

**Rating Requirements
for Air Traffic Controllers**

Aerodrome Control Instrument Rating

ADI

Tower, Air and Ground Movement Control,

TWR – AIR - GMC

Aerodrome Radar and Ground Movement

Surveillance Endorsement

RAD - GMS

Document history

Edition number	In force	Change of content
1.0	01.12.2004	Released issue
2.0	06.01.2006	Adjusted training hours requirements. Inserted possibility for reduction of training hours for SHARED and COMBINED units when performing integrated training of more categories. Editorial corrections. Document history added.

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1. INTRODUCTION

1.1 Background

This document is derived from the Requirements for Air Traffic Controllers developed for the European ATC Licence harmonisation project. The terminology used was developed by Drafting Group 4 of the Common Core Content Task Force.

The requirements in this document represent the minimum level for approving a Unit Training Plan. Every ATS Unit must on this background produce its own Unit Training Plan (UTP) which should satisfy these requirements and have it approved by the Danish CAA.

The **Requirements** are the outcome of a functional analysis of the controller's job, which produced a series of statements called **Performance Objectives** which describe the actions, behaviours or outcomes that the controller should be able to demonstrate.

Each control discipline contains a number of **Key Roles**. For instance a key role common to all ratings is to 'Correlate information useful for the safe and efficient conduct of flights' This key role is divided into two **Topics**, one dealing with Meteorological information and the other with Aeronautical information. Each Topic is then divided into **Sub-topics**, in this case to 'collect, to collate and to disseminate the information'.

Topics common to more than one discipline, Aerodrome, Approach or Area control, can be identified and credit given to staff who have already undergone training in those topics in a different discipline. As not all topics are applicable to every discipline, the numbering used will not necessarily be sequential.

Each sub-topic contains a number of **Performance Objectives**.

A statement of Conditions qualifies each Performance Objective. Conditions describe the context in which the Performance Objectives apply, which means in its simplest form 'can the controller act with equal ability by day or night, and in good or poor weather conditions?'

Finally the Requirements contain detail of the **Essential Knowledge** that is, the knowledge and understanding a controller needs to carry out the task. In order to separate aircraft, the controller must not only know the separation standard to be applied; he must also understand how to apply it. Similarly the controller needs to understand some aspects of the formation of thunderstorms in order to be able to predict their effect on operations and to make allowance for those effects when exercising control.

1.2 Determining Competence by Assessment

In order to determine Competence an Assessor (Examiner) seeks evidence of performance (Can the student/trainee controller actually do the job) both by direct observation and by reference to the training records. Assessment differs from an examination system, by taking a longer more detailed view of performance, rather than taking an intense but short sample of the trainees' work. Performance is assessed in all areas under all conditions seeking to prove that the trainee can perform reliably and consistently to the required level of competence.

Performance must be assessed against the Performance Objectives on sufficient occasions to ensure competence has been demonstrated across all the Conditions for which performance evidence is required. Where performance is tested in only some of the contexts in the conditions, the application of knowledge must be tested by questioning for the remainder.

All items listed, as Content must be tested to prove an understanding of the knowledge, the underlying principles and the application of the knowledge to performance in the workplace. A Student/Trainee, who demonstrates practically that he can do the job and can explain his reasons for acting in a particular manner, thereby demonstrating understanding, has fulfilled all the requirements without the need for additional written testing. It is essential that the Assessor (Examiner) determine understanding, rather than pure knowledge, when determining competence.

1.3 Summary of terms

Key Role

Describes in broad terms, the principal components of the controller's job.

Topic

Divides the Key Role into definable common areas.

Sub-Topic

Defines specific areas of the topic.

Performance Objective

Describes the actions of the controller that demonstrate the correct performance of the Sub-Topic.

Conditions

Describes the contexts in which the Performance Objective applies.

Essential Knowledge

The fundamental knowledge and understanding necessary to perform to the Requirements and to transfer the skills from one situation to another.

1.4 Training

The Unit Training consist of theoretical aspects as well as practical aspects. The training must be planned in a way that the Student/trainee benefits most profitable from this.

The Unit Training plan must indicate the content of the **Transitional OJT** and/or the **Pre-OJT**.

As a minimum the following subjects must be included:

Regional and local geography

ATS message handling

Search and Rescue

Local equipment

Local ATS Procedures

Simulator training if necessary according to BL 6-95.

For the **GMS endorsement** a special theoretical course must be included in the Transitional OJT course. The minimum content of this special theoretical course is attached in attachment A to this document.

1.5 Minimum training time (OJT)

For ADI/TWR: 240 hours
For ADI/AIR: 160 hours
For ADI/GMC: 160 hours

Additional endorsements:

For RAD: 80 hours
For GMS: 80 hours

- 1) When training for obtaining RAD or GMS endorsement as integrated training of more categories, the time required for this endorsement is only counted on one of the categories.
- 2) If training for ADI/TWR/RAD is integrated with training for APS/RAD at a unit where the two categories of ATC service are shared (provided from the same position) the training time may be reduced by 50%, but in such a way that the training time will never be less than the time required for the most time-consuming category (i.e. minimum 320 hrs).
- 3) If training for ADI/TWR/RAD is integrated with training for APS/RAD at combined units where the two categories of ATC service is being provided from different positions, the training time may be reduced by 25% (i.e. minimum 420 hrs.). This includes integrated training for GMS.

Training time (OJT) is meant to be, time "on position" operationally meaningful to acquire the skill relevant to the rating/endorsement.

Hours with very little or no traffic should not be counted as training time (OJT).

1.6 Extension of license, same rating/endorsement – another unit

Minimum training time required for extending the privileges of the license for the same rating/endorsement to another unit is

For ADI/TWR: 120 hours
For ADI/AIR: 80 hours
For ADI/GMC: 80 hours

Additional endorsements:

For RAD: 40 hours
For GMS: 40 hours

1.7 Examination/Assessment

For every 1st time application for a rating/endorsement an examination must be passed.

The examination will include:

- Review the summative report from the Unit Training Plan (UTP)
- the practical check (min. 2hrs on each endorsement)
- the scenario interview (oral examination)
- the final assessment

To Pass the Examination, the Student/Trainee must:

- satisfactorily have fulfilled the objectives of the UTP
- satisfactorily have passed the practical check
- satisfactorily have passed the scenario interview

All three parts must be passed during the same examination.

Assessment for validating or revalidating a Unit Endorsement should be made according to the Performance Objectives in this document for the appropriate Rating/Endorsement at the Unit.

