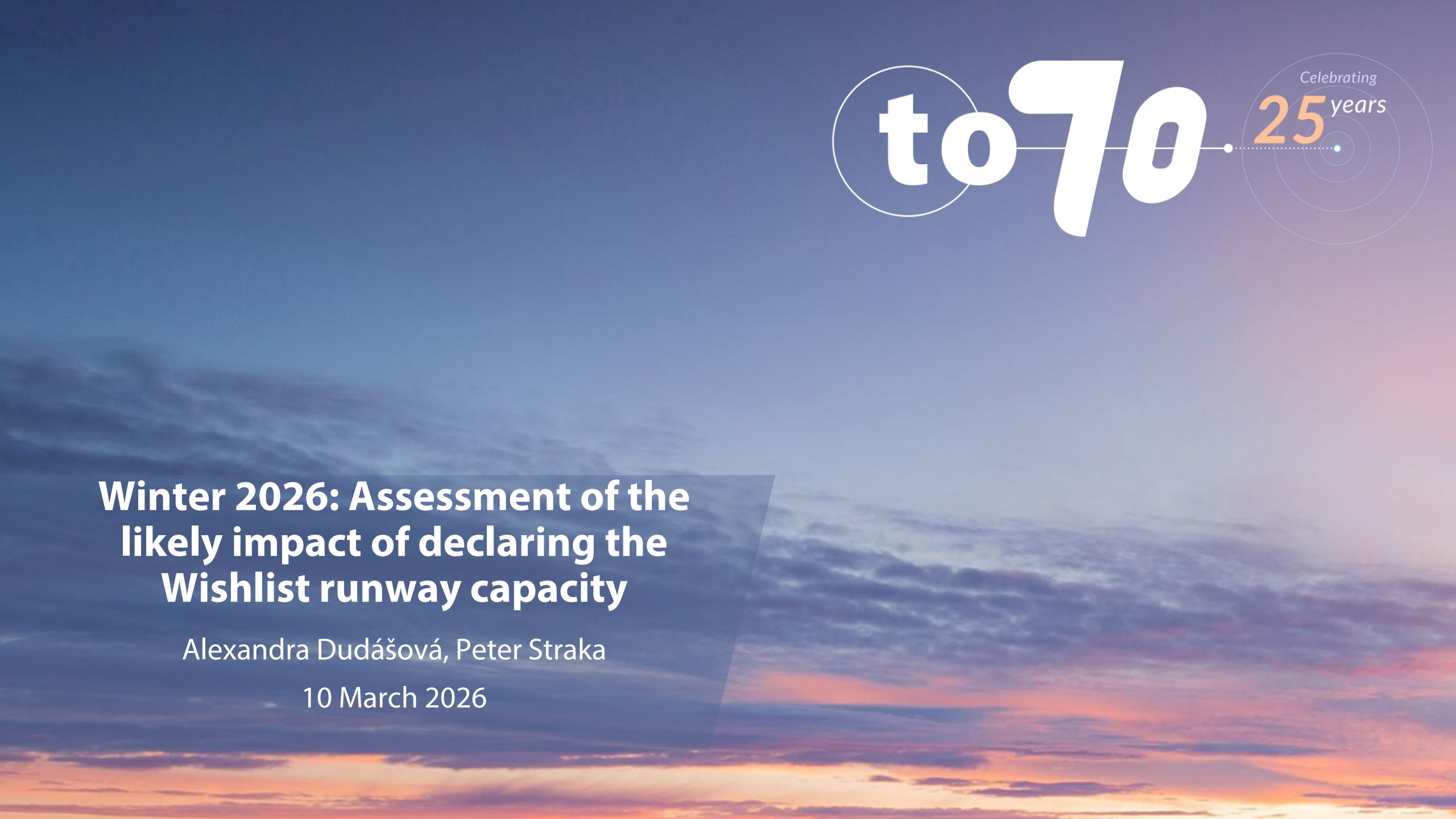


Winter 2026: Assessment of the likely impact of declaring the Wishlist runway capacity

Alexandra Dudášová, Peter Straka

10 March 2026

Contents

Context

The Irish Aviation Authority (IAA) is responsible for determining the parameters for slot allocation at Dublin Airport.

To ensure that optimal parameters are set, the IAA has instructed To70 to undertake airfield fast time simulations in preparation for the Winter 2026 (W26) season at Dublin airport.

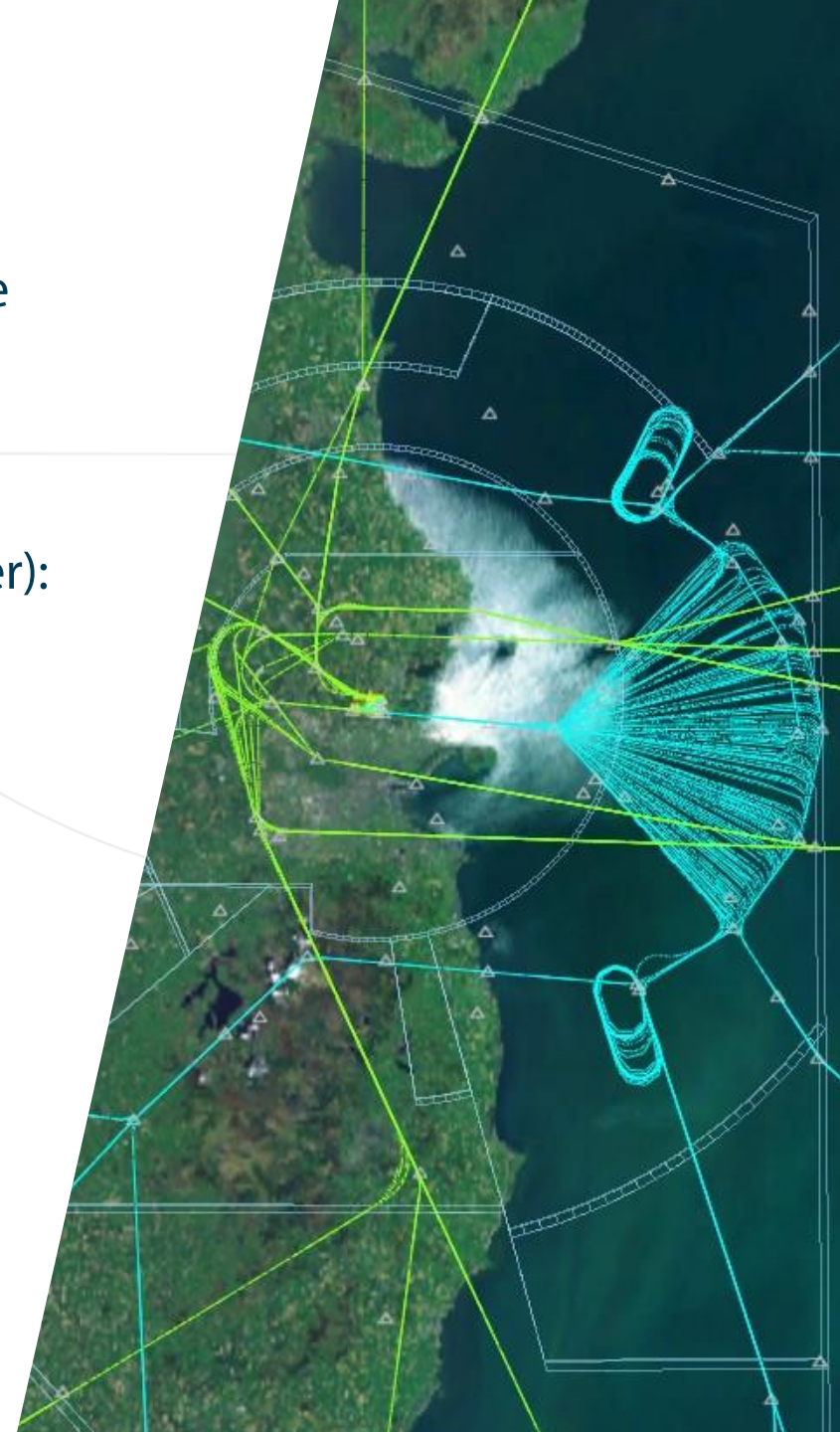
This document provides results from two simulated scenarios:

- W26 flight schedule coordinated to the proposed W26 limits and
- W26 flight schedule coordinated to the existing W25 limits.

