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|------|------------------------|-------|---------------|-------------------|---------------|------------|
| to | Distribution list | | | | LoA 02 | |
| from | J.-H. Baerens, CC/FB-N | phone | 0421 5372 143 | date DRF until | 29.08.2011 | 03.11.2011 |

Amendment of the LoA between Amsterdam ACC and Bremen ACC wef 22 SEP 2011

1. Essentials

Annex B B.1.1 - a note has been added to this paragraph
 Annex C C.2.2.2 - one telephone number added

Explanation from Amsterdam for both additions:

These additions are just meant to make sure that the correct FIS telephone number is embedded in the correct documentation. The same applies for the note in paragraph B.1. It should be clear from the entry in paragraph B.1 that only FIS is provided since FIC is the ATS providing unit. We (Amsterdam ACC) have no other expectations from Bremen other than that Bremen will call the correct number if required for that specific piece of airspace (Nieuw Milligen CTA North).

In the Annexes the revised sector name (EIDER WEST) has been amended where necessary.

2. List of Changes

| Date | Parts | Page(s) | add, replace, delete |
|------------|------------------|---------|----------------------|
| 22.09.2011 | amendment LoA | all | replace |

 Axel Brandt
 Chief of Support

 Hans-Michael Jung
 Chief of Section

| Sector families affected: | | | | | | | | | | | | |
|---|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | North A* | North B* | East A | East B | South* | FDS | FIS | FMP | DA | SV CC | SV FDS | office |
| mandatory | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| information | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| * only applicable to sector(s): EIDW | | | | | | | | | | | | |
| This LoA is valid for: | | | | | | | | | | | | |
| | Nord A* | Nord B* | East A | East B | South* | FDS | FIS | FMP | DA | SV CC | SV FDS | office |
| | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| * only applicable to sector(s): FRI, EIDW, EMS | | | | | | | | | | | | |

Distribution: LoA I
 Mr. Ch. Faby

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LETTER OF AGREEMENT

between

ATC the Netherlands

and

DFS Deutsche
Flugsicherung GmbH
Control Centre Bremen
Bremen ACC

Amsterdam ACC

Effective: 12/02/2009

1 General.

1.1 Purpose.

The purpose of this LoA is to define the co-ordination procedures to be applied between Amsterdam ACC and Bremen ACC when providing ATS to general air traffic (IFR).

These procedures are supplementary to those specified in ICAO, EUROCONTROL and/or national documents.

1.2 Operational Status.

Amsterdam ACC and Bremen ACC shall keep each other advised of any changes in the operational status of their facilities and navigational aids which may affect the procedures specified in this LoA.

2 Areas of Responsibility and Delegation of the Responsibility for the Provision of ATS.

2.1 Areas of Responsibility.

2.1.1 Amsterdam ACC.

Lateral limits: The limits of the area of responsibility correspond to the boundary of the Amsterdam FIR as published in AIP the Netherlands.

Vertical limits: FL 065 to FL 245.

ICAO airspace classification for the area of responsibility of Amsterdam ACC along the common boundary of the areas of responsibility of Amsterdam ACC and Bremen ACC, is described in annex B to this LoA.

2.1.2 Bremen ACC.

Lateral limits: The limits of the area of responsibility correspond to the boundary of the Bremen FIR as published in AIP Germany.

Vertical limits: Up to FL 245.

ICAO airspace classification for the area of responsibility of Bremen ACC along the common boundary of the areas of responsibility of Amsterdam ACC and Bremen ACC, is described in annex B to this LoA.

2.1.3 In order to safeguard the control and co-ordination of IFR flights along the common FIR boundary, Amsterdam ACC and Bremen ACC have agreed upon a common line indicating the common ATC boundary - see appendix 1.
For Flight Information Service, Alerting Service and Search and Rescue the national borders will be considered as common FIR boundary.

2.2 **Delegation of the Responsibility for the Provision of ATS.**

2.2.1 Delegation of ATS from Amsterdam ACC to Bremen ACC.

Not applicable.

2.2.2 Delegation of ATS from Bremen ACC to Amsterdam ACC.

Not applicable.

2.2.3 Other Areas.

Delegations of ATS to/from other co-ordinating ATS units along the common boundary of the areas of responsibility of Amsterdam ACC and Bremen ACC are described in annex B to this LoA.

2.2.4 Alerting Service.

The centre responsible for the provision of ATS, by virtue of delegation, shall provide alerting service and shall co-ordinate with the appropriate rescue co-ordination centre as required.

3 **Procedures.**

3.1 The procedures to be applied by Amsterdam ACC and Bremen ACC are detailed in the annexes to this LoA:

- Annex A: Definitions and Abbreviations.
- Annex B: Area of Common Interest.
- Annex C: Exchange of Flight Data.
- Annex D: Procedures for Co-ordination.
- Annex E: Transfer of Control and Transfer of Communications.
- Annex F: Radar Based Co-ordination Procedures.
- Annex G: Contingency Arrangements.

3.2 These procedures shall be promulgated to the operational staff of the ATS units concerned.

4 **Revisions and Deviations.**

4.1 **Revision of the LoA.**

The revision of the present LoA, excluding annexes, requires the mutual written consent of the signatory authorities.

4.2 **Revision of the Appendices and Annexes to the LoA.**

The revision of appendices and annexes to the present LoA requires the mutual written consent of the authorities designated by the respective signatory approving authorities, normally the Heads of Operations at the respective units.

4.3 **Temporary Deviations.**

When necessary, the Supervisors of the ATS units concerned may introduce, by mutual agreement and for a specified time period, temporary modifications to the procedures laid down in the annexes to the present LoA.

4.4 **Incidental Deviations.**

Instances may arise where incidental deviations from the procedures specified in the annexes to this LoA may become necessary. Under these circumstances air traffic controllers are expected to exercise their best judgement to ensure the safety and efficiency of air traffic.

5 Cancellation.

5.1 Cancellation of the present LoA by mutual agreement of the respective Approving Authorities may take place at any time.

5.2 Cancellation of this LoA by either Approving Authority is possible at any time, provided that the cancelling party declares its intention to cancel the LoA with a minimum pre-notification time of one year before the date the cancellation is to take effect.

6 Interpretation and Settlement of Disputes.

6.1 Should any doubt or diverging views arise regarding the interpretation of any provision of the present LoA, or in case of dispute regarding its application, the parties shall endeavour to reach a solution acceptable to both of them.

6.2 Should no agreement be reached, each of the parties shall refer to a higher level of its national aviation administration, to which the dispute shall be submitted for settlement.

7 Validity.

This LoA becomes effective 12/02/2009, and supersedes the LoA between Amsterdam ACC and Bremen ACC dated 06/07/2006.

