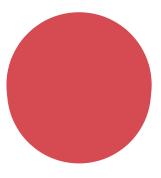




# Information Memorandum Annex P



# Border coordination agreements between Denmark and Germany



# Agreement between the Danish Energy Agency, and the Federal Network Agency concerning the use of the 1500 MHz band (1427-1518 MHz) for MFCN service

#### July 2018

#### 1. Principles and definitions

- 1.1. The 1500 MHz band, as referred to in this agreement, covers the frequencies in the subbands from 1427-1452 MHz, 1452-1492 MHz and 1492-1518 MHz, with the SDL arrangement (Supplemental Downlink) in accordance with ECC Decision (13)03 and ECC Decision (17)06. The use of other arrangements such as TDD is not covered in this agreement.
- 1.2. This agreement is based on the concept of field strength levels and in the case when LTE systems are used preferential PCIs as defined in Annex 1.
- 1.3. This agreement covers the coordination of the base stations. User equipment, or terminals, are allowed to be used on non-interfering basis, in accordance with ITU RR 4.4.
- 1.4. For the purpose of this agreement the border of Denmark and Germany is the coastline, where the border is not on land.
- 1.5. The latest version of ITU-R P.1546 "Method for point-to-area predictions for terrestrial services in the frequency range 30-3000 MHz" shall be used for predictions of field strength values.

#### 2. Use of frequencies without coordination by administrations

- 2.1. Denmark may use the 1452-1492 MHz sub-band without coordination with Germany, if the predicted field strength  $E_0$  produced by a base station does not exceed 60 dB( $\mu$ V/m)/5 MHz at a height of 1.5 m above the ground at the German border, and does not exceed 42 dB( $\mu$ V/m)/5 MHz at a distance of 6 km beyond the German borderline.
- 2.2. Germany may use the 1452-1492 MHz sub-band without coordination with Denmark, if the predicted field strength  $E_0$  produced by a base station does not exceed 60 dB( $\mu$ V/m)/5 MHz at a height of 1.5 m above the ground at the Danish border, and does not exceed 42 dB( $\mu$ V/m)/5 MHz at a distance of 6 km beyond the Danish borderline.
- 2.3. In case of using technologies with other channel bandwidths (BW) than 5 MHz, the predicted field strength E shall be adjusted by a factor in comparison with E<sub>0</sub> as defined in paragraphs 2.1 and 2.2:
  - $E = E_0 + 10 \cdot \log_{10}(BW/5)$ , where BW is measured in MHz.
- 2.4. The field strength values (see 2.1 and 2.2) in this agreement are based on a receiving antenna height of 1.5 m, 10% of the time and 50% of the locations.

## 3. Protection of existing services

3.1. In Germany the sub-bands 1427-1452 MHz and 1492-1518 MHz are used by land military systems.

- 3.2. Denmark may use the 1427-1452 MHz and 1492-1518 MHz sub-bands without coordination with Germany, if the field strength does not exceed 34 dB $\mu$ V/m/5 MHz at a height of 10 m above the ground at the German border.
- 3.3. Germany may use the 1427-1452 MHz and 1492-1518 MHz sub-bands without coordination with Denmark, if the field strength does not exceed 34 dB $\mu$ V/m/5 MHz at a height of 10 m above the ground at the Danish border.
- 3.4. The field strength value in paragraph 3.2 and 3.3 refers to a time probability of 50% and a location probability of 50%.
- 3.5. Germany will inform Denmark as soon as a final date of the change of service in the subbands 1427-1452 MHz and 1492-1518 MHz is set. After change of service the sub-bands 1427-1452 MHz and 1492-1518 MHz will be used under same conditions as the sub-band 1452-1492 MHz.

#### 4. Use of Physical-Layer Cell Identities (PCI) for LTE

4.1. In the case when LTE systems are used, PCI division, according to the table in Annex 1, may be used in border areas to improve coverage and service when channel centre frequencies are aligned. The PCIs are divided between the administrations according to the table.