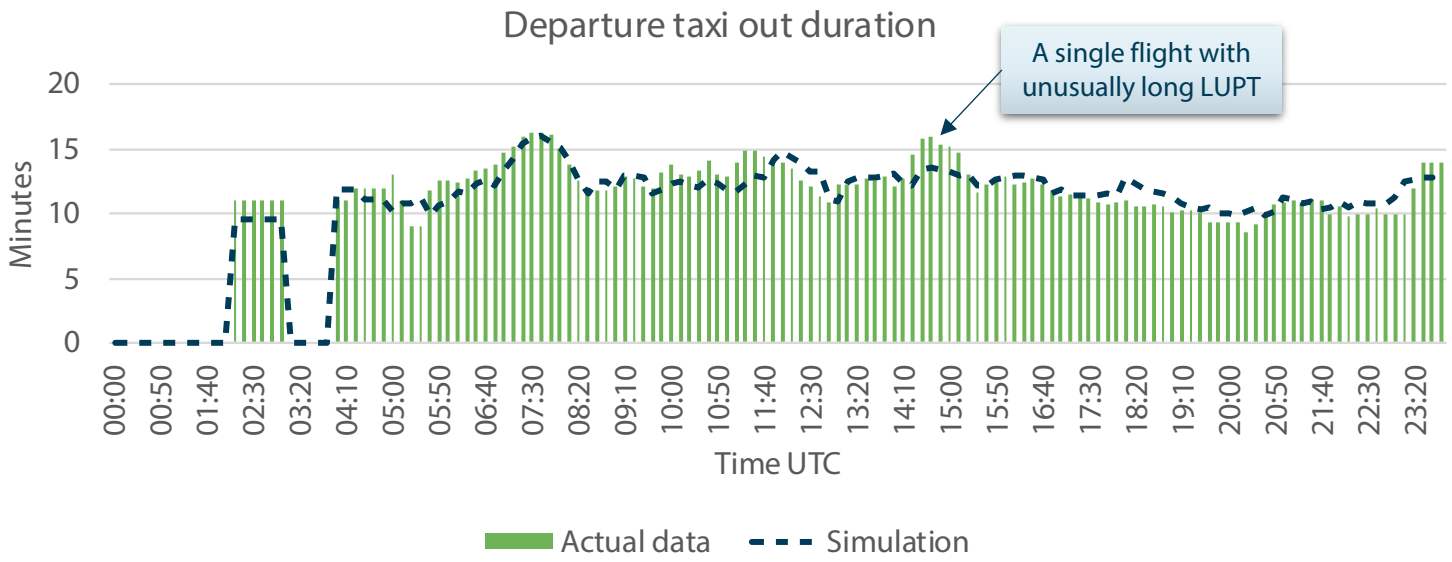
Model validation

Model validation

- Based on the model developed to support the Coordination Committee decisions in 2017 and used since.
- Historically validated against a number of design days from previous seasonal assessments.
- Calibrated against a single day of W25 operations (Saturday 8 November):
  - 312 arrivals and 314 departures, incl. GA and cargo,
  - Arrivals on 28L only,
  - Departures from 28L 2300-0659 UTC,
  - Departures from 28R 0700-2259 UTC,
  - Run from actual block times to take into account all delays.
- A comparison set of airside performance metrics is provided on the following slides.



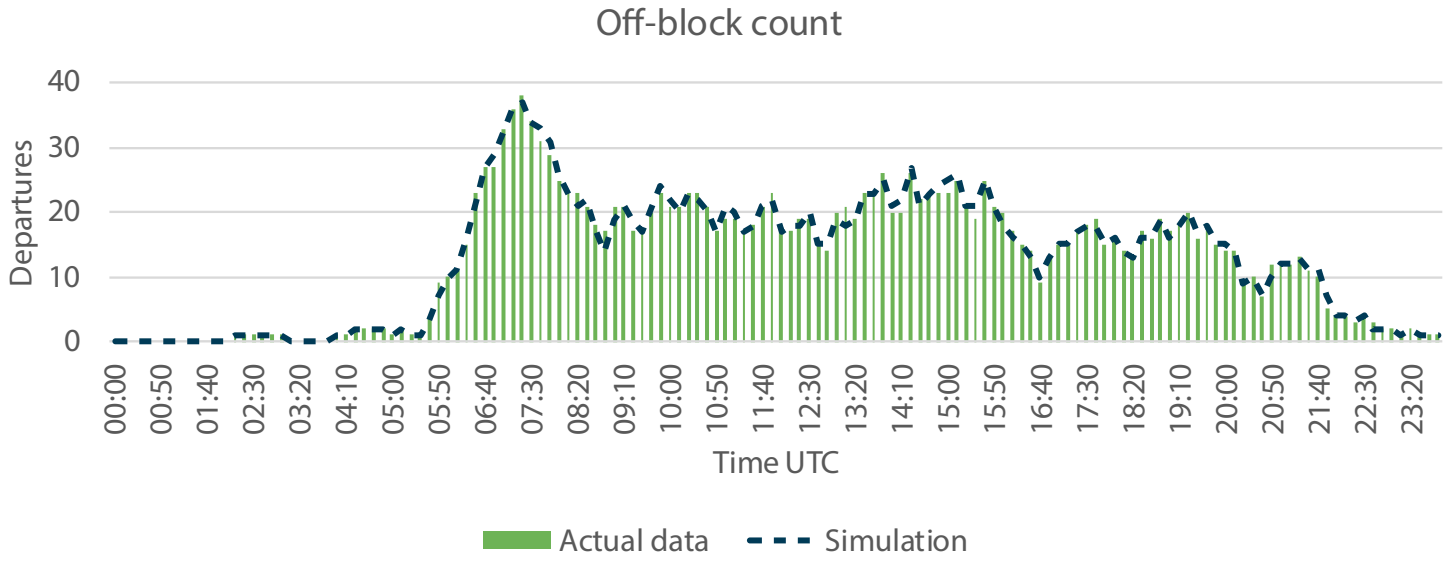
Calibration of departure performance



Metric definition:

Time duration between the off-block time and aircraft lifting off.

*This graph is presented as a rolling 60-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

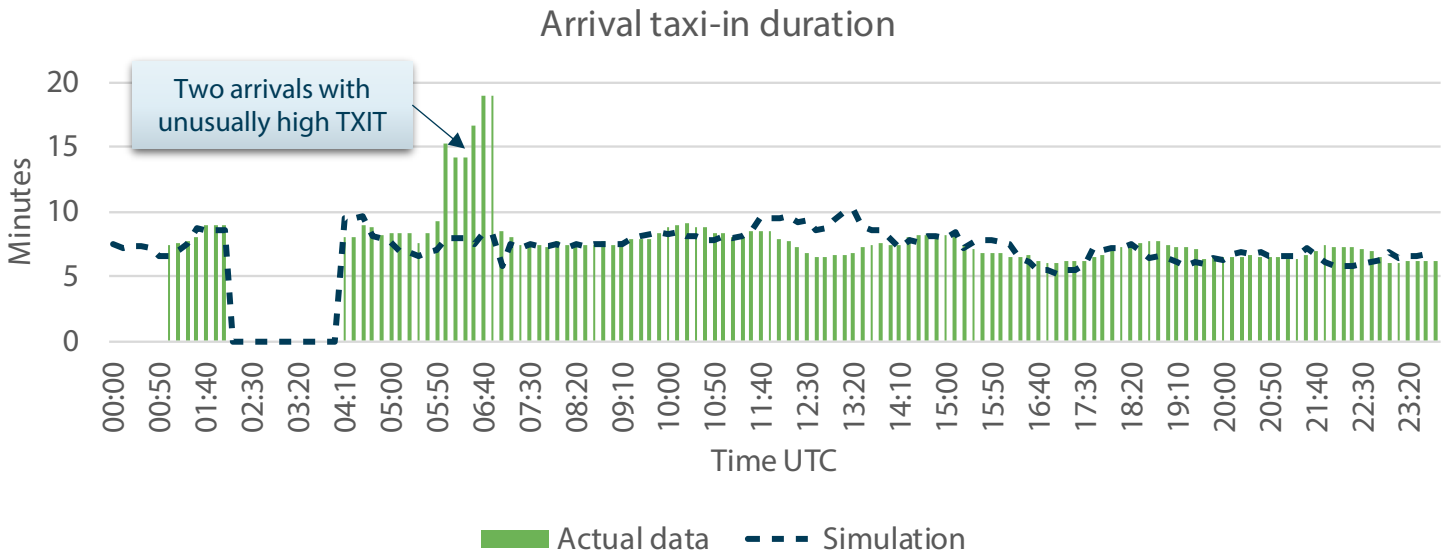


Metric definition:

The number of aircraft that have been pushed back in the last rolling period. The count is incremented when the aircraft leaves its departure parking position (either being pushed back at gate or taxiing / pulled away from a parking position).

* This graph is presented as a rolling 10-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

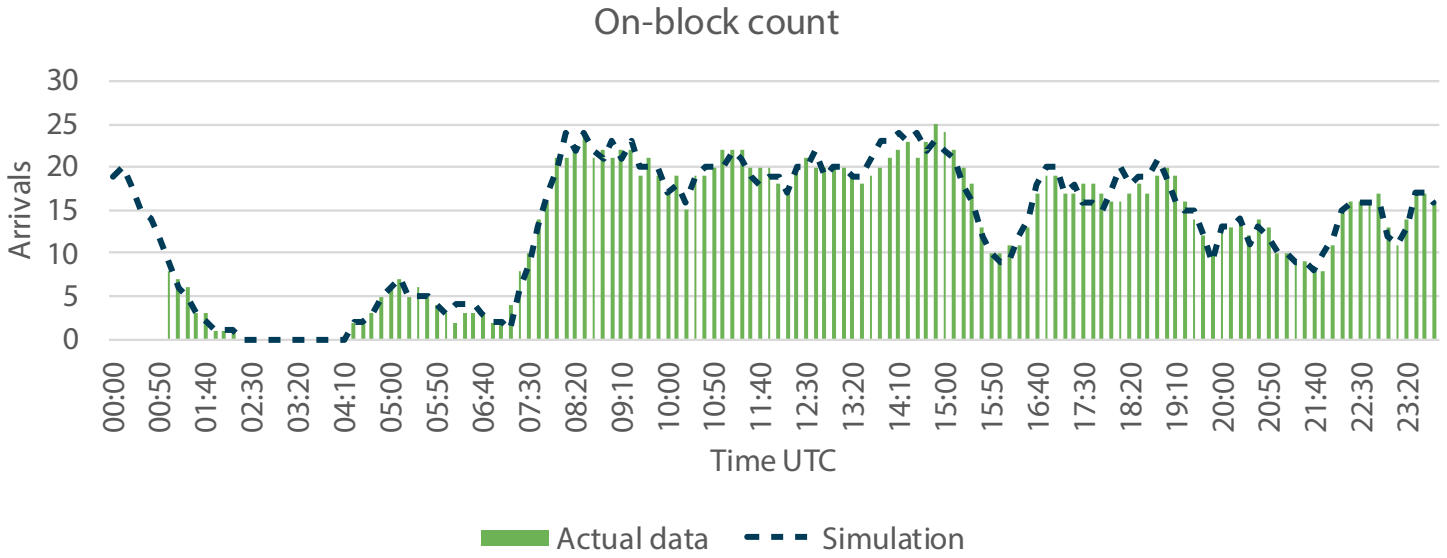
Calibration of arrival performance



Metric definition:

Time duration between touch-down and aircraft parking on-blocks.

