	A			DAINL	15/10/18 09:36	15/10/18 10:10	Available	AU
218	A	B	C				Available	AU
218L	A			OYJTP	15/10/18 08:45	15/10/18 09:25	Available	AU
218R		B		DAIUQ	15/10/18 09:35	15/10/18 09:55		AU
219	A			SPLVA	15/10/18 09:01	15/10/18 09:45	Available	AU

Stand	The stand number
A / B / C	The jetty configuration. If these are blank, there are no jetties (e.g. a remote stand)
REG	The aircraft registration
IBT	In-blocks date & time. This will be updated with estimates until an actual time is received
OBT	Off-blocks date & time. This will be updated with estimates until an actual is received.
FGP	The status of the Fixed Electrical Ground Power
SEG	The status of the Stand Entry Guidance system (this is supported by an explanatory menu at the start of the stand list).

If the stand number is shaded red (e.g. **323**) this indicates the stand unavailable.
If the IBT or OBT is shaded green (e.g. **27/08/15 10:42**) this indicates a towing movement.

3.4.3.2 Filtering data

The only filter option is to filter by terminal:

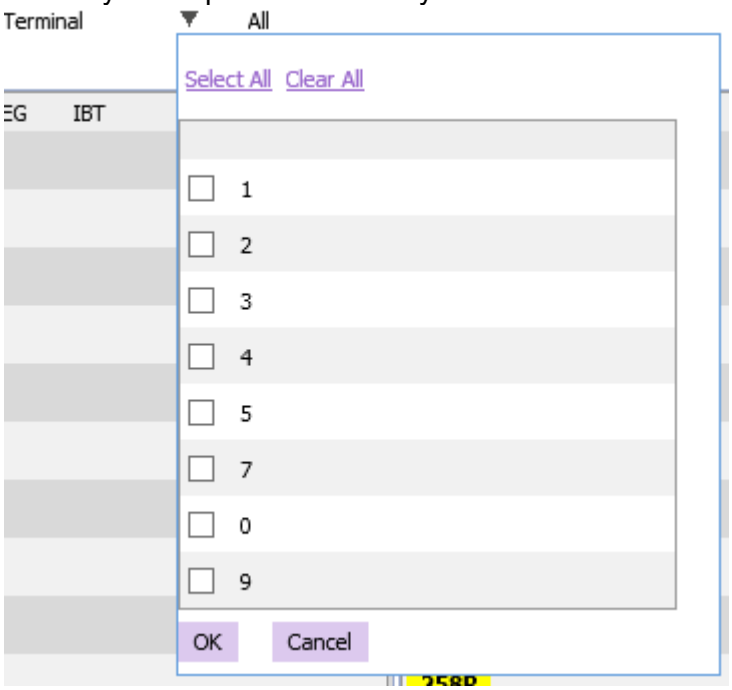


Figure 649: Terminal filter

Select the terminal(s) you require and click OK.

If you wish to remove your filter, click Clear All at the top then click OK.

3.4.4 Ground Movements

On selecting **Ground Movements** from the menu bar, the following screen is displayed:

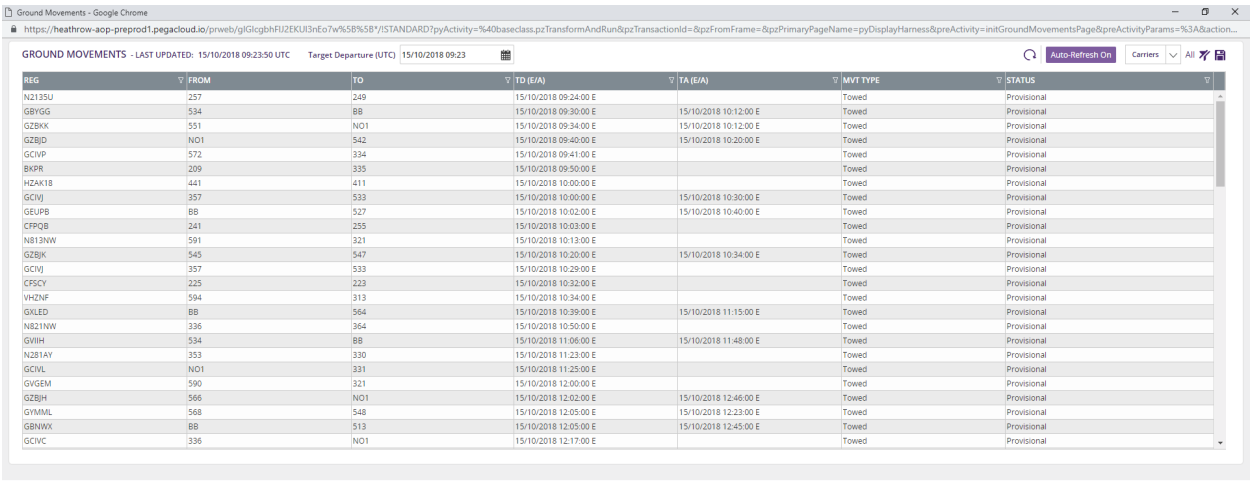


Figure 65: Ground movements

The ground movements page displays the towing movements planned.

