

It is the responsibility of all employers to ensure that relevant AOPs are brought to the attention of their staff. However, individuals remain responsible for their own actions and those who are in doubt should consult their Supervisor or Manager

JA-AOP-053 Cold Weather Operating Procedure

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1 **Policy**

- 1.1 Jersey Airport Cold Weather Operating Procedures are brought into operation whenever snow, ice or heavy frost affect, or are expected to affect, the manoeuvring area (including runway and taxiways), apron and passenger areas such that aircraft, passengers and staff cannot access these areas safely.
- 1.2 Cold Weather Operating Procedures have been adopted to deal with the following:
 - I. Aircraft de-icing
 - II. Surface anti-icing
 - III. Surface de-icing
 - IV. Surface snow clearance
 - V. Surface slush removal
 - VI. Heavy frosts
- 1.3 Necessary action shall be undertaken to clear and treat the manoeuvring area, apron and passenger areas in order to restore the aerodrome to as near 'business as usual' operations as practicable.
- 1.4 Surface contamination on the runway greater than 3mm in depth on more than 25% of any runway third will be removed and the runway surfaces restored to a state that allows aircraft operations to recommence, following a runway surface assessment that meets a GRF RCAM assessment of 5 or more. Any depth of Ice on more than 25% of the runway surface will be cleared, as per the Black Top Policy.

2 **Responsibilities**

- 2.1 The Government of Jersey's Meteorological Department is responsible for the forecast and issue of Snow/Ice Alerts and Warnings in accordance with procedures detailed in Appendix A & B.
- 2.2 ARFFS are responsible for any overnight inspections of paved aerodrome surfaces and will notify ATC in the event that clearance operations are required.

- 2.3 ATC, when on station overnight, are responsible for the notification to Silver Commander and Group Technical Services (GTS) Duty Engineering Manager in the event that clearance operations are required.
- 2.4 Silver Command shall form the Winter Operations Office and be the focal point for all co-ordination between departments regarding contamination clearance, both landside and airside, along with communication to all relevant departments regarding the clearance operation.
- 2.5 The Silver Commander shall be responsible for the creation and upkeep of an event log as detailed in paragraph 8. Silver Command will remain in operation until such time as the cold weather event has ceased.
- 2.6 ATC are responsible for providing overnight staff to remain on station in the ATCC in order to ensure continuity of Channel Island Airspace Services overnight and to provide lone worker oversight to ARFFS carrying out Airfield inspections.
- 2.7 ARFFS are responsible for runway surface inspections and reporting surface contamination and condition to ATC.
- 2.8 ATC are responsible for the decision on runway open, or runway closed, based on the runway surface contamination and condition information received from ARFFS.
- 2.9 Group Technical Services (GTS) are responsible for the clearance of the runway, associated taxiways and apron areas including the application of anti/de-icing agents. A record of all anti/de-icing activities shall be maintained to include date, location and amount used.
- 2.10 GTS are responsible for the East and SSW surface water treatment facilities, ensuring maximum available capacity is ready for use. If required, ARFFS shall be available to assist with adjusting valves at the SSW surface water treatment facility under the instruction of the Group Technical Engineering Duty Engineer.
- 2.11 GTS are responsible for exposing, clearance and inspection of all the airfield ground lighting.
- 2.12 The GTS Duty Engineering Manager shall notify the Government of Jersey's Water Resources department, via email, of all airframe or surface de-icing activities within 24 hours of the activity taking place. Contact information in section 3.4 below.
- 2.13 GTS are responsible for notifying Jersey Water of de-icing activities carried out by

either POJL or POJL Business Partners.

- 2.14 GTS are responsible for ensuring the availability of equipment and consumables as per Appendix C Section 1.
- 2.15 ARFFS, Terminal Services and GTS are responsible for the clearance of airside and landside main pedestrian areas under the co-ordination of the Silver Commander.
- 2.16 The Security team are responsible for the clearance of pedestrian and vehicle areas at Checkpoint 4, Checkpoint 6, and Checkpoint 8. They may also be required to assist with the clearance of other areas under the co-ordination of the Silver Commander.

3 **Snow/Ice Alert and Warnings**

- 3.1 The Government of Jersey's Meteorological Department shall issue Snow/Ice Alerts or Warning messages where there is a specific indication that snow/ice is expected to occur and settle in any amounts or, where contaminated surfaces may become a problem.
- 3.2 The Government of Jersey's Meteorological Department shall issue Snow/Ice Alerts or Warning messages where there is a specific indication that snow/ice is expected to occur and settle in any amounts or, where contaminated surfaces may become a problem.
- 3.3 Specific criteria for the issuance of these warnings are detailed in Appendix A & B.
- 3.4 Messages will include as much information as possible and may include some or all of the following items:
 - Estimated time of commencement
 - Whether light, moderate or heavy snow/ice is more likely
 - Whether drifting is expected
 - Whether snow is expected to be dry or wet
 - Air and concrete temperatures, wind speed and direction.
- 3.5 A Snow or Ice Alert is an advanced message providing advice that snow/ice may occur. Alert messages are normally issued between 2-4 days before the expected event.

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- 3.6 A Snow or Ice Warning is a more precise message and is normally issued between 12 and 24 hours before the expected event and is the winter operations GRF Runway assessment trigger to use ICAO GRF flow Chart A (see AOP 46 Airfield surface inspections).
- 3.7 Cancellation of a Snow or Ice Warning or Alert shall only take place if circumstances have changed to such an extent that suspending the cold weather procedures is justified.
- 4 **Distribution List for Snow/Ice Alerts and Warnings**
- 4.1 The Duty Forecaster shall distribute Alerts and Warnings via email to personnel as per the Distribution List held by POJL - Appendix I.
- 4.2 If this warning occurs after Airport Close, the Duty Forecaster will telephone the Duty Executive Officer who in turn will contact the Silver Commander (07797 716564) and GTS Duty Engineering Manager (07797 738582) to make a joint decision on whether to initiate the Cold Weather plan and if so, what stage. For example - recalling overnight staff to monitor any snow / ice accumulations on runway, taxiways and aprons based on the likelihood of surface contamination before 05:45.
- 4.3 If personnel are required, the Duty Executive Officer will be responsible for informing the POJL Security Night Guard on 07797 798062 who will in turn notify ATC and ARFFS personnel to carry out surface inspections and recall GTS engineering as required.
- 4.4 Alerts and Warnings are also distributed to various business partners and other outside agencies in accordance with a distribution list maintained by the ATC TSO, actioned by Government of Jersey's Meteorological Department. – Appendix I
- 5 **Co-ordination**
- 5.1 On receipt of a Snow / Ice Alert or Warning, the Air Traffic Control Supervisor will convene a Winter Ops. Planning Meeting.
- 5.2 The ATC Supervisor shall use JJ-FORM-192 Winter Ops. Planning Meeting Form to organise this meeting.

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- 5.3 Winter Ops Planning Meetings will normally be held at 15:00 (local) on Microsoft Teams, with as many attendees as possible from the following list:
- i. Airport Director (office hours Mon – Fri), Deputy Airport Director or Duty Executive Officer (Chair)
 - ii. GTS Duty Engineering Manager
 - iii. Marketing and Communications Manager
 - iv. Passenger Services Manager
 - v. ARFFS Duty Manager (who will notify the Silver Commander)
 - vi. Head of Aerodrome Operations
 - vii. Head of Passenger Services & Security
 - viii. ATC Supervisor
- 5.4 The ARFFS Duty Manager / Silver Commander is responsible for opening and maintaining an event log for all Winter Ops Planning meetings / events. Information recorded is detailed in Section 9 of this document.
- 5.5 Standing Agenda:
- i. Meteorological briefing via telephone - 01534 448765 and/or via Microsoft Teams, covering expected timings and conditions
 - ii. Update on internal available resources from all departments
 - iii. Update on vehicles and equipment serviceability
 - iv. Update on de-icing consumable stock levels – De-icer, granules, salt
 - v. Environmental considerations – reed beds, public roads and pathways
 - vi. Initial plan for Snow / Ice clearance to include the following:
 - Expected Aircraft Movements
 - Airfield and landside surface treatment (confirm areas)
 - Overnight recall
 - ARFFS Airfield Inspections and actions in the event of surface contamination
 - ATC resource responsibilities
 - GTS resource responsibilities
 - vii. Personnel travel plans – Vehicle allocation
 - viii. Information for internal business partners
 - ix. Information for external customers
 - x. AOB
- 5.6 A follow up meeting with POJL business partners shall be held at 16:00 local (in a suitable meeting room or on Microsoft Teams) in order to brief on forecast conditions, provide advice on the state of the aerodrome and plans to address the conditions. It is the responsibility of the Passenger Services Manager to call this meeting, with the following attendees:
- i. Airport Director / Assistant Airport Director (office hours Mon – Fri) or Duty Executive Officer (Chair)
 - ii. Passenger Services Manager
 - iii. Jersey Meteorological Department via telephone – 01534 448765 and/or

- via Microsoft Teams
- iv. Airline Services
- v. Blue Islands
- vi. Swissport
- vii. GAMA
- viii. Jersey Aero Club
- ix. JAL
- x. Oceanair
- xi. ATF
- xii. Customs & Immigration

6 **Environment**

- 6.1 Jersey Airport has two surface water treatment facilities, East and SSW. These are designed to help reduce the impact to the environment from de-icing activities on defined catchment areas of the airfield.
- 6.2 Group Engineering are responsible for the management and maintenance of the water treatment facilities. Please refer to the following EOP's:
 - i. EOP 007 Eastern Aeration Pond and Reed Bed Procedures
 - ii. EOP 009 South - Western Aeration Pond and Reed Bed Procedures
- 6.3 The GTS Duty Engineering Manager must be notified prior to any de-icing activities taking place on the airfield.
- 6.4 The GTS Duty Engineering Manager shall ensure the water treatment facilities are set-up to receive the de-icing product being used on the airfield within a catchment area.
- 6.5 The GTS Duty Engineering Manager shall notify Water Resources, via email, of all de-icing activities, aircraft or surface, within 24 hours of the activity taking place. The email shall be sent to the following contacts:
 - J.Robert@gov.je
 - G.Coleman@gov.je

7 **Black Top Policy**

- 7.1 Jersey has adopted a standardised policy relating to runway surface contamination, such that, we will suspend runway operations and commence clearance at a point at which the level of contamination will begin to impact the majority of our customers.

- 7.2** Jersey's runway shall be considered contaminated, to such an extent that runway operations will be suspended, whenever more than 25% of the assessed surface* is contaminated with:

- A. a depth of more than 3mm of Water, Slush, Dry or Wet Snow; or
- B. any depth of ICE

*The assessed surface relates to each individual 3rd of the runway length out to the full or any declared reduced width.

NOTE: FROST is not included in the list of contaminants in a) above as by definition frost will always be less than 3 mm in depth.

NOTE 2 HAIL: The Runway Classification Assessment Matrix (RCAM) only applies to the explicit contaminants listed. Any other runway contaminant cannot be assessed in accordance with the GRF. Under these circumstances the contaminant should be considered 'FOD' and runway use suspended until such time as the contaminant is removed or changed into a classifiable GRF contaminant. i.e HAIL melting to SLUSH.

- 7.3** Another way to determine the point at which runway operations will normally be suspended is to simply classify it as the point at which the runway classification code (RCC) drops below a 5-runway condition code.
- 7.4** Following consultation with our customers it has been agreed that under some circumstances a reduced width runway and taxiway may be acceptable to permit normal operations to continue or resume.
- 7.5** Any decision to conduct a reduced width clearance rather than a full width runway clearance will be at the discretion of the Airport Duty Engineer and will take into consideration the likelihood of banked deposits becoming a greater risk in the medium to long term.

Note: The most likely scenario where reduced width clearance operations would be considered would be following the accumulation of slush where reduced width clearance could be undertaken relatively quickly, and banked deposits would be expected to dissipate naturally without any additional accumulation expected.

- 7.6** Where it will not be possible to clear any winter contaminant to an acceptable level to permit runway operations at normal promulgated opening a SNOW CLOSED NOTAM should be issued as early as possible prior to Promulgated Airport opening.

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- 7.7** Prior to 05:15 local the Duty Engineer should be consulted regarding the status of any ongoing surface clearance. At 05:15 a local Winter Ops Team Planning Meeting will take place in ARFFS.
- 7.8** ATC should make arrangements to listen in to this briefing on Speaker Phone. (Note: Ongoing snow clearance will cease at 05:00 to facilitate crew break, co-ordination with oncoming ARFFS and briefing for the Silver Commander. 'Silver Command' will be manned and from 05:30 the 'Silver Commander' will be the point of contact for all ongoing Cold Weather operations.)

8 Initial Actions

- 8.1** On receipt of an Ice alert / warning, the GTS Engineering Manager shall ensure that all vehicles are re-fuelled and fitted with the appropriate equipment. The large sprayer will also be filled with de-icer and ready for service.
- 8.2** On receipt of a Snow Warning, the GTS Duty Engineering Manager shall ensure that all vehicles are re-fuelled and snow ploughs / equipment is attached ready for service.
- 8.3** On receipt of a Snow/ice warning, ARFFS shall ensure a vehicle is refuelled and is accessible for use in overnight inspections.

9 Out of Hours procedures

- 9.1** All overnight Snow / Ice operations shall be decided and planned during the Winter Ops planning meeting.
- 9.2** Specific arrangements for any overnight airfield surface contamination inspections will be made during the Cold Weather Event Planning Meeting.
- 9.3** Depending on the type and level of the Cold Weather Event forecast, ARFFS staff may be required to undertake overnight airfield surface contamination inspections.
- 9.4** In the event that overnight airfield surface contamination inspections are required, ATC shall ensure that the VCR is manned and shall acknowledge ARFFS on and off station communications, as well as providing an alerting service in the event of an incident/accident involving the inspection vehicle.

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- 9.5 Overnight Surface Contamination inspections should be conducted with minimal driving on the manoeuvring areas and where possible all driving shall be restricted to hard shoulders and runway edge to avoid compacting any contamination on the central areas.
- 9.6 On occasions where surface contamination is plainly evident, to be more than 3mm in depth, from visual assessment from the vicinity of the Fire Station, there is no requirement to assess the remainder of the aerodrome and action should be taken in accordance with plans made during the Winter Ops Planning Meeting.
- 9.7 Unless alternative arrangements have been made during the Winter Ops Planning Meeting, overnight surface contamination inspections shall commence as follows:
- i. Snow Warning / alert inspections shall commence at 02:30
 - ii. Ice/Frost Warning inspections shall commence at 03:30.
- 9.8 ARFFS personnel shall call ATC via TETRA prior to leaving station for inspection and again on return to ensure 'lone worker' health and safety considerations.
- 9.9 Surface Contamination Checks should be repeated at half hour intervals up to 05:30 or until such time as the Silver Commander or GTS Duty Engineering Manager have arrived on site.
- 9.10 In accordance with plans made during the Winter Ops planning meeting, if snow / ice clearance is required, ARFFS shall notify ATC. ATC shall then contact the GTS Duty Engineering Manager and Silver Commander (Tels1 or Crash page on SCHMID).
- 9.11 GTS Duty Engineering Manager will organise engineering resource to carry out snow / ice clearance operations in accordance with plans made during the Winter Ops planning meeting.
- 9.12 In the event of any overnight snow or ice clearance operations, the ARFFS Silver Commander will attend the Aerodrome. The ARFFS Silver Commander will brief with MET Forecaster at 05:00 and will conduct an operational 'Cold Weather Event Update Meeting at 05:15 in ARFFS, and on Microsoft Teams, with as many attendees as possible from the Winter Ops planning meeting.
- 9.13 At 05:00, all vehicles involved in airside snow / ice clearance operations shall vacate all manoeuvring areas, re-position to Stand 32 and await further instruction from the Silver Commander or GTS Duty Engineering Manager.

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- 9.14 At 05:45 or, following completion of snow/ice clearance operations, ARFFS will carry out surface inspections as part of normal Aerodrome Inspection Procedures to inspect runway and taxiways surface conditions and declare runway and taxiways as serviceable.
- 9.15 Subsequent inspections may be conducted by ARFFS in conjunction with Group Engineering to assist with snow clearance options. Snow clearance options shall be agreed by Silver Commander and GTS Duty Engineering Manager.
- 9.16 The following minimum overnight actions will be undertaken on receipt of a Snow/ice Alert/Warning should attendance overnight be required (this shall be agreed / confirmed at the previous days Winter Ops Planning Meeting):
- i. ARFFS shall be responsible for surface condition assessment and reporting to ATC.
 - ii. GTS Engineering shall be responsible for runway surface treatment until such time as the runway can be declared serviceable.
 - iii. Silver Commander shall oversee snow clearance operations and communicate aerodrome status to the Duty Executive as appropriate.

10 **NOTAMS / SNOTAMS**

- 10.1 ATC Watch Supervisor is responsible for the dissemination of operational information pertaining to a Cold Weather Event.
- 10.2 ATC Watch Supervisor is responsible for compiling and dissemination of any SNOW CLOSED NOTAM or SNOTAM.
- 10.3 Guidance for the compilation and distribution of SNOTAM information is available in the Ports GRF reporting APP. The content of the Runway Condition Report (RCR) will be used to disseminate the SNOTAM.
- 10.4 The ATC Supervisor shall ensure that a copy of any SNOTAM issued is also passed to the Jersey Meteorological Department.
- 10.5 SNOTAMS shall only be issued for an open runway. If the runway is closed a "SNOW CLOSED" message shall be issued.
- 10.6 ARFFS Silver Command will be the focal point for all Cold Weather Event operations and will be able to provide information pertinent to the compilation of any SNOTAM signal.
- 10.7 Regardless of any SNOW CLOSED or SNOTAM action taken as a result of unforeseen overnight contamination - early morning operators (pre-07:00) shall be notified directly of the status of the aerodrome surface as soon as possible.