#### 5. Coordination procedure

- 5.1. Establishment of arrangements between operators shall be encouraged to the extent possible. Subject to agreement between operators other technical characteristics can be used, e.g. other field strength limits or propagation models. Such arrangements are subject to consent of the administrations concerned. In particular, before giving consent to such arrangements, the administrations concerned should take care that all network operators concerned are parties in such an arrangement.
- 5.2. Any case of interference shall as far as possible be resolved among the operators concerned. If not resolved, or in case of unequal access to the spectrum band, assistance might be sought from the administrations.

#### 6. Revision and cancellation

- 6.1. This agreement may be revised upon mutual agreement of the two administrations.
- 6.2. This agreement may be cancelled with a notice of at least twelve months from any of the two parties.

#### 7. Enter into force

7.1. This agreement shall enter into force 1 August 2018.

This agreement has been drawn in two identical copies, one for Denmark and one for Germany.

Done at Edinburgh, 17.07.2018

For the Danish Energy Agency

Jeppe Tanderup Kristensen

For the Federal Network Agency

**Tobias Schnetzer** 

# PREFERENTIAL PHYSICAL-LAYER CELL IDENTITIES (PCI) FOR LTE

PCI division, according to the table below, may be used in border areas to improve coverage and service when channel centre frequencies are aligned.

The PCIs are divided between the administrations according to the following table:

DCI	Set A	Set B	Set C	Set D	Set E	Set F
PCI 0 to 83 8	84 to 167	168 to 251	252 to 335	336 to 419	420 to 503	
Country	Denmark	Denmark	Germany	Germany	Germany	Denmark

Table: Division of Preferential Physical-Layer Cell Identities (PCI) for LTE

# **AGREEMENT**

BETWEEN THE ADMINISTRATIONS OF DENMARK AND GERMANY

# ON BORDER CO-ORDINATION OF UMTS/IMT-2000 SYSTEMS

IN THE FREQUENCY BANDS 1900 - 1980 MHZ, 2010 - 2025 MHZ AND 2110 - 2170 MHZ

#### 1 - INTRODUCTION

The frequency bands 1900 - 1980 MHz, 2010 - 2025 MHz and 2110 - 2170 MHz are designated for pan-European digital land mobile services Universal Mobile Telecommunications Systems (UMTS)/ International Mobile Telecommunications 2000 (IMT-2000) according to ERC/DEC/(97)07 and ERC/DEC/(00)01. The harmonised use of spectrum for terrestrial UMTS within the bands 1900 - 1980 MHz, 2010 - 2025 MHz and 2110 - 2170 MHz is defined in ERC/DEC/(99)25.

Principles of border co-ordination for UMTS/IMT-2000 systems are laid down in ERC/REC/(01)01 (Border Coordination of UMTS/IMT-2000 Systems).

The Administrations of Denmark and Germany have agreed on the following coordination procedures.

#### 2 - PRINCIPLES OF CO-ORDINATION

In order to assure in border areas equitable access to the spectrum and to enhance the efficiency of spectrum usage the principles of code co-ordination (according to Annexes 1 and 4 to ERC/REC/(01)01) shall be applicable to the UMTS/IMT-2000 frequency bands taking into account the provisions laid down in ERC/REC/(01)01 and in this Agreement.

Preferential use of frequencies as laid down in Annex 3 of ERC/REC/(01)01 shall not be the subject of this Agreement but may be subject to arrangements between operators.

These principles of co-ordination shall be applied in the frequency bands 1900 - 1920 MHz, 2020 - 2025 MHz and 2110 - 2170 MHz.

The band 2010 - 2020 MHz as identified in ERC/DEC(99)25 for self provided applications shall not be subject to this Agreement.

The use of the frequency band 1920 - 1980 MHz for TDD systems shall be subject to additional bilateral agreements

#### 3 - PROVISION FOR CODE CO-ORDINATION

#### 3.1 - ALLOTMENT OF PREFERENTIAL CODES

The division of preferential codes shall be in accordance with Annex 4 to ERC/REC/(01)01. The division relevant to the signatories to this Agreement is given at Annex 1 to this Agreement.