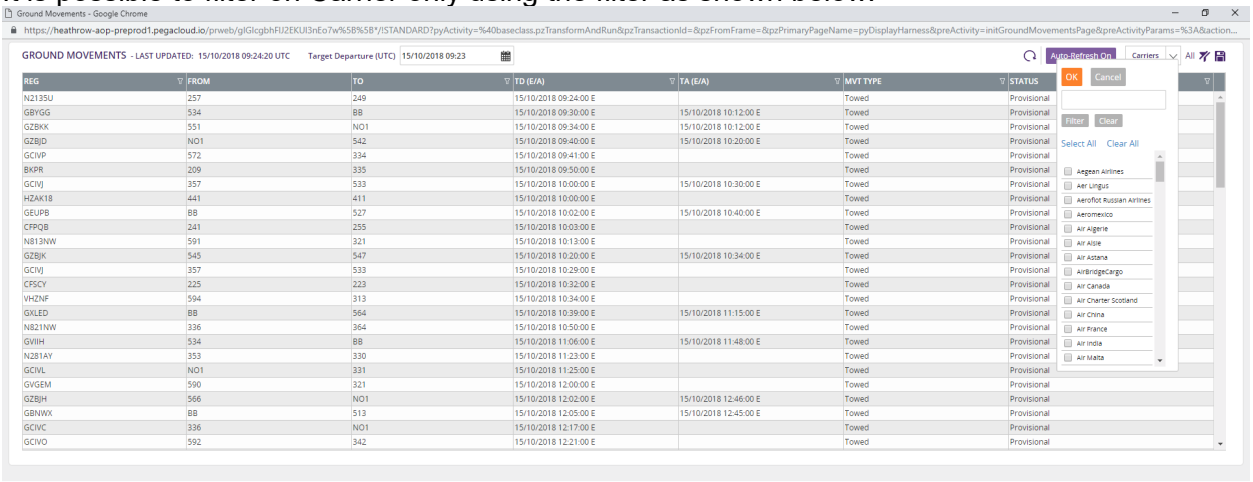
3.4.4.1 Ground movements display

The ground movements page contains the following columns:

Reg	The aircraft registration
From	The stand the a/c is currently parked and will tow from
To	The destination stand of the tow movement
T/D	The anticipated commencement of the tow (E=estimate, A=actual)
T/A	The anticipated completion of the tow (E=estimate, A=actual)
Movement type	The type of movement to be undertaken
Status	The current status of the proposed movement

3.4.4.2 Filtering data

It is possible to filter on Carrier only using the filter as shown below.

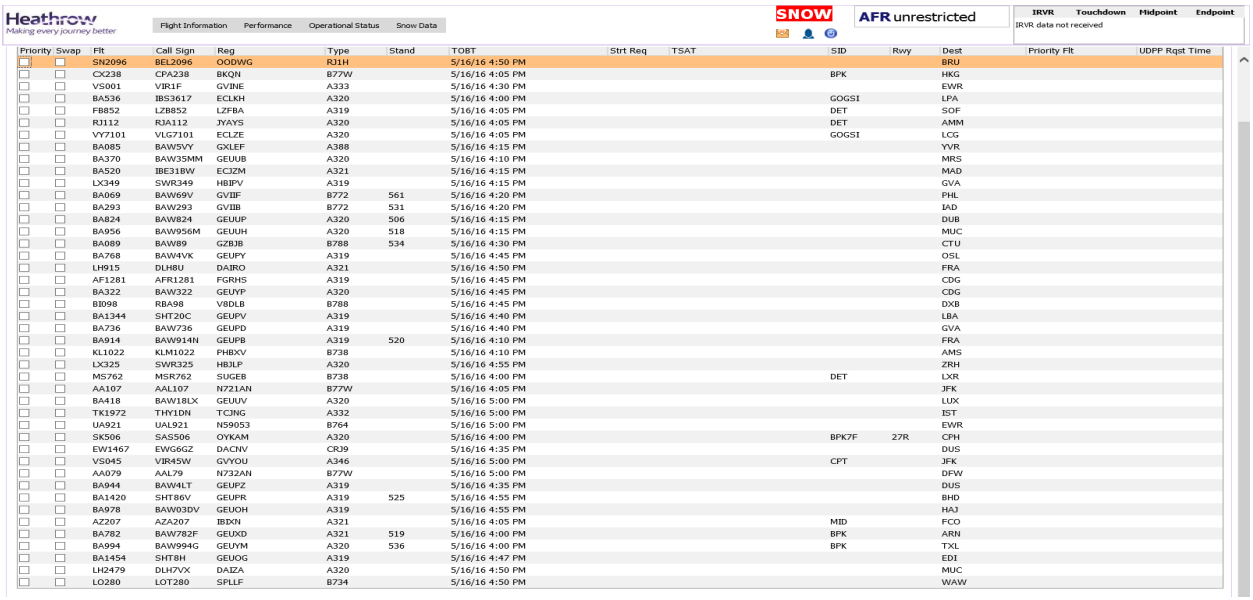


3.4.5 User Driven Prioritisation Process (UDPP)

UDPP at Heathrow will be conditional in activation, optional for use and also will be time restricted with access restricted to those AU's who seek to participate. This will be due to a Capacity Constrained Situation arising at the Airport which will allow for AUs to automatically view a new window within AOP depicting specific flights within the CCS time period offered for UDPP between the company e.g. BA to BA or VS to VS etc. The Company nominee can then select flights which require priority departure and provide a de-prioritised flight (from the same company) against which the prioritisation can be compensated against.

This would trigger a new TSAT request to the TSAT generator, based on which new TSATs would be generated to both the flights (prioritised and de-prioritised). It is up to the Airport to open a UDPP window and assign company nominees access to the UDPP screen.

On UDPP window being opened by the Airport, a notification (using the existing message ticker at the bottom) would be used to inform users that UDPP window has been activated.



