making communications work for everyone

AGENCE NATIONALE DES FRÉQUENCES

The administrations of

France

(Agence Nationale des Fréquences - ANFR)

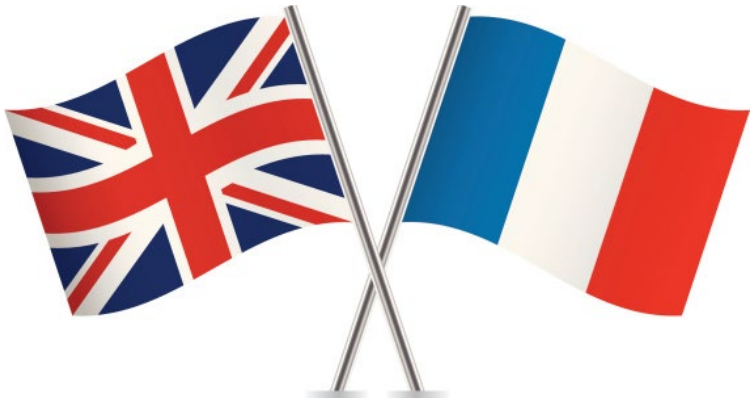
and of

the United Kingdom of Great Britain and Northern Ireland

(Office of Communications - Ofcom)

shall conclude the following

Agreement on the frequency co-ordination of Terrestrial Digital Audio Broadcasting (DAB/DAB+) in the VHF Broadcasting Band III from 174 to 230 MHz



July 2023

I. INTRODUCTION

The administrations of France and the United Kingdom together hereinafter referred to as "the Administrations" have worked together to enable an evolution of DAB planning in the VHF Band III (174 to 230 MHz). The outcome of this bilateral exercise is reported in this document.

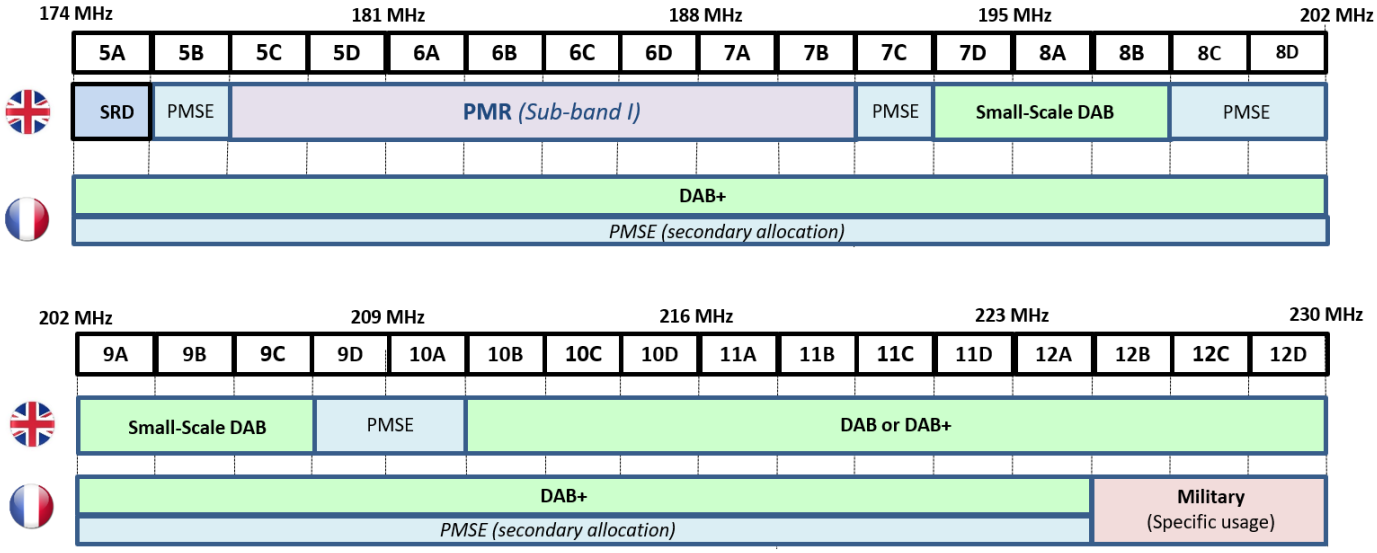
The overall aim of this agreement is to facilitate the roll-out and/or extension of digital radio multiplexes, which will result in modification of the GE06 Plan and introduction of small-scale DAB (SS DAB) services for both administrations.

This agreement will therefore allow 'the Administrations' to implement DAB networks according to their up-to-date broadcasting requirements in accordance with the Geneva 2006 (GE06) Final Acts[1].

To enable the implementation of these networks, 'the Administrations' have agreed field strength levels that should not be exceeded in order to protect both countries.

II. FREQUENCY USAGE

The following figure summarizes the frequency allocations of both countries in the 174-230 MHz band:



France

France has allocated blocks **5A to 12A** (**174-224.8 MHz**) primarily to terrestrial radio broadcasting using the **DAB+** standard. A secondary allocation of this sub band is furthermore dedicated to **PMSE** (*Programme-making and Special Events*) services.

The upper part of VHF Band III (i.e. blocks **12B, 12C and 12D, from 224.8 to 230MHz) is nationally and exclusively assigned to the French military authorities** for their particular mobile services.

[1] According to GE06 article 4.1.2.1.

United Kingdom (excluding Channel Islands)

The United Kingdom have the following VHF Band III allocations:

- Block **5A** is allocated to **SRD** (*Short Range Devices*) and is commonly used for **ALDs** (*Assistive Listening Devices*).
- Blocks **5B, 7C, 8C, 8D, 9D** and **10A** (5 blocks) are assigned to **PMSE** (*Programme-making and Special Events*).
- Blocks **5C to 7B** (8 blocks) are used for **PMR** (*Private Mobile Radio*)

Blocks **10B to 12D** (11 blocks) are used for **Local and National DAB** services across Great Britain and Northern Ireland (as registered in the GE06 Plan).