Schiphol-Oost,

Bremen,

J. Daams
General Manager ATM Procedures
ATC the Netherlands

W. Spier
Spokesman and Head of Operations of
Control Centre Bremen
Deutsche Flugsicherung GmbH

Langen,

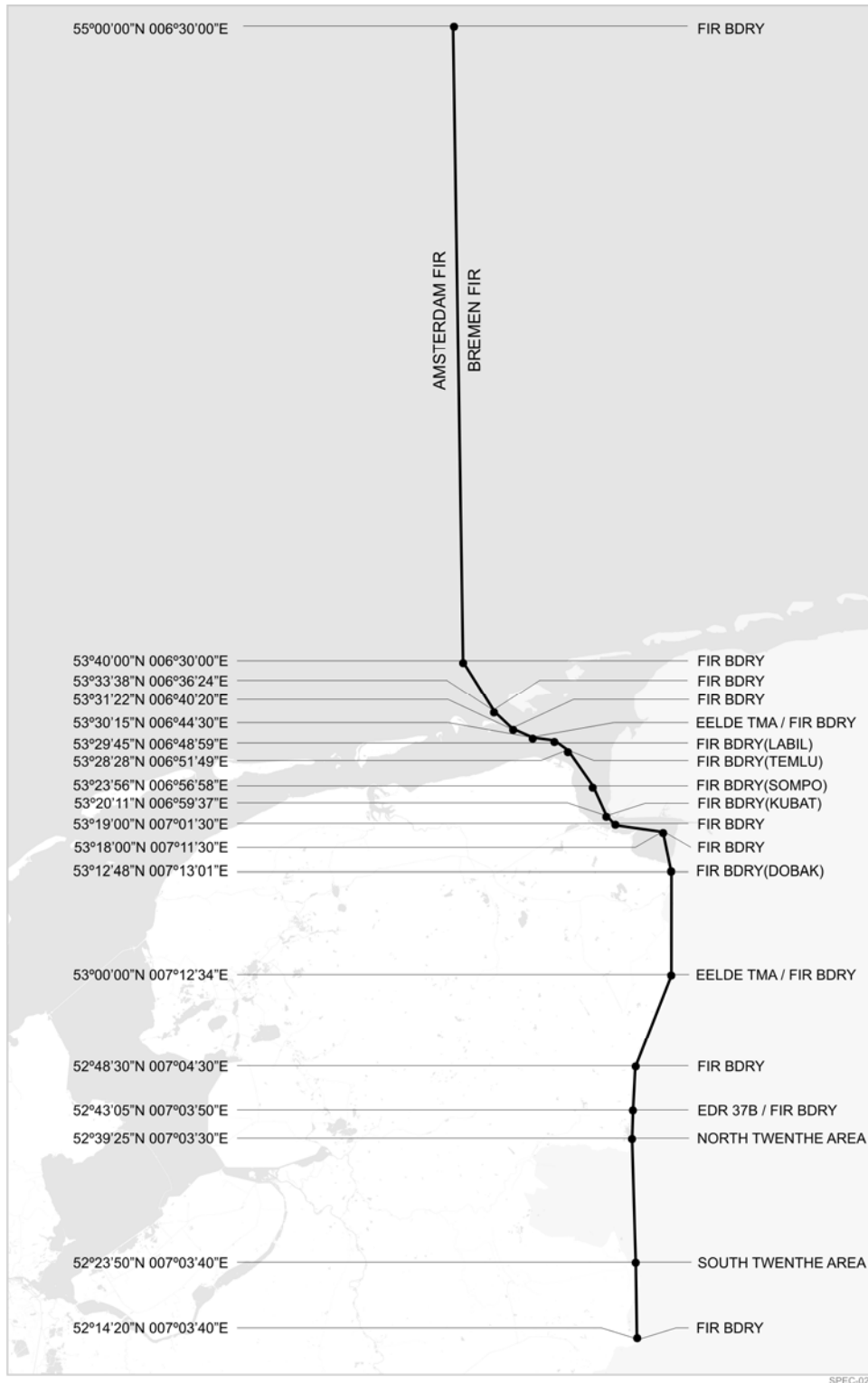
A. Biestmann
Deutsche Flugsicherung GmbH
Head of ATM Operations & Strategy

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Appendix 1.

Effective: 12/02/2009
Revised: 11/03/2010

Agreed Common ATC Boundary.



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Annex A.

Definitions and Abbreviations.

Effective: 12/02/2009

Revised: 18/11/2010

A.1 Definitions.

A.1.1 Area of Responsibility.

An airspace of defined dimensions where a sole ATS unit has responsibility for providing ATS.

A.1.2 Area of Common Interest.

A volume of airspace as agreed between two ATS units, extending into the adjacent/subjacent areas of responsibility, within which airspace structure and related activities may have an impact on air traffic co-ordination procedures.

A.1.3 Approval Request.

Request from an ATS unit to the ATS unit concerned for an approval of:

- an aircraft not yet airborne, whenever the flying time to the transfer of control point is less than the agreed minimum pre-notification time, or
- an aircraft in flight intending to operate under conditions other than those described in mutually agreed procedures.

A.1.4 Expedite Clearance.

An urgent clearance request from an ATS unit to the ATS unit concerned for an aircraft in flight whenever the flying time to the transfer of control point is less than the agreed minimum pre-notification time.

A.1.5 Division Level (DL).

The level dividing two superimposed areas of responsibility for the provision of ATS.

A.1.6 General Air Traffic (GAT).

All flight which are conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislation.

A.1.7 Operational Air Traffic (OAT).

All flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities.

A.1.8 Reduced Vertical Separation Minimum (RVSM).

A vertical separation minimum of 300 m (1000 ft) which is applied between FL 290 and FL 410 inclusive, on the bases of regional air navigation agreements and in accordance with conditions specified therein.

A.1.8.1 RVSM Approved Aircraft.

Aircraft that have received state approval for RVSM operations within the EUR RVSM airspace.

A.1.9 **Release.**

A.1.9.1 Release for Climb.

An authorisation for the accepting unit to climb (a) specific aircraft before the transfer of control.

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.9.2 Release for Descent.

An authorisation for the accepting unit to descend (a) specific aircraft before the transfer of control.

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.9.3 Release for Turn.

An authorisation for the accepting unit to turn (a) specific aircraft away from the current flight path by not more than 45° before the transfer of control.

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.10 **State Aircraft.**

For the purposes of EUR RVSM, only aircraft used in military, customs or police services shall qualify as state aircraft.

A.2 Abbreviations.

| | | | |
|----------------|---|--------------|---|
| ABI | Advance Boundary Information | ICAO | International Civil Aviation Organisation |
| ACC | Area Control Centre | IFR | Instrument Flight Rules |
| ACI | Area of Common Interest | kHz | Kilohertz |
| ACT | Activation Message | kts | Knots |
| AGL | Above Ground Level | LAM | Logical Acknowledge Message |
| AIP | Aeronautical Information Publication | LoA | Letter of Agreement |
| AMC | Airspace Management Cell | MFC | Multi Frequency Coding (telephone system) |
| AMSL | Above Mean Sea Level | MSL | Mean Sea Level |
| AOCS NM | Air Operations Control Station Nieuw Milligen | NM | Nautical Mile |
| AoR | Area of Responsibility | OAT | Operational Air Traffic |
| APP | Approach | ORCAM | Originating Region Code Assignment Method |
| ATC | Air Traffic Control | REF | Reference |
| ATFCM | air traffic flow and capacity management | RTF | Radio Telephony |
| ATM | Air Traffic Management | SSR | Secondary Surveillance Radar |
| ATS | Air Traffic Services | TAS | True Airspeed |
| BDRY | Boundary | TMA | Terminal Area |
| CBA | Cross Border Area | TSA | Temporary Segregated Airspace |
| CCP | Contingency Contact Point | TWR | Tower |
| CDR | Conditional Route | UAC | Upper Area Control Centre |
| COP | Co-ordination Point | UIR | Upper Flight Information Region |
| CRAM | Conditional Route Availability Message | UTA | Upper Control Area |
| CTA | Control Area | UTC | Universal Time Co-ordinate |
| CTR | Control Zone | | |
| DFS | Deutsche Flugsicherung | | |
| DL | Division Level | | |
| e.g. | For example | | |
| ETO | Estimated Time Over (significant point) | | |
| FIR | Flight Information Region | | |
| FL | Flight Level | | |
| FMP | Flow Management Position | | |
| GAT | General Air Traffic | | |
| GmbH | Gesellschaft mit beschränkter Haftung | | |
| GND | Ground | | |

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Annex B.

Area of Common Interest.

Effective: 12/02/2009

Revised: 22/09/2011

B.1 Airspace Structure and Classification within the Area of Common Interest.

The airspace structure within the ACI is shown in appendix 1 of annex B.

