



# 34<sup>th</sup> Airline/ATS Safety Forum

Tactical Flight Delay and Diversion Management

Terry Fulton, Operational Risk & Assurance Manager

# Outline

- Aeronautical Information Publication (AIP) “Alternate” Requirements
- Scenario
- Action
- Challenges
- Future

## AIP – Nomination of Alternate

8.8.1.1 A pilot in command must make provision for flight to an alternate aerodrome, when required, in accordance with the following paragraphs.

8.8.1.2 When a flight is required to provide for an alternate aerodrome, any aerodrome may be so nominated for that flight provided:

- a. it is suitable as a destination for that flight; and
- b. is not an aerodrome for which that flight would require to provide for an alternate aerodrome.

# AIP – Nomination of Alternate

## 8.5 Diversion to an Alternate Aerodrome

8.5.1 The pilot in command is responsible for taking appropriate diversion action based on information received. **The pilot must provide the latest diversion time from the destination** or from a point en route and, if required, the time interval.

## Scenario

1. Bad Weather in Sydney – no aircraft making successful arrival
2. 10 aircraft provide latest divert time with nominated alternate of Canberra
3. Canberra Airport advises they can only accommodate 6 aircraft due parking limitations
4. The 4 unable to land in Canberra must now go elsewhere – Where? When?

## What can we at Airservices do?

- Be proactive and identify when aircraft may require a diversion
- Document Latest Divert Time (LDT) and Alternate
- Ensure alternate has the required capacity in addition to their scheduled traffic
- If the alternate cannot accept the diversion, ATC must advise the aircraft ASAP

# Existing Challenges for Airservices?

- Aircraft often don't volunteer their LDT to ATC until they are about to divert
- Airport parking available unknown to Airservices
- If diversions due un-forecast event alternates are not required to be nominated or flight planned
- Due to above, Airservices often does not have the complete picture to best manage diversions

# Diversion Management Tool – In Test

## Diversion Management Tool - Test Only.

**DMT** Diversion Management Tool  
 Version: 1.0 RC3 | Testing | Mon, 29 May 2017 07:48:59 UTC

Destination Aerodrome Edit

Code **YSSY**

Aerodrome SYDNEY

Start 29/05/2017 07:43

End 29/05/2017 08:48

Alternate Aerodromes Edit

**YMML** ✕

Aerodrome : MELBOURNE  
Available Spaces : 8

**YSCB** ✓

Aerodrome : CANBERRA  
Available Spaces : 3

**YBBN** ✕

Aerodrome : BRISBANE  
Available Spaces : 7

Destination Aerodrome Arrivals - **YSSY**

Divert Actions	LDT (UTC)	Callsign	ADEP	ADES	Aircraft Type	Registration	ETA (UTC) <span>↑</span>
✕	-	JST791	YBSU	YSSY	A320	VHVFY	07:43
✕	-	QFA450	YMML	YSSY	B738	VHVZM	07:43
✕	-	QLK47	YSDU	YSSY	DH8C	VHSBB	07:46
✕	-	JST661	YAYE	YSSY	A320	VHVQP	07:46
✕	-	VOZ180	NFFN	YSSY	B738	VHYIR	07:49
✕	-	VOZ966	YBBN	YSSY	B738	VHYFN	07:51
✕	-	RXA179	YORG	YSSY	SF34	VHZRL	07:53
✕	-	QLK31	YARM	YSSY	DH8C	VHSBG	07:54
✕	-	KXL	YARM	YSSY	C525	VHKXL	07:54

Alternate Aerodrome Arrivals - **YSCB**

Divert Actions	LDT (UTC)	Callsign	ADEP	ADES	Aircraft Type	Registration	ETA (UTC) <span>↑</span>
-	-	VOZ660	YSSY	YSCB	AT76	VHFVP	07:47
-	-	QLK493D	YSSY	YSCB	DH8D	VHQOV	08:14
-	-	QJE1536	YMML	YSCB	B712	VHYQV	08:30



Callsign	ADEP	ADES	Aircraft Type	Registration	ETA (UTC)
QLK117D	YCFS	YSSY	DH8D	VHQOM	08:07
QLK175	YPMQ	YSSY	DH8C	VHSBT	08:09
TGG256	YMML	YSSY	A320	VHVNQ	08:10
RXA674	YSWG	YSSY	SF34	VHTRX	08:11
VOZ180	NFFN	YSSY	B738	VHYIR	08:11
RXA472	YGTH	YSSY	SF34	VHZXG	08:11
QFA764	YPAD	YSSY	B738	VHVXG	08:12
QFA580	YPPH	YSSY	A332	VHEBJ	08:13
JST520	YMML	YSSY	A320	VHVGA	08:13