#### 3.2 - TECHNICAL CHARACTERISTICS

- 3.2.1 Frequencies in the band 2110-2170 MHz for systems using preferential codes, or not using a CDMA IMT-2000 radio interface, may be used without coordination with a neighbouring country if the predicted mean field strength of each carrier produced by the base station does not exceed a value of 37 dBµV/m/5MHz at a height of 3 m above ground at a distance of 6 km from the division line inside the neighbouring country.
- 3.2.2 In the bands 1900-1920 MHz and 2020-2025 MHz TDD systems using preferential codes may be used without coordination with a neighbouring country if the predicted mean field strength of each carrier produced by the base station does not exceed a value of 37 dBμV/m/5MHz at a height of 3 m above ground at a distance of 6 km from the division line inside the neighbouring country.
- 3.2.3 Frequencies used at the border for systems using non preferential codes may be used without coordination with a neighbouring country if the predicted mean field strength of each carrier produced by the base station does not exceed a value of 21 dB<sub>μ</sub>V/m/5MHz at a height of 3 m above ground at the division line between the two countries.

The division line is defined in Annex 2 to this Agreement.

#### 4 - PREDICTION OF PROPAGATION

For the field strength calculations to be used to trigger coordination the modified (2 GHz) version of ITU-R P.370 as specified in ERC/REC(01)01 Annex 2, shall be applied.

#### 5 - EXCHANGE OF INFORMATION FOR CO-ORDINATION PURPOSES

Exchanges of information for co-ordination purposes shall be in accordance with Annex 5 of ERC/REC/(01)01.

#### 6 - ARRANGEMENTS BETWEEN UMTS/IMT-2000 OPERATORS

The establishment of arrangements between operators shall be encouraged to the extent possible.

Subject to agreement between the operators other technical characteristics can be used, e.g. other field strength limits or propagation models.

#### 7 - REVISION OF THE AGREEMENT

This Agreement may be revised as desired by one of the Administrations.

ERC/REC/(01)01 may be reviewed within 2 years of its adoption in the light of practical experience of its application and the operation of UMTS/IMT-2000 systems (recommends 11). The consequences for this agreement of such a review and of possible amendments to ERC/REC/(01)01 shall be discussed between the signatories to this Agreement.

## 8 - WITHDRAWAL FROM THE AGREEMENT

Each Administration may withdraw from this Agreement subject to 6 months notice.

# 9 - DATE OF ENTRY INTO FORCE

This Agreement will enter into force on 1. April 2002.

For the Danish Administration (NTA)

Copenhagen, 3.04.4002

,

Mainz, 19.03 2002

For the German Administration (Reg TP)

Per Christensen

Thomas Heutmann

#### Preferential codes for UTRA

Type country 1: DNK Type country 2: D

For each type of country, the following tables and figure show the sharing of the codes with its neighbouring countries, with the following conventions of writing:

Preferential code
non-preferential code

#### 1. FDD case:

For the FDD mode : 3GPP TS 25.213 defines 64 « scrambling code groups » in §5.2.3, numbered {0..63}, hereafter called « code groups ».

	Set A	Set B	Set C	Set D	Set E	Set F
Country 1	010	1120	2131	3242	4352	5363
Border 1-2	183	** - 10 to				
Zone 1-2-3	Sile					
Border 1-3	500					
Zone 1-2-4	Ég					
Border 1-4	373		ш,			
Zone 1-3-4			8			

	Set A	Set B	Set C	Set D	Set E	Set F
Country 2	010	1120	2131	3242	4352	5363
Border 2-1				6011		
Zone 2-3-1						
Border 2-3		10000	De la			
Zone 2-1-4						
Border 2-4						-24
Zone 2-3-4				22.00		

	Set A			Set D		
Country 3	010	1120	2131	3242	4352	5363
Border 3-2	10000					
Zone 3-1-2				_		
Border 3-1	]					
Zone 3-1-4	Ţ					
Border 3-4						
Zone 3-2-4						

	Set A	Set B	Set C	Set D	Set E	Set F
Country 4	010	1120	2131	32.42	4352	5363
Border 4-1				IE S		
Zone 4-1-2					M.U.	
Border 4-2						
Zone 4-2-3						
Border 4-3	100			HENN		
Zone 4-3-1	1			- N		

#### 2. TDD case:

For the TDD mode, 3GPP TS 25.223 defines 32 « scrambling code groups » in  $\S7.3$ , numbered  $\{0..31\}$ .

