

WAFC re-issuance policy with regard to WAFS SIGWX and WAFS GRIB2

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1.0 Introduction

This document describes how the WAFCs will send corrected Significant Weather Forecasts (SIGWX) and GRIB2 Forecasts. Please note that the WAFCs will not update or amend previously issued forecasts because new weather information becomes available. The WAFCs will only issue corrections to fix errors, such as missing information or corruption.

2.0 General Methodology

2.1 When a BUFR, PNG or GRIB2 file needs to be corrected, it will have 'CCA' added to its WMO AHL. For example, if the original 'JUICE00 EGRR 191800' *bulletin* requires correction, then 'JUICE00 EGRR 191800 CCA' would be issued. If further corrections are necessary, the 2nd correction will have 'CCB' added to its WMO AHL, and the third correction will have 'CCC', and so on. For simplicity and brevity, only 'CCA' will be referenced subsequently in this document.

2.2 On WIFS and Secure SADIS FTP, all of the associated *files* will also have the 'CCA' indicator added to their WMO AHL as well. For example, if the Jets BUFR file needs to be corrected, the Jets BUFR file and all the other BUFR and PNG files, such as the Cloud and Trop files, will be renamed with 'CCA' appended to their filenames.

2.3 With regard to SADIS 2G¹, all of the associated bulletins will be re-transmitted. For example, if it is necessary to correct the High Level CAT BUFR file, all of the

¹ SADIS 2G (the satellite based service) will be withdrawn at 1200 UTC on 31 July 2016. Secure SADIS FTP will continue and is unaffected by the withdrawal of SADIS 2G.

other BUFR files and PNG files for that SIGWX forecast package will be retransmitted, with 'CCA' added to their WMO AHLs. This process would also apply to the WAFS GRIB2 forecasts.

2.4 WIFS and Secure SADIS FTP will replace all the associated files with the re-distributed files, appending 'CCA' to the filenames. The original files will be deleted. See Appendix A for details on filename conventions for both WIFS and Secure SADIS FTP.

2.5 A strictly formatted administrative message will be sent to notify users of the correction. The format and proposed WMO headers of this administrative message can be found in Appendix B of this document.

2.6 Corrected PNG charts will have the 'CCA' added to the bulletin ID, found in the top left corner of the PNG chart.

2.7 User created visualizations of BUFR and GRIB2 forecasts should note that the underlying data was corrected in an appropriate manner.

2.8 Examples of corrected BUFR and GRIB2 files can be found in Appendices C and D.

2.9 WAFS London can supply complete sample files for original and corrected WAFS London SIGWX forecasts. Please contact chris.tyson@metoffice.gov.uk

Appendix A: Example filename convention relating to corrected data

The tables below provide examples of filenames of corrected products for both WIFS and Secure SADIS FTP. Note that the corrected files will be in the same directories as the original files, and the original files will be deleted.

Secure SADIS FTP

Product type	Example Original Filename	Example Corrected Filename
PNG	PGCE05_EGRR_0000.PNG	PGCE05_EGRR_0000_CCA.PNG
BUFR	JUCE00_EGRR_191800	JUCE00_EGRR_191800_CCA
GRIB2	T+06_0000	T+06_0000_CCA
Signature	JUCE00_EGRR_191800.SIG	JUCE00_EGRR_191800_CCA.SIG

WIFS

Product	Original Filename	Corrected Filename
PNG	20140127_0600_PGAE05_KKCI.png	20140127_0600_PGAE05_KKCI_CCA.png
BUFR	20140127_0600_JUBE99_KKCI.bufr	20140127_0600_JUBE99_KKCI_CCA.bufr
GRIB2	20140127_1800f18.grib2	20140127_1800f18_CCA.grib2

Appendix B: Format of FXUK66 EGRR and FXUS66 KKCI messages

Example of the format of the Administrative Message used to notify users of corrections to SIGWX or GRIB2 products. Note that WAFC London will use the WMO header FXUK66 EGRR, and WAFC Washington will use the WMO Header FXUS66 KKCI. Users should use this message as a trigger to update their software with new files.