B.1.1 Amsterdam FIR.

| Area | Vertical Limits | Airspace Classification |
|--|-------------------------------------|-------------------------|
| Amsterdam UTA ¹⁾ | FL 195 – FL 660 | C |
| Amsterdam CTA East 1 ¹⁾ | FL 065 – FL 195 | A |
| Eelde TMA ²⁾ | 1500 ft AMSL – FL 065 | E |
| Nieuw Milligen CTA North ³⁾ | FL 055 – FL 195 | A |
| Nieuw Milligen TMA A ³⁾ | FL 065 ⁴⁾ – FL 195 | B |
| | 1500 ft AMSL – FL 065 ⁴⁾ | E |
| Nieuw Milligen TMA C ³⁾ | FL 065 ⁴⁾ – FL 195 | B |
| | 1500 ft AMSL – FL 065 ⁴⁾ | E |
| Twenthe CTR | GND – 3000 ft AMSL | C |
| Amsterdam FIR ⁵⁾ | GND – FL 055 | G |

¹⁾ ATS provided by Amsterdam ACC.

²⁾ ATS provided by Eelde TWR/APP. Outside opening hours of Eelde TWR/APP, ATS shall be provided by AOCs NM ATC.

³⁾ ATS provided by AOCs NM ATC.

⁴⁾ From Friday 1600 to Sunday 2300 UTC (Friday 1500 to Sunday 2200 UTC summertime) and during legal Dutch holidays (see AIP the Netherlands), classified E up to and including FL 095.

⁵⁾ [ATS below Nieuw Milligen CTA North provided by Amsterdam FIC.](#)

B.1.2 Bremen FIR.

| Area | Vertical Limits | Airspace Classification |
|--|----------------------------------|-------------------------|
| Bremen FIR north of 52°24'02"N | GND – 2500 ft GND | G |
| | 2500 ft GND – FL 100 | E |
| | FL 100 – FL 245 | C |
| Bremen FIR between 52°24'02"N and 52°14'15"N | GND – 3000 ft AMSL ¹⁾ | D |
| | 3000 ft AMSL – FL 100 | E |
| | FL 100 – FL 245 | C |

¹⁾ Twenthe CTR

B.2 Sectorisation.

The sectorisation within the ACI is shown in appendix 1 of annex B.

B.3 Special Areas within the Area of Common Interest.

B.3.1 Delegations of the Responsibility for the Provision of ATS to/from other ATS Units within the ACI.

B.3.1.1 RKN B Area – see appendix 1 of annex B.

Within the Langen FIR, the responsibility for the provision of ATS in accordance with the airspace classification has been delegated from Langen ACC to Amsterdam ACC within the following area:

Lateral limits: The part of the Langen FIR enclosed by a line linking the co-ordinates:
51°56'01"N 006°47'27"E, 51°54'39"N 006°52'36"E, 51°51'44"N 006°58'08"E,
51°58'09"N 007°06'29"E, 52°14'58"N 007°16'04"E, 52°14'20"N 007°03'51"E,
along the Dutch-German border to point of origin.

Vertical limits: FL 205 to FL 245.

Airspace classification: C

B.3.1.2 Twenthe Area – see appendix 1 of annex B.

Within the Bremen FIR/Hannover UIR, the responsibility for the provision of ATS in accordance with the airspace classification has been delegated from Bremen ACC to AOCS NM ATC within the following area:

Lateral limits: The part of the Bremen FIR/Hannover UIR west of a line linking the co-ordinates
52°39'25"N 007°03'30"E and 52°23'50"N 007°03'40"E.

Vertical limits: 2500 ft GND – FL 660.

Airspace classification: 2500 ft GND – FL 100: E
FL 100 – FL 660: C

Note: In the Nieuw Milligen TMAs and in the Nieuw Milligen CTA North, AOCS NM ATC may delegate the responsibility for the separation of flights under its responsibility from flights under the responsibility of Amsterdam ACC, to Amsterdam ACC. In this case, AOCS NM ATC offers 'reduced co-ordination'.
During reduced co-ordination, AOCS NM ATC transfers the responsibility for the provision of ATS in the Twenthe Area between the lower limit of the reduced co-ordination and FL 245 to Amsterdam ACC.

B.3.1.3 Eelde Training Area – see appendix 1 of annex B.

Within the Amsterdam FIR, the responsibility for the provision of ATS in accordance with the airspace classification is delegated from Amsterdam ACC to Eelde TWR/APP during opening hours of Eelde TWR/APP.

Lateral limits: The part of the Amsterdam FIR which corresponds to the vertically extended lateral boundaries of the Eelde TMA.

Vertical limits: FL 065 – FL 085.

Airspace classification: A

Note: Eelde TWR/APP informs Bremen ACC about their openings hours.

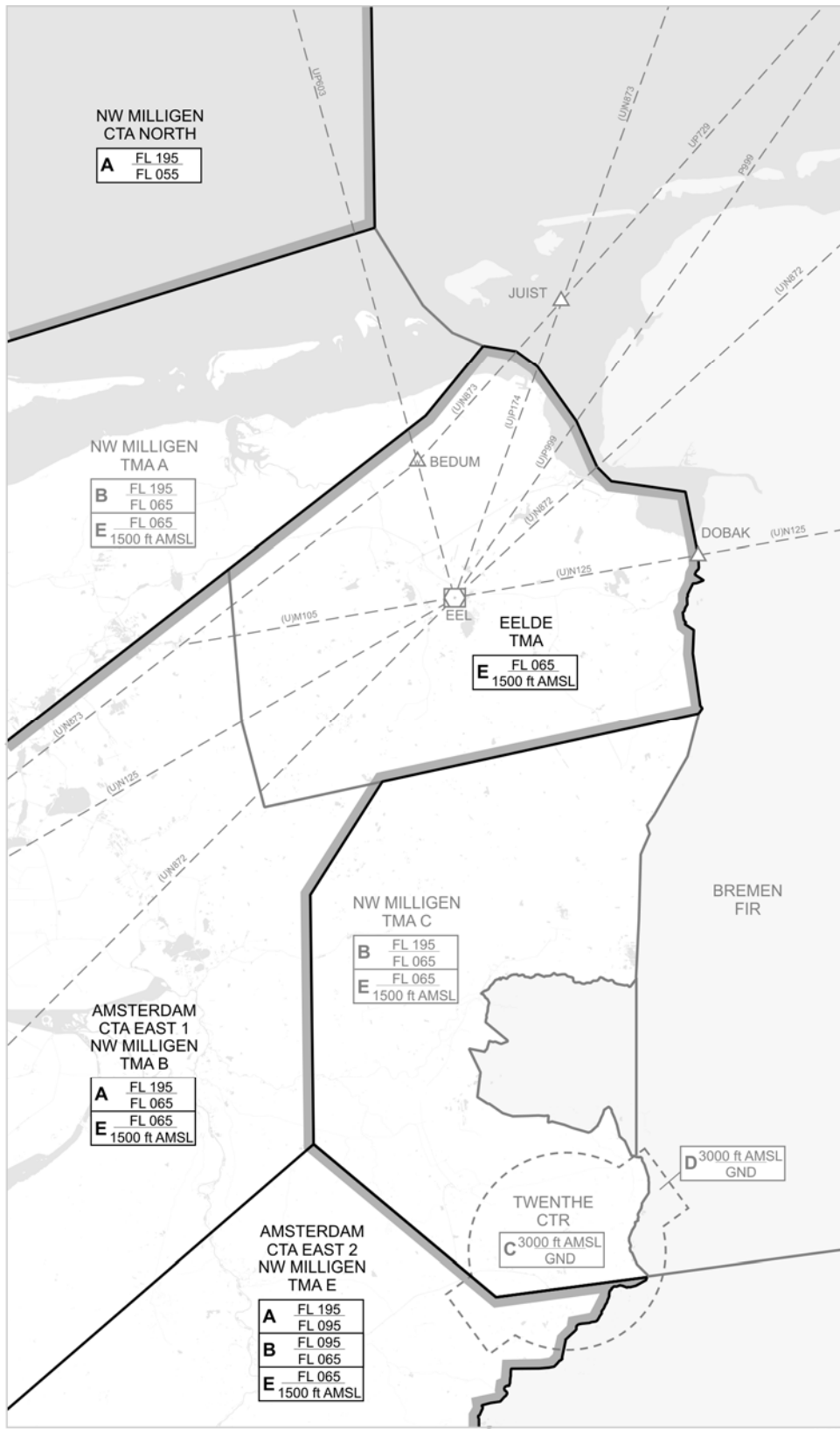
Note: The maximum flight level to be used is FL 080.