**KEY ROLES AND TOPICS FOR AERODROME CONTROL INSTRUMENT RATING - TWR
 (Tower Control Endorsement)**

KEY ROLES	TOPICS
KEY ROLE A COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT A2 COMMUNICATE FROM A VISUAL CONTROL ROOM
KEY ROLE B ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY B2 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME CONTROL
KEY ROLE C CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS	C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION
KEY ROLE D SELECT THE DIRECTION OF LANDING AND TAKE OFF	D1 SELECT THE RUNWAY IN USE AND APPROPRIATE VISUAL AIDS
KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	G1 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME G2 MANAGE AERODROME SURFACE MOVEMENTS G3 CO-ORDINATE WITH OTHER ATC OPERATIONAL POSITIONS G8 EFFECT LIAISON WITH OTHER AGENCIES G9 HANDLE DIVERSIONS G10 WORK AS A TEAM MEMBER ON THE AERODROME CONTROL OPERATIONAL POSITION
KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME CONTROL UNIT H2 MANAGE DOMESTIC CONTINGENCIES IN AN AERODROME VISUAL CONTROL ROOM

**TOPICS AND SUB-TOPICS FOR AERODROME CONTROL INSTRUMENT RATING – TWR
 (Tower Endorsement)**

KEY ROLE A		COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	
TOPICS		SUB-TOPICS	
A1	Check and operate communications equipment	A1.1	Establish and monitor the communications equipment serviceability
		A1.2	Use the communications equipment
A2	Communicate from a visual control room	A2.1	Use standard phraseology applicable to aerodrome control.
KEY ROLE B		ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	
TOPICS		SUB-TOPICS	
B1	Correlate flight data into appropriate proforma for display	B1.1	Obtain flight data information
		B1.2	Insert flight data into the appropriate proforma
B2	Maintain a representative flight data display for aerodrome control	B2.1	Correlate flight data into a display for aerodrome control
		B2.2	Update the aerodrome control flight data display
KEY ROLE C		CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS	
TOPICS		SUB-TOPICS	
C1	Obtain, interpret and disseminate meteorological information	C1.1	Obtain meteorological information
		C1.2	Interpret meteorological information
		C1.3	Disseminate meteorological information
C2	Obtain, interpret and disseminate aeronautical information	C2.1	Obtain aeronautical information
		C2.2	Interpret aeronautical information
		C2.3	Disseminate aeronautical information
KEY ROLE D		SELECT THE DIRECTION OF LANDING AND TAKE OFF	
TOPICS		SUB-TOPICS	
D1	Select the runway in use and appropriate visual aids	D1.1	Select the runway in use
		D1.2	Operate aerodrome lighting
KEY ROLE G		MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	
TOPICS		SUB-TOPICS	
G1	Manage flights operating in the vicinity of the aerodrome	G1.1	Manage flights operating under the visual flight rules
		G1.2	Manage flights operating under the instrument flight rules

G2	Manage aerodrome surface movements	G2.1	Control aircraft on the manoeuvring area and aprons and vehicles and personnel on the manoeuvring area
G3	Co-ordinate with other ATC operational positions	G3.1	Co-ordinate with approach control operational positions
G8	Effect liaison with other agencies	G8.1	Liase with non ATC agencies
		G8.2	Liase with the safety services
G9	Handle diversions	G9.1	Handle diversions
G10	Work as a team member on the aerodrome control operational position	G10.1	Accept responsibility for the operational position
		G10.2	Monitor performance whilst responsible for the operational position
		G10.3	Transfer responsibility for the operational position
KEY ROLE H		MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	
TOPICS		SUB-TOPICS	
H1	Manage developed emergencies from the aerodrome control unit	H1.1	Manage radio failures
		H1.2	Manage situations arising from unlawful interference
		H1.3	Manage Aircraft Emergencies
		H1.4	Provide Alerting Service
H2	Manage domestic contingencies in an aerodrome visual control room	H2.1	Safely evacuate the control room

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**KEY ROLES AND TOPICS FOR AERODROME CONTROL INSTRUMENT RATING – GMC
 (Ground Movement Control Endorsement)**

KEY ROLES	TOPICS
KEY ROLE A COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT A2 COMMUNICATE FROM A VISUAL CONTROL ROOM
KEY ROLE B ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY B2 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME CONTROL
KEY ROLE C CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS	C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION
KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	G2 MANAGE AERODROME SURFACE MOVEMENTS G3 CO-ORDINATE WITH OTHER ATC OPERATIONAL POSITIONS G8 EFFECT LIAISON WITH OTHER AGENCIES G10 WORK AS A TEAM MEMBER ON THE AERODROME CONTROL OPERATIONAL POSITION
KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME CONTROL UNIT H2 MANAGE DOMESTIC CONTINGENCIES IN AN AERODROME CONTROL ROOM

**TOPICS AND SUB-TOPICS FOR AERODROME CONTROL INSTRUMENT RATING – GMC
(Ground Movement Control Endorsement)**

KEY ROLE A		COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	
TOPICS		SUB-TOPICS	
A1	Check and operate communications equipment	A1.1	Establish and monitor the communications equipment serviceability
		A1.2	Use the communications equipment
A2	Communicate from a visual control room	A2.1	Use standard phraseology applicable to aerodrome control.
KEY ROLE B		ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	
TOPICS		SUB-TOPICS	
B1	Correlate flight data into appropriate pro forma for display	B1.1	Obtain flight data information
		B1.2	Insert flight data into the appropriate pro forma
B2	Maintain a representative flight data display for aerodrome control	B2.1	Correlate flight data into a display for aerodrome control
		B2.2	Update the aerodrome control flight data display
KEY ROLE C		CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS	
TOPICS		SUB-TOPICS	
C1	Obtain, interpret and disseminate meteorological information	C1.1	Obtain meteorological information
		C1.2	Interpret meteorological information
		C1.3	Disseminate meteorological information
C2	Obtain, interpret and disseminate aeronautical information	C2.1	Obtain aeronautical information
		C2.2	Interpret aeronautical information
		C2.3	Disseminate aeronautical information
KEY ROLE D		SELECT THE DIRECTION OF LANDING AND TAKE OFF	
TOPICS		SUB-TOPICS	
D1	Select the runway in use and appropriate visual aids	D1.2	Operate aerodrome lighting
KEY ROLE G		MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	
TOPICS		SUB-TOPICS	
G2	Manage aerodrome surface movements	G2.1	Control aircraft on the manoeuvring area and aprons and vehicles and personnel on the manoeuvring area.

G8	Effect liaison with other agencies	G8.1	Liaise with non ATC agencies
		G8.2	Liaise with the safety services
G10	Work as a team member for the aerodrome control operational position	G10.1	Accept responsibility for the operational position
		G10.2	Monitor performance whilst responsible for the operational position
		G10.3	Transfer responsibility for the operational position
KEY ROLE H		MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	
TOPICS		SUB-TOPICS	
H1	Manage developed emergencies from the aerodrome control unit	H1.1	Manage radio failures
		H1.2	Manage situations arising from unlawful interference
		H1.3	Manage Aircraft Emergencies
		H1.4	Provide Alerting Service
H2	Manage domestic contingencies in an aerodrome control room.	H2.1	Safely evacuate the control room

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**KEY ROLES AND TOPICS FOR AERODROME CONTROL INSTRUMENT RATING – AIR
 (Air Control Endorsement)**

