

**MEMORANDUM OF
UNDERSTANDING CONCLUDED
BETWEEN
THE ADMINISTRATIONS OF
THE UNITED
KINGDOM
AND
FRANCE
ON COORDINATION IN THE
1710-1785 AND 1805-1880 MHz
FREQUENCY BANDS**

1 - INTRODUCTION

Frequencies in the bands 1710 - 1785 MHz (mobile transmit) and 1805 - 1880 MHz (base transmit) are designated for pan-European digital land mobile services (DCS 1800) according to ERC/DEC/(95)03 and CEPT T/R 22-07 (MONTREUX, 1993).

In France and the UK, different services occupy these frequency bands; due to the differing characteristics of these services, separate coordination procedures are required in the following cases :

- DCS 1800 in the UK and France;
- DCS 1800 in the UK and radio links in France;

Both administrations express their will to use the HCM software (Harmonised Calculation Method) as a common tool for coordination purposes as soon as possible.

Accordingly, the Administrations of the United Kingdom and France have agreed the following coordination procedures.

2 - PROCEDURE FOR FREQUENCY COORDINATION BETWEEN DCS 1800 SYSTEMS

The coordination procedure is based on the concept of preferential frequencies in accordance with CEPT Recommendation T/R 22-07 (Montreux, 1993). The 1710-1785 and 1805-1880 MHz frequency bands will be apportioned as groups of frequencies which can be assigned in an equitable manner by both countries as "preferential bands".

In a preferential band allocated to one country, a base station may be established without prior coordination if the anticipated field strength at all points 15 km inside the neighbouring country does not exceed the trigger value specified in paragraph 2.1.1.

In a non-preferential band assigned to one country, a base station may be established without prior coordination if the anticipated field strength at all points on the coastline does not exceed the trigger value specified in paragraph 2.1.2. Neither such a base station nor a mobile served by that station may complain of interference caused by a station in the neighbouring country which complies with the conditions laid down for the use of preferential frequencies.

2.1 - Technical characteristics

2.1.1 - Preferential bands

In a preferential band, the field strength shall not exceed the trigger value of 25 dB μ V/m at 3 metres above ground level at all points 15 km inside the neighbouring country.

2.1.2 - Non-preferential bands

In a non-preferential band, the field strength shall not exceed the trigger value of 25 dB μ V/m at 3 metres above ground level at all points on the coastline of the neighbouring country.

2.1.3 - Prediction of propagation

The field prediction method shall be based on CEPT Recommendation T/R 22-07 (Montreux, 1993), which shall be applied as follows:

- 50% of the time and 50% of locations for land (ITU-R Recommendation PN.370-7 curves);
- 50% of the time and 50% of locations for cold sea (ITU-R Recommendation PN.370-7 curves);
 - height of the mobile receiver antenna set at 3 m;
 - average terrain height for the base station in all main directions;
 - type of terrain (eg land, sea, mixed path);
 - effective radiated power, taking account of antenna gain, tilt and azimuth.

This method is an interim solution. The agreed objective is that both administrations shall promote the further development of the HCM software, in particular the incorporation of a sea path algorithm.

2.1.4 - Additional interference sources

Where multiple interference sources are present, the simplified algorithm given in Annex 2 of CEPT Recommendation T/R 22-07 shall be applied.

2.2 - Allocation of preferential channels

The division of preferential channels between the two countries shall be in accordance with Annex 1.

**3 - PROCEDURE FOR FREQUENCY COORDINATION BETWEEN DCS
1800 IN
THE UNITED KINGDOM AND RADIO LINKS IN FRANCE**

Frequency coordination is necessary in order to protect existing services:

- Protection of DCS 1800 in the UK from interference caused by tactical radio links in France;
- Protection of Fixed Links in France from interference caused by DCS 1800 in UK.

3.1 - Tactical radio links in France and DCS 1800 in the UK

The procedure for coordination between tactical radio links in France and DCS 1800 in the UK is described in the flowchart in Annex 2.

The United Kingdom shall notify France as soon as possible of the installation of any DCS 1800 base station located within UK territory at a distance of 80 km or less from the French coast. If possible, a regular summary of all notified stations should be submitted every 6 months. The technical characteristics of DCS 1800 base stations to be supplied by the UK shall be in conformity with paragraph 5.

Calculations relating to tactical radio links shall be carried out by France using the calculation and propagation method of its choice, so as to maintain minimum interference to DCS 1800 stations in the UK. France is not required to provide the UK with information regarding the bringing into use of tactical radio links.

3.2 - Radio links in France and DCS 1800 in the UK

Existing fixed radio links must be protected, irrespective of the arrangement for allocating preferential channels for DCS 1800 - DCS 1800 coordination, as shown in Annex 1.

The procedure for coordination between fixed radio links in France and DCS 1800 in the UK is shown in the flowchart in Annex 3 noting the following exclusion: Base stations in the London area (defined as an area enclosed by the M25 Motorway) having Effective Radiated powers less than or equal to 10 dBW are not subject to this coordination procedure.

If necessary, in cases where other technical solutions are not viable, the UK can notify to France DCS 1800 Base stations installed within 200 km of the notified Fixed Links in Annex 4 which exceed 15 dB μ V/m. France shall signify within 30 days whether coordination is agreed or further assessment is required otherwise it is assumed that the station is coordinated. In the event that more detailed coordination is required the UK and French administrations shall co-operate to resolve the issue in a timely manner.

A list of all French fixed radio links requiring protection is given in Annex 4. There are no plans to increase the number of these links.

4 - PROVISIONS RELATING TO CONFIDENTIALITY OF INFORMATION

The Administrations undertake:

- not to inform their operators of the characteristics of military radio links;
- to carry out any studies necessary for the protection of these radio links;
- to notify only their operators of the restrictions on the deployment of DCS 1800.

5 - EXCHANGE OF INFORMATION

Each administration shall notify for coordination purposes the planned installation of DCS 1800 stations within an area of 80 km from the coast of the neighbouring country. By preference, a list of new assignments should be exchanged every six months, if possible on diskette.

All exchanges of information shall be made in accordance with the format specified in CEPT T/R 25-08 (LECCE 1989 (CR)).

6 - CHANNEL ISLANDS

This Memorandum of Understanding shall not apply to the Channel Islands.

Coordination in the 1710 - 1785 MHz and 1805 - 1880 MHz frequency bands will be the subject of a separate Memorandum of Understanding between France and the United Kingdom covering the Channel Islands.

7 - CHANNEL TUNNEL

Each Administration considers it desirable to provide DCS 1800 cover in the Channel Tunnel. To this end, each Administration may use its preferential channels in accordance with Annex 1.

8 - REVIEW AND FOLLOW UP OF THE MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding will be reviewed as soon as the HCM method is approved with a suitable sea path algorithm. The objective is to achieve this revision of the HCM method by 1st January 2000.

In any case, before 1st January 2000 the MOU will be reviewed in light of future developments and experience in implementing the MOU.

9 - TERMINATION OF THE MEMORANDUM OF UNDERSTANDING

Either Administration may withdraw from this Memorandum of Understanding subject to 6 months notice.

10 - LANGUAGE OF THE MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is drafted in the French and English languages, both languages having equal authority.

The original version in English is laid down with the United Kingdom Radiocommunications Agency in London, the original version in French laid down with the Agence Nationale des Fréquences in Maisons-Alfort.

11 - DATE OF ENTRY INTO FORCE

This Memorandum of Understanding will enter into force on **1st November 1998**.

Done at Maisons-Alfort on 14 May 1998

For FRANCE

For the UNITED KINGDOM

M. MONNOT

B. LAST

LIST OF ANNEXES

- 1 - Allocation of preferential channels
- 2 - Procedure for coordination between tactical fixed links in France and DCS 1800 in the UK
- 3 - Procedure for coordination between fixed radio links and DCS 1800 in the UK
- 4 - List of existing fixed radio links in France requiring protection