Priority	Swap	Flt	Call Sign	Reg	Type	Stand	TOBT	Strt Req	TSAT	SID	Rwy	Dest	Priority Flt	UDPP Rqst Time
		SN2096	BEL2096	OODWG	RJ1H		5/16/16 4:50 PM					BRU		
		CX238	CPA238	BKQN	B77W		5/16/16 4:05 PM			BPK		HKG		
		VS001	VIR1F	GVINE	A333		5/16/16 4:30 PM					EWR		
		BA536	IBS3617	ECLKH	A320		5/16/16 4:00 PM			GOGSI		LPA		
		FB852	LZB852	LZFBA	A319		5/16/16 4:05 PM			DET		SOF		
		RJ112	RJA112	JYAYS	A320		5/16/16 4:05 PM			DET		AMM		
		VY7101	VLG7101	ECLZE	A320		5/16/16 4:05 PM			GOGSI		LCG		
		BA085	BAW5VY	GXLEF	A388		5/16/16 4:15 PM					YVR		
		BA370	BAW35MM	GEUUB	A320		5/16/16 4:10 PM					MRS		
		BA520	IBE31BW	ECJZM	A321		5/16/16 4:15 PM					MAD		
		LX349	SWR349	HBJPV	A319		5/16/16 4:15 PM					GVA		
		BA069	BAW69V	GVIIF	B772	561	5/16/16 4:20 PM					PHL		
		BA293	BAW293	GVIIB	B772	531	5/16/16 4:20 PM					IAD		
		BA824	BAW824	GEUUP	A320	506	5/16/16 4:15 PM					DUB		
		BA956	BAW956M	GEUUH	A320	518	5/16/16 4:15 PM					MUC		
		BA089	BAW89	GZBJB	B788	534	5/16/16 4:30 PM					CTU		
		BA768	BAW4VK	GEUPY	A319		5/16/16 4:45 PM					OSL		
		LH915	DLH8U	DAIRO	A321		5/16/16 4:50 PM					FRA		
		AF1281	AFR1281	FGRHS	A319		5/16/16 4:45 PM					CDG		
		BA322	BAW322	GEUYF	A320		5/16/16 4:45 PM					CDG		
		BI098	RBA98	V8DLB	B788		5/16/16 4:45 PM					DXB		
		BA1344	SHT20C	GEUPV	A319		5/16/16 4:40 PM					LBA		
		BA736	BAW736	GEUPD	A319		5/16/16 4:40 PM					GVA		
		BA914	BAW914N	GEUPB	A319	520	5/16/16 4:10 PM					FRA		
		KL1022	KLM1022	PHBXV	B738		5/16/16 4:10 PM					AMS		
		LX325	SWR325	HBJLP	A320		5/16/16 4:55 PM					ZRH		
		MS762	MSR762	SUGEB	B738		5/16/16 4:00 PM			DET		LXR		
		AA107	AAL107	N721AN	B77W		5/16/16 4:05 PM					JFK		
		BA418	BAW18LX	GEUUV	A320		5/16/16 5:00 PM					LUX		
		TK1972	THY1DN	TCJNG	A332		5/16/16 5:00 PM					IST		
		UA921	UAL921	N59053	B764		5/16/16 5:00 PM					EWR		
		SK506	SAS506	OYKAM	A320		5/16/16 4:00 PM			BPK7F	27R	CPH		
		EW1467	EWG6GZ	DACNV	CRJ9		5/16/16 4:35 PM					DUS		
		VS045	VIR45W	GVYOU	A346		5/16/16 5:00 PM			CPT		JFK		
		AA079	AAL79	N732AN	B77W		5/16/16 5:00 PM					DFW		
		BA944	BAW4LT	GEUPZ	A319		5/16/16 4:35 PM					DUS		
		BA1420	SHT86V	GEUPR	A319	525	5/16/16 4:55 PM					BHD		
		BA978	BAW003DV	GEUOH	A319		5/16/16 4:55 PM					HAJ		
		AZ207	AZA207	IBDXN	A321		5/16/16 4:05 PM			MID		FCO		
		BA782	BAW782F	GEUXD	A321	519	5/16/16 4:00 PM			BPK		ARN		
		BA994	BAW994G	GEUYM	A320	536	5/16/16 4:00 PM			BPK		TXL		
		BA1454	SHT8H	GEUOG	A319		5/16/16 4:47 PM					EDI		
		LH2479	DLH7VX	DAIZA	A320		5/16/16 4:50 PM					MUC		
		LO280	LOT280	SPLLF	B734		5/16/16 4:50 PM					WAW		

Based on certain conditions applied by the Airport, the UDPP window, on selection, would produce a list of flights which satisfy these conditions set by the airport for the Company (Airline) to set priority against.

It is advised that Airlines select only flights whose TOBT entries are stable for UDPP selection. Change in TOBT for flights which have been earlier requested priority would make the request null and void. Moreover, it could de-stabilise the sequencing of flights leading to further delays for the Airlines.

Once an Airline selects a flight for priority, the list would be refreshed to provide possible candidates against whom the Airline can request priority. This refresh is based on Airport conditions which can be based on TOBT difference between the flights (prioritised and de-prioritised), the SID assigned to the flights and the type of Aircraft for the flights.

On selecting the De-prioritised Flight, a button requesting UDPP request to be sent would be enabled which on click would send the TSAT generator the priority weighting of the flights.

Also, a message denoting the success of the request sent for re-sequencing of flights will be displayed on the screen.

New TSAT values would be assigned to both the flights post successful request.

3.4.6 Flight Search

On selecting **Flight Search** from the menu bar, the following screen is displayed:

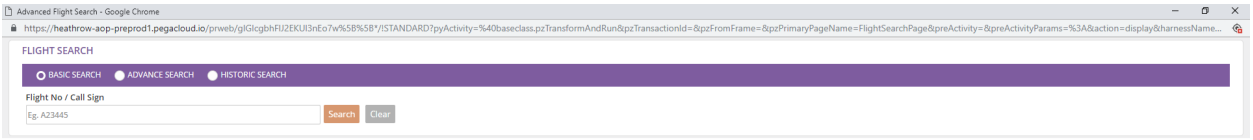


Figure 66: Flight search

This facility allows you to search for historic flight data up to two years old and the schedule for the following day.

3.4.6.1 Basic flight search

The basic search allows you to look for one flight and view all records associated with that flight number.

Enter the IATA flight number into the Flight No field and click Search.

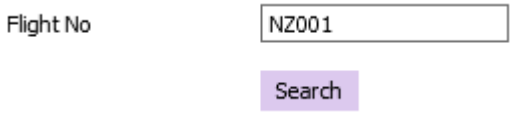


Figure 67: Basic flight search

A new browser window will open (see following page). The exact detail you see depends on whether the flight is an inbound or outbound.

The top section of the page, Flight Information, will show the details available for the next instance of the flight.

The bottom section of the page, Other Results, lists all previous instances of the flight. The list will show flights for the past two years.