KEY ROLES	TOPICS
KEY ROLE A COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT A2 COMMUNICATE FROM A VISUAL CONTROL ROOM
KEY ROLE B ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY B2 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME CONTROL
KEY ROLE C CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS	C1 OBTAIN INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION
KEY ROLE D SELECT THE DIRECTION OF LANDING AND TAKE OFF	D1 SELECT THE RUNWAY IN USE AND APPROPRIATE VISUAL AIDS
KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	G1 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME G3 CO-ORDINATE WITH OTHER ATC OPERATIONAL POSITIONS G8 EFFECT LIAISON WITH OTHER AGENCIES G9 HANDLE DIVERSIONS G10 WORK AS A TEAM MEMBER ON THE AERODROME CONTROL OPERATIONAL POSITION
KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME CONTROL UNIT H2 MANAGE DOMESTIC CONTINGENCIES IN THE AERODROME CONTROL ROOM

**TOPICS AND SUB-TOPICS FOR AERODROME CONTROL INSTRUMENT RATING - AIR
 (Air Control Endorsement)**

KEY ROLE A		COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	
TOPICS		SUB-TOPICS	
A1	Check and operate communications equipment	A1.1	Establish and monitor the communications equipment serviceability
		A1.2	Use the communications equipment
A2	Communicate from a visual control room	A2.1	Use standard phraseology applicable to aerodrome control.
KEY ROLE B		ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	
TOPICS		SUB-TOPICS	
B1	Correlate flight data into appropriate pro forma for display	B1.1	Obtain flight data information
		B1.2	Insert flight data into the appropriate pro forma
B2	Maintain a representative flight data display for aerodrome control	B2.1	Correlate flight data into a display for aerodrome control
		B2.2	Update the aerodrome control flight data display
KEY ROLE C		CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS	
TOPICS		SUB-TOPICS	
C1	Obtain, interpret and disseminate meteorological information	C1.1	Obtain meteorological information
		C1.2	Interpret meteorological information
		C1.3	Disseminate meteorological information
C2	Obtain, interpret and disseminate aeronautical information	C2.1	Obtain aeronautical information
		C2.2	Interpret aeronautical information
		C2.3	Disseminate aeronautical information
KEY ROLE D		SELECT THE DIRECTION OF LANDING AND TAKE OFF	
TOPICS		SUB-TOPICS	
D1	Select the runway in use and appropriate visual aids	D1.1	Select the runway in use
		D1.2	Operate aerodrome lighting
KEY ROLE G		MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	
TOPICS		SUB-TOPICS	
G1	Manage flights operating in the vicinity of the aerodrome	G1.1	Manage flights operating under the visual flight rules
		G1.2	Manage flights operating under the instrument flight rules

G3	Co-ordinate with other ATC operational positions	G3.1	Co-ordinate with approach control operational positions
G8	Effect liaison with other agencies	G8.1	Liaise with non ATC agencies
		G8.2	Liaise with the safety services
G9	Handle diversions	G9.1	Handle diversions
G10	Work as a team member for the aerodrome control operational position	G10.1	Accept responsibility for the operational position
		G10.2	Monitor performance whilst responsible for the operational position
		G10.3	Transfer responsibility for the operational position
KEY ROLE H		MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	
TOPICS		SUB-TOPICS	
H1	Manage developed emergencies from the aerodrome control unit	H1.1	Manage radio failures
		H1.2	Manage situations arising from unlawful interference
		H1.3	Manage Aircraft Emergencies
		H1.4	Provide Alerting Service

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**KEY ROLES AND TOPICS FOR AERODROME CONTROL RATING – RAD
 (Aerodrome Radar Control Endorsement)**

KEY ROLE E SET UP AND USE SURVEILLANCE RADAR EQUIPMENT	E4	SELECT AND SET UP AERODROME CONTROL RADAR
	E5	USE AERODROME CONTROL RADAR
KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	G4	MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME WITH THE AID OF AERODROME CONTROL RADAR
KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	H4	MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED AERODROME CONTROL UNIT

**TOPICS AND SUB-TOPICS FOR AERODROME CONTROL RATING – RAD
 (Aerodrome Radar Control Endorsement)**

KEY ROLE E	SET UP AND USE SURVEILLANCE RADAR EQUIPMENT
TOPICS	SUB-TOPICS
E4 Select and set up aerodrome control radar	E4.1 Select and set up aerodrome control radar
E5 Use aerodrome control radar	E5.1 Use aerodrome control radar
KEY ROLE G	MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC
TOPICS	SUB-TOPICS
G4 Manage flights operating in the vicinity of the aerodrome with the aid of aerodrome control radar	G4.1 Manage flights operating under the visual flight rules G4.2 Manage flights operating under the instrument flight rules
KEY ROLE H	MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES
TOPICS	SUB-TOPICS
H4 Manage developed emergencies from the radar equipped aerodrome control unit	H4.5 Recover from a radar failure.

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**KEY ROLES AND TOPICS FOR AERODROME CONTROL RATING – GMS
 (Ground Movement Surveillance Control Endorsement)**

<p>KEY ROLE E SET UP AND USE SURVEILLANCE RADAR EQUIPMENT</p>	<p>E6 SELECT AND SET UP SURFACE MOVEMENT RADAR</p> <p>E7 USE SURFACE MOVEMENT RADAR</p>
<p>KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC</p>	<p>G5 OPERATE SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS</p> <p>G6 MANAGE AERODROME SURFACE MOVEMENTS IN LOW VISIBILITY WITH THE AID OF SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS</p> <p>G7 MANAGE AERODROME SURFACE MOVEMENTS WITH THE AID OF SURFACE MOVEMENT RADAR</p>
<p>KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES</p>	<p>H4 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED AERODROME CONTROL UNIT</p>

**TOPICS AND SUB-TOPICS FOR AERODROME CONTROL RATING – GMS
 (Ground Movement Surveillance Control Endorsement)**

KEY ROLE E		SET UP AND USE SURVEILLANCE RADAR EQUIPMENT	
TOPICS		SUB-TOPICS	
E6	Select and set up surface movement radar	E6.1	Select and set up surface movement radar
E7	Use surface movement radar	E7.1	Use surface movement radar
KEY ROLE G		MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	
TOPICS		SUB-TOPICS	
G5	Operate surface movement guidance and control systems.	G5.1	Operate surface movement guidance and control systems
G6	Manage aerodrome surface movements in low visibility with the aid of surface movement guidance and control systems	G6.1	Control aircraft on the manoeuvring area and aprons and aircraft and personnel on the manoeuvring area in low visibility
G7	Manage aerodrome surface movements with the aid of surface movement radar	G7.1	Control aircraft on the manoeuvring area and aprons and vehicles and personnel on the manoeuvring area
KEY ROLE H		MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	
TOPICS		SUB-TOPICS	
H4	Manage developed emergencies from the radar equipped aerodrome control unit	H4.5	Recover from a radar failure.

