# **SADIS Management Report**

# 01 July 2015 to 30 Apr 2016

In accordance with SADIS Operations Group<sup>1</sup> (SADISOPSG) Conclusion 7/1 (9 to 13 June 2002, Cairo, Egypt) and SADISOPSG Decision 18/3 (29 to 31 May 2013, Dakar, Senegal), the SADIS Provider and SADIS Gateway providers were invited to submit an annual SADIS Management Report for review by the SADIS Operations Group. Following the disbandment of the SADISOPSG in 2015, the SADIS Management Report will be presented to the SADIS component of meetings of the Meteorological Operations Group to the Meteorological Panel (METP WG-MOG).

The SADIS Provider and the SADIS Gateway Provider are therefore pleased to present the SADIS Management Report to the third meeting of the Meteorological Operations Group, METP WG-MOG/3 (13 to 17, June 2016, Gatwick, United Kingdom).

Chris Tyson SADIS Manager Stuart Dingle SADIS Gateway Manager

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distributed via SADIS 2G and Secure SADIS FTP

<sup>1</sup> SADISOPSG is now disbanded, though SADISOPSG Conclusions/Decisions are considered to remain extant until revised by the relevant METP Working Group.

### 1) Executive Summary:

The SADIS service continues to provide a valuable and reliable service to a large number of users across a large number of States within the AFI, ASIA, EUR, MID and NAT regions, as evidenced by the user feedback in the annual SADIS Efficacy Report (see section 3) and the monitoring statistics provided in this Management Report.

The main events of note:

- 1. Significant user communication and awareness activities were undertaken to ensure all SADIS 2G users were aware of the cessation of SADIS 2G at 1200 UTC on 31 July 2016 were undertaken. Details of these communications to be provided in separate Information Papers to the WG-MOG/3 meeting.
- 2. 6 January 2016, SADIS Gateway Midlife upgrade completed 1000 UTC.
- 3. Secure SADIS FTP bandwidth increased from 16Mbit/sec bursting 24Mbit/sec to 24Mbit/sec bursting 42Mbit/sec effective 1200 UTC 27 October 2015. At the same time individual client limit was increased from 1024Kbit/sec to 2048Kbit/sec.

### 2) Events of note:

- 1. Deletion of legacy T4 format Volcanic Ash Graphic files (1200 UTC 17 November 2015) in accordance with WG-MOG/1 Recommendation 1/11. These files are no longer a requirement of ICAO Annex 3. Annex 3 compliant Volcanic Ash Advisory in alphanumeric form and Volcanic Ash Graphic in PNG format continue to be distributed.
- 2. 3 Feb 2016, 20 minute outage (no data lost).
- 3. Essential ground tracking engineering work was undertaken at Whitehill uplink facility overnight on 17/18 March 2016 and 7/8 April 2016. Initially, it was anticipated that significant periods of unavailability between 2100 UTC and 0300 UTC during each overnight period and users were prewarned. Fortunately, the actual outages were of less than 30 minutes duration in each instance, and disruption to users was minimised.
- 4. Deletion of 'LAST\_18HOURS\_DATA' file from Secure SADIS FTP (1200 UTC 5 April 2016) in accordance with WG-MOG/1 Recommendation 1/10, the file being little used and considered redundant.

### 3) Summary of the SADIS efficacy Report:

i) Respondents: 51 (as compared with 45 for the previous report)

ii) Users reporting good overall assessment of the SADIS 2G VSAT Service:  $N/A^2$ 

iii) Users reporting good overall assessment of the Secure SADIS FTP Service:

98% (95% previous report)

A detailed summary of the SADIS Efficacy Questionnaire is provided in a separate Working Paper to be presented to WG-MOG/3.

 $<sup>2 \</sup>text{ WG-MOG/1}$  meeting determined that there would be no questions relating to SADIS 2G in the 2015/16 Efficacy Questionnaire. For completeness, this is recorded as 'N/A' in relation to this year with this footnote as reference. There will be no reference in future years.

### 4) Significant changes to data content:

a) SADIS 2G	
i) WAFS GRIB2:	There were no significant changes to WAFS GRIB2 data.
ii) WAFS SIGWX:	There were no significant changes to WAFS SIGWX data.
iii) OPMET:	There were no significant changes to OPMET Data
b) Secure SADIS FTP	
i) WAFS GRIB2:	There were no significant changes to WAFS GRIB2 data.
ii) WAFS SIGWX:	There were no significant changes to WAFS SIGWX data.
iii) OPMET:	There were no significant changes to OPMET Data

### 5) User Base:

Table 1 below details the number of SADIS operators in March 2016 (June 2015 figures in brackets for comparison) by region and platform.

ICAO Area				_
	Operator States	Operators	SADIS 2G	Secure SADIS FTP
AFI	46 (47)	67 (70)	54 (57)	60 (57)
ASIA	13 (12)	21 (20)	13 (16)	19 (18)
EUR	47 (43)	95 (87)	43 (45)	87 (78)
MID	14 (12)	29 (18)	19 (19)	17 (12)
NAT	1 (1)	1 (1)	0 (0)	1 (1)
TOTAL	121 (115)	213 (196)	129 (137)	184 (166)

Table 1: Number of SADIS operators in March 2016 (June 2015 figures in brackets) by region and platform

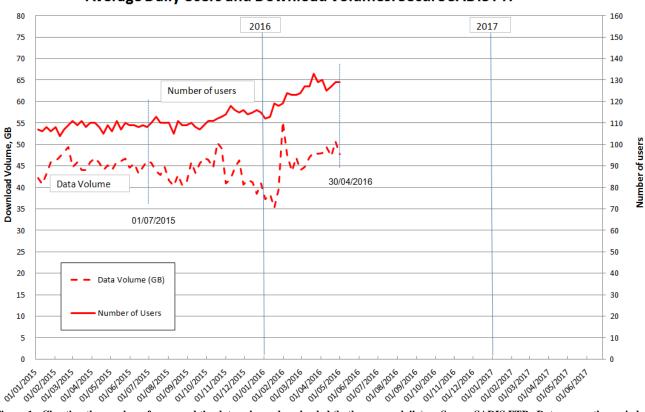
Secure SADIS FTP users have increased by 18 during the reporting period, whilst SADIS 2G users have decreased by 8. The overall number of operator states has increased by 6.

### 6) Usage statistics:

a) SADIS 2G (Daily volumes) i) WAFS GRIB2 ii) WAFS SIGWX	255MB. Similar to previous year. 5.7MB. Similar to previous year.
iii) OPMET	12MB. Similar to previous year.
b) Secure SADIS FTP	
i) WAFS GRIB2	411MB. Similar to previous year.
ii) WAFS SIGWX	5.7MB. Similar to previous year.
iii) OPMET	12MB. Similar to previous year.

*GRIB2* volumes on Secure SADIS FTP are greater than SADIS 2G due to availability of WAFC Washington GRIB2 data on Secure SADIS FTP.

With regard to download volumes, Figure 1 below illustrates the current daily download volumes from Secure SADIS FTP for all data types combined.



### Average Daily Users and Download Volumes: Secure SADIS FTP

Figure 1: Charting the number of users and the data volume downloaded (both average daily) on Secure SADIS FTP. Data covers the period 01July 2015 to 30 April 2016.