FXUK66 EGRR 200343

RETRANSMITTED WAFC LONDON DATA:

DATA TYPE: WAFC LONDON SIGWX BUFR AND PNG

ORIGINAL WMO AHL: PG///// EGRR 191800

JU///// EGRR 191800

RETRANSMITTED WMO AHL: PG///// EGRR 191800 CCA

JU///// EGRR 191800 CCA

WHERE PG///// REPRESENTS ALL WAFC LONDON SIGWX PNG FILES

AND JU///// REPRESENTS ALL WAFC LONDON SIGWX BUFR FILES

ALL WAFC LONDON SIGWX BUFR AND PNG FILES INDICATED ABOVE ARE

NOW BEING RE-TRANSMITTED.

ISSUED BY WAFC LONDON=

Appendix C: Example corrected BUFR file content.

Example of the first few lines of a corrected BUFR file, if it were dumped to text by software such as Microsoft Notepad.

(note the symbols in the extract below represent the 'Notepad' representation of characters of a non-human readable format, and are included to identify the embedded bulletin references, of which the correction identifier is highlighted)

```
0000179500
958
JUCE00 EGRR 191800 CCA
BUFR  à_____ J @ -
_____
_____
_____
K B - , ]fîÔr »JH 2 z £H @@f "î ÷ ` } !Ä" £CÉD¼^ô%™šÂ/®-Ïa[
¹À©ñRñRbaC.Ä_____†ïléÖ'*A I^oüÖ_____
}
```

Appendix D: Example corrected GRIB2 file content.

Example of a corrected GRIB2 file if it were dumped to text by software such as Microsoft Notepad.

(note the symbols in the extract below represent the 'Notepad' representation of characters of a non-human readable format, and are included to identify the embedded bulletin references, of which the correction identifier is highlighted)

```
0002938400
639
YUXC85 EGRR 210000 CCA
GRIB          r¥      J Ý
          H-----          £          '          ...]J€
0]J€b0          Ð          Ð@
"
-----
----- d Lÿ          £ (Ã'
ÿ ÿ qõÿOÿQ )          '          '          ÿ\ @€^^ ^^ ^^ ^^ ^^ ÿR
-----
ÿd ÓæÆmÑ×òmòð÷ÿ
q
```

Appendix E: Secure SADIS FTP and SADIS 2G update policy.

Re-issuance of WAFC London corrected SIGWX.

On Secure SADIS FTP, SIGWX BUFR files are located in the 'BUFR' directory, under which there are two subfolders:

```
11/08/2010 12:00AM      Directory EGRR
09/01/2010 12:00AM      Directory KKCI
```

Within each of EGRR and KKCI, lie 'parameter' subfolders

```
10/21/2013 12:50PM      Directory H\_CAT
10/21/2013 12:50PM      Directory H\_EMBEDDED\_CB
10/21/2013 12:50PM      Directory H\_FRONTS
10/21/2013 12:50PM      Directory H\_JETS
10/21/2013 12:50PM      Directory H\_TROP
10/21/2013 12:50PM      Directory M\_CAT
10/21/2013 12:50PM      Directory M\_CLOUD
10/21/2013 12:50PM      Directory M\_FRONTS
10/21/2013 12:50PM      Directory M\_JETS
10/21/2013 12:50PM      Directory M\_TROP
10/21/2013 12:50PM      Directory OTHER\_PARAMETERS
```

SIGWX BUFR, files are presented thus within their 'parameter' folder:

```
10/20/2013 12:50AM      1,805 JUCE00\_EGRR\_191800
10/20/2013 12:50AM      256 JUCE00\_EGRR\_191800.SIG
10/20/2013 06:50AM      1,911 JUCE00\_EGRR\_200000
10/20/2013 06:50AM      256 JUCE00\_EGRR\_200000.SIG
10/20/2013 12:50PM      1,455 JUCE00\_EGRR\_200600
10/20/2013 12:50PM      256 JUCE00\_EGRR\_200600.SIG
10/20/2013 06:50PM      1,429 JUCE00\_EGRR\_201200
10/20/2013 06:50PM      256 JUCE00\_EGRR\_201200.SIG
10/21/2013 12:50AM      2,295 JUCE00\_EGRR\_201800
10/21/2013 12:50AM      256 JUCE00\_EGRR\_201800.SIG
10/21/2013 06:50AM      2,431 JUCE00\_EGRR\_210000
10/21/2013 06:50AM      256 JUCE00\_EGRR\_210000.SIG
10/21/2013 12:50PM      1,761 JUCE00\_EGRR\_210600
10/21/2013 12:50PM      256 JUCE00\_EGRR\_210600.SIG
```

Consider, the High Level CAT parameter (H_CAT):

```
10/20/2013 12:50AM      1,805 JUCE00\_EGRR\_191800
```

This is how the original data is represented as 'text' (for example in notepad), WMO AHL bulletin ID is highlighted.