*This graph is presented as a rolling 60-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

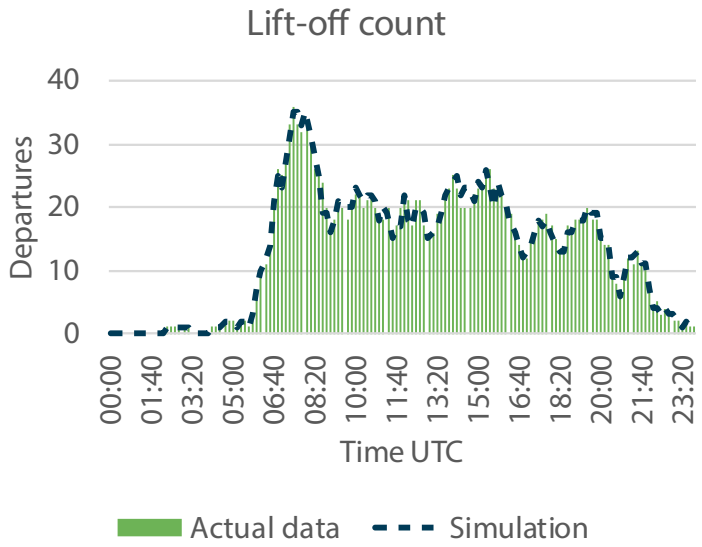


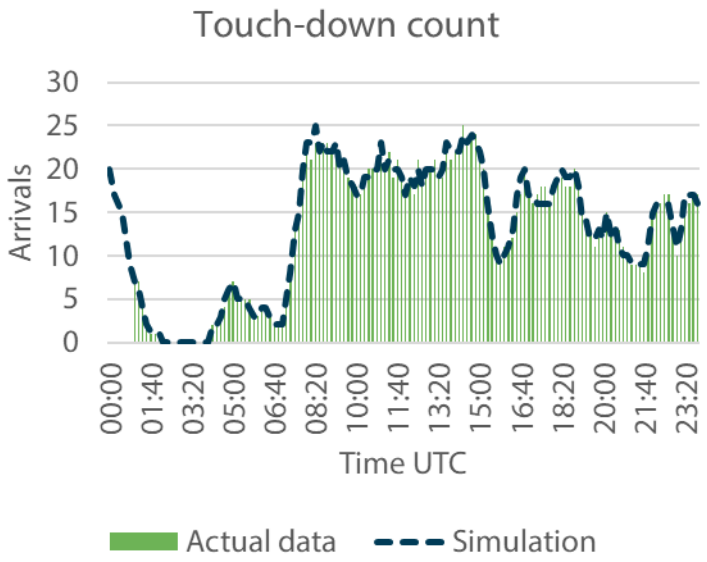
Metric definition:

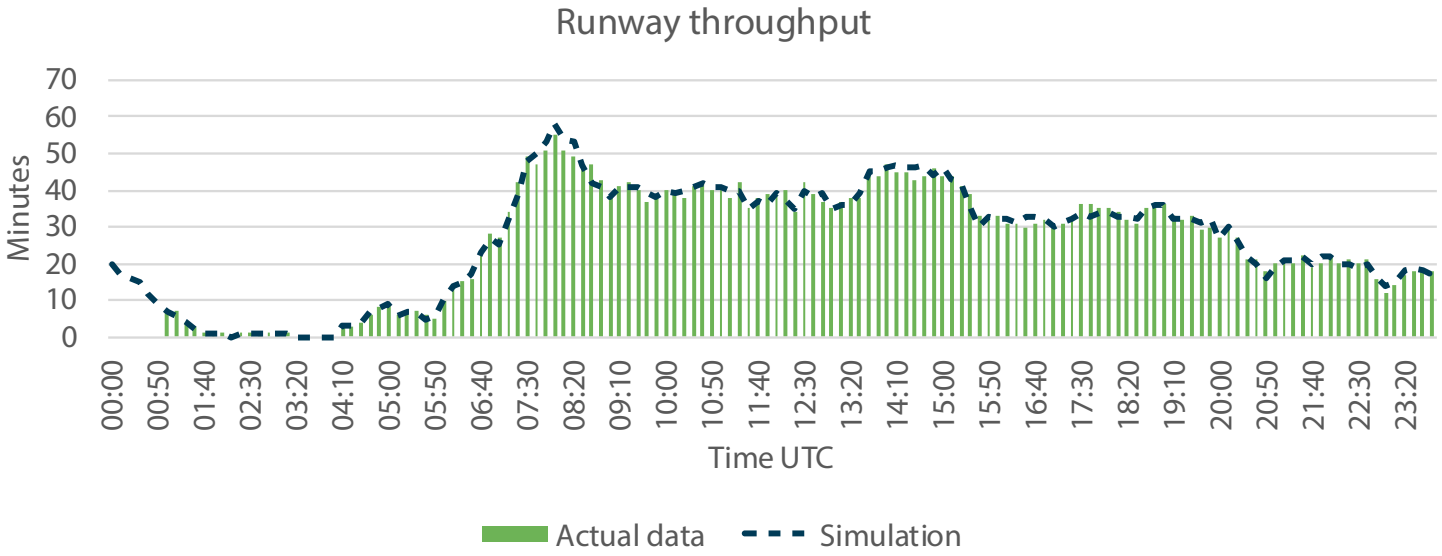
The number of aircraft that have reached their arrival parking position in the last rolling period. The count is incremented when the aircraft reaches its in-blocks position.

* This graph is presented as a rolling 60-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

Calibration of runway performance







Metric definition:

Lift-off count: The number of aircraft that have lifted off in the 60-minute rolling period. The count is incremented when the aircraft passes over the opposite end of the runway.

Touch-down count: The number of aircraft that have touched down in the 60-minute rolling period.

Runway throughput: Sum of all aircraft touching down and lifting-off in the 60-minute rolling period.

* All graphs are presented as a rolling 60-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

Result of model validation exercise

- **As the metrics calculated through the FTS model closely match the real-world data, both in terms of magnitude and profile shape, the model can be considered a satisfactory representation for the purpose of evaluating the impact of the proposed changes on flight schedules.**

- The model is considered to be valid if it is a sufficiently accurate representation of the corresponding real-world problem from the perspective of the intended uses of the model. "Valid" for a simulation does not mean the same as “indistinguishable from the real-world system”, even though in this case there is a close match.

Winter 2026 assessment

Task description

The purpose of this comparison is to assess the likely effect of either:

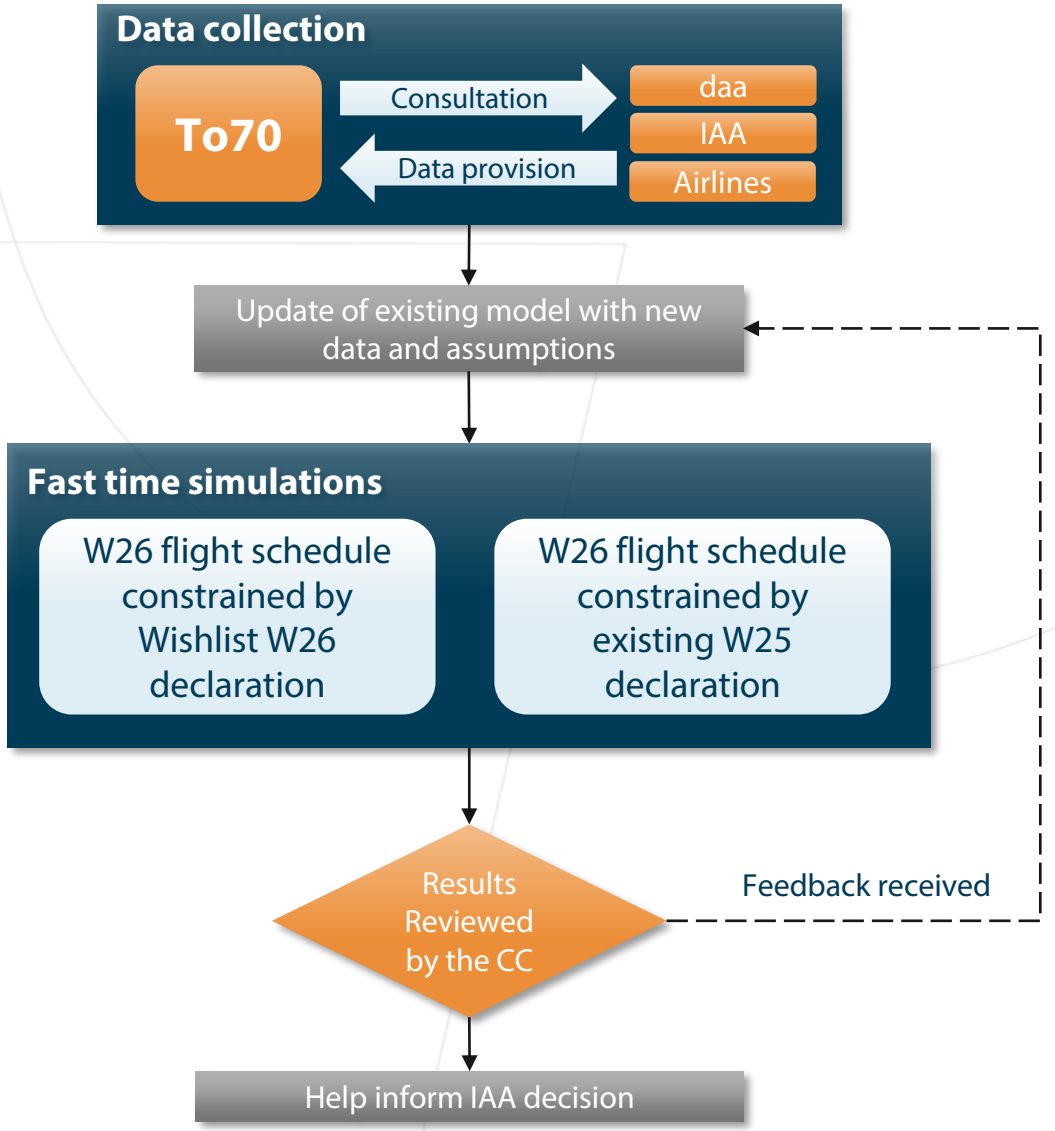
- declaring an increased runway capacity, as per the Winter 2026 Wishlist proposal, or
- maintaining the Winter 2025 capacity declaration limits.