As at end April 2016, 47 GB (+/-5 GB) is accessed daily, by approximately 130 (+/-3) regular users. The number of users has increased during the reporting period as users transition from SADIS 2G to Secure SADIS FTP. Download volumes are more erratic and on balance only show a slight increase from June 2015. The combination of these values is interpreted as users beginning to establish connections to Secure SADIS FTP though not yet fully utilising the service. A significant spike in February of 2016 was due to temporary excessive download activity (100 logon attempts per second) by one user, who – on being contacted – reduced their download activity to a more practicable level.

### 7) Timeliness and Availability statistics:

General:

The SADISOPSG/19 meeting agreed (SADISOPSG Decision 19/2) monitoring targets to apply to the reception of GRIB2 and SIGWX data via the SADIS 2G and Secure SADIS FTP services, and taking into consideration the very significant difference in data rates between the services. The targets are stated in the relevant sections below.

Percentage values highlighted **bold green** indicate targets are being met. Those highlighted *italic yellow* indicate targets not being met.

In summary, the only timeliness target not being met is that related to harmonised cumulonimbus cloud, icing and turbulence timeliness on SADIS 2G. This was primarily due to the dependence of timely receipt of raw data from WAFC Washington, which unfortunately suffered some delays during the period. These are detailed in the tabulated month by month results in Appendix C.

#### a) SADIS 2G

#### i) WAFS GRIB2

WAFC London GRIB2 availability and reception timeliness statistics are presented in Appendix C, Table 2 and Table 3. Note, these statistics are the *reception time* from the SADIS 2G service, not the availability time on MetSwitch.

**Target for WAFC London GRIB2 (not including CB, icing, turbulence) is** >=99.2% to be received at VSAT by T+5hrs. Availability at T+6hrs is also monitored.

**99.8%** of complete data sets and **99.8%** of bulletins were received by T+5hrs and is above the target. **100%** of complete data sets and **100%** of bulletins were received by T+6hrs.

Target for WAFC London GRIB2 CB, icing, turbulence is >=99.2% to be received at VSAT by T+5hrs 5min. Availability at T+6hrs is also monitored.

98.6% of complete data sets and 99.3% of bulletins were received by T+5hrs 5min. In terms of complete datasets and number of bulletins this is below target, though the dependency on receiving raw data from WAFC Washington does make this particular target challenging. 99.8% of complete data sets and 99.8% of bulletins were received by T+6hrs and are both above target.

#### ii) WAFS SIGWX

WAFC London SIGWX BUFR availability and reception timeliness statistics are presented in Appendix C, Table 4 and Table 5. Note, these statistics are the *reception time* from the SADIS 2G service, not the availability time on MetSwitch.

**Target for WAFC London SIGWX BUFR is >=99.2% to be received at VSAT by T+7hrs.** Availability at T+9hrs is also monitored.

**99.9%** of complete data sets and **99.9%** of bulletins were received by T+7hrs, exceeding the target. **100%** of complete data sets and **100%** of bulletins were received by T+9hrs.

Target for WAFC London SIGWX PNG is >=99.2% to be received at VSAT by T+7hrs. Availability at T+9hrs is also monitored.

**99.8%** of complete data sets and **99.9%** of bulletins were received by T+7hrs, and exceed the target. **100%** of complete data sets and **100%** of bulletins were received by T+9hrs.

#### iii) OPMET

In June 2014 the ICAO Council decided the regional air navigation plans (ANPs) would be published in three sections. Part of this change was the replacement of the regional FASID MET 2A tables, with new MET II–2 tables contain AOP OPMET availability.

As the global FASID MET 2A, also known as SUG Annex 1, tables have not been updated since April 2014, a decision was taken by the EUR Data Management

Group, a group that has previously reported to the SADISOPSG, to base their February 2016 OPMET monitoring period on the new Met II-2 tables.

Appendix B details the availability (alignment) of METARs and TAFs against the regional ANP Met II-2 tables, with the exception of the NAM region as their table is currently not available so their AOP entries in the SUG Annex 1 have been used. (SADISOPSG 17/10 and SADISOPSG Conclusion 8/7b)

In accordance with SADISOPSG Conclusion 8/8, Appendix A provides a list of non-scheduled alphanumeric OPMET data received at the SADIS Gateway and distributed via SADIS during the February 2016 monitoring period.

#### b) Secure SADIS FTP

#### i) WAFS GRIB2

WAFC London GRIB2 availability and reception timeliness statistics are presented in Appendix C, Table 6 and Table 7. Note, these statistics are the *availability* time on the Secure SADIS FTP servers.

**Target for WAFC London GRIB2 (not including CB, icing, turbulence) is** >=99.2% to be received at VSAT by T+4hrs 20min. Availability at T+6hrs is also monitored.

**99.8%** of complete data sets and **99.9%** of bulletins were received by T+4hrs 20mins and exceeds the target. **100%** of complete data sets and **100%** of bulletins were received by T+6hrs.

Target for WAFC London GRIB2 CB, icing, turbulence is >=99.2% to be received at VSAT by T+4hrs 50min. Availability at T+6hrs is also monitored.

**99.2%** of complete data sets and **99.3%** of bulletins were received by T+4hrs 35mins. These are meeting the target. **100%** of complete data sets and **100%** of bulletins were received by T+6hrs.

#### i) WAFS SIGWX

WAFC London SIGWX BUFR availability and reception timeliness statistics are presented in Appendix C, Table 8 and Table 9. Note, these statistics are the *availability* time on the Secure SADIS FTP servers.

**Target for WAFC London SIGWX BUFR is >=99.2% to be received at VSAT by T+7hrs**. Availability at T+9hrs is also monitored.

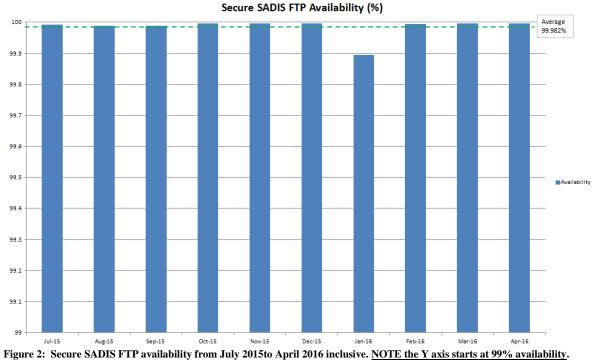
**99.9%** of complete data sets and **99.9%** of bulletins were received by T+7hrs and exceeds the target.

Target for WAFC London SIGWX PNG is >=99.2% to be received at VSAT by T+7hrs. Availability at T+9hrs is also monitored.

**99.8%** of complete data sets and **>99.9%** of bulletins were received by T+7hrs and exceeds the target. **100%** of complete data sets and **100%** of bulletins were received by T+9hrs.

### c) System availability

As a system, the Secure SADIS FTP platform had 99.982% availability through the period. Figure 2 below illustrates the availability on a monthly basis.



A reduction of availability to 99.89% in January 2016 was due to internal network issues.

## 8) Data integrity statistics:

### a) SADIS 2G

i) WAFS data via SADIS2G GRIB2 and T4(BUFR/PNG) PVCs

Please refer to the timeliness and availability statistics in section 7 a) i) and 7 a) ii. Byte level duplicate comparison is used to confirm received data was as transmitted when the statistics are compiled. There is no evidence of data being corrupted during the ground to space, space to ground segments of the data path.