(note the symbols in the extracts below represent the 'Notepad' representation of characters of a non-human readable format, and are included to identify the embedded bulletin references, of which the WMO AHL identifier is highlighted)

```

0000179500
958
JUICE00 EGRR 191800
BUFR  à_____ J @ -
_____
_____
_____
7777
_____

```

This is how the corrected version of the file would be indicated

```

0000179500
958
JUICE00 EGRR 191800 CCA
BUFR  à_____ J @ -
_____
_____
_____
0ÿÆvs €çç!mM»;Zj,,8µİ  ÿÿ4€xÁ:ÂÛç^¹îÓu" 'RêÛ[¥ÐXÉ<<á Çyç·Žđ,,Ë] `š9Õbrþ 27þ
7777
_____

```

Since the policy is that when a correction is issued for WAFS SIGWX forecasts, **all** SIGWX BUFR parameters originally issued by that WAFC will be re-issued (including those parameters that do not have an error). Similar actions will take place for all SIGWX BUFR files issued by that WAFC corrected from the original 191800 datatime in this example.

i.e. the following files would be issued:

- JUWE96_EGRR_191800_CCA (BUFR high level jetstreams)
- JUCE00_EGRR_191800_CCA (BUFR high level CAT)
- JUBE99_EGRR_191800_CCA (BUFR high level cloud)
- JUTE97_EGRR_191800_CCA (BUFR high level TROP)
- JUFE00_EGRR_191800_CCA (BUFR high level fronts)
- JUVE00_EGRR_191800_CCA (BUFR high level TRS, Volcano, Radiation)

JUOE00_EGRR_191800_CCA (BUFR medium level TROP)
 JUTE00_EGRR_191800_CCA (BUFR medium level jetstreams)
 JUJE00_EGRR_191800_CCA (BUFR medium level fronts)
 JUNE00_EGRR_191800_CCA (BUFR medium level cloud)
 JUME00_EGRR_191800_CCA (BUFR medium level CAT)

The PNGs would also be reissued.

They are presented thus on Secure SADIS FTP:

In the 'SIGWX_PNG' folder there are two subfolders

09/01/2010 12:00AM Directory [SWH_PNG](#)
 09/01/2010 12:00AM Directory [SWM_PNG](#)

In SWH_PNG:

10/21/2013 12:55PM Directory [AREA_A](#)
 10/21/2013 12:50PM Directory [AREA_B](#)
 10/21/2013 12:55PM Directory [AREA_B1](#)
 10/21/2013 12:50PM Directory [AREA_C](#)
 10/21/2013 12:50PM Directory [AREA_D](#)
 10/21/2013 12:50PM Directory [AREA_E](#)
 10/21/2013 12:55PM Directory [AREA_F](#)
 10/21/2013 12:50PM Directory [AREA_G](#)
 10/21/2013 12:55PM Directory [AREA_H](#)
 10/21/2013 12:55PM Directory [AREA_I](#)
 10/21/2013 12:55PM Directory [AREA_J](#)
 10/21/2013 12:50PM Directory [AREA_K](#)
 10/21/2013 12:55PM Directory [AREA_M](#)

In SWM_PNG

10/21/2013 12:50PM Directory [AREA_ASIA_SOUTH](#)
 10/21/2013 12:50PM Directory [AREA_EURO](#)
 10/21/2013 12:50PM Directory [AREA_MID](#)
 10/21/2013 12:55PM Directory [AREA_NAT](#)

As an example (from AREA E)

10/21/2013 06:50AM 89,817 [PGCE05_EGRR_0000.PNG](#)
 10/21/2013 06:50AM 256 [PGCE05_EGRR_0000.PNG.SIG](#)
 10/21/2013 12:50PM 88,168 [PGCE05_EGRR_0600.PNG](#)
 10/21/2013 12:50PM 256 [PGCE05_EGRR_0600.PNG.SIG](#)
 10/20/2013 06:50PM 87,399 [PGCE05_EGRR_1200.PNG](#)
 10/20/2013 06:50PM 256 [PGCE05_EGRR_1200.PNG.SIG](#)
 10/21/2013 12:50AM 90,284 [PGCE05_EGRR_1800.PNG](#)
 10/21/2013 12:50AM 256 [PGCE05_EGRR_1800.PNG.SIG](#)