- In both cases it is presumed that the Winter 2026 schedule of increased demand materialises as expected.

- The same number of movements are modelled in all cases, the difference being the limits to which they are coordinated. This difference is therefore a best current information estimate of the effect of a decision to increase the runway limits on a busy Winter 2026 day.

Approach and key changes in the W26 model

- Dual code E taxiways B1/Z to/from South Apron,
- TWY A permanently closed,
- TWY B2 bi-directional,
- Northern portion of TWY W2 & southern portion of TWY W3 closed because of Underpass works,
- Pier 1 West stands complete – TWY F-INNER becomes Code E compliant,
- Stand 618 L/C/R - withdrawal of facilities,
- Night closures in SA under CTS works.



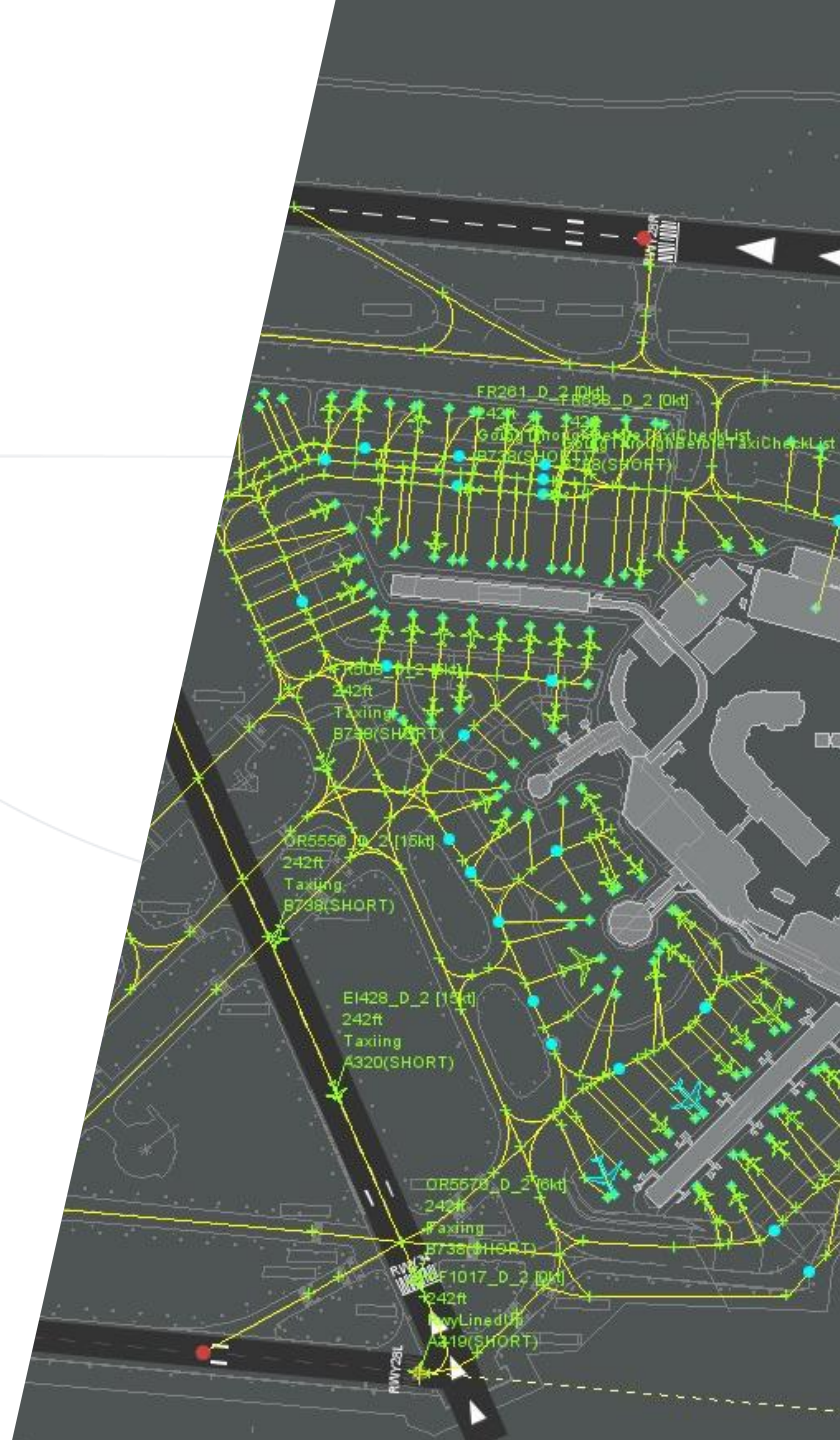
Winter 2026 flight schedule

✈ The flight schedule used for modelling of both scenarios:

- Contains a total of 848 flights:
  - 425 arrivals and
  - 423 departures;

- Contains 104 new services:
  - 53 new arrivals and
  - 51 new departures;

- Does not contain:
  - helicopter,
  - military,
  - state or
  - medical flights.



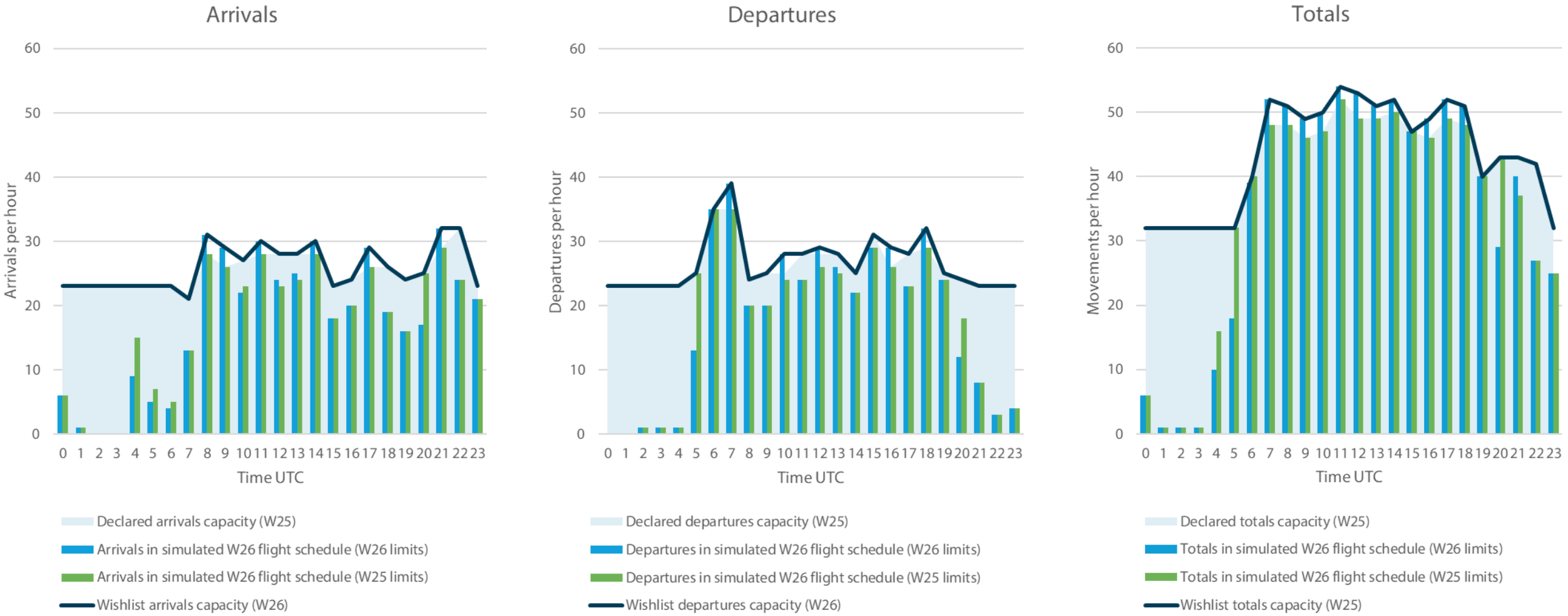
W26 Wishlist proposed by Dublin Airport

Hour UTC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Arrivals																									
Existing W25 arrivals capacity	23	23	23	23	23	23	23	21	28	26	27	28	28	28	28	23	24	26	26	24	25	29	32	23	**607**
Proposed W26 arrivals capacity	23	23	23	23	23	23	23	21	31	29	27	30	28	28	30	23	24	29	26	24	25	32	32	23	**623**
Difference (against W25 declaration)	0	0	0	0	0	0	0	0	3	3	0	2	0	0	2	0	0	3	0	0	0	3	0	0	**16**
Departures																									
Existing W25 departures capacity	23	23	23	23	23	25	35	35	24	25	25	28	28	28	25	31	26	28	29	25	24	23	23	23	**625**
Proposed W26 departures capacity	23	23	23	23	23	25	35	39	24	25	28	28	29	28	25	31	29	28	32	25	24	23	23	23	**639**
Difference (against W25 declaration)	0	0	0	0	0	0	0	4	0	0	3	0	1	0	0	0	3	0	3	0	0	0	0	0	**14**
Totals																									
Existing W25 totals capacity	32	32	32	32	32	32	40	48	48	46	47	52	49	49	50	47	46	49	48	40	43	43	42	32	**1011**
Proposed W26 totals capacity	32	32	32	32	32	32	40	52	51	49	50	54	53	51	52	47	49	52	51	40	43	43	42	32	**1043**
Difference (against W25 declaration)	0	0	0	0	0	0	0	4	3	3	3	2	4	2	2	0	3	3	3	0	0	0	0	0	**32**