### ii) OPMET

The procedure that has been put in place to perform a 24 hour statistical comparison of the OPMET data sent to SADIS 2G from the SADIS Gateway against that received from a SADIS receiver has continued to be followed. On the occasions this has been performed there was shown to be no loss of data.

### 9) Capacity assessment:

### a) SADIS 2G

SADIS 2G is due to be withdrawn on 31 July 2016. Given that there are no plans to make changes to data distributed via SADIS 2G between now and the termination date, available capacity is not considered to be a matter of concern.

#### b) Secure SADIS FTP

The current bandwidth capacity of the Secure SADIS FTP service is 24Mbit/sec bursting to 42Mbit/sec; with individual client limits of 2048 kbit/sec. Figure 3 below is typical of the daily download activity against capacity in February 2016.



Figure 3: Snapshot of 24 hour data download from Secure SADIS FTP against available capacity, 9th February 2016.

The graphic shows that at peak usage (GRIB2 availability times) the peak load is just reaching the burst limit of 42Mbit/sec. A separate paper will be presented at the WG-MOG/3 meeting giving the opportunity to review capacity against requirements.

### 10) Meetings/Seminars attended:

Meetings attended since the WG-MOG/1 meeting:

- Twenty fifth meeting of the European/North Atlantic Meteorological Group (METG/25); 15<sup>th</sup> to 18<sup>th</sup> September 2015, Paris, France.
- Sixteenth meeting of Data Monitoring Group (DMG/16); 20<sup>th</sup> to 22<sup>nd</sup> October 2015, Paris, France
- Sixteenth meeting of the SADIS Cost Recovery Administrative Group (SCRAG/16); 6<sup>th</sup> November 2015, London, United Kingdom.
- First meeting of the Meteorological Information Exchange Working Group of the Meteorological Panel (METP WG-MIE/1); 16<sup>th</sup> to 20<sup>th</sup> November 2015, Montréal, Canada
- Seventeenth meeting of DMG (DMG/17); 15<sup>th</sup> to 17<sup>th</sup> March 2016, London, United Kingdom
- Second meeting of the Meteorological Operations Group (WG-MOG/2 IAVW); 25<sup>th</sup> to 29<sup>th</sup> April 2016, Buenos Aires, Argentina
- Second meeting of the Meteorological Information Exchange Working Group of the Meteorological Panel (METP WG-MIE/2); 23<sup>rd</sup> to 27<sup>th</sup> May 2016, Paris, France
- Workshop on Implementing the ICAO Meteorological Information Exchange Model (IWXXM) for the exchange of OPMET data IWXXM Workshop, 31<sup>st</sup> May to 2<sup>nd</sup> June 2016, Paris, France

It is expected that the following meetings will have been attended by the time of the WG-MOG/3 meeting:

• Twentieth meeting of the Asia Pacific Region Meteorological Sub Group, (APAC MET SG/20); 6<sup>th</sup> to 9<sup>th</sup> June 2016, Bangkok, Thailand.

No Seminars were attended during the period of the Management Report.

### **APPENDIX** A

### NON-SCHEDULED ALPHANUMERIC OPMET RECEIVED AT THE SADIS GATEWAY AND DISTRIBUTED VIA SADIS. FEB 2016 MONITORING PERIOD.

In accordance with SADISOPSG Conclusion 8/8, the following tables present lists of the non-scheduled alphanumeric received at the SADIS Gateway and distributed via SADIS during the February 2016 monitoring period.

### Number of messages received/distributed

SIGMETs:	216
Volcanic Ash SIGMETs:	22
Tropical Cyclone SIGMETs:	7
Tropical Cyclone Advisories:	5
Volcanic Ash Advisories:	20
AIRMETs:	50

# SIGMETS

SIGMETS	
$T_1T_2A_1A_2ii$	CCCC
WSAB31	LATI
WSAG31	SABE
WSAG31	SACO
WSAG31	SAME
WSAG31	SARE
WSAG31	SAVC
WSAG32	SARE
WSAJ31	UBBB
WSAK03	PAWU
WSAL31	DAAA
WSAU21	ABRF
WSAU21	ADRM
WSAU21	AMHF
WSAU21	AMMC
WSAU21	APRF
WSAU21	APRM
WSAU21	ASRF
WSAY31	UDYZ
WSAZ31	LPMG
WSBC31	FBSK
WSBO31	SLLP
WSBU31	LBSM
WSBW20	VGHS
WSBX31	EBBR
WSBY31	UMMS
WSBZ21	SBRE
WSBZ31	SBAZ
WSBZ31	SBBS
WSBZ31	SBCW
WSBZ31	SBRE
WSCD31	FTTJ
WSCG31	FCBB
WSCH31	SCCI
WSCH31	SCFA
WSCH31	SCIP
WSCI31	RCTP
WSCI33	ZBAA
WSCI34	ZSSS
WSCI35	ZGGG
WSCI36	ZUUU

$T_1T_2A_1A_2ii$	сссс
WSCI37	ZLXY
WSCI39	ZWWW
WSCI45	ZHHH
WSCN01	CWAO
WSCN02	CWAO
WSCN03	CWAO
WSCN04	CWAO
WSCN05	CWAO
WSCN06	CWAO
WSCN07	CWAO
WSCN21	CWAO
WSCN22	CWAO
WSCN23	CWAO
WSCN24	CWAO
WSCN25	CWAO
WSCN26	CWAO
WSCN27	CWAO
WSCR31	LEMM
WSCU31	MUHA
WSCZ31	LKPW
WSDL31	EDZF
WSDL31	EDZH
WSDL31	EDZM
WSDL32	EDZF
WSDL32	EDZH
WSDN31	EKCH
WSEG31	HECA
WSEQ31	SEGU
WSFG20	TFFF
WSFJ01	NFFN
WSFR31	LFPW
WSFR32	LFPW
WSFR33	LFPW
WSFR34	LFPW
WSFR35	LFPW
WSGG31	UGTB
WSGL31	BGSF
WSGR31	LGAT
WSHU31	LHBM
WSID20	WIII
WSID21	WAAA

T <sub>1</sub> T <sub>2</sub> A <sub>1</sub> A <sub>2</sub> ii	сссс
WSIE31	EIDB
WSIL31	BICC
WSIQ01	ORBI
WSIR31	OIII
WSIS31	LLBD
WSIY31	LIIB
WSIY32	LIIB
WSIY33	LIIB
WSJP31	RJTD
WSKN31	НКЈК
WSKO31	RKSI
WSKW10	ОКВК
WSKY31	UCFM
WSKY31	UCFO
WSKZ31	UACC
WSLB31	OLBA
WSLJ31	IJIJ
WSLT31	EYVI
WSLV31	EVRA
WSMA31	FIMP
WSMA32	FIMP
WSMC31	GMMC
WSMG31	FMMI
WSMJ31	LWSK
WSMO31	ZMUB
WSMP31	LMMM
WSMS31	WMKK
WSMW31	FWLI
WSMX31	MMMX
WSMZ31	FQMA
WSNL31	EHDB
WSNO31	ENMI
WSNO32	ENMI
WSNO34	ENMI
WSNO35	ENMI
WSNO36	ENMI
WSNR31	DRRN
WSNT01	CWAO
WSNT01	ККСІ
WSNT02	ККСІ
WSNT03	KKCI