Topic A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT

Sub-Topic A1.1 ESTABLISH AND MONITOR THE COMMUNICATIONS EQUIPMENT SERVICEABILITY

Performance Objectives	Conditions	Essential Knowledge
A1.1.1 Visual and/or aural indications are checked whilst making and receiving transmissions for indications of normal operation.	Procedures: Unit specific.	Local procedures Equipment visual and aural indications. Watch log entries. Local standing procedures for reporting equipment faults. Underpinning knowledge Deriving information from NOTAMS.
A1.1.2 Documentation confirming equipment status is checked.		
A1.1.3 Malfunctions and defects are recorded and reported to the appropriate authority according to standing procedures.		

Topic A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT

Sub-Topic A1.2 USE THE COMMUNICATIONS EQUIPMENT

Performance Objectives	Conditions	Essential Knowledge
A1.2.1 The readability of transmissions is assessed.	Communication methods: Radiotelephony, Telephone.	Communications technique Speech technique. Test transmissions.
A1.2.2 Standard speech technique is adhered to.		
A1.2.3 The appropriate frequency is selected and used.		
A1.2.4 Transmit and intercom switches are used in accordance with standard procedures.		
A1.2.5 The appropriate telephone is used.		
A1.2.6 Ancillary telephone equipment is used in accordance with standard procedures.		

Topic A2 COMMUNICATE FROM A VISUAL CONTROL ROOM

Sub-Topic A2.1 USE STANDARD PHRASEOLOGY APPLICABLE TO AERODROME CONTROL

Performance Objectives	Conditions	Essential Knowledge
<p>A2.1.1 Standard phraseology is employed wherever possible in communications.</p> <p>A2.1.2 Composition of messages is concise and unambiguous.</p> <p>A2.1.3 Station identity is used correctly.</p> <p>A2.1.4 Acknowledgements and readbacks are obtained and verified when required.</p> <p>A2.1.5 Abbreviated phraseology is used when appropriate.</p>	<p>Communication by: Radiotelephone, telephone.</p> <p>Message Types: Clearances, instructions, information.</p>	<p>Standard aerodrome control phraseology Standard speech abbreviations. Radiotelephony callsigns. Communication with aircraft. Transfer of communications. Transmission of company messages.</p>

Topic B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY

Sub-Topic B1.1 OBTAIN FLIGHT DATA INFORMATION

Performance Objectives	Conditions	Essential Knowledge
B1.1.1 Flight data information is extracted from all appropriate sources.	Methods of Display: Flight progress strips. Electronic data displays.	Doc. 4444 Appendix 2 Content of full and abbreviated flight plans ATS service messages. Doc. 7910 ICAO location indicators Doc.8585 ICAO abbreviations Filing of flight plans Non standard routes Repetitive flight plan Exemptions and non standard flights Local procedures Flight plan processing
B1.1.2 Relevant flight data is included at the earliest opportunity.		
B1.1.3 Flight data is checked to ensure completeness.		
B1.1.4 Any significant deficiency in flight data is rectified.		

Topic B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PRO FORMA FOR DISPLAY

Sub-Topic B1.2 INSERT FLIGHT DATA INTO THE APPROPRIATE PRO FORMA

Performance Objectives	Conditions	Essential Knowledge
B1.2.1 Strip marking is legible and conforms to standard procedures.	Methods of Display: Flight progress strips. Electronic data displays.	Doc. 7910 ICAO location indicators Doc. 8585 ICAO abbreviations Local procedures Conventional strip marking
B1.2.2 Correct message entry formats are used.		
B1.2.3 Relevant flight data is included at the earliest opportunity.		

Topic B2 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME CONTROL

Sub-Topic B2.1 CORRELATE FLIGHT DATA INTO A DISPLAY FOR AERODROME CONTROL

Performance Objectives	Conditions	Essential Knowledge
B2.1.1 All relevant traffic is included on the display.	Methods of display: Flight progress strip displays. Electronic flight data displays.	Local procedures Layout and use of flight progress strips. Layout and use of electronic flight data displays.
B2.1.2 Flight progress strips are organised in a manner, which reflects the traffic situation in accordance with laid down procedures.		
B2.1.3 Electronic flight data displays are organised in accordance with laid down procedures.		

Topic B2 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME CONTROL

Sub-Topic B2.2 UPDATE THE AERODROME CONTROL FLIGHT DATA DISPLAY

Performance Objectives	Conditions	Essential Knowledge
B2.2.1 Information is extracted from all relevant sources.	Sources of information: Pilot reports. Information from other controllers. Information from other agencies. Computer derived information. Methods of display: Flight progress strips. Electronic data displays.	Aircraft performance. Local procedures Report formats. EDD display parameters.
B2.2.2 The display is updated using information received.		
B2.2.3 Clearances and instructions passed to aircraft and other agencies are recorded.		
B2.2.4 Co-ordination agreed with other agencies is recorded.		
B2.2.5 The integrity of EDD performance and data is monitored.		

Topic C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION

Sub-Topic C1.1 OBTAIN METEOROLOGICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
<p>C1.1.1 Current and forecast weather information is obtained before taking over watch.</p> <p>C1.1.2 Current and forecast weather information is monitored during the watch.</p> <p>C1.1.3 Weather information and reports from pilots are recorded.</p>	<p>Types of briefing: Self and Met office briefing.</p> <p>Types of report: Routine and special reports. Met Warnings. Reports from pilots.</p>	<p>Altimeter setting and vertical reference.</p> <p>Windshear.</p> <p>Meteorological services: Briefing of controllers. Explanation of terms. Supply of information. Aerodrome meteorological reports (Routine) Aerodrome meteorological reports (Special) Coded aerodrome weather reports. SIGMET. Forecasts</p> <p>Underpinning knowledge Meteorology:- Wind, cloud, thunderstorms, microbursts, icing, line squalls. Pilot in flight reports (PIREPS) Low level charts. Significant weather charts. Aerodrome warnings</p>

Topic C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION

Sub-Topic C1.2 INTERPRET METEOROLOGICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
<p>C1.2.1 Significant weather changes are recognised.</p> <p>C1.2.2 The relevance of meteorological information to individual flights or agencies is established.</p>	<p>Significant weather: Surface wind. Thunderstorms and Cumulonimbus clouds. Freezing rain. Moderate / Severe icing. Severe turbulence. Severe mountain waves. Low visibility. Low level wind shear.</p>	<p>Altimeter setting and vertical reference.</p> <p>Windshear.</p> <p>Meteorological services: Briefing of controllers. Explanation of terms. Supply of information. Aerodrome meteorological reports (Routine) Aerodrome meteorological reports (Special) Coded aerodrome weather reports. SIGMET. Forecasts</p> <p>Underpinning knowledge Meteorology:- Wind, cloud, thunderstorms, microbursts, icing, line squalls. Pilot in flight reports (PIREPS) Low level charts. Significant weather charts. Aerodrome warnings</p>

Topic C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION

Sub-Topic C1.3 DISSEMINATE METEOROLOGICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
<p>C1.3.1 Aircraft are advised of significant changes in weather information.</p> <p>C1.3.2 Other agencies are advised of significant changes in weather information.</p>	<p>Significant weather: Surface wind. Thunderstorms and Cumulonimbus clouds. Freezing rain. Moderate / Severe icing. Severe turbulence. Severe mountain waves. Low visibility. Low level wind shear.</p>	<p>Windshear</p> <p>Underpinning knowledge Effects of weather on flight operations. Meteorology: Wind, cloud, thunderstorms, microbursts, icing, line squalls.</p>

Topic C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION

Sub-Topic C2.1 OBTAIN AERONAUTICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C2.1.1 Aeronautical information is obtained before taking over watch.	Sources of information: AIP, NOTAMS, Local notices. Airspace restrictions. Visual observation.	DK/GREENLAND/FAROE AIP Content and use of AIP, NOTAM. Aeronautical information circulars. Restricted, prohibited airspace. Danger areas. Aeronautical charts
C2.1.2 Aeronautical information is monitored during the watch.		
C2.1.3 Pilots' requests for information are promptly and appropriately responded to.		
C2.1.4 Required information is obtained promptly from appropriate agencies.		