### Update Available Spaces ✕

Aerodrome Code **YSCB**

Aerodrome Name **CANBERRA**

Available Spaces \*

**NOTE** Valid entry for Spaces field is between 0 and 99

✕ Cancel
Apply Changes



als - YSCB

Callsign	ADEP	ADES	Aircraft Type	Registration	ETA (UTC)
QLK493D	YSSY	YSCB	DH8D	VHQOV	08:14
QJE1536	YMML	YSCB	B712	VHYQV	08:44
VOZ664	YSSY	YSCB	AT76	VHFVZ	08:53

Destination Aerodrome Arrivals - YSSY

Divert Actions	LDT (UTC)	Callsign	ADEP	ADES	Aircraft Type	Registration	ETA (UTC)
	-	QLK117D	YCFS	YSSY	DH8D	VHQOM	08:07
	-	QLK175	YPMQ	YSSY	DH8C	VHSBT	08:09
	-	TGG256	YMML	YSSY	A320	VHVNQ	08:10
	-	RXA674					
	-	VOZ180					
	-	RXA472					
	-	QFA764					
	-	QFA580					
	-	JST520					

Divert Actions

Callsign **QLK117D**  
 Alternate Destination \*
 

- (YMML) MELBOURNE
- (YSCB) CANBERRA
- (YBBN) BRISBANE

ETA **29/05/2017 08:07**  
 Latest Divert Time (LDT) \* **29/05/2017**
 Hour   Minute

Diversion Status

Diversion Comment

Alternate Aerodrome Arrivals - YSCB

Divert Actions	LDT (UTC)	Callsign
-	-	QLK493D
-	-	QJE1536
-	-	VOZ664

## Divert Actions



Callsign **QLK117D**

Alternate Destination \*  
 (YMML) MELBOURNE  
 (YSCB) CANBERRA  
 (YBBN) BRISBANE

ETA **29/05/2017 08:07**


Latest Divert Time (LDT) \* **29/05/2017** Hour **08** Minute **45**

Diversion Status **Proposed**

Diversion Comment

- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 51
- 52
- 53
- 54
- 55
- 56
- 57
- 58
- 59

 Cancel

 Confirm

## Divert Actions



Callsign **QLK117D**

Alternate Destination \*  
 (YMML) MELBOURNE  
 (YSCB) CANBERRA  
 (YBBN) BRISBANE

ETA **29/05/2017 08:07**

Latest Divert Time (LDT) \* **29/05/2017** Hour  Minute

Diversion Status  
 Proposed  
 Diverted

Diversion Comment





**DMT** **Diversion Management Tool**  
 Version: 1.0 RC3 | Testing | Mon, 29 May 2017 08:29:25 UTC

Destination Aerodrome Edit

Code **YSSY**  
 Aerodrome SYDNEY  
 Start 29/05/2017 08:24  
 End 29/05/2017 09:29

Alternate Aerodromes Edit

**YMML** ✕  
 Aerodrome : MELBOURNE  
 Available Spaces : 8

**YSCB** ✓  
 Aerodrome : CANBERRA  
 Available Spaces : 2

**YBBN** ✕  
 Aerodrome : BRISBANE  
 Available Spaces : 7

Destination Aerodrome Arrivals - **YSSY**

Divert Actions	LDT (UTC)	Callsign	ADEP	ADES	Aircraft Type	Registration	ETA (UTC) ↑
✕ YSCB	08:45	QLK117D	YCFS	YSSY	DH8D	VHQOM	08:07
↔	-	VOZ970	YBBN	YSSY	B738	VHVUV	08:25
↔	-	RXA333	YGFN	YSSY	SF34	VHZXK	08:26
↔	-	QFA580	YPPH	YSSY	A332	VHEBJ	08:28
↔	-	VOZ1192	YPMQ	YSSY	AT76	VHFVY	08:32
↔	-	RXA983	YARM	YSSY	SF34	VHZRZ	08:33
↔	-	JST120	NFFN	YSSY	A320	VHVQF	08:36
↔	-	QTR908	OTHH	YSSY	A388	A7APC	08:37
↔	-	QFA843	YPDN	YSSY	B738	VHVXD	08:37

Alternate Aerodrome Arrivals - **YSCB**

Divert Actions	LDT (UTC)	Callsign	ADEP	ADES	Aircraft Type	Registration	ETA (UTC) ↑
-	-	QJE1536	YMML	YSCB	B712	VHYQV	08:44
-	-	VOZ664	YSSY	YSCB	AT76	VHFVZ	08:53
✕ YSCB	08:45	QLK117D	YCFS	YSSY	DH8D	VHQOM	-

# Flight Information Reporting

<http://fibcdm-prd-01/FIR/flight-info>

## Flight Information Reporting on fibcdm-prd-01.airservices.gov

Report generated: 29/05/17 08:31:58

### Query Parameters

ADES YSSY - 1705290600 - 1705291100

State PLAN CNL PREA COOR CONT HAND SUSP INHB FIN

Number of matching flights: 111

ACID	SSR	FRUL	FTYP	ATYP	WTC	ADEP	DEP Time	ADES	ARR Time	ALTN	REG	State
<a href="#">AM273</a>		I	G	B350	L	YSDU	29/05/17 07:30:00	YSSY	29/05/17 08:16:00		VHNAJ	CNL
<a href="#">AM273</a>		I	G	B350	L	YSWG	29/05/17 09:30:00	YSSY	29/05/17 10:15:00		VHNAJ	PLAN
<a href="#">AM292</a>	1135	I	G	BE20	L	YKMP	29/05/17 07:11:00	YSSY	29/05/17 08:08:00		VHAMS	FIN
<a href="#">ANZ705</a>	0202	I	S	A320	M	NZAA	29/05/17 04:18:00	YSSY	29/05/17 07:25:00	YBCG	ZKOJF	FIN
<a href="#">ANZ883</a>	0210	I	S	A320	M	NZCH	29/05/17 05:49:00	YSSY	29/05/17 08:56:00	YBCG	ZKOJG	CONT
<a href="#">CAL052</a>	0214	I	S	A333	H	NZAA	29/05/17 06:33:00	YSSY	29/05/17 09:35:00	YSCB	B18311	CONT
<a href="#">CPA139</a>	5122	I	S	B77W	H	VHHH	29/05/17 01:39:00	YSSY	29/05/17 09:47:00	YSCB	BKQZ	CONT
<a href="#">CSN301</a>	3105	I	S	A333	H	ZGGG	29/05/17 00:32:00	YSSY	29/05/17 09:23:00	YSCB	B5951	CONT
<a href="#">ETD454</a>	3414	I	S	A388	H	OMAA	28/05/17 18:18:00	YSSY	29/05/17 07:31:00	YMML	A6APH	FIN
<a href="#">HAL451</a>	2766	I	S	A332	H	PHNL	28/05/17 22:49:00	YSSY	29/05/17 09:12:00	YBBN	N395HA	CONT
<a href="#">JST120</a>	1210	I	S	A320	M	NFFN	29/05/17 04:24:00	YSSY	29/05/17 08:58:00		VHVQF	CONT
<a href="#">JST417</a>		I	S	A321	M	YBCG	29/05/17 09:25:00	YSSY	29/05/17 10:31:00		VHVWQ	PLAN
<a href="#">JST419</a>		I	S	A320	M	YBCG	29/05/17 09:30:00	YSSY	29/05/17 10:37:00		VHVQJ	PLAN
<a href="#">JST461</a>	1140	I	S	A320	M	YBNA	29/05/17 06:58:00	YSSY	29/05/17 07:58:00		VHVQQ	FIN
<a href="#">JST518</a>	3653	I	S	A321	M	YMML	29/05/17 06:35:00	YSSY	29/05/17 07:40:00		VHVWW	FIN
<a href="#">JST520</a>	3710	I	S	A320	M	YMML	29/05/17 07:09:00	YSSY	29/05/17 08:13:00		VHVGA	FIN
<a href="#">JST522</a>	4377	I	S	A321	M	YMML	29/05/17 08:41:00	YSSY	29/05/17 09:35:00		VHVWU	COOR
<a href="#">JST526</a>	3635	I	S	A321	M	YMML	29/05/17 08:45:00	YSSY	29/05/17 09:44:00		VHVWZ	PREA
<a href="#">JST608</a>	4015	I	S	A320	M	YMAV	29/05/17 08:01:00	YSSY	29/05/17 09:07:00		VHJQL	CONT
<a href="#">JST661</a>	3754	I	S	A320	M	YAYE	29/05/17 05:00:00	YSSY	29/05/17 07:46:00		VHVQP	FIN
<a href="#">JST791</a>	1202	I	S	A320	M	YBSU	29/05/17 06:25:00	YSSY	29/05/17 07:43:00		VHVFY	FIN
<a href="#">JST821</a>	1161	I	S	A320	M	YBBN	29/05/17 07:35:00	YSSY	29/05/17 08:42:00		VHVGW	CONT

## What's Next?

- Complete all required safety work to commission the DMT for operational use
- Look at possible future enhancements to functionality (possible automation options), such as;
  - Auto-Populate aircraft alternate to minimise manual feeding of the system
  - Calculate the available Airport space based on known airport capacity and scheduled traffic





Alright Any Questions?