$T_1T_2A_1A_2ii$	сссс
WSNT04	ККСІ
WSNT05	ККСІ
WSNT06	ККСІ
WSNT07	ККСІ
WSNT08	ККСІ
WSNT09	ККСІ
WSNT10	ККСІ
WSNT11	ККСІ
WSNT12	ККСІ
WSNT13	ККСІ
WSNT21	CWAO
WSNT21	EGRR
WSNZ21	NZKL
WSOS31	LOWW
WSPA01	PHFO
WSPA02	PHFO
WSPA03	PHFO
WSPF21	NTAA
WSPK31	OPLA
WSPL31	EPWA
WSPN01	ККСІ
WSPN02	ККСІ
WSPN03	ККСІ
WSPN04	ККСІ
WSPN05	ККСІ
WSPN06	ККСІ
WSPN07	ККСІ
WSPN08	ККСІ
WSPO31	LPMG
WSPR31	SPIM
WSPS21	NZKL
WSPY31	SGAS
WSQB31	LQBK

$T_1T_2A_1A_2ii$	сссс
WSRA31	RUEK
WSRA31	RUHB
WSRA31	RUIR
WSRA31	RUKR
WSRA31	RUMG
WSRA31	RUPK
WSRA32	RUEK
WSRA32	RUOM
WSRA33	RUEK
WSRA33	RUYK
WSRA37	RUOM
WSRH31	LDZM
WSRM31	LUKK
WSRO31	LROM
WSRS31	RUAA
WSRS31	RUKG
WSRS31	RUMA
WSRS31	RUNN
WSRS31	RURD
WSRS31	RUSM
WSRS31	RUSP
WSRS32	RUAA
WSRS34	RUAA
WSRW31	HRYR
WSSB31	VCBI
WSSC31	FSIA
WSSD20	OEJD
WSSG31	GOOY
WSSN31	ESWI
WSSP31	LEMM
WSSP32	LEMM
WSSQ31	LZIB
WSSR20	WSSS

T1T2A1A2ii         CCCC           WSSU31         HSSS           WSSW31         LSSW           WSTR31         UTAA           WSTS40         DTTA           WSTS41         LTAC           WSTU31         LTBA           WSUK31         EGRR           WSUK32         EGJJ           WSUR33         EGRR           WSUR34         UKBV           WSUR35         UKLV           WSUR34         UKOV           WSUR35         UKDV           WSUR34         UKOV           WSUR35         UKDV	
WSSW31LSSWWSTR31UTAAWSTS40DTTAWSTU31LTACWSUU31EGRRWSUK32EGJJWSUK33EGRRWSUR31UKBVWSUR32UKLVWSUR33UKOVWSUR34UKOV	
WSTR31UTAAWSTS40DTTAWSTU31LTACWSTU31LTBAWSUK31EGRRWSUK32EGJJWSUR33EGRRWSUR31UKBVWSUR32UKLVWSUR33UKOVWSUR34UKOV	
WSTS40DTTAWSTU31LTACWSTU31LTBAWSUK31EGRRWSUK32EGJJWSUR33EGRRWSUR31UKBVWSUR32UKLVWSUR33UKOVWSUR34UKOVWSUR35UKDV	
WSTU31LTACWSTU31LTBAWSUK31EGRRWSUK32EGJJWSUR33EGRRWSUR31UKBVWSUR32UKLVWSUR33UKOVWSUR34UKOVWSUR35UKDV	
WSTU31 LTBA WSUK31 EGRR WSUK32 EGJJ WSUK33 EGRR WSUR31 UKBV WSUR32 UKLV WSUR33 UKOV WSUR34 UKOV	
WSUK31EGRRWSUK32EGJJWSUK33EGRRWSUR31UKBVWSUR32UKLVWSUR33UKOVWSUR34UKOVWSUR35UKDV	
WSUK32EGJJWSUK33EGRRWSUR31UKBVWSUR32UKLVWSUR33UKOVWSUR34UKOVWSUR35UKDV	
WSUK33EGRRWSUR31UKBVWSUR32UKLVWSUR33UKOVWSUR34UKOVWSUR35UKDV	
WSUR31 UKBV WSUR32 UKLV WSUR33 UKOV WSUR34 UKOV WSUR35 UKDV	
WSUR32 UKLV WSUR33 UKOV WSUR34 UKOV WSUR35 UKDV	
WSUR33 UKOV WSUR34 UKOV WSUR35 UKDV	
WSUR34 UKOV WSUR35 UKDV	
WSUR35 UKDV	
WSUS01 KKCI	
WSUS02 KKCI	
WSUS03 KKCI	
WSUS04 KKCI	
WSUS05 KKCI	
WSUS06 KKCI	
WSUS31 KKCI	
WSUS32 KKCI	
WSUS33 KKCI	
WSUY31 SUMU	
WSUZ31 UTTT	
WSVS31 VVGL	
WSZA21 FAOR	
WSZR31 FZAA	

# Volcanic Ash SIGMETs

$T_1T_2A_1A_2ii$	сссс
WVAG31	SABE
WVAG31	SAME
WVAK01	PAWU
WVAK02	PAWU
WVAK03	PAWU
WVBZ31	SBAZ
WVCH31	SCEL
WVCH31	SCTE
WVCO31	SKBO
WVEQ31	SEGU
WVFJ01	NFFN
WVGL31	BGSF
WVHO31	MHTG
WVID21	WAAA
WVIN31	VOMM
WVIY32	LIIB
WVJP31	RJTD
WVMX31	MMMX
WVPN04	ККСІ
WVPN05	ККСІ
WVPR31	SPIM
WVRA31	RUPK

# Tropical Cyclone SIGMETs

$T_1T_2A_1A_2ii$	CCCC
WCAU01	ABRF
WCAU01	APRF
WCFJ01	NFFN
WCMA20	FIMP
WCMA21	FIMP
WCMG31	FMMI
WCPS21	NZKL

# Tropical Cyclone Advisories

$T_1T_2A_1A_2ii$	сссс
FKAU03	ADRM
FKAU05	ADRM
FKIO20	FMEE
FKPS01	NFFN
FKPS20	NFFN

# Volcanic Ash Advisories

T <sub>1</sub> T <sub>2</sub> A <sub>1</sub> A <sub>2</sub> ii	сссс		
FVAG01	SABM		
FVAG02	SABM		
FVAK21	PAWU		
FVAK22	PAWU		
FVAU01	ADRM		
FVAU02	ADRM		
FVAU03	ADRM		
FVAU04	ADRM		
FVAU05	ADRM		
FVAU06	ADRM		
FVCN01	CWAO		
FVFE01	RJTD		
FVPS01	NZKL		
FVXX01	LFPW		
FVXX20	KNES		
FVXX21	KNES		
FVXX22	KNES		
FVXX23	KNES		
FVXX24	KNES		
FVXX25	KNES		