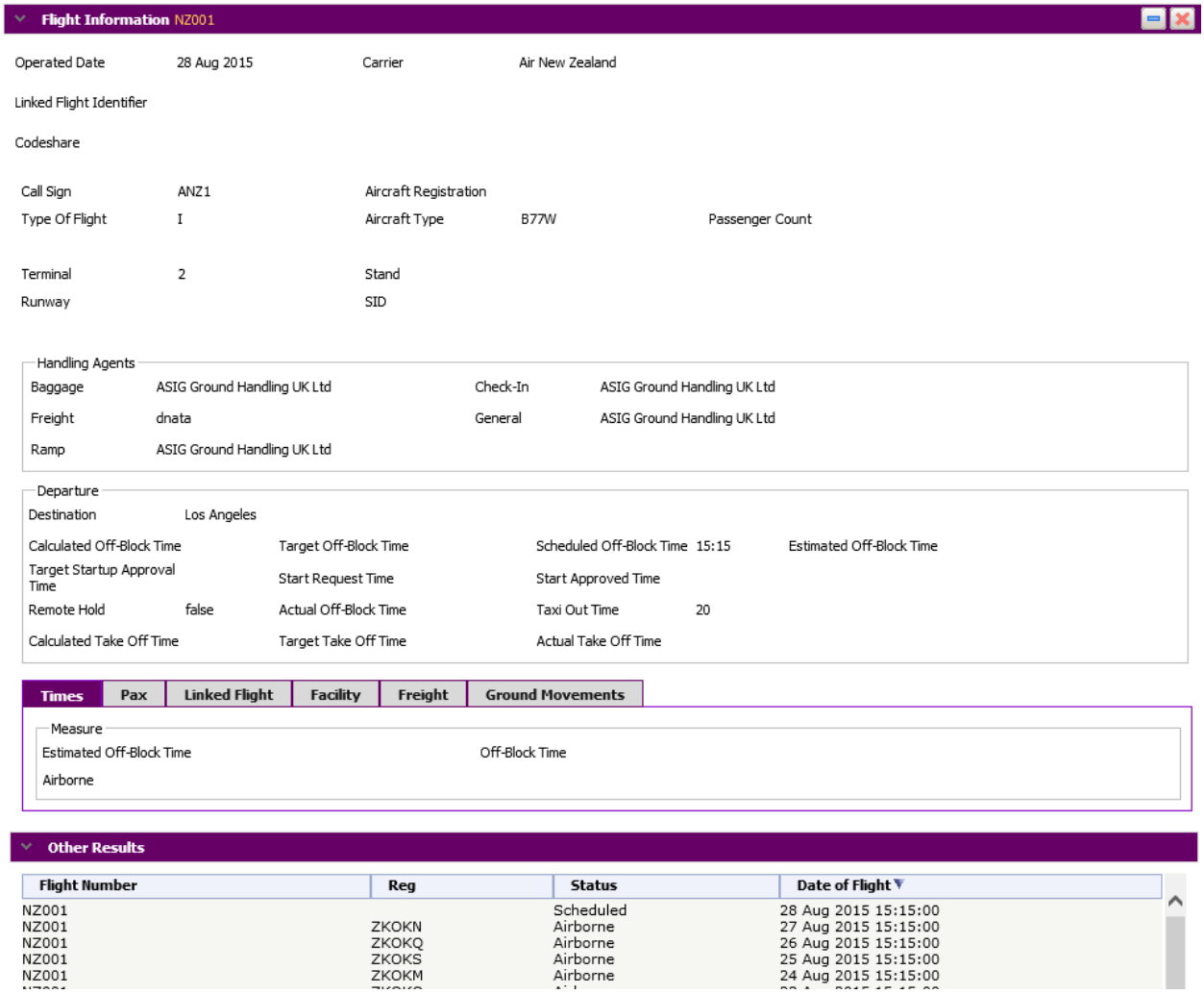


Figure 68: Basic search results

To view the details of a flight, click once on the instance you wish to view.

Click back into AOP and a new tab will be opened.

The flight detail is the same as described in Arrivals (Section 3.4.1.3) and Departures (Section 3.4.2.3) above.

3.4.6.2 Advanced flight search

The advanced search will allow you to select a number of criteria and return multiple results.

Click onto Advanced Search to expand the form:

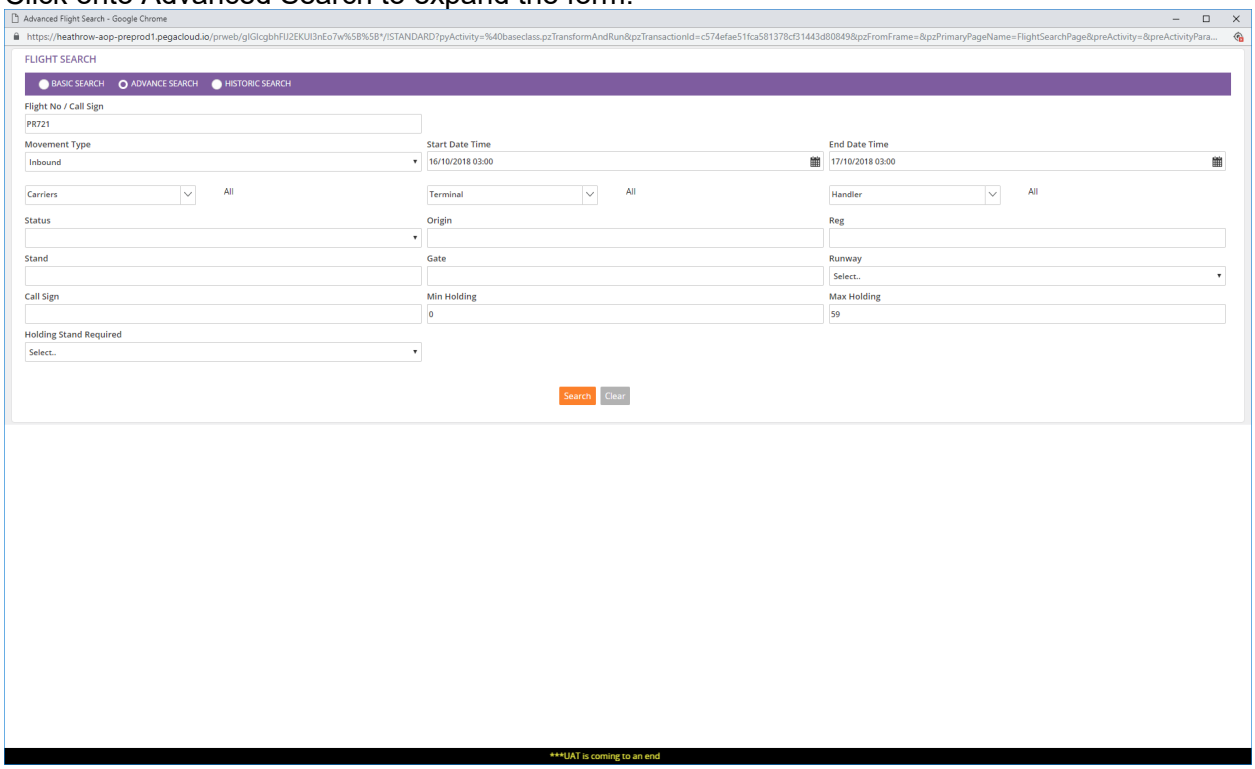


Figure 69: Advanced flight search

By default, the criteria start from the current day at 03:00 to tomorrow at 03:00. You can fill in/select some or all fields:

Mvmt Type	Inbound or Outbound (you cannot search for both)
Start Date Time	The start date/time you wish to search from
End Date Time	The end date/time you wish to search to
Flight No	The IATA flight number (only one entry allowed)
Reg	Aircraft registration (only one entry allowed)
Stand	The stand number (only one entry allowed)
Gate	The departure gate number (only one entry allowed)
Runway	Select from 27R, 27L, 09R, 09L
Dest / Origin	The IATA airport code for the flights' destination/origin
Call Sign	The ICAO flight number (only one entry allowed)
Min Holding	Minimum air holding value (minutes)
Max Holding	Maximum air holding value (minutes)
Holding Stand Required	* = was holding for a stand; H = is holding for a stand (H only returns a result if your date/time range covers the current time)

You can also use the filter lists for Handler, Carrier, and Terminal.

Click on Handler to view the multi-select list, tick the options you require and click OK at the bottom:

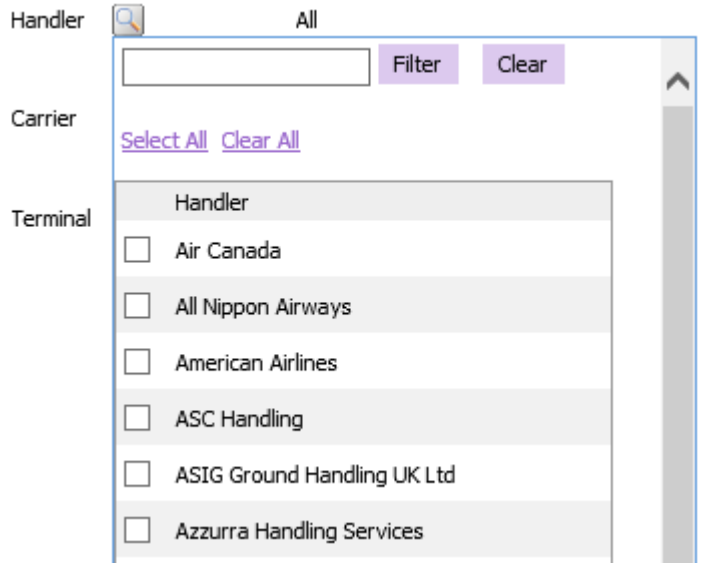
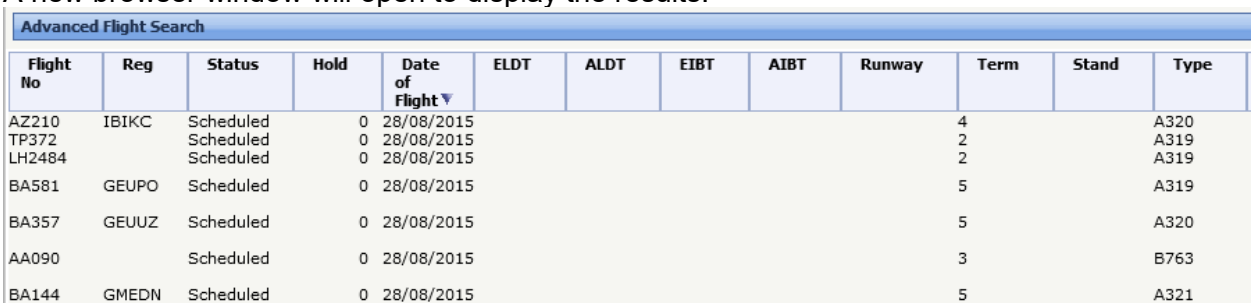


Figure 70: Handler filter

The Carrier and Terminal filters operate in the same manner.

Once you have selected your search criteria, click the Search button.

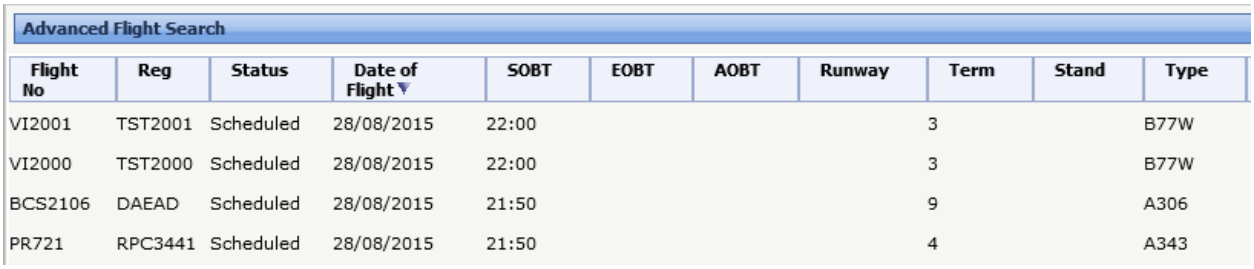
A new browser window will open to display the results:



Advanced Flight Search

Flight No	Reg	Status	Hold	Date of Flight	ELDT	ALDT	EIBT	AIBT	Runway	Term	Stand	Type
AZ210	IBIKC	Scheduled	0	28/08/2015						4		A320
TP372		Scheduled	0	28/08/2015						2		A319
LH2484		Scheduled	0	28/08/2015						2		A319
BA581	GEUPO	Scheduled	0	28/08/2015						5		A319
BA357	GEUUZ	Scheduled	0	28/08/2015						5		A320
AA090		Scheduled	0	28/08/2015						3		B763
BA144	GMEDN	Scheduled	0	28/08/2015						5		A321

Figure 7110: Arrivals (inbound) advanced search results



Advanced Flight Search

Flight No	Reg	Status	Date of Flight	SOBT	EOBT	AOBT	Runway	Term	Stand	Type
VI2001	TST2001	Scheduled	28/08/2015	22:00				3		B77W
VI2000	TST2000	Scheduled	28/08/2015	22:00				3		B77W
BCS2106	DAEAD	Scheduled	28/08/2015	21:50				9		A306
PR721	RPC3441	Scheduled	28/08/2015	21:50				4		A343

Figure 72: Departures (outbound) advanced search results

The default sort order is by Date of Flight in descending order (the latest scheduled at the top). You can amend the sort order by clicking on any column heading.

You can click on any row and the flight details will open in a tab in A-CDM. The flight detail is the same as described in Arrivals (Section 3.4.1.3) and Departures (Section 3.4.2.3) above.

You can export the data to excel for further analysis by scrolling to the right and clicking the button at the top right of the screen:

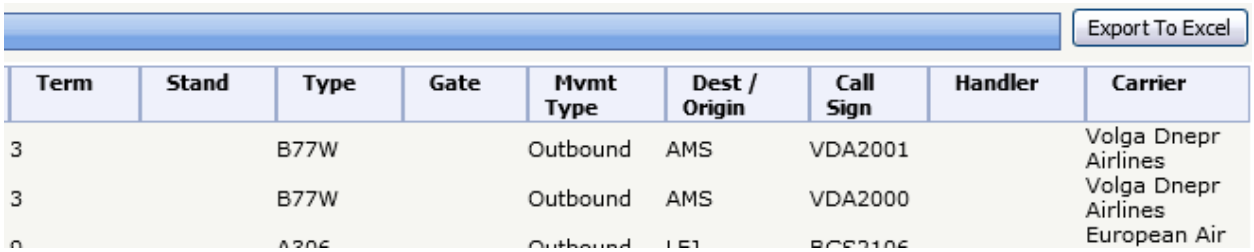
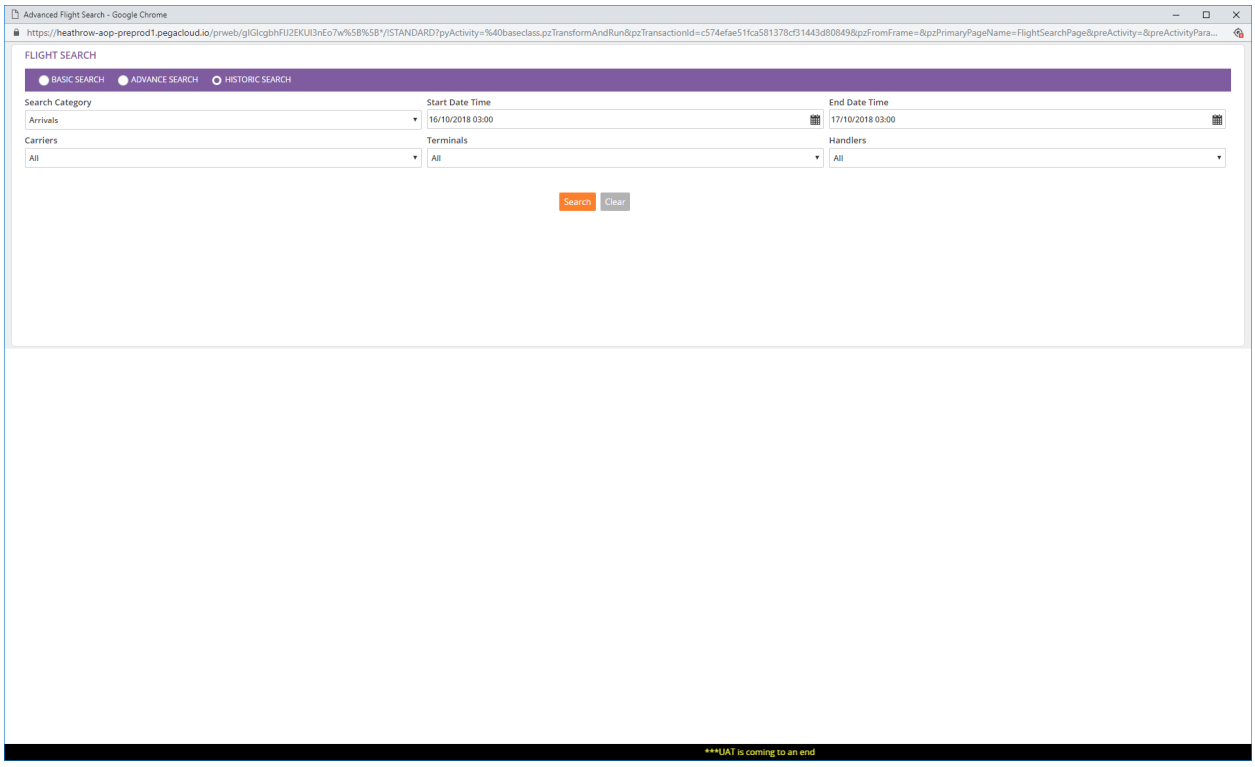