	Set A	Set B	Set C	Set D	Set E	Set F
Country 1	04	510	1115	1620	2126	2731
Border 1-2						
Zone 1-2-3						
Border 1-3						
Zone 1-2-4						
Border 1-4						
Zone 1-3-4						

	Set A				Set E	
Country 2	04	510	1115	1620	2126	2731
Border 2-1						
Zone 2-3-1						
Border 2-3						
Zone 2-1-4			i Ku			
Border 2-4						
Zone 2-3-4						

	Set A	Set B	Set C	Set D	Set E	Set F
Country 3	04	510	1115	1620	2126	2731
Border 3-2						
Zone 3-1-2				4		
Border 3-1						
Zone 3-1-4						
Border 3-4						
Zone 3-2-4						

	Set A	Set B	Set C	Set D	Set E	Set F
Country 4	04	510	1115	1620	2126	2731
Border 4-1						
Zone 4-1-2						
Border 4-2						
Zone 4-2-3						
Border 4-3						
Zone 4-3-1						

#### **Definition of Division line**

In the Flensburg inlet, and where the border is on land, the division line is the borderline.

In the North Sea and in the Baltic, the division line is composed of straight lines, connecting the following geographical coordinates:

	Longitude:	Latitude:
1)	08°13'00"N	55°12'30"N
2)	08°40'00"N	54°54'30"N
3)	10°00'00"N	54°50'00"N
4)	10°40'00"N	54°35'00"N
5)	11°00′00"N	54°38'30"N
6)	11°30′00"N	54°31′00″N
7)	12°00'00"N	54°23'00"N
8)	12°30'00"N	54°42'00"N
9)	13°28'00"N	55°00'00"N
10)	13°58'00"N	55°00'00"N
11)	14°39'00"N	54°27'30"N

In the North Sea, west of coordinate 1), the division line is due west at latitude 55°12'30"N.

## **AMENDMENT No. 1**

# to the

Agreement between the administrations of

Denmark and Germany

on border co-ordination of the UMTS/IMT-2000 systems

in the frequency bands

1900 - 1980 MHz, 2010 - 2025 MHz and 2110 - 2170 MHz

(correspondence 2002)

agreed by correspondence, February 2015

#### 1. Introduction

The Agreement between the administrations of Denmark and Germany on border coordination of the UMTS/IMT-2000 systems in the frequency bands 1900 - 1980 MHz, 2010 -2025 MHz and 2110 - 2170 MHz was concluded 2002.

Both administrations identified the necessity to agree on this Amendment to modify the provisions concerning the definition of the division line.

#### 2. Modification

It was agreed to replace the division line by the borderline in order to align with ECC-Recommendations and further existing bilateral agreements for other frequency bands.

Therefore paragraph 3.2 Technical Characteristics of the Agreement shall be modified as follows:

The term division line is replaced by the term borderline.

The reference to the definition of the division line in Annex 2 of the Agreement shall be replaced by the following text:

The borderline is the coastline where the border is not on land.

Annex 2 of the Agreement shall be deleted.

No other change of the Agreement is done.

#### 4. Date of entry into force

The date of entry into force is 1st March 2015.

Stations co-ordinated in the framework of the agreement before the date of entry into force of this amendment shall stay valid.

#### 5. Signature

This amendment exists in 2 equally authentic copies signed by correspondence.