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ANNEX 1

Allocation of preferential channels

ANNEX 1

ALLOCATION OF PREFERENTIAL CHANNELS

Allocation of preferential channels between the UK and France

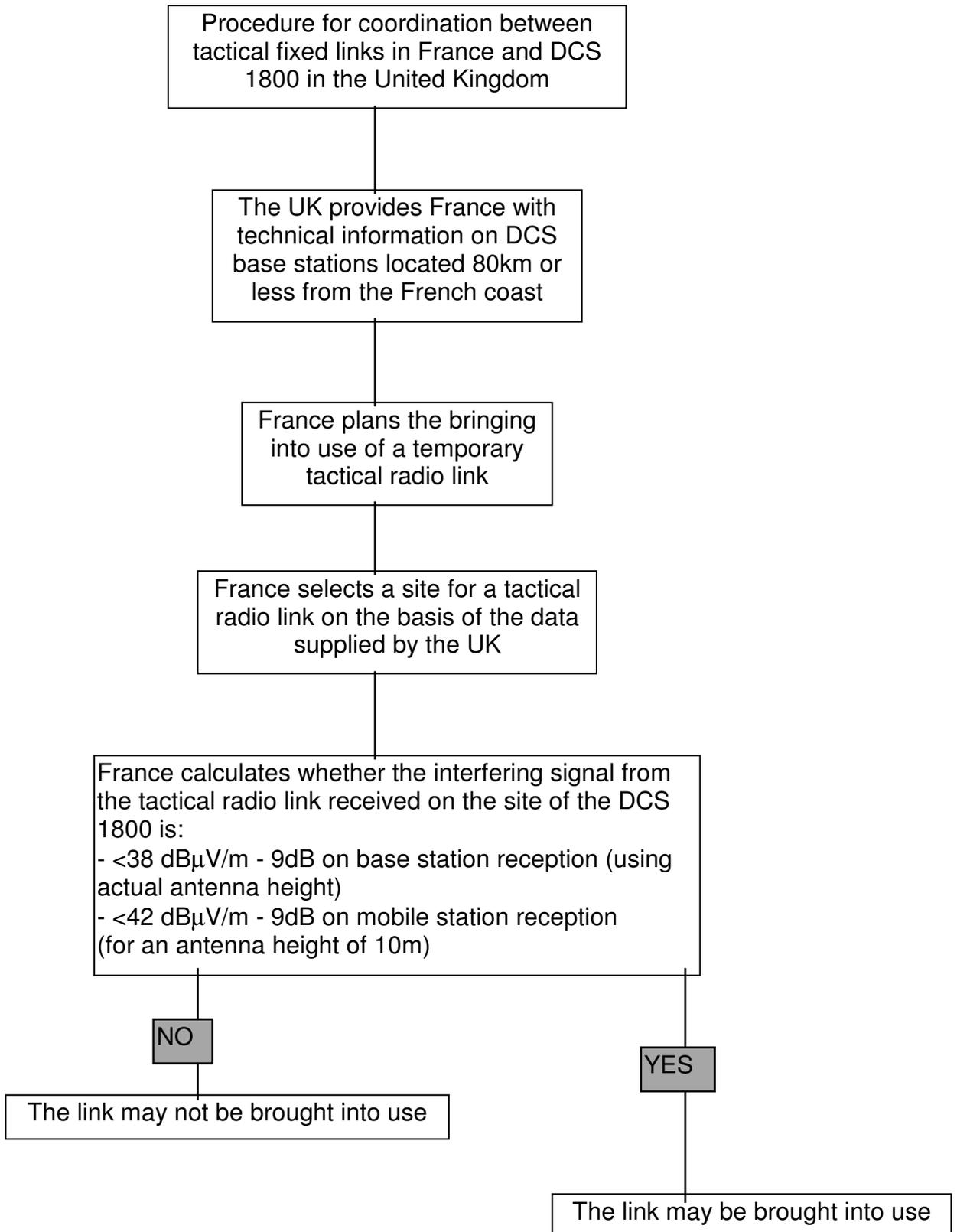
DCS 1800 CHANNEL	COUNTRY
512 - 525	FRANCE
526 - 547	UK
548 - 561	FRANCE
562 - 593	UK
594 - 618	FRANCE
619 - 624	UK
625 - 639	FRANCE
640 - 668	UK
669 - 693	FRANCE
694 - 699	UK
700 - 711	FRANCE
712 - 743	UK
744 - 768	FRANCE
769 - 774	UK
775 - 788	FRANCE
789 - 818	UK
819 - 843	FRANCE
844 - 849	UK
850 - 861	FRANCE
862 - 879	UK
880 - 885	FRANCE

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ANNEX 2

**Procedure for coordination between tactical fixed links
in France and DCS 1800 in the UK**

ANNEX 2

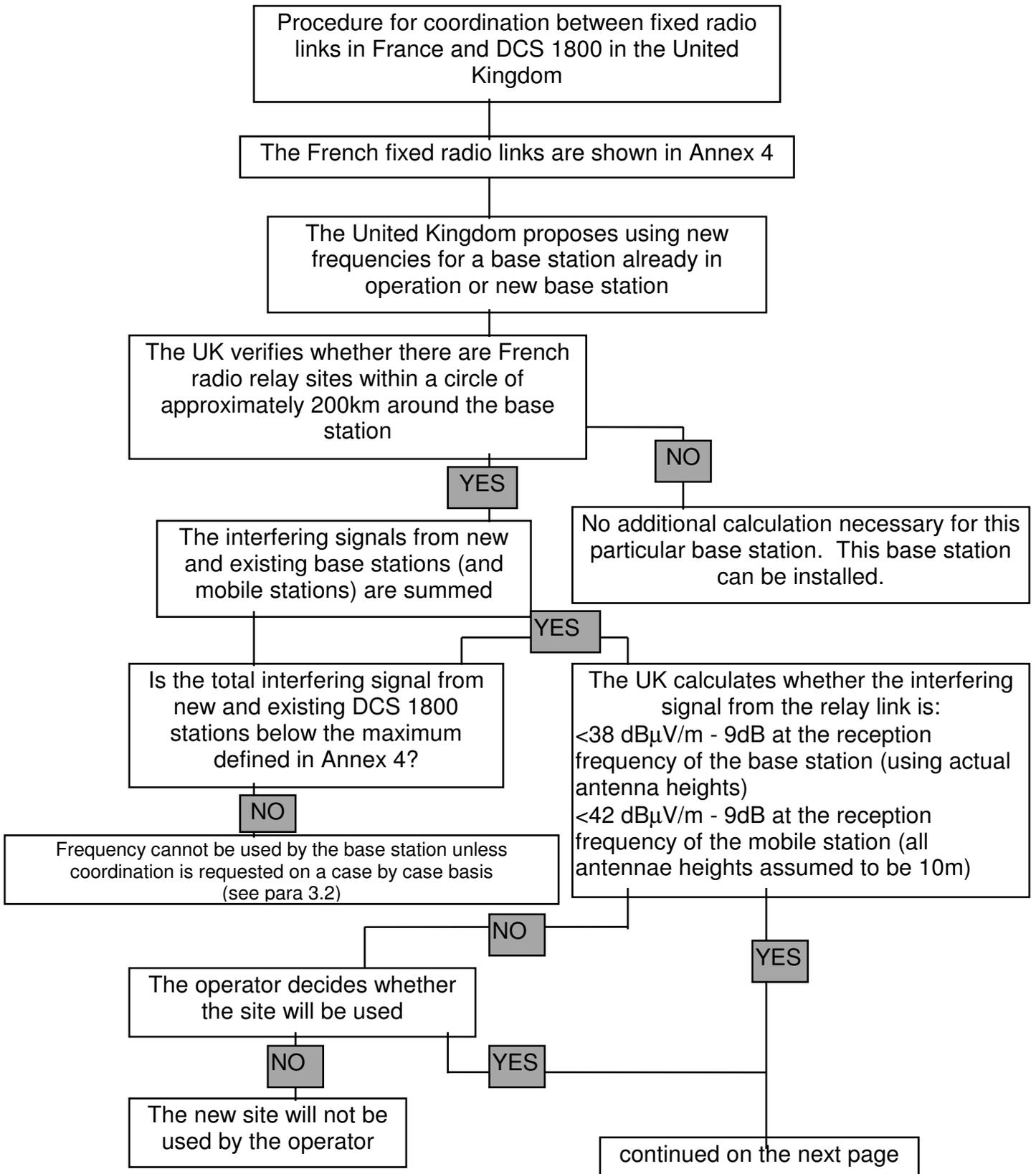


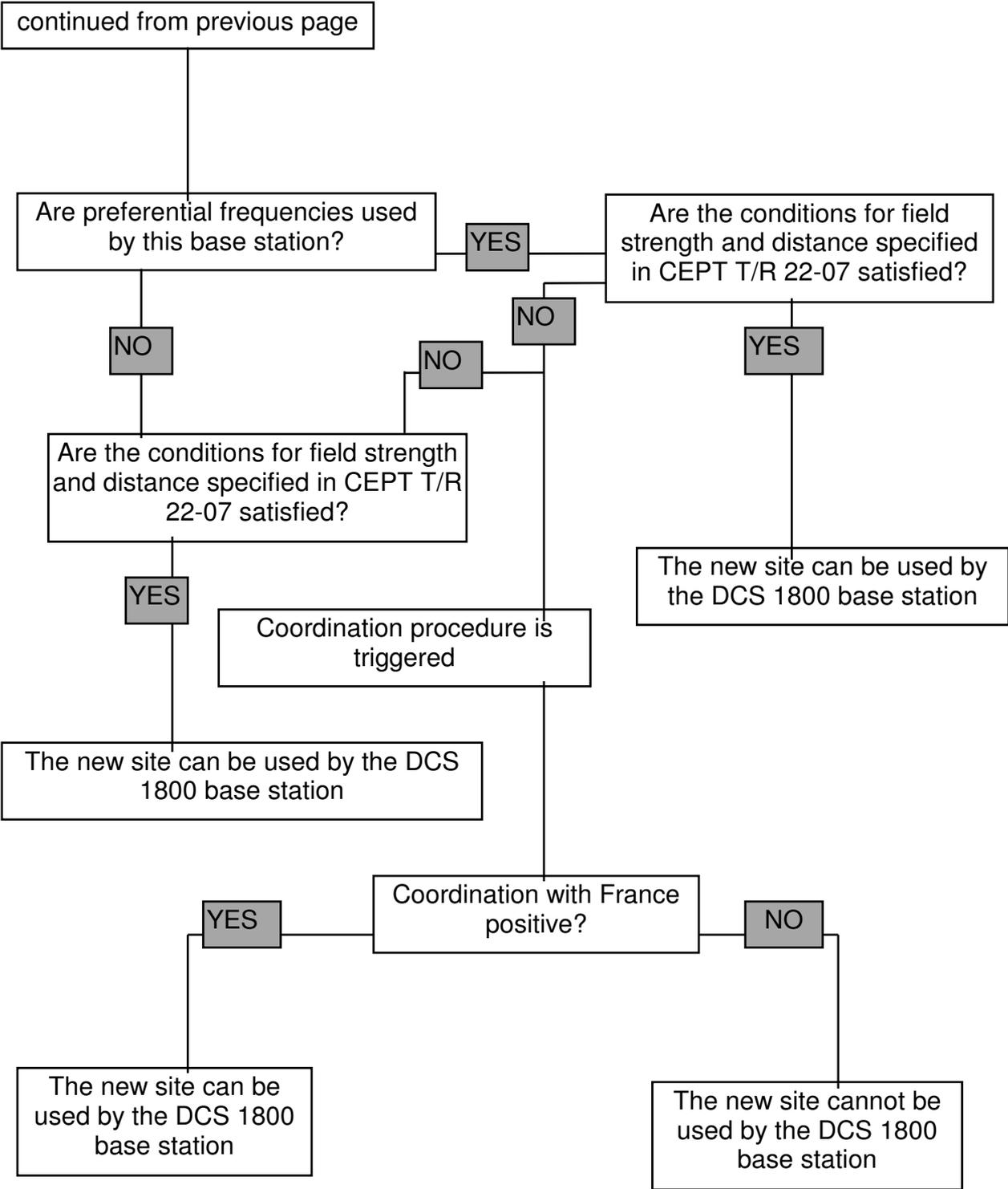
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ANNEX 3

Procedure for coordination between fixed radio links
and DCS 1800 in the UK

ANNEX 3





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ANNEX 4

List of existing fixed radio links in France requiring
protection

ANNEX 4

LIST OF EXISTING FIXED RADIO LINKS IN FRANCE REQUIRING PROTECTION

Dunkerque Semaphore	0022024E 510314N	1713.5+/- 2.5 MHz
Dunkerque Com	0022231E 510225N	1832.5 +/- 2.5 MHz
Saint Frieux	0013633E 503635N	1825.5 +/- 3.5 MHz

The allowable interfering field strength of these Fixed links is 15 dB μ V/m