B.4 Non-published Co-ordination Points.

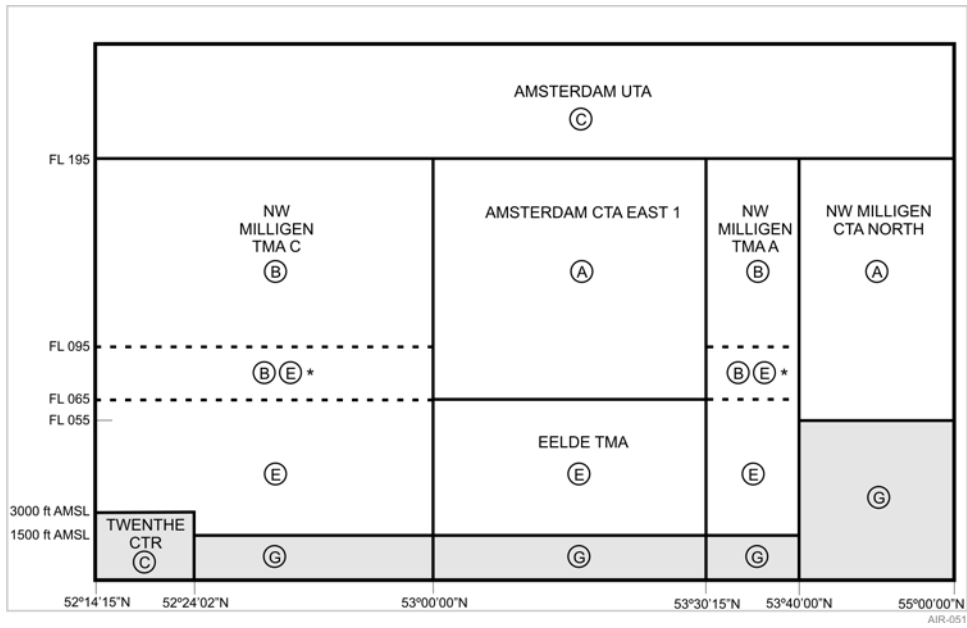
Not applicable.

Appendix 1 of Annex B.

Airspace Structure.

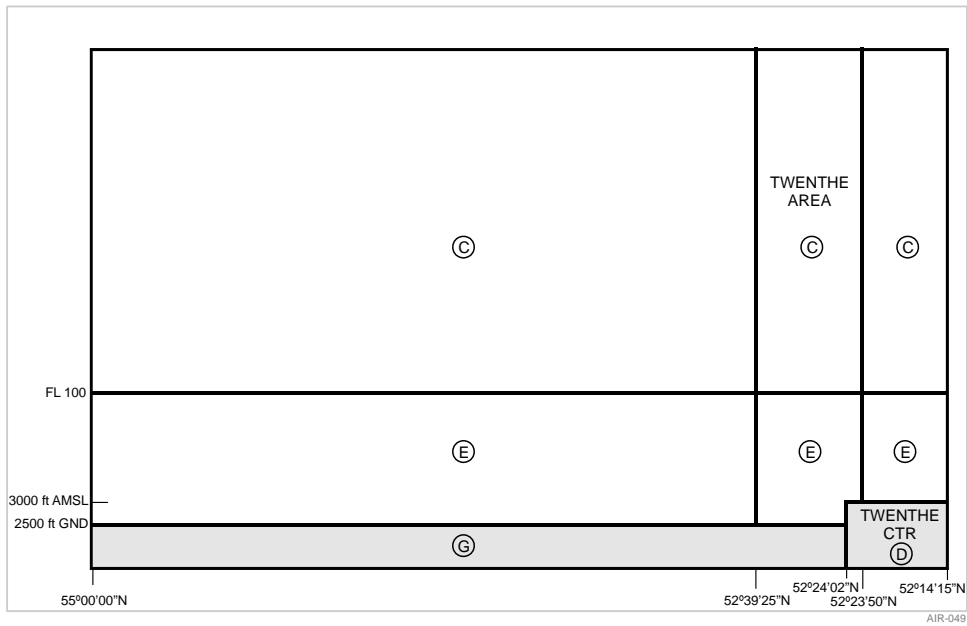


Cross-section of Amsterdam FIR at the Amsterdam/Bremen FIR Boundary.

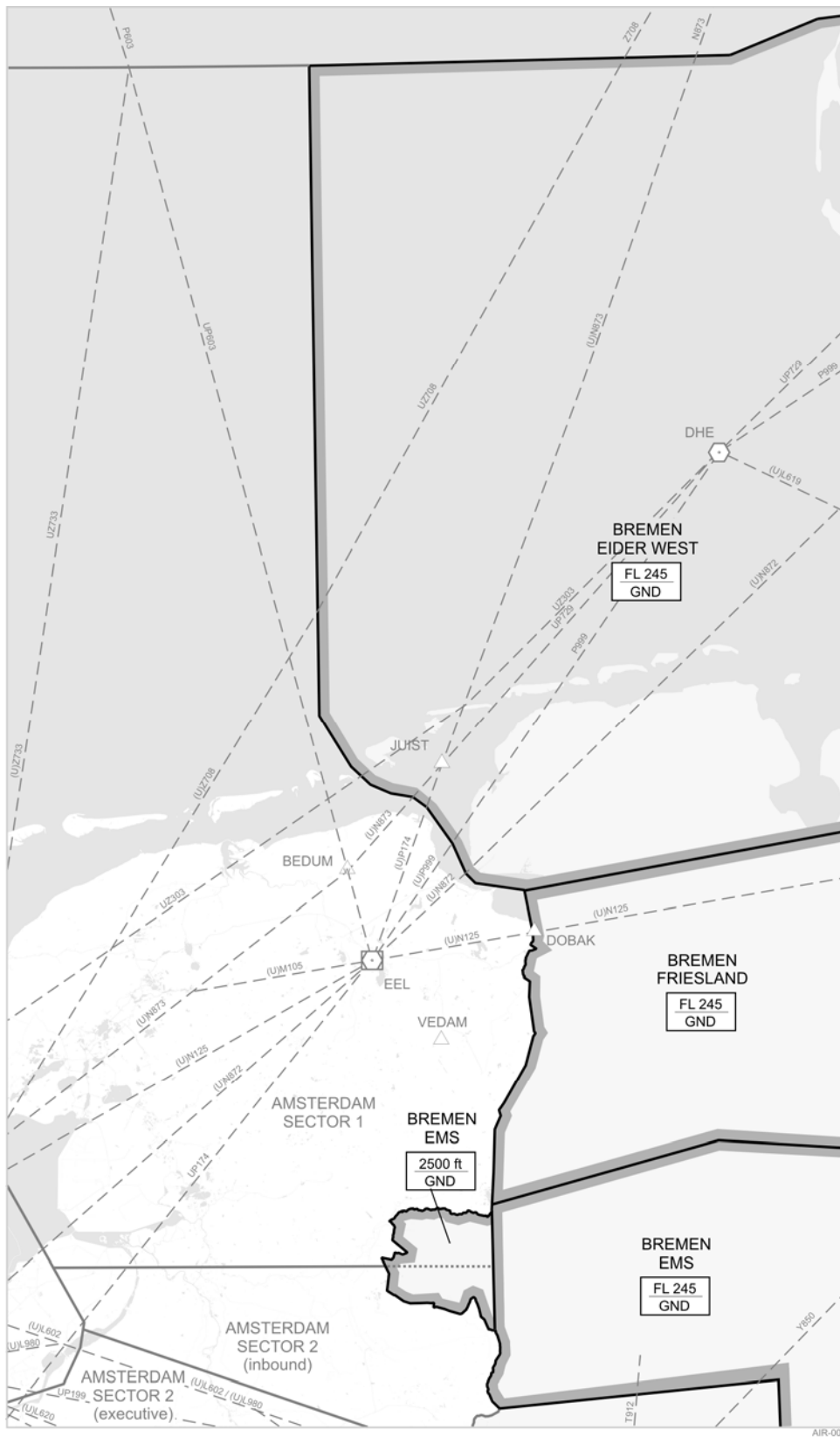


* From Friday 1600 to Sunday 2300 UTC (Friday 1500 to Sunday 2200 UTC summertime) and during legal Dutch holidays classified E up to and including FL 095.