SS DAB in the United Kingdom is primarily planned on blocks **7D, 8A, 8B, 9A, 9B** and **9C**. If none of the six blocks mentioned above are useable, a frequency block from the upper band (10B to 12D) may be considered, but only if the required service(s) can be designed to sit under the envelope of the GE06 right(s) for that block, in accordance with the G-F VHF Band III Broadcasting Services Agreement (9 June 2006).

Channel Islands

The UK's GE06 rights in the Channel Islands are as follows:

- **Block 5C** - Jersey Allotment (G__50036)
- **Block 11C** - Guernsey Allotment (G__50035)
  Original GE06 allocation 12A – swap with 11C coordinated with France in 2019.
- **Block 12A** - Channel Islands I Allotment (G__60003)
  Original GE06 allocation 11C - swap with 12A coordinated with France in 2019.

There are no additional requirements from the three DAB allocations listed above. Any request for other VHF Band III block must be coordinated.

III. COORDINATION ZONE

The Buffer Zone (or Coordination Zone) is defined as the area where a given transmitter might affect the service area of another administration operating on the same block (frequency).

France and the **United Kingdom** agreed the coordination zone contours as detailed in **Annex 1.**

This coordination zone helped to determine the DAB networks to be considered between both administrations as detailed in §. V**.**

IV. TEST POINTS

This document sets out the maximum agreed field strength levels at each country's coastal border for radio frequencies in the 174-230 MHz band which will be used to provide DAB services or other services in both countries.

To this goal, both administrations agree to use test points to define each country's coastal borders within the Buffer Zone.

These test points can be found in **Annex 2.**

V. DAB NETWORKS

Both administrations agree on the allocation of channels to the DAB networks which are described in **Annex 3** and **Annex 4.**

Annex 3 provides details of National, Regional and Local DAB services in France as well as foreseen SS DAB services which will be implemented on an assignment basis.

Reference networks within the agreed coordination zone have been designed to provide an indication of the maximum possible interference field strength (IFS) for each DAB block. The designs have been based on existing GE06 allocations, modified GE06 allocations and the introduction of new DAB allocations.

The cumulative power sum of these networks on any given DAB frequency block recorded in this agreement will respect field strength levels towards the UK implied in §. VI**.**

Annex 4 provides details of UK small-scale DAB (SS DAB) services which will be implemented on an assignment basis.

Reference networks have been designed to provide an indication of the maximum possible interference field strength (IFS) for each DAB block. The designs have been based on the introduction of new DAB allocations.

The cumulative power sum of these networks on any given DAB frequency block recorded in this agreement will respect field strength levels towards France implied in §. VI**.**

VI. MAXIMUM INTERFERENCE FIELD STRENGTH

France <-> Great-Britain

Both administrations agree to the maximum interfering field strengths (IFS) levels of the co-block relations defined in the co-ordination spreadsheets in Annex 5.

The cumulative interfering field strength of all assignments within the Coordination Zone on the same frequency block must not exceed these maximum interfering field strength levels when networks are finally implemented.

For blocks **5C to 7B** (8 blocks) the following rules, compliant with previous provisions, must be respected:

- Outgoing levels from UK towards France remain unchanged and are compliant with the 2006 bilateral agreement on other primary services in Band III.[2]
- Outgoing levels from France towards UK:
  - 5C to 6B: **34dBµV/m**
  - 6C to 7B: **31dBµV/m**

- **France to the Channel Islands**

Regarding the Channel Islands, protection from France towards UK DAB services on the archipelago must be respected:

In this regard, the following allocations require the following levels of protection:

- **Jersey 5C:** Protection level not to exceed **42dBuV/m** to test points UKC01-UKC07
- **Guernsey 11C:** Protection level not to exceed **37dBuV/m** to test points UKC08-UKC20
- **Channel Islands 12A:** Protection level not to exceed **40dBuV/m** to test points UKC01-UKC20

VII. GENERAL RULES AND CALCULATION METHOD

[2] GE06 G – F OPS Agreement on Band III

For the purpose of this agreement, both administrations agree on the following rules as the basis for interference assessments for the co-ordination and implementation of DAB networks:

General rules:

- This co-ordination agreement is based on the cumulative IFS levels not to be exceeded at the opposite country's coastal boundaries as defined by test point data (Annex 2).
- For both administrations, the IFS levels have been calculated using 'reference network' plans which have been developed to provide a 'not to exceed' envelope. Final 'implemented networks' may differ to the 'reference networks' but will respect the IFS levels recorded in this agreement.
- Field strength levels have been uplifted to 35dBuV/m at any test point where the calculated value was less than this figure to provide a minimum IFS which has been applied to the networks of both administrations
- Co-ordination 'relevant zones' have been identified for both administrations are provided in Annex 1. Allocations outside the relevant zone are not subject to this coordination agreement.
- Administrations will inform each other regarding implementation date(s) of assignments via bilateral correspondence or officially through the usual ITU GE06 pre-coordination procedures.

Calculation parameters:

- Field strength calculations are defined using the propagation model described in Recommendation ITU-R P.1546 (version 6 or higher), with parameterisation as illustrated in Annex 6.
- Calculations are carried out by each administration's software with a DTM step of 100m.
- Field strength levels are calculated at 10 metres antenna height for 1% time, 50% of locations[3]. Standard deviation is set to 5.5 dB.
- The power sum method (Bonn) as described in the GE06 Agreement[4] is used to calculate the cumulative interference field strength (IFS) levels for the DAB networks recorded in this agreement.

VIII. UPDATE OF THE GE06 PLAN

Both administrations may register their networks with the ITU to replace the original GE06 rights with new allocations in accordance with this Agreement and formally authorised by written approval of the opposite administration in a regular pre-coordination process.

The UK indicates that it does not intend to register SS DAB networks with the ITU. The UK's existing National and Local DAB networks, as registered in the GE06 Plan, are not being modified or changed by this agreement.

[3] in accordance with Chapter 2 to Annex 2 ('propagation information') of the RCC-06 Final Acts
[4] in accordance with the methodology defined in Paragraph 3.1, Section II of Annex 4 of the RCC-06 Final Acts

IX. REVIEW OF THE AGREEMENT

This co-ordination agreement may only be subsequently amended or abrogated with the consensus of both Administrations.