W26 constrained by proposed W26 limits

Hour UTC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Arrivals																									
Proposed W26 arrivals capacity	23	23	23	23	23	23	23	21	31	29	27	30	28	28	30	23	24	29	26	24	25	32	32	23	**623**
Arrivals in simulated W26 schedule	6	1	0	0	9	5	4	13	31	29	22	30	24	25	30	18	20	29	19	16	17	32	24	21	**425**
Historic	*6*	*1*	*0*	*0*	*9*	*5*	*4*	*11*	*22*	*23*	*21*	*26*	*21*	*23*	*25*	*18*	*17*	*26*	*17*	*12*	*17*	*23*	*24*	*21*	***372***
Additional arrivals proposed for W26	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*9*	*6*	*1*	*4*	*3*	*2*	*5*	*0*	*3*	*3*	*2*	*4*	*0*	*9*	*0*	*0*	***53***
Spare capacity (against W26 wishlist)	17	22	23	23	14	18	19	8	0	0	5	0	4	3	0	5	4	0	7	8	8	0	8	2	**198**
Departures																									
Proposed W26 departures capacity	23	23	23	23	23	25	35	39	24	25	28	28	29	28	25	31	29	28	32	25	24	23	23	23	**639**
Departures in simulated W26 schedule	0	0	1	1	1	13	35	39	20	20	28	24	29	26	22	29	29	23	32	24	12	8	3	4	**423**
Historic	*0*	*0*	*1*	*1*	*1*	*13*	*35*	*30*	*18*	*17*	*21*	*22*	*25*	*25*	*22*	*23*	*25*	*23*	*23*	*20*	*12*	*8*	*3*	*4*	***372***
Additional departures proposed for W26	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*9*	*2*	*3*	*7*	*2*	*4*	*1*	*0*	*6*	*4*	*0*	*9*	*4*	*0*	*0*	*0*	*0*	***51***
Spare capacity (against W26 wishlist)	23	23	22	22	22	12	0	0	4	5	0	4	0	2	3	2	0	5	0	1	12	15	20	19	**216**
Totals																									
Wishlist W26 Totals capacity	32	32	32	32	32	32	40	52	51	49	50	54	53	51	52	47	49	52	51	40	43	43	42	32	**1043**
Totals in simulated W26 schedule	6	1	1	1	10	18	39	52	51	49	50	54	53	51	52	47	49	52	51	40	29	40	27	25	**848**
Historic	*6*	*1*	*1*	*1*	*10*	*18*	*39*	*41*	*40*	*40*	*42*	*48*	*46*	*48*	*47*	*41*	*42*	*49*	*40*	*32*	*29*	*31*	*27*	*25*	***744***
Additional movements proposed for W26	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*11*	*11*	*9*	*8*	*6*	*7*	*3*	*5*	*6*	*7*	*3*	*11*	*8*	*0*	*9*	*0*	*0*	***104***
Spare capacity (against W26 wishlist)	26	31	31	31	22	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14	3	15	7	**195**

Constraining the W26 schedule by the W25 limits results in spreading the flights into shoulder hours



Some of the additional services envisaged in W26 schedule had to be re-timed to make the flight schedule compatible with the existing W25 declaration. This simulates a case where existing W25 declaration will be rolled forward to W26 season, but all the new services would still operate – although not necessarily at the originally scheduled times.

W26 constrained by existing W25 limits

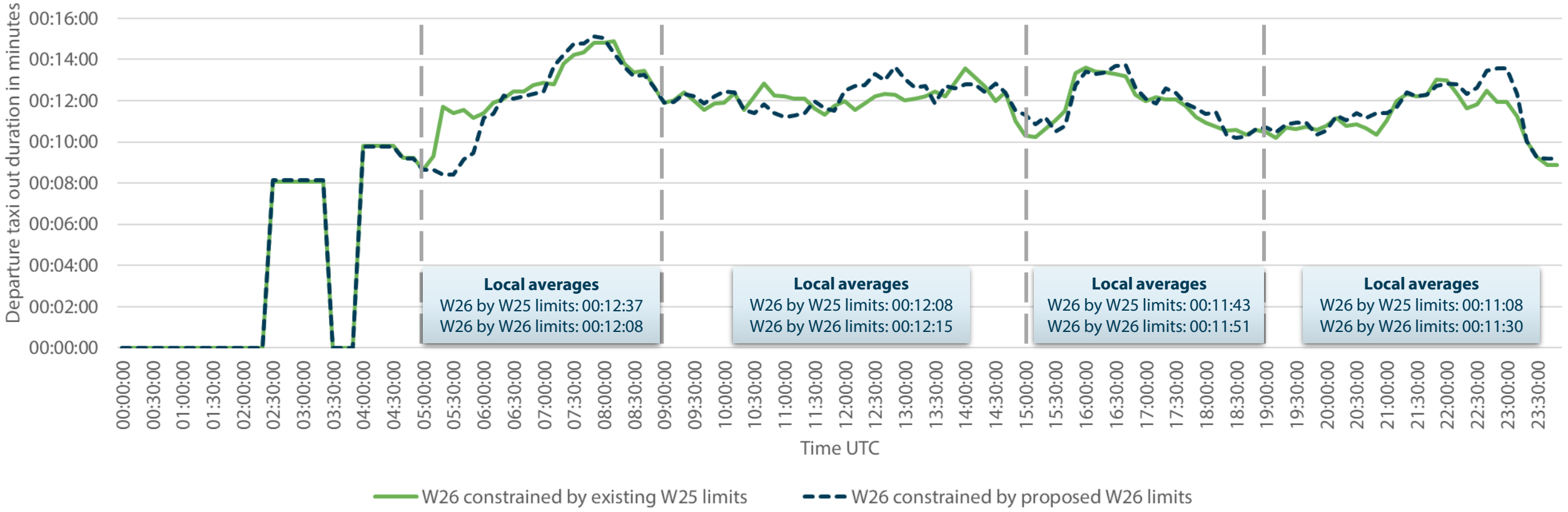
Hour UTC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Arrivals																									
Existing W25 arrivals capacity	23	23	23	23	23	23	23	21	28	26	27	28	28	28	28	23	24	26	26	24	25	29	32	23	**607**
Arrivals in simulated W26 schedule	6	1	0	0	15	7	5	13	28	26	23	28	23	24	28	18	20	26	19	16	25	29	24	21	**425**
Historic	*6*	*1*	*0*	*0*	*9*	*5*	*4*	*11*	*22*	*23*	*21*	*26*	*21*	*23*	*25*	*18*	*17*	*26*	*17*	*12*	*17*	*23*	*24*	*21*	***372***
Additional arrivals proposed for W26	*0*	*0*	*0*	*0*	*6*	*2*	*1*	*2*	*6*	*3*	*2*	*2*	*2*	*1*	*3*	*0*	*3*	*0*	*2*	*4*	*8*	*6*	*0*	*0*	***53***
Spare capacity (against W25 limits)	17	22	23	23	8	16	18	8	0	0	4	0	5	4	0	5	4	0	7	8	0	0	8	2	**182**
Departures																									
Existing W25 departures capacity	23	23	23	23	23	25	35	35	24	25	25	28	28	28	25	31	26	28	29	25	24	23	23	23	**625**
Departures in simulated W26 schedule	0	0	1	1	1	25	35	35	20	20	24	24	26	25	22	29	26	23	29	24	18	8	3	4	**423**
Historic	*0*	*0*	*1*	*1*	*1*	*13*	*35*	*30*	*18*	*17*	*21*	*22*	*25*	*25*	*22*	*23*	*25*	*23*	*23*	*20*	*12*	*8*	*3*	*4*	***372***
Additional departures proposed for W26	*0*	*0*	*0*	*0*	*0*	*12*	*0*	*5*	*2*	*3*	*3*	*2*	*1*	*0*	*0*	*6*	*1*	*0*	*6*	*4*	*6*	*0*	*0*	*0*	***51***
Spare capacity (against W25 limits)	23	23	22	22	22	0	0	0	4	5	1	4	2	3	3	2	0	5	0	1	6	15	20	19	**202**
Totals																									
Existing W25 totals capacity	32	32	32	32	32	32	40	48	48	46	47	52	49	49	50	47	46	49	48	40	43	43	42	32	**1011**
Totals in simulated W26 schedule	6	1	1	1	16	32	40	48	48	46	47	52	49	49	50	47	46	49	48	40	43	37	27	25	**848**
Historic	*6*	*1*	*1*	*1*	*10*	*18*	*39*	*41*	*40*	*40*	*42*	*48*	*46*	*48*	*47*	*41*	*42*	*49*	*40*	*32*	*29*	*31*	*27*	*25*	***744***
Additional movements proposed for W26	*0*	*0*	*0*	*0*	*6*	*14*	*1*	*7*	*8*	*6*	*5*	*4*	*3*	*1*	*3*	*6*	*4*	*0*	*8*	*8*	*14*	*6*	*0*	*0*	***104***
Spare capacity (against W25 limits)	26	31	31	31	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	15	7	**163**

Results

Departure taxi out time

	W25 limits	W26 limits	Difference
Daily average	00:12:09	00:12:16	00:00:07
Peak average	00:14:53	00:15:08	00:00:15

Definition: This metric is defined to be the time period between off-block and the time the aircraft lifts-off. This value is updated every second during the simulation when the aircraft is taxiing for departure even if the aircraft is stopped on the ground.