Topic C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION

Sub-Topic C2.2 INTERPRET AERONAUTICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C2.2.1 Significant changes are recognised.	Operating conditions: Normal conditions. Unserviceable navigation aids. Unserviceable approach and landing aids. Reduction of safety services cover. Surface contamination.	Underpinning knowledge Communication and navigation systems, uses and limitations. Conditions affecting operations at aerodromes. Airspace restrictions.
C2.2.2 The relevance of aeronautical information to individual flights or agencies is established.		

Topic C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION

Sub-Topic C2.3 DISSEMINATE AERONAUTICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C2.3.1 Aircraft are advised of significant changes in aeronautical information. C2.3.2 Other agencies are advised of significant changes in aeronautical information.	Operating conditions: Normal conditions. Unserviceable navigation aids. Unserviceable approach and landing aids. Reduction of safety services cover. Surface contamination.	Flight information service. Essential aerodrome information. Underpinning knowledge Communication and navigation systems, uses and limitations. Conditions affecting operations at aerodromes. Airspace restrictions.

Topic D1 SELECT THE RUNWAY IN USE AND APPROPRIATE VISUAL AIDS

Sub-Topic D1.1 SELECT THE RUNWAY IN USE

Performance Objectives	Conditions	Essential Knowledge
D1.1.1 The prevailing weather conditions are evaluated.	Operating conditions: Day. Night. Low Visibility.	Landing direction and runway in use. Runway changes.
D1.1.2 The availability of essential aids is evaluated.		Underpinning knowledge Take off and landing performance of aircraft. Approach and landing aids use and limitations.
D1.1.3 Surface conditions are evaluated.		
D1.1.4 Operational requirements of aircraft are evaluated.		
D1.1.5 The runway selected is the most suitable.		

Topic D1 SELECT THE RUNWAY IN USE AND APPROPRIATE VISUAL AIDS

Sub-Topic D1.2 OPERATE AERODROME LIGHTING

Performance Objectives	Conditions	Essential Knowledge
D1.2.1 The prevailing weather conditions are evaluated.	Operating conditions: Day. Night. Low Visibility.	Aerodrome lighting aids:- Lighting systems in use at DK aerodromes. Operation of lighting systems and intensity controls. Periods of display.
D1.2.2 The serviceability of lighting aids is evaluated.		Local Procedures Notification of unserviceabilities.
D1.2.3 Lighting is operated in accordance with laid down procedures.		
D1.2.4 Failure or irregular operation of aerodrome lighting is notified in accordance with laid down procedures.		

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Topic E4 SELECT AND SET UP AERODROME CONTROL RADAR

Sub-Topic E4.1 SELECT AND SET UP AERODROME CONTROL RADAR

Performance Objectives	Conditions	Essential Knowledge
E4.1.1 Appropriate aerodrome control radar equipment is selected.	Operating conditions: Day. Night. Low visibility.	Aerodrome traffic monitor. Underpinning knowledge ATM principles of operation. Limitations of ATM Processing and display of ATM data.
E4.1.2 Controls are adjusted to provide best available performance.		
E4.1.3 Accuracy of aerodrome radar information is checked against laid down criteria.		
E4.1.4 Deficiencies are notified in accordance with local procedures.		

Topic E5 USE AERODROME CONTROL RADAR

Sub-Topic E5.1 USE AERODROME CONTROL RADAR

Performance Objectives	Conditions	Essential Knowledge
E5.1.1 Displayed information is accurately correlated with known traffic.	Traffic speeds: Low and high speed traffic.	Aerodrome traffic monitor Underpinning knowledge Processing and display of ATM data. Ground / Air Speed. Effect of wind. Effect of weather
E5.1.2 Action is taken to establish the identity of significant unknown returns.		
E5.1.3 Tracks and speeds are accurately assessed using displayed information.		
E5.1.4 Aircraft are informed, where necessary, of their position and other traffic.		
E5.1.5 Navigational assistance is provided in accordance with laid down procedures		

Topic E6 SELECT AND SET UP SURFACE MOVEMENT RADAR

Sub-Topic E6.1 SELECT AND SET UP SURFACE MOVEMENT RADAR

Performance Objectives	Conditions	Essential Knowledge
E6.1.1 Appropriate surface movement radar equipment is selected.	Operating conditions: Day. Night. Low visibility.	Underpinning knowledge SMR principles of operation. Limitations of SMR Processing and display of SMR data.
E6.1.2 Controls are adjusted to provide best available performance.		
E6.1.3 Accuracy of surface movement radar information is checked against laid down criteria.		
E6.1.4 Deficiencies are notified in accordance with local procedures.		

Topic E7 USE SURFACE MOVEMENT RADAR

Sub-Topic E7.1 USE SURFACE MOVEMENT RADAR

Performance Objectives	Conditions	Essential Knowledge
E7.1.1 Displayed information is accurately correlated with known traffic.	Traffic speeds: Low and high speed traffic.	Surface movement radar. Doc. 4444 Part 6 Use of surface movement radar.
E7.1.2 Action is taken to establish the identity of significant unknown returns.		
E7.1.3 Tracks and speeds are accurately assessed using displayed information.		
E7.1.4 Aircraft are informed, where necessary, of their position and other traffic.		

Topic G1 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME

Sub-Topic G1.1 MANAGE FLIGHTS OPERATING UNDER THE VISUAL FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
<p>G1.1.1 Flight data is assessed for actual and potential traffic conflicts.</p> <p>G1.1.2 Traffic is visually monitored to detect actual and potential conflicts.</p> <p>G1.1.3 The runway is safeguarded to ensure the safety of aircraft taking off and landing.</p> <p>G1.1.4 Traffic information is passed to enable pilots to position themselves in the traffic pattern.</p> <p>G1.1.5 Immediate action is taken to restore wake turbulence spacing when it has been eroded.</p> <p>G1.1.6 ATC procedures are adjusted to allow for the effects of weather on flight operations</p> <p>G1.1.7 ATC procedures are adjusted to allow for the effect of degradation of essential communication services on flight operations.</p>	<p>Airspace category : C,D, E and G.</p> <p>Types of separation: Departing aircraft. Reduced separation in the vicinity of aerodromes.</p> <p>Types of Flight: Fixed and Rotary Wing. VFR. Arriving, Departing, Local.</p> <p>Wake Turbulence Categories: Light, Medium, Heavy, Small.</p> <p>Weather conditions: VMC IMC Special VFR Suspension of VFR operations.</p> <p>Operating conditions: Day Night</p>	<p>Rules of the Air General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings.</p> <p>Aerodrome control:- Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Awaiting take off. Line up clearance. Take off clearance. Critical positions in the traffic circuit. Arriving aircraft. Exemptions from separation minima in the traffic circuit. Missed approach restrictions. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections.</p> <p>Longitudinal separation - departing aircraft. Vortex wake spacing requirements. Reduced separation - in the vicinity of aerodromes, search and rescue aircraft, loss of separation. Essential traffic information Altimeter setting and vertical reference</p> <p>Underpinning knowledge Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids.</p>

Topic G1 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME

Sub-Topic G1.2 MANAGE FLIGHTS OPERATING UNDER THE INSTRUMENT FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
<p>G1.2.1 Flight data is assessed for actual and potential traffic conflicts.</p> <p>G1.2.2 A control strategy is developed to achieve separation with the least average delay to flights.</p> <p>G1.2.3 The runway is safeguarded to ensure the safety of aircraft taking off and landing.</p> <p>G1.2.4 Departing aircraft separation is applied.</p> <p>G1.2.5 The applied separation is the most appropriate taking into account safety and expedition.</p> <p>G1.2.6 Traffic is visually monitored to detect actual and potential conflicts.</p> <p>G1.2.7 Traffic information is passed to enable pilots operating with visual reference to position themselves in the traffic pattern.</p> <p>G1.2.8 Immediate action is taken to restore separation when it has been eroded.</p> <p>G1.2.9 Immediate action is taken to restore wake turbulence spacing when it has been eroded.</p>	<p>Airspace category : A, C, D, E and G</p> <p>Types of separation: Departing aircraft. Reduced separation in the vicinity of aerodromes.</p> <p>Types of Flight: Fixed and Rotary Wing. IFR, Special VFR. Arriving, Departing, Local.</p> <p>Wake Turbulence Categories: Light, Medium, Heavy, Small.</p> <p>Weather conditions: VMC, IMC and Low Visibility.</p> <p>Operating conditions: Day Night</p>	<p>Rules of the Air General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings.</p> <p>Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Awaiting take off. Line up clearance. Take off clearance. Critical positions in the traffic circuit. Arriving aircraft. Exemptions from separation minima in the traffic circuit. Missed approach restrictions. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections.</p> <p>Separation standards: Longitudinal separation - departing aircraft. Vortex wake spacing requirements. Reduced separation - in the vicinity of aerodromes, search and rescue aircraft, loss of separation. Essential traffic information Altimeter setting and vertical reference</p> <p>Underpinning knowledge Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids.</p>

<p>G1.2.10 Appropriate essential traffic information is passed without delay.</p> <p>G1.2.11 ATC procedures are adjusted to allow for the effects of weather on flight operations.</p> <p>G1.2.12 ATC procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight operations.</p>		
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Topic G2 MANAGE AERODROME SURFACE MOVEMENTS

Sub-Topic G2.1 CONTROL AIRCRAFT ON THE MANOEUVRING AREA AND APRONS AND VEHICLES AND PERSONNEL ON THE MANOEUVRING AREA

Performance Objectives	Conditions	Essential Knowledge
G2.1.1 Aerodrome surface is monitored for potential conflicts.	Surface movements: Aircraft. Vehicles. Personnel.	Rules of the Air General Flight Rules - choice of IFR or VFR Aerodrome traffic rules. Aerodrome signals and markings.
G2.1.2 Clearances issued achieve the most expeditious flow consistent with safety.	Monitoring of surface movements: Visually. Reduced visibility	Aerodrome control: Provision of services. Responsibilities.
G2.1.3 The condition of the airfield surface is evaluated when permitting movements.	Communication by: Radiotelephony. Light signals.	Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft.
G2.1.4 Flow management requirements are met.	Mapping manoeuvring area: Exercise knowledge of the physical layout of the manoeuvring area.	Work on the manoeuvring area Aerodrome inspections.
G2.1.5 Requests for work on the airfield are evaluated and appropriately met.		Underpinning knowledge Flow management procedures Aircraft limitations on ground manoeuvring.
G2.1.6 Controlling traffic on manoeuvring area safely under reduced visibility conditions		
G2.1.7 Provide special assistance to aircraft and vehicles under reduced visibility conditions		
G2.1.8 Recognise and describe the layout of the manoeuvring area, assisting/guiding aircraft and vehicles		

Topic G3 CO-ORDINATE WITH OTHER ATC OPERATIONAL POSITIONS

Sub-Topic G3.1 CO-ORDINATE WITH APPROACH CONTROL OPERATIONAL POSITIONS

Performance Objectives	Conditions	Essential Knowledge
<p>G3.1.1 Traffic situation is analysed to determine the need for co-ordination.</p> <p>G3.1.2 Appropriate co-ordination is initiated in sufficient time to permit negotiation and any agreement to be effected.</p> <p>G3.1.3 The effect of co-ordination requested by approach control is assessed.</p> <p>G3.1.4 An appropriate course of action is negotiated and agreed.</p> <p>G3.1.5 The agreed course of action is effected.</p> <p>G3.1.6 Flow management requirements are met.</p>	<p>Control positions: Approach control. Approach radar control.</p>	<p>Responsibilities - Co-ordination.</p> <p>Aircraft performance. Standing agreements. Flow management procedures.</p>

Topic G4 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME WITH THE AID OF AERODROME CONTROL RADAR

Sub-Topic G4.1 MANAGE FLIGHTS OPERATING UNDER THE VISUAL FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
<p>G4.1.1 Radar information is integrated with information from other sources.</p> <p>G4.1.2 Traffic is monitored to detect actual and potential conflictions.</p> <p>G4.1.3 Traffic information is passed to enable pilots operating with visual reference to position themselves in the traffic pattern.</p> <p>G4.1.4 Immediate action is taken to restore separation when it has been eroded.</p> <p>G4.1.5 Immediate action is taken to restore wake turbulence spacing when it has been eroded.</p> <p>G4.1.6 Appropriate essential traffic information is passed without delay.</p> <p>G4.1.7 ATC procedures are adjusted to allow for the effects of weather on flight operations.</p> <p>G4.1.8 ATC procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight operations.</p>	<p>Airspace categories: C, D, E and G</p> <p>Operating conditions: Day. Night</p> <p>Weather conditions: VMC IMC</p> <p>Types of flight: VFR Special VFR</p>	<p>Rules of the Air General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings.</p> <p>Aerodrome control: Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Awaiting take off. Line up clearance. Take off clearance. Critical positions in the traffic circuit. Arriving aircraft. Exemptions from separation minima in the traffic circuit. Aerodrome traffic monitor. Missed approach restrictions. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections. Windshear.</p> <p>Separation standards:- Longitudinal separation - departing aircraft. Vortex wake spacing requirements. Reduced separation - in the vicinity of aerodromes, search and rescue aircraft, loss of separation. Essential traffic information Altimeter setting and vertical reference</p> <p>Underpinning knowledge Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation</p>

		and communications aids. Processing and display of ATM data.
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Topic G4 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME WITH THE AID OF AERODROME CONTROL RADAR

Sub-Topic G4.2 MANAGE FLIGHTS OPERATING UNDER THE INSTRUMENT FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
G4.2.1 Radar information is integrated with information from other sources.	<p>Airspace category : C, D, E and G</p> <p>Types of separation: Departing aircraft. Reduced separation in the vicinity of aerodromes.</p> <p>Types of Flight: Fixed and Rotary Wing. IFR, Special VFR. Arriving, Departing.</p> <p>Wake Turbulence Categories: Light, Medium, Heavy, Small</p> <p>Weather conditions: VMC, IMC and Low Visibility.</p>	<p>Rules of the Air General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings.</p> <p>Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Awaiting take off. Line up clearance. Take off clearance. Critical positions in the traffic circuit. Arriving aircraft. Exemptions from separation minima in the traffic circuit. Missed approach restrictions. Aerodrome traffic monitor. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections. Windshear.</p> <p>Longitudinal separation - departing aircraft. Vortex wake spacing requirements. Reduced separation - in the vicinity of aerodromes, search and rescue aircraft, loss of separation. Essential traffic information. Altimeter setting and vertical reference:-</p> <p>Underpinning knowledge Aircraft performance.</p>
G4.2.2 Flight data is assessed for actual and potential traffic conflicts.		
G4.2.3 A control strategy is developed to achieve separation with the least average delay to flights.		
G4.2.4 The runway is safeguarded to ensure the safety of aircraft taking off and landing.		
G4.2.5 Departing aircraft separation is applied.		
G4.2.6 The applied separation is the most appropriate taking into account safety and expedition.		
G4.2.7 Traffic is monitored to detect actual and potential conflicts.		
G4.2.8 Traffic information is passed to enable pilots operating with visual reference to position themselves in the traffic pattern.		
G4.2.9 Immediate action is taken to restore separation when it has been eroded.		
G4.2.10 Immediate action is		

<p>taken to restore wake turbulence spacing when it has been eroded.</p> <p>G4.2.11 Appropriate essential traffic information is passed without delay.</p> <p>G4.2.12 ATC procedures are adjusted to allow for the effects of weather on flight operations.</p> <p>G4.2.13 ATC procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight operations.</p>		<p>Effects of weather on flight operations. Use and limitations of navigation and communications aids. Processing and display of ATM data.</p>
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Topic G5 OPERATE SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS

Sub-Topic G5.1 OPERATE SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS

Performance Objectives	Conditions	Essential Knowledge
<p>G5.1 Surface movement guidance and control systems are operated in accordance with laid down procedures.</p>	<p>Operating conditions: Day. Night. Low visibility.</p>	<p>Types of surface movement guidance and control systems.</p> <p>Local procedures Operating procedures.</p>

Topic G6 MANAGE AERODROME SURFACE MOVEMENTS IN LOW VISIBILITY WITH THE AID OF SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS

Sub-Topic G6.1 CONTROL AIRCRAFT ON THE MANOEUVRING AREA AND APRONS AND VEHICLES AND PERSONNEL ON THE MANOEUVRING AREA

Performance Objectives	Conditions	Essential Knowledge
G6.1.1 Aerodrome surface is monitored for potential conflicts.	Operating conditions: Day. Night. Low visibility.	Rules of the Air General Flight Rules - choice of IFR or VFR Aerodrome traffic rules. Aerodrome signals and markings.
G6.1.2 The runway is safeguarded to ensure the safety of aircraft taking off and landing.	Other sources: Pilot reports. Other controllers.	Aerodrome control:- Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Work on the manoeuvring area Aerodrome inspections.
G6.1.3 Surface movement guidance and control systems are operated in accordance with laid down procedures.		Underpinning knowledge Flow management procedures Aircraft limitations on ground manoeuvring.
G6.1.4 Clearances issued achieve the most expeditious flow consistent with safety.		
G6.1.5 The condition of the airfield surface is evaluated when permitting movements.		
G6.1.6 Flow management requirements are met.		
G6.1.7 Requests for work on the airfield are evaluated and appropriately met.		

Topic G7 MANAGE AERODROME SURFACE MOVEMENTS WITH THE AID OF SURFACE MOVEMENT RADAR

Sub-Topic G7.1 CONTROL AIRCRAFT ON THE MANOEUVRING AREA AND APRONS AND VEHICLES AND PERSONNEL ON THE MANOEUVRING AREA

Performance Objectives	Conditions	Essential Knowledge
G7.1.1 Surface movement radar information is integrated with information from other sources.	Operating conditions: Day. Night. Low visibility. Other sources: Visual observation. Pilot reports.	Surface movement radar.
G7.1.2 Aerodrome surface is monitored for potential conflicts.		Rules of the Air General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, and choice of IFR or VFR. Aerodrome traffic rules. Aerodrome signals and markings.
G7.1.3 Clearances issued achieve the most expeditious flow consistent with safety.		Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information.
G7.1.4 The condition of the airfield surface is evaluated when permitting movements.		Control of surface traffic. Surface movement radar Taxiing aircraft. Work on the manoeuvring area
G7.1.5 Flow management requirements are met.		Underpinning knowledge Processing and display of SMR data.
G7.1.6 Request for work on the airfield are evaluated and appropriately met.		Flow management procedures. Aircraft limitations on ground manoeuvring.

Topic G8 EFFECT LIAISON WITH OTHER AGENCIES

Sub-Topic G8.1 LIAISE WITH NON ATC AGENCIES

Performance Objectives	Conditions	Essential Knowledge
G8.1.1 The sources of requests are verified. G8.1.2 Requests are evaluated for their effect on aerodrome operations. G8.1.3 Information on the status of the aerodrome and its associated aids is disseminated in accordance with local procedures.	Non ATC Agencies: Aerodrome Authority. Customs and Immigration. Police.	Aerodrome emergency services. Local Procedures.

Topic G8 EFFECT LIAISON WITH OTHER AGENCIES

Sub-Topic G8.2 LIAISE WITH THE SAFETY SERVICES

Performance Objectives	Conditions	Essential Knowledge
G8.2.1 The need for safety services call-out is identified in accordance with laid down criteria.	Safety services: Aerodrome fire and rescue services. Civil fire, ambulance and police.	Aerodrome fire service.
G8.2.2 Call-outs are initiated in accordance with local procedures.		Aerodrome emergency services.
G8.2.3 The category of call-out initiated is appropriate to the circumstances.		Aerodrome rescue and fire fighting.
G8.2.4 The sources of requests for off airfield attendance are verified.		Heliport fire fighting categories.
G8.2.5 Requests for off airfield attendance are evaluated for their effect on aerodrome operations.		
G8.2.6 Off airfield attendance is permitted in accordance with local procedures.		