X. ENTRY INTO FORCE

This Agreement shall enter into force from the dates recorded once both administrations have signed. Two signed copies of this agreement will be held, one by each administration.

_____, 2023-08-08	David Willis, 2023-09-07
Signature Year-Month-Day	Signature Year-Month-Day
On behalf of the Administration of France	On behalf of the Administration of the United Kingdom
[Abdelhak FODIL]	[David WILLIS]

ANNEX 1 – DETAIL AND MAP OF THE COORDINATION ZONE

The Coordination Zone defined in this Agreement (also named Buffer Zone) is the area depicted on the map opposite composed of:

On British side:

In England:

- The whole administrative region of **South East**.
- The whole administrative region of **London**
- The whole administrative region of **East of England.**
- The administrative region of **South West** excluding the county of Gloucestershire.

In the Channel Islands:

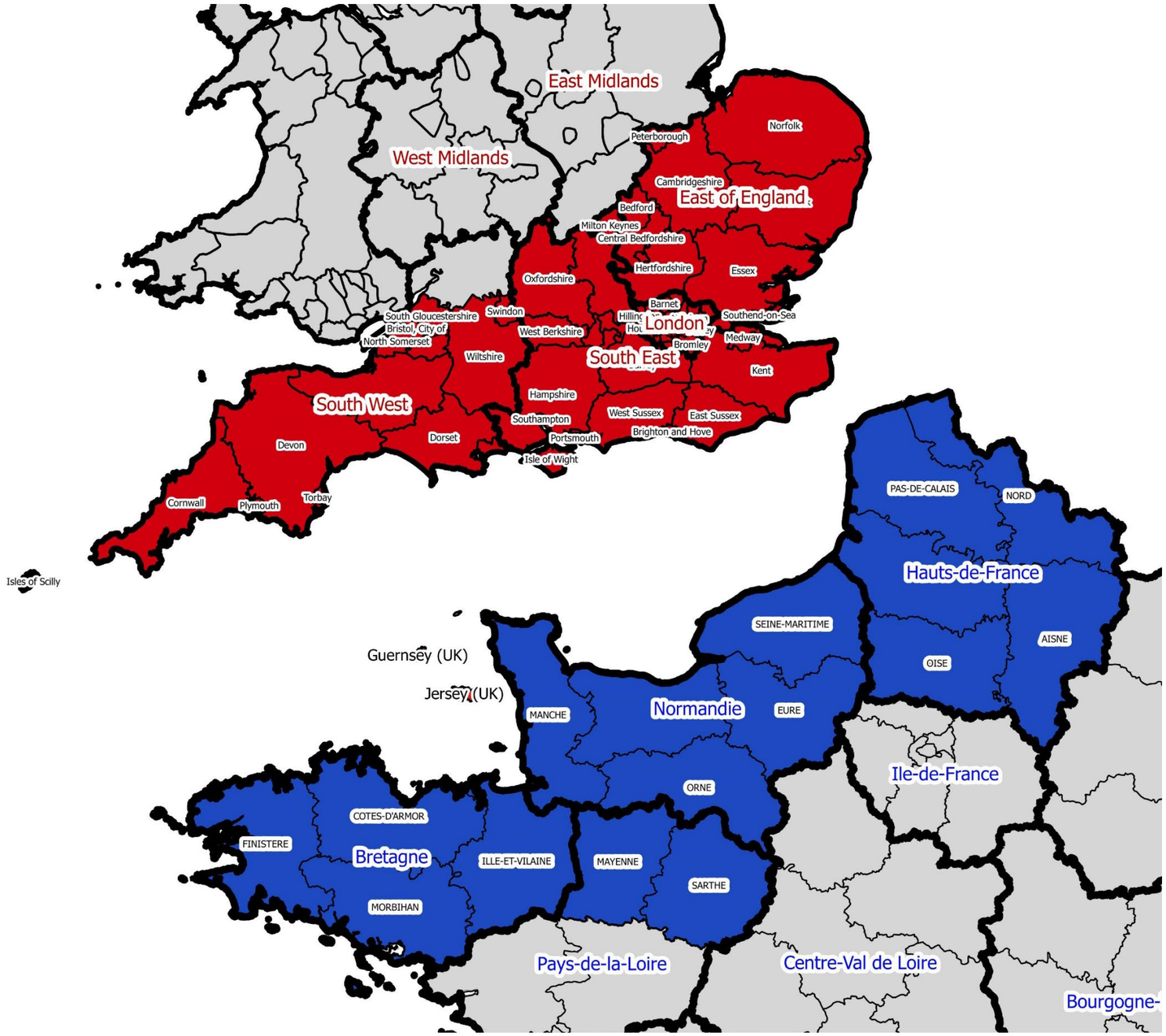
- The Bailiwicks of Jersey and Guernsey.

On French side:

- The administrative region of **Brittany** (*Bretagne*), consisted of the four departments **Finistère, Côtes-d'Armor, Morbihan,** and **Ile-et-Vilaine.**
- The administrative region of **Normandy**, consisted of the five departments **Manche, Calvados, Orne, Eure** and **Seine-Maritime.**
- The administrative region of **Hauts-de-France**, consisted of the five departments **Aisne, Nord, Oise, Pas-de-Calais**, and **Somme.**
- A part of the administrative region of **Pays-de-la-Loire** with the departments **Mayenne** and **Sarthe.**