# AIRMETS

AIRMETS					
$T_1T_2A_1A_2ii$	CCCC				
WAAB31	LATI				
WABU31	LBSM				
WABX31	EBBR				
WABZ19	SBAZ				
WABZ20	SBAZ				
WABZ21	SBRE				
WABZ22	SBBS				
WABZ24	SBCW				
WABZ31	SBAZ				
WABZ31	SBRE				
WACH01	SCCI				
WACH01	SCFA				
WACH01	SCTE				
WACR40	LEMM				
WADL41	EDZF				
WADL41	EDZH				
WADL41	EDZM				
WAEG31	HECA				
WAGG31	UGTB				
WAIS31	LLBD				
WAIY31	LIIB				
WAIY32	LIIB				
WAIY33	LIIB				
WAKO31	RKSI				
WAKZ31	UAAA				
WAKZ31	UAII				
WAKZ41	UATT				
WALJ31	IJIJ				
WALT31	EYVI				
WANO31	ENMI				
WANO32	ENMI				
WANO34	ENMI				
WANO35	ENMI				
WAOS41	LOWW				
WAPL31	EPWA				
WARH31	LDZM				
WASP40	LEMM				
WASP41	LEMM				
WASP42	LEMM				
WASQ41	LZIB				

$T_1T_2A_1A_2ii$	сссс
WASW41	LSSW
WATS31	DTTA
WATS32	DTTA
WATS40	DTTA
WATU31	LTBA
WAUR31	UKBV
WAUR32	UKLV
WAUR35	UKDV
WAUR36	UKDV
WAYG31	LYBM

### **APPENDIX B**

### ALIGNMENT OF THE OPMET CONTENT OF SADIS WITH ANNEX 1 OF THE SADIS USER GUIDE.

1.1 In accordance with SADISOPSG Conclusion 17/10, the SADIS Gateway Provider is pleased to provide information relating to the SADIS Gateway alignment with regard to METAR and TAF in the regional ANP Met II-2 tables (except the NAM region). A detailed table of the alignment of METAR and TAF, listed by ICAO Region, is provided in Table A below.

1.2 Based on monitoring between 1 and 14 February 2016, the SADIS Gateway Provider can report that it has achieved the following level of alignment of the OPMET content of SADIS with the regional ANP Met II-2 tables (except the NAM region):

- METARs (SA): 93.87 per cent
- Short TAFs (FC): 91.91 per cent
- Long TAFs (FT/FX): 94.56 per cent

#### Table A: AVAILABILITY OF METAR AND TAF AGAINST ANNEX 1 TO THE **SADIS USER GUIDE** TOTAL NUMBER OF STATIONS LISTED AS REPORTING METARS 1355 25 AFI MISSING ASIA/PAC MISSING 13 CAR/SAM MISSING 18 **EUR MISSING** 14 13 MID MISSING NAM MISSING 0 NAT MISSING 0 83 **TOTAL MISSING TOTAL REPORTED** 1272 93.87% **METAR ALIGNMENT** TOTAL NUMBER OF STATIONS LISTED AS REPORTING SHORT TAFS 235 AFI MISSING 0 ASIA/PAC MISSING 0 CAR/SAM MISSING 0 EUR MISSING 19 0 MID MISSING NAM MISSING 0 0 NAT MISSING **TOTAL MISSING** 19 **TOTAL REPORTED** 216 SHORT TAF ALIGNMENT 91.91%

TOTAL NUMBER OF STATIONS LISTED AS REPORTING LONG TAFS	1047
AFI MISSING	9
ASIA/PAC MISSING	11
CAR/SAM MISSING	21
EUR MISSING	7
MID MISSING	9
NAM MISSING	0
NAT MISSING	0
TOTAL MISSING	57
TOTAL REPORTED	990
LONG TAF ALIGNMENT	94.56%

# METAR and TAF required by Annex 1 of the SADIS User Guide but identified as being missing

2.8 In accordance with SADISOPSG Conclusion 8/7 b), a list of METAR and TAF required by the regional ANP Met II-2 tables (except the NAM region) but identified as being missing based on latest monitoring at the SADIS Gateway is provided in Table B & C below.

# **TABLE B: Missing METARs**

The following table indicates METARs not available on SADIS (during the SADIS Gateway monitoring period 1 to 14 February 2016) but required in the regional ANP Met II-2 tables (except the NAM region).

	Table B: MISSING METARS				
ICAO REGION	STATE	LOCATION INDICATOR			
AFI	ETHIOPIA	HADR			
AFI	GHANA	DGAA			
AFI	GHANA	DGLE			
AFI	GHANA	DGSI			
AFI	MADAGASCAR	FMMS			
AFI	MADAGASCAR	FMNA			
AFI	MALI	GAGO			
AFI	MALI	GAKD			
AFI	MALI	GAKL			

AFI	MALI	GATB
AFI	NIGERIA	DNCA
AFI	NIGERIA	DNKA
AFI	NIGERIA	DNMA
AFI	NIGERIA	DNSO
AFI	SOMALIA	НСМН
AFI	SOMALIA	НСМІ
AFI	SOMALIA	НСМК
AFI	SOMALIA	HCMM
AFI	SOMALIA	HCMV
AFI	SOUTH AFRICA	FANS
AFI	SOUTH AFRICA	FAPI
AFI	ZAMBIA	FLMF
AFI	ZAMBIA	FLSK
ASI	AFGHANISTAN	OAKN
ASI	CHINA	ZUXC
ASI	DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	ZKPY
ASI	INDIA	VIBN
ASI	INDONESIA	WALR
ASI	INDONESIA	WIPT
ASI	MALDIVES	VRMG
ASI	MALDIVES	VRMH
ASI	MALDIVES	VRMV
ASI	PAKISTAN	OPGD
ASI	SRI LANKA	VCCH
CAR	BAHAMAS	MYSM
CAR	FRENCH ANTILLES (FRANCE)	TFFG
CAR	FRENCH ANTILLES (FRANCE)	TFFJ
CAR	GUYANA	SYCJ
CAR	GUYANA	SYGO
CAR	MONSERRAT (UNITED KINGDOM)	TRPG
CAR	PANAMA	МРСН
CAR	SURINAME	SMZO
CAR	TURKS AND CAICOS ISLANDS (UNITED KINGDOM)	MBGT
CAR	TURKS AND CAICOS ISLANDS (UNITED KINGDOM)	MBSC
EUR	AZERBAIJAN	UBBE
EUR	CROATIA	LDLO
EUR	CYPRUS	LCNC
EUR	GERMANY	ETHN
EUR	KAZAKHSTAN	UAKD
EUR	KYRGYZSTAN	UCFL

EUR	LATVIA	EVJA
EUR	LATVIA	EVLA
EUR	MONACO	LNMC
EUR	MOROCCO	GMMD
EUR	REPUBLIC OF MOLDOVA	LUCH
EUR	RUSSIAN FEDERATION	UNWW
EUR	RUSSIAN FEDERATION	URFF
EUR	SPAIN	LEDA
EUR	SWEDEN	ESND
MID	JORDAN	OJAI
MID	JORDAN	OJAM
MID	JORDAN	QALO
MID	LIBYA	HLLB
MID	LIBYA	HLLS
MID	LIBYA	HLLT
MID	SOUTH SUDAN	HSSJ
MID	SYRIAN ARAB REPUBLIC	OSAP
MID	YEMEN	OYAA
MID	YEMEN	OYHD
MID	YEMEN	OYRN
MID	YEMEN	OYSN
MID	YEMEN	OYTZ
PAC	NAURU	ANYN
PAC	WALLIS AND FUTUNA ISLANDS (FRANCE)	NLWW
SAM	BRAZIL	SBBV
SAM	BRAZIL	SBCB
SAM	BRAZIL	SBCF
SAM	BRAZIL	SBCG
SAM	BRAZIL	SBRF
SAM	BRAZIL	SBSG
SAM	BRAZIL	SBSL
SAM	BRAZIL	SBSN

# **TABLE C: Missing TAFs**

The following table indicates TAFs not available on SADIS (during the SADIS Gateway monitoring period 1 to 14 February 2016) but required in the regional ANP Met II-2 tables (except the NAM region).