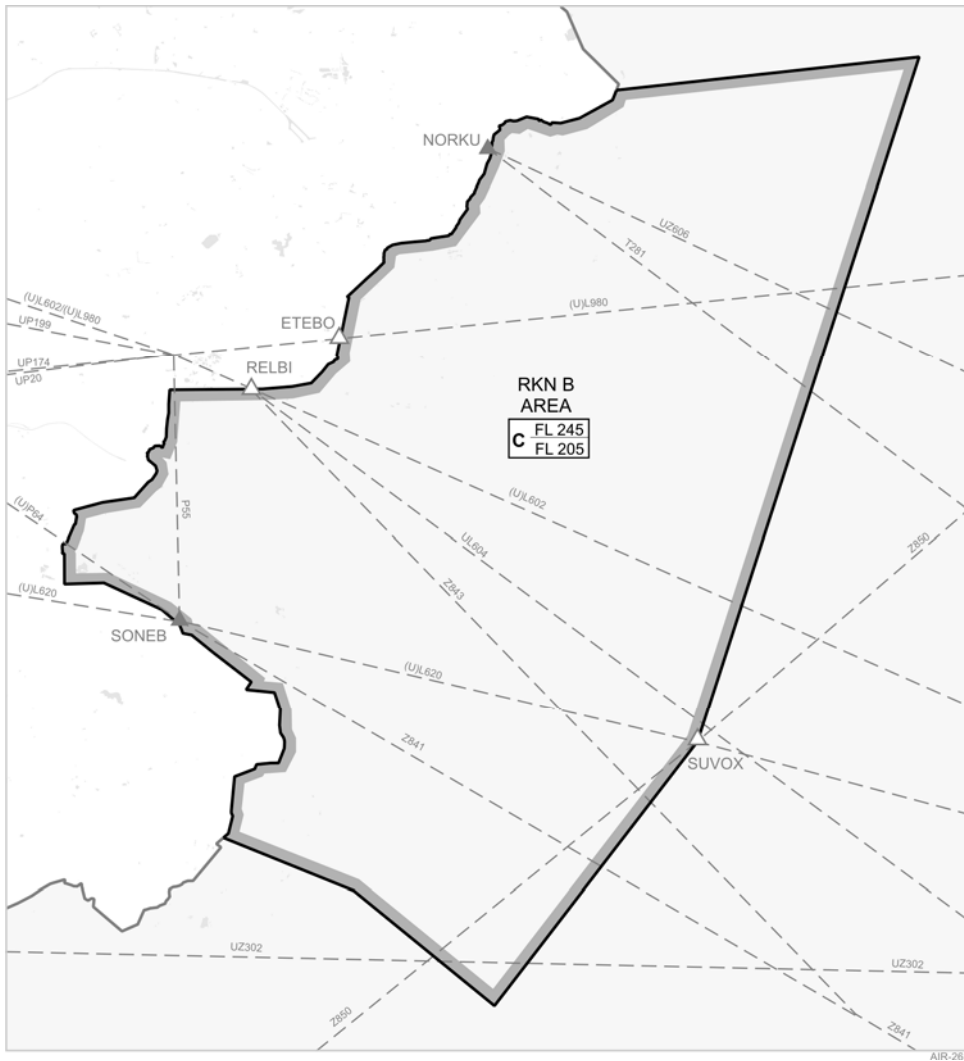
Cross-section of Bremen FIR at the Amsterdam/Bremen FIR Boundary.



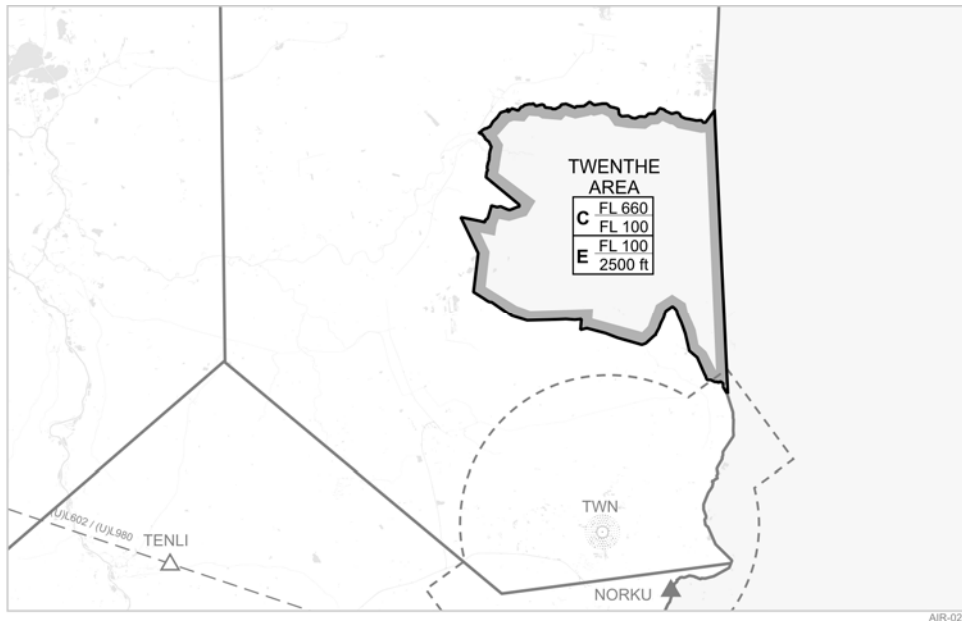
Sectorisation.



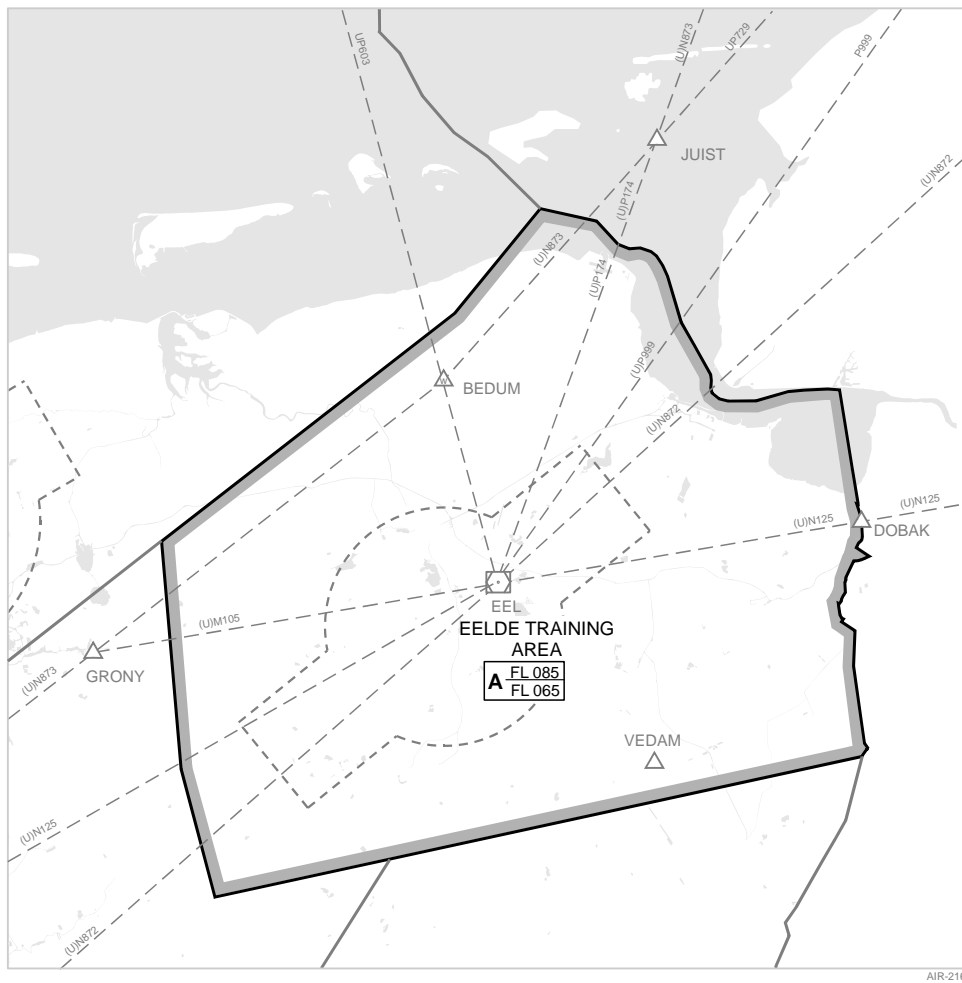
RKN B Area.