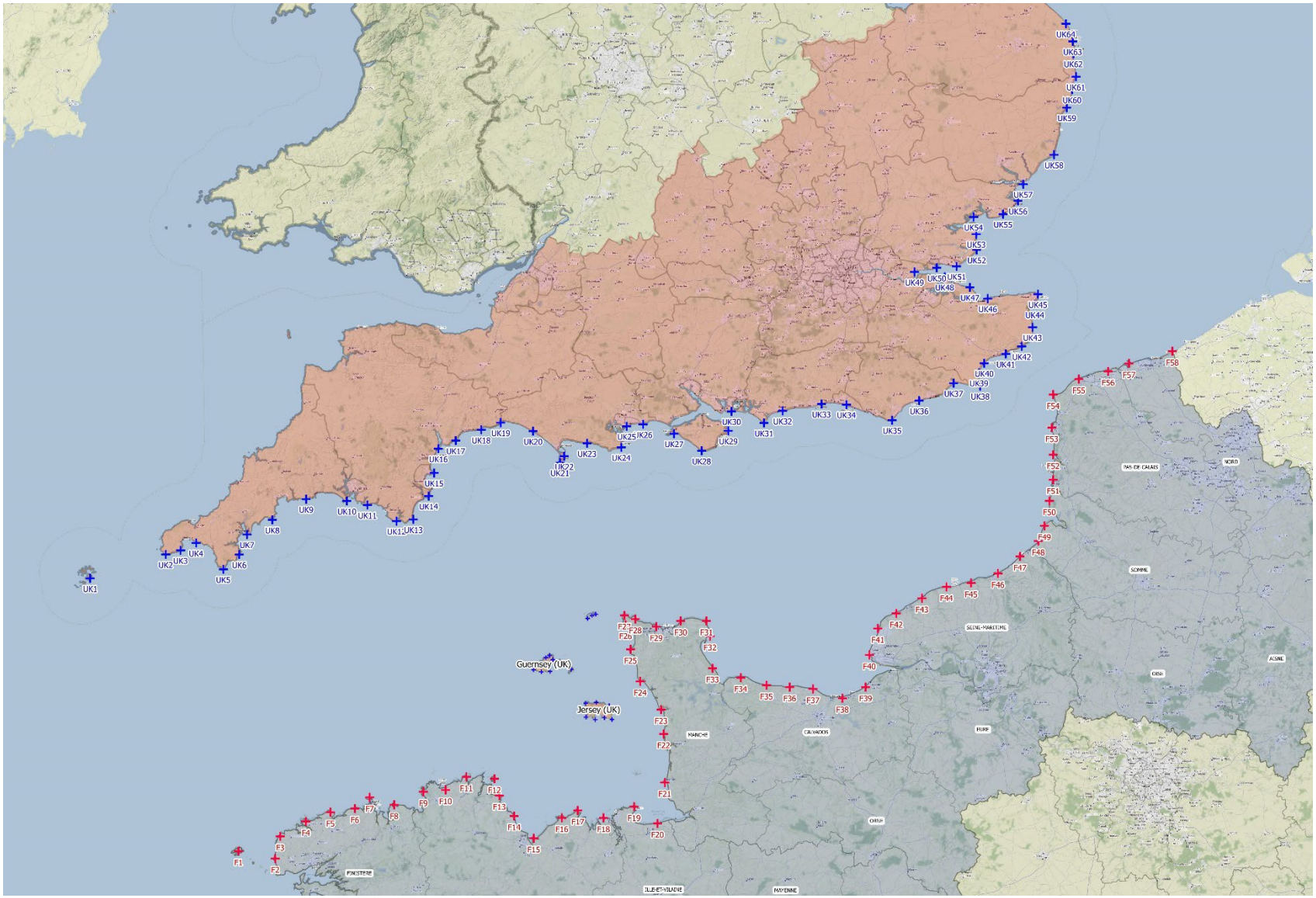
The Coordination Zone can be displayed on Google Earth via the following .kml file:

VHF Coordination Zone F-UK.kml



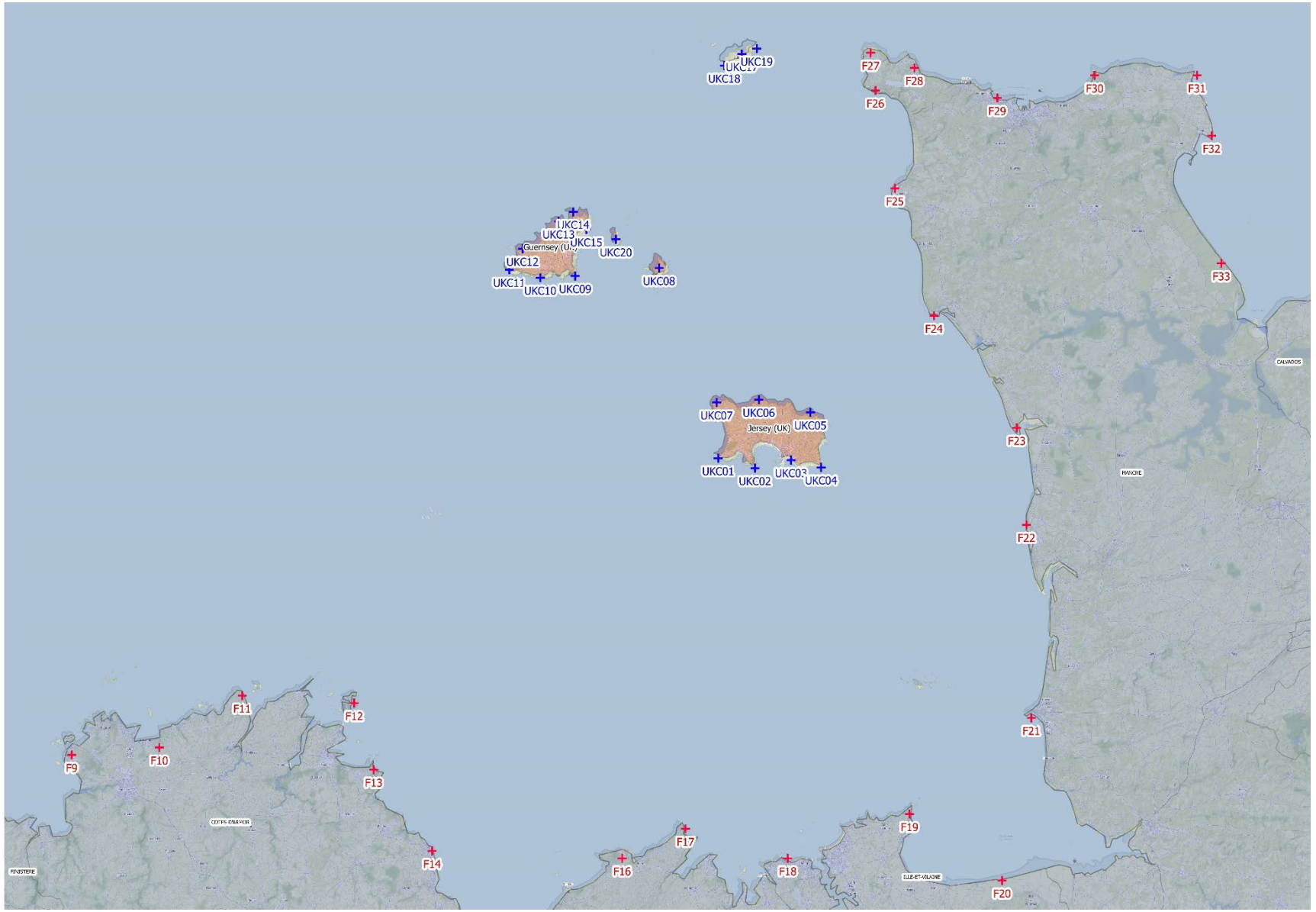
ANNEX 2 – DETAIL OF THE TEST POINTS

The agreed test points on English and French coastlines are mapped below:



Focus on the Channel Islands

The agreed test points in the Channel Islands are mapped below:



Coordinates of French coastline test points

Region *Department*	TP Name	Location	Latitude (WGS84)	Longitude (WGS84)	Remarks
Brittany *Finistère*	**F1**	**Ile de Ouessant**	48.465	-5.0803	
	F2	**Plouarzel**	48.4206	-4.7886	
	F3	**Landunvez**	48.5453	-4.7431	
	F4	**Plouguerneau** (Brest nord)	48.6281	-4.535	
	F5	**Brignogan-Plages**	48.6756	-4.3319	
	F6	**Cléder**	48.6967	-4.1328	
	F7	**Ile de Batz**	48.7525	-4.0156	
	F8	**Plougasnou** (Morlaix nord)	48.7131	-3.8106	
Brittany *Côtes d'Armor*	**F9**	**Trébeurden**	48.7872	-3.5722	
	F10	**Louannec** (Perros-Guirec)	48.7997	-3.3908	
	F11	**Plougrescant**	48.865	-3.2289	
	F12	**Ile de Brehat**	48.8503	-2.9992	
	F13	**Plouézec**	48.7669	-2.9511	
	F14	**Saint-Quay-Portrieux**	48.6547	-2.8317	
	F15	**Saint-Brieuc**	48.5336	-2.6725	
	F16	**Erquy**	48.6481	-2.4428	
	F17	**Cap Fréhel**	48.6819	-2.3142	
Brittany *Ille-et-Vilaine*	**F18**	**Dinard**	48.6403	-2.1092	
	F19	**Cancale**	48.7044	-1.8536	
	F20	**Mont-Saint-Michel**	48.6147	-1.6658	
Normandy *Cotentin Peninsula (Manche)*	**F21**	**Granville**	48.8364	-1.6058	
	F22	**Gouville-sur-Mer**	49.0994	-1.61	
	F23	**Créances**	49.2225	-1.6322	
	F24	**Carteret**	49.3781	-1.8003	
	F25	**Flamanville**	49.5425	-1.8811	
	F26	**La Hague Sud**	49.675	-1.9242	
	F27	**Cap de le Hague**	49.7239	-1.9311	
	F28	**La Hague Nord**	49.7099	-1.8443	
	F29	**Cherbourg**	49.6694	-1.6794	
	F30	**Fermanville**	49.6942	-1.4706	
	F31	**Barfleur**	49.6944	-1.2642	
	F32	**Réville**	49.6133	-1.2336	
	F33	**St-Martin-de-Varreville**	49.4478	-1.2122	
Normandy *Calvados*	**F34**	**Pointe du Hoc**	49.3947	-0.9869	
	F35	**Port en Bessin-Huppain/Bayeux**	49.3519	-0.7778	
	F36	**Asnelles** (Caen Nord-Ouest)	49.3403	-0.5853	
	F37	**St Aubin** (Caen Nord)	49.3303	-0.3947	
	F38	**Cabourg**	49.2863	-0.1566	
	F39	**Deauville**	49.3442	0.0414	
Normandy *Seine-Maritime*	**F40**	**Le Havre**	49.5173	0.0723	
	F41	**Etretat**	49.6508	0.1494	
	F42	**Fécamp ouest**	49.7378	0.2953	
	F43	**Fécamp est**	49.8175	0.5044	
	F44	**St-Valery-en-Caux**	49.8706	0.7056	
	F45	**Dieppe ouest**	49.8992	0.9006	
	F46	**Dieppe est**	49.9411	1.1275	
	F47	**Eu-le Tréport**	50.0325	1.3081	
Hauts-de-France	**F48**	**Ault**	50.11	1.4558	
	F49	**Cayeux-sur-Mer**	50.1919	1.5047	
	F50	**Fort-Mahon-Plage**	50.3222	1.5489	
	F51	**Berck**	50.4347	1.5722	
	F52	**Etaples-Le Touquet**	50.5678	1.5786	
	F53	**Boulogne-sur-Mer**	50.7003	1.5625	
	F54	**Cap Gris Nez**	50.8708	1.5797	*Named F-01 with HOL*
	F55	**Calais**	50.9522	1.7822	*Named F-02 with HOL*
	F56	**Gravelines-Grand-Fort-Philippe**	50.9989	2.025	*Named F-03 with HOL*
	F57	**Dunkerque**	51.0397	2.1914	*Named F-04 with HOL*
	F58	**Belgian border**	51.0903	2.5544	*Named F-06 with HOL*