Key:

- C Requirement for 9-hour validity aerodrome forecasts in TAF code
- T Requirement for 18/24-hour or 30 hour validity aerodrome forecasts in TAF code

# FX - Requirement for 30-hour validity aerodrome forecasts in TAF code

	Table C: MISSING TAFS						
ICAO REGION	STATE	LOCATION INDICATOR	TAF TYPE				
AFI	ERITREA	HHAS	Т				
AFI	GHANA	DGAA	х				
AFI	GHANA	DGSI	Т				
AFI	LESOTHO	FXMM	Т				
AFI	NIGERIA	DNCA	Т				
AFI	NIGERIA	DNPO	х				
AFI	SOMALIA	нсмм	т				
AFI	SWAZILAND	FDMS	Т				
AFI	TOGO	DXNG	х				
ASI	AFGHANISTAN	OAKN	Т				
ASI	BHUTAN	VQPR	Т				
ASI	INDIA	VEGT	т				
ASI	INDIA	VEGY	т				
ASI	INDIA	VIBN	х				
ASI	INDONESIA	WAJJ	т				
ASI	INDONESIA	WAKK	т				
ASI	INDONESIA	WALR	т				
ASI	INDONESIA	WIOO	т				
ASI	INDONESIA	WIPT	Т				
ASI	MALDIVES	VRMH	х				
CAR	BAHAMAS	MYEH	т				
CAR	BAHAMAS	MYSM	т				
CAR	GUYANA	SYGO	т				
CAR	MEXICO	ММСТ	Т				
CAR	NETHERLANDS	TNCE	т				
CAR	PANAMA	МРВО	т				
CAR	PANAMA	МРСН	т				
CAR	TURKS AND CAICOS ISLANDS (UNITED KINGDOM)	MBSC	т				
EUR	AZERBAIJAN	UBBE	С				
EUR	CROATIA	LDLO	Т				
EUR	CYPRUS	LCNC	Т				
EUR	ESTONIA	EEPU	C				
EUR	GERMANY	ETHN	С				
EUR	ITALY	LIMG	c				
EUR	ITALY	LIPK	Т				

EUR	ITALY	LIPU	С
EUR	KAZAKHSTAN	UAKD	С
EUR	KAZAKHSTAN	UAOO	С
EUR	KAZAKHSTAN	UARR	С
EUR	KYRGYZSTAN	UCFL	С
EUR	LATVIA	EVJA	С
EUR	LATVIA	EVLA	С
EUR	NETHERLANDS	EHKD	Т
EUR	POLAND	EPBY	С
EUR	POLAND	EPKT	С
EUR	POLAND	EPSC	С
EUR	POLAND	EPWR	С
EUR	REPUBLIC OF MOLDOVA	LUBL	С
EUR	REPUBLIC OF MOLDOVA	LUCH	С
EUR	RUSSIAN FEDERATION	UNWW	С
EUR	RUSSIAN FEDERATION	UUBW	С
EUR	SPAIN	LEDA	Т
EUR	TAJIKISTAN	UTDD	Т
EUR	TURKMENISTAN	UTAA	Т
MID	IRAQ	ORBM	Т
MID	LIBYA	HLLB	Т
MID	LIBYA	HLLT	Т
MID	SYRIAN ARAB REPUBLIC	OSAP	Т
MID	YEMEN	ΟΥΑΑ	Х
MID	YEMEN	OYHD	Т
MID	YEMEN	OYRN	Т
MID	YEMEN	OYSN	Т
MID	YEMEN	OYTZ	Т
SAM	ARGENTINA	SAAR	Т
SAM	ARGENTINA	SABE	Т
SAM	ARGENTINA	SACO	Т
SAM	ARGENTINA	SAME	Т
SAM	ARGENTINA	SARE	Т
SAM	ARGENTINA	SARI	Т
SAM	ARGENTINA	SASA	Т
SAM	ARGENTINA	SASJ	Т
SAM	ARGENTINA	SAVC	Т
SAM	ARGENTINA	SAWG	Т
SAM	ARGENTINA	SAZM	Т
SAM	ARGENTINA	SAZN	т
SAM	ARGENTINA	SAZS	т

### **APPENDIX C**

### DETAILED MONTH BY MONTH STATISTICS RELATING TO AVAILABILITY AND TIMELINESS OF DATA DISTRIBUTED VIA SADIS 2G AND SECURE SADIS FTP

### SADIS 2G

WAFC London GRIB2 availability and reception timeliness statistics on SADIS 2G are presented in Table 2 and Table 3. Note, these statistics are the *reception time* from the SADIS 2G service, not the availability time on MetSwitch.

WAF	WAFC London GRIB2 – SADIS 2G Availability and Timeliness Reception Statistics						
Month	Complete datasets expected	Complete datasets received by T+5:00	Complete datasets received by T+6:00hrs	Number of bulletins expected	Number of bulletins received by T+5:00	Number of bulletins received by T+6:00hrs	Bulletins not received by T+6:00hrs
Jul 2015	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)
Aug 2015	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)
Sep 2015	120	120 (100%)	120 (100%)	85800	85800 (100%)	85800 (100%)	0 (0%)
Oct 2015	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)
Nov 2015	120	120 (100%)	120 (100%)	85800	85800 (100%)	85800 (100%)	0 (0%)
Dec 2015	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)
Jan 2016	$123^{3}$	123 (100%)	123 (100%)	87945	87945 (100%)	87945 (100%)	0 (0%)
Feb 2016	116 <sup>4</sup>	114 (98.3%)	116 (100%)	82940	81989 (98.9%)	82940 (100%)	0 (0%)
Mar 2016	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)
Apr 2016	120	119 (99.2%)	120 (100%)	85800	85085 (99.2%)	85800 (100%)	0 (0%)
Total	1219	1216 (99.8%)	1219 (100%)	871585	869919 (99.8%)	871585 (100%)	0 (0%)

Table 2: WAFS GRIB2 availability and reception timeliness on SADIS 2G, July 2015 to April 2016 inclusive.