Corrected SIGWX PNGs would be replaced with the following:

10/21/2013 06:50AM 89,817 [PGCE05_EGRR_1800_CCA.PNG](#)
 10/21/2013 06:50AM 256 [PGCE05_EGRR_1800_CCA.PNG.SIG](#)

All other SIGWX PNGs would be similarly re-issued with the following filenames on Secure SADIS FTP.

PGSE05_EGRR_191800_CCA(PNG ICAO High Level SIGWX Area B)
PGRE05_EGRR_191800_CCA(PNG ICAO High Level SIGWX Area C)
PGZE05_EGRR_191800_CCA(PNG ICAO High Level SIGWX Area D)
PGGE05_EGRR_191800_CCA(PNG ICAO High Level SIGWX Area E)
PGCE05_EGRR_191800_CCA(PNG ICAO High Level SIGWX Area G)
PGAE05_EGRR_191800_CCA(PNG ICAO High Level SIGWX Area H)
PGKE05_EGRR_191800_CCA(PNG ICAO High Level SIGWX Area M)
PGDE14_EGRR_191800_CCA(PNG ICAO Medium Level SIGWX Area EURO)
PGCE14_EGRR_191800_CCA(PNG ICAO Medium Level SIGWX Area MID)
PGZE14_EGRR_191800_CCA(PNG ICAO Medium Level SIGWX Area S ASIA)

An automated SIGWX Correction message would be sent with the following:

FXUK66 EGRR 200343

RETRANSMITTED WAFC LONDON DATA:

DATA TYPE: WAFC LONDON SIGWX BUFR AND PNG

ORIGINAL WMO AHL: PG//// EGRR 191800

JU//// EGRR 191800

RETRANSMITTED WMO AHL: PG//// EGRR 191800 CCA

JU//// EGRR 191800 CCA

WHERE PG//// REPRESENTS ALL WAFC LONDON SIGWX PNG FILES

AND JU//// REPRESENTS ALL WAFC LONDON SIGWX BUFR FILES

ALL WAFC LONDON SIGWX BUFR AND PNG FILES INDICATED ABOVE ARE

NOW BEING RE-TRANSMITTED.

ISSUED BY WAFC LONDON=

In addition, the usual FXUK65 EGRR message will be issued to inform those users who a) have not got systems that can re-process the re-issued files, or are – for whatever reason – unable to obtain updated visualisations (soft or hard copy).

1) Should further corrections be necessary, then the sequence CCB, CCC, CCD etc should be followed.

2) Should such messages be received from WAFC Washington, then they will be processed in the same fashion – distributed directly over SADIS 2G (SIGWX only, Not GRIB2), and processed as described above for Secure SADIS FTP. The FXUS66 KKCI would be issued by WAFC Washington and distributed to inform users, and act as a trigger.

For GRIB2 data:

On Secure SADIS FTP, GRIB2 data is in the 'GRIB2' folder. There is a subfolder;

06/15/2011 12:00AM Directory [COMPRESSED](#)

And two lower level subfolder for WAFC London and WAFC Washington data.

08/20/2013 12:14PM Directory [EGRR](#)

08/20/2013 12:14PM Directory [KWBC](#)

Folders for CB, icing and turbulence are provided, and time-step concatenated GRIB2 bulletins. (sub folders in the CAT, CB, ICE and INCLDTURB also concatenate the GRIB2 data into separate time steps).