24/4-1015

For Denmark (ERST)

(signature, date

For Germany (BNetzA)

24.02.20 A Tolias Schry
(signature, date)

# Agreement between the Danish Energy Agency, and the Federal Network Agency concerning the use of the 3.6 GHz band (3400-3800 MHz) for MFCN service

#### October 2020

#### 1. Principles and definitions

- 1.1. The 3.6 GHz band, as referred to in this agreement, covers the frequency band 3400-3800 MHz, with the TDD arrangement in accordance with ECC Decision (11)06. The use of other arrangements such as FDD is not covered in this agreement.
- 1.2. This agreement is based on the concept of field strength levels and in the case when LTE or 5G-NR systems are used preferential PCIs as defined in Annex 1.
- 1.3. This agreement covers the coordination of the base stations. The user equipment, or terminals, are allowed to be used on non-interfering basis, in accordance with ITU RR 4.4.
- 1.4. For the purpose of this agreement the border of Denmark and Germany is the coastline where the border is not on land.
- 1.5. The latest version of ITU-R P.1546 "Method for point-to-area predictions for terrestrial services in the frequency range 30-4000 MHz" shall be used for predictions of field strength values.

# 2. Use of frequencies without coordination by administrations

- 2.1. Denmark may use the 3.6 GHz band without coordination with Germany, if the predicted field strength produced by a base station does not exceed 32 dB( $\mu$ V/m)/5 MHz at the German borderline or beyond.
- 2.2. Germany may use the 3.6 GHz band without coordination with Denmark, if the predicted field strength produced by a base station does not exceed 32 dB( $\mu$ V/m)/5 MHz at the Danish borderline or beyond.
- 2.3. For base stations that are synchronized between Denmark and Germany or deployed as downlink only on both sides of the border, the following applies:
  - 2.3.1 Denmark may use the 3.6 GHz band without coordination with Germany, if the predicted field strength  $E_0$  produced by a base station does not exceed 67 dB( $\mu$ V/m)/5 MHz at the German border, and does not exceed 49 dB( $\mu$ V/m)/5 MHz at a distance of 6 km beyond the German borderline.
  - Germany may use the 3.6 GHz band without coordination with Denmark, if the predicted field strength  $E_0$  produced by a base station does not exceed 67 dB( $\mu$ V/m)/5 MHz at the Danish border, and does not exceed 49 dB( $\mu$ V/m)/5 MHz at a distance of 6 km beyond the Danish borderline.
- 2.4. In case of using technologies with other channel bandwidths (BW) than 5 MHz, the predicted field strength E shall be adjusted by a factor in comparison with  $E_0$  as defined in paragraphs

<sup>&</sup>lt;sup>1</sup> Synchronized TDD base stations operate aligned in time, so that there is no overlap between DL and UL transmission.

#### 2.1 to 2.3:

 $E = E_0 + 10*log_{10}(BW/5)$ , where BW is measured in MHz.

2.5. The field strength values (see 2.1 to 2.3) in this agreement are based on a receiving antenna height of 3 m, 10% of the time and 50% of location.

# 3. Use of Physical-Layer Cell Identities (PCI) for LTE or 5G-NR

3.1. In the case when LTE or 5G-NR systems are used, PCI division, according to the tables in Annex 1, may be used in border areas to improve coverage and service when channel center frequencies are aligned. The PCIs are divided between the administrations according to the tables.

# 4. Coordination procedure

- 4.1. Establishment of arrangements between operators shall be encouraged to the extent possible. Subject to agreement between operators other technical characteristics can be used, e.g. other field strength limits or propagation models and synchronization approaches. Such arrangements are subject to consent of the administrations concerned. In particular, before giving consent to such arrangements, the administrations concerned should take care that all network operators concerned are parties in such an arrangement.
- 4.2. Any case of interference shall as far as possible be resolved among the operators concerned. If not resolved, or in case of unequal access to the spectrum band, assistance might be sought from the administrations.

#### 5. Revision and cancellation

- 5.1. This agreement may be revised upon mutual agreement of the two administrations.
- 5.2. This agreement may be cancelled with a notice of at least twelve months from any of the two parties.