WAFC	WAFC London GRIB2 CB, icing and turbulence-SADIS 2G Availability and Timeliness							
	Reception Statistics							
Month	Complete datasets expected	Complete datasets received by T+5:05hrs	Complete datasets received by T+6:00hrs	Number of bulletins expected	Number of bulletins received by T+5:05hrs	Number of bulletins received by T+6:00hrs	Bulletins not received by T+6:00hrs	
Jul 2015	124	124 (100%)	124 (100%)	50468	50468 (100%)	50468 (100%)	0 (0%)	
Aug 2015	124	124 (100%)	124 (100%)	50468	50468 (100%)	50468 (100%)	0 (0%)	
Sep 2015	120	$117 (97.5\%)^5$	120 (100%)	48840	48487 (99.3%)	48840 (100%)	0 (0%)	
Oct 2015	124	$122 (98.4\%)^6$	124 (100%)	50468	50136 (99.3%)	50468 (100%)	0 (0%)	
Nov 2015	120	119 (99.2%) <sup>7</sup>	120 (100%)	48840	48487 (99.3%)	48840 (100%)	0 (0%)	
Dec 2015	124	124 (100%)	124 (100%)	50468	50468 (100%)	50468 (100%)	0 (0%)	
Jan 2016	123 <sup>8</sup>	121 (98.4%) <sup>9</sup>	123 (100%)	50061	49836 (99.6%)	50061 (100%)	0 (0%)	
Feb 2016	116	111 (95.7%) <sup>10</sup>	115 (99.1%) <sup>11</sup>	47212	45828 (97.07%)	46805 (99.1%)	407 (0.9%)	
Mar 2016	124	122 (98.4%)	124 (100%)	50468	50135 (99.3%)	50468 (100%)	0 (0%)	
Apr 2016	120	118 (98.3%)	119 (99.2%)	48840	48419 (99.1%)	48433 (99.2%)	407 (0.8%)	
Total	1219	1202 (98.6%)	1217 (99.8%)	496133	492856 (99.3%)	495319 (99.8%)	814 (0.2%)	

Table 3: WAFS GRIB2 CB, icing and turbulence availability and reception timeliness on SADIS 2G, July 2015 to April 2016 inclusive.

3 SADIS 2G monitoring was not available for 140000 UTC data. There is no reason to believe data was not delivered, and this run has been removed from the sample, hence 123 rather than 124.

<sup>4</sup> DT171200 and DT171800: Delays due to BT line fault. NOUK10s issued.

<sup>5</sup> Transmission delays from MetSwitch to satellite uplink facility.

<sup>6</sup> DT111800 UTC: 54 bulletins missed the target time (T+4:35) due to late availability of WAFC London data; DT171200 UTC: 407 bulletins missed the target time (T+4:35) due to late availability of WAFC Washington data.

<sup>7</sup> DT160600 UTC: 229 bulletins missed target time (T+5:05) due to late availability of WAFC Washington data.

<sup>8</sup> SADIS 2G monitoring was not available for 140000 UTC data. There is no reason to believe data was not delivered, and this run has been removed from the sample, hence 123 rather than 124.

<sup>9</sup> DT050600 UTC: 316 bulletins missed target time (T+4:35) due to delay in WAFC London distribution processes; 273 bulletins missed target time (T+4:35) due to delay in WAFC London distribution processes

<sup>10</sup> DT191200 UTC; 191800 UTC; and 221200 UTC - non-harmonised data issued due to late availability of WAFC Washington raw data. NOUK10s issued.

<sup>11</sup> DT171200 and DT171800: Delays due to BT line fault. NOUK10s issued.

WAFC London SIGWX BUFR and PNG availability and reception timeliness statistics on SADIS 2G are presented in Table 4 and Table 5. Note, these statistics are the reception time from the SADIS 2G service, not the availability time on MetSwitch.

WAFC London SIGWX BUFR – SADIS 2G Availability and Timeliness Reception									
Statistics									
Month	Complete datasets expected	Complete datasets received by T+7:00hrs	Complete datasets received by T+9:00hrs	Number of bulletins expected	Number of bulletins received by T+7:0 0hrs	Number of bulletins received by T+9:00hrs	Bulletins not received by T+9:00hrs		
Jul 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Aug 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Sep 2015	120	120 (100%)	120 (100%)	1240	1240 (100%)	1240 (100%)	0 (0%)		
Oct 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Nov 2015	120	120 (100%)	120 (100%)	1240	1240 (100%)	1240 (100%)	0 (0%)		
Dec 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Jan 2016	123 <sup>12</sup>	123 (100%)	123 (100%)	1353	1353 (100%)	1353 (100%)	0 (0%)		
Feb 2016	116	116 (100%)	116 (100%)	1276	1276 (100%)	1276 (100%)	0 (0%)		
Mar 2016	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Apr 2016	120	119 (99.2%)	120 (100%)	1320	1309 (99.2%)	1320 (100%)	0 (0%)		
Total	1219	1218 (99.9%)	1219 (100%)	13398	13387 (99.9%)	13398 (100%)	0 (0%)		

WAFC London SIGWX PNG - SADIS 2G Availability and Timeliness Reception **Statistics** Month Complete datasets expected Complete datasets received Complete datasets received Bulletins not received by T+9:00hrs Number of bulletins received by T+7:00hrs Number of bulletins received by T+9:00hrs Number of bulletins expected by T+9:00hrs by T+7:00hrs Jul 2015 124 124 (100%) 1240 1240 (100%) 1240 (100%) 0 (0%) 124 (100%) Aug 2015 124 123 (99.2%) 124 (100%) 1240 1239 (99.9%) 1240 (100%) 0 (0%) 1200 Sep 2015 1200 (100%) 120 1200 (100%) 120 (100%) 120 (100%) 0 (0%) Oct 2015 124 124 (100%) 1240 1240 (100%) 1240 (100%) 124 (100%) 0 (0%) 120 (100%) 1200 (100%) Nov 2015 120 120 (100%) 1200 1200 (100%) 0 (0%) Dec 2015 124 124 (100%) 124 (100%) 1240 1240 (100%) 1240 (100%) 0 (0%) Jan 2016 123<sup>1</sup> 122 (99.2%) 1230 123 (100%) 1220 (99.2%) 1230 (100%) 0(0%)Feb 2016 116 116 (100%) 116 (100%) 1160 1160 (100%) 1160 (100%) 0 (0%) 0 (0%) Mar 2016 124 124 (100%) 124 (100%) 1240 1240 (100%) 1240 (100%) Apr 2016 120 120 (100%) 120 (100%) 1200 1200 (100%) 1200 (100%) 0 (0%) 12190 Total 1219 1217 (99.8%) 1219 (100%) 12179 (99.9%) 12190 (100%) 0 (0%)

Table 5: WAFC London SIGWX PNG availability and reception timeliness on SADIS 2G, July 2015 to April 2016 inclusive.

<sup>12</sup> SADIS 2G monitoring was not available for 140000 UTC data. There is no reason to believe data was not delivered, and this run has been removed from the sample, hence 123 rather than 124.

<sup>13</sup> DT101200 UTC: One SIGWX PNG chart issued late - Human error. Monitoring alert not actioned in a timely fashion - human error.

<sup>14</sup> SADIS 2G monitoring was not available for 140000 UTC data. There is no reason to believe data was not delivered, and this run has been removed from the sample, hence 123 rather than 124.

### **SECURE SADIS FTP**

WAFC London GRIB2 availability and reception timeliness statistics are presented in Table 6 and Table 7. Note, these statistics are the availability time on the Secure SADIS FTP servers.

WAFC London GRIB2 (not including CB, icing and turbulence) – Secure SADIS FTP									
Availability and Timeliness Reception Statistics									
	Complete datasets expected	Complete datasets received by T+4:20hrs	Complete datasets received by T+6:00hrs	Number of bulletins expected	Number of bulletins received by T+4:20hrs	Number of bulletins received by T+6:00hrs	Bulletins not received by T+6:00hrs		
Jul 2015	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)		
Aug 2015	124	$123 (99.2\%)^{15}$	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)		
Sep 2015	120	120 (100%)	120 (100%)	85800	85800 (100%)	85800 (100%)	0 (0%)		
Oct 2015	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)		
Nov 2015	120	120 (100%)	120 (100%)	85800	85800 (100%)	85800 (100%)	0 (0%)		
Dec 2015	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)		
Jan 2016	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)		
Feb 2016	116	116 (100%)	116 (100%)	82940	82940 (100%)	82940 (100%)	0 (0%)		
Mar 2016	124	124 (100%)	124 (100%)	88660	88660 (100%)	88660 (100%)	0 (0%)		
Apr 2016	120	119 (99.2%)	120 (100%)	85800	85085 (99.2%)	85800 (100%)	0 (0%)		
Total	1220	1218 (99.8%)	1220 (100%)	872300	871452 (99.9%)	872300 (100%)	0 (0%)		

Table 6: WAFS GRIB2 availability and reception timeliness on Secure SADIS FTP July 2015 to April 2016 inclusive.