Coordinates of British coastline test points

Region	TP Name	Location	Latitude (WGS84)	Longitude (WGS84)
Channel Islands	UKC1	Jersey Southwest	49.1794	-2.24283
	UKC2	Jersey South	49.1661	-2.16732
	UKC3	Jersey Saint-Hellier	49.1769	-2.09327
	UKC4	Jersey Southeast	49.1671	-2.03152
	UKC5	Jersey Northeast	49.2408	-2.05355
	UKC6	Jersey North	49.2578	-2.15939
	UKC7	Jersey Northwest	49.2541	-2.24595
	UKC8	Sark	49.4337	-2.36408
	UKC9	Guernsey Southeast	49.4231	-2.53636
	UKC10	Guernsey South	49.4209	-2.60804
	UKC11	Guernsey Southwest	49.4314	-2.67161
	UKC12	Guernsey West	49.4594	-2.64439
	UKC13	Guernsey North	49.4958	-2.5703
	UKC14	Guernsey Northeast	49.5085	-2.54006
	UKC15	Guernsey East	49.4853	-2.51357
	UKC16	Guernsey East	49.4853	-2.51357
	UKC17	Alderney South	49.7183	-2.19418
	UKC18	Alderney Southwest	49.703	-2.23018
	UKC19	Alderney East	49.7255	-2.16369
	UKC20	Herm	49.472	-2.4527
England's South West	UK1	Isles of Scilly	49.9143	-6.29064
	UK2	Porthcurno	50.0398	-5.67456
	UK3	S. of Mousehole	50.0616	-5.55323
	UK4	Cudden Point	50.0996	-5.42597
	UK5	Lizard	49.962	-5.2042
	UK6	Manacle Point	50.0393	-5.07385
	UK7	Falmouth	50.1444	-5.0106
	UK8	Dodman Point	50.2207	-4.80368
	UK9	Polperro	50.3287	-4.52759
	UK10	Plymouth Sound	50.3192	-4.19554
	UK11	Stoke Point	50.298	-4.02746
	UK12	Salcombe	50.2146	-3.78984
	UK13	Start Point	50.223	-3.65276
	UK14	Kingswear	50.3452	-3.52769
	UK15	Torquay	50.4654	-3.48365
	UK16	Dawlish	50.5909	-3.44804
	UK17	Budleigh Salterton	50.633	-3.30651
	UK18	Beer	50.6882	-3.09852
	UK19	Lyme Regis	50.7256	-2.93929
	UK20	Abbotsbury	50.6815	-2.67514
	UK21	Portland Bill	50.5189	-2.45558
	UK22	Fortuneswell	50.5514	-2.42061
	UK23	Lulworth	50.6185	-2.23462
	UK24	Swanage	50.598	-1.95476
	UK25	Poole	50.7068	-1.91075
	UK26	Hengistbury Head	50.7166	-1.77758

Region	TP Name	Location	Latitude (WGS84)	Longitude (WGS84)
England's South East	UK27	Freshwater	50.669	-1.52451
	UK28	St Catherines Point	50.5798	-1.29942
	UK29	Bembridge	50.6835	-1.0813
	UK30	Portsmouth	50.784	-1.05522
	UK31	Selsey	50.724	-0.790075
	UK32	Bognor Regis	50.7861	-0.638092
	UK33	Worthing	50.8216	-0.320453
	UK34	Brighton	50.8185	-0.117545
	UK35	Beachy Head	50.7381	0.256238
	UK36	Bexhill	50.8389	0.477002
	UK37	Rye	50.9288	0.757886
	UK38	Dungeness	50.9145	0.974736
	UK39	New Romney	50.9822	0.964816
	UK40	Dymchurch	51.0315	1.0079
	UK41	Folkestone	51.079	1.18377
	UK42	Dover	51.1176	1.31363
	UK43	Deal	51.2158	1.40232
	UK44	Ramsgate	51.3313	1.42092
	UK45	Margate	51.3837	1.44639
	UK46	Whitstable	51.3617	1.03669
	UK47	Sheppey	51.4194	0.890903
	UK48	Grain	51.4719	0.685405
East of England	UK49	Stanford le Hope	51.4971	0.439054
	UK50	Canvey Island	51.5184	0.620384
	UK51	Southend	51.5263	0.782327
	UK52	Foulness	51.6096	0.946314
	UK53	-	51.6888	0.942777
	UK54	West Mersea	51.7757	0.920883
	UK55	Clacton	51.7902	1.16113
	UK56	Walton on the Naze	51.857	1.28347
	UK57	Felixstowe	51.9412	1.326
	UK58	Orford Ness	52.0885	1.57789
	UK59	Southwold	52.3246	1.68207
	UK60	Kessingland	52.4141	1.72483
	UK61	Lowestoft	52.4779	1.75674
	UK62	Great Yarmouth	52.5928	1.73556
	UK63	Caiter on Sea	52.6532	1.73036
	UK64	Horsey	52.7404	1.67408

The test points can be precisely located in Google Earth using the .kml files below:

GE -Coastal F.KML

GE - Coastal UK.KML

ANNEX 3 – FRANCE DAB NETWORKS

The following French DAB networks helped to determine the IFS levels detailed in Annex 5.

They are provided for information purposes only and correspond to the current planned use of the block at the date of the signature.

TerRaSys files with specific data

The zip files embedded below contain ITU notice files which provide the technical parameters for the **'reference networks'** that were used to calculate the interference field strength (IFS) levels recorded in the co-ordination spreadsheets (Annex 5) for the following DAB networks:

National:


National 1.txt


National 2.txt

Regional:


Regional (Etendue).txt

Local:


Local.txt

SSDAB:


F_SSDAB on coast.txt

Final implementation network parameters may differ to those listed in the embedded files above, but the interference field strength (IFS) levels recorded in Annex 5 of this agreement **must be respected** as the maximum cumulative levels that can be achieved by any DAB network on a given frequency block.

ANNEX 4 – UK SMALL-SCALE DAB (SSDAB) NETWORKS

The following UK DAB networks helped to determine the IFS levels detailed in Annex 5.

They are provided for information purposes only and correspond to the current planned use of the block at the date of the signature.

TerRaSys files with specific data

The zip files embedded below contain ITU notice files which provide the technical parameters for the **'reference networks'** that were used to calculate the interference field strength (IFS) levels recorded in the co-ordination spreadsheets (Annex 5) for the following DAB networks:

UK SSDAB:


UK SS DAB 7D.TXT


UK SS DAB 8A.TXT


UK SS DAB 8B.TXT


UK SS DAB 9A.TXT


UK SS DAB 9B.TXT


UK SS DAB 9C.TXT

Final implementation network parameters may differ to those listed in the embedded file above, but the interference field strength (IFS) levels recorded in Annex 5 of this agreement **must be respected** as the maximum cumulative levels that can be achieved by any DAB network on a given frequency block.