## 6. Enter into force

6.1. This agreement shall enter into force 1 January 2021.

# 7. Abrogation of previous agreement

- 7.1 The "Agreement between the telecommunication authorities of Denmark and the Federal Republic of Germany on the frequency co-ordination for systems for the Fixed Wireless Access (FWA) in the band 3400-3600 MHz, Copenhagen / Berlin 1. March 2001" is abrogated from 1 January 2021.
- 7.2 Until the given dates existing FWA stations in Germany operating on non-preferential frequencies in line with the aforementioned agreement may produce a PFD limit of -122 dB(W/(MHz\*m²)) at a height of 1.5 m above the border (see Annex 2). The provisions of 1.3, 4.1 and 4.2 also apply.
- 7.3 Until 1 July 2021 existing FWA stations in Denmark operating on preferential frequencies in line with the aforementioned agreement may produce a PFD limit of -122 dB(W/(MHz\*m²)) at a height of 1.5 m at a distance of 15 km beyond the border (see Annex 3). The provisions of 1.3, 4.1 and 4.2 also apply.
- 7.4 For the purpose of 7.2 and 7.3 the border between Denmark and Germany is the EEZ-line were the border is not on land.

This agreement has been drawn in two identical copies, one for Denmark and one for Germany.

Place K &benhava

Date 23/10 2020

Jeppe Tanderup Kristensen

For the Danish Energy Agency

Place Main 2

Date 30/10/2020

For the Federal Network Agency

**Tobias Schnetzer** 

#### PREFERENTIAL PHYSICAL-LAYER CELL IDENTITIES (PCI) FOR LTE and 5G-NR

PCI division, according to the tables below, may be used in border areas to improve coverage and service when channel centre frequencies are aligned.

The PCIs are divided between the administrations according to the following tables:

	Set A	Set B	Set C	Set D	Set E	Set F
PCI	0 to 83	84 to 167	168 to 251	252 to 335	336 to 419	420 to 503
Country	Denmark	Denmark	Germany	Germany	Germany	Denmark

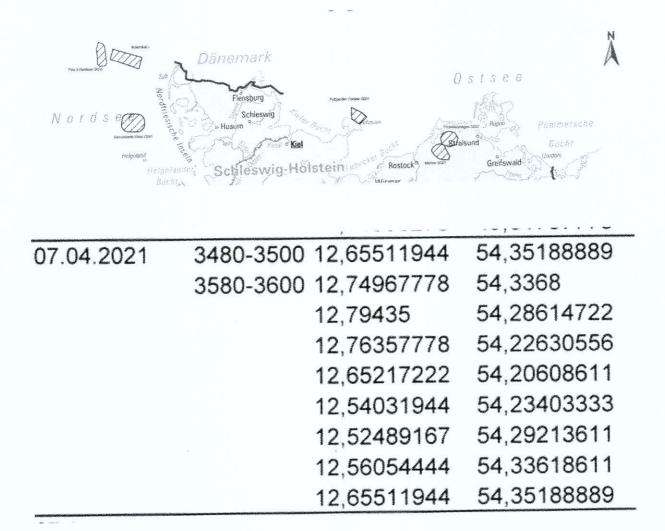
Table: Division of Preferential Physical-Layer Cell Identities (PCI) for LTE

	Set A	Set B	Set C	Set D	Set E	Set F
PCI	0 to 83	84 to 167	168 to 251	252 to 335	336 to 419	420 to 503
	504 to 587	588 to 671	672 to 755	756 to 839	840 to 923	924 to 1007
Country	Denmark	Denmark	Germany	Germany	Germany	Denmark

Table: Division of Preferential Physical-Layer Cell Identities (PCI) for 5G-NR

ANNEX 2

List of stations/networks in Germany to be protected on a transitional basis until:



12.04.2021 3480-3500 12,41431111 54,143580; 3580-3600 12,47814444 54,108461 12,553025 54,095188; 12,63058611 54,094527; 12,65076667 54,128927; 12,63149722 54,148852; 12,61010278 54,172186; 12,57975278 54,212772; 12,57975278 54,229622; 12,51733333 54,242425; 12,47181944 54,239394; 12,43240556 54,226911; 12,37061944 54,183055; 12,41431111 54,143580;	11 89 78 78 78 11
12,55302554,09518812,6305861154,09452712,6507666754,12892712,6314972254,14885212,6101027854,17218612,5981194454,19066112,5797527854,21277212,5797527854,22962212,5173333354,24242512,4718194454,23939412,4324055654,22691112,3934444454,20854712,3706194454,183055	89 78 78 78 11
12,63058611 54,094527 12,65076667 54,128927 12,63149722 54,148852 12,61010278 54,172186 12,59811944 54,190661 12,57975278 54,212772 12,57975278 54,229622 12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,208547 12,37061944 54,1830558	78 78 78 11
12,65076667 54,128927 12,63149722 54,148852 12,61010278 54,172186 12,59811944 54,190661 12,57975278 54,212772 12,57975278 54,229622 12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,208547 12,37061944 54,183055	78 78 11
12,63149722 54,148852 12,61010278 54,172186 12,59811944 54,190661 12,57975278 54,2127722 12,57975278 54,2296222 12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,2085472 12,37061944 54,1830558	78 11 11
12,61010278 54,172186 12,59811944 54,190661 12,57975278 54,212772 12,57975278 54,229622 12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,208547 12,37061944 54,183055	11
12,59811944 54,190661 12,57975278 54,2127723 12,57975278 54,2296223 12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,2085473 12,37061944 54,1830558	11
12,57975278 54,2127723 12,57975278 54,2296223 12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,2085473 12,37061944 54,183055	
12,57975278 54,2296223 12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,2085473 12,37061944 54,183055	20
12,51733333 54,242425 12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,208547 12,37061944 54,183055	22
12,47181944 54,239394 12,43240556 54,226911 12,39344444 54,208547 12,37061944 54,183055	22
12,43240556 54,226911 12,39344444 54,208547 12,37061944 54,183055	
12,39344444 54,208547 12,37061944 54,183055	44
12,37061944 54,183055	11
,	22
12 41431111 54 143580	56
12,41401111 04,110000	56
09.10.2022 3480-3500 7,116666667 55,196944	44
3580-3600 7,143888889 55,263888	89
7,220833333 55,247222	22
7,246388889 55,229444	44
7,285833333 55,071944	44
7,265277778 55,046666	67
7,175 55,040833	33
7,1375 55,061111	11
7,130555556 55,143611	
7,116666667 55,196944	11

		*	*
22.09.2022	3480-3490	11,15333333	54,62194444
	3580-3590	11,31861111	54,56944444
		11,39111111	54,52694444
		11,26806667	54,46621944
		11,15359444	54,51614167
		11,15333333	54,62194444
A A A A			,
31.12.2022	3480-3500	7,624166667	54,60722222
	3580-3590	7,788055556	54,6075
		7,841111111	54,5955556
		7,878055556	54,57277778
		7,888611111	54,55722222
		7,891666667	54,49833333
		7,880833333	54,47666667
		7,836666667	54,45083333
		7,795277778	54,44222222
		7,628055556	54,44083333
		7,583055556	54,44972222
		7,542222222	54,47277778
		7,527222222	54,49805556
		7,52555556	54,49805556
		7,545277778	54,57833333
		7,587777778	54,6
		7,624166667	54,60722222

CONTRACTOR OF THE PROPERTY OF			
31.12.2022	3490-3500	7,799638889	55,01976111
		7,341266667	55,10730556
		7,380833333	55,20027778
		7,85	55,12527778
		7,799638889	55,01976111
alle to a since the second			
31.12.2022	3590-3600	7,8831	54,1803
		8,035	54,2461
		7,8689	54,5528
		7,2261	54,5636
		7,225	54,2011
		7,7667	54,0875
		7,8831	54,1803

#### List of stations/networks in Denmark to be protected on a transitional basis:

#### Rødby, 3480-3490 MHz paired with 3580-3590 MHz in the area:

54N4058, 011E1800

54N3804, 011E0529

54N3639, 011E1233

54N3513, 011E1539

54N3417, 011E1912

54N3131, 011E2337

54N3806, 011E2412

54N3948, 011E2709

54N4245, 011E2126

54N4058, 011E1800

#### Illustration of the area:



# Gedser, 3480-3490 MHz paired with 3580-3590 MHz in the area:

54N3726, 011E5350

54N2158, 011E4120

54N2200, 011E5623

54N2431, 012E0636

54N2821, 012E1053

54N3806, 011E5727

54N3726, 011E5350

#### Illustration of the area:

