



RAF Waddington

Defence Aerodrome Manual (DAM)

Issue 3.3 – 09 Aug 23



FOREWORD

1. **Purpose and Regulatory Framework.** RAF Waddington is a complicated operating environment, and the purpose of the Defence Aerodrome Manual (DAM) is to inform airfield users of the RAF Waddington operating environment, which includes the management, physical characteristics, services available & operating procedures of the aerodrome. The Manual is written to inform & direct military & civilian aircrew using the airfield & to provide orders for personnel operating on the airfield or providing airfield services. The Defence Aerodrome Manual conforms to the guidance provided by the Military Aviation Authority (MAA) in [Regulatory Article \(RA\) 1026](#). It includes the RAF Waddington Aerodrome Order Book & can be considered equivalent to the civilian Manual, [CAA CAP 168 Aerodrome Manual](#). [MAA RA1026](#) details the requirement for the appointed AO to produce and take ownership of the DAM. This document satisfies this requirement and has been produced in-line with the MAA guidance.
2. **Content.** This Manual contains detailed information regarding the aerodrome physical characteristics, aerodrome facilities and local area procedures however, it is essential that aircrew should refer to the Mil AIP, AIDU Aerodrome Booklet & Civil AIP documents for their primary source of aeronautical data as this document should not be relied upon for flight planning. Any anomalies should be brought to the attention of the undersigned without delay. All airfield users are to adhere to the Taxiway and Aircraft Bay nomenclature used within the DAM for any RT procedures. AESOs, Sqn Orders and SOPs should be reviewed to ensure full compliance with naming conventions.
3. **Responsibilities.** The Manual is mandated reading for operators of Waddington-based aircraft, and all Waddington-based personnel responsible for the delivery of airfield services. Visiting and civil aircraft operators, and aerodrome users, must comply with the rules and guidelines of this manual. The orders contained within this manual do not absolve any person from using their best judgement to ensure the safety of aircraft and personnel. Where safety or operational imperatives demand, the orders may be deviated from, provided that a convincing case can be offered in retrospect.
4. **Request for Change.** Authorisation of amendments (changes to process, regulation, equipment, and services) are the responsibility of Chapter, Section and Annex 'Information Owners' and are co-ordinated through Operations Support Wing Assurance Support. Notification of errors and requests for change can be made in accordance with the details found in this document.

OC Operations Support Wing
RAF Waddington

DISTRIBUTION

External:

RAF Coningsby OC Ops Wg
RAF Cranwell OC Ops Wg
RAF Coningsby TATCC – OC WAD RADAR & WAD RADAR WO
Lincs & Notts Air Ambulance
Internal:
Stn Cdr
Cdr Air Wg (ISTAR DDH)
Cdr Display Wg (Hawk T Mk 1 DDH)
OC Ops Spt Wg/Aerodrome Operator
OC Air Wg Spt/ISTAR Senior Operator
COS Display HQ/Hawk T Mk1 Senior Operator
OC BSW
OC Air Wg Eng
OC ESS
OC RAFAT
OC 13 Sqn
OC 14 Sqn
OC 51 Sqn
OC 54 Sqn
OC Ops Sqn
OC DSF (Formerly OC Cyber Sqn)
13 Sqn Ops
14 Sqn Ops
51 Sqn Ops
SATCO
OC ISTAR StanEval
OC RAFAT StanEval
OC Safety Centre
OC Logs Sqn
MCO
WO Fire
SMO
OC RAFP & Sy Flt
OIC Waddington Flying School
Duty Ops Controller
Duty Eng Ops Controller
SFSO
S FOD O
S Met O

DAM REQUEST FOR CHANGE

Person making request:				
Rank	Name	Section	Ext	Email
Change Details				
Page		Chapter	Para	
Current Text:				
Proposed Text:				
Amplifying Comments:				
<p>Once complete the proposed changes are to be emailed to Ops Spt Wg Assurance for consideration</p> <p>(WAD-Ops-WgAssurance&Audit@mod.gov.uk)</p> <p>(WAD-FS-OpsSptWg-Assurance)</p>				
<hr/>				
Implementation Actions				
Ref No.				
Ops Spt Wg Assurance & Audit Actions				
E / S / C*				
Recommendation				
Action				
*E-Editorial, S-Substantial, C-Critical				
Information Owner Review				
Role				

Implement at next update**	Immediate update**	Reject Change Request**	
Comments:			
Rank & Name		Date	
**Delete as required.			
AO Approval			
Rank & Name		Date	
Ops Spt Wg Assurance & Audit Final Actions			
Approved	• Send to Editor	Date	
	• Send to Originator	Date	
Rejected	• Send Feedback to originator	Date	

[Link to Word version of RFC.](#)

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1.1	Name & Work Address of Aerodrome Operator	OC Ops Sqn
1.2	Aerodrome Operators Authority & Letter of delegation	OC Ops Sqn
1.3	Safety Meeting Structure	OC Safety Centre
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1.5	Aerodrome Operating Hazard Log (AOHL)	SATCO
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<u>CHAPTER 2: AERODROME DATA, CHARACTERISTICS & FACILITIES</u>		
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2.3	Noise Abatement Procedure Orders	SATCO
2.4	Temporary Obstruction Orders	OC Logs & SATCO
2.5	Runway Strip Obstructions	SATCO
2.6	Runway End Safety Area (RESA)	SATCO
2.7	Light Aggregate (Lytag) Arrestor Beds or Engineered Materials Arrestor Systems (EMAS)	SATCO
2.8	Aerodrome Arresting System Orders	SATCO
2.9	Manoeuvring Area Safety and Control Orders	SATCO

<u>CHAPTER 3: EMERGENCY & AERODROME RESCUE & FIREFIGHTING ORDERS</u>		
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3.1	Emergency Organisation	OC Ops Sqn
3.2	Emergency Orders – Aerodrome Crash Plan	OC Ops Sqn
3.3	Aerodrome Rescue & Fire Fighting (ARFF) Services & Training Orders	Flt Cdr Fire
3.4	Disabled Aircraft Removal Orders	OC Ops Sqn/OC ESS
<u>CHAPTER 4: AIR TRAFFIC SERVICES & LOCAL PROCEDURES</u>		
Para	Title	Information Owner
4.1	Air Traffic Control Orders	SATCO
4.2	Air Traffic Control Services	SATCO
4.3	Departure Procedures	SATCO
4.4	Approach Procedures	SATCO
4.5	Aerodrome Procedures	SATCO
<u>CHAPTER 5: AERODROME ADMINISTRATION & OPERATING PROCEDURES</u>		
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5.2	Aerodrome Serviceability Inspection – Orders	SATCO
5.3	Aerodrome Technical Inspection – Orders	SATCO
5.4	Radar, Radio & Navigation Aid Maintenance, Monitoring & Protection	SATCO (Action OC DSF)
5.5	Aerodrome Works Safety	SATCO
5.6	Aerodrome Users – Vehicle & Pedestrian Control	SATCO
5.7	Foreign Object Damage/Debris (FOD) Prevention – Training & Awareness	S FOD O
5.8	Aerodrome Wildlife Management	SATCO
5.9	Low Visibility Operations	SATCO
5.10	Snow & Ice Operations	OC Ops Sqn
5.11	Thunderstorm & Strong Wind Procedures	OC ESS
5.12	Civil Aircraft Aerodrome Usage – Terms & Conditions	OC Ops Sqn

5.13	Safeguarding Requirements – Waivers & Exemptions	SATCO
5.14	Aerodrome Assurance Activity	OC Ops Sqn
5.15	Electrical Ground Power Procedures	OC ESS
5.16	Aviation Fuel Management Procedures	OC Logs
5.17	Hazardous Materials Spillage Plan	OC Logs
5.18	Jettison & Fuel Dumping Area	OC Ops Sqn
5.19	Compass Calibration Base	SATCO
5.20	Explosive Ordnance Disposal Area	OC ESS
5.21	Dangerous Goods (DG) Procedures	OC Logs
5.22	Hydrazine (H70) Leak	OC Ops Sqn
5.23	Remote Piloted Aircraft (RPAS) Orders	SATCO
5.24	Aircraft Parking	OC Ops Sqn
5.25	Force Protection	OC Police & Sy
5.26	RAF Waddington Aerodrome Order Book (AOB)	SATCO

AMENDMENTS					
Amendment No	Substantial Changes	Name	Amendment Date	Date Incorporated	Signature
Issue 3.0	DAM major format change – (Chapter 2) Deletion of RAF Scampton references Terminology change (Air System – Aircraft)		13 Apr 23	13 Apr 23	
Issue 3.1	Minor chg to AOB Order C102 (CWL/WAD Twr to Twr procedures)		15 Apr 23	15 Apr 23	
Issue 3.2	Hawk T1 Circuit Procedures; Engine Ground Run Order; LOA updates; Fire and Rescue (RAFAT) procedures; FRD RAFP Procedure; and Rotors Running Order Suspended.		03 Aug 23	03 Aug 23	
Issue 3.3	Wg Cdr removed as AO and replaced with Wg Cdr. Practice Approaches, Approach Procedures, Civil Aircraft Aerodrome Usage – Terms & Conditions and Aerodrome Rescue & Fire Fighting Services & Training Orders amended.		09 Aug 23	09 Aug 23	
AMENDMENT PROCESS					
Any suggested amendments are to be emailed to OC Ops Sqn for consideration.					
DAM MASTER VERSION					
The RAF Waddington DAM conforms to Version 9 of the MAA DAM template.					

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ANNEXES		INFORMATION OWNER
Annex A	Aerodrome Operator Letter of Delegation	OC Ops Sqn
Annex B	Safety Meeting Structure	OC Safety Centre
Annex C	Aerodrome Key Stakeholders	OC Ops Sqn
Annex D	Aerodrome Operators Hazard Log & BMHL	SATCO
Annex E	Formal Aerodrome Related Agreements	SATCO
Annex F	Aerodrome Alternative Acceptable Means of Compliance (AAMC), Waivers and Exemptions	SATCO
Annex G	Aerodrome Location & Control of Entry & Access	OC Police & Sy
Annex H	Noise Abatement Procedure – Orders	SATCO
Annex I	Temporary & Permanent Obstruction – Orders	SATCO
Annex J	Aerodrome Arresting System – Orders	SATCO (OC ESS input)
Annex K	Manoeuvring Area Safety & Control – Orders	SATCO (OC ESS & OC Ops Input)
Annex L	Emergency Orders / Aerodrome Crash Plan	OC Ops Sqn
Annex M	Aerodrome Rescue & Fire-Fighting Services & Training – Orders	Flt Cdr Fire
Annex N	Disabled Aircraft Removal	OC Ops Sqn
Annex O	Air Traffic Control – Orders	SATCO
Annex P	Aerodrome Data Reporting Procedures – Orders	SATCO
Annex Q	Aerodrome Serviceability Inspections – Orders	SATCO
Annex R	Aerodrome Technical Inspections – Orders	SATCO
Annex S	Radar, Radio & Navigation Aid Maintenance, Monitoring & Protection – Orders	SATCO (Action OC DSF)
Annex T	Aerodrome Works Safety – Orders	SATCO
Annex U	Aerodrome Users – Vehicle & Pedestrian Control – Orders	SATCO
Annex V	FOD Prevention, Training & Awareness – Orders	S FOD O
Annex W	Aerodrome Wildlife Management – Orders	SATCO
Annex X	Low Visibility Operations (LVP) – Orders	SATCO
Annex Y	Snow & Ice Operations – Orders	OC Ops Sqn
Annex Z	Thunderstorm & Strong Wind Procedures – Orders	OC ESS
Annex AA	Civil Aircraft Aerodrome Usage – Terms & Conditions including Breach	OC Ops Sqn
Annex BB	Safeguarding Requirements	SATCO
Annex CC	Electrical Ground Power Procedures – Orders	OC ESS
Annex DD	Aviation Fuel Management Procedures – Orders	OC Logs

Annex EE	Handling of Hazardous Materials (Spillage Plan) – Orders	OC Logs
Annex FF	Jettison Area – Orders (Nil at Present)	OC Ops Sqn
Annex GG	Compass Calibration Base – Orders	SATCO
Annex HH	Explosive Ordnance Disposal Area – Orders	OC ESS
Annex II	Dangerous Goods (DG) Procedures – Loading /Unloading – Orders	OC Logs
Annex JJ	Hydrazine (H70) Leak – Orders	OC Ops Sqn
Annex KK	UAS / RPAS – Orders	SATCO
Annex LL	Aircraft Parking	OC Ops Sqn
Annex MM	Force Protection Responsibilities – Force Protection (FP) Orders (Kept separately due to security classification)	OC Police & Sy
Annex NN	RAF Waddington AOB	SATCO

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Chapter 1 – TECHNICAL ADMINISTRATION

1.1	NAME & WORK ADDRESS OF AERODROME OPERATOR (AO)
Rank	Name
Wg Cdr	
Address	Contact
Officer Commanding Operations Support Wing	Mil: 95771 6532
RAF Waddington	Civ: 01522 72 6532
LINCOLN	Email: via Stn Ops (see 2-1)
LN5 9NB	
1.2	AERODROME OPERATORS AUTHORITY
<p>The AO is responsible for the management of an aerodrome environment in order to accommodate the safe operation of Aircraft in accordance with MAA RA1026. The management & running of the aerodrome is a Duty Holder Facing (DHF) responsibility. The AO has been issued a letter of delegation by the Head of Establishment (HoE) who has responsibility for the aerodrome. A copy can be found at Annex A.</p>	
1.3	SAFETY MEETING STRUCTURE
<p>An organisational aviation safety meeting flow diagram can be found at Annex B.</p>	
1.4	AERODROME KEY STAKEHOLDERS
<p>Detail of RAF Waddington Key Stakeholders can be found at Annex C.</p>	
1.5	AERODROME OPERATING HAZARD LOG (AOHL)
<p>The RAF Waddington DAM AOHL (abbreviated, with some BMHL information) can be found at Annex D. The AOHL is a living document it is updated regularly & reviewed by the Hazard Review Group which meets monthly. The Battlespace Management Hazard Log (BMHL) is also linked at Annex D.</p>	
1.6	FORMAL AERODROME RELATED AGREEMENTS
<p>All formal aerodrome related agreements are detailed at Annex E. These agreements are to be reviewed annually by the AO.</p>	
1.7	AERODROME ALTERNATIVE ACCEPTABLE MEANS OF COMPLIANCE (AAMC), WAIVERS AND EXEMPTIONS
<p>Details of all RAF Waddington aerodrome related Waivers, Exemptions & approved AAMC can be found at Annex F.</p>	
1.8	AERODROME LOCATION, CONTROL OF ENTRY & ACCESS
<p>RAF Waddington is located within the village of Waddington & is 4 miles South of the city of Lincoln, Lincolnshire. The nearest train to RAF Waddington is Lincoln Central. Buses run regularly along the A607 providing regular access to either Lincoln City Centre to the north or Grantham to the south. Local area & Aerodrome Crash Plan maps can be found below. The aerodrome location, control of entry & access points can be found at Annex G.</p>	

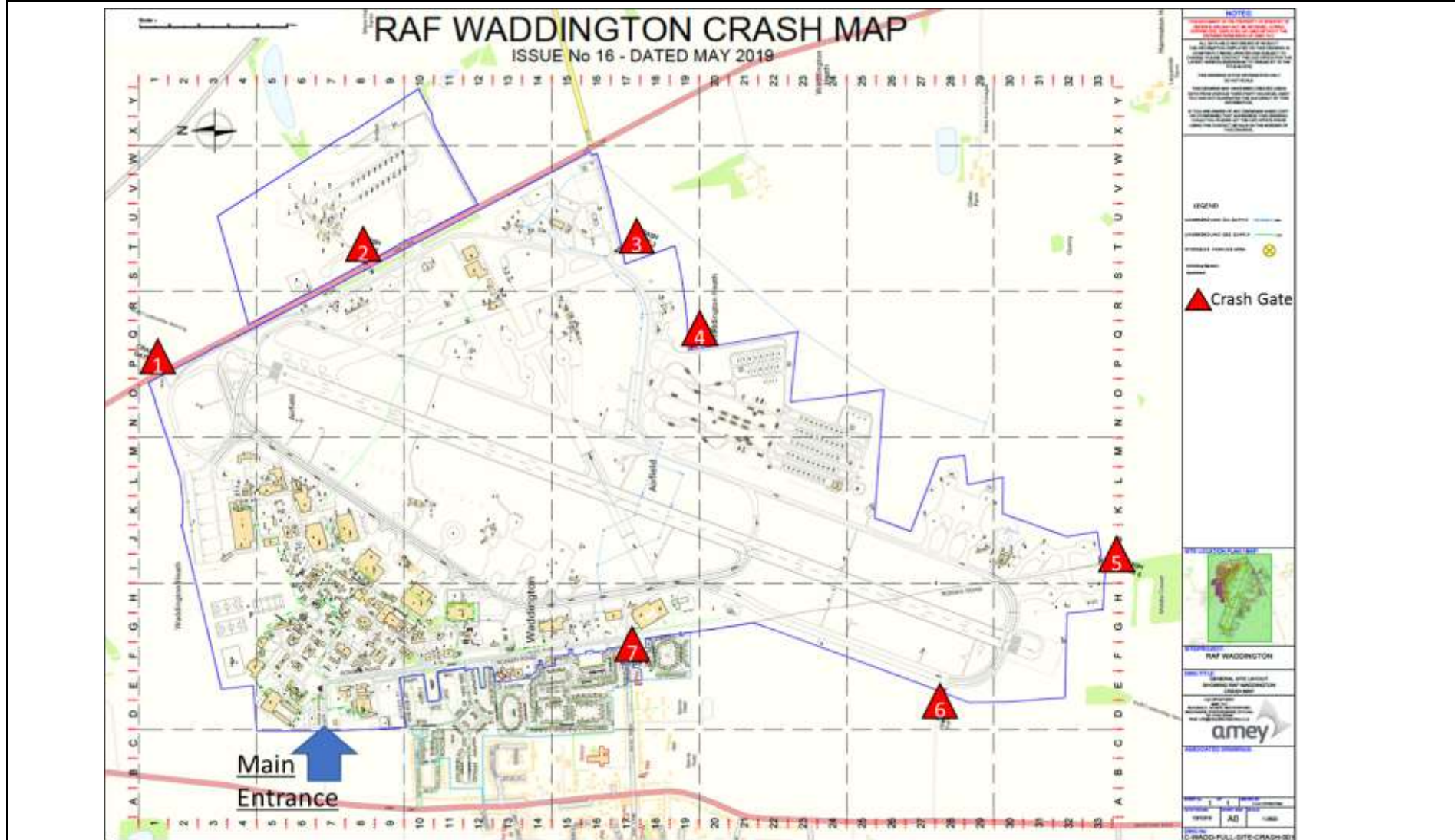
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LOCAL AREA MAP



LOCAL AREA MAP (REFINED)





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Chapter 2 – AERODROME DATA FACILITIES & CHARACTERISTICS

Source Data: Measured Heights Survey (MHS) (Nov 21)		
RAF Waddington Biennial Inspection Final BAIR Nov 22		
2.1	AERODROME DATA	
EGXW – RAF WADDINGTON		
	ARP Co-ordinates & site at AD	53 09 58.18N 000 31 25.82W centred on mid-point of RWY 02/20.
	Direction & distance from City	4nm South of Lincoln.
	Elevation/Reference Temperature	230ft/21°C
	Magnetic Variation/Annual Change	0° 07’W (07/10/2020) / -0°12’ E.
	Geoid Undulation at AD Elev Position	Data not available
	AD Administration	
	Address	Royal Air Force Waddington Lincoln LN5 9NB
	Telephone	Mil: 95771 7301 / 6532 (Ops). Civ: (01522) 727301 / 726532
	Fax	Mil: 95771 6786 (Ops)
	E-mail	Wad-StationOps@mod.gov.uk WADOPS@outlook.com
	Website	http://www.raf.mod.uk/rafwaddington/
	Types of Traffic Permitted (IFR/VFR)	IFR/VFR
	Remarks	Nil

2.2	SPECIAL PROCEDURES				
	2.2.1	2.2.2	2.2.3	2.2.4	2.2.5
	Elev	Var	TA	DATE	CHART NO.
	230ft	0°W	3000ft	25 Mar 21	B1
2.2.6	Practice Diversions	All PD are to be booked in advance owing to high demand of Waddington & EG R313 activity; bookings by R/T will not normally be accepted.			
2.2.7	Departures	Departures in the sector 130°- 220° will not normally be approved without prior coordination with Cranwell. Fast jets departing the airfield under VFR are not to fly below 500ft QFE until clear of the CMATZ boundary. All right-hand departures from Runway 20 are to climb on Runway Tr to WAD 3d or 1400QFE before commencing the turn. All other non-standard IFR departures, including into the instrument pattern, are to climb on Runway Tr to 1400QFE before commencing the turn. Aircraft requiring entry to Cranwell MATZ are to request coordination prior to departure.			
2.2.8	Airspace Reservations	When aerobatics are taking place in EGR 313, instrument approaches to Rwy 20 are not permitted. Aircraft should be prepared to hold-off for up to 30 mins or execute visual or radar to visual recoveries.			
2.2.9	Armed Aircraft	Pilots of visiting & diverted Aircraft are to inform ATC on initial contact if the Aircraft is armed. Waddington does not have any licensed forward firing bays.			
2.2.10	TACAN	All right-hand departures from Rwy 20 are to climb on Rwy Tr to WAD 3d or 1400 QFE prior to turning.			
2.3	NOISE ABATEMENT PROCEDURES ORDERS				
Orders contained at Annex H cover all noise abatement procedures.					
2.4	TEMPORARY OBSTRUCTIONS ORDERS				
Orders, contained at Annex I cover the actions involved in dealing with temporary obstructions on or around any manoeuvring area that are considered to be a hazard to either Aircraft or vehicles.					
2.5	RUNWAY STRIP OBSTRUCTIONS				
A Rwy Strip clear obstacles should extend at least 150m either side of the Rwy centreline & 60m before the threshold & beyond the Rwy end. A number of obstacles at RAF Waddington lie within the Rwy strip. A list of obstructions can be found at the following link: Runway Strip Obstructions . MAA RA 3500 series – Aerodrome Design & Safeguarding provides further information.					

2.6	RUNWAY END SAFETY AREA (RESA)				
The RESA provides undershooting or overrunning Aircraft with a cleared & graded area. The RAF Waddington RESA dimensions are as follows:					
	<table> <tr> <td>RWY 02RH</td><td>90m</td></tr> <tr> <td>RWY 20</td><td>90m</td></tr> </table>	RWY 02RH	90m	RWY 20	90m
RWY 02RH	90m				
RWY 20	90m				
2.7	LIGHT AGGREGATE (LYTAG) ARRESTOR BEDS OR ENGINEERED MATERIALS ARRESTOR SYSTEM (EMAS).				
LYTAG is not present at RAF Waddington.					
2.8	AERODROME ARRESTING SYSTEM ORDERS				
Orders contained at Annex J cover the maintenance & safe operation of the RHAG in accordance with extant policy guidance. RAF Waddington does not have a barrier.					
2.9	MANOEUVRING AREA SAFETY & CONTROL ORDERS				
The Manoeuvring Area Safety & Control Orders can be found at Annex K .					
Manoeuvring Area Safety & Control Orders					
2.9.1	Arrangements for allocating Aircraft parking positions.				
2.9.2	Arrangements for initiating engine start.				
2.9.3	Ensuring clearance for Aircraft push-back (if required) / restricted taxiing.				
2.9.4	Marshalling services.				
2.9.5	'Follow-me' provision.				
2.9.6	Orders for operation of the 'Follow-me' vehicle procedures & Aircraft marshalling.				
Procedures to ensure Manoeuvring Area Safety					
2.9.7	Protection from jet blast.				
2.9.8	Enforcing of safety precautions during Aircraft refuelling operations.				
2.9.9	Orders for Runway & Apron sweeping; Apron cleaning.				
2.9.10	Arrangements for reporting incidents & accidents on an apron etc.				

Chapter 3 – EMERGENCY, RESCUE & FIREFIGHTING ORDERS

The AO is to be familiar with the following documents & requirements:	
RA 3261(2) :	Aerodrome Emergency Services
RA 3263 :	Aerodrome Classification
RA 3049 :	Defence Contractor Flying Organization responsibilities for UK Military Aircraft Operating Locations
DSA DFRS 02	Defence Aerodrome Rescue & Firefighting (ARFF) Regulations
Capita IRMP	RAF Waddington Integrated Risk Management Plan (Password = Scotland.1)
3.1	EMERGENCY ORGANISATION
<p>The AO is to be familiar with RA 3261(2); RA 3263 and DSA02 DFRS¹. ►◄ RA 3049² stipulates that Defence Contractor Flying Organizations operating MAA-regulated Aircraft must meet the requirements detailed in DSA02 DFRS³. The relationship between the AO and the Defence ARFF Service Provider is defined within DSA02 DFRS³ and the Business Agreements between Defence ARFF Service Provider and the TLBs. The Defence ARFF Service Provider is a DH-Facing Organization and its Fire Stations operate to national good practice providing a service to the AO. This is detailed within the current Joint business agreement.</p>	
3.2	EMERGENCY ORDERS / AERODROME CRASH PLAN
<p>Emergency Orders / Aerodrome Crash Plans are to be produced and contained at Annex L, iaw guidance contained within the Manual of Post Crash Management (MAPCM), RA 1400(1)⁴ and DSA02 DFRS³. Orders are to cover the eventuality of an Aircraft accident / incident, on the Aerodrome or within the 1000 m area assessment from runway thresholds, AOs may also consider the establishment's Post Crash Management Area of Responsibility. The plan is to be exercised by tabletop or live-ex on alternate years iaw extant regulations. In addition, the Aerodrome Crash Plan may be made available to the local Resilience Forum. Consideration may be given to producing specific orders in the event the runway is declared 'BLACK'. For the provision of passenger management, a passenger evacuation management system (PEMS) has been detailed in CONPLAN1.</p>	
3.3	AERODROME RESCUE & FIRE FIGHTING SERVICES & TRAINING ORDERS
<p>The Fire Station Manager, iaw DSA02 DFRS³, is to ensure that the following information is produced and contained via hyperlinks at Annex M.</p>	
Operational Output	
3.3.1	Generic Standard Operational Procedures
3.3.2	Local Standard Operational Procedures

¹ Refer to RA 3261(2): Aerodrome Emergency Services, RA 3263 – Aerodrome Classification and DSA02 DFRS – Defence ARFF Regulation.

² Refer to RA 3049 – Defence Contractor Flying Organization Responsibilities for UK Military Air System Operating Locations.

³ Refer to DSA02 DFRS – Defence ARFF Regulation.

⁴ Refer to RA 1400(1): Flight Safety.

3.3.3	FRS Generic Risk Assessments
3.3.4	Defence ARFF Service Provider Chief Fire Officers Instructions
3.3.5	Tactical Information / Response Plans covering site-specific operational requirements
3.3.6	Fire Section Orders
Task Resource Analysis (TRA)	
<p>RAF Waddington is designated as ICAO 'crash category seven' airfield, providing ARFF (at a level dictated by output requirements) and structural cover 24 hours a day, seven days a week</p> <p>The Defence ARFF Service Provider will provide RAF Waddington with appropriate aerodrome rescue & firefighting cover, as derived from an aerodrome task & resource analysis (TRA). The TRA will be based on agreed worst credible scenarios (WCS) & will ensure that resources are always available & aligned with operating hours, to ensure that the on-site fire & rescue service is operationally prepared to provide this service. Up to ICAO 8 can be provided on a surge basis.</p> <p>An increased ARFF response, termed ICAO 7 '+ RAFAT', is specifically for planned and agreed ops for RAFAT Dual Seat Formation Take Off/Landings, only when an operational necessity has been identified iaw DSA02 and in conjunction with WAD TRA TTP's – ICAO 7 + RAFAT – Annex B Addendum to WAD TRA V1.3 – The Red Arrows.</p>	
3.3.7	TRA Report for each ICAO Aerodrome category promulgated at Annex M.
ARFF Assessments	
<p>To ensure that ARFF Services are operationally prepared for the provision of service, they are required as defined within DSA DFSR 02 to carry out the following assessments:</p> <p>Fire Section - Response Area Assessment</p> <p>Fire Section - 1000 Meter Assessment</p> <p>Fire section- Water assessment</p> <p>These assessments are contained in the Fire Service SharePoint area.</p>	
3.3.8	DFSR Form 01 – Response Area Assessment
3.3.9	DFSR Form 02 – 1000m Assessment
3.3.10	DFSR Form 03 – Water Assessment
3.3.11	DFSR Form 04 – Category for Specific Hazard Assessment
3.3.12	DFSR Form 06 – Reduction of ARFF Cover
	<p>Circumstances may require that flying is conducted to/from aerodromes with reduced levels of ARFF services. HoE/ADHs may approve such activity following a risk assessment informed by advice from the On-site ARFF provider. ARFF Reduction of Cover – Hazard Assessment – (DDH) must be completed. All completed risk assessments are to be recorded/stored within the Fire Service SharePoint area.</p>

ARFF Training Area Orders & Training Area Risk Assessments	
ARFF Training area risk assessments & orders are contained at Annex M . For Units that do not have onsite training facilities this annex is to provide details of how all Mandated Core Competencies required by ARFF personnel are maintained.	
3.3.13	Orders: MPFTS Trg Simulator
3.3.14	Risk Assessments: Fire Trg
3.4	DISABLED AIRCRAFT REMOVAL
The AO is to ensure that orders, contained at Annex N , are in place to cover the requirement to quickly and safely remove an Aircraft that has caused a temporary closure of a runway, taxiway or Aircraft Servicing Platform (ASP), but falls beneath the criteria of an accident that would be dealt with separately under the Aerodrome Aircraft Crash Plan. The following points may be considered:	
ATCO I/C	
3.4.1	Notification of the ARFF Services & Duty Operations Controller (DOC).
3.4.2	Aircraft identification & type.
3.4.3	Nature of Aircraft un-serviceability.
3.4.4	Location of Aircraft.
3.4.5	Section of the manoeuvring area affected.
3.4.6	Persons On Board (POB).
3.4.7	Estimated time of Arrival (ETA) of all Aircraft requiring use of the closed runway.
3.4.8	Latest time for affected Aircraft to divert.
3.4.9	Any unserviceable areas of the manoeuvring area are correctly marked to provide for safe Aircraft operation of the remaining areas.
Stations Operations	
3.4.10	Notify ATC of a disabled Aircraft if not already aware.
3.4.11	Ensure the appropriate Notice to Airperson (NOTAM) has been raised.
3.4.12	If required carry out RUNWAY BLACK plan.
3.4.13	Notify OC OSW / OC Ops Sqn (or equivalent), Eng Ops (or equivalent), VAHS/Movements (or equivalent), appropriate Sqn (if it affects a station-based Aircraft).

3.4.14	Contact Defence Accident Investigation Branch (DAIB) Air, if applicable or if clarification is required that the Station assessment of the incident falls beneath that warranting an Air Accident Investigation Branch (AAIB) investigation ⁵ .
STATION OPS MANAGEMENT	
3.4.15	Obtain & record permission from the owner or duly authorized representative of the owner of the Aircraft to the movement of the disabled Aircraft.
3.4.16	Notify all Aircraft operators likely to be affected if RUNWAY BLACK.
3.4.17	For civilian Aircraft, notify the Aircraft operating authority & AAIB.
Fire Section	
3.4.18	Respond iaw DSA DFSR 02 – Defence Aerodrome Rescue & Fire Fighting (ARFF) Regulations & site-specific Incident Plan.
Aircraft Owner	
3.4.19	The Aircraft owner is defined as the holder of the Certificate of Registration & can be held responsible for the Aircraft removal & disposal of fuel & other hazardous materials that have been spilt because of an incident (noting the aerodrome will have instigated the Stn Spill Plan). When advised of an Aircraft, the owner should liaise with Station Operations (or equivalent) to discuss its removal.
VAHS / Eng Control (or equivalent)	
3.4.20	Once cleared by Ops, tow the disabled Aircraft clear with the appropriate towing arm or 'universal dolly'.

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⁵ If the AAIB elect to conduct an on-scene investigation, the disabled aircraft cannot be removed until authorized by the AAIB. AAIB will require Aircraft identification and type; nature of un-serviceability; location; section of the manoeuvring area affected and POB. 2022DIN06-005 contains additional information on when and by what method accidents and serious incidents are to be reported to the DAIB.

Chapter 4 – AIR TRAFFIC SERVICES & LOCAL PROCEDURES

4.1	AIR TRAFFIC CONTROL ORDERS
ATC Operational Management Orders are produced to cover all ATC procedures involved in the safe & expeditious flow of ATC. The orders take into account any direction & guidance contained with the MMATM & in accordance with MAA RA 3000 series (ATM) to ensure compliance & are contained at Annex O .	
4.2	ATC SERVICES
4.2.1	Deconfliction Service (DS)
A surveillance based ATS where the controller provides specific surveillance derived traffic information & issues headings &/or levels aimed at achieving planned deconfliction minima against all observed Aircraft in Class G airspace, or for positioning &/or sequencing. The avoidance of other traffic is ultimately the pilot's responsibility. A DS may be provided in the Waddington ATC Area Of Responsibility (AOR), subject to regulations laid down in CAP 774 Chapter 4.	
4.2.2	Traffic Service (TS)
A surveillance based ATS where the controller provides specific surveillance derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings &/or levels for the purposes of positioning &/or sequencing. The controller is not required to achieve deconfliction minima. The avoidance of other traffic is ultimately the pilot's responsibility. ATS may be provided in the Waddington ATC AOR subject to regulations laid down in CAP 774 Chapter 3.	
4.2.3	Basic Service (BS)
An ATS provided for the purpose of giving advice & information useful for the safe & efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information & any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility. A BS may be provided at Waddington in accordance with CAP 774 Chapter 2.	
4.2.4	Lower Airspace Radar Service (LARS)
Lincs TATCC is tasked with providing a LARS within 30nm of Waddington. Aircraft may call Waddington Zone on frequency 119.50 VHF or 232.70 UHF for a LARS service. This LARS service is subject to availability & controller capacity within the published hours Mon-Thu 0800-1800, Fri 0800-1300 (all times local), subject to Station based Op requirements (a NOTAM would be issued in advance of any changes to published weekend LARS hours).	
4.2.5	Waddington Visual Circuit
Vis ccts at WAD are approved. Std circuit height is 1000ft QFE (1300ft QNH), with a low-level circuit at 500ft QFE (800ft QNH) on request.	

4.2.6	Helicopter Visual recoveries / departures
<p>Waddington regularly hosts helicopter detachments & refuelling moves. In order to standardise arrival & departure profiles, the following procedures apply:</p> <p>Visual recoveries & VFR departures are to route inbound /outbound either from the West via Swinderby, or East via Metheringham, maintaining not above 500ft QFE (730ft QNH) inside the aerodrome boundary.</p>	
4.2.7	Glider & Microlight Activity
<p>Gliders and microlights are operating from an increasing number of sites around the Lincolnshire area. With most gliders being neither transponder or Automatic Detection System-Broadcast (ADS-B) equipped they will not show on WAM or Airborne Collision Avoidance Systems. This leaves Star NG PSR as the only regularised equipment available to ATC that will detect a glider. However, this will not provide information with regards to Height or Altitude.</p> <p>FLARM derived information can be accessed from standalone laptops by an ATC Supervisor or ATCO IC functioning in a non-controlling capacity. During periods of suspected high glider activity, the supervisors or ATCO ICs, or a TC (RA) endorsed controller not in a controlling position, can use FLARM to provide additional information to increase SA for aircrew. When relaying altitude information from FLARM, the SRE controller is to clearly state that this is "FLARM derived Traffic Information (TI)"</p> <p>On occasion, FLARM may show glider activity that is not reflected through assured means, i.e., Star NG and WAM. The controller will provide FLARM derived TI stating: "No radar contact, FLARM suggests glider traffic (estimated position and range)."</p>	

4.3	DEPARTURE PROCEDURES
4.3.1	Airspace Restrictions
<p>VFR & IFR departures are normally prohibited in the Sector 130° through South to 220°. In exceptional cases Aircraft may be cleared to climb out in this Sector subject to prior coordination with Cranwell ATC. Fast jets departing the airfield under VFR are not to fly below 500 ft QFE until clear of the Waddington MATZ boundary. All right-hand VFR departures from Rwy 20 are to climb straight ahead for 3nm DME from WAD or 1000 ft QFE before commencing the turn. EGR313 & Cranwell MATZ are to be avoided unless positive clearance has been provided by ATC.</p>	
4.3.2	Standard Radar Departures
<p>Waddington Military Instrument Departures (MIDs) are published in the Mil AIP & Terminal Charts.</p>	
4.3.3	Non-Standard IFR

Crews conducting non-standard IFR departures are to climb initially on Rwy track to 1400ft QFE. To reduce R/T, this instruction will not be transmitted to Stn based crews or visiting crews operating iaw this DAM.	
4.4	APPROACH PROCEDURES
4.4.1	Radar Vector Chart
A copy of the RAF Waddington Mil Safety Minimum Altitude Chart (Mil SMAC) is in the RAF Waddington Aerodrome Order Book Order B201. ATC are not permitted to descend Aircraft in receipt of a DS to heights below the Terrain Safe Level (TSL) unless following a notified instrument approach procedure.	
4.4.2	Waddington Radar Directed patterns
A left-hand pattern is normally flown for both runways. The downwind leg for both rwys is normally flown at 2500ft QFE. Radar patterns may be lowered by the Director to 2000ft QFE for expedition & sequencing.	
4.4.3	Radar Approaches
All radar approaches to Waddington are directed to finals. QFE is the recognized pressure setting for all approaches; however, QNH approaches can be accepted with prior notice & at the discretion of the Supervisor or ATCO I/C. Waddington-based ISTAR and Hawk AC are permitted to conduct an un-monitored ILS approach. Arrival & approach procedures are published in FLIPs, MIDs & TAPs.	
4.4.4	Type of service
To reduce R/T when on departure or recovery, if the type of service required by crews is not specified, ATC will apply TS.	
4.4.5	MACF
The Missed Approach & Communications Failure (MACF) procedures are published in the MilAIP & will be passed to crews on request or if an emergency is declared.	
4.4.6	Initial Call
Recoveries will normally be affected by controller-to-controller handover from an ATCRU or adjacent airfield. Aircraft should provide a "30 Minutes to LAND Call" to Stn Ops. Aircraft free-calling Waddington Approach are to do so at least 20nm from the MATZ boundary.	
4.4.7	Landing Datum
The primary landing datum for RAF Waddington is to be QFE, including for overseas visiting air systems, with the exception of Rivet Joint who will use the QNH. QNH approaches for other aircraft types/nationalities may be approved subject to other traffic constraints and controller workload. All RNP approaches are to be conducted on QNH.	
4.4.8	Visual Recovery
Visual recoveries may be carried out to either runway but will be controlled by Waddington	

Approach. Due to the diverse Aircraft types encountered, crews should anticipate that other Aircraft on visual recovery may be joining via Initials, the overhead, downwind, crosswind or straight-in. Helicopters may join via the East or West aerodrome boundaries.	
4.4.9	Radar to Initial Procedure
Visual recoveries are available to the runway in use, but will be controlled by Waddington Approach. Due to the diverse Aircraft types encountered, crews should anticipate that other Aircraft on visual recovery may be joining via Initials, the overhead, downwind, crosswind or straight-in. Helicopters may join via the East or West aerodrome boundaries. Visual recoveries to the non-published runway can be requested, and will be tactically managed by ATC.	
4.4.10	Instrument Procedures
<p>1. Instrument patterns are published as 2500ft QFE (2800ft QNH) but may be lower depending on the prevailing traffic situation. Short Pattern Circuits are normally flown at 1500ft (1800ft QNH) in the same direction as the full pattern. A full list of Instrument Recoveries is available in Mil AIP & TAP Charts.</p> <p>2. Circling Approaches. Operating Authority minima are not to be used if below the minima published in the MilAIP. Circling Approaches are prohibited west of the Rwy. ILS accepted for both IFR/VFR recoveries & the PAR is VFR for Stn-based approaches only.</p> <p>3. Instrument Recoveries to Rwy 20. Are restricted when aerobatics are taking place in EGR 313. Crews should be prepared to hold off for up to 30 minutes or execute visual or radar to visual recoveries.</p> <p>4. Available Instrument Recoveries.</p> <ul style="list-style-type: none"> i. RNP ii. PAR iii. ILS (RWY 20 only) iv. TAC to ILS (RWY 20 only) v. ILS Localiser Only (RWY 20 only) vi. SRA vii. Internal Aids Approaches viii. Radar to Visual <p>5. Stn Based Aircraft. Unmonitored ILS is available to Waddington-based ISTAR and Hawk AC.</p> <p>6. Visiting Aircraft. All practice approaches using internal aids are radar monitored by ATC.</p> <p>7. WAD RADAR maintains responsibility for service provision on all instrument approaches.</p>	
4.4.11	Application of DS for Rwy 02RH
The instrument approach profile for Rwy 02RH utilises airspace that is regularly used by multiple light Aircraft conducting general handling, & standard separation may not be achievable. In such	

circumstances a reduced service may be offered or, if it is impracticable to continue, the controller will advise the pilot accordingly & will offer TS; if this is unacceptable to the crew ATC may suggest an alternative approach if the weather is suitable or a diversion. **A standing agreement exists between Lincs TATCC Radar controllers for inbound traffic to WAD Rwy 02RH under a DS against Cranwell departures, recoveries and circuit traffic; approaches in these circumstances may not achieve standard deconfliction minima but are procedurally separated under the standing agreement.**

4.4.12	Missed Approach Procedure	
RWY 02RH	Rwy 02RH – Climb on Rwy track to 1730ftQNH/1500ft QFE, then right onto track 045° climbing to 3230ft QNH/3000ft QFE. Call Waddington Approach.	
RWY 20	Rwy 20 – Climb on Rwy track to 1720ftQNH/1500ft QFE, then turn left onto track 045° climbing to 3220ft QNH/3000ft QFE. Call Waddington Approach.	
RWY 02RH	Rwy 02RH – Climb on Rwy track to 1730ftQNH/1500ft QFE, then right onto track 045° climbing to 3230ft QNH/3000ft QFE.Call Waddington Approach.	
RNP MPA RWY 02RH	Climb to A3800. Initially climb straight ahead to XWM01 then right to join UXONE hold or as instructed.	
RNP MPA RWY 20	Climb to A3800. Authorize climb straight ahead to XWM02, then right to XWM03, then left to join NUZWO hold or as instructed.	
4.4.13	Communications Failure Procedure	
If unable to continue approach, turn towards the Aerodrome, fly at minimum 3000ft QFE (3300ft QNH), try to regain contact on any Waddington frequency.		
4.4.14	RAF Waddington Flying School Aircraft Procedures	
RAF Waddington has an established Flying School (WFS), situated on the eastern side of the airfield, operating from building 572 or 233. The WFS conducts training for the Private Pilot’s License (PPL) & associated ratings. Flight training is conducted in various single-engine light Aircraft by WFS instructors & students operating 7 days a week. WFS Aircraft will normally route in & out of Waddington VFR west or eastbound. WFS operations are permitted at RAF Waddington both when the airfield is open & closed, see Annex NN , AOB Order B222. If ATC is closed pilots will make pre-emptive blind broadcasts of their intentions on VHF frequency 121.3 MHz, prefixed with ‘RAF Waddington traffic’.		
4.5	AERODROME PROCEDURES	
4.5.1	Visual Circuits	
1. For Aircraft operating in the visual circuit, the following applies:		
a. Rwy 20. Left hand at 1000ft QFE (1300ft QNH).		
b. Rwy 02RH. Right hand at 1000ft QFE (1300ft QNH).		

2. The RJ visual circuits are flown at 1300ft QNH.
3. Non-standard circuits, available with ATC permission, include a low-level circuit at 500 ft QFE (800ft QNH for RJ) & a glide circuit at 1500 ft QFE.
4. Slow moving aircraft will not be permitted to conduct circuits when fast jets or heavy aircraft circuits are required.
5. RAFAT Formation Breaks will be available with prior approval from the ATC Supervisor. The MATZ is to be sterile prior to RAFAT formation arrival.
6. Due to the diverse Aircraft types encountered, VHF 121.3 should be used at all times for all Aircraft departing the airfield & joining or remaining in the visual circuit. UHF 342.12 (Stud 1) should be used for pilots requesting start, when taxiing out/in & for passing departure instructions, with 121.3 only being used by non-UHF equipped ac. UHF 241.325 (Stud 2) should only be used in extremis where an Aircraft is unable to use VHF.

4.5.2	Hawk T1 Procedures
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1. Hawk T1 FJ aircraft operated from RAF Waddington, for both display and CT flying, will execute a variety of visual circuit procedures, some of which do not easily mix with routine Station-based and visiting aircraft circuit patterns.
2. The detail of the various Hawk T1 circuit procedures is captured in the Aerodrome Order Book [Annex NN AOB Order B211](#) . All Stn-based and visiting aircraft are encouraged to note how the flight profiles differ markedly from non-FJ circuit patterns. A clear circuit may be required by the Aerodrome Operator for the execution of some of the circuit patterns in Order B211 Para 14.

4.5.3	Aircraft Priorities
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1. On 4th April 22 a hub/satellite model under Pg MARSHALL was implemented, with RAF Waddington becoming a satellite ATC unit. Radar services for Lincolnshire are now provided centrally by the Terminal Air Traffic Control Centre (TATCC), based at RAF Coningsby. The following list serves as a guideline & decision-making framework for Air Traffic Control Supervisors to allocate available resource to defined tasks & deliver ATC services in an order of priority. Although contained within the TATCC LOA – those priorities have been agreed by all AOs, HoEs and DDHs in the region as an agreed baseline. In discharging their responsibilities, ATC Supervisors & controllers will use their discretion in assigning priorities with safety as their utmost priority at any given time. These priorities are to be reviewed by SATCO at least annually.
2. Priorities afforded to Aircraft in the Lincolnshire TATCC are:
 - a. Emergencies and Cat A flights. Aircraft in emergency, police, emergency flights.

- b. Flights iso named operations.
- c. Cat B, C, D Flights*.
- d. VIP/VVIPs.
- e. RAFAT and BBMF when in critical workup phase or timed display.
- f. FGen iso CA, ISTAR and JHC ops.
- g. Cat E flights. Flight check aircraft on time or weather critical flights.
- h. MFTS/UAS/AEF
- i. Other routine CA/ISTAR/RAFAT flying.
- j. OGD authorized exercises.
- k. LARS.
- l. Flying Clubs/School.

*Cat B flights include post-accident flight checks, Defence Joint Contingency Capability (DJCC) tasks, and other Civil Aviation Authority (CAA) approved flights (i.e. open skies, police flights under normal priority). Cat C flights include NOTAM'd Royal and HoS. Cat D flights includes CAA authorised Heads of Government and Senior Government Ministers. Within the above list of priorities, individual priorities at RAF Waddington are broken down further as follows:

- a. Aircraft in emergency
- b. Helimed & other Humanitarian flights.
- c. Flights iso Named operations.
- d. VIP movements.
- e. Calculated Take off Times (CTOT) to join Controlled Airspace.
- f. Instrument approaches (including visual straight in to land).
- g. Practice emergencies.
- h. Visual approaches.
- i. Departures.

4.5.4

Runway Occupancy

1. **Runway Occupancy.** Aircraft may be cleared for a Full Stop, Touch & Go or Low Approach with another Aircraft on the Rwy, only if the following circumstances apply:
2. **Full Stop.** Aircraft larger than a Shadow may only be cleared to land when the Rwy is clear. Other Aircraft may be cleared to land behind another Aircraft landing or touch & go providing that the one ahead is of similar or faster type, has touched down & the horizontal separation is 3500ft or more.
3. **Touch & Go.** Aircraft larger than a Shadow may only be cleared to touch & go when the Rwy is clear. Other Aircraft may be cleared to touch & go behind another Aircraft touch & go providing that the Aircraft ahead is of similar or faster type, has touched down & has commenced the acceleration stage of the touch & go before the clearance is issued. See note.

4. **Low Approach.** Aircraft may be cleared to low approach when the Rwy is occupied by another Aircraft providing that the one on is remaining on the Rwy & the pilot carrying out a low approach is to be instructed '... not below 200ft cleared to low approach only, one on'.

5. **Continue Approach.** Aircraft in the visual circuit will be instructed to 'continue approach' when ATC anticipate that they will be able to issue a positive clearance. In the event that a pilot is not in receipt of a positive clearance by his/her minima he/she is to initiate a go-around.

6. **Go Around.** Aircraft in the visual circuit will be instructed to go around when ATC cannot issue a positive clearance. Aircraft will also be instructed to go around when ATC wish them to discontinue the approach. Instructions to go around are normally followed by a reason – i.e. 'C/S.... go around 3 on'.

7. **Exceptions.** Exceptions to the above sub-paras 1-6 are as follows:

- a. Aircraft are not to be cleared to land, touch & go or low approach when the Rwy is occupied by an Aero-medical or DG Aircraft.
- b. Visiting or detached fast-jet Aircraft whose crews have received an ATC brief, shall be considered a similar type to other fast-jet Aircraft.
- c. Aircraft larger than a Shadow may land with other Aircraft occupying the Rwy provided the Aircraft on the Rwy is/are of the same formation & the procedure is pre-briefed.
- d. RAFAT formation clearances will be issued in accordance with RAF Aerobatic Team Procedures published in BMOs.

Note: ATC are to warn pilots as appropriate, e.g. 'C/S...cleared to touch & go/land, one ahead/one on' etc.

4.5.5	Mixed Instrument & Visual Circuits
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| <ol style="list-style-type: none">1. The maximum number of Aircraft permitted in the visual circuit at one time is to be 4 Aircraft except when large formations are on recovery.2. Minimum cloud base & visibility for mixed circuits is 1500ft AGL & 5000m.3. When mixed circuits are in operation, captains of Aircraft in the visual circuit are responsible for collision avoidance. However, ATC will advise visual circuit Aircraft of inbound instrument traffic. Except for Aircraft in emergency or requesting a priority landing, Aircraft on an instrument approach take precedence over visual circuit traffic.4. The Aerodrome Controller is to broadcast a message to Aircraft in the visual circuit whenever Aircraft on instrument finals are at 8 & 4 miles from touchdown. This is to be |
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augmented by a call at 2 miles from touch down if required. The message is to contain the Aircraft type (e.g. Typhoon) & the intention of the Aircraft (e.g. land).

5. Visual circuits are not to be extended beyond 5 nms downwind.
6. The weather minima for radar to visual approaches are as follows:
 - a. Cloud base (SCT) \geq 1200ft agl.
 - b. Visibility \geq 5000m

4.5.6 Manoeuvring Area

1. The following restrictions apply to the Manoeuvring Area:
 - a. Bravo Taxiway – ‘Tight turns’ are not permitted.
 - b. Delta Taxiway is category C PCN 40. Large aircraft such as RC-135 (RJ) are not to be taxied down Delta due to wingtip clearance issues & FOD ingestion. Large AS can be towed down Delta taxiway.
 - c. Foxtrot Taxiway is only available to light, propeller driven aircraft.
 - d. Taxi patterns & parking for aircraft larger than RJ should be discussed with Air/Eng Ops in good time. To aid in planning, the declared PCNs as specified in the Mil AIP & DAM Section 4.8 should be referred to.
 - e. The Helipad adjacent to ATC is not to be used due to the degradation of the surface.

4.5.7 Loading / unloading of Dangerous Air Cargo (DAC) & parking of Armed Air Systems (including Aircraft carrying Counter Measure (CM) Flares)

1. The loading/unloading of DAC & parking of armed Aircraft is to take place iaw AESO 2-1-1-01-37.
2. DAC. The designated parking area for the loading/unloading of DAC is Bay 19A.. Further information is at Annex II.
3. **Armed Aircraft Parking.** Limitations on accepting Armed Aircraft are in force & are subject to Station Ops approval. Of note RAF Waddington does not accept Aircraft with forward firing weapons. Further information is at [Annex II](#).

4.5.8 ILS Protected Area: CAT 1 Holding Points

CAT 1 holding points are controlled by ATC via a set of traffic lights short of the entry to bays 1-9.

4.5.9	Actions to be taken when the bird activity levels are assessed as HIGH
<p>1. Wildlife Hazard Management at Aerodromes is detailed in CAP 772. At RAF Waddington, bird activity levels are to be assessed by the Airfield Wildlife Control Unit (AWCU) in conjunction with the ATC Sup or ATCO i/c prior to, & during flying. Levels are to be declared as LOW, MEDIUM, HIGH or VERY HIGH & are defined as follows:</p> <p>a. LOW. The number of birds either on the airfield, in the approach/climb out lane &/or passing through is insignificant & poses little or no threat to flying activity.</p> <p>b. MEDIUM. There is an increased number of birds either on the airfield, in the approach/climb out lane &/or passing through that slightly increases the threat to flying activity.</p> <p>c. HIGH. There is a significant increase in numbers of birds either on the airfield, in the approach/climb out lane &/or passing through causing a significant threat to flying activity.</p> <p>d. VERY HIGH. Large numbers of birds either on the airfield, in the approaches & passing through. Our usual practices are unable to ensure a safe operating environment for airfield users.</p> <p>2. Bird states may be called for the entire airfield, including approach/climb-out lane, or other specific parts. Once a bird state is called it remains in place until amended by AWCU in conjunction with the ATC Sup or ATCO i/c. The following procedures & restrictions apply:</p> <p>a. All States. Details to be passed to Stn Ops by ATC on first observation & any change in level.</p> <p>b. LOW. Nil.</p> <p>c. MEDIUM. Specific warnings of bird activity are to be broadcast by ATC to Aircraft joining the visual circuit & with radar clearances. Bird activity levels are to be added to DATIS broadcasts.</p> <p>d. HIGH. Specific warnings of bird activity are to be broadcast by ATC to Aircraft joining the visual circuit & with radar clearances. Bird activity levels are to be added to DATIS broadcasts. The following additional procedures & restrictions apply:</p> <p>The ATC Sup or ATCO i/c is to:</p> <ul style="list-style-type: none"> • Ensure that the AO / OSW Duty Exec & all SSOFs are informed, as soon as possible, through Stn Ops. • Inform diversion commitment aerodromes. 	

- Amend all ATC calls within the terminal area to include the clause 'Caution, Bird State High'.

AO / OSW Duty Exec is to consider taking one or more of the following actions dependent upon their interpretation of the circumstances:

- Restrict or stop further take offs.
- Arrange with the ATC Sup or ATCO i/c for Stn-based Aircraft to either hold off or to land from their first approach.
- Limiting the visual circuit & instrument approach pattern to avoid areas of known bird activity.

Aircraft commanders may consider taking the following actions – dependent upon their interpretation of the circumstances:

- Delaying or cancelling their departure.
- Holding off, or making a single approach to land.

e. **VERY HIGH.** Large numbers of birds either on the airfield, in the approaches & passing through which is assessed to have compromised a safe operating environment for airfield users.

The ATC Sup or ATCO i/c is to:

- Ensure that the AO / OSW Duty Exec & all SSOFs are informed, as soon as possible, through Stn Ops.
- Close the visual circuit.
- Stop further take off's unless operationally essential (to be discussed between OSW/OSW Duty Exec or SSOF).
- Through Stn Ops, cancel all diversion commitment aerodromes if those aerodromes are able to book an alternate.
- Amend all ATC calls within the terminal area to include the clause 'Caution Bird State Very High'.

AO/OSW Duty Exec is to be prepared to:

- Discuss take-off and landing requirements on a case by case basis.

Aircraft commanders may take the following actions:

- Delay or cancel their departure unless operationally essential (and approved).
- Hold off, or make a single approach to land once approved to do so.

4.5.10

Bird Activity

The period 1 October – 31 March has increased likelihood of the bird state being HIGH +/- 30 mins of sunrise & sunset. During this period, Aircraft commanders should not routinely plan to depart or arrive during +/- 30 mins of sunrise & sunset unless it is operationally essential, & they are authorised to do so by their respective SSOF. If programme changes or delays require arrivals, departures or training circuits during these timings, the relevant actions should be taken based on the prevailing bird-state as defined above.

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Chapter 5 – AERODROME ADMINISTRATION & OPERATING PROCEDURES

5.1	AERODROME DATA REPORTING	
<p>The AO is responsible for the ownership of the Aerodrome data and is to ensure all data provided is always correct. Orders for the reporting procedures to advise the relevant agency of any permanent changes to Aerodrome information are to be contained at Annex P. Management of these duties can be delegated at larger units, however responsibility for these actions will always remain with the AO. Further guidance on Aerodrome Information and notification is contained in the UK Civilian Air Information Publication (AIP) / Mil AIP.</p>		
5.1.1	Legislation, Standards & Technical References.	
<p>Information relating to the aerodrome serviceability or hazards to air navigation is routinely updated through the Aeronautical Information Publications (AIP) & NOTAM.</p>		
5.1.2	Reporting Procedures	
<p>Any situation that may have an immediate effect on the safety of Aircraft operations is to be reported as soon as possible. In the first instance to ATC on ext. 333 / 01522 727333 or Management Radio Equipment (MRE). If ATC are unavailable, contact the Duty Ops Controller (DOC) on ext. 6532 / 01522 726532.</p>		
5.1.3	NOTAM	
<p>The AO ensures that all NOTAM action is recorded for possible 1st / 2nd & 3rd party audit. The DOC acts as Stn NOTAM focal point. NOTAM action is recorded & archived for a period of 6 months from date of expiry or cancellation. NOTAM requests should be made via email to the DOC (Wad-StationOps@mod.gov.uk). NOTAMs will be originated in the standard NOTAM format for any of the following circumstances⁶:</p>		
	5.1.3.1	A change in the serviceability of the manoeuvring area.
	5.1.3.2	A change in the operational information contained in this manual & published in the Mil AIP.
	5.1.3.3	Aerodrome works effecting the manoeuvring area or penetrating the Obstacle Limitation Surfaces.
	5.1.3.4	New obstacles which affect the safety of Aircraft operations.
	5.1.3.5	Bird or animal hazards on or near RAF Waddington.
	5.1.3.6	A change in the availability of aerodrome visual aids, i.e. markers & markings, runway lighting, etc.
	5.1.3.7	Any change in aerodrome facilities published in AIP.

⁶ Where a permanent NOTAM is subsequently issued, the AO is to ensure that the Mil AIP is updated to reflect the change

	5.1.3.8	Unusual air activities at the aerodrome.
5.2	AERODROME SERVICEABILITY INSPECTION ORDERS	
5.2.1	Aerodrome Inspections are to be carried out by ATC who are to carry out a comprehensive inspection of the movement area. Orders are at Annex Q .	
	5.2.1.1.	Daily, before the aerodrome is opened for flying on each occasion (if initial inspection is carried out in darkness then a further inspection should be carried out after first light).
	5.2.1.2.	If night flying is to be conducted a further inspection is to be conducted prior to last light.
	5.2.1.3.	Where ATC is staffed on a 24-hour basis, an inspection is to be undertaken as soon as practicable after first light and another prior to last light.
	5.2.1.4.	Check the serviceability of all aerodrome traffic lights.
	5.2.1.5.	Controllers are to vacate the vehicle at random intervals & conduct a close-up visual inspection of an area of the runway.
5.2.2	All inspections are to be logged in the ATC logbook, including any issues raised.	
5.2.3	Any issues are to be reported to the relevant section subject matter expert (SME). Any sweeping requests are to be logged.	
	Any work requests are to be put through the correct channels & a record of the request & subsequent action maintained.	
5.3	AERODROME TECHNICAL INSPECTIONS ORDERS	
Orders, contained at Annex R , for the technical inspection of the Aerodrome are to be produced and conducted iaw Aerodrome regulations. If present, it is suggested that a technical inspection of Aerodrome lighting is to be conducted daily by the qualified SME. At units with established ATC a more in-depth inspection of the Aerodrome and associated equipment is to be conducted each week on behalf of the AO. In addition to these inspections, it is suggested as a minimum routine Maintenance is to be carried out on all surfaces and equipment as follows:		
5.3.1	Routine inspections of the technical equipment (transmitters, receivers, ILS etc) with precision navigation aids being calibrated by a flight check Aircraft accordance with AP 600-Royal Air Force Information CIS policy & relevant SPS.	
5.3.2	Runway, taxiway & obstruction lights, along with PAPIs & aerodrome traffic lights are inspected daily.	

5.3.3	Main earth points are to be tested every 24 months. The resistance is to be as low as possible but is not to exceed 10 ohm. Temporary earth points are to be tested at regular intervals (at least annually) and must not exceed 10,000 ohm ⁷ .
5.3.4	Manoeuvring Areas & drainage are inspected, maintained & repaired in accordance with DIO guidance.
5.3.5	All aerodrome signs are inspected weekly by ATC & monthly by DIO SME.
5.3.6	Aerodrome lighting along with other essential equipment is backed up by stand-by power system. The stand-by power system is to be inspected daily with a switchover test being carried out monthly. Where the alternative input power supply is provided by independent generators, they must run for at least 15 min under full load when carrying out this check.
5.3.7	Traffic lights, CCTV & road barriers for the control of airside vehicle control measures are inspected daily.
5.4	RADAR, RADIO & NAVIGATION AID MAINTENANCE, MONITORING & PROTECTION
Orders, contained at Annex S , for the supervision of access/entry to any of the aerodrome navigation aids or their immediate vicinity are to be produced as part of Aquila ATM maintenance plan and Airfield Support Team Orders. Orders, contained at Annex S , for the maintenance & monitoring of surveillance equipment are produced in accordance with extant Support Policy Statements (SPS) & the AP 600. Orders, contained at Annex S , for the equipment maintenance & monitoring of all aerodrome navigation equipment are to be produced in accordance with extant policy regulations & the AP 600 to ensure navigation & approach aid equipment (TACAN/ILS/etc) have a continuously monitored fault & check procedure.	
5.5	AERODROME WORKS SAFETY ORDERS
Orders, contained at Annex T , cover the control & supervision of work in progress on the aerodrome. It is suggested that control of Working Parties is achieved through the use of the following:	
5.5.1	Work in Progress (WIP) Records
WIP records are maintained in accordance with MAA RA3266 – Aerodrome Maintenance . A plan of the aerodrome is displayed in both ATC & Operations for the marking of all obstacles, the nature of the obstruction, its marking & all work in progress.	
5.5.2	WIP Log
A WIP Log is established in accordance with MAA RA3266 – Aerodrome Maintenance . In addition to an aerodrome plan, the WIP Log is to be maintained in the control tower.	

⁷ Refer to AEP-24 (STANAG 7009) – Aircraft Electrical Hazards on the Flight Line.

5.5.3	WIP Briefings	
Supervisors of any working parties are to be fully briefed on their responsibilities. The ATCO IC is responsible for ensuring that the supervisor of the working party is properly briefed. The briefing is to include (but not limited to) the following details:		
	5.5.3.1	Limits of the work area.
	5.5.3.2	Direction of Aircraft movements.
	5.5.3.3	Route to be taken by works vehicles.
	5.5.3.4	Parking area for works vehicles & equipment.
	5.5.3.5	Control to be exercised over works vehicles & workers.
	5.5.3.6	Signals to be employed.
	5.5.3.7	FOD prevention
5.5.4	Control Measures	
When work is to be carried out on the aerodrome & it is not possible to stop flying, special control rules are to be enforced to safeguard the working party. Orders for these control measures are to be produced on a case by case basis. All aerodrome work is to be clearly marked using approved high visibility markers & lit during hours of darkness.		
5.5.5	Grass Cutting	
Grass cutting at RAF Waddington is sub-contracted & managed through DIO & Vivo. Routine grass cutting takes place on a continuous rotational basis & according to a detailed high-resolution schematic plan located here . The plan is managed dynamically depending on weather conditions & the sub-contractor is scored weekly on their performance. All grass cutting activity is closely coordinated with ATC at all times in order to minimise impact to operations.		
Grass length on the main airfield operating areas is managed iaw the Aerodrome Long Grass Policy detailed in MAA RA 3270 in order to deter wildlife activity including breeding & foraging. Grass length is monitored by the Airfield Wildlife Control Team & reported to ATC on a monthly basis. Any required corrective action is subsequently reported to DIO via SATCO.		
See also Annex W : Wildlife management – orders.		
5.6	AERODROME USERS. VEHICLE & PEDESTRIAN CONTROL	
Orders, contained at Annex U , for the control of vehicular & pedestrian traffic on the aerodrome have been written iaw MAA RA 3262 – Aerodrome Access. The following points are to be considered as a minimum:		
5.6.1	Aircraft Manoeuvring Area.	
5.6.2	Aprons.	
5.6.3	Aerodrome Access Permit (AAP).	

5.6.4	Aerodrome Access Briefs.
5.6.5	Access Routes.
5.6.6	Orders for Airside Vehicle Control.
5.6.7	Additional Orders for Drivers on Aprons (ASPs).
5.6.8	Additional Orders for the Control of Airside Vehicles at Night.
5.6.9	Orders for Pedestrians / cyclists / riders / dog walkers / runners, etc.
5.6.10	Signals for the Control of Vehicles & Pedestrians.
5.6.11	Speed Limits.
5.6.12	Annual review of Aerodrome Driving Orders
5.7	FOD PREVENTION, TRAINING & AWARENESS
Orders, following the guidance & instructions contained within RA 1400 with regards to FOD prevention, training & awareness are contained at Annex V .	
5.8	AERODROME WILDLIFE MANAGEMENT
The bird activity on & around the vicinity of the aerodrome is managed by a civil agency who are contracted to operate an Airfield Wildlife Control Unit (AWCU) at RAF Waddington on a continuous basis. Wildlife Management orders can be found at Annex W . All units are to consider the following requirements as a minimum:	
5.8.1	Assess & effectively minimise the local bird hazard to Aircraft through a coordinated bird control effort on the Station.
5.8.2	Record & collate recorded information on bird concentrations & movement patterns both on the aerodrome & within its safeguarded zone.
5.8.3	Liaise with Station executives, DIO Property Management representatives, local authorities & landowners & tenant farmers whose land abuts the aerodrome, concerning such matters as the identification & dispersal of local bird concentrations, & the elimination of bird food sources & other topographical features which might attract birds to the aerodrome vicinity.
5.8.4	Coordinate the use of bird dispersal equipment & materials, & ensure that their use is properly controlled in accordance with current regulations.
5.8.5	Ensure that all vehicles & wildlife control equipment is properly serviced in accordance with current servicing schedules & that any un-serviceability is rectified promptly.
5.8.6	Ensure that all WCU personnel are correctly trained in the use of bird dispersal equipment & its safe handling.

5.8.7	Ensure that bird hazard warnings are issued in accordance with the procedures published in Flight Information Publications.
5.8.8	At Station Safety Management Committee ensure the AO has the latest WCU report that covers any general concerns or wildlife related issues.
5.8.9	Ensure all Wildlife Strikes are reported on Air Safety Information Management System (ASIMS).
5.8.10	Seek specialist advice whenever necessary from SO2 ATM Infra or DEFRA.
5.8.11	Supervise the maintenance of the bird control log.
5.8.12	Measures are in place for discouraging wildlife such as grass and crop management.
5.8.13	Identify who is responsible for the management of wildlife management procedures and where applicable, ensure Terms of References are issued.
5.8.14	Detail the procedures required to control the presence of birds or mammals in the Aerodrome flight pattern or movement area, that pose a danger to Aircraft operations.
5.8.15	Ensure plans are in place for assessing any wildlife Hazards.
5.8.16	Ensure wildlife control programmes are implemented.
Note: For details concerning RAF Aerodrome WCU policy see Battlespace Management (BM) Force Orders. For details concerning RN bird control policy contact SO2 FGen NAvn ATM Policy and Safety.	
5.9	LOW VISIBILITY OPERATIONS (LVO)
Orders for LVOs iaw MAA RA 3274 – Low Visibility Procedures (LVP) are contained at Annex X . If required, details of how to measure and report Runway Visual Range are contained within RA 3275 ⁸ . The AO is to consider the following points as a minimum:	
5.9.1	Authority for air movements, restrictions of ground movements, etc.
5.9.2	List responsibilities, who authorizes / cancels LVP.
5.9.3	Provide instructions on how to perform LVP (checklists).
5.10	SNOW & ICE OPERATIONS
Orders to enable use of aerodrome operating surfaces during periods of snow & ice operations at RAF Waddington, known locally as Operation BLACKTOP, are exercised & reviewed annually iaw RA 3278 ⁹ . – Snow & Ice Operations. These are contained at Annex Y .	

⁸ Refer to RA 3275 – Runway Visual Range.

⁹ Refer to RA 3278 – Snow and Ice Operations.

5.11	THUNDERSTORM & STRONG WIND PROCEDURES	
Orders, contained at Annex Z , are to be produced to cover Aircraft operations during thunderstorm (lightning risk) warning periods and periods of forecast strong winds. The following may be considered as a minimum:		
5.11.1	Strong wind & gale procedures.	
5.11.2	Use of vehicles to protect/shield Aircraft vulnerable to strong winds.	
5.11.3	Pax loading/unloading limits in strong winds.	
5.11.4	Lightning Risk Orders.	
5.11.5	Aircraft refuelling operations	
5.12	CIVIL AIRCRAFT AERODROME USAGE – TERMS & CONDITIONS	
Use of MOD Aerodromes by civil registered Aircraft shall be in accordance with JSP 360 ¹⁰ – Use of Military Aerodrome by Civil Aircraft . Requests to use RAF Waddington should be made to Station Ops on 01522 727301. Orders governing use by civil registered Aircraft are at Annex AA . Orders may also cover the eventuality of a breach of terms and conditions; any breach could constitute grounds for the privilege of operating at the Aerodrome being withdrawn temporarily or permanently. Civil registered Aircraft captains wishing to operate in and out of a MOD Aerodrome must agree to abide by the Aerodromes extant Terms and Conditions which must reflect JSP 360 and include the following parameters as a minimum:		
5.12.1	The Terms & Conditions may be varied at any time by the Aerodrome Operator to reflect any changes, amendments or additions to working practices at the specific aerodrome. Factors may include some or all of the following:	
	5.12.1.1	Winter Operations.
	5.12.1.2	Operational Support.
	5.12.1.3	Passenger Handling.
	5.12.1.4	Animal Handling.
	5.12.1.5	Refuelling Services.
	5.12.1.6	Catering.
	5.12.1.7	Aircraft Maintenance.
	5.12.1.8	Security.
	5.12.1.9	Flight Safety.
	5.12.1.10	Aircraft Handling.
	5.12.1.11	Airworthiness.

¹⁰ Refer to JSP 360 - Use of Military Aerodromes by Civil Aircraft. This will need to be made available to civil operators on request.

5.12.2	Whilst the AO will use all reasonable endeavours to advise Civilian Users of any changes to the Terms & Conditions, it will be for the Civilian Users to ensure that they are aware of extant Terms & Conditions. The AO shall not be liable for any loss or damage (whether direct or indirect) arising out of any change in the Terms & Conditions.	
5.12.3	All Civilian Users are to operate in accordance with extant DfT NASP & wider ATSy protocols.	
5.12.4	RAF Waddington operating hours are 0800-2359L Mon-Thu and Friday 0800-1800L but frequently, the aerodrome operates non-standard hours. Movements outside of operating hours can be requested through Stn Ops.	
5.12.5	Commercial charter Airline operations are not permitted to operate from RAF Waddington.	
5.12.6	Scheduled aircraft operations are not permitted to operate from RAF Waddington.	
5.12.7	RAF Waddington is not a designated Port of Entry and has no permanent HM Revenue & Customs (HMRC), UK Border Agency or SO15 (CTC) presence.	
5.12.8	Declaration that in the event of a Local or National Emergency whether declared or not the aerodrome may be closed to civilian operators. A non-exhaustive list of potential circumstances includes.	
	5.12.8.1	Loss / Reduction of Crash category.
	5.12.8.2	Repatriation of troops.
	5.12.8.3	Loss of power to all, or parts, of the aerodrome.
	5.12.8.4	Interruptions in communications both within the aerodrome & with external agencies.
	5.12.8.5	Unforeseen natural disaster (Flooding, etc).
	5.12.8.6	Unforeseen national epidemics (swine flu/bird flu).
Note: In the event of such closure all access to the aerodrome for any reason whatsoever may be restricted & no liability is accepted for any loss or damage (whether direct or indirect) arising.		
5.13	SAFEGUARDING REQUIREMENTS – WAIVERS & EXEMPTIONS	
The procedures involved in safeguarding the operational environment of military aerodromes are explained in greater detail in the MAA RA 3500 series – Aerodrome Design & Safeguarding . All Safeguarding activities are conducted in accordance with extant regulations & any waivers or exemptions issued by the MAA. Waivers & Exemptions are promulgated in Annex F .		
5.14	AERODROME ASSURANCE ACTIVITY	

The AO will ensure that reports, surveys & assurance documentation, regarding the aerodrome & its facilities are captured within the DAAF in accordance with Annex P . In addition, the AO will determine which 2 nd Party assurance reports (of those involved in activities on or around the aerodrome are also captured).	
5.15	ELECTRICAL GROUND POWER PROCEDURES
Orders contained at Annex CC , deal with priorities for using Ground Power. Personnel are trained by Sqn Training Cell on how to operate safely. The following should be considered as a minimum:	
5.15.1	Use of fixed electrical ground power.
5.15.2	Use of mobile ground power units.
5.15.3	Use of Auxiliary Power Units (APU's).
5.15.4	Use of 28 Volt conversion units.
5.16	AVIATION FUEL MANAGEMENT PROCEDURES
Orders for aviation fuel management are contained at Annex DD . The following areas should be covered as a minimum:	
5.16.1	Management of Bulk Fuel installations.
5.16.2	Fuel storage, quality & delivery.
5.16.3	Safety procedures.
5.16.4	Fuelling zone procedures.
5.16.5	Bonding & grounding of Aircraft & fuelling equipment.
5.16.6	Fuelling with passengers on board.
5.16.7	Fuelling with engines running.
5.16.8	Fuelling & de-fuelling in hangers.
5.16.9	Fuel spillage procedures.
5.17	HANDLING OF HAZARDOUS MATERIALS (SPILLAGE PLAN)
Orders for the Handling of Hazardous Materials (Spillage Plan) can be found at Annex EE .	
5.18	JETTISON & FUEL DUMPING AREA
RAF Waddington does not have any Jettison areas. Annex FF is included for compliance with DAM Template.	
5.19	COMPASS CALIBRATION BASE

Orders for the management of the Compass Calibration Base can be found at Annex GG .	
5.20	EXPLOSIVE ORDNANCE DISPOSAL AREA
RAF Waddington does not have any EOD areas. Annex HH is included for compliance with DAM Template.	
5.21	DANGEROUS GOODS (DG) PROCEDURES
Orders, contained at Annex II are to be produced for the control & management of DG in accordance with extant regulations.	
5.22	HYDRAZINE (H70) LEAKS
<p>RAF Waddington does not maintain a capability for dealing with Hydrazine leaks, & therefore does not declare an ability to accept planned detachments of F-16 aircraft. If visiting nations wish to operate from RAF Waddington, it is their responsibility to bring suitably trained & equipped personnel to handle a potential Hydrazine leak. This forms part of the conditions of usage of Waddington aerodrome for such detachments.</p> <p>Routine F-16 Diversion bookings will not be accepted either, excepting emergencies where no other suitable Aerodrome is available.</p> <p>Generic Guidance on how to deal with Hydrazine, only in extremis, is at Annex JJ.</p>	
5.23	UAS / RPAS ORDERS
RPAS Orders can be found at Annex KK .	
5.24	AIRCRAFT PARKING
Orders for the management of the aircraft Parking can be found at Annex LL .	
5.25	FORCE PROTECTION
Force Protection (FP) Orders, contained at Annex MM are to be updated, exercised & activated as required. Due to the nature of the task & security classification of the orders they are beyond the classification of this document.	
5.26	WADDINGTON AERODROME ORDER BOOK
The RAF Waddington Aerodrome Order Book (AOB) can be found at Annex NN .	

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Annex A to DAM

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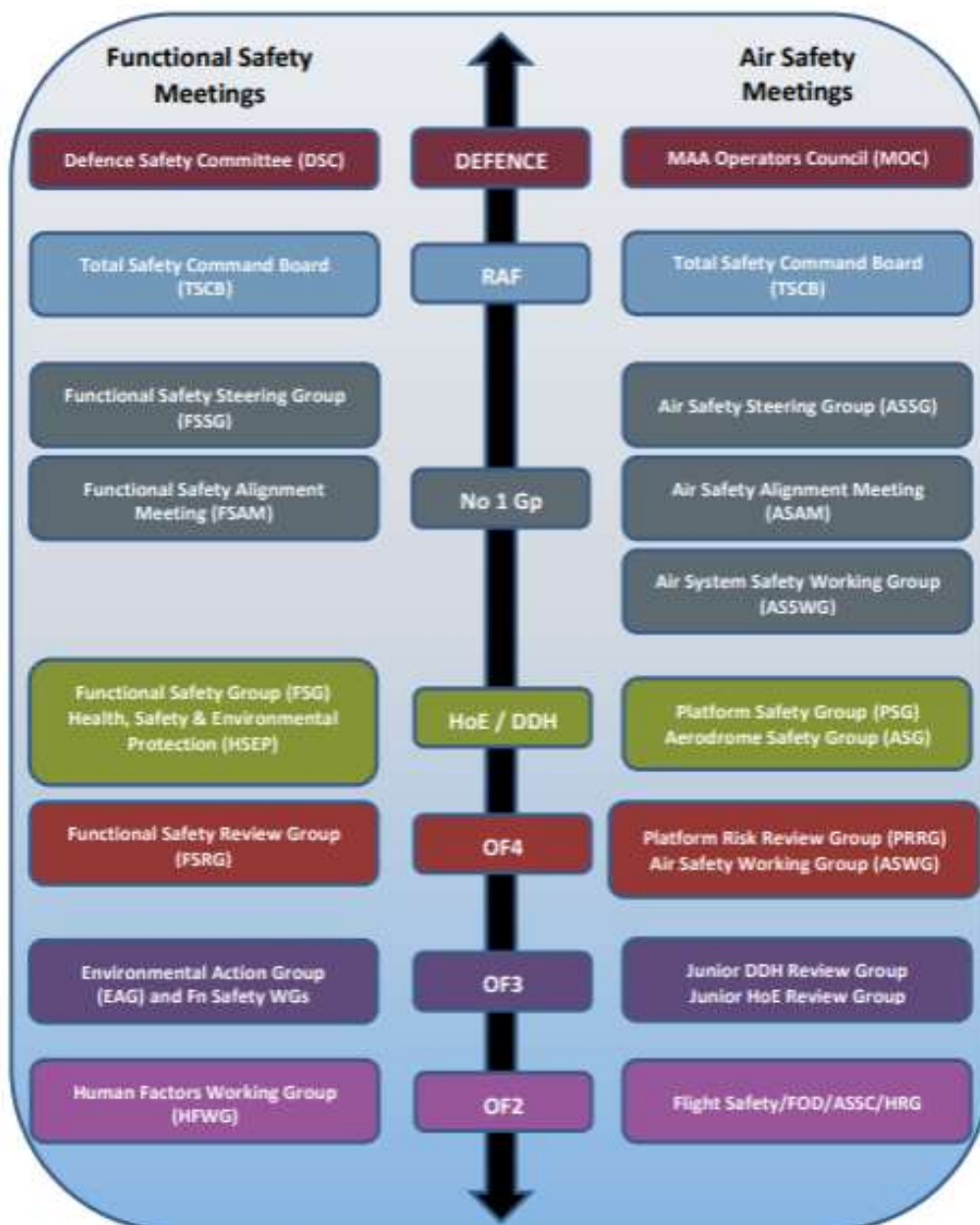
Letter of authority to act as AO for RAF Waddington

Annex B to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Safety Meeting Structure.

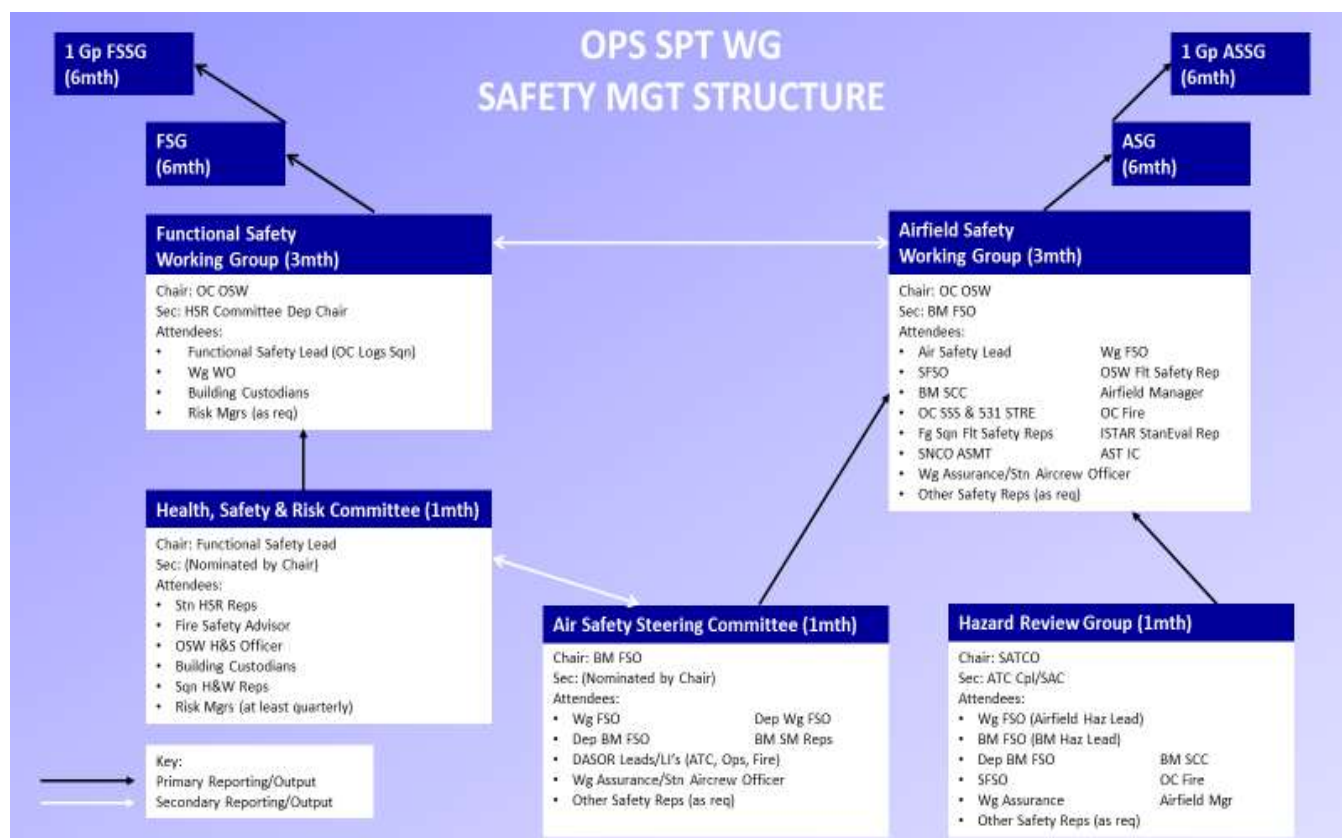
1. Safety meetings. Safety meetings are timed to fit in with the Gp battle-rhythm & are mandated by the DDH/HoE. Diagram is correct as of 21 Oct 22 but for authoritative reference, refer to the RAF Waddington [SMP](#) .



2. **Aerodrome Operator (AO) Safety Management.** OC Ops Spt Wg is responsible to the HoE in two areas: Air Safety & Functional Safety. This ensures OSW supports the HoE in executing their legally accountable role and subsequently their responsibility as HoE to multiple ADH chains to whom they are responsible under military policy. The SMS structure, outlined in the diagram below, is based upon working groups made up of empowered representatives from across the Wg who meet monthly, underpinned by a First-Party Assurance system. These are the:

- a. Health, Safety and Risk (HSR) Committee, chaired by OC Logs.
- b. Hazard Review Group, chaired by SATCO.
- c. Air Safety Steering Committee, chaired by BMFSO.

The Chair of these working groups feeds their groups' progress and issues to the relevant overarching groups, either the Ops Spt Wg Functional Safety Working Group (FSWG) or the Air Safety Working Group (ASWG), depending upon the focus of their group. There will inevitably be crossover between Air and Functional Safety. The Ops Spt Wg FSWG and ASWG are chaired by OC Ops Spt Wg. A weekly update can also be given in the weekly Ops Spt Wg Execs mtg, or sooner if time-sensitive, to ensure that OC Ops Spt Wg is briefed routinely on the activity of the Working Groups.



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Annex C to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

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Annex D to DAM

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Aerodrome Operating Hazard Log (AOHL) & Battlespace Management Hazard Log (BMHL)

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Annex E to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Formal Aerodrome Related Agreements.**

1. All formal agreements between RAF Waddington (WAD) & other aerodromes can be found in the ATC Sharepoint working area under [Letters of Agreement \(LoA\)](#) and agreed by all parties. Should you require more details please contact SATCO, WAD.
2. Following the Pg MARSHALL split, the LOAs have been adjusted to reflect the move of radar controllers to TATCC (Lincs) located at RAF Coningsby. A Letter of Agreement exists between RAF Coningsby, RAF Cranwell, RAF Barkston Heath, & RAF Waddington, for the provision of Terminal Air Traffic Services (ATS) by the Lincolnshire Terminal Air Traffic Control Centre (TATCC). The TATCC (Lincs) LOAs can be found [here](#).
3. Current and future review dates can be found on the LoA Tracker, linked [here](#). The following aerodromes/airports have LoAs (brief description included) with WAD:
 - a. **RAFC Cranwell – Coordination:** Defines the ATC co-ordinating procedures & Standing Agreement Co-ordination to be applied between WAD & CRN.
 - b. **RAF Coningsby – Coordination, Standing Diversions and Radar Services:** Defines the roles, responsibilities & overarching procedures for WAD ATC Sqn and the Lincolnshire Terminal Air Traffic Control Centre (Lincs TATCC), the parameters in which CON can book WAD & vice versa as a standard daily diversion airfield, CON ATC support to WAD Radar and co-ordination procedures.
 - c. **Aubourn Peacocks Airstrip – Grass (4.5nm WSW of WAD):** Definition of co-operation & ATC procedures for the safety of aircraft ivo both locations.
 - d. **National Police Air Service (NPAS).** Definition of procedures for the use of WAD by NPAS for refuelling support during operational flights.
 - e. **Lincs & Notts Air Ambulance (LNAA):** Definition of co-operation between LNAA and RAF Waddington/airspace/airfield users and deconfliction procedures agreed between all parties.

Annex F to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Aerodrome Waivers, Exemptions & Alternated Acceptable Means of Compliance.**

1. RAF Waddington safeguarding waivers & exemptions are detailed below. Detail of the current status of each AAMC, Exemption or Waiver are stored at this [location](#). Hard copies can be made available on request to RAF Waddington DSATCO.

a. The following AAMCs were authorised by the MAA in 2015:

(1) Measurement datum for runway strip & placement of rwy end lighting. AAMC letter [here](#).

(2) Use of ZA 293 units to provide inset low intensity omni-directional runway edge lighting (AAMC Letter [here](#))

These AAMCs were updated in Nov 2020 and remain in force TFN.

b. [Waiver \(MAA AWE 2017 006\)](#) – Non-standard Threshold Crossing Height (TCH) for Instrument Landing System (ILS) on Runway 20 at RAF Waddington (expires Apr 2020). This Waiver was renegotiated in May 2020, see [link](#) to waiver extension, valid until 31 Mar 2037.

c. [Waiver \(MAA AWE 2017 050\)](#) – For Obstacle lighting control – compliance by other means. Updated by amendment against new RA and extended [here](#) until expires 31 Mar 2032.

d. [Waiver \(MAA AWE 2020 126\)](#) – Permanent infringement obstacle limitation surface caused by the installation of new TACAN until expiry on 31 Mar 2037.

e. Permanent concessions cannot be granted for trees which infringe the Navigational Aids. Waddington continues to work with DIO & local authorities to implement a tree control policy. All ATC staff are made aware of the potential degradation of radar picture & comms capabilities & the following temporary concessions are granted:

f. [Transmitters](#).

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Annex G to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Control of Entry & Access**

1. RAF Waddington is a secure military base. Identity & vehicle checks will be conducted at the Main Gate before visitors are allowed entry. The Station Commander reserves the right to refuse access should he feel that the requirements are not met. Persons, who require access onto the manoeuvring area, must hold a valid airfield driving permit & be familiar with Airfield User Orders detailed at [Annex U](#).
2. The Military Provost Guard Service (MPGS) & Station Guard Force (SGF) control entry onto the Station. If operating on the airfield, users are to be in possession of a valid airfield access permit. Acceptable forms of identification required for entry onto RAF Waddington are as follows, in order of preference:

British Nationals.	Current UK photo card driving license or passport. Current full UK driving license (old paper version). Police warrant Card. Current benefit book or card.
Other EEA Nationals.	Full EEA passport. Residence permit issued by Home Office to EU nationals on sight of home country passport. National Identity Card.
Other Nationals.	Current, signed, full passport. A Home Office document confirming the individual's UK immigration status. National Identity Card.
Unacceptable forms of Identification.	Duplicate or photocopied documents. An international driving licence. A birth certificate issued more than 6 weeks after birth. Any passport that has expired.

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Annex H to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Noise Abatement Procedure Orders.

Waddington based Aircraft

1. After 2200 LOCAL in the summer & 2100 LOCAL in the winter, Stn-based Aircraft movements are to be kept to an absolute minimum commensurate with the training or operational task.
2. All routine Stn flying is to cease at 2359 LOCAL. However, visual circuits, touch & go's or low approaches are not permitted after 2300 LOCAL; approaches (visual straight-in or instrument) are to culminate in a full-stop landing. Any requests for dispensation are to be made to OC OSW via the DOC for consideration. Only straight-in approaches will be allowed for movements outside normal operating times.
3. When Runway 02RH is in use, it is impractical to avoid overflying Coleby (202°/2nm). Low level circuits when on runway 02RH should also be kept to an absolute minimum commensurate with the training or operational task. After 2100 LOCAL, low level circuits should not be conducted on Runway 02 unless there is an urgent operational requirement.

Visiting Aircraft

4. Visiting Aircraft will only be accepted on a case by case basis & with the express permission of OC OSW. If issued with a PPR, captains of visiting Aircraft are to abide by the following noise abatement procedures.
5. Owing to the high usage of Waddington, circuit training (CT) by visiting aircraft & practice diversions (PDs) will normally be restricted to the following times (Local):
 - a. Mon-Thu 0800-1800hrs, Fri 0800-1300.
 - b. If operational requirements dictate that the AD be open between 1800-2100hrs, a maximum of 2 visiting (PD) aircraft will be allowed in the visual circuit or the instrument pattern at one time. PDs will be restricted to 2 visual circuits & two instrument approaches per aircraft. PDs must be pre-approved by the ATC Supervisor before 1800.
 - c. PDs will be accepted at Supervisor's discretion subject to the Stn flying programme.
 - d. If operational requirements dictate that the AD be open between 2100-2200hrs, aircraft will be accepted for single approaches at a rate of one aircraft in any 30-minute period.

- e. There are no restrictions on movements, including CT, by Waddington-based aircraft. However, after 2100hrs, movements are to be kept to a minimum commensurate with training or operational tasking.

Local area avoids

6. All Aircraft joining or flying in the visual circuit should adhere to all noise abatement procedures, unless flight safety critical or operationally essential. Aircraft are to avoid overflight of the following villages and the Explosive Storage Area (ESA):

a. **1000ft QFE (1300ft QNH)**

- (1) Waddington village, including base Married Quarters (1000ft QFE(1300ft QNH) – 303°/0.5nm)

b. **500ft QFE (800ft QNH)**

- (1) Bracebridge Heath (352°/1.7nm).
- (2) Branston (048°/2.5nm).
- (3) Boothby Graffoe (190°/2.8nm).
- (4) Coleby (202°/2.0nm).
- (5) Navenby (185°/3.5nm).
- (6) Washingborough/ Heighington (038°/3.7nm)
- (7) Harmston Village (221°/1.3nm)

. All pilots are advised that there is an additional risk associated with over flight of the Explosives Storage Area (ESA) due to storage of co-located explosives. Overflight of the ESA is to be avoided. If overflight unavoidable, aircraft are not to be below:

- (1) FJ/FW aircraft (500' QFE)
- (2) RW aircraft (2000' QFE)

Low flying complaints & noise

7. On occasion, flying complaints may be received from the general public due to noise, low or unusual flying. All flying complaints can be dealt with by the DOC or DOS

and are to be handled politely and courteously. In order to be best placed to defend against future legal action being taken against the MOD as a result of noise nuisance complaints, recording and storage of pertinent data is critical. Complaints are to be recorded on Military aircraft Activity Public Complaint Form (MOD F953) with as much information as possible. All sections of the MOD F953 must be completed.

8. Full details of how noise complaints are to be handled are contained in the following documents.

2018DIN03-003



Stn Ops Orders – Low flying/noise

Members of the public may also contact:

Ministry of Defence Low Flying Complaints and Enquiries Unit

Building 435

Wittering

Peterborough

PE8 6HB

Complaints telephone number: 01780 417558 Email: SWK-LowFlying@mod.gov.uk

9. Stn Ops pers are to ensure that the MCO is made aware of any planned flying that is outside of expected levels, e.g. Night Flying or Practice Air Displays.
10. This can extend to unusual visiting ac such as helicopters and fast jets. Stn Ops pers are to use their discretion and report visitors to the MCO as appropriate.
11. The MCO should be informed by Stn Ops if any flying activity has the potential to cause complaints.

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Annex I to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Temporary & Permanent Obstruction Orders.****Temporary Obstructions**

1. Temporary obstructions on or around any manoeuvring area that are considered to be a hazard to either Aircraft or vehicles are to be reported to Waddington Air Traffic Control. If necessary, obstructions will be marked by high visibility markers, tape or fencing with additional red-light markers at night.
2. For the safe movement of Aircraft, a NOTAM will be issued, & taxi patterns will be controlled by ATC & briefed to pilots on landing or when calling for start.
3. Red Obstruction lighting throughout the airfield & on Coleby Church spire. The Obstruction Lights for No 3 Hangar are not connected to the main Airfield Obstruction Light circuit. They are operated from a manual isolation switch located at the south side of the Hangar.

Permanent Obstructions

4. The following structures encroach the **Code D (37m) wingtip** clearance.

<u>Building ID/Obstruction</u>	<u>Distance (m)</u>	<u>Distance within Safe – 37(m)</u>
Per. Fence IVO 629 – Ent. To bays 1-9	34.230	2.770
193A - HRDF	36.280	0.720
Pillbox IVO 251 -VAHS	36.530	0.470
Generator Pen IVO 282 - Off Delta	34.390	2.610
Generator Pen IVO 286 – Off Delta	33.420	3.580

5. The following structures encroach the **Code D (33.5m) taxi lane** clearance.

<u>Building ID/Obstruction</u>	<u>Distance (m)</u>	<u>Distance within Safe – 33.5(m)</u>
Bays 26-29	25.6	7.9
(Southern taxi lane centreline to 2 x light stanchion)		
Bay 29 North	30	3.5
(Northern taxi lane centreline to light stanchion)		

Bays 30 & 31

31.6

1.9

(Southern centreline to light stanchion)

6. The following structures encroach the **Code E (43.5m)** wingtip clearance.

<u>Building ID</u>	<u>Distance (m)</u>	<u>Distance within Safe – 43.5(m)</u>
565A – Met Compound	43.20	0.30
746 – NE corner of H2	37.58	5.92
H2	43.30	0.20
Barrier wall IVO car park (H4)	37.12	6.38
Gen. pen IVO 748 – ent. To bays 1-9	38.93	4.57
Fence IVO 680 – AWC	42.31	1.19
180A – AAR	41.34	2.16
Generator pen IVO 814 – Fire	42.00	1.50
Pillbox IVO 656C – Bay 18	41.24	2.26

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Annex J to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Aerodrome Arresting System Orders.

1. **Maintenance of the RHAG.** The maintenance & maintenance schedule for the RHAG is carried out in accordance with [DAP-119J-1405-12](#).
2. **Operation of the RHAG.** Operation of the RHAG is in accordance with RAF Waddington [ATC Orders](#) & MAA [RA 3268 – Aircraft Arresting Systems](#).
3. **Standard Configuration.** Standard RHAG configuration is approach end cable de-rigged & overrun cable up. However, ISTAR Aircraft often require both cables to be de-rigged. If the RHAG is required ATC should be contacted in advance.

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Annex K to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Manoeuvring Area Safety & Control Orders.**

1. **Aircraft Towing.** All Aircraft towing is to be carried out in accordance with [AESO 2-2-2-05-05](#).
2. **Ground Support Equipment (GSE) Towing.** Towing of GSE on the airfield is to be carried out in accordance with [AESO 2-2-2-05-08](#) Airfield Support Equipment Towing & Manoeuvring.
3. **Allocation of Parking Positions.** Should Aircraft require to be parked on non-intercepted areas (e.g. taxiways) the procedures are detailed in [AOB Order B224](#). Aircraft parking is allocated as detailed below but is at the discretion of the DOC/DEOC:
 - a. **Parking Bays 1-4.** RAFAT (however bay allocation is not fixed, it can change daily and is at the discretion of the DOC and DEOCs).
 - b. **Parking Bay 7.** Aircraft Wash Pan. See AOB 226.
 - c. **Parking Bays 18-25.** VAHS. Parking on Bays 18-25 is at the discretion of DOC/DEOC.
 - d. **Parking Bays 26-27.** 14 Sqn.
 - e. **Parking Bays 30-31.** 51 Sqn.
4. **Arrangements for Engine Start.** UHF 342.12 (Stud 1) should be used for pilots requesting start, when taxiing out/in & for passing departure instructions, with 121.3 only being used by non-UHF equipped ac.
5. **Marshalling Services.** All Aircraft which are manoeuvring onto parking bays require Aircraft Marshalls. Unless other arrangements have been put in place, marshalling of RAF Waddington based Aircraft is the responsibility of individual Sqn's & Marshalling of visiting Aircraft is the responsibility of VAHS. All Aircraft marshalling is to be carried out in accordance with AESO 2-1-1-01-21.
6. **Follow Me Provision.** RAF Waddington does not routinely provide a Follow Me service for Aircraft. Users requiring this service are to contact RAF Waddington Operations in advance to discuss their exact requirements.
7. **Protection from Jet Blast.** The following is to be observed to minimise the risk posed by jet blast on the airfield:

a. **Aircraft Manoeuvring to Parking Bays.** All Aircraft manoeuvring onto parking bays are to be in accordance with AESO 2-1-1-01-21/MAM-P.

b. **Proximity of Jet Blast to A15 Carriageway on Rwy 20.** On limited occasions it may be necessary to utilise an extended length of RWY20 for Aircraft departures bringing jet blast in closer proximity to the A15 carriageway. The enhanced checks outlined at Appendix 1 are to be put in place when using the extended length of RWY20.

8. **Enforcement of Safety Procedures During Refuelling Ops.** Aircraft refuelling procedures are to be carried out in accordance with [AESO 2-2-2-05-02](#) Aircraft Fuel Operations.

9. **Orders for Airfield Sweeping.** Airfield Sweeping is carried out daily in accordance with The Airfield Sweeping Plan (if required a copy can be obtained on request from Air Operations) & [LOB 2-1-11-01-14](#) Airfield Sweeping Operations.

10. **Incident Reporting.** Incidents on the airfield which pose an immediate danger to Aircraft or personnel are to be reported immediately to RAF Waddington Air Traffic Control on Ext 333. Other incidents are to be reported to the Stn Flt Safety Team on Ext 6666 or through completion of a DASOR on [ASIMS](#).

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Appendices:

1. Voice procedures for additional assurance that the A15 carriageway is sterile during extended Runway 20 departures.
2. RAF Waddington licensed Aircraft dispersals – [AESO 2-1-1-01-37](#).

Appendix 1 to Annex K**File reference 20230809-RAF_Waddington_DAM_3.3-O****Voice procedures for additional assurance that the A15 carriageway is sterile during extended Runway 20 departures**

1. Below is the suggested voice procedure & RAFP/QRF co-ordination for Aircraft requiring the extended RWY20 departure for additional runway length. This action is subject to PPR NLT 12hrs prior to take-off from Air Operations. It is in place due to the proximity of jet efflux to the A15 carriageway when the extended RWY20 is in use. The RAFP/QRF presence is to ensure, as far as possible, that the under-shoot is sterile prior to take-off (i.e. free from pedestrians & vehicles).

Ser	RAFP/QRF Posture	Radio Call	Words
1	# 1 (Within MGR)	C/S to WAD Tower	"Waddington Tower, C/S requesting START"
2	# 1 (Within MGR)	WAD Tower to C/S	"C/S, Waddington Tower, Standby"
<p><i>WAD Tower will telephone RAFP Duty telephone Ext 7131 to confirm they are available to deploy RAFP/QRF to A15 This can be inside the aerodrome boundary in position at the MT1 traffic lights - either side [Eastern or Western] is acceptable. (only likelihood that they are not is if they are responding to an incident).</i></p> <p><i>When RAFP/QRF confirm they can deploy to A15.....</i></p>			
3	# 1 (Within MGR)	WAD Tower to C/S	"C/S, START"
<p><i>C/S starts & there may be a notable delay before C/S ready for taxi.</i></p>			
4	# 1 (Within MGR)	C/S to WAD Tower	"Waddington Tower, C/S requesting TAXI"
5	# 1 (Within MGR)	WAD Tower to C/S	"C/S, Waddington Tower Standby"
<p><i>WAD Tower will AGAIN telephone RAFP Duty telephone Ext 7131 to confirm they are available to deploy to A15.... & if so DEPLOY THEM (only likelihood they are not is if they are responding to an incident).</i></p> <p><i>When RAFP/QRF confirm they are deploying to A15.....</i></p>			

6	# 1 (Within MGR) (moving to #2)	WAD Tower to C/S	"C/S, Taxi..."
<i>Aircraft taxis to Runway 20 HOLD & RAFP/QRF deploy to A15.</i>			
7	# 2 (A15)	RAFP/QRF to WAD Tower	"Waddington Tower, WHITE CAP/QRF in position."
8	# 2 (A15)	WAD Tower to RAFP/QRF	"White Cap/QRF, Waddington Tower, Roger"
<i>Aircraft waits at Runway 20 HOLD & RAFP/QRF wait at Posture # 2 (Crash Gate One).</i>			
<i>When Aircraft ready to depart...</i>			
9	# 2 (A15)	C/S to WAD Tower	"Waddington Tower, C/S ready for departure"
10	# 2 (A15)	WAD Tower to C/S	"C/S, Waddington Tower LINE UP"
<i>WAD Tower <u>IMMEDIATELY</u> switches A15 lights on to flashing red.</i>			
<i>On seeing A15 flashing lights, RAFP/QRF conduct a check of the section between the A15 traffic lights to ensure it is sterile.</i>			
<i>Aircraft LINES UP & awaits confirmation that A15 is sterile....</i>			
11	# 3 (On foot in view of A15)	WAD Tower to RAFP/QRF	"WHITE CAP/QRF, WAD Tower – Confirm A15 is STERILE?"

12	# 3 (On foot in view of A15)	RAFP/QRF to WAD Tower	"Affirm" OR "Negative"
<i>If A15 is sterile....</i>			
13	# 3 (On foot in view of A15)	WAD Tower to C/S	"C/S, cleared for TAKEOFF"

Once the Aircraft has 'throttled up' & commenced a take-off roll, it is then committed to take-off & cannot reasonably be stopped by activity taking place behind in the A15.

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Appendix 2 to Annex K**File reference 20230809-RAF_Waddington_DAM_3.3-O****RAF Waddington licensed Aircraft dispersals – [AESO 2-1-1-01-37](#)**

AIRCRAFT DISPERSAL	QTY OF WEAPONS ALLOWED BY HAZARD DIVISION	SAFETY DISTANCE (NOT FDA) ^{Note 1}	CM FLARE	FORWARD FIRING	RESTRICTIONS
Bay 18-23 not including Bay 19A	HD 1.2.1 – 1.4 = 50 Kg Permitted to park 2 x Aircraft on one bay containing 50kg each	60m	Yes*	No	ESR must be informed prior to parking *Provided the Flare Danger Area can be met
Bay 24	NIL	N/A	No	No	Bay <u>not</u> licensed for explosives
Bay 25	HD 1.2.1 – 1.4 = 50 Kg Permitted to park 2 x system on one bay containing 50kg each	60m	Yes*	No	ESR must be informed prior to parking Aggregation rules apply *Provided the Flare Danger Area can be met
Bay 19A DAC ONLY (See note 2)	HD 1.1 = Nil		Yes*	No	
	HD 1.2.1 = 137kg	60m			
	HD 1.2.2 = 12884kg				
	HD 1.2.3 = 1440kg				
	HD 1.3.3 = 12117kg				
	HD 1.3.4 = 15000kg				
	HD 1.4 = 15000kg				

Note:

1. The Safety Distance is that generated by the Net Explosives Quantity & must not be confused with Flare Danger Area, which in some cases may be larger than the NEQ generated distance stated in Table 1.
2. Bay 19A is not to be used for parking armed Aircraft carrying munitions other than CM Flares.

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Annex L to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Emergency Orders & Aerodrome Crash Plan.**

1. The RAF Waddington Aircraft Post Crash Management (APCM) & Major Accident Plan (CONPLAN 1) can be found at this [link](#).
2. RAF Waddington maintains 24/7 coverage of Aircraft Post Crash Management Incident officer (APCMIO) duties for the airfield only through a roster of suitably qualified personnel across the whole of the site. The roster is managed by Flt Cdr Ops on behalf of OC Ops Sqn, & the orders are [here](#). The APCMIO will be activated by the DOC. The regional post-crash management lead is held by RAF Coningsby.
3. CONPLAN 1 is an all-encompassing response document for aircraft crash & Major Accident. The table below details the exercising regime of the document:

Area Exercised	Exercise Frequency	Date of Last Event & Comments
Unit Spillage Response Plan	Tier 1 & 2 – annual as part of USRP Tier 3 – Yearly tabletop with local agencies	USRPs require annual exercise for Tiers 1 & 2 USRP. contains full Exercise & Training Record. Tier 1 & 2: Local on-site practical trg 27 Feb 22, Tier 3: MACR TTX 13 Dec 22
APCM Full Scale Ex.	Every 2 years	Last APCM LIVEX – 5 Nov 21
APCM Table Top Ex.	Any year a full-scale Ex has not been carried out.	Last APCM TTX 07 Jul 22
Major Accident Ex (with Civilian Emergency Services)	Every 3 Years	Ex SILVER SIREN carried out 5/6 th Oct 21
Major Accident Control Regulations (MACR) 3PA DOSR Assessments	Every 5 years	Carried out May 21
MACR 3PA DOSR (documentation) Inspections due every 3 years.	Every 3 years	Ex SILVER SIREN took place 5/6 th Oct 21

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Annex M to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Aerodrome Rescue & Fire Fighting Services & Training Orders.**

1. These orders supplement the RAF Waddington Aircraft Post Crash Management & Major Accident Plan & [Fire Section Orders](#) to outline the actions to be taken during an incident that may affect airfield operations. This could be an incident notified by the Civilian Emergency Services; Stn Ops or on guidance from ATC requiring pre-emptive emergency action to either Aircraft, technical or domestic situations.

2. Defence ARFF Service Providers are to provide policy guidance in the form of Tactical Information Plans (TIPs), Chief Fire Officer Instructions (CFOIs) and Operational Instructions. These orders are highlighted below, anyone who needs access to these documents should contact the RAF Waddington Fire OC on 01522 72 8551/7234 from civilian telephone networks or 95771 8551/7234 from military networks.

- a. **Operational Instructions and Guidance.** Capture the risks faced by all responding fire authorities in the execution of their operational duties.
- b. **TIPs.** All Defence ARFF Service Provider – Fire Stations are required to complete & document a TIP for all ‘Significant Risk’ premises within their areas of responsibility. TIPs inform & assess potential risks to fire-fighters in the event of a fire or incident & inform pre-planning strategies.
- c. **SOPs/TTPs.** Standard Operating Procedures written & produced for Fire personnel by the Defence ARFF Service Provider.

CFOI's. These are a means of providing the DFR Brigade with a single source of information for Civil Servants, Contractor Fire Services, Trade Group 7 (Fire) & the Royal Navy on current [CFOI Policy and Guidance](#) operating procedures & technical information in line with current practices.

3. **Release of Airfield Rescue Fire Fighting (ARFF) assets in support of incidents.** In accordance with MAA [RA 3261\(2\)](#) in the event of an incident across MOD estates with ‘persons reported’, or an aircraft incident reported within 5NM of the airfield boundary, the ATC Supervisor or ATCO IC is authorised to release the ARFF & to reduce or lose the Aerodrome Category in accordance with the following:

- a. Once informed of persons reported, the ATC Supervisor or ATCO IC is to authorise the Crew Commander to commit resources & reduce or lose the Aerodrome Category. The ATC Supervisor or ATCO IC is to consult with Stn Ops who will confirm the Sqn's requirements for any airborne Aircraft, in consultation with the sqn DAOs. If possible, any RW Aircraft in the visual circuit will be given landing instructions for any part of the airfield before the resources are committed. If this is not possible, the AO is to be consulted about authorisation for Field

Operations landings. FW Aircraft are to be sent around or diverted unless in the critical stages of flight; the ARFF are not to be delayed from crossing the runway by the landing Aircraft.

b. If the ARFF are unable to attend the incident due to an agreed higher priority on-airfield incident, confirmation from the Crew Commander is required that the local authority has been alerted via 999. Additionally, all details are to be recorded in both the ATC & Stn Ops Watch Logs.

c. When only small elements of a unit's capability are affected in support of an ongoing off-airfield incident, the ATC Supervisor is to liaise with the Crew Commander & confirm the Aerodrome Category. The Supervisor is then to liaise with Stn Ops & decide on whether to continue Aircraft operations from the airfield.

4. **Aerodrome categories.** Aerodrome categories. Aerodrome categories. RAF Waddington is designated an ICAO 'Crash Category Seven' (Cat 7/ ICAO 7+RAFAT) airfield for Stn-based AS. This is rested to ICAO Cat 5 for agreed periods of the day and will revert to domestic cover during the periods when flying has ceased with ability to generate ICAO 3 at 1 hour readiness. Stn Operations will automatically arrange for an appropriate crash category uplift to be in place 60 mins prior to the ETD or ETA if required. Moving to ICAO Cat 8 is available with prior notice & justification.

a. Hot refuelling of fixed wing aircraft is not permitted under any Aerodrome Category at RAF Waddington.

b. Minimum ARFF ICAO Categories for Stn-based aircraft are:

(1) Rivet Joint – ICAO Cat 7.

(2) Shadow – ICAO Cat 3.

(3) Hawk – ICAO Cat 3.

(4) RAFAT – ICAO Cat 7+RAFAT for Dual seat/formation Take off /Landing^{11 12}

c. In order to allow for full cooldown & remove any potential hazard for fire, upon landing, the relevant ICAO category will be maintained by the Fire Section for 15 mins following declaration of engine shutdown from the ac crew. Stn Ops will be the

¹¹ Due to the findings of [20230124-SQEP Panel RAFAT FIRE TRA](#) it has been accepted that when ICAO 7 + RAFAT cannot be met, ICAO 7 is sufficient to safely deal with a revised Hawk T1 Worst Credible Scenario without an increase in risk to life. The reductions in ARFF cover procedure will still be required to take place to capture this event

¹² A further [SQEP panel](#) has been carried out to delineate the difference between "formation" moves which require ICAO 7 + RAFAT as per the TRA, and "Single Hawk moves" Which require ICAO 3 as stated in the DSA 02

conduit for all such information to relevant parties as required & will confirm stand-down from ICAO category as required.

d. When holding diversions for fast jets, the Stn will routinely be at ICAO Cat 5 during the flying window.

5. **Temporary reductions in ARFF cover.** In the event of an unexpected reduction in ARFF capability e.g. unserviceability of a vehicle, specialist equipment or unplanned shortage of fire personnel, the senior RAF Fire Manager on duty shall:

- a. Complete the relevant ARFF Reduction of Cover – Hazard Assessment.
- b. Detail the nature of the reduction in ARFF capability.
- c. State what ARFF capability remains.
- d. Provide an estimate of how long the reduced capability is expected to persist.
- e. Once completed by the Senior RAF Fire Manager, ARFF Reduction of Cover – Hazard Assessment shall be sent to the DSATCO/ATCO IC to allow the HoE or AO determine what, if any, action will be taken concerning continuance of flying operations. The decision to stop, restrict or continue flying operations will depend on the nature of the reduction of ARFF capability.

6. **Display Standby.** Following the policy laid out in the DSA02 DFSR, a SQEP Panel was held to ascertain the appropriate level of standby cover required for AC Display, practices and training event. The outcome resulted in “Display standby” detailed in both the SQEP panel and Form 4 Hazard assessment DDH display standby.

a. [SQEP Panel](#)

b. [!\[\]\(0b5e7e25e8775f7e7e80906ada4f0021_img.jpg\) Form 4 Hazard assessment DDH display standby.](#)

7. **Medical cover.** The following Stn medical resources are available:

a. **Published airfield opening hours. Medical assistance.** The Duty Doctor is available via the Duty Medic, at 2 MT driver & AMRV are on standby at MT during Aerodrome opening hours & will respond immediately when required. The Duty Medic (DM) will remain on standby at Medical Centre. The Duty Doctor will respond to incidents at Waddington.

b. **Aerodrome opening outside of published hours.** On receipt of notification that the aerodrome has opened the DM is to contact MT & confirm the actions at 8a are in place. In the event of an Aircraft crash on Stn, the DM will respond in the AMRV & ATC will telephone 999 for civilian emergency hours’ notice, for the coordination of aviation & occupational emergencies.

8. **Inspection of fire & medical vehicles.** The daily inspection of fire & medical vehicles is to be carried out IAW [JSP 800](#) & relevant AESP's; any unserviceability's are to be reported to Air Ops who will then inform ATC & other sections as required.

9. As defined within DSA DFSR 02 – Defence Aerodrome Rescue & Fire Fighting (ARFF) Regulations, RAF Waddington has carried out a Task Resource Analysis (TRA) to assess the aerodrome ARFF response capability & to determine the minimum requirement of rescue & firefighting equipment, personnel & supervisory grades. All equipment required to provide appropriate ARFF cover at Waddington are stated in the [Equipment Needs Analysis \(ENA\)](#).

10. This TRA has been finalised in consultation between the HoE/AO & the Defence ARFF Provider to ascertain the optimum level of resource required to effectively manage a Credible Worst-Case Scenario (CWCS). The outcome of the TRA is agreed with the HoE/AO & should be shared with the local Fire & Rescue Authority(s) or Host Nation equivalent & Local Resilience Forums.

11. Dependent upon the role of the aerodrome it may be necessary to have carried out TRAs for a number of ICAO Aircraft Categories. TRA reports endorsed by the AO complete with all assessments are available via the hyperlinks below:

- a. ICAO Aircraft Category 7 AO endorsed TRA Report and associated CWCs Timelines and Workload assessments located – [TRA](#) (Scotland.1).

If required, copy above for each ARFF Category to be promulgated at the Unit.

12. **Response area assessment.** The operational objective of the ARFF service is to achieve response times of two minutes & not exceeding three minutes to any point of each operational runway, as well as to any other part of the operating area (response area), in optimum surface & visibility¹³. Response time is considered to be the time between the initial call to the ARFF service, & the time when the first responding vehicle(s) is (are) in position to apply foam at a rate of at least 50 per cent of the discharge rate required as defined within DSA DFSR 02 – Defence Aerodrome Rescue & Fire Fighting (ARFF) Regulations.

- b. RAF Waddington Response Area Assessment is located [here](#).
- c. RAF Waddington has an Aircraft Post Crash Management & Major Accident Plan – CONPLAN 1, which details how incidents on the Station, including an Air System crash, will be dealt with. Details of the plan including the exercise schedule are at Annex L. Detachment Cdrs in charge of RAF Waddington ISTAR Platforms overseas are to take appropriate APCM precautions as outlined in the MAA MPCM.

¹³ Optimum visibility & surface conditions are defined as daytime, good visibility, no precipitation with normal response route free of surface contamination e.g. water, ice or snow & aircraft movement restrictions.

RAF Waddington, under the orders of the duty ATCO, will send an initial crash response to any AC incident within 5 NM of the RAF Waddington boundary.

13. **1000Mtr assessment.** As defined within DSA DFSR 02 – Defence Aerodrome Rescue & Fire Fighting (ARFF) Regulations: assessment of the approach & departure areas within 1000m of the runway threshold¹⁴ should be carried out to determine the options available for rescue. In considering the need for any specialist rescue & access routes, the environment of the risk area, in particular the topography & composition of the surface should be considered.

a. Emergency access roads should be provided on an aerodrome where terrain conditions permit their construction to facilitate achieving minimum response times. Particular attention should be given to the provision of ready access to approach areas up to 1000m from the threshold, or at least within the aerodrome boundary. Where a fence is provided, the need for convenient access to outside areas should be considered.

b. Where an aerodrome is located close to uneven ground or difficult terrain, & where a significant portion of approach or departure manoeuvres take place over these areas, the ARFF service will be expected to respond to incidents in these areas & should be appropriately resourced with specialist rescue/firefighting equipment & training.

c. RAF Waddington 1000Mtr Assessment is located [here](#).

14. **Water assessment.** Additional water supplies shall be provided. The objective of providing additional water supplies at adequate pressure & flow is to ensure rapid replenishment of ARFF vehicles. This supports the principle of continuous application of extinguishing media to maintain survivable conditions at the scene of an Aircraft incident for far longer than that provided for by the minimum amounts of water defined in DSA DFSR 02 – Defence Aerodrome Rescue & Fire Fighting (ARFF) Regulations. Additional water to replenish vehicles may be required in as little as five minutes after an incident.

a. RAF Waddington Water Assessment is located [here](#).

15. **Reduction of ARFF category provision.** Circumstances may require that flying is conducted to/from aerodromes with reduced levels of ARFF services. HoE/ADHs may approve such activity following a risk assessment informed by advice from the ARFF provider.

a. The risk assessment is conducted using ARFF Reduction of Cover – Hazard Assessment which is to be archived once completed as the auditable record of the HoE/ADH's decision. Aircraft Operating Authority are responsible for detailing in

¹⁴ If required for rotary wing aircraft all undershoot/overshoot areas for the operating areas.

their Orders who can make risk-based decisions & to what level of reduced ARFF category will require elevation to the appropriate risk owner.

- b. All completed risk assessments are to be retained.
- c. Reduction of ARFF Category due to loss of Vehicle is located [here](#).

16. **RAF Waddington Fire Service Training Area.** RAF Waddington has 2 Fire Service Training Areas, they contain an Aircraft fire training simulator & breathing apparatus training facility; in particular the Aircraft simulator is a pressurised fuel fed system which meets the requirement of NATO STANAG 7145 ATM (Edition 5) – Minimum core competency levels & proficiency of skills for fire fighters, & part of the CSA between Defence ARFF Service Provider. Both training facilities are maintained as part of the estate maintenance programme.

17. All Firefighters at RAF Waddington complete maintenance of competence training, all Training Event Sheets (TES) & Risk Assessments (Ras) can be found [here](#).

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Annex N to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Disabled Aircraft Removal.**

1. **Overview.** This order outlines the actions to be taken when a requirement exists, to quickly & safely remove an Aircraft that has caused a temporary closure of a runway, taxiway or Aircraft Servicing Platform (ASP), but falls beneath the criteria of an accident that would be dealt with separately under CONPLAN 1. If there is any doubt as to the status of an incident, advice should be sought from the Military Accident Investigation Branch (MIAIB) or Air Accidents Investigation Branch (AAIB), if a civilian Aircraft is involved.

2. **Waddington Based Aircraft.** Should an RAF Waddington-based Aircraft become disabled & cause a temporary closure to any Aircraft Operating Surface, the responsibility for the recovery of the Aircraft will lie with the Aircraft owner (for Waddington based Aircraft, this will be the operating Sqn). During the procedure the following actions are to be carried out:

- a. **Waddington Air Traffic Control.** ATC are to assess the impact of the temporary closure on current flying operations. If necessary, they are to coordinate ARFF response & initial Aircraft diversion actions. If required, any unusable areas of the manoeuvring area are to be marked correctly. The following points should be considered:

ATCO I/C	
1	Notify the ARFF Services.
2	Aircraft identification & type.
3	Nature of Aircraft un-serviceability.
4	Location of Aircraft.
5	Section of the manoeuvring area affected.
6	People On Board (POB).
7	Estimated time of Arrival (ETA) of all Aircraft requiring use of the closed runway.
8	Latest time for affected Aircraft to divert.
9	Ensure that any unserviceable areas of the manoeuvring area are correctly marked, in accordance with MAA standards, to provide for safe Aircraft operation of the remaining areas.
Specifically, the ATCO IC is to pass the following information to Stn Ops.	
10	Aircraft Identification & Type.
11	Nature of unserviceability.
12	Location of Aircraft.
13	Section of the manoeuvring area affected.
14	POB

15	Time until the next Aircraft requires use of the closed manoeuvring area.
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- b. **Waddington Station Operations.** Are to liaise with Eng Ops & ATC to determine the time of the anticipated closure, submit a Runway BLACK NOTAM if necessary & coordinate the response to any Aircraft diversions.

Station Operations	
1	Notify ATC of a disabled Aircraft if not already aware.
2	Ensure the appropriate Notice to Airperson (NOTAM) has been raised.
3	If required carry out RUNWAY BLACK plan.
4	Notify OC OSW / OC Ops Sqn (or equivalent).
5	Notify Eng Ops (or equivalent).
6	Notify VAHS/Movements (or equivalent).
7	Notify relevant Sqn (if it affects a station-based Aircraft).
8	<p>Notify AAIB, for civilian Aircraft, to verify that the establishment assessment of the incident falls beneath that warranting an AAIB investigation.¹⁵ AAIB will require Aircraft identification & type; nature of Aircraft un-serviceability; location of Aircraft; section of the manoeuvring area affected & POB.</p> <ul style="list-style-type: none"> • Accident reporting 01252 512299 • General enquiries 01252 510300
Duty Ops Controller	
9	Obtain & record permission from the owner or duly authorized representative of the owner of the Aircraft, for the movement of the disabled Aircraft. Due to potential for MOD liability for any damage caused during the rapid removal of a civilian aircraft, the aircraft should normally only be moved under the supervision of the operating crew or owner. The speed of removal, supervision & precautions to avoid damage, will depend on the operational constraints or safety considerations at the time. The Duty OSW Exec is to be contacted as soon as the situation is understood, to make this decision in a timely manner.
10	Notify all Aircraft operators likely to be affected if "RUNWAY BLACK".
11	For civilian Aircraft, notify the Aircraft operating authority & AAIB.
Fire Section	
12	Response iaw DSA DFRS 02 – Defence Aerodrome Rescue & Fire Fighting (ARFF) Regulations & Site-specific Crash Plans.

¹⁵ If the AAIB elect to conduct an on-scene investigation, the disabled Aircraft cannot be removed from the movement area until authorised by the AAIB.

- c. **Waddington Engineering Operations.** Are to liaise with the relevant Engineering Sqn to determine & assist with any recovery actions. Eng Ops are to consider the possibility of activating the Stn Spillage Plan.

Eng Control (Or equivalent)	
1	Once cleared by Ops, tow the disabled Aircraft clear with the appropriate towing arm or 'universal dolly.'
Aircraft Owner	
2	The Aircraft owner is defined as the holder of the Certificate of Registration & can be held responsible for the Aircraft removal & disposal of fuel & other hazardous materials that have been spilt because of an incident (noting the aerodrome will have instigated the Stn Spill Plan). When advised of a disabled Aircraft, the owner should liaise with Station Operations (or equivalent) to discuss its removal.

3. **Visiting Military Aircraft.** Should visiting military Aircraft become disabled & cause a temporary closure to any Aircraft Operating Surface, the responsibility for the recovery of the Aircraft will lie with Waddington Eng Ops. The actions outlined in Paragraph 2 shall be carried out along with the following actions:

- a. **Waddington Air Operations.** Waddington Air Operations are to liaise with the parent unit to inform them of the situation.
- b. **Waddington Engineering Operations.** Waddington Engineering Operations are to nominate a parking bay for ASMT to tow the Aircraft for parking.
- c. **Parent Unit Operations/Engineering Section.** Parent Unit Operations/Engineering Section are to coordinate a full recovery plan through RAF Waddington Station Operations.

4. **Visiting Civilian Aircraft.** Should a civilian Aircraft become disabled & cause a temporary closure to any Aircraft Operating Surface, the responsibility for the recovery of the Aircraft will lie with the Aircraft owner, as detailed on the certificate of registration. Under the authorisation/supervision of the Aircraft owner or Captain, Waddington Eng Ops will initially tow the Aircraft clear of any Aircraft operating surfaces to a suitable parking bay. The Aircraft owner is then responsible for organising all recovery actions in coordination with Waddington Station Operations. It should be noted that, in extremis, RAF Waddington reserve the right to remove any disabled Aircraft should it pose a threat to safety or Operational output.

5. **AAIB Involvement.** In the event of a disabled civilian Aircraft, the AAIB should be contacted to verify that the assessment of the incident falls beneath that warranting an AAIB investigation. Specifically, the AAIB should be passed the following information:

- a. Aircraft Identification.

- b. Aircraft Type.
- c. Nature of unserviceability.
- d. Location of Aircraft.
- e. POB.

6. If it is deemed that an investigation is required, the Aircraft should not be moved from its location.

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Annex O to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Air Traffic Control Orders.

The Air Traffic Control Squadron Order Book is a live document updated regularly by DSATCO. The latest copy of the Order Book can be found at the following link:

[ATC Order Book](#)

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Annex P to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Aerodrome Data Reporting Procedures.

1. **AO.** The AO is responsible for ensuring aerodrome data is accurate. The AO ensures that procedures are established, & resources provided to report changes to aerodrome physical characteristics or any other change that may affect the safety of Aircraft operations.
2. **SATCO.** SATCO has overall responsibility for ensuring that information provided & published by AIDU for RAF Waddington is correct.

Authority to Amend

3. In order to ensure amendments to AIDU documentation are correct the following posts, as per AIDU direction, have been created to control change:
 - a. **Delegated Authority (DA).** A post which has been given authority by the AO (typically SO2, or SO3 equivalent) to authorise the change of aeronautical information on their behalf, for the UK Mil AIP. The following posts are DAs at RAF Waddington:
 - (1) SATCO.
 - (2) OC Ops Sqn.
 - b. **Support Contacts (SC).** SCs are posts which are involved with the change request submission process, they act on behalf of the Das. The following posts are SCs at RAF Waddington:

- (1) OC Ops Spt Wg Assurance
- (2) FS Ops Spt Wg Assurance
- (3) Flt Cdr Stn Ops.
- (4) DSATCO.
- (5) FS Stn Ops.

Process

4. **Requesting change.** Anyone wishing to submit a permanent change of aerodrome information to AIDU must submit their request through the contacts listed above.

5. **OC Ops Spt Wg Assurance.** The OC Ops Spt Wg Assurance is responsible for confirming that Aerodrome Data in the DAM is correct & matches the MilAIP. Where differences are identified the correct information must be obtained & the discrepancy rectified.

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Annex Q to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Aerodrome Serviceability Inspections.

1. **Aerodrome Serviceability Inspections.** Serviceability Inspections at RAF Waddington are carried out by RAF Waddington ATC in accordance with the guidance given in MAA [RA 3264 – Aerodrome Inspections](#). They are completed before the Aerodrome is opened by the Aerodrome Controller (ADC) who is to carry out a comprehensive inspection of the movement area as detailed below:

- a. Daily, before the aerodrome is opened for flying on each occasion.
- b. If night flying is to be conducted a further inspection is to be conducted prior to last light.
- c. Check the serviceability of all aerodrome traffic lights.
- d. Controllers are to vacate the vehicle at random intervals & conduct a close-up visual inspection of an area of the runway.
- e. All inspections are to be logged in the ATC logbook, including any issues raised. Any issues are to be reported to the relevant section subject matter expert (SME). Any sweeping requests are to be logged.
- f. Any work requests are to be put through the correct channels & a record of the request & subsequent action maintained.

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Annex R to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Aerodrome Technical Inspections.

1. **Inspection of technical equipment.** Personnel with Aquila (formerly GRMS) are responsible for routine inspections of the technical equipment (transmitters, receivers, ILS etc) with precision navigation aids being calibrated by a flight check Aircraft in accordance with [AP 600](#) Royal Air Force CIS policy & the relevant equipment Support Policy Statement.
2. **Airfield lighting.** Airfield Lighting is maintained & checked on a routine basis by Vivo in accordance with the Military Airfield Design Specification.
3. **Earthing points.** Earthing Points are maintained & checked on a routine basis by Vivo in accordance with MAA RA 3500 series.
4. **Manoeuvring Areas & drainage.** The Airfield Manoeuvring Areas are maintained & checked on a routine basis by Vivo in accordance with the Military Airfield Design Specification. The airfield drainage plan is checked & maintained by Severn Trent Constrain.
5. **Aerodrome signage.** Aerodrome signage is maintained & checked on a routine basis by Vivo in accordance with the Military Airfield Design Specification.
6. **ARFF vehicles.** The Airfield Response Fire Fighting vehicles are checked & maintained iaw CFR Operational Instructions. This document is available through RAF Waddington Fire section – [Fire B&TA SharePoint site](#).
7. **Crash ambulance.** The scaling of the Crash ambulance is done iaw AP 1269 & Defence Logistics Framework; civilian access via the Defence Gateway detailing the associated equipment care inspections.
8. **Airside vehicle control measures.** The Airside vehicle control measures of Traffic lights, CCTV & road barriers is maintained iaw RA 3262 & ATC Sqn Orders.
9. **Airfield Wildlife Control Unit.** The Airfield Wildlife Control Unit equipment & vehicles are inspected on a daily basis & a locally produced form from SERCO is completed to annotate this.
10. **Standby Power System checks.** The Airfield Standby Power System is maintained & checked on a routine basis by Vivo in accordance with the Military Airfield Design Specification.

11. **Review of Aerodrome Driving Orders.** Aerodrome Driving Orders are the responsibility of Waddington ATC ASOM. They are reviewed & updated annually.

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Annex S to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Radar, Radio & Navigation Aid Maintenance, Monitoring & Protection.

1. The Airfield Support Team (AST) Supervisor & staff are responsible for the security, safety, safeguarding & infrastructure of Ground Radio Installations (GRI). This is achieved through controlled access, regular inspections & active involvement with Boards of Officers/Siting Boards in accordance with AP 600 Royal Air Force CIS Policy.

2. Security of the GRI is achieved by ensuring access to any site is via either the Aquila GRMS or the AST Task Control office. These staff ensure that only personnel with a valid reason for entering the GRI are permitted entry & all visitors without the relevant level of security clearance will be escorted. Two sets of keys exist (Aquila and AST held) and control is delivered by the use of site-specific Health & Safety briefs which must be read & signed for before the drawing of keys, which in turn are signed for in the respective Key Register on issue. Site Integrity Signs instructing personnel to contact either Aquila or AST are clearly visible to anyone approaching the GRI from an approved direction.

To ensure the integrity of all GRI is maintained, whether manned or unmanned, they are subject to a Weekly, Monthly check by AST staff in accordance with AP600 and local orders, a copy of these orders can be obtained on request from OC DSF. In addition, OC DSF undertakes a 3 Monthly site check in accordance with [AP600 Order 2.1.1](#) and [AP600 Order 2.1.2](#)

3. Equipment Maintenance is carried out by suitably trained, authorised personnel within the Aquila GRMS¹⁶, Aquila 3rd line support & external agencies that supply &/or maintain associated equipment.

4. The maintenance policy for each item of technical equipment is detailed in the relevant Support Policy Statement (SPS). The SPS is the executive document specifying the support arrangement for each GRI & reflects the broad policy contained in [AP600 RAF CIS Policy](#).

5. In addition to the SPS are the equipment associated technical Air Publications (AP) which detail the type & periodicity of preventative maintenance. A full set of these can be accessed via the Technical Documentation On Line Search engine DR TDOL Viewer.

¹⁶ With the delivery of Programme MARSHALL, Air Traffic Management Services were awarded to Aquila Air Traffic Management Services Ltd. A consequence of this contract award was that not all the tasks undertaken by the RAF Ground Radio Maintenance Section (GRMS) were included. To ensure these residual 'out of scope' tasks are maintained the establishment of an Airfield Support Team took place. Full responsibilities of that team are detailed within [AP600 RAF CIS Policy](#).

6. Equipment monitoring is carried out by Air Traffic Control duty personnel via equipment specific Remote Control/Interface Units located in the ATC Approach Control Room. Any fault indications are reported by ATC staff to the Aquila Service Desk.

7. Air Traffic Management Equipment Technical Safeguarding¹⁷ as detailed within [RA3136](#) is carried out by the AST with OC DSF as the C-E Specialist Officer appointed by the HoE to ensure the technical safeguarding, of all Ground Radio Installations (GRI) in accordance with the policy detailed within [JSP 604](#). Technical safeguarding is further referenced in Annex BB of the WAD DAM.

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¹⁷ Technical Safeguarding is the process employed to protect radio signals from being affected by physical or electromagnetic changes in their transmission environment.

Annex T to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Aerodrome Works Safety.

1. **Work In Progress (WIP) brief & contractor control orders.** The control & supervision of Airfield WIP is carried out in accordance with the guidance issued in MAA [RA3266](#). Contractors are to be briefed by ATC prior to starting work on the airfield & are to be made familiar with the Airfield User Orders at [Annex Z](#).
2. **WIP supervision.** Supervisors of any working parties are to be fully briefed on their responsibilities. The ATCO IC is responsible for ensuring that the supervisor of the working party is properly briefed. The briefing is to include (but not limited to) the following details:
 - a. Limits of the work area.
 - b. Direction of Aircraft movements.
 - c. Route to be taken by works vehicles.
 - d. Parking area for works vehicles & equipment.
 - e. Control to be exercised over works vehicles & workers.
 - f. Signals to be employed.
 - g. FOD prevention.
8. **WIP log.** The WIP log is kept in the ATC Tower. Contractors are to sign it prior to commencing work on the airfield.
9. **WIP record.** The WIP record is kept in the ATC Tower & can be made available on request to the Waddington ATC Supervisor.

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Annex U to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Aerodrome Users – Vehicle & Pedestrian Control.

References:

- A. MAA [RA3261](#)
- B. MAA [RA3262](#)
- C. MAA [RA3225](#)
- D. BM Orders
- E. CAP 413
- F. CAP 774
- G. WAD DAM
- H. AP 8000 Fair Model
- I. ATC SOB
- J. Station Standing Orders: Order 34

Introduction

1. RAF Waddington is an operational flying unit & the airfield is active & operational 24 hrs a day. Therefore, all personnel are to treat the airfield as live at all times. **The airfield is out of bounds to all personnel & their vehicles unless they hold a valid Airfield Access Permit (AAP).** When ATC is open, they are the sole controllers of access to the airfield. Out of hours, Station Operations manage access to the airfield. The airfield boundary is defined in the [DAM Appendix 8 to Annex NN](#).

PERSONNEL REQUIRING ACCESS TO THE MOVEMENT AREA ARE TO CALL ATC IN THE FIRST INSTANCE ON 01522 727451 (EXT 7451).

WHEN ATC IS CLOSED, ALL PERSONNEL REQUESTING ACCESS TO THE MOVEMENT AREA ARE TO TELEPHONE THE DOC ON 01522 726532 (EXT 6532) FOR PERMISSION. THIS IS NOT REQUIRED TO TRANSIT THE MT ROUTE.

UPON ATC OPENING, THE ATC SUPERVISOR/ATCO IC HAS THE AUTHORITY TO AMEND, DELAY OR CANCEL ANY PREVIOUSLY AUTHORISED ACTIVITY ON THE AIRFIELD IN ACCORDANCE WITH RA3261 & RA3225.

2. **Applicability.** These regulations have been written for the safety of all airfield users. All airfield users are to comply with these regulations. Failure to adhere to the instructions could result in the withdrawal of an individual's permit & may result in disciplinary or administrative action.

Definitions

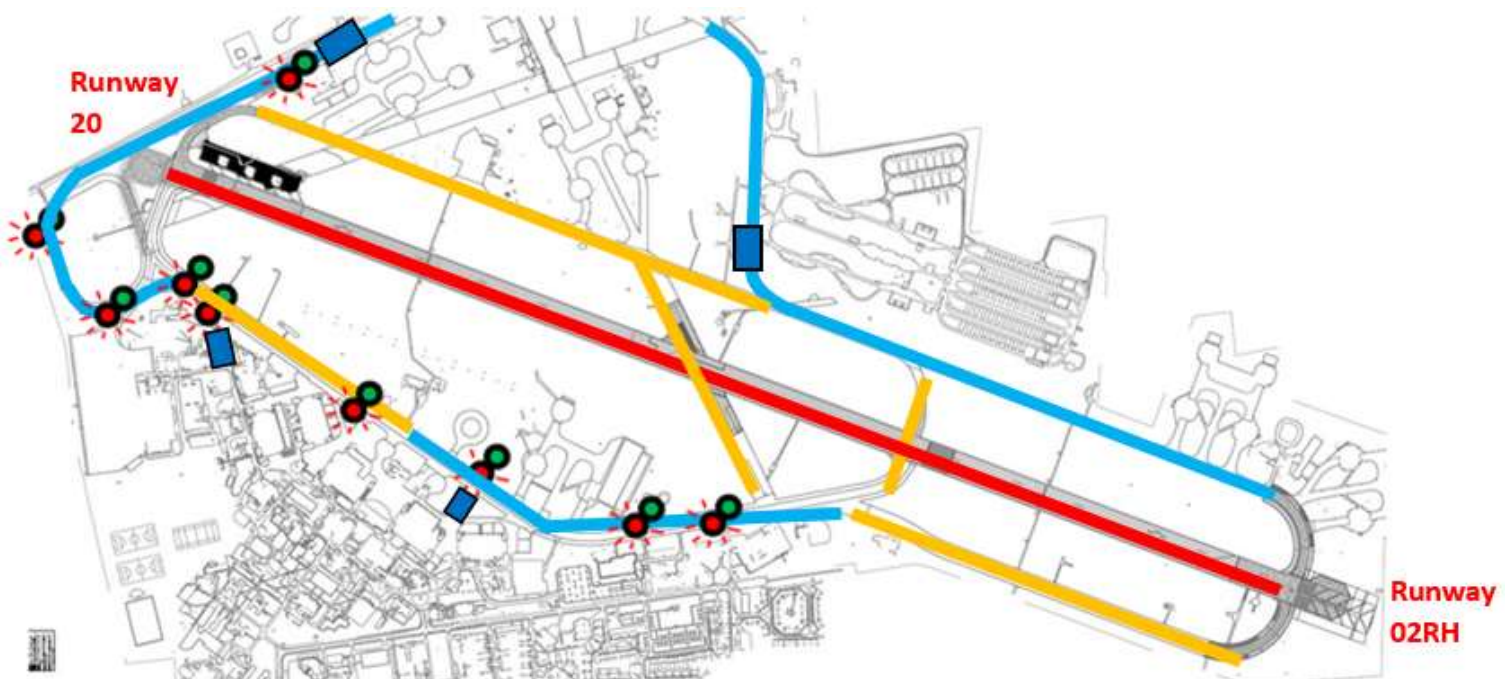
3. **Movement Area.** That part of an aerodrome intended for the surface movement of aircraft, including the manoeuvring area & apron(s).

a. **Manoeuvring Area.** That part of an Aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding Aprons.

b. **Apron.** A defined area, on a land Aerodrome, intended to accommodate aircraft for purposes of Loading or unloading Passengers or Cargo, fuelling, parking or Maintenance. Also known as an Aircraft Servicing Platform.

4. AIRFIELD LAYOUT

Runway — Restricted access — MT Route —
 Airfield Traffic Lights  FOD Box 



5. **Permission.** Aerodrome Access Briefs are carried out in accordance with MAA [RA 3262](#). All personnel entering the airfield are to be in possession of a valid AAP. AAP Briefs for MODNET users can be booked via the RAF Waddington SharePoint Homepage > “How do I” > “Book a course”. Personnel without MODNET access are to contact ATC Ext 7451 to book an in-person brief at ATC. All personnel are to complete an exam following the brief with 100% pass mark required. MODNET users will complete an online test which when passed, enables the user to print their permit. Non-MODNET users complete a paper version and permits are issued manually by ATC. Visitors may be escorted by a person who is in possession of a valid AAP, however the escorting driver remains responsible for the visitor’s conduct. Possessing an AAP does not give personnel an automatic right to drive on the airfield.

There are some activities that require specific permission & a brief from the Aerodrome Controller (ext 7448) these include, but are not limited to:

- a. Aircraft under tow.
- b. Slow moving vehicles (e.g. cranes, cherry pickers, etc).
- c. Vehicles with large or awkward loads.
- d. Vehicles towing open loaded trailers.
- e. Open top loaded vehicles.
- f. Weapons convoys.

6. Having received authority to enter the manoeuvring area, drivers are to proceed to their destinations with care & caution. Drivers are to inform ATC/Duty Ops Controller (DOC), if for any reason a delay is incurred.

7. **AAP validity.** AAP validity is as follows:

- a. AAPs are valid for the minimum period required, up to 12 months & it is the responsibility of the individual to effect renewal.
- b. AAPs will not be issued for periods of 3 days or less. Hosts of visiting drivers are to ensure that visitors do not drive on the airfield without permission. Escorts should be provided in all cases where an AAP has not been issued.
- c. Two types of AAP are issued; colour coded permits restrict access as follows:
 - (1) **MT route only (white). MT Route Only (white).** Valid from airfield entrance at the Northern MT Loop Road and eastern side of the airfield up to Delta taxiway. This includes Delta South up to and including VAHS and 2503 Sqn. Access to Delta South is controlled by ATC/Station Operations when the yellow gates are closed at the entrance to Delta at the end of the MT Loop Road. When the gate is closed, permission is required from ATC/Station Operations before proceeding. ATC Ext 7448, Station Operations Ext 6532.
 - (2) **Full (red).** Valid for all airfield areas including the runway, in addition to the MT Route.
- d. Full permits must be signed by the individual's Line Manager (LM) in order to be valid. Unsigned permits are restricted to the MT Route only. LM signature confirms that the individual has received task-specific OJT following attendance at the Airfield Access Brief. Examples of best practice OJT are available via ATC on Ext 7451 (01522727451).

8. **Colour perception.** Personnel requiring an AAP are to be colour perception safe (CP2 or CP3 safe). Personnel who do not meet the required colour perception standard cannot be employed as drivers on the manoeuvring areas. If a known colour perception condition exists or is suspected, individuals are to seek medical advice prior to applying for an AAP. By accepting the issuance of an AAP, individuals are deemed to be declaring themselves CP2 or CP3 safe & are responsible for their actions.

9. **Breaches of regulation/runway incursions.** In accordance with MAA RAs, BM Orders, ATC Sqn Order Book & the FAIR Model, failure to comply with these orders may result in the following:

a. When a breach of regulations has occurred, SATCO, or their nominated representative, is to utilise the above references to ascertain the appropriate immediate actions which can include:

(1) AAP suspension.

(2) Retraining.

(3) When required, administrative or disciplinary action following consultation between SATCO, OC PMS & the individual's LM.

(4) If the driver has not been stopped, the registration of the vehicle is to be passed to the RAF Police for tracing action. The DASOR reference number is to be passed to the RAFP as soon as possible.

b. Spot checks of AAPs will be conducted on authority of SATCO. All airfield users are to produce a valid AAP & ID upon demand.

10. **Vehicular activity.** Regulations permitting vehicular activity are as follows:

a. Conducting duties directly in support of Aircraft activity on the airfield.

b. Conducting duties directly in support of the airfield.

c. Driving to/from a place of duty.

d. The road testing of private vehicles is strictly prohibited on the airfield.

e. Learner drivers are not permitted on the airfield.

11. **Use of private vehicles on the airfield.** Unless driving on the MT Route or commuting to/from a place of duty, private vehicles are not to be driven on the manoeuvring area. At all other times duties should be undertaken in an appropriate service vehicle.

12. **Insurance.** Private vehicles are to be properly insured. All personnel are to note that some insurance companies operate an “Airside Exclusion” clause. Neither the Crown nor the Station accept any liability for any accidental damage or injury occurring whilst driving on the airfield; whether involving only your vehicle, with another vehicle, aircraft (both stationary or moving), person, equipment or obstacle within the airfield boundary (defined as inside the perimeter fence). Whilst driving on the airfield you must either personally obtain suitable airside insurance for your vehicle or understand that you are undertaking liability for any damage or injury caused by you or to you whilst driving on the airfield.

13. **Pedestrians.** Pedestrians are not permitted on the airfield without prior approval of the Aerodrome Controller / DOC unless they hold a valid AAP. Pedestrians on the Airfield are to wear a minimum of a high visibility vest (hi visibility belts are considered sub-optimal). Pedestrians are to route directly to/from their place of duty & obey all traffic lights & light gun. Pedestrians are not to cross the runway, including via the MT Route, without vehicular support & permission from the Aerodrome Controller. The use of the movement area for running/jogging is strictly prohibited.

14. **Cyclists.** All cyclists on the airfield are to adhere to the following instructions:

- a. Cyclists are to be in possession of a valid AAP.
- b. When cycling on the airfield high visibility clothing is to be worn. (Hi visibility belts are considered sub-optimal)
- c. Cyclists are to adhere to traffic lights & light gun signals.
- d. Cyclists may only transit to/from their place of duty. The use of the airfield for leisure cycling/sports training is strictly prohibited.
- e. Bicycles are to be fitted with working white front lights & red rear lights, which are to be operated during hours of darkness & in low visibility.
- f. The use of other non-regular modes of transport including, but not limited to, skateboards, roller skates & scooters is prohibited.

15. **Two Hangar North.** The area on Alpha Taxiway at Two Hangar North is out of bounds to pedestrians & cyclists.

AIRCRAFT WHETHER TAXIING OR ON TOW HAVE RIGHT OF WAY OVER ALL VEHICLES EXCEPT IN CERTAIN SITUATIONS (WEAPONS CONVOYS).

16. **Driving routes.** Detailed rules to be applied at RAF Waddington are as follows:

- a. An MT route runs along part of Alpha Taxiway. When traffic lights are green, vehicles are permitted to enter & transit along Alpha Taxiway iaw the Airfield Driving

Brief. There are several uncontrolled access points to Alpha Taxiway; if entering from an uncontrolled access point, vehicles are to carry out a FOD check & scan along the taxi way for any moving Aircraft prior to entering. If an Aircraft is seen, vehicles are to hold position & give way to & moving Aircraft. Should a vehicle enter Alpha Taxiway & find themselves head-to-head with an Aircraft, the vehicle is to conduct a U-turn & vacate the taxiway & the first available opportunity. If any doubt exists, personnel are to contact ATC prior to entering the movement area.

b. There is no MT Route on DELTA NORTH Taxiway (North of the MT Loop Road at the ESA); personnel requiring access are to be in possession of a Full (red) AAP and are to telephone/radio ATC prior to entry. If ATC is closed permission must be obtained from Station Operations to enter DELTA Taxiway North of the ESA.

c. Vehicles are to be driven on the MT Route or, if authorised to operate on the movement area away from the MT Route, routes that have the minimum use of Aircraft operating surfaces.

d. Drivers are to cross the airfield via the MT Route which passes the undershoot of RWY20 at the northern end of the airfield. However, ATC may grant permission or instruct MRE equipped personnel to cross the runway at other locations. Such instructions are mandatory, & drivers are not to cross the runway without positive MRE clearance from the Aerodrome Controller

e. When ATC is open, the 02 Threshold Traffic Lights will be set to RED & the area is out of bounds to all vehicles unless permission has been granted via MRE from the Aerodrome Controller.

f. When ATC is closed, the 02 Threshold Lights will be set to GREEN. The area is out of bounds to all vehicles except duty RAF Police, MPGS, QRF, & Fire vehicles. Any requests for works in the area, e.g. Airfield Electrician, are to be requested via the DOC.

g. Drivers on Alpha Taxiway must stay on the Western shoulder (Domestic/Hangar side) of the taxiway & standard rules of the road apply. Vehicles in excess of 42 tons are exempt & must only drive on the main part of the taxiway.

h. The area of Alpha Taxiway between the 4/5 Hangar entry point & the MT Route entry point adjacent to RAFAT HQ is restricted to large airside support vehicles with MRE permission to transit (e.g. tankers, fire vehicles, ATC vehicles & LOX vehicles). Flatbed trucks & minibuses are not considered to be large airside support vehicles. If ATC is closed, permission is to be requested via telephone from the DOC. Drivers requiring access to sections within the ATC buildings are to route via 4/5 Hangar entry point to ATC unless permission has been granted from the

ADC to transit from the Northern MT Route. Personal vehicles may be used to access ATC buildings as a place of duty.

- i. Entry/exit points to the airfield are marked by blue FOD boxes; FOD checks are to be carried out in accordance with Station FOD Policy.
- j. All areas of Alpha and Delta Taxiway can be frequently used by taxiing aircraft travelling in either direction. Drivers are to be vigilant at ALL times. If the driver's route is obstructed by taxiing aircraft, drivers are to vacate onto the nearest safe hard standing off the taxiway or turn around and go back to the next hard standing off the taxiway. In an emergency, vacate the taxiway on to the grass and conduct FOD checks on return.

17. **Parking.** The only parking areas on the airfield are as designated with Station Zonal Parking Policy. Other locations are as authorised by SATCO. Vehicles are not to be parked or left unattended on the movement area or Airfield Entry Points.

Traffic lights & Light Gun signals

18. **Taxiway traffic lights.** There are traffic lights situated at the various entrances to the taxiway. Drivers are to comply with traffic light signals as follows:

- c. STEADY RED – Stop, do not enter the taxiway until the lights change to GREEN or exit the taxiway at the next exit.
- d. STEADY GREEN – Cleared to proceed.

19. **Runway crossing traffic lights.** Drivers are to comply with traffic light signals as follows:

- c. STEADY RED – Stop, remain clear of the runway until the lights change to GREEN.
- d. FLASHING RED – Stop, remain clear of the runway until the lights change to GREEN.
- e. STEADY GREEN – Cleared to proceed with MRE permission from ATC.
- f. FLASHING AMBER WIG WAGS – These are Runway Entry Points. Unless positive MRE permission has been given by ATC, drivers are not to proceed beyond these lights.

20. **Light Gun signals.** ATC or the Runway Caravan controller may use Light Gun signals to communicate with airfield users. Drivers are to comply with Signal Light Gun as follows:

- c. STEADY RED – Stop.

- d. FLASHING RED – Clear the runway or taxiway immediately.
- e. FLASHING GREEN – Cleared to proceed (CAUTION- A STEADY GREEN IS FOR AIRCRAFT ONLY).
- f. FLASHING WHITE – Return to starting point or do as briefed.
- g. In addition to the above, a RED Verey flare fired towards or in front of a moving vehicle indicates the driver is to conduct an EMERGENCY STOP.

IF A TRAFFIC LIGHT IS SHOWING NEITHER A RED NOR GREEN, AIRFIELD USERS ARE NOT TO PROCEED WITHOUT THE PERMISSION OF ATC (OR THE DOC IF ATC IS CLOSED).

21. **Telephones.** Telephones are sited on multiple dispersals to report emergencies or Flight Safety hazards. To report an emergency dial ext 333. To report non-Flight Safety critical hazards or to speak to the Aerodrome Controller, dial ext 7448/7451. To call from a mobile phone call 01522 727448. When ATC is closed, Flight Safety Hazards are to be reported to the DOC on ext 6532 / 01522 72 6532.

22. **Speed limits.** The following maximum speed limits apply:

- c. Taxiways & MT Route Day – 30 mph.
- d. Taxiways & MT Route Night – 20 mph.
- e. Low Visibility Procedures – 15 mph.
- f. Hangars fronts – 10 mph (unless lower is signed).
- g. Dispersals – 10 mph.
- h. Aircraft under tow – 5 mph.
- i. When instructed to 'EXPEDITE' by the Aerodrome Controller. As required/authorised as safety permits for vehicles responding to an accident/incident, including practices.
- j. As required/authorised for emergency vehicles as part of Dis.
- k. As required for ATC vehicles conducting specific tasks (i.e. Mu-meter runs).

23. **General rules.** The following general rules are to be observed:

- a. Only authorised Vehicular Entry Points (VEP) are to be used to enter any Aircraft Operating Surfaces (AOS). Drivers entering or crossing the AOS are to stop at the blue FOD boxes & fully carry out FOD checks complying with all below:

- (1) FOD checks are mandatory for all personnel 24/7.
 - (2) All drivers are to stop their vehicles before entering the manoeuvring area and check the outside of their vehicles for FOD; if any is found, drivers are to remove it and stow it in their vehicle until a suitable method of disposal is found.
 - (3) All vehicles are to have a light source available to conduct the check when required at night & low visibility – if one is not available the driver is to sign out a torch from stores. During periods of low light levels, drivers are to take all reasonable actions and precautions to ensure their vehicles are FOD free.
 - (4) All personnel are mandated have a Hi-Visibility (hi-viz) Personal Protective Equipment (PPE) available in vehicles for use when on the AOS (in case of breakdown / to be worn during FOD checks at night & low visibility).
 - (5) All personnel are to carry out a 'vehicle roll forward' in order to check the whole tyre before driving onto any AOS.
 - (6) Personnel are to ensure that all vehicle doors are closed when carrying out a FOD check.
 - (7) Any FOD found while checking vehicles is to be retained by the driver & disposed of appropriately.
 - (8) Separate tyre checks are required each time a vehicle moves from a non-aircraft operating surface to an AOS, regardless of how many times this may occur in a single journey.
- b. Emergency vehicles, when attending an emergency need not stop at the blue FOD boxes to check for FOD. However, on returning from the emergency, emergency vehicles are to stop, & their tyres are to be checked for FOD prior to entering AOS. FOD checks are to be carried out iaw para 1. Immediately following the completion of emergency activity, each emergency vehicle commander is to contact the Eng Ops controller & arrange for all AOS over which the emergency vehicles have driven to be swept for FOD as soon as possible.
- c. When a driver's intended route is obstructed by an Aircraft taxiing or under tow, drivers are to give way & vehicles are to be cleared onto a hard standing or are to turn about & return along the taxiway. Only in an emergency are drivers to use the grassed areas & FOD checks are to be carried out before continuing on the Taxiway.
- d. Except at traffic lights or by order of ATC, an Aircraft marshaller or a security patrol acting on behalf of ATC, vehicles are not to stop on the taxiway.

- e. Vehicles are to maintain an orderly flow of traffic. Overtaking is permitted only of very slow-moving vehicles (e.g. forklifts/cherry pickers) travelling at less than 15 mph. Overtaking vehicles are to remain within the speed limit. Towed & taxiing Aircraft ARE NOT to be overtaken at any time.
- f. Reversing in the manoeuvring area is to be undertaken only as a last resort & the driver is to brief another person to take up a position on his blind side to act as a marshaller.
- g. Vehicles are not to be driven on the runway without the specific authority of the Aerodrome Controller. When ATC is closed, essential access to the runway is to be requested via the DOC.
- h. Vehicles will be equipped with serviceable hazard warning lights or drivers will carry a serviceable red torch for use in the event of breakdown. In the event of a breakdown on the manoeuvring area, vehicles are not to be left unattended. Draw attention to the vehicle by contacting ATC using MRE, if available, or mobile telephone. Raise the bonnet of the vehicle, turn on the hazard lights and try and attract the attention of a passing vehicle to assist you. If a breakdown occurs in a dispersal or hangar area, the driver may leave the vehicle to summon assistance provided there are no Aircraft in the vicinity. The driver is to return to the vehicle as soon as assistance has been summoned. The Duty Operations Controller is to be contacted if ATC is closed. Drivers may warn pilots of taxiing Aircraft by shining a steady red torch beam at the cockpit if it is evident that the broken-down vehicle constitutes an immediate Hazard to the Aircraft.
- i. The whole airfield is classed as a Hearing Protection Zone (HPZ). Therefore, personnel operating on the Airfield are to ensure they have the appropriate level of Personal Protective Equipment (PPE) with them at all times.

24. **Night driving.** The following additional rules apply to driving on the manoeuvring area at night:

- a. Vehicles are to be equipped with serviceable hazard warning lights or drivers are to carry a red torch for use in the event of a breakdown. Drivers may warn pilots of taxiing Aircraft by shining a steady red torch beam at the cockpit if it is evident that the broken-down vehicle constitutes an immediate hazard to the Aircraft.
- b. Vehicles in motion are to have DIPPED HEADLIGHTS, SIDE & TAIL LIGHTS switched on. Vehicles at the halt are to have their headlights switched to sidelights until such time as there is a real intention to proceed.
- c. Drivers are to ensure that they do not cause dazzle to Aircraft pilots.

- d. Drivers are to exercise greater vigilance at night, as some Aircraft cannot be readily identified. This is of particular importance when visibility is poor, i.e. less than 1500m.

25. **Crash rescue vehicles.** Crash rescue vehicles proceeding to an incident are to be given every priority.

26. **Driving on grassed areas.** Only authorised vehicles are permitted to drive on the grassed areas unless in an emergency or, as a last resort, to give way to Aircraft taxiing or under tow. Vehicles authorised to operate on the grassed areas for essential duties are:

- a. ATC Vehicles.
- b. Airfield Wildlife Control Unit.
- c. Elements of the Crash Combine.
- d. The Airfield Electrician.
- e. RAFP & MPGS undertaking security patrols of the perimeter fence.
- f. The contracted grass cutters.

ALL DRIVERS ARE TO CONDUCT A FOD CHECK PRIOR TO RE-ENTERING THE MOVEMENT AREA.

27. **Poor weather conditions.** In poor weather conditions ATC may prohibit all vehicular movement or implement special escort procedures. In wintry conditions vehicles may be prohibited from the airfield in order to stop the compacting of snow in order to allow Operation BLACKTOP snow clearance to proceed unhindered. Drivers requiring essential access to the movement area & MT Route are to telephone the DOC. When visibility falls below 1500m, Low Visibility Procedures are enforced. In this case, all non-essential vehicle movements on the airfield are to cease. Vehicles requiring access to the airfield are to contact ATC for permission to proceed. If permission to enter movement area is given by ATC, drivers are to proceed with extreme caution.

28. **Out of hours activity.** The Waddington Flying School (WFS) operate when ATC is closed, including during the evening & weekends. Landing & taking off for the WFS is conducted between the RHAGs (2000ft from either threshold) with the traffic lights permanently on green. Drivers may still transit the Airfield via the MT Route & should keep a good lookout for Aircraft both on the runway & in the approach lanes. Drivers are to give way if it appears that the Aircraft is not conforming with the laid down rules. If the Aircraft appears not to be conforming with the agreed regulations, ATC & the DOC should be informed at the earliest opportunity.

29. **Humanitarian Helicopter Operations.** The Lincs & Notts Air Ambulance operate from beyond the north-eastern corner of the airfield (across the A15) 24 hours a day, 365 days of the year. Airfield users are to remain vigilant and give way to such aircraft at all times in the event they are operating on the airfield. Airfield users are to give way to all emergency vehicles.

30. **Animals.** Privately owned dogs are only permitted on the airfield in accordance with SSOs. Dogs are to be kept on a lead at all times within the aerodrome boundary. The exercising of other animals, including horses, is not permitted on the airfield.

31. **MRE.** All personnel operating on the airfield with MRE are to ensure they have received appropriate OJT of how to use it. MRE is NOT secure, therefore specific names, sortie details, Squadrons etc, are not to be used. Examples of best practice OJT are available via ATC on Ext 7451 (01522727451). MRE callsigns are to be allocated to specific vehicles or the appointment of the officer travelling therein. Their respective callsigns are as follows:

VEHICLE/ APPOINTMENT	CALLSIGN
MPRV	CRASH 1
MPRV	CRASH 2
MPRV (Spare)	CRASH 3
AMRV	MEDIC
Medical Officer	STARLIGHT
ATC Vehicles	ROVER
Stn Cdr	SUNRAY
OC Ops Spt Wg	SEAGULL
OC AWE	LUPIN
SATCO	BASEBALL
ASMT	NIMROD
S Fire O	FIREGUARD
Duty Snow & Ice Clearance Officer	DISCO

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Annex V to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

FOD prevention, training & awareness

Introduction

1. This Annex is designed to be a central document for the Stn FOD Prevention Organisation, providing guidance & a baseline standard for all to meet. This document details:

- a. The FOD Prevention Organisation.
- b. Individual & collective responsibilities for the prevention of FOD.
- c. Station FOD prevention objectives & measures.

Organisation & reporting

2. The RAF Waddington FOD Prevention Organisation is at Appendix 1. The Stn FOD Prevention Officer (SFODPO) is responsible to the RAF Waddington FOD Prevention Committee for the prevention of FOD on the Station. Furthermore, Sqn/Unit FOD positions are to be established to coordinate the Sqn/Unit FOD prevention measures under the direction of the SFODPO. The composition of the RAF Waddington FOD Prevention Committee is at Appendix 2.

3. All Aircraft FOD incidents are to be reported on ASIMS. All other FOD is to be reported to the SFODPO on a MOD F7014 b (Trial) Appendix 6.

Responsibilities & terms of reference

4. FOD Prevention is the responsibility of every individual at RAF Waddington. However, many individuals & organisations at RAF Waddington have specific responsibilities in the prevention of FOD. Detailed TORs for the RAF Waddington FOD Prevention Committee are at Appendix 3, the SFODPO at Appendix 4 & the Sqn FOD POCs at Appendix 5.

Station FOD prevention objectives & measures

5. The objective of the Stn FOD Prevention Organisation is to minimise, if not remove, the hazard FOD poses to Aircraft at RAF Waddington. This objective is to be achieved through the use of the following measures:

- a. **Committee meetings & actions.** The Stn FOD Prevention Committee will monitor the effectiveness of existing FOD prevention schemes to ensure their continued relevance. The Committee is to set the standard & provide a unified & dedicated example to the Stn.

- b. **FOD prevention publicity.** The importance of FOD publicity cannot be overstressed & every available opportunity must be taken to further the FOD prevention message. FOD publicity is to be on display for all personnel. All work areas are to have FOD posters prominently positioned & these should be changed frequently to maintain their impact.
- c. **Engineering practices.** A large percentage of engine FOD is caused by small metallic objects, most of which can be identified as engineering debris. The continued use of sound engineering practices is an essential element of FOD prevention.
- d. **Airfield sweeping.** The primary aim of the FOD Prevention Organisation is the prevention of foreign objects migrating to the Aircraft manoeuvring area. Maintaining an effective airfield sweeping plan provides an essential backstop to this policy. The ASMT FOD PO is to inform the SFODPO of any debris swept up from the Aircraft manoeuvring area. The airfield sweeping plan is to be reviewed on an annual basis by the Stn MTO in conjunction with the SFODPO.
- e. **ASPs located between hangars.** All Sqns are responsible for ensuring that a full FOD sweep of the ASPs outside of their hangar is conducted before any Aircraft are towed or manoeuvred over them.
- f. **Training.** All Sqn FOD representatives are responsible for the training of their personnel. They are to ensure that personnel new to RAF Waddington are aware of the Stn FOD policy, FOD Check Areas & the mandatory FOD check procedure for vehicles as directed by the poster at Appendix 7.
- g. **Workplace FOD sweeps.** All Flt/Sqn/Wg at RAF Waddington are to carry out a sweep of their Area of Responsibility as required, though it is recommended that sweeps be conducted at least monthly. Any items found are to be reported to the FOD PO as per para 3.
- h. **Contractors.** Building contractors on Station have limited knowledge of FOD or its dangers. A close liaison with contractors is essential to ensure that due care is taken by them when working on Station. SETL is to ensure that all contractors are made aware of the dangers of FOD & of the necessity to control & clear away any works debris.
- i. **Investigations.** Vigorous investigation into any incident or potential incident maintains the high visibility that FOD prevention requires & reinforces how seriously FOD is viewed. The SFODPO is to investigate fully any FOD hazard reported to him & report the occurrence to the Stn FOD Prevention Committee.

- j. **Aircraft manoeuvring area.** The clear demarcations of an Aircraft manoeuvring area & FOD hazard area should provide a timely reminder for personnel entering a high-risk environment. In conjunction with the SFODPO, SATCO is responsible for the provision & maintenance of the Aircraft manoeuvring area & FOD hazard signs which are to be displayed around the Aircraft manoeuvring area. The restrictions pertaining to vehicles & contractors entering an Aircraft manoeuvring area are to be detailed in SSOs & reviewed on an annual basis by SATCO in conjunction with the SFODPO.
- k. **FOD prevention initiatives.** Personnel are to be encouraged to forward FOD prevention initiatives & ideas to the SFODPO for presentation to the FOD Prevention Committee.
- l. **Headdress.** Personnel are not to wear headdress within the confines of the airfield boundary as detailed in Appendix 8 figures 1 & 2. Headdress is to be removed & securely held or stowed by the individual. On exiting the airfield boundary, or no headdress zone, headdress is to be replaced iaw normal dress regulations.
- m. **Op BEAUFORT.** Op BEAUFORT's purpose is to ensure that RAF Waddington is fully prepared for strong winds, thus reducing the chances of FOD preventing the Stn being returned to full operational capability post a strong wind period. To ensure this all personnel are to familiarise themselves with [Op BEAUFORT](#) & ensure all actions in the Op Order are complied with.

Conclusion

6. This Annex outlines the organisation & responsibilities for FOD prevention at RAF Waddington. It is imperative that those with direct responsibilities for FOD prevention show the necessary commitment & lead by example. All personnel at RAF Waddington are responsible for FOD prevention & must be given a clear lead by those in charge.

Appendices:

1. RAF Waddington FOD Prevention Organisation & Reporting Chain.
2. Composition of the RAF Waddington FOD Prevention Committee.
3. TORs of the RAF Waddington FOD Prevention Committee.
4. TORs for the Stn FOD Prevention Officer.
5. TORs for the Sqn FOD Prevention Officers.
6. FOD Occurrence Report (F7014 B (Trial)).
7. Mandatory FOD check poster.

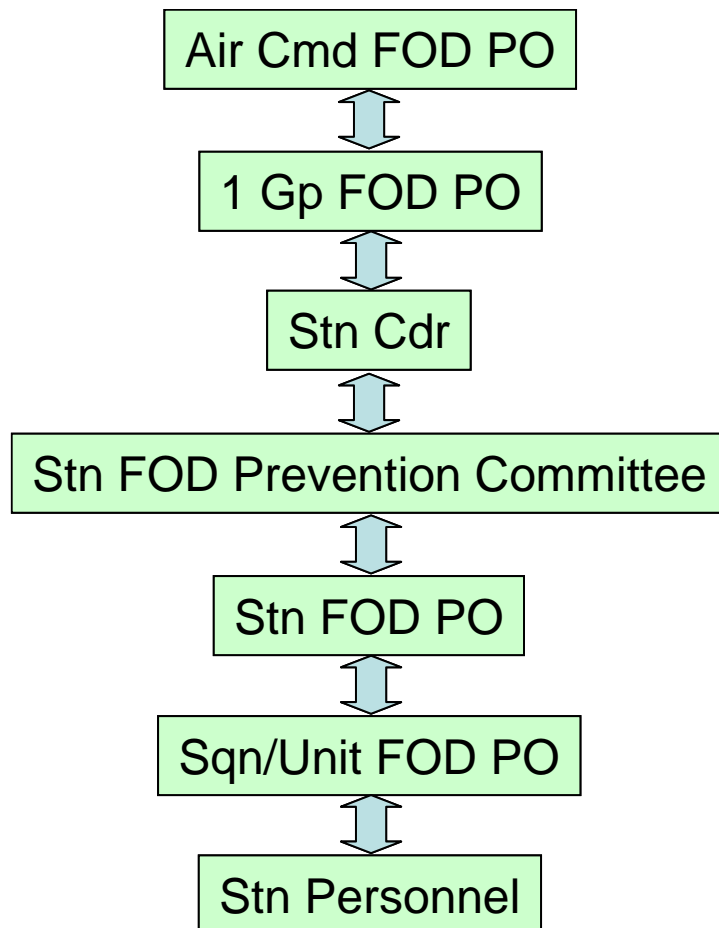
8. Airfield & waterfront boundaries.

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Appendix 1 to Annex V

File reference 20230809-RAF_Waddington_DAM_3.3-O

RAF Waddington FOD prevention organisation & reporting chain



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Appendix

Information Owner: S FOD O

Extra Input From: Nil

Appendix 2 to Annex V

File reference 20230809-RAF_Waddington_DAM_3.3-O

Composition of Stn FOD Prevention Committee

1. The Stn FOD Prevention Committee is to comprise of the following personnel or their representative:

- a. SFSO Chairman
- b. DSFSO (SFODPO/Sec)
- c. XIII Sqn FOD PO
- d. 14 Sqn FOD PO
- e. 51 Sqn FOD PO
- f. 54 Sqn FOD PO
- g. 56 Sqn FOD PO
- h. RAFAT FOD PO
- i. 2503 Sqn FOD PO
- j. AAR FOD PO
- k. ASMT Flt PO
- l. ATC FOD PO
- m. AWC FOD PO
- n. ESS FOD PO
- o. Flying School FOD PO
- p. AWE FOD PO (FS Eng Wg HQ)
- q. Logs Sqn FOD PO
- r. Medical Centre FOD PO
- s. Police Flt FOD PO (Police Flt Adjnt)
- t. RSL FOD PO
- u. VIVO FOD PO
- v. Site Estates Team FOD PO
- w. SHSO
- x. SEPO
- y. ESS (Cleaners) FOD PO
- z. STM FOD PO

Appendix

Information Owner: S FOD O

Extra Input From: Nil

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Appendix

Information Owner: S FOD O

Extra Input From: Nil

Appendix 3 to Annex V

File reference 20230809-RAF_Waddington_DAM_3.3-O

Terms of reference for the RAF Waddington FOD Prevention Committee

1. The Stn FOD Prevention Committee is to:
 - a. Examine the causes of & trends in FOD incidents on the Station.
 - b. Monitor the effectiveness of existing FOD prevention measures & discuss proposals for improvement, which may include:
 - (1) FOD prevention publicity.
 - (2) FOD prevention incentive schemes.
 - (3) Engineering practices.
 - (4) Airfield sweeping plans.
 - (5) Aircraft parking arrangements.
 - (6) Aircraft ground manoeuvring rules.
 - (7) Works Services aspects, including contractual cover for the control & removal of works debris.
 - (8) Vehicle access.
 - (9) Visiting Aircraft.
 - (10) Frequency & extent of manual FOD sweeps.
 - c. The Stn FOD Prevention Committee is to meet at least twice a year.

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Appendix 4 to Annex V**File reference 20230809-RAF_Waddington_DAM_3.3-O****Terms Of reference for the Stn FOD Prevention Officer (SFODPO)**

1. The SFODPO is responsible for:
 - a. Monitoring & controlling unit FOD prevention procedures as outlined in the MOD FOD policies.
 - b. Advising & assisting the unit in their understanding & execution of the FOD prevention programme.
 - c. Ensuring that all FOD incidents & loose article/foreign object finds are investigated & reported in accordance with MOD FOD policy.
 - d. Maintaining a record of all FOD incidents on the unit for reference & local analysis.
 - e. Instigating a system to ensure that all Aircraft operating areas & associated technical sites are routinely surveyed to identify possible problem areas & to initiate corrective action.
 - f. Where required, managing & acting as chairman to the unit FOD WG, holding regular meetings prior to the unit Flight Safety Meeting.
 - g. Providing a FOD briefing to unit Flight Safety Meetings.
 - h. Advising unit executives of FOD matters requiring attention.
 - i. Maintaining liaison with OC Works Flt (or equivalent) for minimizing the FOD hazard associated with works services & to ensure the briefing of external contractors concerning the dangers of FOD prior to their employment on operational areas of the airfield.
 - j. Providing summary reports to their Service FOD PO when requested for FSWG meetings.
 - k. Ensuring that FOD prevention is publicised effectively on the unit.
 - l. Maintaining the unit FOD website, where applicable.
 - m. Monitoring the unit sweeping plan & updating to take into account any major works programmes.
 - n. Carry out FODEvals of all Sqn / Sect at RAF Waddington.

Appendix

Information Owner: S FOD O

Extra Input From: Nil

- o. Ensure Op BEAUFORT is being carried out correctly by conducting spot checks around the Stn after Op BEAUFORT has been activated.

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Information Owner: S FOD O

Extra Input From: Nil

Appendix 5 to Annex V

File reference 20230809-RAF_Waddington_DAM_3.3-O

Terms of reference for the unit/sqn FOD prevention officers

1. Sqn/Unit Cdrs or a delegated individual are to be nominated as a FOD Prevention Officer (Sqn/Unit FOD PO). Those individuals are responsible to the Stn FOD Prevention Committee through the Stn FOD PO for:

- a. Monitoring & controlling Sect FOD prevention procedures as outlined in the MOD & RAF FOD policies.
- b. Attend all Station FOD WG meetings scheduled by the SFSO or FODPO & act as a liaison between the FOD Working Group, & your Flt/Sect Mgmt/colleagues.
- c. Ensure continuous education of personnel in your AOR & promote FOD awareness. Advising & assisting the Sect in understanding & executing the FOD prevention programme.
- d. Ensuring that all FOD incidents & foreign object finds are investigated & reported in accordance with the Flt/Sect FOD Prevention Plan & that all FOD occurrence & aero-engine reports are properly reported to the FOD PO.
- e. Report, in a timely & accurate manner, all FOD occurrences using DFSOR or Local FOD Found Form.
- f. Establish & maintain a FOD notice board to display FOD awareness material & current performance indicators.
- g. Initiate FOD sweeps & inspections of your AOR on a regular basis & maintain an auditable record of those activities.
- h. Conduct FODEVALS outside your AOR, as detailed by the SFSO or FOD PO.
- i. Instigating a system to ensure that all AOS & associated technical sites are routinely surveyed to identify possible problem areas & to initiate corrective action.
- j. Act as a point of contact between your Sect & the ASMT Sect for sweeper request.
- k. Ensure contractors in your Sect follow correct FOD prevention practices & report bad practice to OC SSS.
- l. Nominating a deputy Sect FOD WG Rep.
- m. Ensure Op BEAUFORT actions are being carried out in their AORs & report any issues to the S FOD O.

Appendix

Information Owner: S FOD O

Extra Input From: Nil

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Information Owner: S FOD O

Extra Input From: Nil

Appendix 6 to Annex V

File reference 20230809-RAF_Waddington_DAM_3.3-O

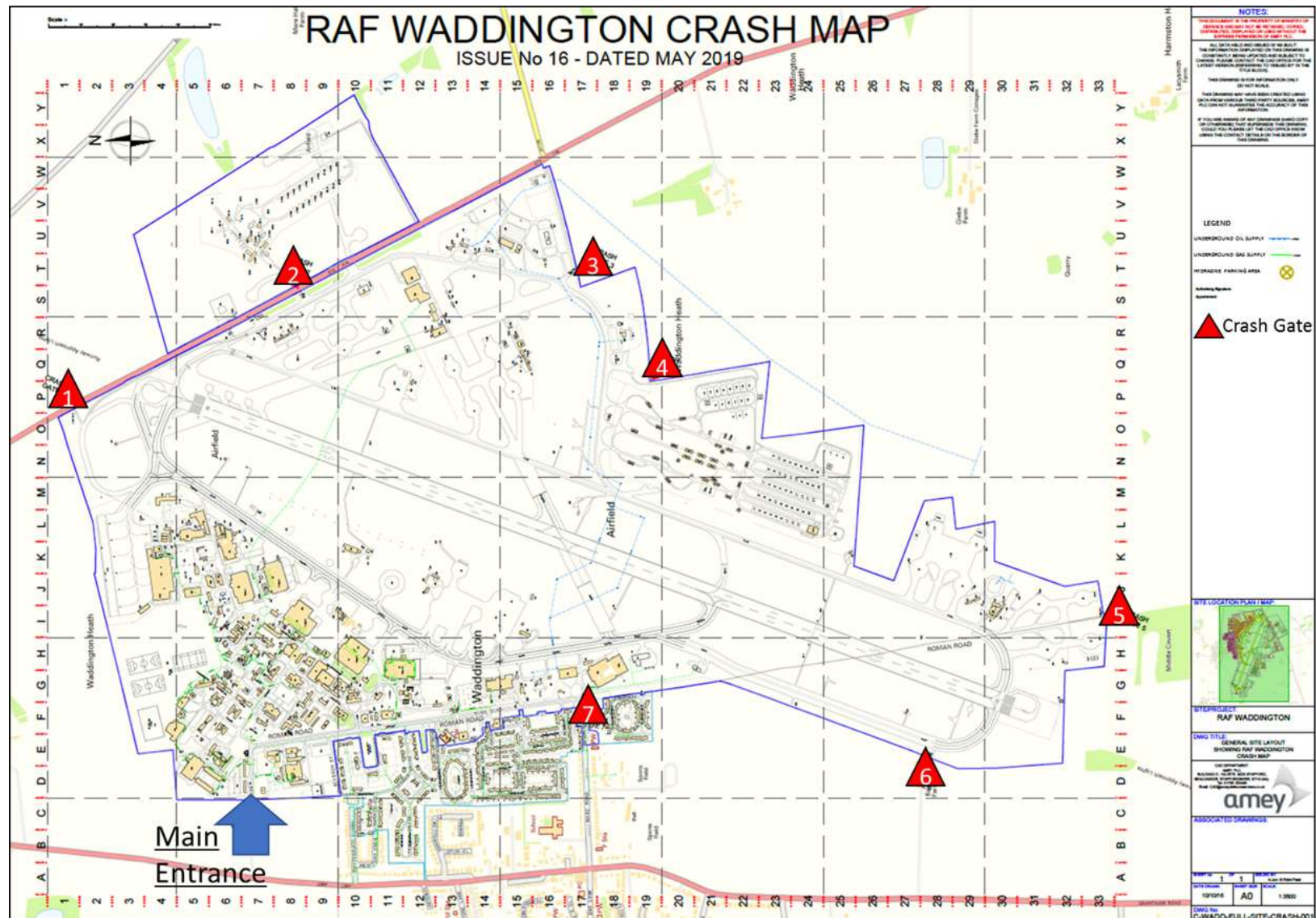
FOD Reporting

FOD is to be reported using the following link: [RAF Waddington Safety Reporting](#)

Appendix

Information Owner: S FOD O

Extra Input From: Nil



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Uncontrolled when printed

Appendix 7 to Annex V

File reference 20230809-RAF_Waddington_DAM_3.3-O

Mandatory Foreign Object Debris (FOD) Checks



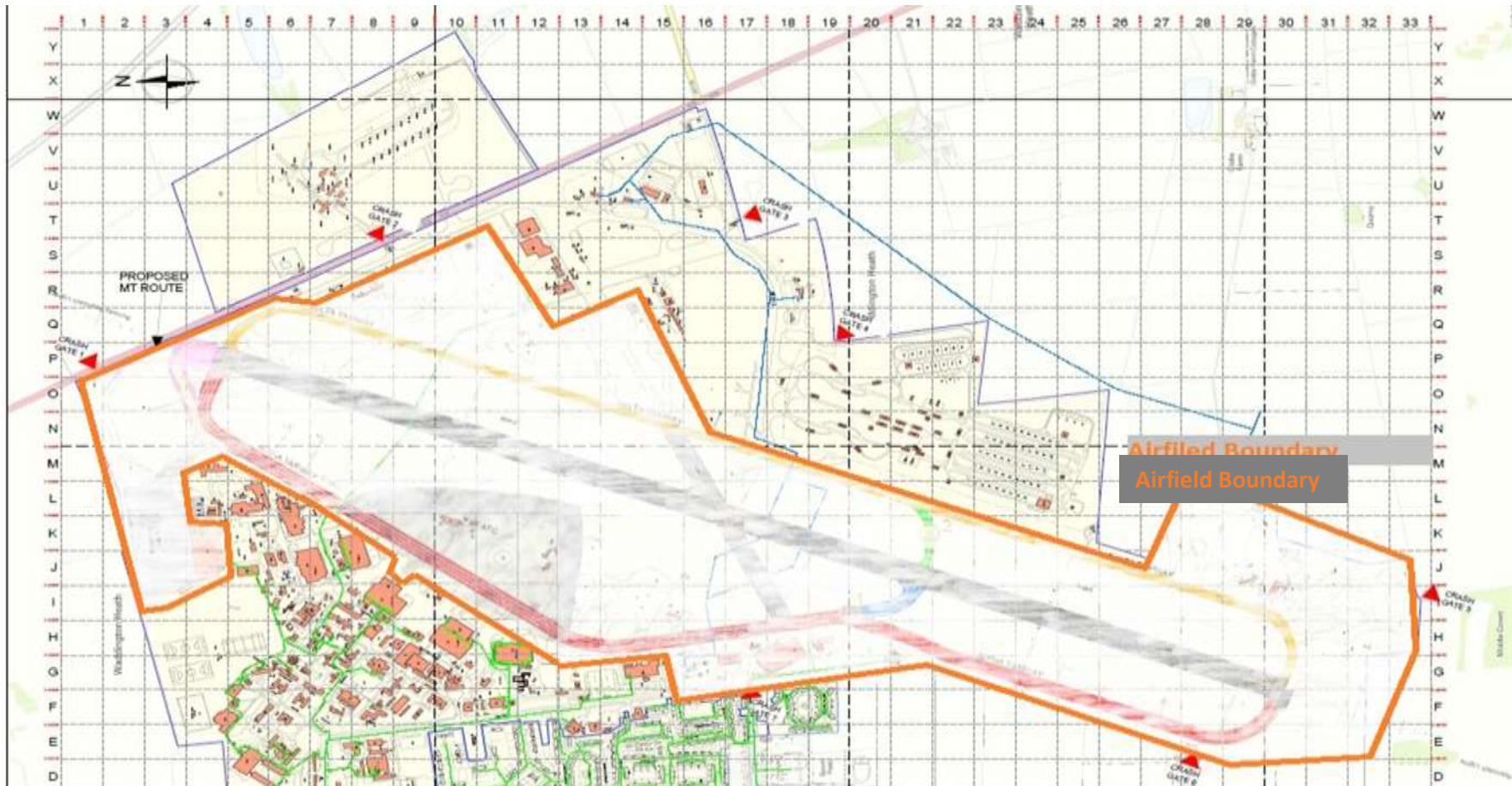
- 1.FOD checks are mandatory for all personnel 24/7.
- 2.All vehicles are to have a light source available to conduct the check when required at night & low visibility – if one is not available the driver is to sign out a torch from stores.
- 3.All personnel are mandated have a Hi-Visibility (Hi-Viz) Personal Protective Equipment (PPE) available in vehicles for use when on the AOS (in case of breakdown / to be worn during FOD checks at night & low visibility).
- 4.All personnel are to carry out a 'vehicle roll forward' in order to check the whole tyre before driving onto any AOS.
- 5.Personnel are to ensure that all vehicle doors are closed when carrying out a FOD check.
- 6.Any FOD found while checking vehicles is to be retained by the driver & disposed of

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Appendix 8 to Annex V

File reference 20230809-RAF_Waddington_DAM_3.3-O

No headress zone within airfield boundary





Waterfront headdress zone in detail

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Annex W to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Aerodrome Wildlife Management.****Introduction**

1. The Airfield Wildlife Control Unit's (AWCU) primary aim is to reduce the risk of collision between birds & Aircraft. This is achieved by maintaining, as far as reasonably practicable, a bird-free environment on & around the airfield at RAF Waddington. To achieve this, AWCU & relevant station personnel need to work closely together to promote a holistic approach to environmental, habitat & wildlife management.

Background

2. RAF Waddington is situated in a highly diverse, high bird activity area. Set in a predominantly arable environment interspersed with occasional pockets of dense woodland, most notably copses adjacent to runway 02 & runway 20 approaches. Also, there are game-rearing areas near both approaches. Farming activity has a direct influence on the numbers of hazardous species that gather in local fields. Numerous large bodies of water (gravel pits) now support large numbers of waterfowl & roosting gulls. All of these can have a negative impact on the bird protection afforded by the RAF long grass policy.

3. This Annex is created iaw MAA [RA3270](#) to give clear direction & understanding of AWCU responsibilities & actions. It outlines those tasks stated & provides guidance for off-station bird control & bird scaring & the AWCU monitoring of the airfield habitat & environment.

Airfield bird control & bird scaring

4. The AWCU should be actively staffed two hours before any inbound & one hour before any outbound Aircraft movement, or as directed by ATC, however this may be reduced to a stand-by commitment by the ATC Supervisor. When stood down, there may be a requirement to conduct regular patrols of the airfield to prevent birds becoming habituated or breeding etc. The AWCU will, by any legally approved means available to it, work to disperse birds away from the immediate active surfaces & will also attempt to disperse birds away from the domestic areas of the station, subject to flying programme, to create a bird sterile buffer zone.

5. The AWCU operator should report the bird state level to ATC, prior to the commencement of station flying, at the start of each shift & whenever the bird state changes. Different bird states may be in place simultaneously for different parts of the Airfield.

6. The AWCU operator should inform ATC of any changes in risk to Aircraft caused by any increase or reduction in bird activity, or changes in their behaviour which may result in increased likelihood of conflict with Aircraft.

7. The Bird state definitions are as follows:

- a. **LOW.** Usual number of birds on the airfield, in the approaches & passing through & our normal procedures are moving them out of the danger areas.
- b. **MEDIUM.** There is an increased number of birds either on the airfield, in the approach/climb out lane &/or passing through that slightly increases the threat to flying activity.
- c. **HIGH.** There is a significant increase in numbers of birds either on the airfield, in the approach/climb out lane &/or passing through causing a significant threat to flying activity.
- d. **VERY HIGH.** Large numbers of birds either on the airfield, in the approaches & passing through. Our usual practices are unable to ensure a safe operating environment for airfield users.

8. Controllers should avoid issuing instructions to AWCU operators (regarding where/how to control bird activity), unless not to do so would impact on flight safety. Sweeps of the main area have limited use in controlling birds. "AWCU operators would be better employed pushing birds away from the airfield & creating a more hostile environment" (in the opinion of the CSL bird strike avoidance team). AWCU operators will request the flying programme in the morning & at shift changeover, however they are to be aware that the movements schedule changes constantly. Controllers should inform the AWCU when there are gaps in the programme to enable the AWCU to effectively utilise their time. This may include tasks such as removal of nests or birds from hangars, habitat management (e.g. visiting the messes to check on bird attractants such as food waste disposal) & monitoring the landscaping of the domestic site & hedgerows for bird attracting species of trees & shrubs.

9. Controllers should be aware of the visual limitations of the AWCU operator at ground level on the airfield. They should use the extra height of the ATC tower in conjunction with aircrew reports to inform the AWCU operator of problem areas; however, to ensure that the correct course of action is taken, it is essential that ATC personnel allow the AWCU operator to prioritise tasks.

Off airfield bird control & bird scaring

10. The control of birds on the active surfaces remains the priority of the AWCU; however, birds use the human environment to suit their needs-building nests & roosting in & around buildings (particularly the hangars).

11. The AWCU will, by any legally approved means available to it & so far as is reasonably practicable, work to disperse birds away from the hangar areas & to discourage their return by making the area as inhospitable as possible either by direct action or by advising the Station on suitable courses of action.

12. The AWCU will carry out pest control programmes as deemed necessary by consultation with building custodians, providing that the pest in question has a direct relationship to bird activity on the Station & in doing so, does not interfere with the primary role of the AWCU.

13. The AWCU will visit all station messes on a weekly basis, checking that the disposal of food waste is carried out in such a way that it does not become an attractant to scavenging birds & vertebrates. The findings of these checks will be reported to the SATCO for any action deemed necessary & will be included in the flight safety brief.

14. On a seasonal basis the AWCU will check the landscaping of the Station for any fruit or berry producing shrubs & trees. The findings of these checks will be reported to the SATCO & SEPO/DIO/Vivo for any actions deemed necessary.

15. The AWCU manager will carry out regular "off airfield" visits to local farmers & bird attracting sites within the safeguarding zone to carry out bird counts & PR meetings. The outcome of which will be reported to the SATCO through the monthly report.

Animal Management

16. Animal Management on the aerodrome is conducted by a contracted Airfield Wildlife Control Unit (AWCU). During flying hours, the AWCU team maintain a continuous presence on the airfield in order to deter & manage any animal activity in accordance with MAA RA3270. The AWCU team can be contacted, through ATC on 95771 7451 during aerodrome opening hours.

Monitoring of habitat & environment

17. The AWCU will carry out monitoring activities on the airfield, including checks on Long Grass Policy, Broad Leaf Vegetation of the Grass & Tree Habitats on & around the Stn. The results of which will be recorded & reported to the SATCO, SEPO/DIO/Vivo & Flt Safety Cttee for any action deemed necessary. The grassed area will be checked regularly & will be reported through the monthly report. A detailed, high-resolution schematic of the requirements for the Stn grass cutting policy is held in ATC Orders [here](#).

18. The AWCU will assist the Station with environmental & habitat monitoring as necessary, providing this does not interfere with the primary role of the AWCU.

19. The AWCU will assist the Station in the culling of vertebrates at the request of RAF Waddington; however, this is only possible if the AWCU operator on duty is qualified to do so & has the correct equipment available.

20. The Aerodrome Wildlife Control Management Plan (AWCMP) can be found at link [ATC - Airfield Management](#). A hard copy of the order can be made available on request to RAF Waddington DSATCO.

21. The Station Airfield Wildlife Control Unit operates iaw [CAP 772, MMATM](#) & Phoenix Bird Control Services Ltd operational procedures.

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Annex X to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Low Visibility Procedures (LVP)

The orders for LVP can be found in RAF Waddington [ATC Order Book](#) & at [Annex Q](#) of this DAM. A hard copy can be made available on request to RAF Waddington DSATCO.

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Annex Y to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Snow & Ice Operations.

The RAF Waddington response to snow & ice conditions is contained within CONPLAN 2 [Op BLACKTOP.](#)

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Annex Z to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Thunderstorm & Strong Wind Procedures.

Thunderstorm levels / lightning risk

1. Details of actions to be taken on notification of a 'Thunderstorm Level'/'Risk' warnings, 'Lightning Risk' warnings or when thunderstorm activity is apparent in the local vicinity can be found in [MAM-P](#) Chap 3.4.1 & 8.1.

Strong wind & gale procedures

2. **Forecast / weather warnings.** When strong winds & gales are forecast the Met Office are responsible for publishing a Weather Warning via email to ATC, Stn Operations & the Duty Eng Operations Controller. ATC will publicise the information via the Stn Tannoy. Eng Operations will conduct: the following:

3. **Aircraft parking.** RAF Waddington Eng Ops will pass the information on to the relevant Sqns. Details of actions to be taken on notification of a Strong Wind Warning can be found in [AESO 2-1-1-01-07](#).

4. **Use of vehicles to shield light aircraft.** Wherever possible all light aircraft are to be moved into hangars. Consultation with captains of visiting aircraft on precautions & advise captains of forecast wind speeds. If light aircraft cannot be moved, refuellers may be provided as windbreaks.

5. **Hangars 1 - 6.** When wind speeds are forecast to reach or exceed 60 mph, the NCO IC Hangar is to follow the directions articulated in [AESO 2-1-1-01-01](#) adverse weather conditions – Effects on Hangars 1 – 6.

6. **Hangar 6 (Formerly Sentry/Alpha hangar).** When wind speeds in excess of 40kts are forecast the DOC (Duty Ops Controller) is to notify the DEOC (Duty Eng Ops Controller) who in turn will notify RAFAT Eng (or Duty Eng rep OOHs) of the high wind warning including the wind speed & direction. RAFAT Eng (or duty Eng Rep) will then initiate the appropriate risk mitigation measures as directed by CoC.

7. **Pax loading / unloading limits in strong winds.** The loading & unloading of pax will be conducted iaw [DAP 3150 Manual of Movements](#) Chap 9 Para 9.02.05 & Figure 9.1.

8. **Strong Wind Measures.** Details of actions to be taken on notification of strong winds can be found in the [Op BEAUFORT Operation Order](#).

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Annex AA to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Civil Aircraft Aerodrome Usage – Terms & Conditions.

Introduction

1. All matters relating to Civil Aircraft use of RAF Waddington are governed by [JSP 360](#).
2. These General Terms & Conditions are applicable to all civilian registered Aircraft operating to/from RAF Waddington. The Aerodrome Operator reserves the right to alter or cancel these Terms & Conditions at any time.
3. Civilian Aircraft operations to/from RAF Waddington are in accordance with the guidance laid down in JSP 360. Civil Operators utilising RAF Waddington are to have a Military or UK Government sponsor prior to submitting a movement/handling request.
4. RAF Waddington operates a PPR airfield. All movement requests are to be submitted through RAF Waddington Operations (01522 72 7301) at least 48 hours in advance of the scheduled landing/departure time for Flights from Overseas & CTA, 24 hours in advance of the scheduled landing/departure time for flights within the UK.

Winter operations

5. **Winter clearance plan.** Full details of Winter operations can be found in the RAF Waddington [Op BLACKTOP](#) Op order.
6. **Operating surface clearance.** RAF Waddington will endeavour to maintain an operating surface clear from Snow/Ice, however, Snow/Ice clearance will only be conducted for specific Stn requirements & visitors are advised to contact Station Operations in advance to determine Snow/Ice clearance plans.
7. **Aircraft de-icing.** Aircraft de-icing is not routinely available for visiting civilian Aircraft. If required it must be booked through Stn Ops 24 hours in advance.

Operational support

8. **Flight planning.** RAF Waddington is able to provide the following Flt Planning services:
 - a. Flt plan submission/change/cancellation.
 - b. NOTAM pack-up.

9. **Flight following.** RAF Waddington does not provide a Flight Following Service for visiting civilian Aircraft.

Passenger handling

10. **PAX handling facility.** RAF Waddington has a limited ability to handle large numbers of passengers. All PAX requirements should be discussed in advance with RAF Waddington Operations. Aircraft PAX Operations will be subject to ATSy/DfT NASP procedures.

11. **Transport.** Visitors are responsible for organising their own onward transport from the Aircraft.

12. **Customs / immigration.** RAF Waddington is not a designated Port of Entry to the United Kingdom. Customs & Immigration facilities are available 24/7 through PPR with at least 48 hours' notice. Customs & Immigration is provided by the UK Border Force Immingham but requests must be submitted via RAF Waddington Operations.

13. **Charter Aircraft operations.** Charter airline operations may be permitted providing the AO agrees to the handling of the Aircraft.

14. **Scheduled Aircraft operations.** Scheduled Aircraft operations are not permitted at RAF Waddington. Enquiries should be forwarded to the AO.

15. **In-flight catering.** There is no In-flight catering available for visiting civilian Aircraft at RAF Waddington.

Aircraft handling

16. **Refuelling services.** Re-fuelling may be available for certain Civilian Aircraft with prior arrangement at the time of booking, minimum 24 hours in advance through RAF Waddington Air Operations. Stn Aircraft will receive priority for refuels unless prior arrangements have been made through the AO.

17. **Aircraft marshalling.** Aircraft entering designated parking bays/ASPs are to do so under the direction of a qualified Aircraft marshaller. For visiting civilian Aircraft, this will be carried out by the visiting Aircraft or appropriate WAD Eng section with prior agreement.

18. **Aircraft parking.** Aircraft parking will be decided in advance by Waddington Operations. Hangarage is not available for civilian Aircraft.

19. **Maintenance of Aircraft.** RAF Waddington will provide no maintenance assistance for visiting civilian Aircraft.

20. **Ground Support Equipment (GSE).** RAF Waddington may be able to provide certain elements of GSE. Requirements are addressed on a case by case basis & should be articulated to RAF Waddington Operations in advance of any planned movement. Stn Aircraft retain priority over Stn GSE at all times.

21. **Airfield fire protection.** Airfield Fire Protection is detailed at Annex O in this manual.

22. **Security of Aircraft.** RAF Waddington is a secure site patrolled by RAFP & MPGS. Unless requested, specific security measures will not be applied to visiting civilian Aircraft.

23. **Flight Safety.** The AO retains the right to deny landing/take off clearance to any Aircraft where flight safety/airworthiness concerns exist. Flight safety concerns are to be forwarded to the RAF Waddington Flight Safety Officer (contactable through RAF Waddington Operations).

Contingency plans

24. **Loss of fire category.** Aircrew will be informed in the event of a drop in Fire Protection. In this event, the AO retains the right to deny take off/landing.

25. **Loss of power / communications.** Contingency plans exist for the restoring of power & communications to the airfield. Where a flight safety concern exists, the AO retains the right to deny take off/landing clearances.

26. **Unforeseen natural disasters / pandemics / emergencies.** In the event of an unforeseen disaster, the AO retains the right to deny landing/take-off clearances for visiting civilian Aircraft. Additionally, it may be decided that previously agreed Stn support to Aircraft (including Aircraft parking) will be withdrawn.

Breach of terms & conditions

27. The regulations governing Civil Aircraft operations at RAF Waddington are detailed within [JSP 360](#).

28. Any breaches of the guidelines directed within JSP360 or local procedures contained within the document (known as Terms & Conditions) will be brought to the attention of the AO who shall decide on an appropriate response, which may include the privilege of operating at the aerodrome being temporarily or permanently withdrawn.

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Annex BB to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Safeguarding

1. An Aerodrome is intended to be a safe place for Aircraft to operate from. Many factors need to be considered when constructing an Aerodrome. Standards that are not met could be instrumental in Aircraft damage. A safe operating environment, at MOD aerodromes, can be provided by adherence to design standards and safeguarding processes¹.
2. All regulations relating to safeguarding at RAF Waddington are detailed within [RA 3500](#).
3. Air Traffic Management Equipment Technical Safeguarding as detailed within [RA3136](#) is carried out by the Airfield Support Team in accordance with the policy detailed within [JSP 604 leaflet 3032](#) and [AP600 Order 2.1.1](#)
4. A [register](#) is maintained in accordance with the requirement within RA3136 and provides details of all ATM equipment at RAF Waddington, the safeguarding status of that equipment including any infringements to the equipment and appropriate concessions issued. Technical Safeguarding is explained in greater depth within Annex S.

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¹ A MOD aerodrome in the context of this RA is defined as an MOD site, establishment or base into which an Aircraft, under Aviation Duty Holder (ADH) Risk to Life (RtL) responsibility, operates, including temporary aerodromes in the UK and overseas.

Annex CC to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Electrical ground power procedures

1. **Operation of RAFAT (formerly Sentry) dispersal Anton pillars.** Operation of RAFAT dispersal 312KVA Anton pillars is currently suspended due to long term unserviceability.
2. **Operation of portable Ground Power Units (GPUs).** Various GPUs are used at RAF Waddington. Personnel require a specific Engineering Authorisation, awarded following suitable training, to operate these GPUs. GA90 & GA180 type GPUs may be available for visiting Aircraft in emergencies.

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Annex DD to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Aviation fuel management procedures**

1. **Management of Bulk Fuel Installation (BFI).** Management of BFI is carried out in accordance with the direction outlined in [JSP 317](#).
2. **Fuel storage, quality & delivery.** Fuel storage, quality & delivery is the responsibility of RAF Waddington Fuels & Lubrications Section & is carried out in accordance with the regulations in [JSP 317](#) & Defence Logistics Framework; civilian access via the [Defence Gateway](#), military access at this [link](#).
3. **Safety procedures.** All refuelling activity is to be carried out by personnel who have been trained in accordance with the HQ Air Command MTD Operator Refuelling Course Syllabus & in accordance with [AESO 2-2-2-05-2](#) Aircraft Fuel Operations. In the event of a fuel spillage, actions are to be carried out in accordance with [Annex EE](#).
4. **Aircraft fuel operations.** Aircraft fuel operations are detailed in [AESO 2-2-2-05-2](#).
5. **Bonding & grounding of Aircraft & fuelling equipment.** Bonding & grounding of Aircraft & fuelling equipment is to be carried out in accordance with HQ Air Command MTD Operator Refuelling Course Syllabus.
6. **Fuelling with passengers on board.** Aircraft based at RAF Waddington do not normally carry passengers. In the event that a visiting Aircraft requests a refuel with passengers onboard, the procedures outlined in [MAM-P, Chapter 3.4.1, Para 6.3](#) are to be followed.
7. **Fuelling with engines running.** Fuelling with Engines Running is not to be carried out at RAF Waddington, as it is prohibited in Annex O above: Aerodrome Rescue & Fire Fighting services orders. In the event that engines running refuelling is authorized by the AO, it is to be conducted in accordance with [MAM-P Chap 3.4.1 Para 5](#): For Rotors Turning/Engine Running Refuelling [See Temporary Order A101](#).
8. **Fuelling & de-fuelling in hangars.** Fuelling & de-fuelling in hangars is to be carried out in accordance with [MAM-P Chap 3.4.1 Para 6.1](#).
9. **Fuelling & de-fuelling on non-intercepted surfaces.** Fuelling & de-fuelling on non-intercepted surfaces is to be carried out in accordance with [AOB Order B224](#), Parking Refuelling & Defueling of Aircraft on Non-intercepted Areas – Environmental Protection Procedures.
10. **Fuel spillage procedures.** Fuel Spillage Procedures are detailed in the RAF Waddington Spillage Plan at [Annex EE](#).

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Annex EE to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Handling of hazardous materials (spillage plan)

CONPLAN 3, the [Unit Spillage Response Plan](#) can be found from the RAF Waddington Ops Spt Wg Assurance/MACR webpage.

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Annex FF to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Jettison area – orders

1. RAF Waddington does not have fuel jettison orders.
2. Fuel Dump Occurrence Report form is located in the ISTAR DDH Orders, available via the [ISTAR STANEVAL sharepoint page](#).

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Annex GG to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Compass Calibration Bay - orders

1. **Classification & Location.** RAF Waddington has a Class 2 Compass Calibration Base which, iaw MAA [RA 3521](#), should only be utilised for standard compass swings. The base is located off Alpha taxiway adjacent to the ATC tower.
2. **Periodic Surveys:**
 - a. MAA RA3521(3) specifies that periodic surveys of all compass bases will be undertaken by staff from QinetiQ, LAND Magnetic Facilities. Class 1 bases will be re-surveyed every 5 years. However, Class 2 bases are normally subject to magnetic anomalies, the effects of which are liable to change with time; these bases need to therefore be re-surveyed every 2 years.
 - b. The RAF Waddington Airfield Manager is responsible for the scheduling & booking of the QinetiQ biennial survey.
 - c. A copy of the Certificate of Compass Base Calibration is held by the Airfield Manager, (2 yearly renewal due Nov 24).
3. **Booking & Allocation:**
 - a. The Duty Engineering Operations Controller is responsible for the control & allocation of the Compass Calibration Base.
 - b. The process for booking the base is contained in ANNEX V to ESS MOE Leaflet 524.
4. **Communications & Safety.** Radio communications are to be maintained with ATC during any aircraft compass swing procedure.
5. **Order Compliance.** It is the responsibility of SATCO to ensure that RAF Waddington is compliant with these orders.

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Annex HH to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Explosive Ordnance Disposal Area (EODA).

RAF Waddington does not have an EODA.

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Annex II to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Dangerous Goods (DG) Procedures.

1. RAF Waddington movements Staff will carry out unloading & loading of DG IAW Current IATA or [MTSR /Dangerous Goods Manual \(DGM\)](#) regulations.
2. **DG.** The parking area for the loading/unloading of DG is allocated by Eng Ops iaw [AESO 2-1-1-01-37](#). RAF Waddington can handle Class 2-9. The handling of Class 1 is limited, and requests should be submitted for review by ESR, ESA and Movs to ascertain if it can be accepted prior to any approval being granted.
3. **Armed Aircraft parking.** RAF Waddington cannot accept Forward Firing Armed Aircraft but may accept Flared Aircraft. The parking area for Flared Aircraft is allocated by Eng Ops iaw [AESO 2-1-1-01-37](#). Aircraft must be deflated prior to loading/offloading.

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Annex JJ to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****Hydrazine (H70) Leak.**

1. Hydrazine is a highly toxic fluid used to fuel the emergency power unit of F16 Aircraft. A hydrazine leak will occur if the pilot inadvertently initiates the EPU in flight. F16 pilots are responsible for directing procedures for handling any leaks that might occur at RAF Waddington.
2. The probability of a hydrazine leak is low. However, in the event of a suspected hydrazine contamination an F16 pilot is likely to take the following actions:
 - a. Declare an emergency with ATC.
 - b. Request parking in Hydrazine emergency area of the airfield. Crash Map ref H 31 (Bay 25), O 01 ("Z" Taxiway/Loop) are the designated areas depending on runway heading utilised.
 - c. ("Z" Taxiway/Loop) are the designated areas depending on runway heading utilised. Request that entry to the parking area be strictly controlled.
 - d. Ensure all equipment & personnel remain upwind of the Air System.
 - e. Request the establishment of rapid communication with his home base to discuss technical assistance (through Crew Commander & Ops).
3. Should RAF Waddington receive an F16 Aircraft under these circumstances the Sup/ATCO IC is to take the following actions:
 - a. Initiate Emergency State 2.
 - b. Inform the SMO.
 - c. Deploy a suitably equipped vehicle with Management Radio Equipment (MRE) for use by the F16 pilot for ground-ground comms.
 - d. Consider diverting other Aircraft in the event the Crash Crews are engaged in the incident or discharging media from Airfield Rescue Vehicles.
 - e. Modify taxi patterns to ensure all traffic remains upwind of the incident.
 - f. React to further instructions from the F16 pilot as necessary.
 - g. Tannoy Fuel/POL spillage message on consultation with Eng Ops.

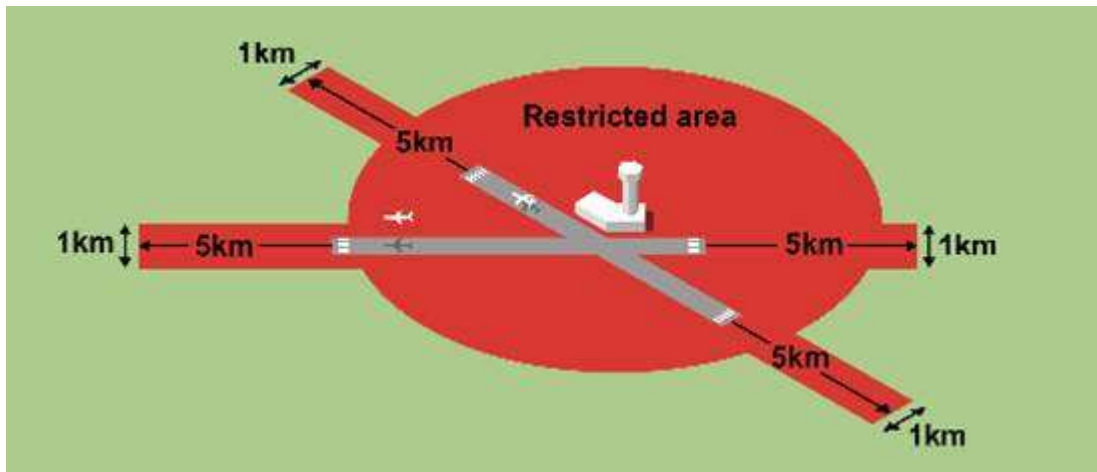
4. The Duty Ops Controller is to complete the following actions:
 - a. Contact the operating base of the AC and inform of incident, and on a confirmed Hydrazine incident, request a response team to recover.
 - b. Contact the Lincolnshire Fire Control Room on 01522 582222 or 999 reporting a Hazmat incident involving Hydrazine H70 from an F16 Aircraft at RAF Waddington.
 - c. Contact the MGR on ext 7005 informing them that several Lincolnshire Fire & Rescue Service (LFRS) vehicles and a team from the operating base will be arriving.
5. The Crew Commander is to complete the following actions:
 - a. Carry out any firefighting or life saving actions.¹⁸
 - b. Establish a 100m cordon of the Aircraft.
 - c. Provide comms for the F-16 pilot.
 - d. Handover control of the incident to the LFRS/operating base team on their arrival and assist where requested.
6. RAF Waddington does not have the resources to control/recover a hydrazine spillage. All requests for further information are to be directed, in the first instance, to RAF Waddington Duty Ops Controller on 01522 726532 or Email WAD-Ops-DutyOpsController@mod.gov.uk.
7. In instances such as Ex COBRA WARRIOR, where Aircraft with a Hydrazine risk are operating out of RAF Waddington, it is the responsibility of the visit nation/ Sqn, to provide a Hydrazine response team and kit, to be utilised in a Hydrazine incident.

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¹⁸ Any offensive life saving firefighting to be done with the minimum level of protection of full PPE and BA. In addition any Firefighters involved in offensive firefighting are to undergo emergency decontamination or initial decontamination if set up.

Annex KK to DAM**File reference 20230809-RAF_Waddington_DAM_3.3-O****UAS/RPAS Orders.****FLIGHT RESTRICTION ZONE**

1. The Flight Restriction Zone (FRZ) consists of the following two elements:
 - a. **The Aerodrome Traffic Zone (ATZ):** A 2nm radius 'cylinder' around the aerodrome, extending 2000ft above aerodrome level, centred on the runway.
 - b. **Runway Protection Zones:** A rectangle extending 5km from the threshold of the runway away from the aerodrome, along the extended runway centreline, & 500m either side to a height of 2000ft above aerodrome level.



2. The exact shape of the FRZ varies depending on the specific aerodrome that it protects.
3. It is illegal to fly any RPAS at any time within these restricted zones unless you have permission from ATC. If ATC is closed, permission should be sought from the Duty Operations Controller (DOC), ext 6532.



Source: <https://www.caa.co.uk/Consumers/Unmanned-aircraft/Our-role/Airspace-restrictions-for-unmanned-aircraft-&-drones/>

AUTHORISED OPERATORS

4. RPAS are operated by Station authorised users under the direct control of ATC during airfield open hours. RPAS may operate outside airfield open hours under the control of the DOC, Station Operations. All RPAS operators should be qualified & assured to MAA or Station standards. Current Stn authorised operators are as follows:

- a. 8 FP Wg intends to operate RPAS for purposes of enhancing FP & Sy at RAF Stations within Wgs Area of Responsibility (AOR) through the application of tactical level FP B-ISTAR, military exercises, training & maintenance of operator currency. Operation may include photography & inspection tasks not related to FP.
- b. 56 Sqn operate RPAS within airfield boundaries for training purposes.

RPAS INTEGRATION

5. RPAS flights at Waddington are restricted to max height of 400ft AGL around the Station & airfield. Aircraft departing, making approaches, & flying in the visual circuit at Waddington may share the airspace with RPAS. Where this occurs RPAS are restricted to 200ft AGL or ordered to land by ATC to maintain separation.

6. Details of RPAS activity are published on DATIS & ATC will inform pilots of activity where appropriate.

7. Full RPAS operating procedures can be found in [ATC Orders](#)

OUT-OF-HOURS RPAS OPERATIONS (AIRFIELD ACTIVE, ATC CLOSED)

8. When the airfield is active & ATC is closed RPAS operators (RPASOs) are to liaise directly with the DOC, at least 30 minutes prior to any planned activity to deconflict.
9. RPAS are to operate not above 400ft AGL & remain clear of the Lincolnshire & Nottingham Air Ambulance (Callsign "Helimed") & Waddington Flying School (WFS) aircraft & operating areas.

LINCS & NOTTS AIR AMBULANCE DECONFLICTION

10. Lincs & Notts Air Ambulance (Callsign "Helimed") deconfliction:
 - a. If Helimed is inbound/outbound, RPAS are to operate not above 200ft AGL in permitted zones. RPASOs are to monitor an air to ground radio (frequency 121.3MHz) for Helimed activity.
 - b. If ATC unstaffed & unexpected Helimed activity is heard or seen, RPAS are to land.

WADDINGTON FLYING SCHOOL DECONFLICTION

11. Waddington Flying School (WFS) should notify of their intentions to fly at the OPG and book out through the DOC. WFS are to be warned of all RPAS operations. RPAS are to operate not above 200ft AGL if WFS are active outside of ATC open hours.

SECURITY INCIDENT RESPONSE

12. If responding to a security incident RPASOs will:
 - a. Call the Helimed Duty Pilot or LNAA HQ directly to inform of activity. RPASOs are to contact the DOC in order to warn WFS of RPAS activity. On warn out, WFS pilots are to provide a mobile number to the DOC. RPAS are to land if WFS aircraft are observed in or approaching the visual circuit.
 - b. Once deployed at the launch location, RPASOs are to remain contactable on Waddington Skyranger (RPAS) operator mobile number 07976688411.

SINGLE OCCUPANCY PRINCIPLE

13. The DOC is to adhere to the single occupancy principle when the airfield is under their control. A visual representation of airfield activity should be maintained within Stn Ops.

Annex LL to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Aircraft parking

1. In accordance with [AOB Order B224](#) Parking, refuelling & defueling of Aircraft on non-intercepted areas – environmental protection procedures, all Aircraft are to be parked on paved areas protected by drainage & interceptors.
2. Unless agreed through prior arrangement with RAF Waddington Station Operations, handling of visiting Aircraft at RAF Waddington is conducted by VAHS in accordance with [AESO 2-1-1-01-37](#) Instruction for parking of visiting Aircraft including armed Aircraft. The exact slot for parking will be decided by RAF Waddington Station Operations. Procedures governing Dangerous Air Cargo / Armed Aircraft can be found at the above AESO, DAM Chapter 7 & Appendix 2 to [Annex II](#).
3. Deviations from the established parking locations detailed above are to be managed by RAF Waddington Station Operations in accordance with relevant regulatory documentation.
4. When Station Operations are selecting suitable parking locations for ac, consideration should be given to the possibility of damage to tarmac surfaces from hydraulic fluid & fuel leaking from ac. Furthermore, Aircraft can sink into tarmac due to hot tyres or when the OAT is high or when parked in one location for a long period, even when the pavement is of the correct LCN.

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Annex MM to DAM

File reference 20230809-RAF_Waddington_DAM_3.3-O

Force Protection Responsibilities

RAF Waddington Force Protection Orders are beyond the security classification of this document. If required contact RAF Waddington Air Operations.

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Annex NN To DAM
Dated 09 Aug 2023



RAF Waddington

Aerodrome Order Book (AOB)

DAM Issue 3.3 – 09 Aug 23

Info Owner – SATCO
Info Input – Fg Sqns, STANEVAL, SFODO & Ops
Support Wg

UNCONTROLLED COPY WHEN PRINTED

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AOB FOREWORD

1. RAF Waddington has two resident Air Wings (Display and ISTAR) each with their own DDH Orders, so to better reflect the Aerodrome Operator's and Head of Establishment's responsibilities, the Flying Order Book has been renamed the Aerodrome Order Book (AOB) The orders contained in this AOB are mandatory for all personnel involved in flying operations from RAF Waddington. The AOB is supplementary to King's Regulations, the Air Navigation Order (ANO), Military Aviation Authority Regulatory Publications (MRP), No 1 Gp ASO's, Aircraft Document Sets and any other applicable Flying Orders / Guidance. In the event of a conflict between orders, the most stringent rules are to be applied while clarification is sought. On arrival, on amendment thereafter, or as directed, all relevant personnel are to read, & sign as having understood, these orders by way of signing for the DAM. The electronic version of the AOB is to be considered the master. Any printed copies are not subject to amendment & are to be treated as uncontrolled. All previous printed versions are to be destroyed.
2. The content of the AOB is controlled by SATCO with input from the Sqn's, STANEVAL and Ops Support Wing. SATCO is to maintain the online Master Copy. All requests for amendment are to be staffed through SATCO.
3. All times quoted in these orders are LOCAL unless otherwise stated.

OC Operations Support Wing
RAF Waddington

AOB SECTION A – TEMPORARY & SUSPENDED ORDERS

Temporary Orders A101 – TEMPORARY ORDERS

Currently there are no temporary orders.

Suspended Orders A102 – SUSPENDED ORDERS

Content A102 – REFUELLING OF ROTARY AIRCRAFT WITH ROTORS
TURNING/ ENGINE RUNNING

References A. MAM-P 3.4.1.
B. DAP 3150 - MTIs, PT 3, INS 9 and relevant local Auths.
C. IETP / DAAvn 44/022/07 and STARS Apache Authorization iaw
MAM-P 2.1
D. Con Plan 6 - Unit Spillage Response Plan (USRP)
E. ATP 49, Part 4, Chapt 4
F. RAF Waddington Visiting AC Proforma

Annexes A. RRF Layout

AUTHORIZATION.

1. The refuelling of aircraft with rotors turning / engine running may be carried out at RAF Waddington for operational or training reasons, when specifically authorized by Head of Establishment (HOE), or their nominated deputy, along with the visiting platform's DDH.
2. The hazardous nature of rotors turning/engines running refuelling, requires a Risk Assessment to be undertaken by HoE/ADHs/AM(MF)s, with advice from the Senior ARFF Officer to identify appropriate levels of fire protection commensurate to the risk. Agreed procedures are to be published within Unit Orders.

APPLICABILITY.

3. This Order is applicable to all pers involved in the refuelling of helicopters / propeller driven aircraft visiting or on short term deployment to RAF Waddington. The term Rotors Running Refuel (RRRF) will be used throughout this document and will apply to all variations of refuelling of rotary / propeller driven ac with rotors / propellers turning / engine running.

AIM

4. The aim of this Order is to amplify the operating procedures and safety precautions contained at Reference A, adopted by all pers during the RRRF of aircraft at RAF Waddington.

IMPLEMENTATION.

5. An Aircraft Rescue and Fire-Fighting Vehicle (ARFFV) is to be manned and located at the active nominated site during all RRRF operations, and parked in such a manner so as not to obstruct the movement of the aircraft or refueller. At all times during the RRRF, the Fire Cdr must have line of sight to the ac Cdr, bowser driver and Crewman (Cmn) conducting the refuel (see Annex A.) Should the ARFFV be recalled for an emergency elsewhere the aircraft Cmn IC RRRF is to terminate the refuel immediately and ensure the hose and bonding lead are safely disconnected. If the aircraft has insufficient fuel to continue on task it is to be shutdown and a cold refuel carried out.

6. The refueller driver / operator should pre-position the fuel bowser alongside the ARFF, so that the aircraft being refuelled can safely taxi into the RRRF area, and then be marshalled into position by the Cmn.

7. **RRRF Team Composition.** The minimum requirements for a RRRF team are;

- a. IC RRRF - ac Cmn/AAC REME holding relevant auths.
- b. An ARFFV with required capacity depending on the Crash Cat.
- c. A Bowser Operator who carries the required Auth iaw Reference B
- d. Safety Man

Note 1: Refuelling may only be carried out by the authorized pers iaw Reference A.

Note 2: Refuelling of Apache aircraft may only be carried out by authorised personnel holding Auth iaw Reference C. This will likely mean that Apache RRRFs will only be conducted when deployed with Eng Spt due to limited experience at WAD

8. **Locations for RRRF.** All intercepted ASPs at WAD are available for RRRF, providing they do not conflict with other ac operations. The relevant bay will be nominated by the DEOC and this info will be passed to ATC, ASMT and Fire prior to the commencement of flying. If the bay needs to be amended during the flying day, the relevant pers must be informed.

Although many sites are authorized, only one will be active at any given time; depending on runway and visiting aircraft requirements. Suitable spacing between aircraft, depending on aircraft type, must be maintained if multiple RRRF events are occurring. On no occasion must an aircraft be refuelled whilst it is parked on grassed areas, as these areas do not have drainage interceptors and as a result, any fuel spillage could contaminate local water courses.

9. All booking requests for RRRFs are to be provided by the appropriate visiting ac Ops to RAF Waddington Stn Ops using Ref F, with a minimum of 24 hrs notice where possible, who will maintain a booking system to co-ordinate refuelling requirements. DEOC, Fire Station Officer, SNCO VAHS, SNCO ASMT and SNCO ATC will be informed of confirmed bookings the day prior. All details of booking are to be recorded on Reference E and filed in the Duty Ops Archive folder and retained for 6 months.

10. **Refueller.**

a. **Positioning.** The refueller driver is to be RRRF qualified iaw Reference B. Once in position the bowser must be able to drive away through a clear escape lane in case of an emergency. The refueller must be positioned outside the rotor/propeller disc/arc area, **final responsibility for separation between the bowser and the disc area remains the responsibility of the aircraft captain iaw the flight reference cards.** The fire crew providing fire cover for the refuel will position themselves in the appropriate position, maintaining line of sight with the ac Cdr, bowser driver and ac Cmn refuelling.

b. **Hose and bonding lead.** Sufficient hose is to be reeled out to allow for the doubling back of at least 4m. The refuel hose nozzle is to be placed on the ground with the nozzle cover fitted. **ONLY REEL TYPE REFUELLER IS TO BE USED.**

c. **FOD.** Once the refueller and hose are positioned the ground crew are to ensure that the refuel area is clear of FOD.

d. **Vehicle Lighting.** Refueller vehicles are to have their amber anti-collision lights switched on at all times when operating in the vicinity of aircraft. At night, side lights and marker lights are also to be switched on. When instructed by the aircrew, refueller floodlights are to be used to illuminate the refuelling area. The driver is to position his vehicle so that his headlights do not shine directly into the cockpit.

e. **Operation.** The refueller operator is to pass the earth bonding lead to the aircraft crewman IC RT / ER when requested, the aircraft crewman IC RT / ER refuel will then connect the bonding lead to an aircraft earthing point and will then

RAF Waddington AOB – Annex NN to the DAM

connect the refuelling hose to the ac. On instruction from the aircraft crewman IC RT / ER refuel, the refueller operator is to start and stop refuelling. When refuelling is completed, and before the aircraft "lifts," the refuel hose is to be disconnected and doubled back to the refueller and the earth bonding lead is to be disconnected and fully wound in. **AT NO POINT ARE ASMT PERS TO ENTER THE DISK AREA.**

NB: *When reeling the aircraft earth lead in or out, care is to be taken to ensure that it does not become slack and enter the rotor disc area.*

11. **Safety Precautions.**

- a. **Passengers.** Reference A. Details the regulations pertaining to refuelling operations with passengers enplaned preference is for passengers to de-plane before commencement of refuelling operations and to enplane once refuelling is complete. This will be controlled by members of the flight crew, under the captain's guidance.
- b. **Wind Speed.** The decision on whether a RRRF will be carried out rests with the aircraft captain iaw the flight reference cards.
- c. **Protective Clothing.** The aircraft tradesman and refuel driver are to wear safety boots, gloves, ear defenders, goggles and protective clothing (which covers the arms and legs) and high visibility vests. All clothing is to be of an anti-static quality.
- d. **Fire Precautions.** A Fire Tender is to be in attendance and positioned upwind as required during the refuelling operation.
- e. **Fuel Spillages.** In the event of a fuel spillage refuelling is to cease immediately. The refuelling hose and earth lead are to be disconnected from the aircraft, the refuel nozzle cover is to be fitted and the hose and earth lead are to be drawn back to the refueller. If the spillage is deemed as minor it should be mopped up by the RRRF team personnel. If the spill is estimated as above 50 litres WAD Tower is to be contacted with the request for ConPlan 6 (Reference D) to be initiated. The decision to shut down or to move the aircraft will be made by the aircraft captain.

12. **Emergency procedures**

- a. In the event of a bowser fire, the Cmn is to inform the ac Cdr, the bowser driver is to cease the flow of fuel and the Cmn is to disconnect the hose whilst fire crews attempt to fight the fire. The ac Cdr will decide whether to lift the ac away to a safe position or to remain in situ.
- b. In the event of an ac fire, the Cmn is to inform the ac Cdr, the bowser driver is to cease the flow of fuel and the Cmn is to disconnect the hose. The ac Cdr will shut the ac down and fire crews to attempt to fight the fire.
- c. In both events, the fire crews are to inform ATC and Ops.

Annex A to AOB Order A102

File reference 20230809-RAF_Waddington_AOB-O

RRF Layout



Fire cdr visual with a/c
cdr, bowser driver and
crewman conducting
refuel



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AOB SECTION B PART 1 – CONTROL OF FLYING

Order	B101 - AERODROME & FLYING SUPERVISION
References	A. RA 1010: Head of Establishment – Aerodrome Responsibilities B. MAA RA 1026: Aerodrome Operator C. RA 2335: Flying Displays & Special Events
Annexes	A. RAF Waddington Ops Spt Wg Duty Exec Terms of Reference

ALL TIMES LOCAL

- 1. Stn Cdr/HOE.** The Head of Establishment (HoE) is responsible for actively providing a Safe Operating Environment (SOE) for Aircraft on MOD Aerodromes, Air Weapons Ranges, Electronic Warfare Ranges, aviation capable ships and Helicopter Landing Sites (HLS), in order to meet their Duty Holder-Facing (DH-Facing) responsibilities in accordance with (iaw) RA 10201 or RA 10242 as appropriate. Providing a SOE also enables the HoE to meet their legal Duty of Care responsibilities for all Aerodrome users. The Stn Cdr as HoE is responsible for the provision of a safe aerodrome operating environment for Waddington based & visiting Aircraft.
- 2. ADHs.** As Delivery Duty Holders (DDH) Cdr Air ISTAR Wg and Cdr Display have responsibility for the routine supervision & oversight of flying of RAF Waddington ISTAR platforms and RAFAT, respectively. For visiting aircraft, this is provided by respective DDH or equivalent. For platform specific supervision responsibilities, please refer to [ISTAR DDH Orders](#) or Display Wing Orders (once published).
- 3. Aerodrome Operator.** In accordance with Reference B, OC OSW has been appointed by the HoE as the Aerodrome Operator (AO) for RAF Waddington. As AO, OC OSW is responsible to the HoE for the oversight of all RAF Waddington flying & is DH facing in the provision of a safe aerodrome operating environment to all station based & visiting Aircraft. Outside of normal working hours & when OC OSW is unavailable, responsibility will be delegated to the OSW Duty Exec. Eligibility criteria & Terms of Reference (ToRs) for the OSW Duty Exec are at [Annex A](#) to this order.
- 4. Sqn Supervisor Of Flying (SSOF).** For the duration of the duty period, FEs (Fg Sqns) are to provide a SSOF (contactable by telephone as a minimum) in order to provide specific platform information and advice to relevant Stn sections/personnel as required. The SSOF may be required to liaise with the OSW Duty Exec for matters not directly related to Aircraft operations.
- 5. ATC Supervisor.** The ATC Supervisor is responsible to the AO for the safe & efficient control of Aircraft operations at RAF Waddington & for the day-to-day management of airfield activity. They are to keep the respective Sqn Duty Exec & Duty Ops Controller informed of any occurrence which could affect the safe conduct of flying such as Aircraft emergencies, deteriorating weather & change of airfield status. They are to invite AO/Duty OSW Exec & relevant SSOF, to the control tower whenever they consider that there is a need for closer oversight/supervision of flying. The ATC Supervisor is to be available & contactable via the ATC switchboard at all times whenever the aerodrome is active.

6. **Duty Ops Controller (DOC).** The DOC is responsible to the AO for the routine management & oversight of all RAF Waddington ISTAR FE & visiting Aircraft operations. In addition, they are responsible to the Stn Duty Exec for all operational matters affecting the Stn outside of normal working hours. The DOC is to be available & contactable via Stn Ops at all times.
7. **Duty Meteorological Officer (DMetO).** Operational Meteorologist (OM) or Operational Meteorologist Technician (OMT). The OM or OMT is to be on duty in the Meteorological Office at RAF Waddington whilst the airfield is open. The OM is on duty from 1900L Sunday till COP Friday, and on call COP Friday till 1900L Sunday.
8. **Flying Display Director.** In accordance with Reference E, it is a mandatory requirement for all public flying displays at RAF Waddington (such as Families' Days) to have a SQEP Flying Display Director (FDD) assigned. SQEP for FDDs is defined by the MAA; any nominated FDD for an event at RAF Waddington must contact the MAA with a resume of their experience to become authorised. In most cases they must also attend a MAA hosted FDD Training Event which may have considerable lead-times to gain access to. Waivers will only be granted on an exceptional basis. OC OSW is to be provided with evidence that the MAA have authorised any nominated FDD for RAF Waddington events.
9. **Supported Units & Visiting Detachments.** All non-station-based assets are to nominate a flying supervisor (or equivalent). As part of their responsibility, they are to ensure that the Duty Ops Controller & the ATC Supervisor have direct contact during flying hours.

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Annex A to AOB Order B101**File reference 20230809-RAF_Waddington_AOB-O****RAF WADDINGTON OPS SPT WG EXEC TERMS OF REFERENCE**

References:

- A. Defence Aerodrome Manual (DAM) (Within which these TORs are contained)
 - B. CONPLAN 1 (Aircraft Post Crash Management & Major Accident Control Regulations) – hard copy held in Stn Ops
 - C. CONPLAN 2 (Op BLACKTOP) - hard copy held in Stn Ops
1. **Eligibility Criteria.** OF3 officers in command appointments are eligible for Ops Spt Wg (OSW) Duty Exec duties. Exceptionally, OF2/OR9 may also be selected for OSW Duty Exec with OC OSW's endorsement. Selected & endorsed OF2/OR9 are only to be scheduled for OSW Duty Exec when OC OSW Wg or XO OSW is available to provide supervisory oversight & support.
 2. **Responsibilities.** The OSW Duty Exec is responsible for representing OC OSW outside normal working hours or whenever OC OSW is unavailable. They are responsible to the Aerodrome Operator (AO), through the DOC, for maintaining a safe aerodrome operating environment for all station based & visiting Aircraft in accordance with MAA RA 1026. Specifically, the OSW Duty Exec is to:
 - a. Remain contactable by telephone for the duration of the duty period (contact details to be passed to the DOC the day before the duty begins).
 - b. Be on duty from 1200L Friday – 1159L the following Friday (unless agreed with OC OSW or agreed internally across OSW Duty Exec cadre), & as scheduled in the OSW Execs availability planner.
 - c. Maintain a 90 min return to work response time outside normal working hours.
 - d. Ensure that the DOC notifies any changes in aerodrome status to station based & visiting Aircraft.
 - e. Upon notification from & based on advice from the DOC, subsequently notify the AO of any aerodrome related matter that may affect the safe conduct of flight at RAF Waddington. In the event that the AO is unavailable, matters affecting the safe conduct of flight are to be notified direct to the HoE (i.e. RAF Waddington Stn Cdr). If operationally essential to meet planned departure/recovery times, the relevant DDH is to be notified direct. If a safe aerodrome operating environment cannot be provided, flying operations are to cease until further AO/HoE/DDH direction is obtained. Notwithstanding, airborne Aircraft in distress may recover at the captain's discretion.

f. Through liaison with the DOC, provide Duty Exec cover for decisions relating to out-of-hours visiting Aircraft requests, subject to requirements & available resources as assessed by the DOC.

g. Out of hours, the Duty OSW Exec might be required to make a decision regarding the removal of a disabled aircraft from the airfield operating surfaces. The Duty Exec will be contacted by the DOC as soon as the situation is understood, to consent to moving the aircraft in a timely manner; consideration should be given to the potential for MOD liability for any damage caused during the movement. The speed of removal, supervision & precautions to avoid damage will depend on the operational constraints & safety considerations at the time. The aircraft should normally only be moved under the supervision of the operating crew or owner. Ref Annex N of the DAM 'Orders for disabled Aircraft Removal' refers.

h. All individuals nominated to hold the OSW Duty Exec role are to read the classified folders held within cabinet E12 before they sign for becoming a Duty Exec and thereafter 3 monthly. A signature sheet will be held within the cabinet to ensure that all comply; it's the responsibility of the Ops Spt Wg WO to ensure that this is kept up to date

3. **ECC COS.** The OSW Duty Exec is to authorize the activation of the ECC OOH, through liaison with the DOC where necessary; and to assume the role of Emergency Coordination Cell Chief of Staff (ECC COS) in the event of the ECC being activated, (until relieved by Sqn Ldr Ops during normal working hours, if appropriate). Refer to [CONPLAN 1](#) –page 2-6:

[**ECC COS.** The ECC COS is responsible for maintaining the ECC to a fully operational standard; ensuring the logging of events is undertaken; managing visitors to the ECC and briefing them as required. This duty will be carried out by OC Ops Sqn or the Ops Duty Exec.]

4. **Op BLACKTOP.** The OSW Duty Exec is not required to attend the 1330L Op BLACKTOP daily planning meeting but should be prepared to fulfil the duties detailed within CONPLAN 2 regarding Op BLACKTOP. In sum, these are:

a. Establish the ECC in the event of Op BLACKTOP PLUS procedures being initiated by OC OSW (Refer to para 11 and 29 in OP BLACKTOP [CONPLAN 2](#)).

b. During normal working hours (weekdays 0800-1700) the DISCO will make a request to the DOC for the activation of Tiger Teams. During the working day, OC OSW may approve the activation of personnel to be placed on RS60 overnight. This will be co-ordinated through the SWO. However, If the Station Tiger Team are required to be activated OOH (e.g., weekends or stand down), then the OSW Duty Exec will liaise with the DOC to activate the Tiger Team and place personnel on a recall of 60 minutes. (Refer to para 5f and para 10 within Annex F to [CONPLAN 2](#)).

- (1) OOH, the DOC is responsible for contacting units/Sqns across the Stn as per Annex H of [CONPLAN 2](#)) and reporting back to the Stn Duty Exec as to the workforce levels of the Tiger Team.
- (2) If there are any concerns with respect to the safety of individuals fulfilling the Tiger Team role, or the Tiger Team workforce levels are less than 50%, then the OSW Duty Exec should refer to the Station Duty Exec.

5. **Ops Spt Wg Recall.** The OSW Duty Exec is responsible for initiating the recall of OSW personnel either as directed by the Stn Cdr or SDE (which will either be directly or via the DOC) or on judgement that a situation has arisen which requires the recall of OSW personnel out of hours/back from leave as required. The OSW Duty Exec is to contact the 5 x SO2s, who will each initiate internal cascade. OC OSW should be informed of the requirement as soon as practically possible.

6. **MACA** (Military Aid to Civil Authorities). The MACA Request process has [5 levels of authorization](#) (from HoE up to ministerial authorization). The first level, where “Assistance is required to urgently save life, alleviate distress, or protect significant property”, requires HoE Authority. If, however, out of hours, the OSW Duty Exec decides that MACA is appropriate to urgently save life only, every attempt should be made to contact the Station Duty Exec (SDE) or OC OSW, in order to sanction the activity. Consideration should be given to Stn activity (e.g., if the ICAO category declaration of the fire section is to be reduced and for how long) in consultation with the DOC (e.g., PDs, visiting ac etc.). If the SDE cannot be contacted within the timeline that the activity is required, the OSW Duty Exec is authorised to approve the activity and should back brief the SDE asap.

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List of other authorised officers outside of 5 x OSW SO2 are at Appendix 1 to this Annex

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Appendix 1 to Annex A to AOB Order B101**File reference 20230809-RAF_Waddington_AOB-O****DUTY AUTH LIST FOR OPS SUPPORT WING DUTY EXEC****1. Ops Spt Wg XO**

Name	Signature	OC Ops Spt Wg Signature	Date

2. OC Ops Spt Sqn

Name	Signature	OC Ops Spt Wg Signature	Date

3. OC ATC Sqn (SATCO)

Name	Signature	OC Ops Spt Wg Signature	Date

4. OC Logs Sqn

Name	Signature	OC Ops Spt Wg Signature	Date

5. Other – Flt Cdr MSF

Name	Signature	OC Ops Spt Wg Signature	Date

6. Other – Flt Cdr Ops

Name	Signature	OC Ops Spt Wg Signature	Date

7. Other – to be notified

Name	Signature	OC Ops Spt Wg Signature	Date

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8. Other

Name	Signature	OC Ops Spt Wg Signature	Date

9. Other

Name	Signature	OC Ops Spt Wg Signature	Date

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Order	B102 – AUTHORISATION OF FLYING
References	A. RA 2306: Authorisation of Flying
Annexes	Nil

1. **Authorisation.** All flights are to be authorised in accordance with RA 2306. Individual platforms are to comply with all orders mandated to them by the DDH, e.g., 1 Gp (ISTAR) ASOs and RAF Waddington DDH Orders.
2. **Aircrew Briefing.** Flying Unit Cdrs are to ensure that aircrew under their command are fully conversant with the regulations, orders, instructions and information applicable to their respective platforms. MAA RA 1000 and 2000 Series.
3. **RAF Waddington Stn Ops.** RAF Waddington Stn Ops will notify flying Sqn's of updates to the following documents. Note: Notification of the latest amendments to the documents listed above (will be passed from Air Ops to Sqn Ops desks. Sqn Ops personnel are responsible for notifying their own Sqn pers of amendments.
 - a. MAA RA 1000 and 2000 Series.
 - b. 1 Gp (ISTAR) ASO's.
 - c. RAF Waddington DAM (or AOB and/or DAM of the airfield Aircraft is being operated from).
4. **Flying Sqn's.** Flying Sqn's are responsible for ensuring that they keep up to date with DDH mandated orders applicable to their aircraft type, such as Air Training Instructions, Read File, DDH orders etc.

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AOB SECTION B PART 2 – AIRFIELD OPERATIONS

Order	B201 – RAF WADDINGTON
References	A. JSP 506: UK Peacetime Air/Ground Word Call Sign Policy, Instructions and Allocation B. 1 Gp ISTAR ASOs C. RAF Waddington DDH Orders
Annexes	Nil
Content	

Aerodrome Location

1. RAF Waddington is located alongside the village of Waddington and is 4 miles South of the city of Lincoln, Lincolnshire. RAF Waddington operates within close proximity to a number of local military, civilian and minor aerodromes.

LOCAL AREA MAP



Note: DON and SCA aerodromes no longer exist. ATC maps will be updated idc.

LOCAL AIRSPACE RESTRICTIONS

2. Military Aerodromes

- a. RAF Waddington MATZ (5nm radius, surface – 3000ft AGL)
- b. RAFC Cranwell MATZ (5nm radius, surface – 3000ft AGL)
- c. RAF Coningsby MATZ (5nm radius, surface – 3000ft AGL)

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- d. RAF Barkston Heath MATZ (3nm radius, surface – 3000ft AGL)
- e. RAF Syerston ATZ (2nm radius, surface – 2000ft AGL)

3. Civilian Aerodromes

- a. Humberside International Airport ATZ (2.5nm, surface – 2000ft AGL)
- b. Wickenby ATZ (2.0nm, surface – 2000ft AGL)
- c. Gamston ATZ (2.0nm, surface – 2000ft AGL)

4. Minor Aerodromes

- a. Hibaldstow Freefall Drop Zone (1.5nm, surface – FL160 when notified)
- b. Kirton-in-Lynsey Unpublished (when notified)
- c. Darlton Glider Site (when notified)
- d. Langer Freefall Drop Zone (1.5nm, surface – FL150 when notified)
- e. Saltby Glider Site (when notified)
- f. Strubby Glider Site (when notified)

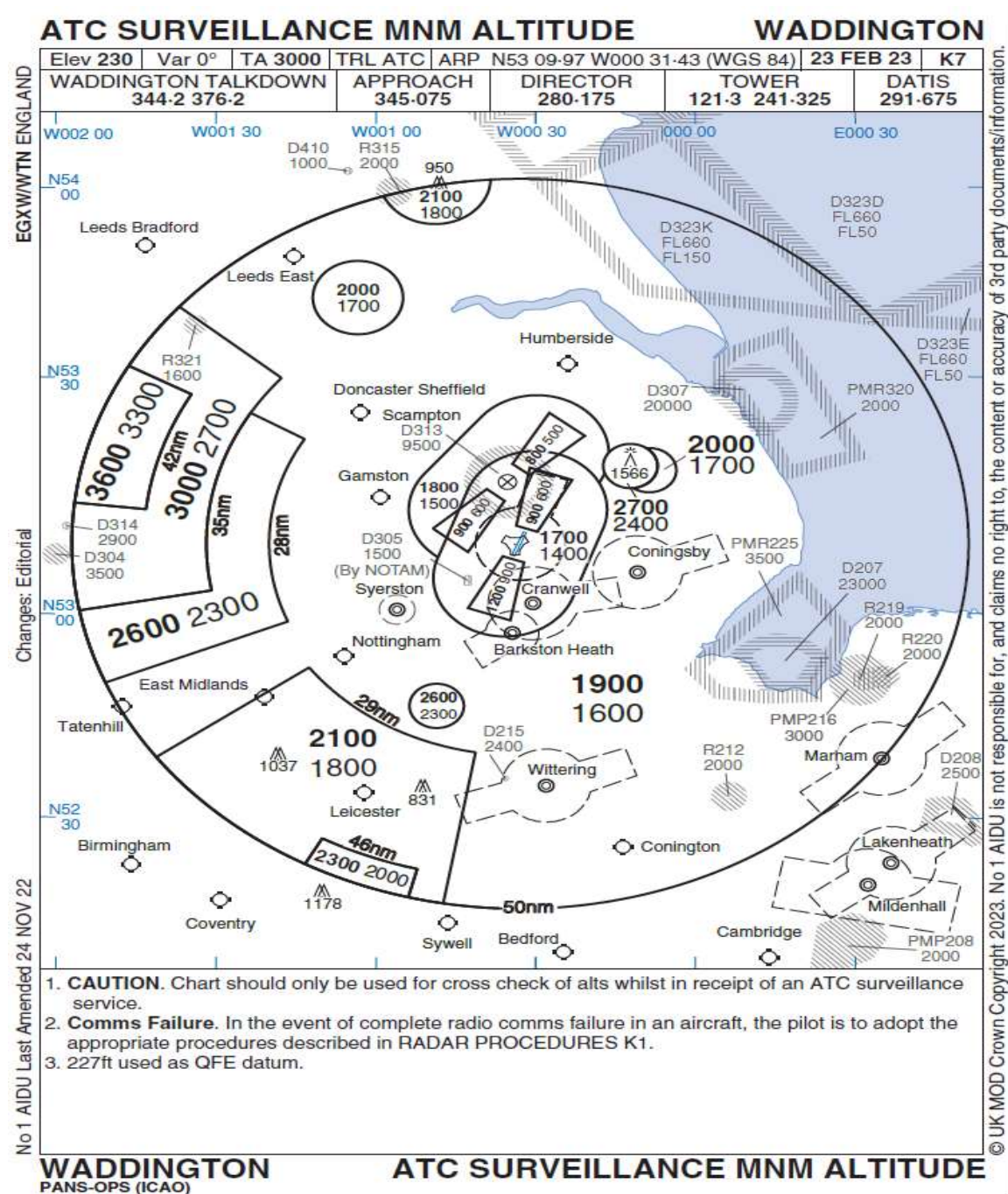
5. **EG R313.** EG R313 is restricted airspace centred over Scampton and is used by RAFAT for practice acrobatic displays and air tests. WAD Radar at TATCC (Lincs) is the controlling authority of EG R313. Commonly referred to as R313, the airspace is active 0830 – 1700Z Monday to Friday, SFC – 9500 ft and is based on the Regional Pressure Setting. If active outside these published hours a NOTAM will be issued with the additional times. TATCC (Lincs) is responsible for providing a RADAR service to RAFAT whilst practicing within the area.

6. **D307 – Donna Nook Range.** Donna Nook Range (DNR) is a Danger Area located on the eastern coast. The airspace is active 0900 – 1630Z Monday to Thursday, 0900 – 1500Z on Friday including 1630 – 2200Z Monday and Wednesday from September to April, SFC – 20,000 ft and is based on the Regional Pressure Setting. If active outside these published hours a NOTAM will be issued with the additional times.

7. **D207 – Holbeach Range.** Holbeach Range is a Danger Area on the north Norfolk coast. The airspace is active 0900 – 1700Z Monday to Thursday, 0900 – 1200Z Friday including 1700 – 2200Z Tuesday and Thursday from September to April, SCF – 23,000 ft and is based on the Regional Pressure Setting. If active outside these published hours a NOTAM will be issued with the additional times.

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RAF WADDINGTON ATC SURVEILLANCE MNM ALTITUDE



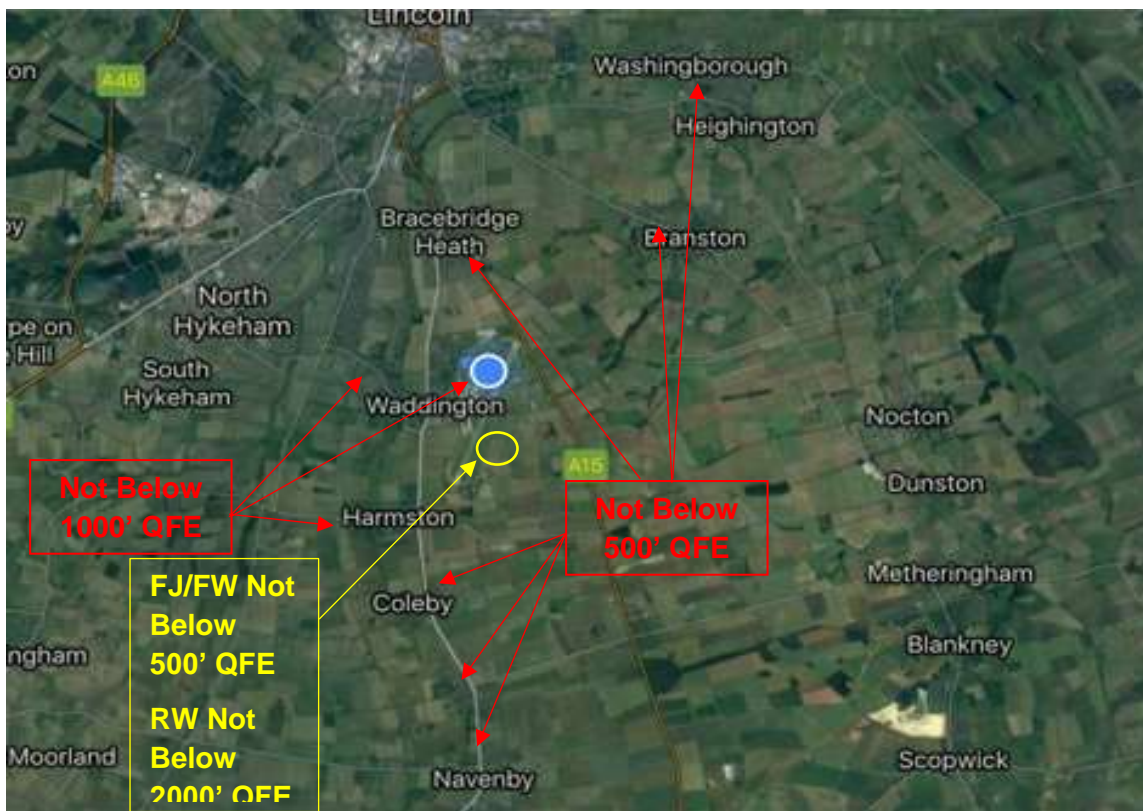
EXTRAORDINARY AIR ACTIVITY

8. All extraordinary air activity such as RPAS activity, model aircraft flying, ballooning, paragliding, falconry etc. must have prior approval from the Aerodrome Operator before commencing activity.

RAF Waddington AOB – Annex NN to the DAM

- a. Standing agreements may be issued where appropriate.
- b. All RPAS activity on the aerodrome is to be conducted iaw:
 - i. [ATC Sqn Order Book](#)
 - ii. Ops Sqn Orders, [Temporary Order 01](#).

MANDATORY AVOID AREAS



EMBARGOS

9. The following embargos can be authorised by OC OSW and promulgated by Stn Ops/ATC.

Type	Vis Circuits	RTC	Ground Operations	
1	No visual circuits	RADAR patterns only	N/A	N/A

2	No take-offs, circuits or PDs	Straight in to land	Minimum thrust reverse	No EGRs
3	No take-offs, circuits or PDs or taxiing Aircraft	No approaches	No landings	No EGRs

Note: Aircraft in an emergency are exempt from the above restrictions.

VISITING AIRCRAFT

10. Visiting Aircraft will only be accepted on a case by case basis and with the express permission of OC OSW. If issued with a PPR, captains of visiting Aircraft are to abide by the noise abatement procedures.

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Order B202 – R/T FREQUENCIES – STUD CARDS

References A. CAP 413 Radiotelephony Manual

Annexes Nil

Content

1. The Lincolnshire Terminal Air Traffic Control Centre - TATCC (Lincs) at RAF Coningsby - is responsible for providing WAD Radar ATS to RAF Waddington.
2. **Tower Frequency.** Although a UHF frequency is available at RAF Waddington Tower, the VHF frequency 121.3 is to be used at all times. If aircraft do not have VHF capability, TWR UHF 241.32 is to be used.
3. **Pre-Set Frequencies.**

RAF WADDINGTON STUD CARD									
#1	#2	VHF	#3	#4	#5	#6	#13	VHF	VHF
GRD	TWR	TWR	APP	DIR	T/D1	T/D2	ZONE	ZONE	RAFAT
342.12	241.32	121.3	345.07	280.17	344.20	376.20	232.70	119.5	125.35

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Order	B203 – R/T PROCEDURES
References	A. CAP 413 Radiotelephony manual
Annexes	A. Poor UHF/VHF Performance Map
Content	

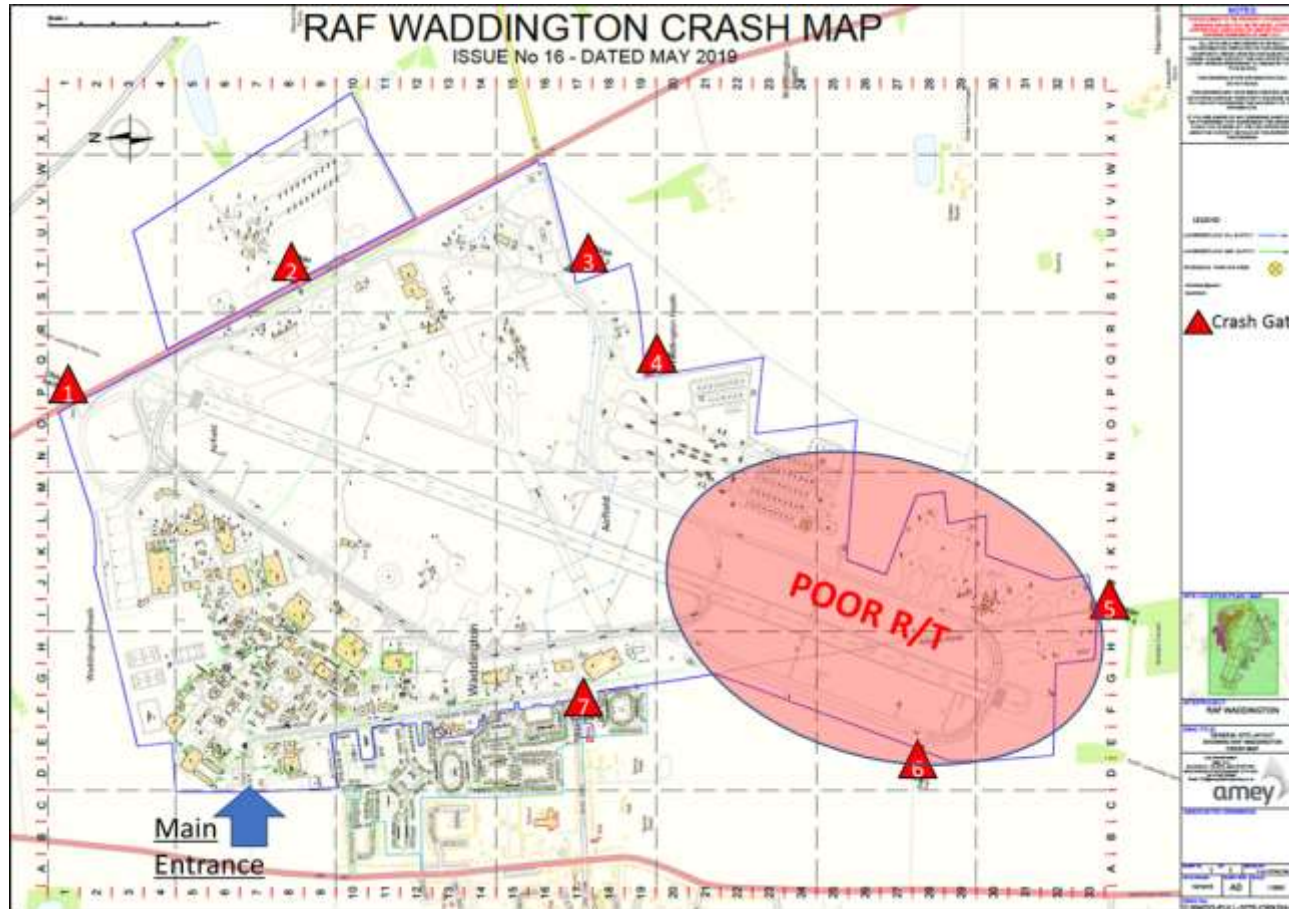
1. **Local R/T Procedures.** Whenever possible all procedures & phraseology are to be in accordance with Reference A.
2. **Aircraft Start.** All Aircraft are to ensure positive two-way R/T has been established with the RAF Waddington Ground Controller prior to engine start. An exception applies for RW Field Ops when authorized, see Order B211.
3. **Areas of Poor UHF/VHF Performance.** RAF Waddington aerodrome has known areas of poor UHF/VHF reception. ATC personnel & aircrew operating in the vicinity of the areas shown at Annex A to this order are to be aware of the potential for reduced quality of R/T exchanges & are therefore to pay particular attention to ensure that clearances & instructions are correctly acknowledged by all concerned.

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Annex A to AOB Order B203

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RAF WADDINGTON POOR UHF/VHF PERFORMANCE MAP



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Order B204 – NOTIFICATION OF FLIGHTS

References Nil

Annexes Nil

Content

STARS

1. STARS is the only flying programme software used by RAF Waddington.
 - a. Sqn Ops are responsible for ensuring STARS is up to date with their daily & weekly flying programme.
 - b. Sqns are responsible for maintaining & updating contact details on STARS.
 - c. OOH Stn Ops will update STARS with airborne & landing times.

UPDATING SORTIE INFORMATION

2. **RAF Waddington Based Aircraft.** Sqns are responsible for keeping STARS up to date with sortie information. This should include all involved parties & their contact details. Importance should be placed if the sortie is part of an exercise & external agencies need to be informed of changes & cancellations.
3. If a sortie changes or cancels within 24hrs of the planned departure, the following is to take place:
 - a. During normal working hours (0800A-1700A):
 - i. Sqn Ops will update STARS.
 - ii. Sqn Ops are to inform all relevant parties of the flight delay or cancellation, including Stn Ops & any external agencies.
 - b. Outside normal working hours:
 - i. Stn Ops will update STARS.
 - ii. Stn Ops will call all relevant parties & inform them of the flight delay or cancellation according to the individual Sqn's "out of hours" procedure & include any external agencies annotated on STARS by the Sqn.
4. If a sortie changes or cancels 24hrs or more before the planned departure, the following is to take place:
 - a. Sqn Ops are to amend STARS. All agencies are expected to check STARS daily for changes to the flying programme.

5. **Visiting Aircraft.** When any visiting Aircraft operates from RAF Waddington, Stn Ops is responsible for updating STARS for any sorties. Visiting detachments, 2xcel / Gama Aviation & Waddington Flying School are responsible for informing Stn Ops (Ex 6731) for updating them with sortie details.

6. Sortie details are to be passed to Stn Ops. If this is not possible, the following information should also be passed when calling for taxi:

- a. Departure details (hdg, alt/ FL, MIDs, non-standard dep, RADAR service required).
- b. Sortie length, if other than standard.
- c. Destination airfield & time en-route, if other than operating base.

DIPLOMATIC CLEARANCES

7. All international transit flights for RAF Waddington Aircraft must have the appropriate diplomatic clearances. In order to do so, it is the Captain's responsibility to ensure a diplomatic clearance request form is complete.

- a. A separate form must be completed for each leg of the transit.

It is the responsibility of the Sqn Ops personnel to submit the Diplomatic Clearance request.

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Order B205 – ENGINEERING DISTRACTION

References Nil

Annexes Nil

Content

1. **Engineering Distraction.** Distraction during engineering shift handovers has been identified as a significant cause of incidents & accidents.
2. To avoid this distraction & hence enhance flight safety, Aircraft sorties should be routinely planned so that the aircrew engineering de-briefs avoid the 1 hr surrounding the engineering shift handover.
3. For the majority of Sqns the 'Golden Hour' is 1545L – 1645L. This will ensure the Engineering Day to Night shift handover is protected & uninterrupted, therefore reducing the risk of Human Factors related incidents.

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Order B206 – DIVERSION AIRFIELDS

References BINA

Annexes Nil

Content

1. Prior to daily flying commencing the DOC in consultation with the OM & Sqn ops staff will book suitable diversion airfield for Waddington based platforms. Sqn ops staff are to inform the DOC if a diversion is not suitable or if additional diversions are required. A list of suitable diversion airfields is in the table below:

AIRFIELD	ICAO	LDA (ft)	BEARING /RANGE (nms)	Civil ILS Monitored	ICAO	Aircraft Type
Boscombe Down	EGDM	RWY 05: 10,440 RWY 23: 10,187	201.22/128.97		ICAO A6*	SHADOW
Bristol	EGGD	RWY 09: 6,598 RWY 27: 6,175	217.77/134.1	Yes	CAT A8. CAT 9 under remission	SHADOW
Brize Norton	EGVN	RWY 7/25:10,007	205.05/93.29	Yes – On request	ICAO 8	RJ, SHADOW
Cranwell	EGYD	RWY 08: 6,286 RWY 26: 6,529	172.5/08.19		ICAO 5	SHADOW
Coningsby	EGXC	RWY 07/25: 9,003	108.89/13.52		ICAO 5	SHADOW
Teeside Intl	EGNV	RWY 05/23: 7,516	338.77/87.22	Yes	ICAO 6	SHADOW
East Midlands	EGNX	RWY 09: 8,904 RWY 27: 9,068	236.23/34.96	Yes	CAT A7. CAT 8 On remission. CAT 9 by arrangement minimum 12hrs notice required.	RJ, SHADOW
Humberside	EGNJ	RWY 02: 6,791 RWY 20: 6,398	016/25.25	Yes	CAT A6. CAT 7 & 8 By Arrangement	SHADOW
Lakenheath	EGUL	RWY 06/24: 8,996	138.58/60.07		NATO 7	SHADOW
Leeming	EGXE	RWY 16/34: 7,516	332.71/076.8		ICAO 5	SHADOW
Leuchars	EGQL	RWY 08: 7,602 RWY 26: 8,484	338.28/209.33		ICAO 5	SHADOW
Lossiemouth	EGQS	RWY 05: 9,068 RWY 23: 8,780	341.81/289.31		ICAO 7	SHADOW

Marham	EGYM	RWY 06/24: 9,131	128.18/049.72		ICAO 5	SHADOW
Mildenhall	EGUN	RWY 10/28: 9,214	142.36/060.61		NATO 9	RJ, SHADOW
Newcastle	EGNT	RWY 07: 7,247 RWY 25: 6,969	340.33/119.76	No	ICAO 8	SHADOW
Newquay	EGHQ	RWY 12: 8,652 RWY 30: 8,018	227.38/233.45	RWY30 only	ICAO 6	SHADOW
Norwich	EGSH	RWY 09/27: 6,043	113.48/071.77	No	ICAO 6	SHADOW
Prestwick	EGPK	RWY 12: 8,996 RWY 30: 9,800	316.33/200.94	Yes	ICAO 7	RJ, SHADOW
Shawbury	EGOS	RWY 18/36: 6,007	255.58/080.7		ICAO 4	SHADOW
Valley	EGOV	RWY 13/31: 7,513	273.67/144.61		ICAO 5	SHADOW
Warton	EGNO	RWY 07: 7,730 RWY 25: 7,680	293.53/091.62	By request	CAT 6: PEAK Hrs. CAT 9: PN O/R.	SHADOW IF REQUESTED
Wattisham	EGUW	RWY 05/23: 7,490	138.1/82.28		ICAO 5	SHADOW
Yeovilton	EGDY	RWY 08/26: 7,523	212.12/151.1		ICAO 5	SHADOW

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Order B207 – TAXI PATTERNS, PROCEDURES & PARKING BAYS

References A. RA3261(1) – Aerodrome Service

Annexes Nil

Content

1. To ensure safe & effective operation of Aircraft on the Manoeuvring Area, aircrew shall conform with ATC instructions regarding taxi patterns. This provides a level of expectation amongst air crew & permits forward planning for the sequencing of movements. When safe to do so, controllers may impose alternative taxi instructions for safety reasons or for increased expedition. Alternative routings may be requested by aircrew where time & circumstances permit; however, unless a routing has been specifically authorised by ATC, aircrews are to follow ATC instructions. All instructions passed by ATC to Aircraft on the Manoeuvring Area are mandatory.
2. Due to the diverse Aircraft types encountered, VHF 121.3 should be used at all times for all airborne aircraft under the control of the ADC. This includes aircraft departing the airfield, joining or remaining in the visual circuit. UHF 342.12 (Stud 1) should be used for pilots requesting start, when taxiing out/in & for passing departure instructions, with 121.3 only being used by non-UHF equipped Aircraft. UHF 241.32 (Stud 2) should only be used where an Aircraft is unable to use VHF.
3. Aircrew are to include the following when requesting start / taxi clearance:
 - a. POB (if not given previously when requesting start up clearance).
 - b. ATIS Flight Information Code Letter (Obtain before calling).
 - c. Bay number or location.
4. **Taxi Clearance.** Taxi instructions issued by ATC will contain a clearance limit which is the point at which the Aircraft must stop unless further permission is given. For departing Aircraft, the clearance limit will normally be the holding point of the runway in use, but it may be any other position on the airfield depending on the prevailing traffic. If an Aircraft starts to taxi for RWY20 while instrument traffic is inbound using the ILS, the Aircraft on taxi will be held at the Cat 1 Hold while the inbound traffic is on finals.
5. **Restrictions of CODE D/E Aircraft.** A RE report has clarified the suitability of taxiway & wing tip clearances for **CODE** D/E Aircraft. Further detail on obstructions affecting wingtip clearances can be found in at Annex I.
6. **Follow Me Provision.** RAF Waddington does not routinely provide a Follow Me service for Aircraft. Users requiring this service are to contact RAF Waddington Operations in advance to discuss their exact requirements.

7. **Proximity of Jet Blast to A15 Carriageway on RWY20.** On limited occasions it may be necessary to utilise an extended length of RWY20 for Aircraft departures bringing jet blast in closer proximity to the A15 carriageway. All full-length departures need prior approval by OC OSW.
8. **Ground Support Equipment (GSE).** RAF Waddington may be able to provide certain elements of GSE. Requirements are addressed on a case by case basis & should be articulated to RAF Waddington Operations in advance of any planned movement. Stn-based Aircraft retain priority over Stn GSE at all times.

DANGEROUS AIR CARGO / ARMED AIRCRAFT PARKING

9. The loading/unloading of DAC & parking of armed Aircraft is to take place iaw AESO 2-1-1-01-37.
10. **DAC.** The designated parking area for the loading/unloading of DAC is Bay 19A. Further information is at [Annex II](#) to the DAM.
11. **Armed Aircraft Parking.** Limitations on accepting Armed Aircraft are in force & are subject to Station Ops approval. Of note RAF Waddington does not accept Aircraft with forward firing weapons. Further information is at [Annex II](#) to the DAM.

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Order B208 – CONTINUOUS CHARGE

References Nil

Annexes Nil

Content

1. Any sortie that requires an Engine Running Crew Change (ERCC) should be pre-noted to ATC beforehand. This allows the ATC Supervisor to plan for the disruption this may cause & to arrange appropriate fire cover. If the ATC supervisor believes that priority tasking will be affected, or safety compromised by an ERCC, the request may be denied. The respective Sqn will be informed of this as soon as possible to allow them to react accordingly.
2. Whilst an ERCC is in progress, the ADC may utilise the Rwy to backtrack an Aircraft & taxi them against the stream, or to move Aircraft in & out of bays that are positioned along Alpha Taxiway.
3. 14 Sqn have continuous charge procedures that allow them to carry out ERCC on Alpha Taxiway at 2 Hangar North (14Sqn).
4. Appropriate fire cover will be arranged via ATC prior to the Aircraft being positioned for the ERCC.

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Order**B209 – VEHICLE MOVEMENTS**

Vehicle & pedestrian control orders can be found at [Annex U](#) to RAF Waddington DAM.

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Order B210 – DEPARTURES

References Nil

Annexes Nil

Content

VISUAL DEPARTURES

1. **General.** VFR & IFR departures are normally prohibited in the Sector 130° through South to 220°. In exceptional cases Aircraft may be cleared to climb out in this Sector subject to prior coordination with CRN ATC. Fast jets departing the airfield under VFR are not to fly below 500 ft QFE until clear of the RAF Waddington MATZ boundary. All right hand VFR departures from RWY20 are to climb straight ahead for 3nm DME from RAF Waddington or 1000 ft QFE before commencing the turn. EGR 313 & CRN MATZ are to be avoided unless positive clearance has been provided by ATC.

2. **Helicopter VFR Departures.** RAF Waddington regularly hosts helicopter detachments & refuelling moves. In order to standardise arrival & departure profiles, the following procedures apply:

- a. Visual recoveries & VFR departures are to route inbound / outbound either from the West via Swinderby, or East via Metherringham, maintaining not above 500ft QFE inside the aerodrome boundary.

INSTRUMENT DEPARTURES

3. **Military Instrument Departures (MID).** The MIDs are safeguarded iaw PANS-OPS Military Instrument Procedures & Standards (MIPS). All RAF Waddington MID are published in the TAP Charts.

- a. **MID NE RWY 02** – Climb on Rwy track to 500' QFE / 730' QNH, then turn right to intercept Waddington 045R, climbing to FL120.
- b. **MID NE RWY 20** – Climb on Rwy track to 500' QFE / 730' QNH, then turn left OTR climbing to FL120 (if entering the RTC – stop climb 2500' QFE / 2800' QNH).
- c. **MID SE RWY 02** – Climb on Rwy track to 500' QFE / 730' QNH, then turn right onto track 090°, at Waddington 8d, turn right direct CGY. Outbound 180R to CGY 6d, climbing FL120.

4. Aircraft conducting non-standard IFR departures are to climb initially on RWY track to 1400ft QFE prior to turning. To reduce R/T, this instruction will not be transmitted to Stn based crews or visiting crews operating iaw this AOB. EGR 313 and CRN MATZ are to be avoided unless positive clearance has been provided by ATC.

APPLICATION OF RADAR SERVICES

5. Station based Aircraft will be given a Traffic Service on departure unless otherwise requested. Visiting Aircraft requiring a RADAR service are to request the type of service required on initial contact with ATC.

WADDINGTON / CONINGSBY AGREEMENT

6. Due to the proximity of RAF Waddington, RAFC Cranwell & RAF Coningsby, some non-standard departure profiles for some larger Aircraft may be denied or altered in order to maintain clear of local MATZ.

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Order B211 – WADDINGTON VISUAL CIRCUIT PROCEDURES

References A. CAP 413 - Radiotelephony Manual

Annexes Nil

Content

1. IAW Noise Abatement Procedures, all routine Stn flying is to cease at 2359 LOCAL. However, visual circuits, touch & go's or low approaches are not permitted after 2300 LOCAL. Any requests for dispensation are to be made to OC OSW via the DOC for consideration. Only straight-in approaches will be allowed for movements outside normal operating times.
2. Owing to the high usage of RAF Waddington, Circuit Training (CT) by visiting Aircraft & Practice Diversions (PDs) will normally be restricted to the following times (local):
 - a. Mon-Thu 0800-1800hrs, Fri 0800-1300.
 - b. If operational requirements dictate that the AD be open between 1800-2100hrs, a maximum of 2 visiting (PD) aircraft will be allowed in the visual circuit or the instrument pattern at one time. PDs will be restricted to 2 visual circuits & two instrument approaches per aircraft. PDs must be pre-approved by the ATC Supervisor before 1800.
 - c. PDs will be accepted at Supervisor's discretion subject to the Stn flying programme.
 - d. If operational requirements dictate that the AD be open between 2100-2200hrs, aircraft will be accepted for single approaches at a rate of one aircraft in any 30-minute period.
 - e. There are no restrictions on movements, including CT, by Waddington-based aircraft. However, after 2100hrs, movements are to be kept to a minimum commensurate with training or operational tasking.
 - f. PDs will be accepted at Supervisor's discretion subject to the Stn flying programme.
3. Visual circuits are only to be flown to the RWY in use, unless ATC clearance has been obtained to use another RWY.
4. Further restrictions to those promulgated above may be imposed by the ATC Supervisor/ATCO IC, depending on recent usage rate of the visual circuit.
5. For Aircraft operating in the visual circuit, the following applies:
 - a. Standard Circuit Height. The visual circuit heights are:
 - i. Glide Circuit 1500 ft QFE 1800 ft QNH
 - ii. Normal Circuit 1000 ft QFE 1300 ft QNH

- iii. Low Level Circuit 500 ft QFE 800 ft QNH

Note: Glide and Low Level Circuits must be requested to allow ATC to deconflict other Aircraft in the visual circuit.

- b. Circuit Directions. The circuit directions are normally as follows:

- i. RWY 20 Left HAND at 1000 ft QFE
- ii. RWY 02 RH Right HAND at 1000 ft QFE

6. Due to the diverse Aircraft types encountered, VHF 121.3 should always be used for all Aircraft departing the airfield & joining or remaining in the visual circuit. UHF 342.12 (Stud 1) should be used for pilots requesting start, when taxiing out/in & for passing departure instructions, with 121.3 only being used by non-UHF equipped Aircraft. UHF 241.32 (Stud 2) should only be used where an Aircraft is unable to use VHF.

MIXED INSTRUMENT & VISUAL CIRCUITS

7. The maximum number of Aircraft permitted in the visual circuit at one time is to be 4 Aircraft except when large formations are on recovery.

- a. Minimum cloud base & visibility for mixed circuits is 1500ft AGL & 5000m. The aerodrome controller will monitor the weather conditions & place restrictions on the number of Aircraft in the circuit if required.
- b. When mixed circuits are in operation, captains of Aircraft in the visual circuit are responsible for collision avoidance. However, ATC will advise visual circuit Aircraft of inbound instrument traffic. Aircraft on an instrument approach take precedence over visual circuit traffic, except for an Aircraft in emergency (HELMED) or requesting a priority landing.
- c. The Aerodrome Controller will broadcast a message to Aircraft in the visual circuit whenever Aircraft on instrument finals are at 8 & 4 nautical miles from touchdown. This is to be augmented by a call at 2 nautical miles from touch down if required. The message is to contain the Aircraft type (e.g. Typhoon) & the intention of the Aircraft (e.g. land).
- d. Visual circuits are not to be extended beyond 5nms downwind.

8. Aircraft on final approach will have priority over other Aircraft (in this context final approach can be considered to be within 4nm of the touchdown point on an IFR approach or after the entry to the final turn on a visual circuit). In all other circumstances, The priorities afforded to aircraft from WAD ATC are:

- a. Aircraft in emergency.
- b. Helimed & other Humanitarian flights.
- c. Flights iso Named operations.
- d. VIP movements.
- e. CTOT/Timed Take-Off.
- f. Instrument approaches (including visual straight in to land).
- g. Practice emergencies.
- h. Visual approaches.
- i. Departures.

FORMATIONS

9. With the exclusion of RAFAT formations, the maximum number of Aircraft permitted in the visual circuit at one time is to be 4 Aircraft except when large formations are on recovery.

ROTARY HYDRAULIC ARRESTOR GEAR (RHAG) OPERATIONS

10. Standard RHAG configuration is approach end cable de-rigged & overrun cable up. However, ISTAR Aircraft often require both cables to be de-rigged. If the RHAG is required ATC should be contacted in advance. Further details on its maintenance & safe operation are at Annex J of the DAM.

SASSY / SSE / SEFATO REQUESTS

11. All requests for non-standard visual circuits are to be notified to ATC via RT.

WAKE TURBULENCE

12. During approaches in light wind conditions, crews are to be alert to the possibility of experiencing wake turbulence from preceding Aircraft & are to comply with the Wake Turbulence Separation Criteria specified in the FIH.

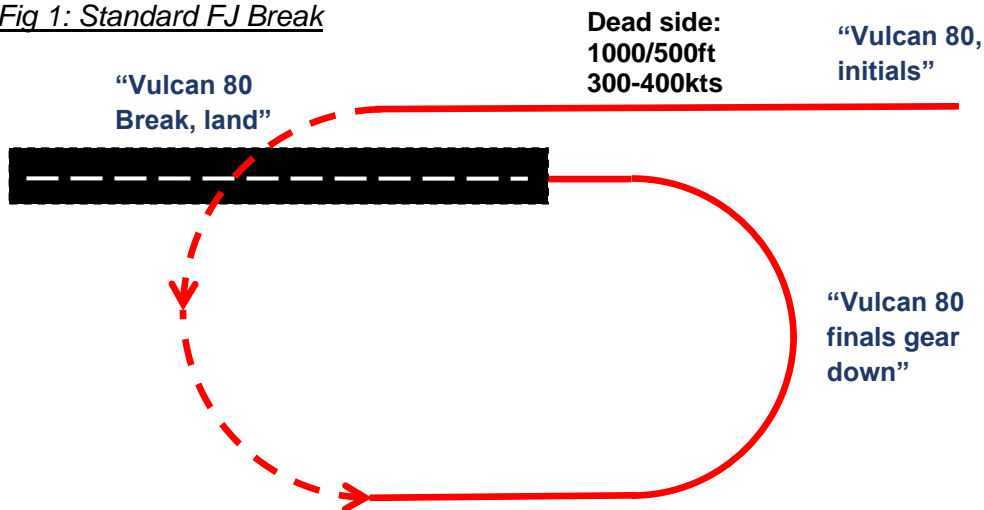
Hawk T1 Procedures

13. This section applies to recoveries for single Hawk T1 aircraft and formations of up to 4 aircraft. All heights QFE unless otherwise stated. Dashed lines show aircraft climbing, solid lines level or descending. Hawk T1 aircraft planning to depart the circuit pattern to initials or to low / high key should make this request to ATC, ideally passing their intentions downwind on the circuit prior. For example – ‘Vulcan 80, downwind touch and go, depart wide downwind to initials for a RAFAT Break Profile’.

Standard Fast Jet Breaks

14. Standard Fast Jet Breaks can be flown with other aircraft in the circuit. Hawk aircraft joining the circuit will visually deconflict with aircraft already established in the circuit. Formations of up to 4 aircraft will route via standard Waddington IP's and break from the dead side between 300-400kts. Breaks can be flown from either 1000ft or 500ft if a "low break" is requested and approved by ATC. 500ft breaks can either be flown level or climbing to 1000ft.

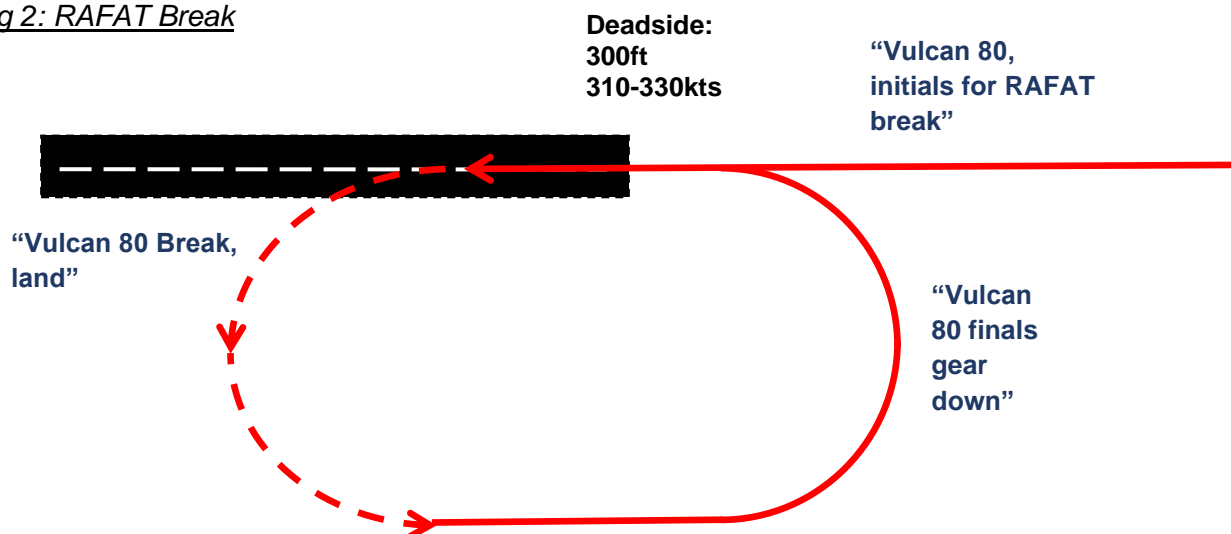
Fig 1: Standard FJ Break



RAFAT Break Profile

15. The RAFAT break profile can be flown with station based aircraft in the circuit. Aircraft will route via the IP before descending to 300ft/310-330kts on the deadside. The break will be flown from 300ft climbing to 700ft. Aircraft will use standard VRIAB RT.

Fig 2: RAFAT Break



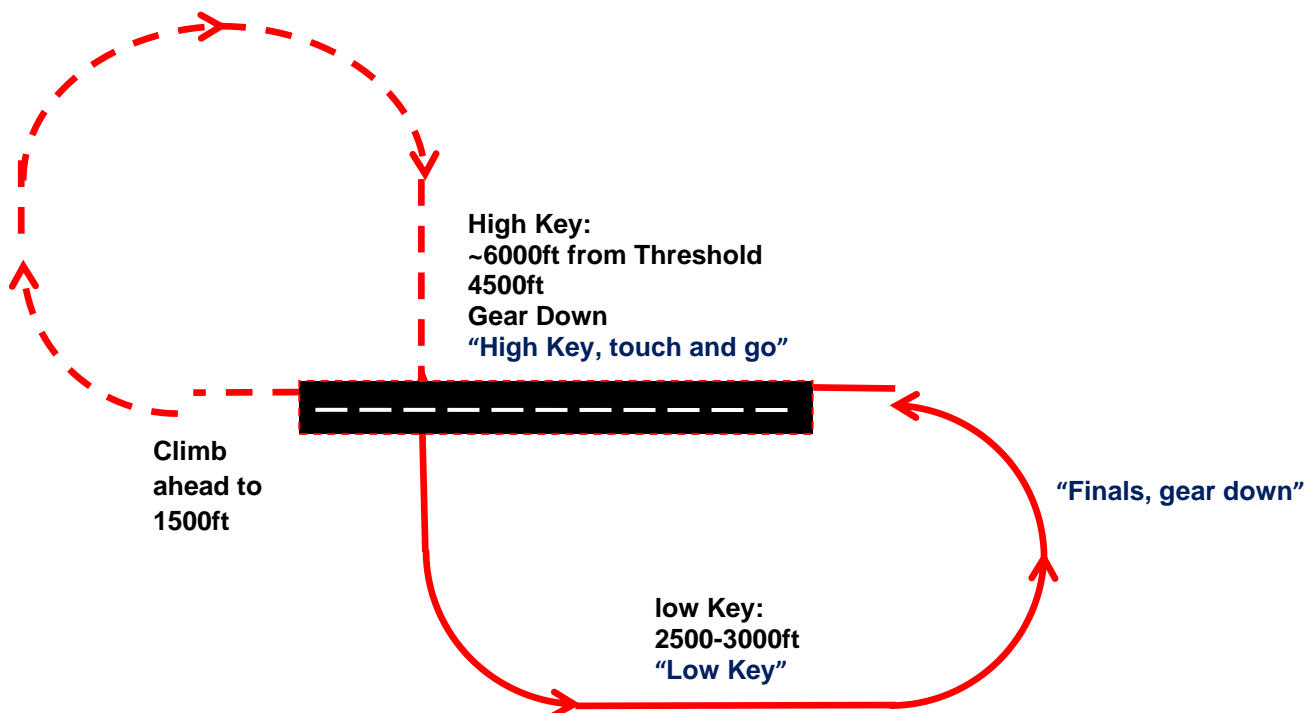
RAFAT Circuit Profile

16. RAFAT circuits can be flown with station based traffic in the circuit. Aircraft will request a RAFAT circuit upwind. RAFAT circuits are flown at 700' downwind using the same ground track as a normal fast jet circuit.

Visual Practise Forced Landing (PFL)

17. Visual PFLs can be flown with other aircraft in the circuit and are flown by single aircraft only. Positioning from the circuit (after a touch and go or low approach), aircraft will use a high rate of climb (20-25° nose up) extending ahead to 1500ft / 250kts before commencing a turn opposite to the circuit direction climbing to 4500ft. High key is 4500ft perpendicular to the runway, approximately 6000ft from the threshold in use. "High key" with intentions will be called before a continuous descending turn to low key commenced. Aircraft will not descend from high key without SA on other circuit traffic. "Low key" is 2500-3000ft in approximately the late downwind position, slightly wider than a normal circuit and is called for positional awareness. "Finals" will be called with gear as appropriate. Expect a steep approach and aircraft to touch down approximately 2-3000ft into the runway. PFLs are flown to low approach or touch and go only

Fig 3: PFL



Practise Engine Failure After Take Off (PEFATO)

18. PEFATOs are flown by single aircraft only. PEFATOs can be flown to the runway in use or reciprocal, both require a clear circuit and ATC approval. The PEFATO will be initiated from a minimum of 300kts from either a straight ahead or turning ground track. "Simulated engine failure positioning for runway 02/20" if the reciprocal or, "Simulated engine failure positioning for low key" to the runway in use will be called to initiate the procedure. A climbing turn (either direction) back towards the airfield will be flown with an apex of up to 3000ft. All PEFATOs will be to low approach only with a go around initiated by 300ft minimum. The "finals gear down call" may well come late to maximise gliding performance. Expect a steep approach. Following the go around, aircraft flying a PEFATO to the reciprocal runway will position to intercept the departure ground track for the in use runway unless a clearance to deviate from this ground track has been approved by ATC.

Fig 4: Reciprocal PEFATO



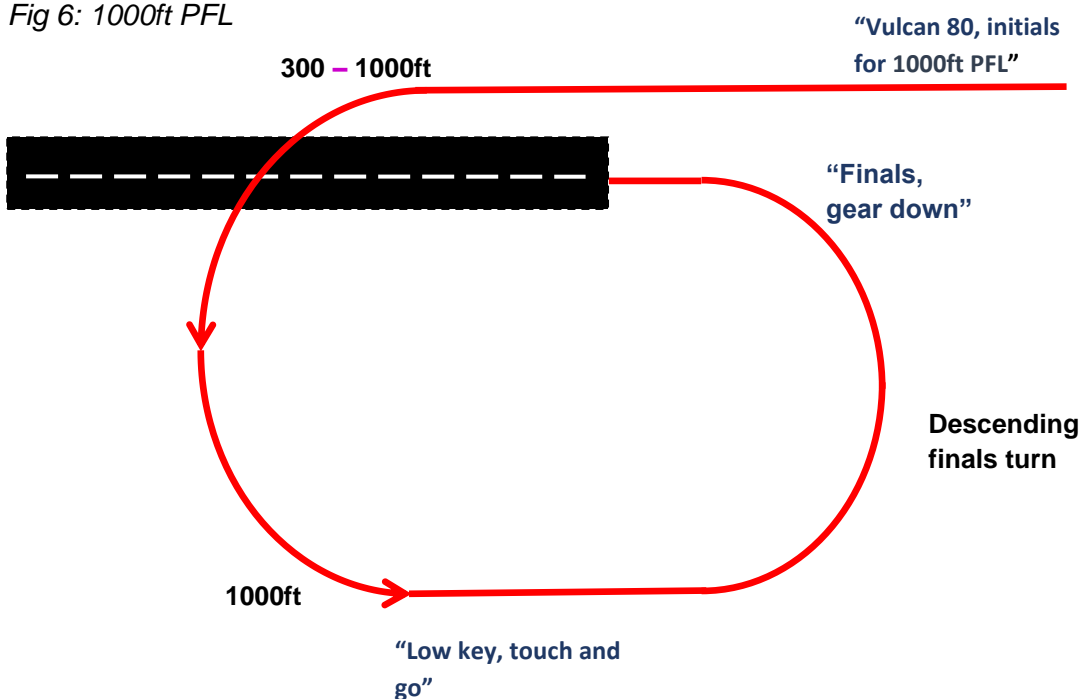
Fig 5: Low Key PEFATO



1000ft PFL

19. 1000' PFLs can be flown with station based traffic in the circuit. They are flown by single aircraft only. Aircraft will be positioned to run in through the IP at 1000ft and approximately 300kts, calling "initials for 1000ft PFL". The aircraft may descend running in from initials as 1000ft PFLs can be initiated at any height between 300ft and 1000ft, subject to ATC restrictions. Idle will be selected on the dead side, normally between the threshold in use and halfway down the runway and a climbing or level turn to the low key lateral position flown. Low key with intentions will be called but landing gear will remain up. The aircraft is likely to tip finals without gear to maximise glide performance. Gear selection and the call of "finals gear down" call may come as late as the aircraft rolling out in line with the runway. Aircraft will not proceed below 300ft unless gear is down and locked and with clearance from ATC.

Fig 6: 1000ft PFL



Flapless Straight in Approach

20. Flapless Straight in Approaches can be flown with other aircraft in the circuit and are flown by single aircraft only. Aircraft will position on the extended centreline of the runway in use at approximately 1000ft and 5nm. A visual straight in approach will be flown. "Long finals" with intentions will be called at 5nm and "short finals, gear down" at 2nm. Airspeed on the approach will be high, up to 170kts tapering to approximately 140kts at touch down. Visibility of the runway on light crosswind days will be restricted, especially from the rear seat. Practise flapless approaches will be flown to touch and go or low approach only.

Bolter Landings

21. Bolter landings can be flown with other aircraft in the circuit and are flown by single aircraft only during conversion to type training to give pilots experience of having to bolt from a landing with large numbers of aircraft ahead on the runway. ATC will be pre noted downwind with a “downwind for practise bolter landing” call. Aircraft will carry out a normal approach and touchdown before gently decelerating to around 70kts. Power will then be applied to complete a touch and go. The aircraft will remain configured for the subsequent circuit to aid brake cooling.

Red Arrow Procedures

22. This section applies to Red Arrow formations of 5 to 12 aircraft. The circuit should be clear for all Red Arrow formation recoveries. Red Arrow formations will request a formation clearance to land, normally prior to the break, and conduct internal gear checks on the formation UHF frequency.

Flat Break

23. A Flat Break is the standard Red Arrow formation recovery and can be flown with up to 12 aircraft. The Red Arrow formation will route via the IP before descending to 300ft/310-330kts on the centreline. A ‘Flat Break’ will be requested. The break will be flown from 300ft climbing to 700ft. All aircraft will break in the same direction. Aircraft will come to a stop on the runway and remain stationary until the last aircraft has landed safely and reduced to slow speed. The formation will then taxi clear or execute a Reverse. A Flat Break can be flown in 2 sections at approx. 0.5nm separation; sections will deconflict internally iaw RAFAT DD / Hawk SOPs. If an aircraft executes a go around they will fly a RAFAT Circuit in the same direction that the break was executed.

Left Right Break

24. A Left Right Break can be flown with up to 10 aircraft. The Red Arrow formation will route via the IP before descending to 300ft/310-330kts on the centreline. A ‘Left Right Break’ will be requested. The break will be flown from 300ft climbing to 700ft. Pairs of aircraft fly simultaneous breaks to the left and right, and land in sequence from opposite circuit directions. Aircraft will come to a stop on the runway and remain stationary until the last aircraft has landed safely and reduced to slow speed. The formation will then taxi clear or execute a Reverse. If an aircraft executes a go around they will fly a RAFAT Circuit and turn downwind in the same direction that they flew their break.

Spaghetti and Magnum Breaks

25. A Spaghetti or Magnum Break¹⁹ can be flown with up to 9 aircraft. A 'Spaghetti Break' or 'Magnum Break' will be requested. The break requires airspace up to 6000' above the airfield. The Red Arrow formation will route via the IP before descending to 300ft/360kts on the centreline. The Red Arrow formation will pull up into a loop at least halfway down the active runway before breaking simultaneously to pre-briefed angles and landing in sequence from opposite direction circuits. The minimum height for aircraft recovering from the loop is 500' MSD and the opposing circuits are flown at 1000' QFE. Aircraft will come to a stop on the runway and remain stationary until the last aircraft has landed safely and reduced to slow speed. The formation will then taxi clear or execute a Reverse. If an aircraft executes a go around they will fly a RAFAT Circuit and turn downwind in the same direction that they flew their break.

Reverse

26. The objective of a Reverse is to turn the Red Arrow formation around on the runway in a safe and expeditious manner. A 'back track' will be requested prior to the break or after landing. All aircraft will come to a complete stop on the runway prior to turning inwards simultaneously through two 90° turns to end up on the other side of the runway pointing in the opposite direction. The Red Arrow formation will then taxi clear.

Lincs & Notts Air Ambulance (LNAA)

27. In the event of an LNAA launch before reaching initials, RAFAT will be informed immediately and provided with a "not below" height restriction to enable the LNAA to safely depart at 500ft AGL. Inside of initials, ac executing a break will expeditiously climb to 1000ft or greater until deconfliction can be achieved.

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¹⁹ A Spaghetti and Magnum break are identical in execution except for the formation position flown on the run in prior to the break.

Order B212 – FLYING DISPLAYS, ROLE DEMOS AND FLYPASTS

References
A. RA 2335
B. 1Gp ASOs G2335

Annexes Nil

Content

1. **Guidance.** References A and B contain detailed guidance on the planning, approval and execution of flying displays, display flying, role demonstrations and flypasts. References A and B should be used as the primary reference documents.
2. **Flypasts.** In addition to the contents of References A and B, flypasts being conducted at WAD are to be approved in advance by the Aerodrome Operator. For the avoidance of doubt, RAF Waddington is classed as 'Rural' & NOT 'Urban / Built Up'²⁰.

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²⁰ Within 1Gp ASOs, advice on the definition of Urban Areas is listed in the UKLFH. Within the UKLFH, Lincoln City is listed as an Urban Area with the boundary of the Urban Area being depicted as 'Grey Fill' on the UKLFC (reference OC Low Flying Spt Centre - 25 Dec 17). As there is a clear gap between RAF Waddington & the Lincoln City boundary (UKLFC), & as Waddington Village + RAF Waddington have a population of less than 10,000; RAF Waddington is therefore classified as 'Rural' under normal circumstances.

Order	B213 – VISUAL RECOVERIES
References	A. CAP 413 - Radiotelephony Manual
Annexes	Nil
Content	

1. Visual recoveries may be carried out to either runway radar ATS will be controlled by Waddington Approach based at TATCC (Lincs), RAF Coningsby. Due to the diverse Aircraft types encountered, crews should anticipate that other Aircraft on visual recovery may be joining via Initials, the overhead, downwind, crosswind or straight-in. RAF Waddington regularly hosts helicopter detachments & refuelling moves. Helicopters may join via the East or West aerodrome boundaries. Specific orders on Helicopter Operations are at [Order B220](#).
2. Waddington Approach will confirm that the ATIS Code is current, or pass the relevant ATIS changes, & will either give the pilot the position of any RADAR traffic or confirm that there is none.
3. If a VFR Basic Service recovery conflicts with a RADAR recovery, the approach controller may ask the VFR Aircraft to “squawk ident” & stay on frequency until the pilot is visual with the RADAR traffic.

ROTARY VISUAL RECOVERIES

4. Visual recoveries & VFR departures are to route inbound /outbound either from the West via Swinderby, or East via Metherringham, maintaining not above 500ft QFE inside the aerodrome boundary.

RADAR TO - VISUAL RECOVERIES

5. Aircraft will be vectored towards the airfield & be given a descent to 1000ft QFE when safe to do so. On becoming visual with the airfield, the pilot is to carry out an appropriate visual join. If the pilot is not visual with the airfield by 4nm, ATC are to pass break off instructions & vector the Aircraft for a further approach.
6. The weather minima for RADAR to visual approaches are as follows:
 - a. Cloud base (SCT) \geq 1200ft agl.
 - b. Visibility \geq 5000m.

RADAR TO INITIAL

7. Aircraft may be vectored for a recovery via initials point (IP). The IP locations are as follows:
IP Runway 20:

- a. 4nm from the Aerodrome Reference Point (ARP) offset 0.5 nm to the dead side of the extended runway centreline.

IP Runway 02:

- a. 4nm from the ARP offset 1.0 nm to the dead side of the extended runway centreline.

RADAR STRAIGHT-IN

8. Multi engine, RAF transport or civilian Aircraft often conduct RADAR to straight in approaches. At the approval of the Tower controller, the Aircraft is vectored to intercept the extended centreline at a point where the pilot can see the Aerodrome & can position for a visual landing.

RADAR TO OVERHEAD

9. The Aircraft is vectored towards the overhead not below 3000ft QFE. When visual, the pilot is instructed to continue with RAF Waddington Tower.

- a. Shadow aircraft will approach the airfield at least 1000 ft above the normal circuit height and position the aircraft to cross the landing threshold towards the dead side. Once on the dead side, providing there is no conflicting traffic either going around or joining through initials, Shadow will call "Dead side descending" and fly a continuous curving descent on the dead side to cross the upwind threshold of the runway at right angles at 1000 ft to intercept the normal downwind leg. If there is conflicting circuit traffic, the descent will be modified, or the turn adjusted on the dead side to fit in behind aircraft that are already established in the circuit. The turn will then be continued onto the live side to intercept the normal downwind leg.
- b. Other aircraft may conduct overhead joins as appropriate for their aircraft type.

BREAK OFF

10. Any radar to visual Aircraft not visual with the Aerodrome by 4nm will be instructed to Break Off the approach. The Aircraft will be given a safe heading, climbed to a safe height in accordance with the TSL & the pilot's intentions confirmed.

JOINING THE VISUAL CIRCUIT

11. The Visual Circuit Joining Procedure is in place to enhance flight safety processes & simplifies matters for both controllers & aircrew. Aircrew are to pass intentions, the RWY & QFE/QNH in use on first contact with TWR:

"RAF Waddington Tower, C/S, request join, Information Code / RWY XX, QFE/QNH XXXX set."

12. If the TWR controller does not receive a RWY & QFE/QNH on the initial call, they will pass the information & request a read back. Any relevant change to airfield details will be stated by ATC.

LIGHTS OFF APPROACHES

13. All lights off approaches by station based or visiting Aircraft are to be requested via ATC.

WEEKEND OPERATIONS

14. The Waddington Flying School (WFS) operate when ATC is closed, including during the evening & weekends. Landing & taking off for the WFS is conducted between the RHAGs with the traffic lights permanently on green. Drivers may still transit the Airfield via the MT Route & should keep a good lookout for Aircraft both on the runway & in the approach lanes. Drivers are to give way if it appears that the Aircraft is not conforming with the laid down rules. If the Aircraft appears not to be conforming with the agreed regulations, ATC & the DOC should be informed at the earliest opportunity.

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Order B214 – INSTRUMENT RECOVERIES

References A. MAA RA3206
B. CAP774
C. MMATM

Annexes Nil

Content

RADAR TRAINING CIRCUIT

1. All RADAR approaches to RAF Waddington are directed to finals. QFE is the recognised pressure setting for all approaches except RNP; however, QNH approaches can be accepted with prior notice & at the discretion of the Supervisor or ATCO I/C. Arrival & approach procedures are published in FLIPs, MIDs & TAPs.

- a. **RWY 20.** Left hand pattern at 2500ft QFE (2800ft QNH). RADAR patterns may be lowered by the Director to 2000ft QFE (2300ft QNH) for expedition & sequencing.
- b. **RWY 02RH.** Right hand pattern at 2500ft QFE (2800ft QNH). RADAR patterns may be lowered by the Director to 2000ft QFE (2300ft QNH) for expedition & sequencing.

RADAR RECOVERIES

2. **Minimum Visibility for Instrument Approaches.** The minimum visibility & approach minima for instrument approaches are published for each type of approach & Aircraft category in the relevant Terminal Approach Procedure Chart (TAP).

3. SRA Runway 02 incorporates a stepfix at 3nm. **Do not** descend below **730' QNH** (500' QFE) until cleared by ATC. A busy public road crosses the Runway 20 undershoot, pilots are to be aware of the possibility of high sided vehicles not complying with traffic lights or a traffic light failure. There is a 6ft high perimeter fence in the Runway 20 undershoot.

ILS RWY 20

4. RAF Waddington offers an ILS approach to RWY 20 only.

TAC ILS

5. As published in TAP Charts.

RPFL

6. As per MMATM (Manual of Military Air Traffic Management).

SHORT PATTERN CIRCUIT (SPC)

7. SPCs will normally be flown at 1500ft RAF Waddington QFE (1800ft QNH), traffic conditions permitting. During practices, the downwind leg will normally be flown at 1500ft QFE (1800ft QNH), until 6nm before turning inbound. The change to the Talkdown frequency will, when possible, be initiated by the Director on the downwind leg. Practice SPC may be denied dependent on controller workload & traffic intensity.

APPLICATION OF RADAR SERVICES

8. Pilots requiring a RADAR service will be placed under a Traffic Service (TS), unless the pilot requests an upgrade to a Deconfliction Service (DS).

9. If a pilot is unable to accept a TS as stipulated, they may request a DS. However, standard separation may not be achieved in areas of high traffic density & a re-route &/ or delay may be necessary in order to achieve the deconfliction minima.

REDUCTION OF RADAR SERVICE

10. In accordance with CAP 774, Aircraft will not knowingly be vectored towards a RADAR contact. Action & advice will be given appropriate to the service being provided. Under DS, aircrew will be notified if it is not possible to maintain standard separation between a known persistent RADAR contact. Crews are advised to maintain an increased level of lookout in these areas.

LANDING CLEARANCES

11. **Full Stop.** Aircraft larger than a Shadow may only be cleared to land when the Rwy is clear. Other Aircraft may be cleared to land behind another Aircraft landing or touch & go providing that the one ahead is of similar or faster type, has touched down & the horizontal separation is 3500ft or more.

12. **Touch & Go.** Aircraft larger than a Shadow may only be cleared to touch & go when the Rwy is clear. Other Aircraft may be cleared to touch & go behind another Aircraft touch & go providing that the Aircraft ahead is of similar or faster type, has touched down & has commenced the acceleration stage of the touch & go before the clearance is issued.

15. **Low Approach.** Aircraft may be cleared to low approach when the Rwy is occupied by another Aircraft providing that the one on is remaining on the Rwy & the pilot carrying out a low approach is to be instructed '... not below 200ft QFE (500ft QNH) cleared to low approach only, one on'.

16. **Pilots' Actions if Not Visual.** If not visual with the aerodrome, the pilot must respond accordingly to the Talkdown controller, the pilot will be instructed to either execute the MAP or fly as directed.

17. **Clearances When Broken Off.** Aircraft will be instructed to "Break off the (instrument) approach", no later than 2nm, when there is no possibility of the approach being completed. Aircraft will then be instructed to fly through or join dead-side, execute the MAP, or fly as directed by ATC depending on whether the pilot is visual with the aerodrome. Aircraft commanders are to comply with ATC break-off instructions.

MISSED APPROACH PROCEDURE

18. Climb on RWY track to 1740ft QNH/1500ft QFE, then turn onto 045° climbing to 3240ft QNH/3000ft QFE. Free call RAF Waddington Approach 345.07mhz.

COMMUNICATIONS FAILURE PROCEDURE

19. If unable to continue approach, turn towards the Aerodrome, fly not below 3000ft QFE (3300ft QNH), try to regain contact on any RAF Waddington frequency.

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Order	B215 - EMERGENCY PROCEDURES
References	A. MAA RA 3312 B. 20230802-SAOC CBY Emergency VFR Diversion WAD-O
Annexes	Nil
Content	

OVERDUE ACTION

1. The Ground Controller/ Approach Controller (as appropriate) is to notify the ATC Supervisor in the event of an Aircraft failing to make R/T contact with base at the end of its notified sortie duration, or by the ETA notified to ATC movements, whichever is later. The Supervisor is to inform the DOC & take appropriate action to trace the missing Aircraft. If the Aircraft cannot be located, then full overdue action is to be taken without delay.
2. In order to avoid unnecessary tracing action being taken, Aircraft commanders are to ensure that, whenever possible:
 - a. They advise ATC of their operating frequency.
 - b. They make every effort to inform ATC, either directly or via another agency, whenever it appears that their sorties may be extended beyond their original ETA.

SSR EMERGENCY SQUAWK

3. In the event of an unintentional "Emergency Squawk" when airborne, pilots are to call the relevant ATC Authority & announce their error. This is to prevent any unnecessary SAR action being taken.

TOTAL ELECTRICS FAILURE (TEF) AIRCRAFT PROCEDURES

4. The standard procedure at RAF Waddington for TEF Aircraft is as follows:
5. **After Gear-Pyro Sequence.** When Aircraft with total electrics failure requires an undercarriage status check prior to landing, the following procedure will be as follows.
 - a. A port to starboard sequence for indicating undercarriage status.
 - b. Green pyrotechnics to indicate undercarriage down, red to indicate position other than locked down. (See MMATM for procedure for Aircraft with outriggers).
 - c. Hook fitted Aircraft will receive a green (fourth pyrotechnic) for the hook only if it is down.
6. Following the gear-configuration sequence of pyrotechnics (given downwind), the Tower will transmit 'Total Electrics Failure Aircraft, I see you turning finals, you are cleared to land'. At this

point the TRC should fire a green pyrotechnic to inform the emergency Aircraft that the Rwy is available at the Aircraft's discretion.

Note: The only time another red should be fired is if the Rwy becomes unavailable for any other reason.

NO COMPASS NO GYRO (NCNG)

7. Any practice NCNG requests are subject to controller workload & airspace restrictions at the time of request. During an actual emergency, phraseology will be standard in accordance with CAP 413 Radiotelephony Manual.

SPEECHLESS

8. Any practice speechless requests are subject to controller workload & airspace restrictions at the time of request.

CBY TYPHOON EMERGENCY VFR DIVERSION PROCEDURE

9. For RAF Coningsby Typhoon, a procedure exists for when there is requirement for an emergency VFR diversion to Waddington with minimum time to land. When an ac calls for emergency diversion to WAD, CON ATC will acknowledge and instruct the pilot to squawk Emergency and free call Waddington Approach (or WAD ADC iaw the Wad Radar Sup's direction and available time for ATCO liaison). Ac are to depart upwind, climb to 1000ft CON QFE, when level turn left/ right heading 290°, at a maximum speed of 230kts IAS, and free call Waddington as directed by CON ATC. Typhoon ac are to join via initial for a run and break and can request Wad Tower to do so at 800' Wad QFE. Ac can also request a visual straight-in approach if required.

Aircrew may elect to practice this procedure at any time, retaining their routine squawk. In these circumstances, ac are to request the procedure on their downwind call, or when passing their intentions to the radar controller when recovering via GCA. If the procedure cannot be facilitated in the above format, ATC may ask the ac to delay the practice diversion, offer slightly different transit details (i.e. such as 1500ft QFE), or decline the request entirely.

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Order B216 – AERODROME RESCUE & FIRE FIGHTING (ARFF) CATEGORIES

References A. DSA DFSR 02
B. BM Orders 401

Annexes A. RAF Waddington Crash Gate Map

Content

1. Aerodrome categories. RAF Waddington is designated an ICAO 'Crash Category Seven' (Cat 7/ ICAO 7+RAFAT) airfield for Stn-based aircraft. This is rested to ICAO Cat 5 for agreed periods of the day and will revert to domestic cover during the periods when flying has ceased with ability to generate ICAO 3 at 1 hour readiness. Stn Operations will automatically arrange for an appropriate crash category uplift to be in place 60 mins prior to the ETD or ETA if required. Moving to ICAO Cat 8 is available with prior notice & justification.
2. Only declared ARFF Categories are to be used. law Ref A, categories do not vary with number of POB.
3. Engine or rotors running refuels are not permitted under any Aerodrome Cat at RAF Waddington.

MINIMUM ARFF CATEGORIES FOR RAF WADDINGTON BASED AIRCRAFT

4. The following minimum ARFF Aerodrome Categories are required iaw Ref A:
 - a. **Rivet Joint** – ICAO Cat 7
 - b. **Hawk T1** – ICAO Cat 3
 - c. **Shadow** – ICAO Cat 3
 - d. **RAFAT Dual-seat Formation** Take Offs/Landings – ICAO Cat 7+RAFAT²¹
5. There is no ICAO requirement for any engine ground run & the duty crew commander will delegate the appropriate FFV when Fire Cover is requested from Eng Ops.
6. When holding diversions for fast jets, RAF Waddington will routinely be at ICAO Cat 5 during the flying window.

²¹ Due to the findings of [20230124-SQEP Panel RAFAT FIRE TRA](#) it has been accepted that when ICAO 7 + RAFAT cannot be met, ICAO 7 is sufficient to safely deal with a revised Hawk T1 Worst Credible Scenario without an increase in risk to life. The reductions in ARFF cover procedure will still be required to take place to capture this event.

FLIGHTS TO AIRFIELDS BELOW THE TYPE SPECIFIC ARFF AERODROME CATEGORY FOR AIRCRAFT OPERATIONS

7. Circumstances may require that flying is conducted to/from aerodromes with reduced levels of ARFF services. HoE/ADHs may approve such activity following a risk assessment informed by advice from the ARFF provider.

- a. The risk assessment is conducted using ARFF Reduction of Cover – Hazard Assessment which is to be archived once completed as the auditable record of the HoE/ADH's decision. Aircraft Operating Authority are responsible for detailing in their Orders who can make risk-based decisions & to what level of reduced ARFF category will require elevation to the appropriate risk owner.
- b. All completed risk assessments are to be retained.

VISITING AIRCRAFT

8. A non-MoD visiting Aircraft controlling authority is responsible for liaising with Waddington Ops to determine the crash category for the specific movement. It is their responsibility to judge the operational necessity of the flight against the risk involved of operating at RAF Waddington. However, visiting Aircraft are not to be accepted without the authority of the DOC & agreement is required by the AO if the available Aerodrome Category is less than the Aircraft's requirement.

COMMAND OF ARFF COMBINE

9. The DOC will oversee the coordination & communication between each of the airfields key enablers regarding ARFF management.

10. The ATC Supervisor/ATCO IC retains tactical management of crash crews to enable timely deployment in response to both airfield & domestics incidents. All deployments that reduce ARFF Cat will be passed to Stn Ops to inform the AO.

11. Once the ARFF is deployed the COMMAND will be retained by the fire services CoC. This includes the crash ambulance, C/S 'MEDIC'.

TESTING OF COMMUNICATIONS

12. ARFF rescue communications are to be tested by the Sup/ATCO IC. The ADC is to ascertain the serviceability of the following at the start of their watch:

- a. The ARFF vehicles in order to ascertain the current ARFF cat.
- b. The MRE in the VCR.
- c. ARFF rescue & ambulance MRE radios (each vehicle is to call for a radio check).
- d. The ARFF telephone.

- e. The Stn ARFF alarm & broadcast system.
- f. Emergency telephone Ext 333.

READINESS OF ARFF VEHICLES

13. For the ARFF organization to be effective, all ARFF vehicles & the ambulance are to be immediately available to respond to an emergency state being declared. Therefore, all vehicles & their crews are to be placed under the orders of the Sup/ATCO IC. When activated on a 'crash state' call, all ARFF vehicles, including 'MEDIC' are placed under the command of the Crew Commander.

14. The prior permission of Sup/ATCO IC is to be obtained before any element of the ARFF services leaves its normal location, unless undertaking routine business or responding to an incident. Permission should normally be obtained by telephone. On departure from the Fire Section crews are to establish & maintain radio contact with ATC throughout their journey; the vehicles are not to be left unattended & the crews are to respond to **all** emergency state broadcasts.

CONTROL OF ARFF VEHICLES

15. Radio control of all ARFF vehicles, rescue, fire & ambulance, is to be, in normal circumstances, by the GC. They are to ensure that the VCR ASOS refers all requests for movements of such vehicles accordingly. Additionally, the GC is to maintain a record of the location of such vehicles on the ground movements' board.

NON-AVIATION FIRE VEHICLE DEPLOYMENT

16. The withdrawal of the Domestic Fire vehicle from RAF Waddington has meant that the ARFF line must respond to technical site incidents on the Stn. In this event, the ARFF Category may reduce. The deployment of the ARFF vehicles does not automatically reduce the ARFF Category. The ARFF Category should be clarified with the 'Crew Commander'. However, if the fire vehicles deploy to a confirmed fire or risk to life incident, ATC must inform all Aircraft of this & suspend imminent flying. The Sup/ATCO IC is then to consult with the DOC & a decision to hold or divert Aircraft can then be made.

ARMED AIRCRAFT PARKING

17. RAF Waddington cannot accept Aircraft fitted with forward firing weapons. Flare safety exclusion zones are to be used for Aircraft loaded with countermeasure flares.

ARFF RESPONSE TO DANGEROUS AIR CARGO (DAC)

18. The loading/unloading of DAC & parking of armed Aircraft is to take place iaw [AESO 2-1-1-01-37](#). The designated parking area for the loading/unloading of DAC is Bay 19A. The ATC Sup/ATCO IC will initiate an 'Emergency State 3' for the arrival & departure of Aircraft carrying UN Class 1 DAC. During unloading / loading of UN Class 1.1 DAC, a staffed ARFF vehicle shall be

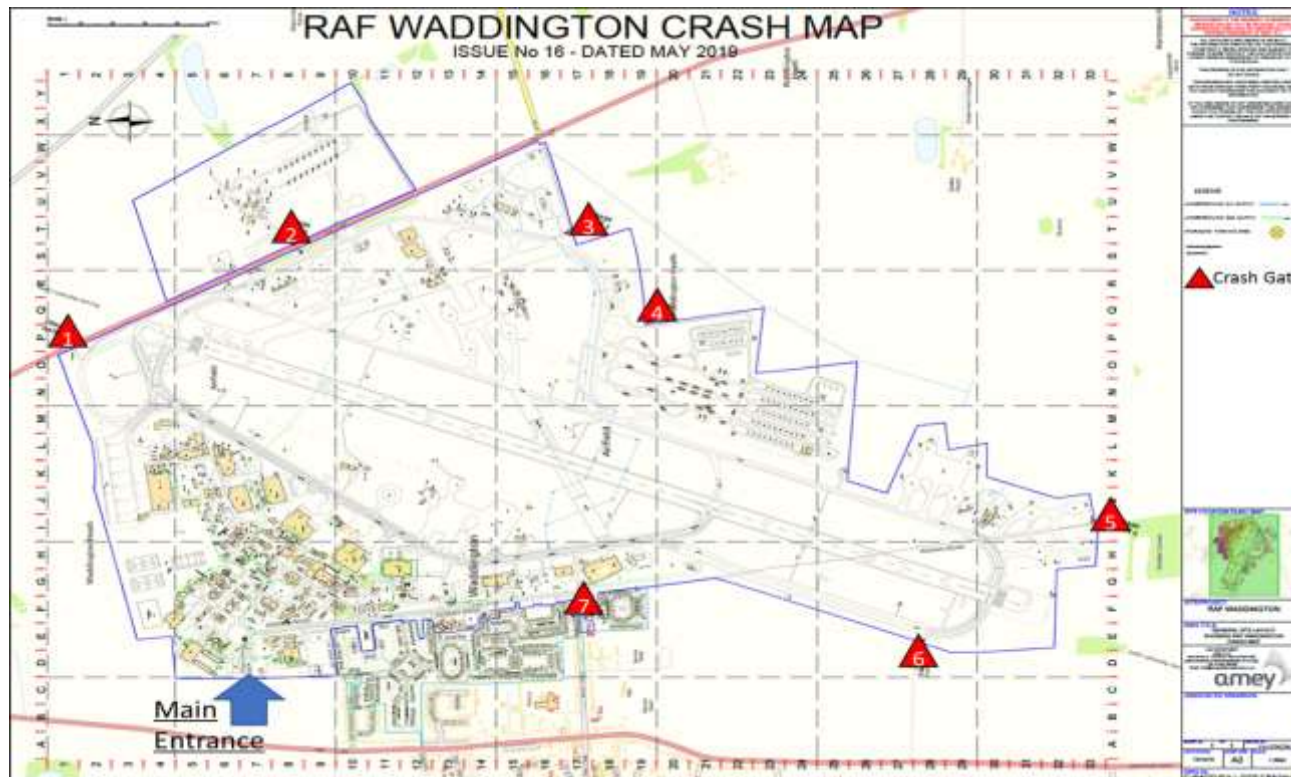
located near the operation for optimum response. Flare safety exclusion zones are to be used for Aircraft loaded with countermeasure flares.

19. The parking area for the loading/unloading of DG is allocated by Eng Ops Ex 7544. The license to handle UN Class 1 is granted for Parking Bay 19A.

20. If a live armed Aircraft (applies only to HD 1.1) intends to park at RAF Waddington, approval from the Stn Cdr must be obtained, on the advice of the Explosive Safety Representative. This is a local restriction not a licensing restriction. Flare safety exclusion zones are to be used for Aircraft loaded with countermeasure flares. The HD 1.1 Qty can be increased to 8125Kg provided:

- a. Bay 18,19, 20, 21 & the VAHS carpark are vacated.
- b. If the above are not vacated the limit reduces to 101Kg.

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Annex A to AOB Order B216**File reference 20230809-RAF_Waddington_AOB-O****RAF Waddington Crash Gate Map**

RAF Waddington AOB – Annex NN to the DAM

Order	B217 – FLYING RESTRICTIONS
References	A. RA 3278 – Snow & Ice Operations
Annexes	Nil
Content	

ICING CONDITIONS

1. Regulations for Snow & Ice clearance operations are detailed within RA 3278 – Snow & Ice Operations.
2. RAF Waddington [BLACKTOP](#) season runs from 1 Nov to 30 Apr each year. The Season can be brought forward or extended should it be necessary due to the prevailing weather conditions. Whenever moderate or severe icing conditions exist or are forecast in the local area during the flying period, the following orders are to be complied with.

FORECAST

3. The Met Forecaster is to include moderate or severe icing cloud as well as the altitude band in which airframe & / or engine icing is likely to be experienced.

IN-FLIGHT REPORTING

4. Whenever Aircraft commanders experience airframe & / or engine icing during departure or recovery, they are to report the details as follows:
 - a. Type of icing & severity
 - b. Height band where icing occurred
 - c. Position of Aircraft

ACTION BY DOC

5. On receiving an airborne icing report, the DOC is to:
 - a. Through the ATC Sup, inform all Aircraft in the local area.
 - b. Consider diverting Aircraft.
 - c. Instruct ATC to avoid holding Aircraft in icing bands & adopt icing let-down procedures where possible.
 - d. Consider prohibiting departures.
 - e. Inform all Sqns, through the relevant DA.

ICING LET-DOWN PROCEDURES

6. When icing is forecast or reported below 3000ft agl & Aircraft commanders are unable to avoid icing conditions, the following icing let down procedures are available:

- a. **Cloud base \geq 1000ft agl/ Visibility \geq 5km.** Pilots may elect to fly a RADAR-to-visual approach.
- b. **Cloud base $<$ 1000ft agl/ Visibility $<$ 5km.** Aircraft are to be held above the icing band until cleared to descend on a published approach. Level flight in the icing band is to be kept to a minimum.
- c. In all instances, the Aircraft Captain has the right to elect to fly whichever approach they deem most suitable for the circumstances encountered. The option to divert to a suitable alternate airfield is also available.

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Order B218 – AUTOMATED TRAFFIC INFORMATION SYSTEM

References A. CAP 413 – Radiotelephony Manual

Annexes Nil

Content

1. RAF Waddington ATIS will broadcast routine & special changes to airfield information during airfield opening hours on frequency 291.675MHz.

2. RAF Waddington will publish two different ATIS formats dependant on the weather state. When the colour state is white/blue a short format ATIS will be broadcast.

- a. ATIS Information Code
- b. Time
- c. RWY
- d. Surface Wind
- e. Colour State
- f. Outside Air Temp
- g. Dew point
- h. QFE (hPa & INS) / QNH (hPa & INS)
- i. Aids
- j. RHAGS
- k. Aerodrome Category
- l. End of ATIS Information Code

3. When the colour state is Green or worse a long format ATIS will be broadcast.

- a. ATIS Information Code
- b. Time
- c. RWY
- d. Surface Wind
- e. Colour State

- f. Visibility
- g. Present Weather
- h. Current Cloud
- i. Outside Air Temp
- j. Dew Point
- k. QFE (hPa & INS) / QNH (hPa & INS)
- l. Aids
- m. RHAGS
- n. Aerodrome Category
- o. End of ATIS Information Code

4. When the airfield closes the broadcast will be the following:

- a. 'the next transmission on ATIS will be at ****Z (plus the following days date'
- b. Weather specials (QFE & QNH only)
- c. Serviceability (U/S, S & Maintenance)
- d. Colour code
- e. Runway change
- f. Aircraft diversion change
- g. Fuel on the ground
- h. Crash category
- i. RWY wet condition
- j. Air Experience Flying

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Order	B219 – HELICOPTER OPERATIONS – GENERAL
References	Nil
Annexes	Nil

Content

1. To maximise safety when integrating helicopters with fixed wing vis CCT traffic, rotary VFR departures & recoveries will be allocated the following gates:

- a. East Gate – Via Metherringham.
- b. West Gate – Via Swinderby.
- c. Helicopters to fly not above 500ft QFE inside the MATZ.

2. Once in the vis circuit, light helicopters (Gazelle, Leonardo, Juno, Jupiter, Wildcat) may depart or land direct on dispersal. Larger helicopters with significant ground wash (Chinook, Merlin, Puma, Apache) are to make their final approach to the Rwy in use & ground taxi to dispersal. In all cases, helicopters must not take off from Alpha or Delta taxiway.

Note: Rotary Aircraft are not permitted to hover taxi over grass at RAF Waddington.

3. All IFR departures must be from the Rwy due to obstacle clearance.

4. The restrictions above do not apply to the Lincolnshire & Nottinghamshire Air Ambulance on an emergency callout.

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Order	B220 – HELICOPTER OPERATIONS – FIELD OPERATIONS
References	A. SAoC 2019/06 - RW Field Operations at RAF Waddington
Annexes	A. RW Crew Awareness Information

Content

- Field Operations (Field Ops).** Rotary Wing (RW) Field Ops are considered to be in place when airfield services (ATC, Fire (ICAO 5)) are unavailable & authorisation has been granted as at para 6. Approval for RW Field Ops will not routinely be granted apart for Priority 1 tasks that cannot be achieved by alternate means. Other RW Field Ops requests must be robustly justified against a definite Service need before approval will be considered. FW Field Ops (CONPLAN 10) are **not** to take place with RW Field Ops simultaneously.
- High priority RW tasks.** Joint Helicopter Command has a number of RW assets, some of which are kept on varying readiness states. There may be occasions when there is a requirement for RAF Waddington to accept short notice, high-priority RW aircraft movements outside of the ATC opening hours.
- Recce.** Aircraft cdrs are responsible for ensuring that the airfield has been appropriately recce'd prior to landing / taxiing. Fire crews will conduct a FOD sweep prior to arrival.
- Meteorological conditions.** RW Field Ops will only be authorised in VMC conditions. If the meteorological conditions are forecast to be below GREEN,²² both the Waddington AO / nominated deputy & the requesting unit's Duty Auth must be informed by the DOC. RW Field Ops are not permitted during BLACKTOP operations.
- ARFF cover.** The ARFF cover must be confirmed as per JSP 426 Vol 3 Leaflet 2²³. However, authorisation can be requested from the AO for operating below the ARFF cover in extremis & in consultation with the aircraft operators DDH. The appropriate ARFF must be maintained in the event of pax being on board.
- Authorisation for Field Ops.** The AO or in his / her absence, the OSW Duty Exec may authorise, arrival or departure of RW aircraft to / from RAF Waddington under 'RW Field Ops'. The AO / nominated deputy is to ensure the aircraft operator's DDH is content with their aircraft arriving / departing at RAF Waddington under Field Ops via e-mail. Decisions to authorise 'RW Field Ops' are to be e-mailed to the Duty Ops Controller (DOC) in Stn Ops.
- Actions on approval of Field Ops.** Full detail of the DOC actions are captured in [CONPLAN 11](#). In outline, once approved, the following actions are to take place:

²² Surface visibility of 3.7km or 2nm, base of lowest cloud layer 3/8 or more, 700ft AGL.

²³ Chinook ARFF 5, Merlin ARFF 4, Puma ARFF3, Dauphin ARFF 3, Wildcat ARFF 3.

- a. The aircraft cdr or requesting sqn ops is to book any landing & take-off through the DOC. The DOC must ensure the crew awareness points at Annex 1 to this order are passed to operating crews as part of the booking process.
- b. The DOC is to inform the Lincolnshire & Nottinghamshire Air Ambulance (LNAA) on 01522 548469, RAF Waddington Flying School (WFS) on 01522 548469, the Model Flying Club & any other airfield user likely to be active. The WFS & Model Flying Club are to be informed that their activities must cease during Field Ops.
- c. The DOC is to liaise with the Fire Section & Duty Medic²⁴ to ensure they are on standby 30 minutes before the aircraft movement & to confirm they are at the appropriate ARFF cover (informing RW DDH if ARFF cover is not available). The Duty Medic (if available) is to liaise with MT to ensure a driver is available.
- d. The Fire Section are to confirm airfield lighting requirements with the DOC & proceed to ATC & switch on the airfield lighting at least 30 minutes before the arrival / departure of the aircraft if required. This is to aid the aircraft crew & inform airfield users that the airfield is active.
- e. Medic 1 (if available) is to re-locate to the Fire Section & the Crash Combine is to hold normal readiness until the aircraft has departed or arrived.
- f. RW crews are to be made aware that the LNAA operate outside of ATC opening hours & are to make routine blind calls on Waddington TOWER, 121x3MHz.
- g. Crews are to establish two-way comms with Waddington Ops on 369x4MHz when 10 minutes from the airfield, on landing, on shut down / start & on departure. The DOC is to pass the parking bay to the aircraft as part of the 10-minute inbound radio call. The DOC is to inform the Crash Combine when the aircraft has shut down or departed.
- h. In the event of lost / unworkable comms, aircraft must exercise extreme caution when approaching the airfield. This is due to the air activity that is conducted outside of ATC opening hours.
- i. All approaches / departures must be made to the runway. The aircraft must ground taxi, where able, to / from the designated parking area.
- j. Aircraft are to ground taxi onto the parking bay as directed by the DOC.
- k. The DOC & Sqn Ops are to flight follow & conduct overdue action if required.

²⁴ The Duty Medic is only available during ATC operating hours unless prior notice is provided.

I. The DOC will stand down the Crash Combine 10 minutes after the aircraft has departed.

8. **Changes.** Any changes to timings / cancellations, are to be passed to the DOC for onward dissemination to the Fire Section, Med Centre & other airfield users.

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Annex A to AOB Order B220**File reference 20230809-RAF_Waddington_AOB-O****RW CREW AWARENESS INFORMATION**

The following points are to be passed, by the DOC, to the operating crews as part of the booking process:

1. Crews are to make blind routine ATC calls on 121.3MHz & establish 2-way comms with Vulcan Ops on 369.4MHz 10 mins from the airfield / on departure.
2. When RAF Waddington ATC is closed, crews are to **operate with extreme caution within the MATZ** in case of aircraft operating not under control of RAF Waddington ATC. LNAA (Air Ambulance) operate from 'Kookaburra' (on the other side of the A15, adjacent to RAF Waddington) without ATC & make blind calls on 121.3MHz. For reference the LNAA landline number is 01522 548469.
3. Crews are to satisfy their own recce requirements, land on the runway & ground taxi to designated parking bay as passed by Vulcan Ops.
4. Airfield lighting ON / OFF? Be aware that this cannot be changed within 30 mins of scheduled arrival time due to the ATC tower being unmanned.
5. RAF Waddington Fire Section will attempt to turn airfield lighting for rwy 20 on (can be seen from both rwy directions) prior to aircraft arrival if requested at booking. Once aircraft is parked at location fire vehicles will be in attendance.

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Order B221 – OPERATIONS BY RAF WADDINGTON FLYING SCHOOL

References Nil

Annexes Nil

Content

1. RAF Waddington has an established Flying School situated on the eastern side of the airfield, operating from building 233. Waddington Flying School (WFS)²⁵ conducts training for the Private Pilot's License (PPL) & associated ratings. Flight training is conducted in various single engine light Aircraft by WFS instructors & students operating 7 days a week. WFS operates a variety of civilian registered Aircraft, primarily under UK CAA Regulations but, due to its location & service pedigree, also adheres to MAA & MoD Regulations where they are relevant & more restrictive.

PERMITTED OPERATING HOURS

2. WFS is permitted to operate from RAF Waddington both during normal airfield operating hours when Air Traffic Control is open &, additionally, at weekends/bank-holidays & after normal station flying times when Air Traffic Control is closed. WFS Aircraft will normally route in & out of RAF Waddington VFR west or eastbound. If ATC is closed pilots will make pre-emptive blind broadcasts of their intentions on VHF frequency 121.3 MHz, prefixed with 'RAF Waddington traffic'.

DURING NORMAL AIRFIELD OPERATING HOURS

3. All Aircraft movements are to be notified at the OPG and then requested & agreed with RAF Waddington Stn Ops (Ext 6731). Once agreed, RAF Waddington Ops will then notify ATC via telephone call. Full RT procedures are to be used on VHF TWR frequency. Instructions from RAF Waddington ATC are mandatory. WFS pilots shall be familiar with the RAF Waddington AOB & shall follow all procedures therein, including flying military style circuits.

START-UP & TAXI PROCEDURES WHEN ATC IS OPEN

4. Pilots are to make an initial call on RAF Waddington Tower 121.3 MHz to request start-up & taxi clearance. Aircraft are to taxi iaw the direction of flow for the runway in use. Expect taxi instructions as follows:

- a. ATC Open – follow ATC instructions but expect taxi to Foxtrot via the Delta taxiway. All landings are between the RHAG lines and all exits from the main runway will be at Foxtrot. If the approach cable is de-rigged, and subject to ATC permission, pilots may request a departure from the D1 entry point for Rwy 20.

²⁵ Waddington Flying Club was re-branded as the 'Waddington Flying School' in Spring 2020. However, some trading accounts & CAA licences will continue to refer to the Waddington Flying Club for the foreseeable future.

OUTSIDE NORMAL AIRFIELD OPERATING HOURS

5. Landing & taking off for WFS is conducted between the RHAGs with the traffic lights permanently on green. Drivers may still transit the Airfield via the MT Route & should keep a good lookout for Aircraft both on the runway & in the approach lanes. Drivers are to give way if it appears that the Aircraft is not conforming with the laid down rules. If the Aircraft appears not to be conforming with the agreed regulations, ATC & the Duty Operations Controller (DOC) should be informed at the earliest opportunity. It is the responsibility of the DOC to inform the Fire section when a WFS Aircraft is flying outside of normal airfield operating hours, i.e. weekends.
6. When ATC is closed, control of the airfield is transferred to Stn Ops; the pilot must consult with the DOC to confirm runway availability & to deconflict timings of airfield use between the WFS, Airfield Sweeper, Airfield Electrician, & any other airfield maintenance activities.
7. The DOC is to adhere to a single occupancy principle, which forbids the dual use (air & ground activity) of the Rwy. The DOC is only able to deliver procedural co-ordination.

START UP & TAXI PROCEDURES WHEN ATC IS CLOSED

8. There may be occasions where WAD RADAR is staffed, despite the airfield being closed. Therefore, pilots should follow standard operating and RT procedures at all times to alert other users of their activity. Pilots are to make blind calls on RAF Waddington Tower 121.3 MHz & the pilot should remain on this frequency until clear of the visual circuit or shut-down. Taxi instructions are as follows:
 - a. ATC Closed – All entry and exit to the main runway are to be via the Foxtrot Entry point – taxi via Delta to the Foxtrot hold. There is sufficient runway available to depart from the entry point. All operations are between the RHAG lines and all exits from the main runway will be at Foxtrot. Alpha Taxiway and Delta taxiway south of Foxtrot are not to be used unless authorised by the DOC.
 - b. Standard RT phraseology should be maintained at all times. Blind calls are to be made prior to each critical stage (taxi, entering runway, circuits, landing, etc.). This ensures that all units listening on the frequency are aware of other Aircraft's intentions. If ATC respond, e.g. due to another non-light Aircraft airfield move, then all ATC instructions are to be complied with iaw procedures when ATC is open.

TAKE-OFF & LANDING

9. Landing & taking off for WFS is conducted between the RHAGs. The runway traffic lights at the 02RH threshold will be left on GREEN (out of hours) & pilots are to be aware that the thresholds are uncontrolled; vehicles may cross at any time. Traffic lights will be at RED while ATC is open.
10. After landing the runway is to be vacated as soon as possible. When ATC is open, ATC taxi instructions to route to the WFS Parking Bay are to be complied with.

DEPARTURES & RECOVERIES

11. All departures & recoveries are to be VFR. Pilots requiring a BS are to contact Waddington Zone on 119.50 MHz. Pilots are to request the desired direction of VFR departure, i.e. North/South/East/West. They are to comply with the subsequent ATC clearance, taking the most direct turn in the approved direction. If a downwind departure is desired, this must be specifically requested & cleared by ATC, due to potential conflicts with inbound aircraft & adjacent units' patterns. On recovery, pilots are to broadcast their intentions on 121.3 MHz prior to entering the visual circuit. All pilots are responsible for self-sequencing of Aircraft & are to squawk 7000, (or as instructed by ATC), with mode C if available.

CIRCUIT PROCEDURES

12. Whilst conducting visual circuits out of hours, pilots are to make blind calls at the relevant points within the visual circuit on the tower frequency, 121.30.

- a. If the Lincs/Notts Air Ambulance is responding to an emergency call out (Callsign Helimed 29A), aircraft within the visual circuit who are visual and remain visual with Helimed 29A, are to maintain separation and continue making blind calls.
- b. If the Lincs/Notts Air Ambulance is responding to an emergency call out (Callsign Helimed 29A), aircraft within the visual circuit who are not visual with Helimed 29A are to climb to not below 1000ft AGL and continue making blind calls. Helimed 29A will call when reaching the ATZ boundary allowing those other aircraft to continue/reposition as per their requirements.

MISCELLANEOUS

13. Pilots are to ensure that they are adequately self-briefed on weather & NOTAMS before getting airborne.

14. The Air Ambulance operates from 'Kookaburra', its main operating base, situated just across the A15 and to the north of the 20 threshold. Other than for an Aircraft in emergency, the Air Ambulance has priority at all times.

15. **DELTA TLZ.** Delta Taxiway is not to be used as a TLZ.²⁶

17. **'Kookaburra'**, If the word 'Kookaburra' is heard on RT transmissions, this is a reference to the main operating base of the Lincs/Notts Air Ambulance. 'Kookaburra' is situated just across the A15 and to the north of the 20 threshold.

18. **Reporting of Out of Hours Incidents.** WFS operates its own Safety Management System. The WFS Duty Pilot has an incident check-list to follow. The primary method of reporting any incident is by using the Military DASOR system; a tick-box within the DASOR can be used to release the information to the CAA Safety Reporting System & is the easiest way to cover this

²⁶ TLZ operations on Delta Taxiway ceased in Sep 20 due to long-term construction work east side of airfield.

responsibility. In the event of a serious incident or accident out of hours, the following should be informed.

- | | | |
|----|-------------------------|--------------|
| a. | Main Guard Room | 01522 727005 |
| b. | Stn Ops Duty Assistant | 01522 726731 |
| c. | Senior Duty Exec | 07976 689117 |
| d. | Station Orderly Officer | 07976 684807 |

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Order B222 – Lincs & NOTTS AIR AMBULANCE OPERATIONS

References A. [Lincs TATCC Order Book](#)

Annexes Nil

Content

1. The Lincs/Notts Air Ambulance operates from 'Kookaburra', its main operating base, situated just across the A15 and to the north of the 20 threshold to provide support to the local emergency services. The crews are instrument rated however they will normally operate VFR. The Aircraft will squawk 0020 & use the callsign 'Helimed 29' with the appropriate suffix Alpha, Echo or Zulu. When the Alpha suffix is used, the Aircraft is to be afforded priority in accordance with standing ATS civil/military regulation. When ATC is closed, Air Ambulance are to contact the DOC via Ext 6532.

2. The LOA between RAF Waddington & L&NAA can be found here. [Letter of Agreement between RAF Waddington & LNA.](#)

3. Access to EG R313. Should there be a requirement for Helimed 29A to penetrate EG R313 when it is active, WAD LARS is to liaise with RA who is then to contact RAFAT & request that they operate not below 1000ft WAD QFE, thus allowing Helimed 29A to transit safely through the area not above 500ft Scampton QFE. LARS is to notify RA when the Aircraft has either landed or cleared the area so that full use of EG R313 may be resumed. A further clearance must be obtained before Helimed 29A may lift from within EG R313 or re-enter the area following casualty pick-up. Should EG R313 be active but the LARS service is not available, Helimed 29A should transit through the area not above 500ft WAD QFE and make blind calls on LARS frequency 119.5 MHz.

4. **VFR Departure & Recovery.** The Helimed is normally controlled by LARS on 119.50MHz.

5. **IFR Recovery.** The Helimed is to be controlled by a Dir qualified controller. With the RA controller's permission this may be carried out by the LARS controller if suitably qualified.

6. During periods that the airfield is considered as closed:

a. When WAD RADAR is staffed but WAD TWR is closed, RADAR are to maintain a listening watch for Helimed on 121.3MHz. LARS will note the POB & departure details & inform the pilot that RAF Waddington Tower is closed & that blind calls are required.

b. The pilot will remain on 121.3MHz for departure & will transfer to LARS on 119.50MHz at the aerodrome boundary.

c. On recovery to RAF Waddington, LARS will pass the RWY, QFE, surface wind & ask the pilot to report visual with the Aerodrome. Once visual with the Aerodrome, & free from confliction, the pilot will transfer to 121.3 MHz making blind calls.

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Order	B223 – ENGINE GROUND RUNNING
References	Nil
Annexes	A RAF Waddington Timings and Approval Flowchart B RAF Waddington EGR location table C Engine ground running positions on ERP showing Rivet Joint safety zones (at 100% N1 RPM)

Content

1. **Background.** Aero-engines and / or auxiliary power units (APU) may need to be started for diagnostic or testing purposes, or to provide aircraft services for maintenance activities when ground support equipment (GSE) is neither available nor suitable. This order applies to all personnel involved with aircraft Engine ground runs (EGRs). This is also applicable to personnel employed at RAF Waddington for short periods of attachment.
2. **Aim.** This order outlines the procedures specific for all RAF Waddington based and visiting aircraft.
3. **Precautions.** Personnel are to comply with the following safety precautions:
 - a. **Notifications.** All EGR requests are to go through Eng Ops for prior approval. Eng Ops will then notify Stn Ops and the Fire Section of the EGR details in order to ensure appropriate Fire Section readiness in case of an emergency during the EGR. It is vital that any changes to the requested EGR are communicated to and approved by Eng Ops, so that Stn Ops and the Fire Section can be informed. In addition, Eng Ops are to notify ATC of any visiting aircraft EGRs. Annex A provides guidance on approval timings and approval authority.
 - b. **Permission to start EGR.** Permission to start is to be obtained from ATC prior to commencement of any EGR. If ATC is closed, permission to start is to be obtained from the Duty Ops Controller (DOC) on telephone ext 6532. Communications are to be maintained between the EGR team and ATC / DOC until the EGR has ceased, so that the Fire Section can be dispatched in the case of an emergency.
 - c. **Jet efflux hazard.** Refer to appropriate aircraft safety & maintenance notes (Topic 5A2) or equivalent.
 - d. **Noise hazard.** Refer to appropriate aircraft safety & maintenance notes (Topic 5A2) or equivalent.
4. **FOD.** Should an EGR be carried out away from the normal sqn area of operation (as seen in Annex A), a full ground survey is to be carried out prior to engine start by the NCO IC of the EGR or by the on-shift engineering manager. This statement does not apply to EGRs carried out on the ERP. A FOD sweep/walk/check should be carried out prior to any EGR no matter the location. All EGR team members are to be FOD aware throughout the EGR.
5. **Fire precautions.** In addition to the normal first aid fire appliances, additional fire section support is to be requested through Eng Ops if any of the following conditions are met.
 - a. Initial post engine installation EGR.

- b. Onboard ac fire suppression systems are anything other than fully serviceable.
 - c. Aircraft configurations that compromise its fire suppression capability i.e. removed cowlings/panel.
 - d. Increased fire risks due to known or suspected fuel leaks.
6. **Icing conditions.** Engine operators are to be aware of ambient icing conditions and carry out precautions specific to aircraft type.
7. **GSE.** The supervisor I/C the EGR is to ensure all GSE is parked (and chocked if necessary) in a safe and appropriate position prior to commencement of the EGR.
8. **Emergency procedures.** All ac emergency actions are to be carried out IAW relevant ac documentation.
9. **EGRs carried out away from MOB.** EGRs required away from MOB are to be conducted in accordance with local engineering orders. This order is for EGRs at WAD only.
10. **Safety personnel.** Sufficient safety personnel iaw DDH AESO 2-1-1-01-20 are to be pre-positioned to prevent vehicles/personnel entering danger areas.
11. **Location.** EGR locations take into account impact to the local community (noise), impact to operations on the airfield, hazards associated with jet efflux and Load Classifications of the parking area²⁷. The Engine Running Platform (ERP)²⁸ is a purpose-built facility designed to minimise the impact of engine running up to 100% N1 RPM / take-off thrust and must be used for High Power, Rivet Joint and sustained 100% NH Hawk EGRs in the first instance. Aircraft can be positioned on the ERP to suit wind direction and velocity, except for jet efflux blowing towards the ERP building (572) The following locations, in priority order, with constraints are also permitted for each ac type (*note: higher power rated Bays can be used for lower power EGRs, see Annex B*):
- a. **Hawk Aircraft.** EGRs are permitted to take place on Bays 1 - 6. The significant hazard areas shown at the appropriate Aircraft Safety & Maintenance Notes (Topic 5A2) or Equivalent, limit the authorised running power settings and running locations to:
 - (1) **Engine Ground Runs going up to 90% NH with transient periods (<5 secs) of 100% NH.**
 - i. Bay 1-6. The aircraft is to be positioned correctly within the bay; particular attention is to be made to ensure that the aircraft is correctly aligned, chocked and all items of ASE are clear of danger Areas and areas forward of the aircraft.

²⁷ As per the Aircraft/ Pavement Classification Number (ACN/PCN) System detailed in No 1 AIDU Flight Information Handbook.

²⁸ OC Ops has authorised overload operations on the ERP for RJ due to the PCN being less than the aircraft ACN.

(2) **Engine Ground Runs going up to sustained 100% NH.**

- i. The Engine Running Platform.
- ii In exceptional circumstances EGRs may be carried out on the threshold of Runway 20, with the prior permission of OC Ops Spt Wg.

b. **Rivet Joint Aircraft.** EGRs at ground idle thrust are permitted to take place on any Rivet Joint approved bay²⁹. The significant hazard areas shown at Rivet Joint T.O 1C-135-2-4-1-1 limit the authorised running power settings and running locations to:

(1) **Engine ground runs going up to 40% N1 RPM.** Bay 7 (the aircraft wash area normally for engine compressors washes) with the aircraft tail nearest the blast fence. The aircraft is to be positioned correctly within the bay; particular attention is to be made to ensure that the aircraft is correctly aligned with the marked lines within the bay and that the nose wheels are within the painted nose wheel spot.

(2) **Engine ground runs up to 55% N1 RPM.** Bay 31. The aircraft is to be positioned facing North for 2 engines to be run.

- (a) The EGR supervisor is to ensure no personnel are located on Bays 26-29 nor can personnel enter these bays during the EGR.
- (b) Aircraft can remain present on Bays 26-29 during the EGR.
- (c) Occupants of building 266 (Training Cell) should be notified of the EGR and afforded the opportunity to relocate if they wish.

(3) **Engine ground runs going up to 100% N1 RPM.**

- (a) The engine running platform for 2-engine runs (No 1 and 4, or 2 and 3, for balanced thrust) or 4-engine runs.
- (b) When the ERP is out of use or where the wind limits of AP101B-5301-12C would position the ac on the ERP with jet efflux blowing towards the ERP building (572), Alternative locations can be considered with prior permission from Air Ops (DOC), under delegated authority from OC Ops Wg and co-ordinated via Eng Ops x 7544 to organise bay / taxi way allocation.
- (c) **RWY 20 threshold.** In exceptional circumstances EGRs may be carried out on the threshold of runway 20, with the prior permission of OC Ops Spt Wg.

c. **Shadow aircraft.** The dangerous areas are detailed in the Shadow Tech Log. Engine ground running is to be carried out on Bays 26-29 where there are no restrictions on the number of engines or power settings. EGRs at ground idle are permitted to take place on any Shadow approved bay¹. Low power engine ground runs may also be carried out outside 2 Hangar North. Other bays may be used following consultation with the Eng Ops Controller.

²⁹ As per the ACN/PCN System detailed in No 1 AIDU Flight Information Handbook.

d. **Visiting Aircraft.** Visiting aircraft are permitted to conduct low power/idle engine ground run on any approved parking bay for the type. All high-power engine ground runs for visiting aircraft are to be carried out on the ERP. parameters.

12. **Engine Operation:**

a. **Hawk Aircraft.** EGRs on Hawk aircraft are to be carried out strictly in accordance with AP101B-4401-1A Chap 6.

b. **Shadow Aircraft.** EGRs on Shadow aircraft are to be carried out strictly iaw the Pilots Operating Handbook and the P&WC Maintenance Manual.

c. **Rivet Joint Aircraft.** EGRs on Rivet Joint aircraft are to be carried out strictly iaw Rivet Joint T.O. 1C-135-2-4-1-1 ►◄.

d. **Visiting Aircraft.** EGRs of visiting aircraft are only to be undertaken by the pilot, flight engineer or authorised engine operator for the specific type.

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Annex A**to AOB Order B223****File reference 20230809-RAF_Waddington-AOB_Issue 3.3-O****RAF Waddington Timings and Approval Flowchart**

<u>Day</u>	<u>Times</u>	<u>EGR Approver</u>
Mon to Thu	0700 to 2200	Sqn EngO
	2200 to 0700	AO or Delegated Authority ³⁰
Fri	0700 to 1800	Sqn EngO
Fri To Mon	1800 to 0700	AO or Delegated Authority



³⁰ The AO has delegated authority for approval of EGR OOH to the DOC, providing the above flowchart is followed.

Annex B**to AOB Order B223****File reference 20230809-RAF_Waddington-AOB_Issue 3.3-O****RAF Waddington EGR location table**

EGR Power Setting	Standard	Alternative with permission from Air Ops	Alternative with permission from OC Ops
Ground Idle (all ac)	All Bays	N/A	N/A
Low power < 67% N1 (ground idle) (Shadow)	All suitable bays Inc 2HN	N/A	N/A
Med – High > 67% N1 (Shadow)	Bays 1-6 / 26-29	All approved operating bays (Not 2HN)	N/A
Up to 90% NH (with transient periods of 100% NH <5 secs). (Hawk)	Bays 1-6	ERP	Runway 20 Threshold
Up to 100% NH sustained. (Hawk)	ERP		Runway 20 Threshold
Up to 40% N1 RPM (RJ)	Bay 7	Bay 31	Runway 20 Threshold
Up to 55% N1 RPM (RJ, 4 Engines), (2 Engines BAY 31)	Bays 1 to 6, 31	ERP	Runway 20 Threshold
Up to 100% N1 RPM / Take-off Thrust (all ac)	ERP	N/A	Runway 20 Threshold

All EGRs require prior permission from RAF Waddington Eng Ops.

Note 1: Requires permission from Sqn EngO.
Note 2: Requires permission from AO or Delegated Authority.

Annex C**to AOB Order B223****File reference 202300809 RAF_Waddington-AOB_Issue 3.3-O****Engine ground running positions on ERP showing Rivet Joint safety zones (at 100% N1 RPM)**

*Ensure that jet efflux does not point directly towards OWI fencing and adjacent infra – The aircraft symbols used above are for illustration purposes only and do not dictate the orientation of the aircraft.

RAF Waddington AOB – Annex NN to the DAM

C-73

Order B224 – PARKING, REFUELLING AND DEFUELLING OF AIRCRAFT ON NON-INTERCEPTED AREAS – ENVIRONMENTAL PROTECTION PROCEDURES

References A. Water Resources Act 1991

Annexes Nil

Content

Introduction

1. This order applies to RAF Waddington personnel involved in the parking, refuelling and defueling of aircraft on non-intercepted areas. This order is also applicable to personnel employed at RAF Waddington for short periods of detachment. Mitigation measures are to be in place prior to the parking, refuelling or defueling of aircraft in order to protect the environment and comply with Reference A, in the event of a leak or uncontrolled discharge of fuel during refuel / defuel operations.

2. The Duty Engineering Operations Controller (DEOC) shall obtain authority from OC Ops Support Wg (OSW) via the Duty Ops Controller (DOC) to park, refuel or defuel aircraft on non-intercepted areas. When an aircraft is parked on a non-intercepted area, the measures contained in this order shall be followed.

Implementation

3. The airfield paved areas protected by drains and interceptors are:

a. Bays 1 to 32 inclusive. Additional areas include:

- (1) The Alpha taxiway between Bays 26 to 32.
- (2) The RAFAT dispersal entrance.
- (3) The areas between 3 & 4 hangars.
- (4) The Engine Running Pan (ERP).
- (5) Operational Readiness Platform (ORP), adjacent to runway 20 threshold.

4. All other areas of the airfield drainage system are not served by interceptors and do not comply with the requirement laid out in Reference A. It is necessary to implement the following additional measures to protect the environment from the effects of leaks and fuel spills in order to contain them until the Unit Spillage Response Plan can be implemented:

a. Under no circumstances is the DEOC to give approval to park aircraft or conduct refuel / defuel operations on non-intercepted areas without authority from OC OSW via the DOC. When an aircraft is parked on a non-intercepted area, the following measures are to be implemented, taking into account any slope of the parking area:

- (1) Portable booms are to be deployed around the aircraft such that any inadvertent spillage is contained within the boom. The boom cordon area is to be large enough to include any refuel / defuel vehicle and other GSE required.

- (2) The boom should be 'opened' to allow the access and egress of refuelling vehicles or other GSE; the boom shall be closed again before any refuelling operation commences.
 - (3) Ensure a major spill kit is immediately available.
- b. Should a spillage occur or a leak is discovered the actions laid down in the Unit Spillage Response Plan (Annexes A and B) should be implemented immediately.

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Order B225 – ACTION TO BE TAKEN ON RECEIPT OF WIND WARNINGS –
DUTY ENGINEERING OPERATIONS CONTROLLER

References Nil

Annexes Nil

Content

Introduction

1. The aim of this order is to provide standard procedures to be followed by RAF Waddington Base personnel following the issue of a wind warning from the Operational Meteorologist.
2. The Operational Meteorologist will issue a Wind Warning when wind speeds are expected to exceed 35 knots or a Fast Jet Strong Wind Warning for wind speeds 36G41KT (day) 31G36KT (night). These warnings will contain details of the expected maximum wind speed.

Implementation

3. **Duty Engineering Operations Controller (DEOC).** The DEOC is to inform the Sqn / Section Controllers listed below, by telephone, email or Skype of the warning and the expected maximum wind speed as detailed in the ESS MOE LFT 524 Annex K:

- a. 14 Sqn.
- b. 51 Sqn.
- c. RAFAT.
- d. ASMT.
- e. GEF.
- f. Movements.
- g. VAHS.

4. **SNCO Visiting Aircraft Handling Squadron (VAHS).** For visiting aircraft, VAHS are to inform the Aircraft Captain / Detachment Commander about the wind warning and obtain advice from them. If they are unable to specify exact precautions to be taken, they are to be advised to contact their home base for specialist advice. The Aircraft Captain / Detachment Commander shall remain responsible for their aircraft, although the general requirements of this order should be applied.

5. **For expected wind speed >35 knots, but <40 knots (gust or mean):**

- a. Personnel:
 - (1) Brief personnel, aircraft upper wing surface work is to cease.
- b. Aircraft:

(1) Check the security of aircraft in your area of responsibility.

c. Visiting aircraft:

(1) Visiting aircraft captains are to be consulted on precautions and advised of forecasted wind speeds. If light aircraft cannot be moved, refuellers may be provided as windbreaks.

d. Ground Support Equipment (GSE)³¹:

(1) In-use GSE. Items shall not be operated in conditions exceeding their wind speed limitations as detailed in relevant AP119F Topic 1. Where no formal wind speed limitations are published, users are to seek Level G approval prior to use.

(2) Not in-use GSE. Items shall be removed from the vicinity of aircraft to a sterile area and where possible, point into wind. Present the smallest GSE profile to the wind, lowering if possible. Braking and stabilising devices shall be correctly applied. Stabilising devices are not to be wound down so that they lift the GSE off the ground. All lightweight GSE is to be held inside or secured to an immobile structure.

e. Reporting actions complete:

(1) When all applicable actions have been completed, a report is to be made to the DEOC confirming the precautions taken.

6. **For expected wind speed >40 knots, but <80 knots (gust or mean):**

a. Carry out all actions listed under Para 5.

b. Personnel:

Cease all work, excepting actions at para c - g below.

c. Aircraft:

For aircraft parked in the open, carry out periodic checks of chocks, blanks and brake pressure levels.

d. Visiting aircraft:

VAHS are to take direction from the Aircraft Captain / Detachment Commander.

e. GSE:

>50 knots, all GSE is to be removed from the vicinity of aircraft and held inside where possible.

f. Hangar doors:

>40 knots, consider closing hangar doors.

>60 knots, hangar doors must be closed IAW AESO-2-1-1-1-01.

³¹ When using items of GSE in windy conditions, they are not to be operated in conditions exceeding their wind speed limitations found in AP119F Topic 1 (for relevant GSE) or AESP 201-601 (for relevant vehicle). Where no formal wind speed limitations are published, users are to seek Level G approval prior to use.

- g. Reporting actions complete:

When all applicable actions have been completed, a report is to be made to the DEOC confirming the precautions taken.

7. For expected wind speed >80 knots (gust or mean):

- a. Carry out all actions listed under Para 5 and 6.

- b. Aircraft:

(1) The DEOC shall consult with Sqn Engineering Controllers to discuss the need to evacuate aircraft to a safe weather area.

(2) Aircraft to be prepared to fly as directed by Sqn Executives, within the constraints of this order, in readiness for severe weather fly off³².

- c. Reporting actions complete:

(1) When all applicable actions have been completed, a report is to be made to the DEOC confirming the precautions taken.

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³² Note: The severe weather Fly-Off Instruction will be given by Stn Ops before the wind speed reaches 60 knots

Order B226 – AIRCRAFT WASH PROCEDURE

References Nil

Annexes Nil

Content

Introduction

1. This order applies to RAF Waddington Engineering Operations (Eng Ops) personnel in the role of Duty Eng Ops Controller (DEOC) responsible for the facilitation of aircraft washes on Unit.

Implementation

2. The DEOC is to act as the POC for all aircraft wash requests at RAF Waddington and should:

- a. 51 Sqn – All requests are to be processed IAW AESO 2-1-1-01-17 and ESS MOE Lft 524 and forwarded to RJ Backshop.
- b. For all other FE's and Visiting Aircraft, Eng Ops will act as POC for booking the aircraft wash bay (Slot 7) only.
- c. Provide Met data to the requesting FE NLT 2-working days prior to the wash to inform their decision to cancel or go ahead. The DEOC is to:
 - (1) Contact the RAF Waddington Met Office to obtain the weather forecast for the planned wash day.
 - (2) If Met forecast is within the following limits: Outside Air Temperature. (OAT) $>4^{\circ}\text{C}$ & wind speed <28 MPH (24 Knots), contact the requestee & confirm if wash is still required.
 - (3) If the Met forecast is outside the following limits: Outside Air Temp. (OAT) $\leq 4^{\circ}\text{C}$ or $>$ MPH (24 Knots), contact the requestee and confirm if wash is to be cancelled.
- d. Organise drainage of the Wash Pan Holding Tank if required.

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Order B227 - RESUMPTION OF SHADOW OPS FROM 2 HANGAR NORTH**References**

- A. [Eng Ops \(Hangar 2\)- No 03-EAR 2022-23.pdf](#)
- B. [Eng Ops \(Non Intercepted Areas\)- No 01 EAR 2022-23.pdf](#)
- C. [Eng Ops \(Engine Runs\)- No 02 EAR 2022-23.pdf](#)
- D. [AOB Order B224](#): Parking, refuelling, and defueling of aircraft on non-intercepted areas – Environmental protection procedures.

Content**Background**

1. Shadow refuelling ops from 2 Hangar North were terminated due to surface degradation, assumed to be caused by fuel spills. This has since been determined to have been caused by the fuel bowser conducting tight turns over the surfaces surrounding 2 Hangar North. This order permits a resumption of refuelling, subject to procedural compliance and checks to ensure the AOS is not damaged. Ref A-C cover environmental aspects reviewed for resumption of Shadow ops.

Shadow ops

- 2. The following rules apply:
 - a. A maximum of two Shadow aircraft can conduct routine line ops in the area outside 2 Hangar North. The 'operating area' and 'refuelling area' in which routine line ops are permitted, can be seen by the corresponding green and orange lines in Annex A.
 - b. A taxiway edge line is marked incorrectly and will be re-marked to aid wingtip clearance deconfliction in the event of non-standard ops.
 - c. In the event of non-standard ops (aircraft with fine wingtip clearance), the procedures stated within this order may be temporarily suspended. In the event of non-standard ops, operators should refer to Ref A.

Aircraft refuelling

- 3. The following rules apply.
 - a. Open line refuelling (non-pressurised) is to be conducted in intercepted refuelling area bound by the orange lines seen in Annex A. The surface of this area is concrete to avoid degradation upon spillage. Refuelling is therefore NOT to be conducted on the asphalt Operating area.
 - b. A spill kit is to be positioned in the Operating area of 2 Hangar North for immediate availability during all scheduled fuelling slots.
 - c. Bowsers are to position on the concrete surface labelled 'bowser' seen in Annex A, bound by red lines. Bowsers are to conduct a wide approach and departure to the bowser area to avoid tight turns on the asphalt surfaces.
 - d. When the airfield is open, refuelling is to be conducted under the control of ATC, as the bowser remains within an active taxiway width. ASMT are to inform ATC via MRE of

refuel start/end. When the airfield is closed, refuelling is to be conducted under the control of Stn Ops, as per the single occupancy rule.

Engine ground runs

4. The following rules apply.
 - a. Low powered engine ground runs may be conducted within the operating area bound by the green and orange lines seen in Annex A.
 - b. High powered engine ground runs and prop tunes are not to be conducted in the operating area of 2 Hangar North, in accordance with Ref A.

Crew Changes

5. Projected refuel windows are to be considered in the weekly OSW OPG, in order to deconflict with large aircraft moves. It is anticipated that the total time for refuel activity to and from ASMT will be 45 minutes.

Surface condition checks

6. The following rules apply.
 - a. The Airfield Mgr is to conduct weekly checks of the surfaces of 2 Hangar North, in order to monitor the potential degradation of surfaces in the area.
 - b. If degradation of the surfaces outside 2 Hangar North is observed, these procedures are to be temporarily suspended to allow cause investigation. Procedures will be modified as required.

Annex

- A. RAF Waddington 2 Hangar North Order Schematic.

Annex A-1 to AOB Order B227**File reference 20230809-RAF_Waddington_Issue 3.3-O****10 May 22****2 Hangar North**

1. The green area represents the tarmacked operating area.
2. The orange area represents the concrete refuelling area.
3. The red area represents the concrete bowser area.
4. The red lines represent the bowsers intended approach and departure path to the bowser area.



Order B228 – Non-Standard Takeoff Distances

References A. [Annex K Appendix 1](#)

Annexes A. Local Declared Distances

Content

Introduction

1. Standard declared distances are contained in the UK Mil AIP. However, there are occasions when distances not included in the AIP are required for use by Waddington-based aircraft. In exceptional circumstances an additional local departure, known as the Full Runway Departure (FRD) or the 20Z departure, may be available with prior permission from the AO.

Runway 20 ‘Zulu’ Departure

2. RAF Waddington based ISTAR assets may require additional runway distance for departures than is declared in the AIP. In such circumstances, a departure from runway 20 using the intersection from taxiway ‘Zulu’ may be authorised by the AO. To ensure the departure procedure for Rwy 20Z is assured, the declared distance data given at Annex A-1, along with information given at Ref B (DAM Annex K Appendix 1) is to be followed.

Runway 02 Intersection A/D Departure

3. For expediency, RAF Waddington based assets may desire to depart from runway 02 using the intersection of taxiways A and D (as opposed to the full AIP runway length using the turning loop). The declared distance data for such a departure is at Annex A-1,

Intersection F Departures

4. For expediency, RAF Waddington based assets may desire to depart from runway 02 or 20 using the intersection with taxiway F. The declared distance data for such a departure is at Annex A.

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Annex A to AOB Order B228

File reference 20230809-RAF_Waddington-AOB_Issue 3.3-O

15 Apr 23

Non-Standard Takeoff Distances

	DECLARED DISTANCES								
2.13.1	2.13.2		2.13.3		2.13.4		2.13.5		2.13.6
RUNWAY	TORA		TODA		ASDA		LDA		COMMENTS
	M	FT	M	FT	M	FT	M	FT	
Zulu 20	2878	9444	3017	9898	2878	9444	N/A	N/A	a. TORA = Taxiway Zulu Origin of Intersection to 02 Thr. b. TODA = Taxiway Zulu Origin of Intersection to 02 Fence. a. ASDA = Taxiway Zulu Origin of Intersection to 02 Thr.
Alpha / Delta 02	2666	8746	2805	9203	2666	8746	N/A	N/A	a. TORA = Taxiway Alpha / Delta Origin of Intersection to 20 Thr. b. TODA = Taxiway Alpha / Delta Origin of Intersection to 20 Fence. b. ASDA = Taxiway Alpha / Delta Origin of Intersection to 20 Thr.
Foxtrot 02	1202	3943	1340	4396	1202	3943	N/A	N/A	c. TORA = Downwind edge of Foxtrot to 20 Thr. d. TODA = Downwind edge of Foxtrot to 20 Fence. e. ASDA = Downwind edge of Foxtrot to 20 Thr.
Foxtrot 20	1531	5023	1669	5475	1531	5023	N/A	N/A	a. TORA = Downwind edge of Foxtrot to 02 Thr. b. TODA = Downwind edge of Foxtrot to 02 Fence. c. ASDA = Downwind edge of Foxtrot to 02 Thr.

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AOB SECTION C – DECONFLICTION PROCEDURE

Order	C101 – LINCOLNSHIRE AGREED AIRSPACE
References	A. CAP 774 UK Flight Information Services
Annexes	A. AA Sectors & Capabilities B. Visual Reporting Points of AA

Content

1. The Local Operating Airspace around RAF Waddington & RAFC Cranwell has been split into 8 notional sectors to offer systemic deconfliction to local units.

AIRSPACE STRUCTURE

2. **Lateral.** Annex A to this order provides lateral boundaries & is split into four equal sectors. All bearings are in degrees magnetic as follows:
 - a. North-East Sector 000° - 089°. (AA Sector 2)
 - b. South-East Sector 090° - 179°. (AA Sector 4)
 - c. South-West Sector 180° - 269°. (AA Sector 3)
 - d. North-West Sector 270° - 359°. (AA Sector 1)
 - e. Sectors 5 - 8 are nominated to the south of RAF Wittering (WIT), primarily for the use of WIT based Aircraft.
3. **Vertical.** The vertical dimensions of the procedures are 4000ft to 10000ft.

CONCEPT OF OPERATIONS

4. As the sectors fall into uncontrolled airspace the primary responsibility for separation rests with 'see & avoid' by the Aircraft commander. The concept of 'soft boundaries' applies to the sectors – Aircraft may operate next to & along boundaries; occasional minor incursions may occur provided crews return to the allocated sector as soon as practical.
5. Aircraft commanders can change operating sector when airborne for reasons such as weather. They are to request this change via ATC. Aircraft commanders are to use & appropriate FIS.
 - a. Aircraft commanders are to depart RAFC Cranwell as normal for their planned sector & expect a traffic service from RAF Waddington ATC.
 - b. Aircraft commanders are to call established in the sector & pass brief operating details with the planned requested altitudes.

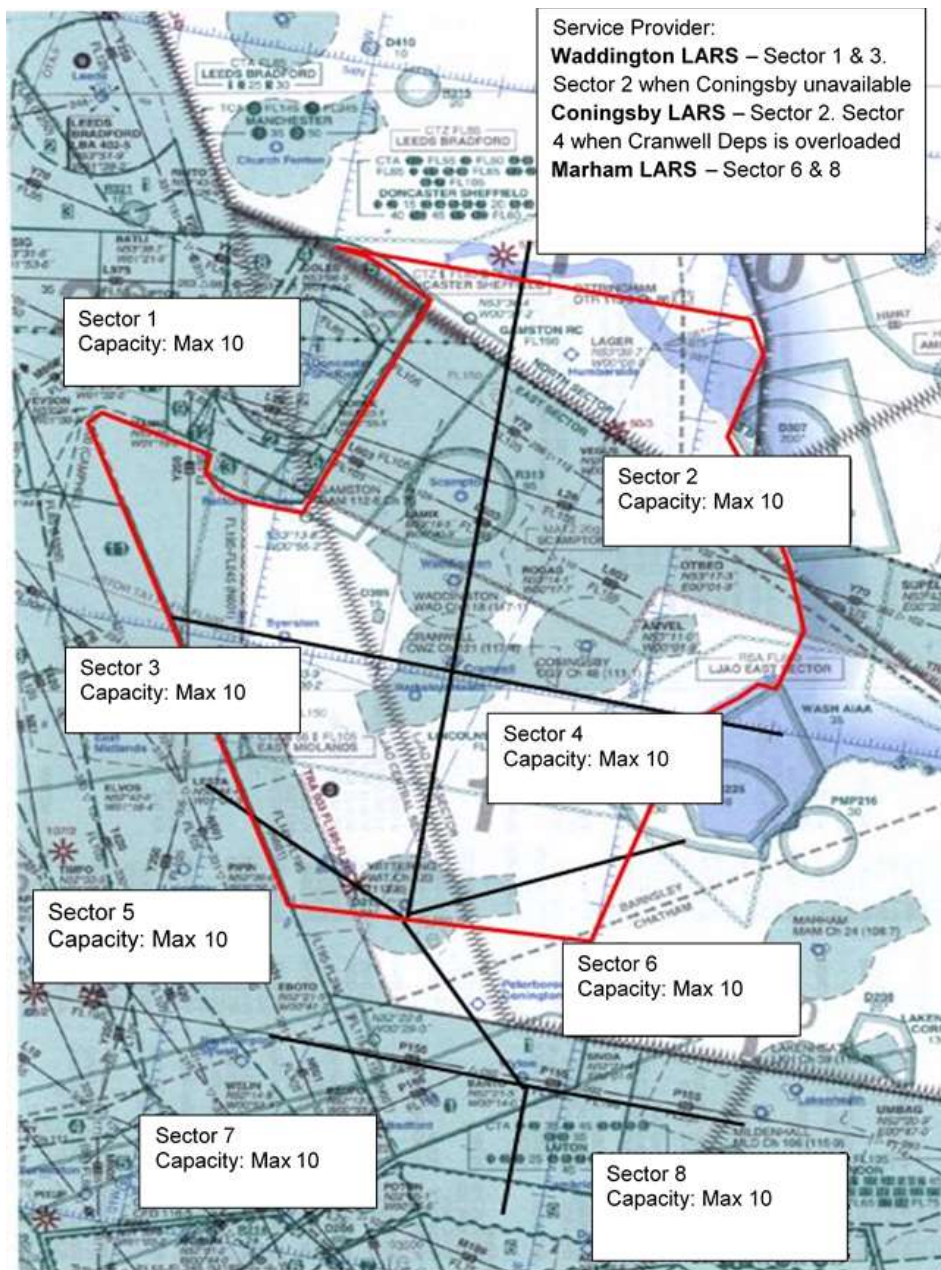
For Aircraft in receipt of a radar Service, when Mode C indicates above the base height/altitude stipulated in the pre-booked AA sector block, ATC will initiate approval, when safe to do so, for Aircraft to manoeuvre as required.

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Annex A to AOB Order C101

File reference 20230809-RAF_Waddington-AOB_Issue 3.3-O

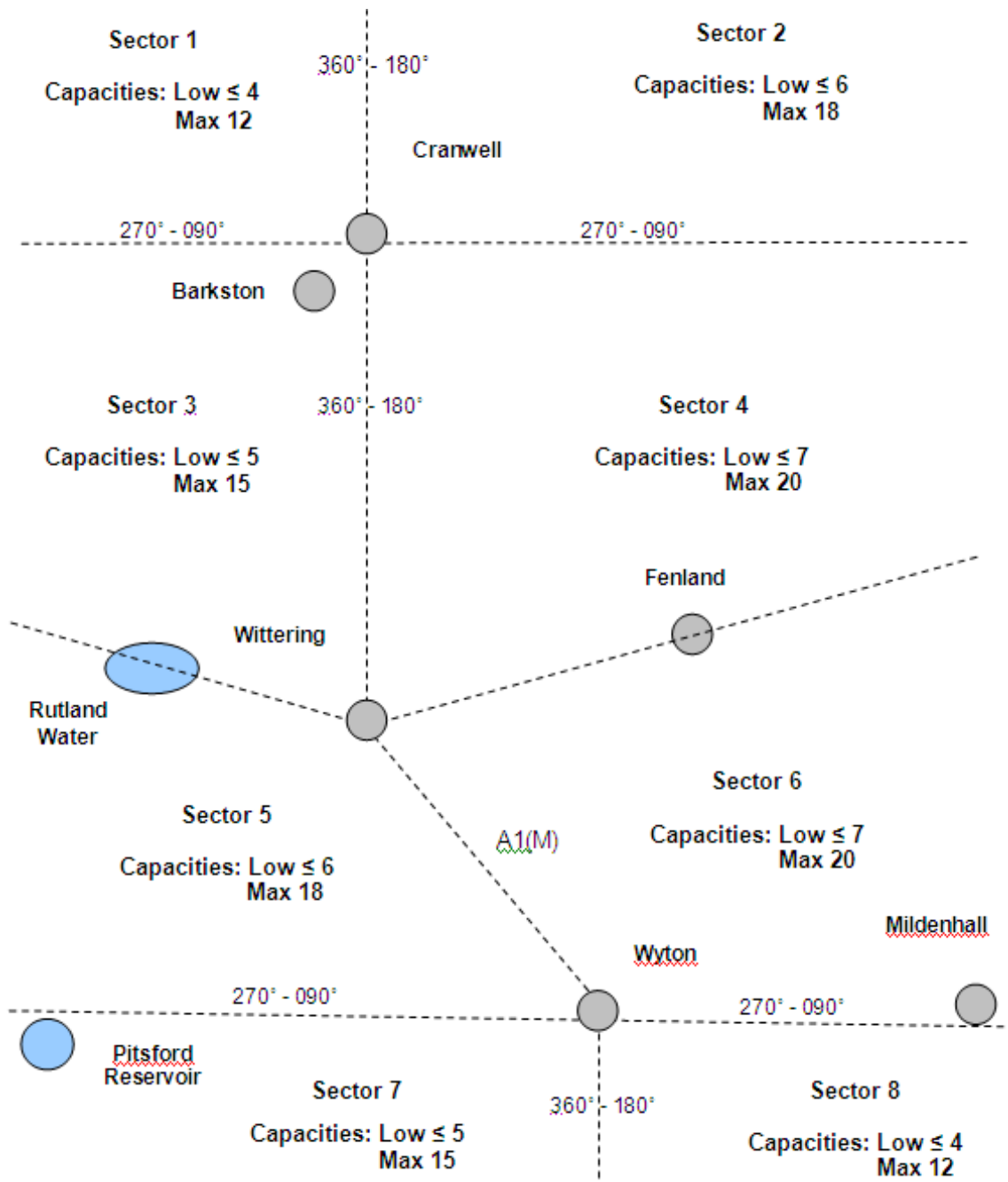
AAT SECTORS & CAPACITIES



Annex A-1 to AOB Order C101

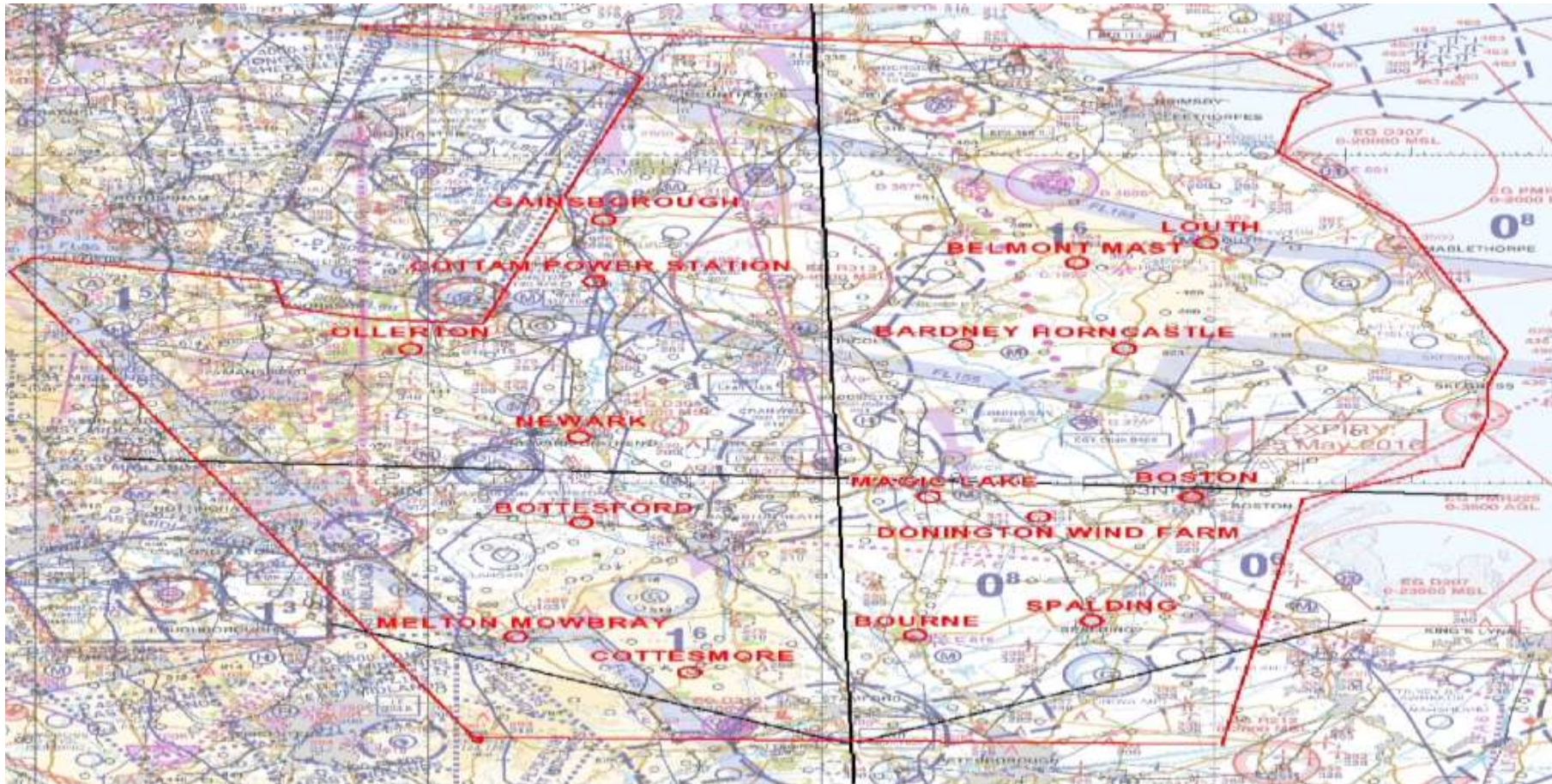
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AAT SECTORS & CAPACITIES



Annex B to AOB Order C101

File reference 20230809-RAF_Waddington_AOB_Issue 3.3-O

VISUAL REPORTING POINTS SECTORS 1-4 OF LINCOLNSHIRE AGREED AIRSPACE

RAF Waddington AOB – Annex NN to the DAM

Order C102 – RAF WADDINGTON/RAFC CRANWELL TRANSIT PROCEDURE

References Nil

Annexes A. Tower to Tower Transit procedures

Content

RAF WADDINGTON / RAFC CRANWELL TRANSIT PROCEDURES

1. Aircraft are to depart RAFC Cranwell at 1000ft RAFC Cranwell QFE to join at RAF Waddington via initials for RWY 02 or downwind for RWY 20. On return, Aircraft are to fly at 1500ft RAFC Cranwell QFE to join via the IP at RAFC Cranwell. Aircraft transiting are to squawk Mode 3/A 3627C. If RAFC Cranwell RWY 01/19 is in use the transit procedure for the instrument runway at RAFC Cranwell is to be flown.
2. Pilots are to notify ATC of their wish to transit when downwind on their final circuit, on taxi, by requesting “TWR to TWR”. The destination airfield is to be contacted as soon as they are clear of the visual circuit of the departure airfield.

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Annex A to AOB Order C102**File reference 20230809-RAF_Waddington_AOB_Issue 3.3-O****TOWER TO TOWER TRANSIT PROCEDURE**

RAFC Cranwell 26



RAFC Cranwell 08

A – THE START OF RAF WADDINGTON RWY 20 DOWNWIND LEG

B – IP FOR RAF WADDINGTON RWY 02RH (4 nm – incorrectly shown closer on map, pending update after liaison with RAF Cranwell).

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RAF Waddington AOB – Annex NN to the DAM