Twenthe Area.



Eelde Training Area.



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Annex C.

Exchange of Flight Data.

Effective: 12/02/2009

Revised: 22/09/2011

C.1 General.

C.1.1 Basic Flight Plans.

Basic flight plan data should normally be available at both ATS units.

C.1.2 Current Flight Plan Data.

Messages, including current flight plan data, shall be forwarded by the transferring ATS unit to the accepting ATS unit either by automatic data exchange or by telephone to the appropriate sector/position.

C.1.2.1 Automatic Data Exchange.

ABI/ACT/LAM messages are exchanged between the two ATS units in accordance with appendix 1 to annex C.

C.1.2.2 Verbal Estimates.

For conditions that are not supported by the automatic data exchange, verbal estimates shall be exchanged.

A verbal estimate shall be passed to the appropriate sector at the accepting ATS unit at least 10 minutes prior, but not earlier than 30 minutes before the aircraft is estimated to pass the transfer of control point, and shall contain:

- Call sign.
- SSR code (discrete mode A code or special purpose code 1000).
- ETO for the appropriate COP as laid down in annex D to this LoA.
- Cleared level, specifying climb or descent conditions if applicable, at the transfer of control point.
- Requested level if different from cleared level.
- Other information, if applicable.

Note: To indicate that the flight plan is available, the accepting ATS unit should state aircraft type and destination after having received the call sign.

Normally, verbal estimates will not be passed in parallel with ACT messages. In all cases, verbally passed data shall take precedence over data exchanged automatically.

C.1.2.3 Failure of Automatic Data Exchange.

In the event of a failure which prevents the automatic transfer of data, the supervisors shall immediately decide to revert to the verbal exchange of estimates.

After recovery from a system failure, the supervisors shall agree as to when they will revert to automatic data exchange.

C.1.3 Non-availability of Basic Flight Plan Data.

If the accepting ATS unit does not have basic flight plan data available, additional information may be requested from the transferring ATS unit to supplement the ACT message or a verbal estimate.

C.1.4 Revisions.

Any significant revisions to the flight data are to be transmitted to the accepting ATS unit.

Time differences of 5 minutes or more are to be exchanged.

Changes to the co-ordinated levels within 5 minutes of the ETO for the transfer of control point are subject to an approval request.

C.1.5 Expedite Clearance and Approval Requests.

Whenever the minimum time of 10 minutes for a verbal estimate, or those prescribed in appendix 1 to annex C for ACT messages, cannot be met, either an expedite clearance request or an approval request, as appropriate, shall be initiated, except departures EDDW, which are co-ordinated immediately after departure.

C.2 Means of Communications and their Use.

C.2.1 Equipment.

The following lines are available between Amsterdam ACC and Bremen ACC:

- 1 data line.
- 2 telephone lines (MFC).

C.2.2 Telephone Co-ordination.

All telephone communications shall be terminated with the initials of both parties concerned.

Exchange of flight plan data, estimates and control messages by telephone shall be carried out in accordance with the tables below.

C.2.2.1 Messages from Amsterdam ACC to Bremen ACC.

| Receiving Sector / COPs | Message | Position | Extension |
|------------------------------|--|-----------|-----------|
| Eider West / EEL BEDUM | Flight plan data and estimates | Assistant | 02123 |
| | Control messages, expedite clearance requests, approval requests and revisions | Planner | 02031 |
| | Radar co-ordination | Executive | 02021 |
| Friesland / EEL | Flight plan data and estimates | Assistant | 02123 |
| | Control messages, expedite clearance requests, approval requests and revisions | Planner | 02033 |
| | Radar co-ordination | Executive | 02023 |
| Ems | Flight plan data and estimates | Assistant | 02164 |
| | Control messages, expedite clearance requests, approval requests and revisions | Planner | 02071 |
| | Radar co-ordination | Executive | 02061 |

Supervisor: 02199 FMP: 02099
Switchboard: 02119 AMC: 02099
Telefax: +49 421 535533

C.2.2.2 Messages from Bremen ACC to Amsterdam ACC.

| Receiving Sector / COPs | Message | Position | Extension |
|--------------------------------------|---|---------------------|-----------|
| Amsterdam Sector 1 / EEL VEDAM | Flight plan data, estimates, expedite clearance requests and revisions (\geq 10 min. before ETO) | Assistant | 1331 |
| | Control messages, approval requests, revisions (< 10 min. before ETO) and radar co-ordination | Planning Controller | 1321 |
| | Urgent radar co-ordination | Radar Controller | 1311 |
| Amsterdam Sector 2 (Inbound) | Flight plan data, estimates, expedite clearance requests and revisions (\geq 10 min. before ETO) | Assistant | 1332 |
| | Control messages, approval requests, revisions (< 10 min. before ETO) and radar co-ordination | Planning Controller | 1322 |
| | Urgent radar co-ordination | Radar Controller | 1392 |
| Amsterdam FIC | Flight plan data and co-ordination | Assistant FIC | 1388 |

Supervisor: 1310 FMP: 1390
Switchboard: 1380 AMC: 1390
Telefax: +31 20 4063506

C.3 Failure of Ground/Ground Voice Communications.

C.3.1 Fall-Back Procedures for Co-ordination.

In the event of failure of the direct lines between the co-ordinating partners, co-ordination may be effected via:

- Maastricht UAC, or
- public telephone:

Amsterdam ACC: + 31 20 406 2200. Supervisor Amsterdam ACC.
Supervisor Amsterdam ACC shall provide the applicable telephone number for sector 1.

Bremen ACC: + 49 421 596 3489. Supervisor Bremen ACC.
Supervisor Bremen ACC shall provide the applicable telephone numbers for the sectors.

C.3.2 Alternate Fall-Back Procedures for Co-ordination.

In case of communications failure where the alternatives described in para C.3.1 are not available or practicable, pilots shall be instructed, at least 5 minutes prior to the transfer of control point, to pass flight data on the appropriate frequency of the accepting ATS unit for the purpose of obtaining an ATC entry clearance from the accepting ATS unit.

If the accepting ATS unit cannot issue an entry clearance to the pilot upon his initial contact, the pilot shall be instructed to inform the transferring ATS unit accordingly via RTF.

The transferring ATS unit shall hold the aircraft within its AoR and after a minimum of 10 minutes instruct the pilot to re-establish RTF contact with the accepting ATS unit.

This procedure shall be repeated until an onward clearance has been obtained from the accepting ATS unit.

Appendix 1 to Annex C.

Automatic Data Exchange.

ABI/ACT/LAM messages are exchanged between the two ATS units in accordance with the table below:

| Messages | COPs | Time and/or Distance Parameters | |
|----------|---|--|---|
| | | Messages from Amsterdam ACC to Bremen ACC | Messages from Bremen ACC to Amsterdam ACC |
| ABI | BEDUM ¹⁾ EEL VEDAM ²⁾ | 30 minutes prior to ETO COP. | On activation of the last route-segment (this can be more than 30 minutes prior to ETO COP). |
| ACT | BEDUM ¹⁾ EEL VEDAM ²⁾ | 20 minutes prior to ETO COP, if the TAS is < 395 kts. 12 minutes prior to ETO COP, if the TAS is ≥ 395 kts. | 20 minutes prior to ETO COP or 50 NM prior to COP, whichever comes first. |
| LAM | | A LAM should be received at the transferring ATS unit within 45 seconds after the ABI/ACT transmission. | A LAM should be received at the transferring ATS unit within 15 seconds after the ABI/ACT transmission. |

¹⁾ Amsterdam to Bremen only.

²⁾ Bremen to Amsterdam only.

If necessary the time parameters above can be overruled by Amsterdam ACC by sending a manual ACT. Bremen is unable to send a manual ACT.

Bremen ACC shall send an information ACT to Amsterdam ACC for flights passing through the Eelde TMA or Eelde Training area.

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Annex D.

Procedures for Co-ordination.

Effective: 12/02/2009

Revised: –

D.1 General Conditions for Acceptance of Flights.

- D.1.1 Co-ordination of flights shall take place by reference to the COP for the relevant route and in accordance with the appropriate levels specified for the relevant route (see paras D.2 and D.3).
- D.1.2 Flights shall be considered to be maintaining the co-ordinated level at the transfer of control point unless climb or descent conditions have been clearly stated by use of crossing conditions in the ACT or by verbal co-ordination - except if otherwise described in para D.2 or D.3.
- D.1.3 If the accepting ATS unit cannot accept a flight offered in accordance with the conditions specified above, it shall clearly indicate its inability and specify the conditions under which the flight will be accepted.
- D.1.4 For any proposed deviation from the conditions specified in this annex (e.g. COP, route or level) the transferring unit shall initiate an approval request.
- D.1.5 The accepting ATS unit shall not notify the transferring ATS unit that it has established ground-air communications with the transferred aircraft unless specifically requested to do so.
- D.1.6. Both ATS units shall only clear flights above FL 195, when such flights are 8.33 kHz channel spacing equipped or UHF equipped exempted state flights. Both ATS units shall make an approval request for UHF equipped exempted state flights before clearing these flights to enter the respective AoR.

All flights identified as not equipped with 8.33 kHz channel spacing capability are to be co-ordinated below FL 195.

If no alternative UHF ATC civil control frequency is available for a UHF equipped exempted state flight, the state flight must also be co-ordinated below FL 195.

D.2 ATS Routes, Co-ordination Points and Level Allocation.

Available ATS routes, COPs to be used and level allocation to be applied, unless otherwise described in para D.3, are described in the tables below.

D.2.1 Flights from Amsterdam ACC to Bremen ACC.

| ATS Route | COP | Level Allocation ¹⁾ | Special Conditions |
|-----------------------|-------|--------------------------------|---|
| (U)N873 ²⁾ | BEDUM | FL 070 – FL 230 | Flights via EEL/BEDUM may be deviated from track by Bremen ACC after passing EEL/BEDUM, provided these flights stay within the area defined as follows: 2.5 NM north of line between BEDUM and JUIST; 2.5 NM south of line between EEL and DOBAK. |
| (U)N125 | EEL | FL 070 – FL 230 | |
| (U)P174 | EEL | FL 070 – FL 230 | |
| (U)P999 | EEL | FL 070 – FL 230 | |

¹⁾ Eastbound levels

²⁾ ATS route Z212 between JUIST and DHE is available only between Friday 1500 and Monday 0700 UTC (Friday 1400 and Monday 0600 UTC summertime). Flights intending to proceed to DHE outside this time period must proceed via ATS route P999.

Note: During opening hours of Eelde TWR/APP, Amsterdam ACC shall pass a verbal estimate for flights at FL 070 to Eelde TWR/APP. Eelde TWR/APP shall co-ordinate these flights with Bremen ACC by means of ABI/ACT.

D.2.2 Flights from Bremen ACC to Amsterdam ACC.

| ATS Route | COP | Level Allocation ¹⁾ | Special Conditions |
|-----------|--------------|--------------------------------|--|
| UN872 | EEL | FL 200 – FL 240 | |
| (U)N125 | EEL VEDAM | FL 080 – FL 240 | May be routed via VEDAM. An ACT and/or estimate shall be passed via VEDAM. |
| (U)P174 | EEL | FL 080 – FL 240 | |
| (U)P999 | EEL | FL 080 – FL 240 | May be routed from ALS direct to EEL, without co-ordination. |

¹⁾ Westbound levels

Note: During opening hours of Eelde TWR/APP, Bremen ACC shall pass an ABI/ACT to Eelde TWR/APP for flights at FL 080. Eelde TWR/APP shall co-ordinate these flights with Amsterdam ACC.

Bremen ACC separates flights following different ATS routes towards EEL either vertically or by assuring that the minimum distance between the relevant aircraft does not fall below 20 NM until passing EEL.

D.3 Special Procedures.

D.3.1 Off-route Traffic.

Normally GAT will not be given clearance to operate off the published ATS routes. Exceptions may be granted after co-ordination if traffic situation permits.

D.4 Co-ordination of Status of Special Areas in the Area of Common Interest.

Not applicable.

Annex E.

Transfer of Control and Transfer of Communications.

Effective: 12/02/2009

Revised: 22/09/2011

E.1 Transfer of Control.

The transfer of control takes place at the AoR boundary, unless otherwise specified in para E.3.

E.2 Transfer of Communications.

The transfer of communications shall take place not later than the transfer of control and as specified in para E.3, unless otherwise co-ordinated.

Note: Frequencies:

- Amsterdam Sector 1 : 134.375 MHz
- Amsterdam Sector 2 : 124.875 MHz
- Dutch Mil Info : 132.350 MHz
- Bremen Eider West : 120.225 MHz
- Bremen Friesland : 124.800 MHz
- Bremen Ems : 125.025 MHz
- Bremen FIC (north of 53°00'00"N) : 125.100 MHz
- Bremen FIC (south of 53°00'00"N) : 119.825 MHz

E.3 Specific Points for Transfer of Control and Transfer of Communications.

| ATS Route | COP | Transfer of Control Point | Transfer of Communications | |
|-----------|--------------|---------------------------|---|---|
| | | | Amsterdam ACC to Bremen ACC ¹⁾ | Bremen ACC to Amsterdam ACC ²⁾ |
| (U)N872 | EEL | AoR Boundary | ----- | Before the transfer of control point |
| (U)N873 | BEDUM | AoR Boundary | Before the transfer of control point | ----- |
| (U)N125 | EEL VEDAM | AoR Boundary | Before the transfer of control point | Before the transfer of control point |
| (U)P174 | BEDUM EEL | AoR Boundary | Before the transfer of control point | Before the transfer of control point |
| (U)P999 | EEL | AoR Boundary | Before the transfer of control point | Before the transfer of control point |

¹⁾ During opening hours of Eelde TWR/APP, transfer of communications for flights passing through the Eelde Training Area shall take place between Amsterdam ACC and Eelde TWR/APP.

²⁾ During opening hours of Eelde TWR/APP, transfer of communications for flights passing through the Eelde Training Area shall take place between Bremen ACC and Eelde TWR/APP.

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Annex F.

Radar Based Co-ordination Procedures.

Effective: 12/02/2009

Revised: 03/06/2010

F.1 SSR Code Assignment.

- F.1.1 Both ATS units shall transfer aircraft on verified discrete SSR codes, or on verified code 1000, assigned in accordance with ORCAM.
- F.1.2 Any change of SSR code by the accepting ATS unit may only take place after the transfer of control point.
- F.1.3 The accepting ATS unit shall be notified of any observed irregularity in the operation of SSR transponders.