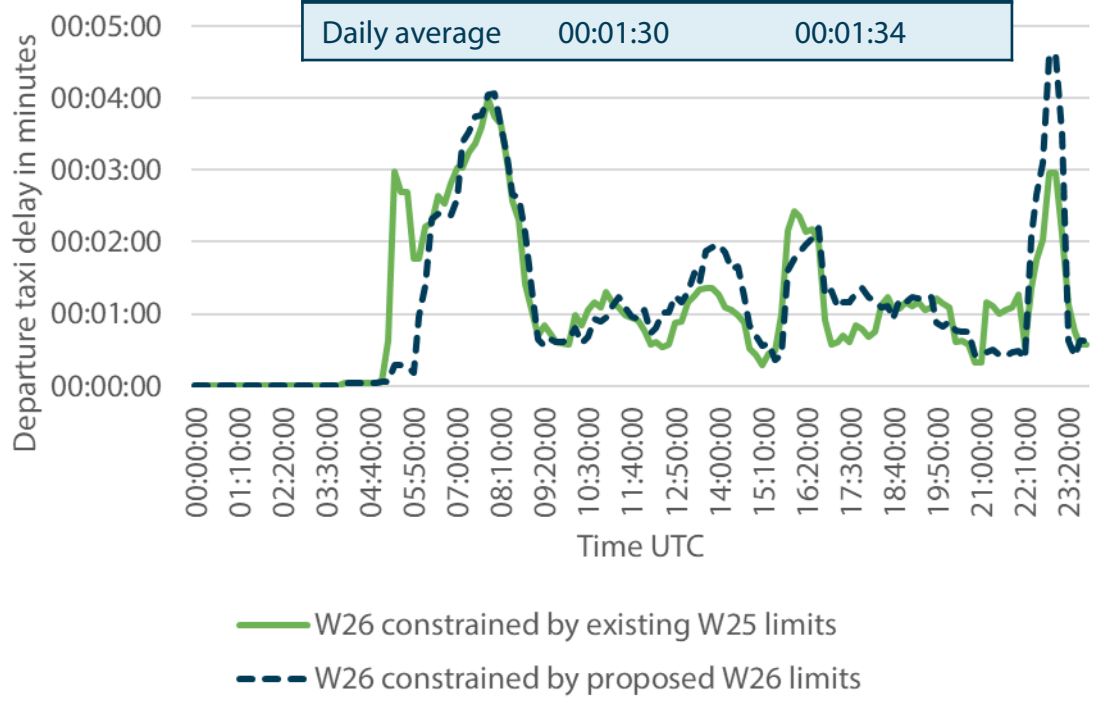


*This graph is presented as a rolling 60-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

Departure taxi delay and runway holding delay

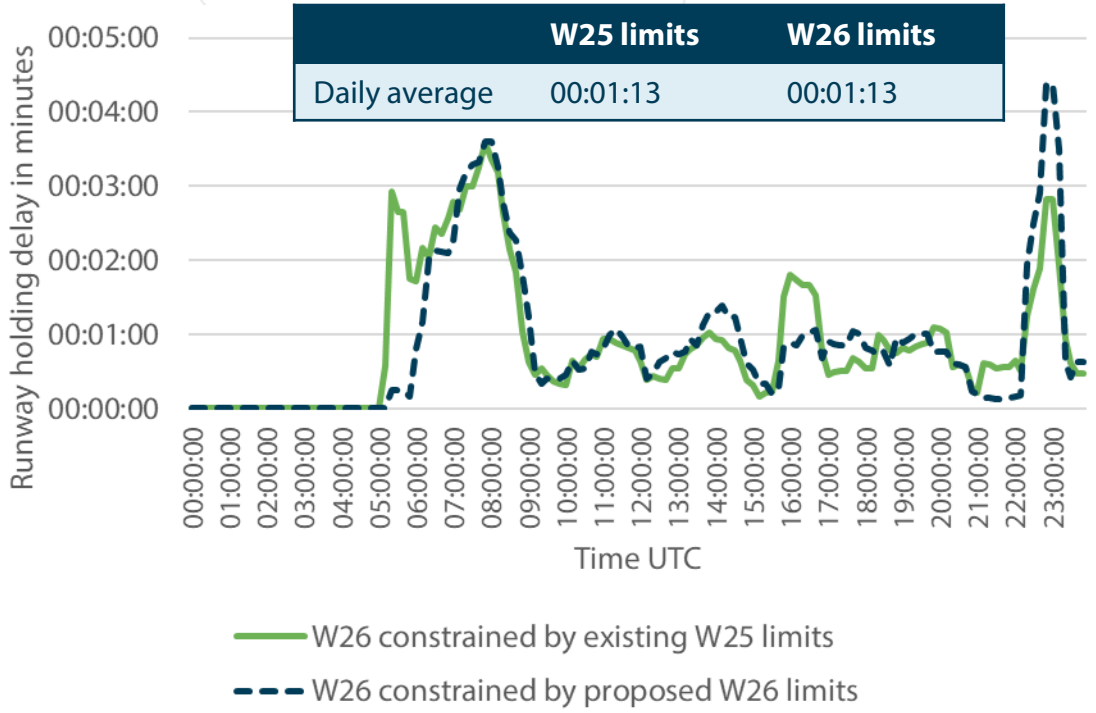
Departure taxi delay: Total delay of departing aircraft accumulated between off-block and entering the runway. It is effectively the sum of runway holding delay and non-runway delays encountered during taxi-out.

	W25 limits	W26 limits
Daily average	00:01:30	00:01:34



Runway holding delay: The delay experienced while the aircraft is queueing for runway entry. The delay can be caused by other aircraft (being slowed down or stopped) or when waiting at runway stop-bar (because the runway is not free for lining up). This metric is defined as the period between joining the back end of the runway queue and the time the aircraft starts lining up.

	W25 limits	W26 limits
Daily average	00:01:13	00:01:13

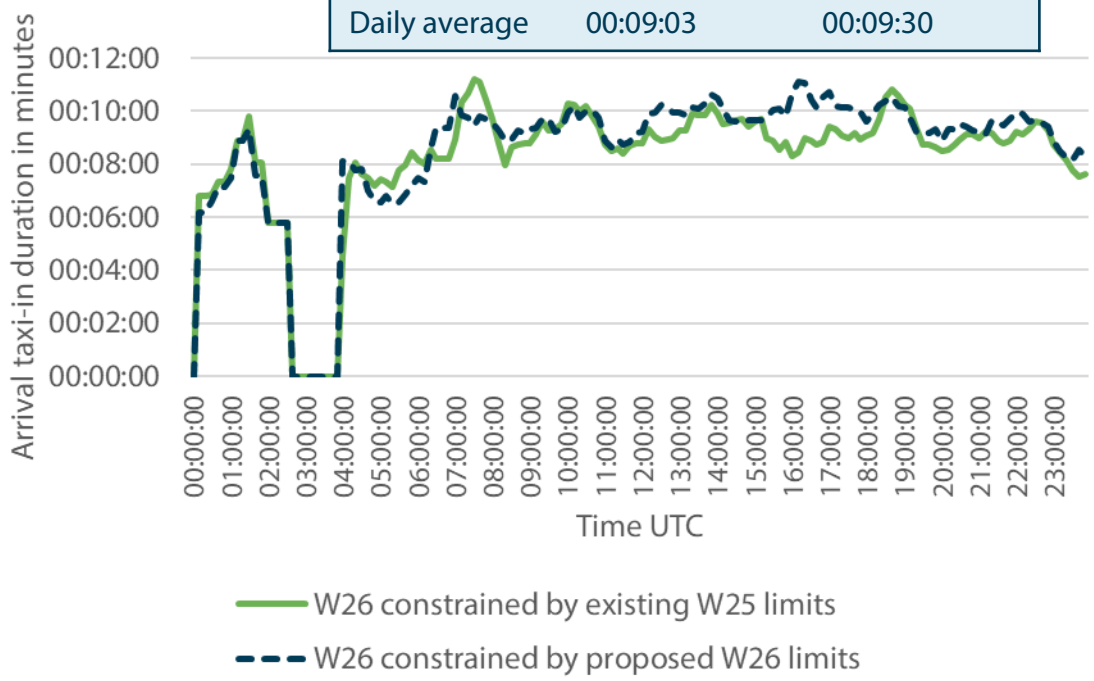


*These graphs are presented as a rolling 60-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

Arrival taxi in time and arrival taxi delay

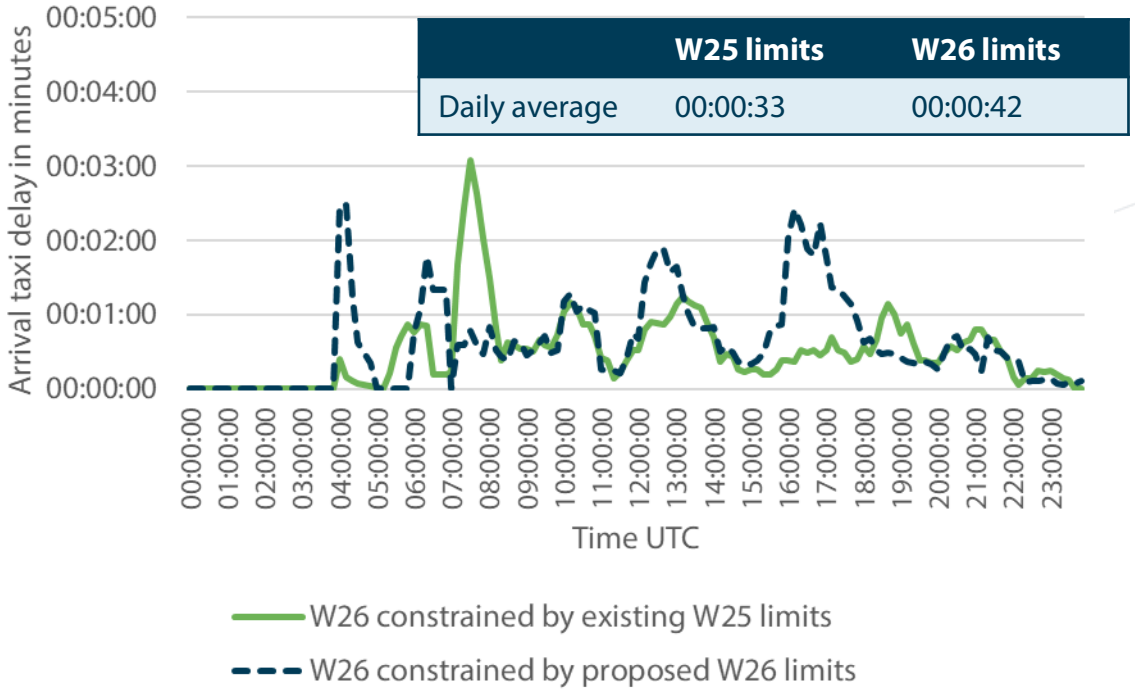
Arrival taxi-in time: The time duration the arriving aircraft has been taxiing on the ground of its arrival airport. This value is updated every second of simulation time when the arriving aircraft is taxiing, even if the aircraft is stopped on ground.

	W25 limits	W26 limits
Daily average	00:09:03	00:09:30



Arrival taxi delay: The delay caused by other traffic (slowing down or being stopped) while the aircraft is taxiing to its arrival stand. Every second of simulation time the aircraft is stopped on ground due to other traffic, the delay is increased accordingly. Additionally, if the aircraft is forced to slow-down due to other traffic, a proportional delay is calculated.

	W25 limits	W26 limits
Daily average	00:00:33	00:00:42

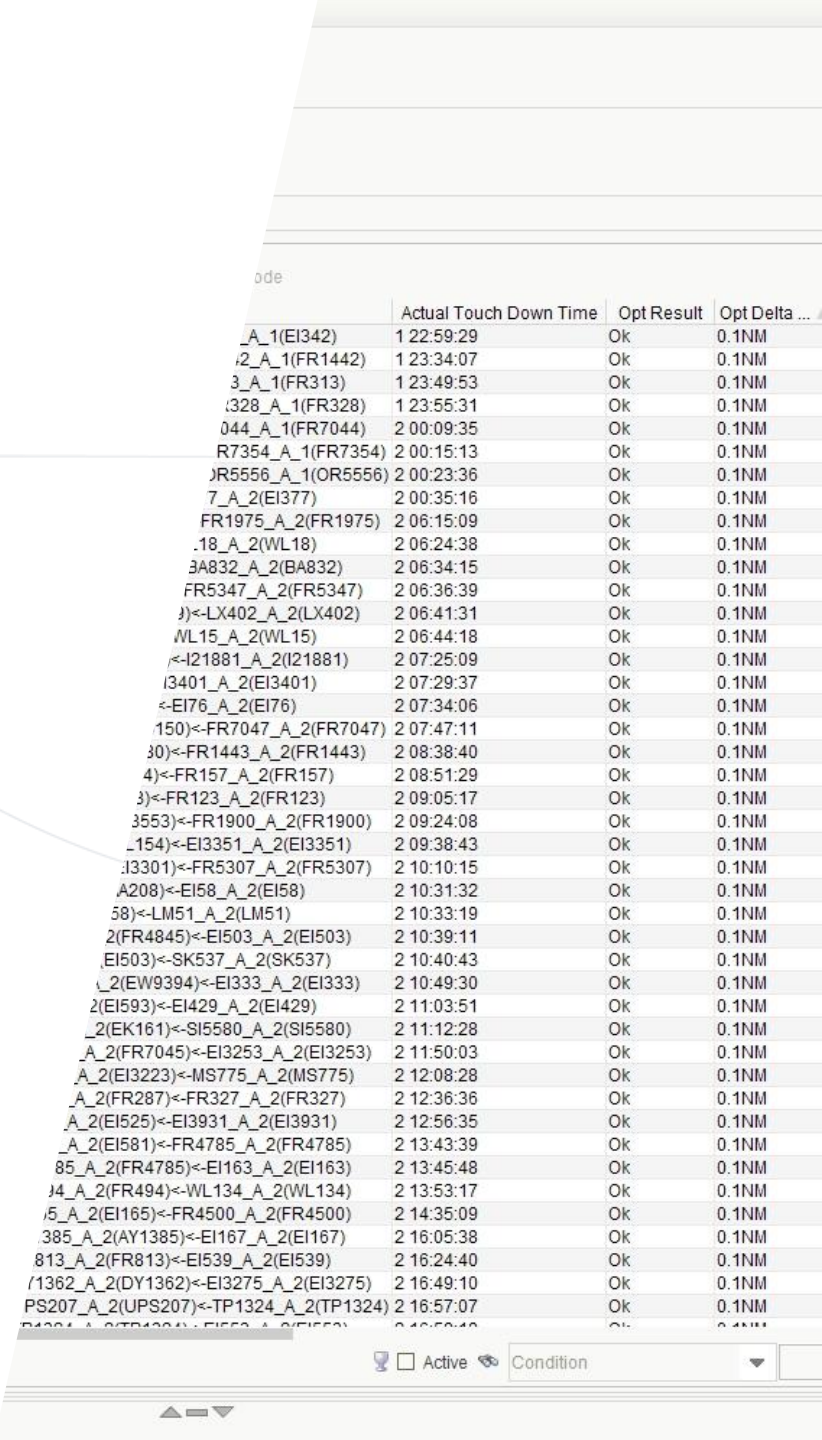


*These graphs are presented as a rolling 60-minute average (value for each time period has been calculated as average of values of all events occurring within the T-60 minutes window from the start of the measurement).

Increasing the RWY limits in line with the W26 Wishlist

- If the demand materialises as expected and the W26 limits are declared:
  - There might be localised increases in av. taxi times in or around the time periods where the new services are added.
  - The totals between 07:00 hour and 19:00 hour (inclusive) are likely to be scheduled up to the capacity limits.
  - The arrival limit at 21:00 hour is likely to be reached.
  - The morning departure limits at 06:00 and 07:00 hours are likely to be reached.

However, the overall impact of declaring the W26 Wishlist runway capacity limits seems to have only marginal impact on the daily taxi performance (i.e. a couple of seconds per flight on average).



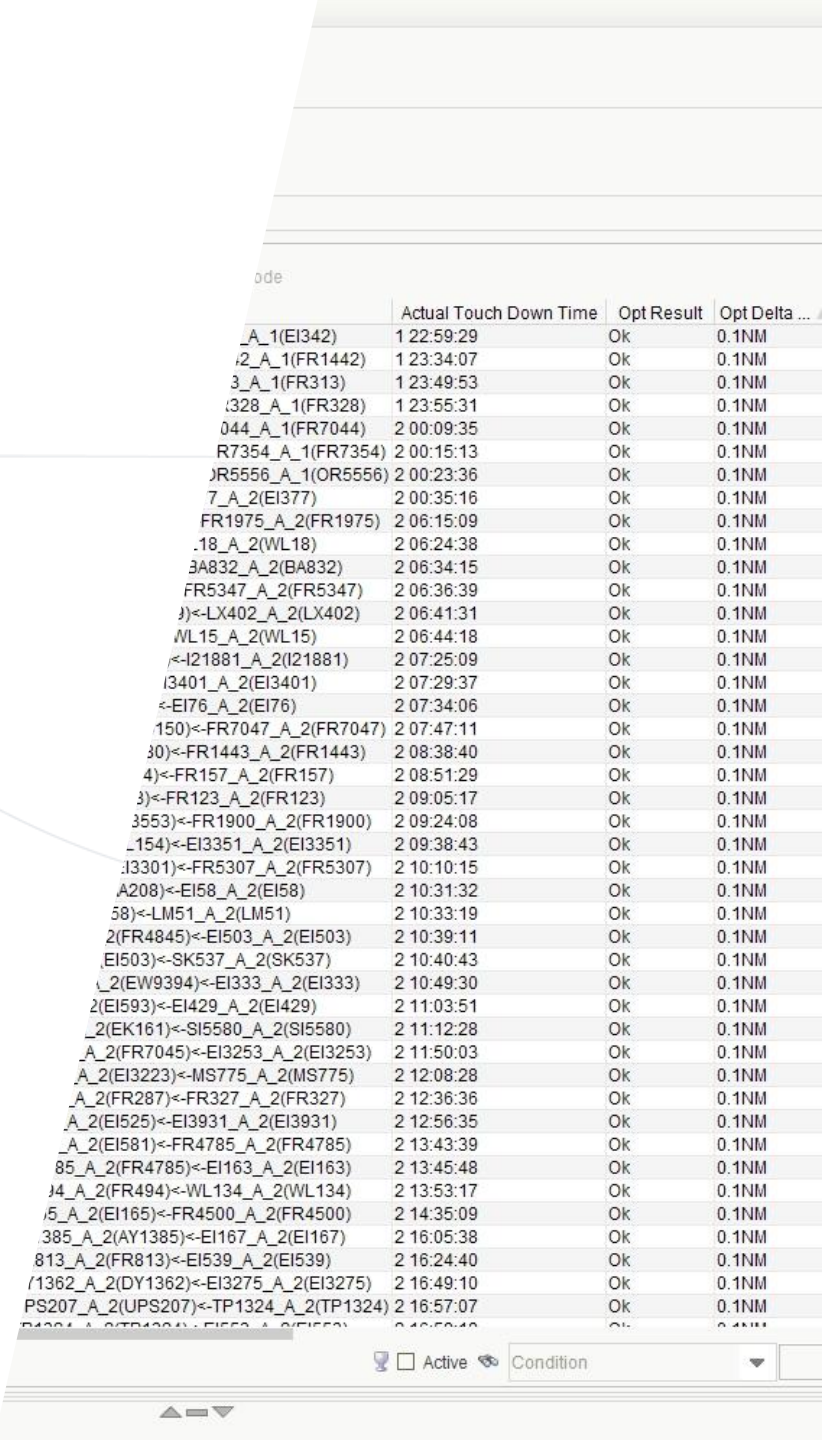
	Actual Touch Down Time	Opt Result	Opt Delta ...
_A_1(EI342)	1 22:59:29	Ok	0.1NM
2_A_1(FR1442)	1 23:34:07	Ok	0.1NM
3_A_1(FR313)	1 23:49:53	Ok	0.1NM
328_A_1(FR328)	1 23:55:31	Ok	0.1NM
044_A_1(FR7044)	2 00:09:35	Ok	0.1NM
R7354_A_1(FR7354)	2 00:15:13	Ok	0.1NM
R5556_A_1(OR5556)	2 00:23:36	Ok	0.1NM
7_A_2(EI377)	2 00:35:16	Ok	0.1NM
FR1975_A_2(FR1975)	2 06:15:09	Ok	0.1NM
.18_A_2(WL18)	2 06:24:38	Ok	0.1NM
BA832_A_2(BA832)	2 06:34:15	Ok	0.1NM
FR5347_A_2(FR5347)	2 06:36:39	Ok	0.1NM
)<-LX402_A_2(LX402)	2 06:41:31	Ok	0.1NM
WL15_A_2(WL15)	2 06:44:18	Ok	0.1NM
<-I21881_A_2(I21881)	2 07:25:09	Ok	0.1NM
I3401_A_2(EI3401)	2 07:29:37	Ok	0.1NM
<-EI76_A_2(EI76)	2 07:34:06	Ok	0.1NM
150)<-FR7047_A_2(FR7047)	2 07:47:11	Ok	0.1NM
30)<-FR1443_A_2(FR1443)	2 08:38:40	Ok	0.1NM
4)<-FR157_A_2(FR157)	2 08:51:29	Ok	0.1NM
3)<-FR123_A_2(FR123)	2 09:05:17	Ok	0.1NM
3553)<-FR1900_A_2(FR1900)	2 09:24:08	Ok	0.1NM
_154)<-EI3351_A_2(EI3351)	2 09:38:43	Ok	0.1NM
I3301)<-FR5307_A_2(FR5307)	2 10:10:15	Ok	0.1NM
A208)<-EI58_A_2(EI58)	2 10:31:32	Ok	0.1NM
58)<-LM51_A_2(LM51)	2 10:33:19	Ok	0.1NM
2(FR4845)<-EI503_A_2(EI503)	2 10:39:11	Ok	0.1NM
EI503)<-SK537_A_2(SK537)	2 10:40:43	Ok	0.1NM
_2(EW9394)<-EI333_A_2(EI333)	2 10:49:30	Ok	0.1NM
2(EI593)<-EI429_A_2(EI429)	2 11:03:51	Ok	0.1NM
_2(EK161)<-SI5580_A_2(SI5580)	2 11:12:28	Ok	0.1NM
A_2(FR7045)<-EI3253_A_2(EI3253)	2 11:50:03	Ok	0.1NM
A_2(EI3223)<-MS775_A_2(MS775)	2 12:08:28	Ok	0.1NM
A_2(FR287)<-FR327_A_2(FR327)	2 12:36:36	Ok	0.1NM
A_2(EI525)<-EI3931_A_2(EI3931)	2 12:56:35	Ok	0.1NM
_A_2(EI581)<-FR4785_A_2(FR4785)	2 13:43:39	Ok	0.1NM
85_A_2(FR4785)<-EI163_A_2(EI163)	2 13:45:48	Ok	0.1NM
4_A_2(FR494)<-WL134_A_2(WL134)	2 13:53:17	Ok	0.1NM
5_A_2(EI165)<-FR4500_A_2(FR4500)	2 14:35:09	Ok	0.1NM
385_A_2(AY1385)<-EI167_A_2(EI167)	2 16:05:38	Ok	0.1NM
813_A_2(FR813)<-EI539_A_2(EI539)	2 16:24:40	Ok	0.1NM
1362_A_2(DY1362)<-EI3275_A_2(EI3275)	2 16:49:10	Ok	0.1NM
PS207_A_2(UPS207)<-TP1324_A_2(TP1324)	2 16:57:07	Ok	0.1NM

Active Condition

Maintaining the RWY limits in line with the W25 declaration

- If the demand materialises as expected and the W25 limits are kept:
  - The additional W26 demand may end up re-distributed to hours with any spare capacity. Re-distribution of these services flattens some of the local taxi time peaks.
  - The totals between 05:00 hour and 20:00 hour (inclusive) are likely to be scheduled up to the capacity limits.
  - The arrival limit at 21:00 hour is likely to be reached.
  - The morning departure wave is likely to start earlier, with departure limits at 05:00, 06:00 and 07:00 hours likely to be reached.

The overall impact of keeping the W25 limits on average taxi time performance is negligible compared to declaring the W26 runway limits.



	Actual Touch Down Time	Opt Result	Opt Delta ...
_A_1(EI342)	1 22:59:29	Ok	0.1NM
2_A_1(FR1442)	1 23:34:07	Ok	0.1NM
3_A_1(FR313)	1 23:49:53	Ok	0.1NM
328_A_1(FR328)	1 23:55:31	Ok	0.1NM
044_A_1(FR7044)	2 00:09:35	Ok	0.1NM
R7354_A_1(FR7354)	2 00:15:13	Ok	0.1NM
R5556_A_1(OR5556)	2 00:23:36	Ok	0.1NM
7_A_2(EI377)	2 00:35:16	Ok	0.1NM
FR1975_A_2(FR1975)	2 06:15:09	Ok	0.1NM
.18_A_2(WL18)	2 06:24:38	Ok	0.1NM
BA832_A_2(BA832)	2 06:34:15	Ok	0.1NM
FR5347_A_2(FR5347)	2 06:36:39	Ok	0.1NM
)<-LX402_A_2(LX402)	2 06:41:31	Ok	0.1NM
WL15_A_2(WL15)	2 06:44:18	Ok	0.1NM
<-I21881_A_2(I21881)	2 07:25:09	Ok	0.1NM
3401_A_2(EI3401)	2 07:29:37	Ok	0.1NM
<-EI76_A_2(EI76)	2 07:34:06	Ok	0.1NM
150)<-FR7047_A_2(FR7047)	2 07:47:11	Ok	0.1NM
30)<-FR1443_A_2(FR1443)	2 08:38:40	Ok	0.1NM
4)<-FR157_A_2(FR157)	2 08:51:29	Ok	0.1NM
3)<-FR123_A_2(FR123)	2 09:05:17	Ok	0.1NM
3553)<-FR1900_A_2(FR1900)	2 09:24:08	Ok	0.1NM
_154)<-EI3351_A_2(EI3351)	2 09:38:43	Ok	0.1NM
I3301)<-FR5307_A_2(FR5307)	2 10:10:15	Ok	0.1NM
A208)<-EI58_A_2(EI58)	2 10:31:32	Ok	0.1NM
58)<-LM51_A_2(LM51)	2 10:33:19	Ok	0.1NM
2(FR4845)<-EI503_A_2(EI503)	2 10:39:11	Ok	0.1NM
EI503)<-SK537_A_2(SK537)	2 10:40:43	Ok	0.1NM
_2(EW9394)<-EI333_A_2(EI333)	2 10:49:30	Ok	0.1NM
2(EI593)<-EI429_A_2(EI429)	2 11:03:51	Ok	0.1NM
_2(EK161)<-SI5580_A_2(SI5580)	2 11:12:28	Ok	0.1NM
A_2(FR7045)<-EI3253_A_2(EI3253)	2 11:50:03	Ok	0.1NM
A_2(EI3223)<-MS775_A_2(MS775)	2 12:08:28	Ok	0.1NM
A_2(FR287)<-FR327_A_2(FR327)	2 12:36:36	Ok	0.1NM
A_2(EI525)<-EI3931_A_2(EI3931)	2 12:56:35	Ok	0.1NM
_A_2(EI581)<-FR4785_A_2(FR4785)	2 13:43:39	Ok	0.1NM
85_A_2(FR4785)<-EI163_A_2(EI163)	2 13:45:48	Ok	0.1NM
4_A_2(FR494)<-WL134_A_2(WL134)	2 13:53:17	Ok	0.1NM
5_A_2(EI165)<-FR4500_A_2(FR4500)	2 14:35:09	Ok	0.1NM
385_A_2(AY1385)<-EI167_A_2(EI167)	2 16:05:38	Ok	0.1NM
813_A_2(FR813)<-EI539_A_2(EI539)	2 16:24:40	Ok	0.1NM
1362_A_2(DY1362)<-EI3275_A_2(EI3275)	2 16:49:10	Ok	0.1NM
PS207_A_2(UPS207)<-TP1324_A_2(TP1324)	2 16:57:07	Ok	0.1NM

Active Condition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