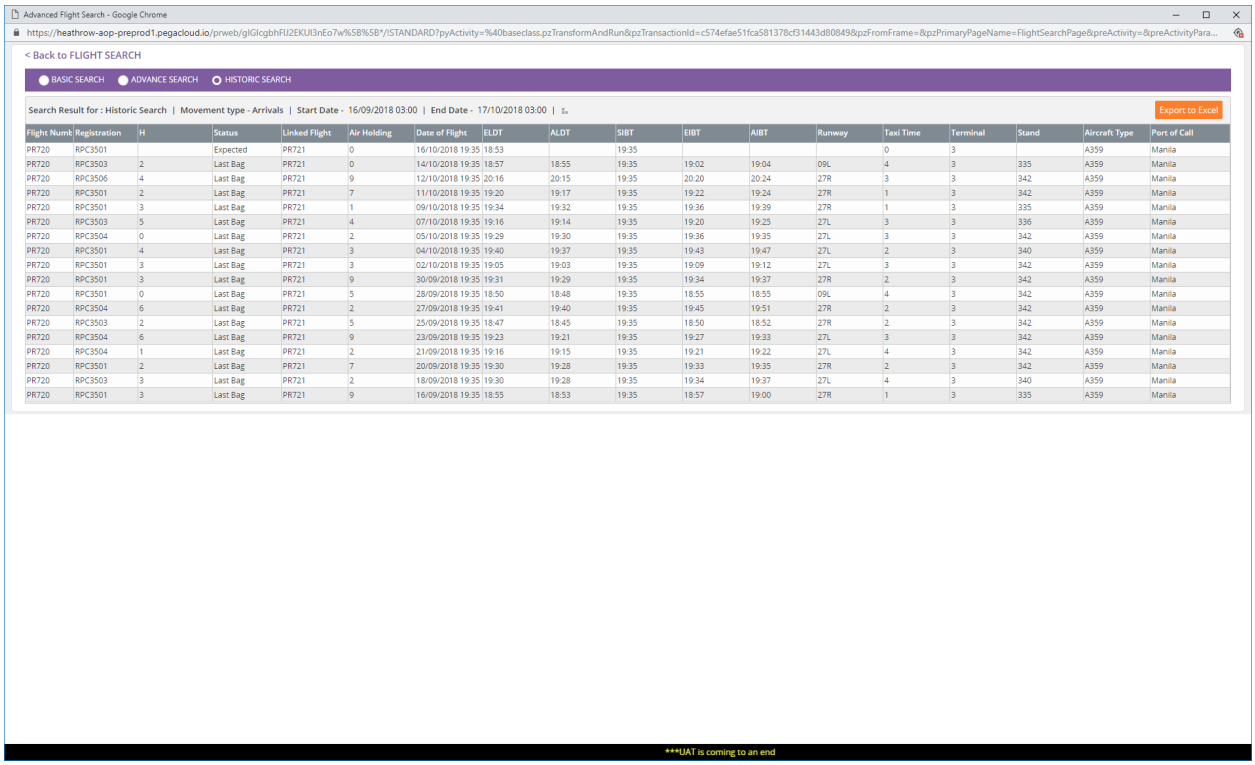
Figure 73: Export to excel

3.4.6.3 Historic flight search

In a similar vein to the advanced flight search, the historic flight search can be used to search for information on flights up to 99 days in the past. Select Historic Flight Search from the flight search menu.



Once you have populated the details and pressed search the return is provided. These are not available for drill down.



Flight Numb	Registration	H	Status	Linked Flight	Air Holding	Date of Flight	ELDT	ALDT	SIBT	EIBT	AIBT	Runway	Taxi Time	Terminal	Stand	Aircraft Type	Port of Call
PR720	RPC3501		Expected	PR721	0	16/10/2018 19:35	18:53		19:35				0	3		A359	Manila
PR720	RPC3503	2	Last Bag	PR721	0	14/10/2018 19:35	18:57	18:55	19:35	19:02	19:04	09L	4	3	335	A359	Manila
PR720	RPC3506	4	Last Bag	PR721	9	12/10/2018 19:35	20:16	20:15	19:35	20:20	20:24	27R	3	3	342	A359	Manila
PR720	RPC3501	2	Last Bag	PR721	7	11/10/2018 19:35	19:20	19:17	19:35	19:22	19:24	27R	1	3	342	A359	Manila
PR720	RPC3501	3	Last Bag	PR721	1	09/10/2018 19:35	19:34	19:32	19:35	19:36	19:39	27R	1	3	335	A359	Manila
PR720	RPC3503	5	Last Bag	PR721	4	07/10/2018 19:35	19:16	19:14	19:35	19:20	19:25	27L	3	3	336	A359	Manila
PR720	RPC3504	0	Last Bag	PR721	2	05/10/2018 19:35	19:29	19:30	19:35	19:36	19:35	27L	3	3	342	A359	Manila
PR720	RPC3501	4	Last Bag	PR721	3	04/10/2018 19:35	19:40	19:37	19:35	19:43	19:47	27L	2	3	340	A359	Manila
PR720	RPC3501	3	Last Bag	PR721	3	02/10/2018 19:35	19:05	19:03	19:35	19:09	19:12	27L	3	3	342	A359	Manila
PR720	RPC3501	3	Last Bag	PR721	9	30/09/2018 19:35	19:31	19:29	19:35	19:34	19:37	27R	2	3	342	A359	Manila
PR720	RPC3501	0	Last Bag	PR721	5	28/09/2018 19:35	18:50	18:48	19:35	18:55	18:55	09L	4	3	342	A359	Manila
PR720	RPC3504	6	Last Bag	PR721	2	27/09/2018 19:35	19:41	19:40	19:35	19:45	19:51	27R	2	3	342	A359	Manila
PR720	RPC3503	2	Last Bag	PR721	5	25/09/2018 19:35	18:47	18:45	19:35	18:50	18:52	27R	2	3	342	A359	Manila
PR720	RPC3504	6	Last Bag	PR721	9	23/09/2018 19:35	19:23	19:21	19:35	19:27	19:33	27L	3	3	342	A359	Manila
PR720	RPC3504	1	Last Bag	PR721	2	21/09/2018 19:35	19:16	19:15	19:35	19:21	19:22	27L	4	3	342	A359	Manila
PR720	RPC3501	2	Last Bag	PR721	7	20/09/2018 19:35	19:30	19:28	19:35	19:33	19:35	27R	2	3	342	A359	Manila
PR720	RPC3503	3	Last Bag	PR721	2	18/09/2018 19:35	19:30	19:28	19:35	19:34	19:37	27L	4	3	340	A359	Manila
PR720	RPC3501	3	Last Bag	PR721	9	16/09/2018 19:35	18:55	18:53	19:35	18:57	19:00	27R	1	3	335	A359	Manila