F.2 Radar Co-ordination Procedures.

F.2.1 General.

- F.2.1.1 Transfer of radar identification and transfer of radar control between Amsterdam ACC and Bremen ACC will be subject to the serviceability of the respective radar systems and two-way direct speech facilities between the radar positions.
- F.2.1.2 If it becomes necessary to reduce or suspend radar transfers, a 5 minutes prior notification will be observed, except in emergency situations.
- F.2.1.3 Vectoring within the respective AoRs may take place without co-ordination between the ATS units provided the distance to the AoR boundary is not less than 2.5 NM.

F.2.2 Transfer of Radar Control.

Transfer of radar control may be effected after prior co-ordination provided the minimum distance between the aircraft does not fall below 5 NM.

F.2.3 Silent Transfer of Radar Control.

Transfer of radar control may be effected without prior co-ordination provided the minimum distance between successive aircraft about to be transferred is 10 NM and constant or increasing.

Note: When using speed control, pilots concerned shall be instructed to report their assigned speed to the accepting ATS unit upon initial contact.

F.3 Reduced Longitudinal Separation.

A minimum longitudinal separation of 3 minutes may be applied between aircraft on the same track or crossing tracks, whether at the same level, climbing or descending, provided that the relevant aircraft are continuously radar monitored and the transferring ATS unit has ensured that the actual distance between the aircraft does not fall below 20 NM.

F.4 Radar Separation Minima.

F.4.1 The following radar separation minima are applicable:

- Amsterdam ACC : 5 NM
- Bremen ACC : 5 NM

F.5 Air Traffic Flow Management.

Not applicable.

Annex G.

Contingency Arrangements.

Effective: 12/02/2009

Revised: 22/09/2011

G.1 General.

- G.1.1 In case of technical or catastrophic outage resulting in the disruption of the provision of ATS at Amsterdam ACC or at Bremen ACC, the adjacent co-ordinating partners are expected to assist the failing ATS unit as far as possible in order to ensure the safe evacuation of air traffic from the AoR of the failing ATS unit.
- G.1.2 The Contingency Contact Point (CCP) of the failing ATS unit shall decide about the required contingency measures and co-ordinate the subsequent execution of the contingency plan.

G.2 Disruption of the Provision of ATS at Amsterdam ACC.

G.2.1 Acceptance of Traffic During the Disruption of ATS.

Not applicable.

G.2.2 Delegation of ATS to Aiding ATS Unit.

Until contingency sectors have been established at the aiding ATS unit, the provision of ATS within the AoR of Amsterdam ACC shall be delegated to AOCs NM ATC.

G.2.3 Establishment of Contingency Sectors at Aiding ATS Unit.

Amsterdam ACC may re-establish the provision of ATS within its AoR by opening contingency sectors at the aiding ATS unit AOCs NM ATC. The contingency sectors will correspond to existing sectors at Amsterdam ACC and normal co-ordination procedures shall apply unless otherwise co-ordinated by the CCP.

G.2.4 Relevant Public Telephone Numbers.

Amsterdam CCP: +31 20 4063700/01/02/03
AOCs NM ATC Switchboard: +31 577 45 8705

G.3 Disruption of the Provision of ATS at Bremen ACC.

G.3.1 Purpose.

Paragraph G.3 describes the procedures that shall be applied in case of contingency of Bremen ACC; these procedures shall overrule respective procedures in annex A to F to this LoA.

G.3.2 Contingency Phase 0 – Immediate Actions.

G.3.2.1 If the operational status of Bremen ACC becomes impaired to such an extent, that ATS can no longer be provided, the Bremen ACC Supervisor shall notify the co-ordinating partners.

If necessary and possible, measures shall be agreed in order to ensure the safe evacuation of all controlled air traffic from the Bremen ACC AoR.

When the operation of Bremen ACC is disrupted and the Bremen ACC AoR is vacated from any controlled traffic, the Supervisor in charge of operations shall declare contingency phase 0 for Bremen ACC. From this time on:

- the Bremen ACC AoR shall be called Bremen ACC Contingency Area, until full serviceability of Bremen ACC is recovered;
- the Bremen ACC Contingency Area is a No-Fly-Zone, entry is prohibited until contingency phase 2 is activated.

G.3.2.2 Communications with the Emergency Operations Staff Bremen ACC takes place via the ACC Supervisor: +49 421 596 3489 or +49 173 340 1129.

G.3.3 Contingency Phase 1 – ATS delegation.

Not applicable.

G.3.4 Contingency Phase 2 – Resuming Operations at Bremen ACC Contingency Location.

G.3.4.1 General.

In contingency phase 2, Bremen ACC re-establishes the provision of ATS within its AoR by opening contingency sectors at Maastricht UAC. The contingency sectors will correspond to the existing sectors at Bremen ACC:

- the sectors Eider [West](#) and Friesland are called contingency sector North West;
- the Ems sector is called contingency sector South High.

G.3.4.2 Activation and De-activation.

The Bremen ACC Supervisor shall inform the co-ordinating partners about the activation and de-activation of the contingency sectors as well as the frequencies to be used.

G.3.4.3 ATFCM Procedures.

If necessary, the Bremen ACC Supervisor shall initiate ATFCM measures.

G.3.4.4 Contingency Sectors and Communications.

G.3.4.4.1 Messages from Amsterdam ACC to Bremen ACC.

| Receiving Contingency Sector | Message | Position | Extension / public telephone |
|------------------------------|--|----------------------|------------------------------|
| North West | Flight plan data and estimates | Assistant | 34 4924 +31 433 6625 23 |
| | Control messages, expedite clearance requests, approval requests and revisions | Planner | 34 4921 + 31 433 6625 16 |
| | Radar co-ordination | Executive | 34 4920 + 31 433 6625 17 |
| South High | Flight plan data and estimates | Assistant | 34 4924 +31 433 6625 23 |
| | Control messages, expedite clearance requests, approval requests and revisions | Planner | 34 4931 +31 433 6625 20 |
| | Radar co-ordination | Executive | 34 4930 + 31 433 6625 21 |
| All sectors | Procedures, capacity, emergency | SUP Bremen ACC | 34 4923 +31 433 6625 22 |

G.3.4.4.2 Messages from Bremen ACC to Amsterdam ACC.

The Bremen ACC contingency working positions shall call the respective working position as agreed in annex C.

G.3.4.5 Exchange of Flight Data and Co-ordination.

G.3.4.5.1 Limited basic flight plan data shall be available at the contingency working positions.

G.3.4.5.2 OLDI data exchange with the contingency working positions is not possible. All co-ordination shall be done verbally. Verbal estimates shall be passed to the appropriate sector at least 10 minutes prior, but not earlier than 30 minutes before the aircraft is estimated to pass the AoR boundary.

G.3.4.5.3 The transferring unit shall initiate an expedite clearance or approval request if:

- the verbal estimate cannot be passed at least 10 minutes before the aircraft is estimated to pass the AoR boundary,
- a change of the co-ordinated flight level is necessary within 5 minutes prior to crossing the AoR boundary.

G.3.4.6 Control Procedures.

For flights planned on ATS routes, Bremen ACC accepts co-ordination for direct routings outside ATS routes only in urgent cases, e.g. emergencies, weather diversions.

The separation minimum between aircraft on transfer shall be 15 NM constant or increasing.

G.3.4.7 Call sign.

In case of contingency, Bremen ACC has the following call sign:

- radio telephony: Bremen Radar.
- telephone: Bremen Contingency + name of working position (e.g. North West).

G.3.4.8 SSR Code Assignment.

During contingency, Bremen ACC may not be able to transfer aircraft on verified discrete SSR codes, or on verified code 1000, assigned in accordance with ORCAM.

G.4. Contingency Exercises.

G.4.1. Voice Communication Systems.

During exercises all systems at Bremen ACC remain operational, except for OLDI data exchange. MFC numbers as published in paragraph G.3.4.4.1 shall be used during exercises. Public phone shall only be used as back-up system.