08/20/2013 12:14PM Directory [CAT](#)
08/20/2013 12:14PM Directory [CB](#)
08/20/2013 12:14PM Directory [ICE](#)
08/20/2013 12:14PM Directory [INCLDTURB](#)
10/21/2013 12:45PM Directory [T+06](#)
10/21/2013 12:45PM Directory [T+09](#)
10/21/2013 12:45PM Directory [T+12](#)
10/21/2013 12:45PM Directory [T+15](#)
10/21/2013 12:45PM Directory [T+18](#)
10/21/2013 12:45PM Directory [T+21](#)
10/21/2013 12:45PM Directory [T+24](#)
10/21/2013 12:45PM Directory [T+27](#)
10/21/2013 12:45PM Directory [T+30](#)
10/21/2013 12:45PM Directory [T+33](#)
10/21/2013 12:45PM Directory [T+36](#)

So, typically, for the T+06 folder:

10/21/2013 03:30AM 1,550,574 [T+06_0000](#)
10/21/2013 03:30AM 256 [T+06_0000.SIG](#)
10/21/2013 09:30AM 1,550,375 [T+06_0600](#)
10/21/2013 09:30AM 256 [T+06_0600.SIG](#)

A very truncated 'text' version of the T+06_0000 file is shown below, the WMO AHL of the *bulletin* is highlighted:

(note the symbols in the extract below represent the 'Notepad' representation of characters of a non-human readable format, and are included to identify the embedded bulletin references, of which the correction identifier is highlighted)

```
0002938400
639
YUXC85 EGRR 210000
GRIB          r¥      J Ý
          H-----          £          '          ...]J€
0]J€b0          Đ          Đ@
"

----- d Lÿ          £ (Ã'
ÿ  ÿ  qõÿOÿQ )          '          '          ÿ\ @€^^ ^^ ^^ ^^ ^^ ÿR

-----
ÿd ÓæÆmÑ×òmðð÷ÿ
  q
ÿ"İü0øPToìn€ÈjwE,£jU¥,o!FRđ;Â}@Ó§-----=i°âh]^'đžW
etc etc
640
YUXC70 EGRR 210000
GRIB          oË      J Ý
          H-----          £          '          ...]J€
0]J€b0          Đ          Đ@
"

----- d pÿ          £ (Ã{
ÿ  ÿ  oÿOÿQ )          '          '          ÿ\ @€^^ ^^ ^^ ^^ ^^ ÿR

-----
ÿd ÓæÆmÑ×òmðð÷ÿ          n³ ÿ"İü0ìPToìnf³Ä»lÇmTL«¼Êüü`JÉì?b0Z%îG»
etc etc
```

In the event that GRIB2 had to be re-issued, then data will be distributed as normal over SADIS 2G.

On Secure SADIS FTP, each concatenated file will contain corrected bulletins (note modified WMO AHLs):

(note the symbols in the extract below represent the 'Notepad' representation of characters of a non-human readable format, and are included to identify the embedded bulletin references, of which the correction identifier is highlighted)

0002938400

639

YUXC85 EGRR 210000 CCA

GRIB rY J Y

H----- £ ' ...]J€
0]J€b0 Đ Đ@
"

----- d Lÿ £ (Ã'
ÿ ÿ qðÿOÿQ) ' ' ÿ\ @€^^ ^^ ^^ ^^ ^^ ÿR

ÿd ÓæÆmÑ×òmòð÷ÿ

q
ÿ"Ïü0øPTòin€ÈjwE,£jU¥,o!FRð;Â}@Ós-----=i°âh]^'ðžW
etc etc

640

YUXC70 EGRR 210000 CCA

GRIB oË J Y

H----- £ ' ...]J€
0]J€b0 Đ Đ@
"

----- d pÿ £ (Ã{
ÿ ÿ oÿOÿQ) ' ' ÿ\ @€^^ ^^ ^^ ^^ ^^ ÿR

ÿd ÓæÆmÑ×òmòð÷ÿ n³ ÿ"Ïü0ìPTòin£³Ä»lÇmTL«¼Êüü`JÉì?b0Z%îG»
etc etc

An automated GRIB2 Correction message will be sent with the following:

FXUK66 EGRR 200343

RETRANSMITTED WAFc LONDON DATA:

DATA TYPE: WAFc LONDON GRIB2 UPPER AIR FORECASTS

ORIGINAL WMO AHL: Y/X/// EGRR 210000

RETRANSMITTED WMO AHL: Y/X/// EGRR 210000

WHERE Y/X/// REPRESENTS ALL WAFc LONDON GRIB2 WAFS FILES

ALL WAFc LONDON GRIB2 WAFS FILES INDICATED ABOVE ARE NOW

BEING RE-TRANSMITTED.

ISSUED BY WAFc LONDON=

1) Should further corrections be necessary, then the sequence will be CCB, CCC, CCD etc should be followed.

- END -