ANNEX 5

Agreed maximum interference field strength (IFS) levels

France > United Kingdom

All values in dBuV/m – For readability, values equal to the minimal threshold (35dBuV/m) have been highlighted in blue.

(Please refer to 'Section VI - Maximum Interference Field Strength' within this document for protection level requirements from France towards UK Channel Island Allotments)

Test point	5A	5B	5C	5D	6A	6B	6C	6D	7A	7B	7C	7D	8A	8B	8C	8D	9A	9B	9C	9D	10A	10B	10C	10D	11A	11B	11C	11D	12A	12B	12C	12D
UK1	40	42									43	35	35	36	46	41	46	45	35	43	36	36	36	37	35	42	37	37	35			
UK2	42	43									46	35	35	37	47	41	47	47	35	46	40	40	40	38	35	42	39	37	35			
UK3	42	44									46	36	35	37	48	40	48	48	35	46	40	40	40	39	35	42	39	37	35			
UK4	42	43									46	35	35	38	48	39	48	48	35	46	38	37	37	38	35	42	37	37	35			
UK5	44	45									48	38	35	39	50	41	50	50	35	48	43	43	43	41	35	42	42	37	35			
UK6	44	44									47	39	35	39	50	41	50	50	35	48	43	43	43	41	35	42	41	37	35			
UK7	43	43									47	38	35	39	49	40	49	49	35	47	42	42	42	41	36	42	42	37	35			
UK8	43	43									47	38	35	38	49	42	49	48	35	47	43	43	43	42	36	42	42	37	35			
UK9	43	42									44	38	35	37	49	42	48	48	35	48	43	42	48	43	36	42	41	37	35			
UK10	43	42									46	39	35	38	51	43	50	49	35	49	44	44	48	45	38	43	43	37	35			
UK11	44	43									47	38	35	38	51	43	50	50	35	49	45	45	48	46	39	43	44	37	35			
UK12	44	44									49	37	36	40	53	49	51	51	35	50	49	47	48	48	41	45	37	37	37			
UK13	45	44									51	35	37	40	54	50	51	51	35	52	50	47	48	48	41	45	37	37	38			
UK14	44	43									53	35	36	39	54	50	49	49	35	53	50	45	48	47	42	44	37	37	38			
UK15	43	42									53	35	35	38	54	49	47	47	35	54	49	44	48	46	41	43	37	37	38			
UK16	42	41									53	35	35	37	54	48	46	46	35	54	49	43	48	45	41	42	37	37	38			
UK17	41	41									53	35	35	36	54	48	46	46	35	54	49	46	48	44	41	42	37	37	39			
UK18	41	40									54	35	35	35	54	49	45	45	35	55	50	46	48	43	42	41	37	37	39			
UK19	40	40									55	35	35	35	55	50	44	45	35	55	49	46	48	42	42	41	37	37	38			
UK20	41	40									56	35	35	35	56	50	44	45	35	57	49	46	41	42	41	40	37	37	37			
UK21	42	43									59	35	37	37	59	54	47	47	35	59	53	46	45	44	46	43	44	37	45			
UK22	42	43									59	35	36	36	59	53	46	46	35	59	53	46	44	44	46	42	44	37	44			
UK23	42	43									59	35	36	36	59	53	46	46	35	59	53	46	44	44	45	42	44	37	45			
UK24	42	46									60	35	38	38	60	53	47	47	35	60	55	46	44	45	46	42	45	37	47			
UK25	41	45									59	35	37	36	59	52	45	45	35	59	54	46	44	44	45	42	43	37	46			
UK26	42	46									59	35	38	37	59	52	46	46	35	59	55	46	44	44	46	42	42	37	47			
UK27	42	47									59	35	50	38	60	52	46	46	35	60	56	46	44	45	45	42	37	37	47			
UK28	43	49									60	37	53	53	61	53	48	48	36	61	58	49	44	47	48	40	37	37	51			
UK29	42	49									58	35	51	51	60	52	38	46	36	60	58	48	44	47	46	37	37	37	50			
UK30	42	48									56	35	50	50	57	50	36	46	35	57	58	42	46	48	46	35	37	37	50			
UK31	44	50									57	35	51	51	59	51	37	47	36	59	59	42	46	50	47	35	37	37	52			
UK32	44	49									56	35	50	50	58	50	36	46	36	58	59	42	46	50	47	35	44	37	52			
UK33	45	48									54	35	49	49	56	49	35	44	36	56	60	42	46	50	46	35	45	37	51			
UK34	45	48									52	35	49	49	56	49	35	45	36	56	60	42	46	50	47	35	45	37	52			
UK35	48	53									53	35	55	55	61	55	35	45	37	55	61	42	46	52	47	37	49	37	55			
UK36	48	54									54	35	55	54	60	54	35	43	37	55	60	42	50	51	44	37	51	37	53			
UK37	48	56									56	35	57	57	63	56	35	39	36	53	54	42	50	50	42	37	42	37	51			
UK38	49	59									64	35	63	63	67	63	35	38	36	53	54	51	51	51	42	37	42	37	53			
UK39	48	58									62	35	61	61	65	61	35	36	35	52	52	48	48	48	42	36	42	37	49			
UK40	48	58									62	35	61	61	65	61	35	35	35	52	52	48	48	49	42	36	42	37	50			
UK41	47	58									65	35	65	65	66	65	35	36	35	51	52	48	48	49	42	35	42	37	51			
UK42	47	57									66	36	67	67	67	67	35	35	35	51	51	48	48	48	42	35	42	37	51			
UK43	44	53									63	37	64	64	64	64	35	35	35	49	48	45	45	45	42	35	42	37	44			
UK44	45	50									64	37	62	62	63	62	35	35	35	48	47	44	44	44	40	35	42	37	41			
UK45	44	49									62	37	61	61	62	61	35	35	35	47	47	45	45	43	39	35	42	37	42			
UK46	37	44									47	35	49	48	53	47	35	35	35	44	43	37	37	38	37	35	39	37	37			
UK47	35	43									49	35	48	46	51	45	35	35	35	42	42	35	35	36	35	35	37	37	35			
UK48	35	41									48	35	46	44	49	44	35	35	35	41	40	35	35	35	35	35	36	37	35			
UK49	35	39									43	35	42	41	46	39	35	35	35	40	39	35	35	35	35	35	35	37	35			
UK50	35	40									48	35	46	45	49	45	35	35	35	40	39	35	35	35	35	35	35	37	35			
UK51	35	41									49	35	48	48	52	48	35	35	35	41	40	35	35	35	35	35	36	37	35			
UK52	35	42									52	35	52	50	56	50	35	35	35	41	41	35	35	35	35	35	37	37	35			
UK53	35	41									51	35	52	51	56	51	35	35	35	41	40	35	35	35	35	35	36	37	35			
UK54	35	41									51	35	52	52	56	52	35	35	35	39	38	35	35	35	35	35	36	37	35			
UK55	35	43									51	36	53	52	57	52	35	35	35	40	40	35	35	35	35	35	37	37	35			
UK56	35	43									52	36	53	53	58	53	35	35	35	40	39	35	35	35	35	35	37	37	35			
UK57	35	43									50	35	54	51	57	51	35	35	35	39	38	35	35	35	35	35	36	37	35			
UK58	38	41									50	36	55	51	57	51	35	35	35	40	40	35	35	35	35	35	42	37	36			
UK59	36	39									48	35	54	48	55	48	35	35	35	38	38	35	35	35	35	35	40	37	36			
UK60	35	38									46	35	53	46	54	46	35	35	35	37	37	35	35	35	35	35	37	37	35			
UK61	35	37									47	35	52	46	53	46	35	35	35	37	36	35	35	35	35	35	38	37	35			
UK62	35	35									41	35	51	43	51	46	35	35	35	35	35	35	35	35	35	35	35	37	35			
UK63	35	35									40	35	49	42	50	44	35	35	35	35	35	35	35	35	35	35	35	37	35			
UK64	35	35									37	35	45	39	46	39	35	35	35	35	35	35	35	35	35	35	35	37	35			