3.5 Further information

3.5.1.1 Additional information and resources

The main landing page of AOP also includes some further guidance and information that can assist users:

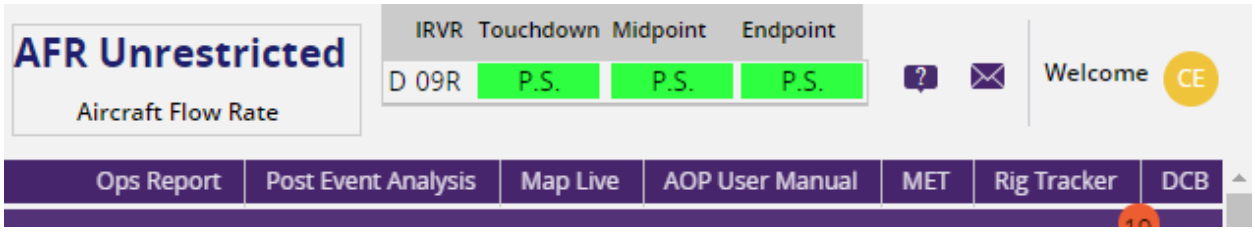


Figure 74: Additional resources

Ops report – this box is sometimes used to promulgate information relating to as specific event, e.g. a long term closure of a key asset. This ensures that all users obtain the same information. The Aircraft Operations Duty Managers (AODMs) are the sole publishers of this information.

Post Event Analysis - In a similar vein to the above this area may be used by the AODMs to provide information and wash up documentation after a major event.

Map Live – this provides the situational awareness map which is fed by the ground radar from NATS. It is NOT the same as the Situational Awareness Map that is used for Winter Operations.

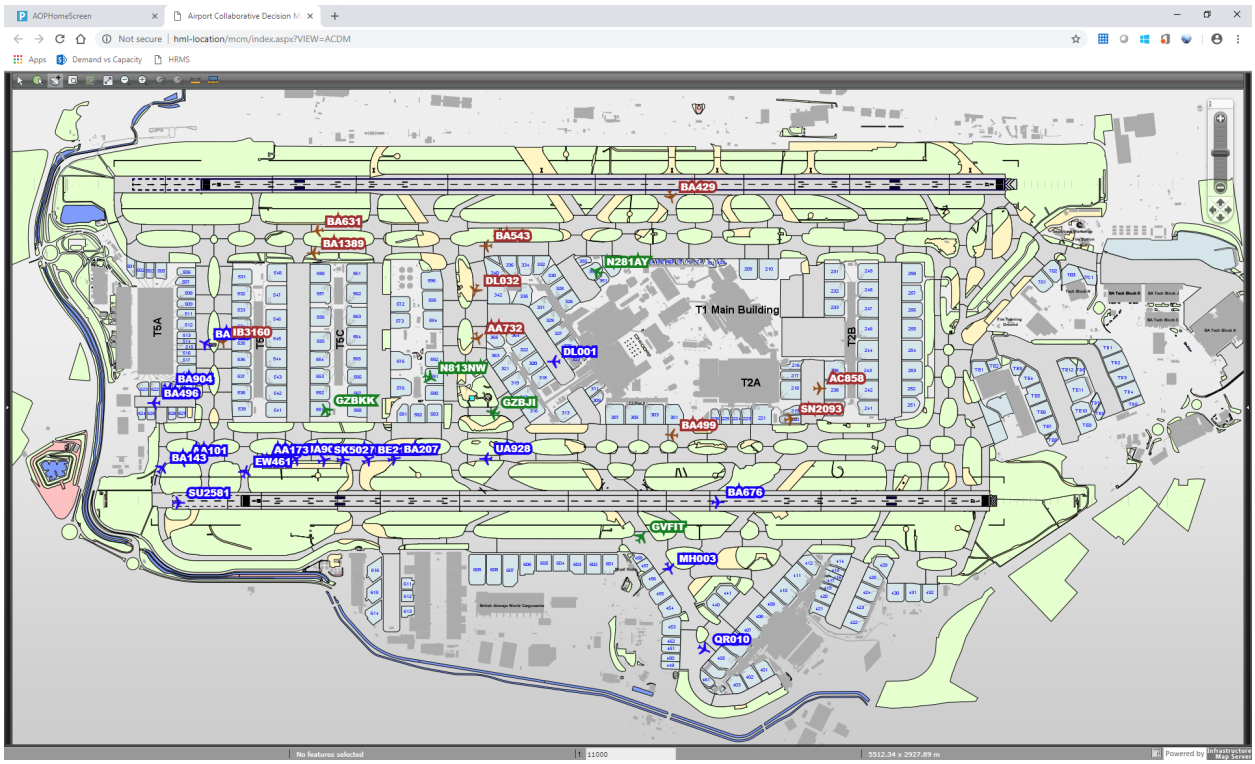


Figure 75: Map live

AOP User Manual - This link launches the A-CDM web page (www.heathrow.com/acdm) where general information and training documents are available.

Met - This link opens the Met Office portal to view weather data. You will have a separate user name and password if you have been given access to this system.

Rig Tracker – allows Power Users to see the allocation status of de-icing rigs

DCB – Allows Power users access to the Demand and Capacity Balancing tool.