WAFC London GRIB2 CB, icing and turbulence – Secure SADIS FTP Availability and Timeliness Reception Statistics									
	Complete datasets expected	Complete datasets received by T+4:35hrs	Complete datasets received by T+6:00hrs	Number of bulletins expected	Number of bulletins received by T+4:35hrs	Number of bulletins received by T+6:00hrs	Bulletins not received by T+6:00hrs		
Jul 2015	124	124 (100%)	124 (100%)	50468	50468 (100%)	50468 (100%)	0 (0%)		
Aug 2015	124	124 (100%)	124 (100%)	50468	50468 (100%)	50468 (100%)	0 (0%)		
Sep 2015	120	120 (100%)	120 (100%)	48840	48840 (100%)	48840 (100%)	0 (0%)		
Oct 2015	124	$122 (98.4\%)^{16}$	124 (100%)	50468	50007 (99.1%)	50468 (100%)	0 (0%)		
Nov 2015	120	119 (99.2%) <sup>17</sup>	120 (100%)	48840	48433 (99.2%)	48840 (100%)	0 (0%)		
Dec 2015	124	124 (100%)	124 (100%)	50468	50468 (100%)	50468 (100%)	0 (0%)		
Jan 2016	124	123 (99.2%) <sup>18</sup>	124 (100%)	50468	50061 (99.20%)	50468 (100%)	0 (0%)		
Feb 2016	116	113 (97.4%) <sup>19</sup>	116 (100%)	47212	45991 (97.4%)	47212 (100%)	0 (0%)		
Mar 2016	124	$122 (98.4\%)^{20}$	124 (100%)	50468	49654 (98.4%)	50468 (100%)	0 (0%)		
Apr 2016	120	119 (99.2%)	120 (100%)	48840	48433 (99.2%)	48840 (100%)	0 (0%)		
Total	1220	1210 (99.2%)	1220 (100%)	496540	492823 (99.3%)	496540 (100%)	0 (0%)		

Table 7: WAFS GRIB2 CB, icing and turbulence availability and reception timeliness on Secure SADIS FTP, July 2015 to April 2016 inclusive.

<sup>15</sup> DT290600 UTC: 133 bulletins missed the target time (T+4:20) by 5 minutes.

<sup>16</sup> DT111800 UTC: 54 bulletins missed the target time (T+4:35) due to late availability of WAFC London data; DT171200 UTC: 407 bulletins missed the target time (T+4:35) due to late availability of WAFC Washington data.

<sup>17</sup> DT160600 UTC: 407 bulletins missed target time (T+4:35) due to late availability of WAFC Washington data.
18 DT201200 UTC: 407 bulletins missed target time (T+4:35) due to delay in WAFC London distribution processes.

<sup>19</sup> DT191200 UTC; DT191800 UTC and DT221200 UTC: Non-harmonised data issued by WAFC London due to late availability of WAFC Washington raw data. NOUK10 administrative messages issued.

<sup>20</sup> DT201200 UTC and DT210000 UTC: Non-harmonised data issued by WAFC London due to late availability of WAFC Washington raw data. NOUK10 administrative messages issued.

WAFC London SIGWX BUFR availability and reception timeliness statistics on Secure SADIS FTP are presented in Table 8 and Table 9. Note, these statistics are the *availability* time on the Secure SADIS FTP servers.

WAFC London SIGWX BUFR – Secure SADIS FTP Availability and Timeliness									
Reception Statistics									
Month	Complete datasets expected	Complete datasets received by T+7:00hrs	Complete datasets received by T+9:00hrs	Number of bulletins expected	Number of bulletins received by T+7:00hrs	Number of bulletins received by T+9:00hrs	Bulletins not received by T+9:00hrs		
Jul 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Aug 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Sep 2015	120	120 (100%)	120 (100%)	1320	1320 (100%)	1320 (100%)	0 (0%)		
Oct 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Nov 2015	120	120 (100%)	120 (100%)	1320	1320 (100%)	1320 (100%)	0 (0%)		
Dec 2015	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Jan 2016	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Feb 2016	116	116 (100%)	116 (100%)	1276	1276 (100%)	1276 (100%)	0 (0%)		
Mar 2016	124	124 (100%)	124 (100%)	1364	1364 (100%)	1364 (100%)	0 (0%)		
Apr 2016	120	119 (99.2%)	120 (100%)	1320	1309 (99.2%)	1320 (100%)	0 (0%)		
Total	1220	1219 (99.9%)	1220 (100%)	13420	13409 (99.9%)	12100 (100%)	0 (0%)		

Table 8: WAFC London SIGWX BUFR availability and reception timeliness statistics, July 2015 to April 2016 inclusive.

WAFC London SIGWX PNG – Secure SADIS FTP Availability and Timeliness									
Reception Statistics									
Month	Complete datasets expected	Complete datasets received by T+7:00hrs	Complete datasets received by T+9:00hrs	Number of bulletins expected	Number of bulletins received by T+07:00hrs	Number of bulletins received by T+9:00hrs	Bulletins not received by T+9:00hrs		
Jul 2015	124	124 (100%)	124 (100%)	1240	1240 (100%)	1240 (100%)	0 (0%)		
Aug 2015	124	123 (99.2%) <sup>21</sup>	124 (100%)	1240	1239 (99.9%)	1240 (100%)	0 (0%)		
Sep 2015	120	120 (100%)	120 (100%)	1200	1200 (100%)	1200 (100%)	0 (0%)		
Oct 2015	124	124 (100%)	124 (100%)	1240	1240 (100%)	1240 (100%)	0 (0%)		
Nov 2015	120	120 (100%)	120 (100%)	1200	1200 (100%)	1200 (100%)	0 (0%)		
Dec 2015	124	124 (100%)	124 (100%)	1240	1240 (100%)	1240 (100%)	0 (0%)		
Jan 2016	124	123 (99.2%)	124 (100%)	1240	1230 (99.2%)	1240 (100%)	0 (0%)		
Feb 2016	116	116 (100%)	116 (100%)	1160	1160(100%)	1160 (100%)	0 (0%)		
Mar 2016	124	124 (100%)	124 (100%)	1240	1240 (100%)	1240 (100%)	0 (0%)		
Apr 2016	120	120 (100%)	120 (100%)	1200	1200 (100%)	1200 (100%)	0 (0%)		
Total	1220	1218 (99.8%)	1220 (100%)	12200	12198 (>99.9%)	12200 (100%)	0 (0%)		

Table 9: WAFC London SIGWX PNG availability and reception timeliness statistics, July 2015 to April 2016 inclusive.

#### -END-

<sup>21</sup> DT101200 UTC: One SIGWX PNG chart issued late - Human error. Monitoring alert not actioned in a timely fashion - human error.