34
PMR DL in the UK
According to 2006 OS bilateral
Agreement reviewed in June 2018

31
PMR UL in the UK
According to 2006 OS bilateral
Agreement reviewed in June 2018

Not applicable

ANNEX 5

Agreed maximum interference field strength (IFS) levels

United Kingdom > France

All values in dBuV/m – For readability, values equal to the minimal threshold (35dBuV/m) have been highlighted in blue.

Test point	5A	5B	5C	5D	6A	6B	6C	6D	7A	7B	7C	7D	8A	8B	8C	8D	9A	9B	9C	9D	10A	10B	10C	10D	11A	11B	11C	11D	12A	12B	12C	12D
F1												37	40	42			35	35	39													
F2												36	40	41			35	35	38													
F3												40	41	43			35	35	41													
F4												41	41	44			35	35	41													
F5												41	41	44			35	35	42													
F6												41	42	44			35	35	42													
F7												42	42	44			35	35	43													
F8												41	41	43			35	35	42													
F9												41	40	44			35	35	42													
F10												40	40	43			35	35	42													
F11												40	40	45			35	35	43													
F12												39	39	43			35	35	41													
F13												38	38	43			35	35	40													
F14												36	35	42			35	35	39													
F15												35	35	40			35	35	37													
F16												35	35	40			35	35	38													
F17												35	35	39			35	35	38													
F18												35	35	39			35	35	36													
F19												35	35	37			35	35	37													
F20												35	35	35			35	35	36													
F21												35	35	36			35	35	39													
F22												36	35	40			35	35	38													
F23												37	35	40			35	35	36													
F24												38	35	42			35	35	43													
F25												42	37	44			38	36	48													
F26												43	37	46			40	39	48													
F27												44	37	47			43	41	50													
F28												45	37	47			43	41	50													
F29	N/A (SRD)	N/A (PMSE)	44 (PMR)	45 (PMR)	42 (PMR)	42 (PMR)	45 (PMR)	53 (PMR)	50 (PMR)	42 (PMR)	N/A (PMSE)	44	36	45	N/A (PMSE)		43	41	49	N/A (PMSE)	N/A (PMSE)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)	N/A (GE06)
F30												45	36	45			45	41	48													
F31												45	35	44			46	42	47													
F32												44	35	40			45	41	42													
F33												43	35	37			43	40	39													
F34												43	35	39			42	40	39													
F35												43	35	39			42	40	42													
F36												43	35	38			41	39	41													
F37												42	35	37			41	40	39													
F38												42	35	37			41	39	38													
F39												42	35	37			40	40	35													
F40												43	35	38			42	42	35													
F41												45	35	38			44	43	37													
F42												46	35	38			43	44	38													
F43												45	35	38			44	45	39													
F44												45	35	36			44	45	40													
F45												44	35	35			43	45	39													
F46												44	35	35			41	43	40													
F47												44	35	35			42	44	42													
F48												44	35	35			43	49	41													
F49												44	35	35			43	49	40													
F50												45	35	35			44	50	40													
F51												45	35	35			45	51	39													
F52												45	35	35			46	54	41													
F53												45	35	35			48	58	41													
F54												46	35	35			48	63	41													
F55												45	35	35			46	61	42													
F56												45	35	35			44	59	42													
F57												45	35	35			44	57	42													
F58												44	35	35			43	52	41													

According to
GE06 G - F OPS Agreement on Band III
(8 June 2006)

According to
G - F VHF Band III Broadcasting Services Agreement
(9 June 2006)

Blocks 10B through to 12D have not been considered as part of this bilateral agreement and their GE06 rights remain unchanged and in accordance with the G-F VHF Band III Broadcasting Services Agreement (9 June 2006).

PDF
08 June 2006_G-F
OPS Agreement on B

PDF
09 June 2006_G-F
VHF Band III Broadca

ANNEX 6 – TECHNICAL PARAMETERIZATION OF P. 1546-6

The field strength prediction model used to assess the interference is in accordance with recommendation **ITU-R P. 1546 (version 6 or upper), 1% time; 50% location on 10 meters height** and without using Terrain Clearance Angle, no tropospheric scattering and with sea path defined as “Cold” in ITU IDWM.

The following parameterization should thus apply if ATDI’s HTZ Communications software is used.