Topic G9 HANDLE DIVERSIONS

Sub-Topic G9.1 HANDLE DIVERSIONS

Performance Objectives	Conditions	Essential Knowledge
G9.1.1 Information necessary to facilitate the diversion is obtained.	Types of diversion: Pilot initiated. Company initiated. ATC initiated.	Diversion procedures.
G9.1.2 Other relevant agencies are informed of the diversion.		Aerodrome actions
G9.1.3 Flight plan data is amended.		ATC actions.
G9.1.4 Diversion messages are issued when appropriate.		Underpinning knowledge Background on weather minima. Background on fuel management.

Topic G10 WORK AS A TEAM MEMBER ON THE AERODROME CONTROL OPERATIONAL POSITION

Sub-Topic G10.1 ACCEPT RESPONSIBILITY FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G10.1.1 Compliance with licensing and medical requirements is confirmed.	Initial arrival for duty period. Return following fatigue break.	Aeronautical information circulars Effects of drugs, medicines, fatigue, stress, medical conditions.
G10.1.2 Pre task briefing is carried out.		Air Navigation Order Licensing requirements. Certification of competence
G10.1.3 The current and projected traffic situation is obtained from the duty controller.		Actions before taking over an operational position.
G10.1.4 Current and projected workload is evaluated to determine whether the resources available are appropriate.		
G10.1.5 Action is taken to ensure resources are adequate for the task.		

Topic G10 WORK AS A TEAM MEMBER ON THE AERODROME CONTROL OPERATIONAL POSITION

Sub-Topic G10.2 MONITOR PERFORMANCE WHILST RESPONSIBLE FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
<p>G10.2.1 Assistance is called for in sufficient time to ensure personal capabilities are not exceeded.</p> <p>G10.2.2 Assistance provided to other team members is appropriate to the circumstances.</p> <p>G10.2.3 Current and projected workload is evaluated to determine whether the resources available are appropriate.</p> <p>G10.2.4 Action is taken to ensure resources are adequate for the task.</p> <p>G10.2.5 Rest/fatigue break requirements are complied with.</p> <p>G10.2.6 Concentration is maintained at an appropriate level for the task.</p> <p>G10.2.7 Indications of reduced or inadequate performance are acted upon in an appropriate manner.</p>	<p>Traffic flow: Light, Medium, Heavy.</p>	<p>Scheme for regulation of the working hours of civil ATCOs</p> <p><i>Underpinning knowledge</i> Indications of stress Indications of fatigue. Workload sharing.</p>

Topic G10 WORK AS A TEAM MEMBER ON THE AERODROME CONTROL OPERATIONAL POSITION

Sub-Topic G10.3 TRANSFER RESPONSIBILITY FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G10.3.1 The current traffic situation is clearly communicated to the relieving controller.	Running handover.	Scheme for regulation of the working hours of civil ATCOs
G10.3.2 The current and projected operating conditions are clearly communicated to the relieving controller.		Actions when handing over an operational position
G10.3.3 Current and projected workload is evaluated to determine whether the resources available are appropriate.		
G10.3.4 Action is taken to ensure resources are adequate for the task.		

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Topic H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME CONTROL UNIT

Sub-Topic H1.1 MANAGE RADIO FAILURES

Performance Objectives	Conditions	Essential Knowledge
H1.1.1 Aircraft radio failure is recognised from available information.	Types of failure: Ground radio. Partial and complete aircraft radio.	Pilot actions in the event of loss of communications. ATC procedures in the event of loss of communications.
H1.1.2 Standard radio failure procedures are implemented.	Environment: Radar and non-radar environment.	Reporting actions. Availability of supplementary flight plan information.

Topic H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME CONTROL UNIT

Sub-Topic H1.2 MANAGE SITUATIONS ARISING FROM UNLAWFUL INTERFERENCE

Performance Objectives	Conditions	Essential Knowledge
H1.2.1 The possibility of unlawful interference is recognised from available information.	Aircraft intending to land. Aircraft on ground.	Hi-jacking and the unlawful use of aircraft. Availability of supplementary flight plan information.
H1.2.2 Standard procedures are adhered to when dealing with aircraft subject to unlawful interference.		Reporting action.

Topic H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME CONTROL UNIT

Sub-Topic H1.3 MANAGE AIRCRAFT EMERGENCIES

Performance Objectives	Conditions	Essential Knowledge
H1.3.1 The possibility of an emergency situation existing is recognised from available information.	Types of emergency: Engine. Airframe. Fuel based. Medical.	Aircraft emergencies. Aircraft lost. Reporting action
H1.3.2 The nature of the emergency is determined.		Underpinning knowledge Aircraft performance and performance limitations.
H1.3.3 The level of priority over other traffic is evaluated		

Topic H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME CONTROL UNIT

Sub-Topic H1.4 PROVIDE ALERTING SERVICE

Performance Objectives	Conditions	Essential Knowledge
H1.4.1 Available information is evaluated to determine the phase of emergency existing.	Phases of emergency: Uncertainty. Alert. Distress.	Alerting service. Overdue aircraft. Reporting action.
H1.4.2 Actions follow laid down procedures appropriate to the phase of the emergency.		

Topic H2 MANAGE DOMESTIC CONTINGENCIES IN AN AERODROME VISUAL CONTROL ROOM

Sub-Topic H2.1 SAFELY EVACUATE THE CONTROL ROOM

Performance Objectives	Conditions	Essential Knowledge
H2.1.1 Available information is evaluated to determine the need to evacuate the control room.	Reasons for evacuation: Fire and Bomb Warnings.	Local procedures Evacuation of control room.
H2.1.2 Traffic is disposed of in accordance with laid down procedures.		
H2.1.3 Evacuation is conducted in accordance with laid down procedures.		

Topic H4 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED AERODROME CONTROL UNIT

Sub-Topic H4.5 RECOVER FROM A RADAR FAILURE

Performance Objectives	Conditions	Essential Knowledge
H4.5.1 Aircraft are informed of the failure	Airspace category: Control zone and/or Manoeuvring area Operating environment Total or partial radar failure Computer assisted failure Types of flight: Aircraft en route, joining, crossing and leaving controlled and advisory airspace.	Altimetry, Heights, Altitudes and Flight Levels. Effects of weather on flight operations. Use and limitations of navigation and communications aids.
H4.5.2 Flight data is assessed for actual and potential traffic conflicts.		Non radar separation standards. Radar separation standards. Wake turbulence spacing. Aircraft performance. Actions in the event of radar failure. Reporting action. Essential traffic information. Traffic information.
H4.5.3 A control strategy is developed to achieve separation with the least average delay to flights.		Ground based collision avoidance systems.
H4.5.4 Immediate action is taken to achieve non-radar separation according to the unit contingency plan.		Contingency plans
H4.5.5 Appropriate traffic information is passed without delay.		
H4.5.6 The applied separation is the most appropriate taking into account safety and expedition.		
H4.5.7 Appropriate traffic flow restrictions are applied.		
H4.5.8 Aircraft are identified on resumption of radar service.		
H4.5.9 Aircraft are informed of the resumption of radar service.		

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