11 Winter Operations Office - ARFFS Silver Command

- 11.1 ARFFS Silver Command will be the focal point for all co-ordinated information relating to the cold weather event.
- 11.2 The ARFFS Silver Commander is responsible for the co-ordination of snow / ice clearance operations.
- 11.3 Critical staff may relocate to this office as required such as Media Relations, Terminal Services etc.
- 11.4 The role of the Silver Commander includes:
 - i. Chairing subsequent cold weather event meetings as directed by the Airport Director or Duty Executive
 - ii. Regularly liaise with the Government of Jersey Met department for up to date weather forecast
 - iii. Co-ordinate available staff resources
 - iv. Co-ordinate available equipment resources
 - v. Track the status of clearance operations, estimates etc.
 - vi. Co-ordinate with business partners on operational plans
 - vii. Ensure an estimated runway open time is available to all interested parties as soon as possible and all are kept advised
 - viii. Prioritise tasks
 - ix. Scheduled updates to business partners and the Airport Operational Management Team

12 Surface Clearance and Treatment Priorities

- 12.1 Surface Clearance and Treatment Priorities are detailed in Appendix F and shall be used by the Winter Operations Office to prioritise clearance operations to ensure that staff, passengers and members of the general public have safe access to the Terminal Building and work areas.
- 12.2 The clearance of the runway and its associated taxiways and apron areas is the responsibility of the GTS Duty Engineering Manager.
- 12.3 The main priority is the runway. In some circumstances, it has been agreed that reduced width runway and taxiways may be acceptable to permit normal operations to continue or resume. Any decision to conduct reduced width clearance rather than a full width runway clearance will be at the discretion of the Silver Commander, Airport Director or Deputy Airport Director.
- 12.4 Following consultation with Jersey Airport business partners, agreement has been made on a minimum clearance width of 30 metres with snow banks no greater than 300mm. The 30m should be evenly spaced 15m either side of the runway centreline. If this is not possible a description on the bias left or right (north or south) must be stated in any condition report.

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- 12.5 The main route to the runway will be via Echo, however, if the potential for low visibility is forecast, Bravo taxiway shall be used as this alleviates issues with moving aircraft during Low Visibility Procedures. All taxiways shall normally be cleared to a minimum width of 18 metres (code C) and de-iced as required.
- 12.6 *If conditions make taxiway clearance difficult, the consideration of a reduced clear area may be applied at 5.5m either side of the centreline which would accommodate up to B737-800 including the low engine pod clearance at 0.48m above the surface (AUW). The Airport Director, Deputy Airport Director or Silver Commander shall be responsible for any decision regarding a reduced taxiway clearance width below 18m.*
- 12.7 The Clearance of both airside and landside public and passenger areas will normally be undertaken by ARFFS, Terminal Services and GTS personnel assisted by staff made available by other Airport departments and Business Partners.
- 12.8 GAMA are responsible for contamination removal on their apron and currently they are reliant on contracted resource as they have no suitable in-house equipment.
- 12.9 The Jersey Aero Club are responsible for contamination removal on their Apron up to holding point Hotel.
- 12.10 JAL are responsible for contamination removal on their Apron up to holding point Mike.
- 12.11 It is important that the runway and all contaminated surfaces are inspected throughout any clearance operation allowing for the information to be made available to ATC for inclusion on updated essential aerodrome information or new NOTAM / SNOWTAM issue.
- 12.12 A robust inspection programme will also identify any FOD issues that may have been created as a result of the clearance operations. e.g. brush material or loose stones.
- 13 **Wildlife Control**
- 13.1 Wildlife control will be suspended whilst Runway is closed for snow / ice clearance operations.
- 13.2 Wildlife control will resume a minimum of 15 minutes before first aircraft movement.
- 14 **Use and Control of Aircraft De-icer**

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- 14.1 All Operators must contact GTS Duty Engineering Manager on 07797 738582 prior to the application of any aircraft or surface de-icer products.
 - 14.2 Aircraft de-icing / anti-icing is only to be undertaken on Stands 1-12 and 20-23.
 - 14.3 Aircraft de-icing / anti-icing on Stand 19 may be available on request and must be co-ordinated with GTS Duty Engineering Manager.
 - 14.4 Aircraft de-icing / anti-icing is not permitted to take place on Stands 13- 18, East Apron, Gama, Aero Club & JAL aprons as these areas are not protected by the drainage & aeration systems necessary to prevent a breach of Water resources limits.
 - 14.5 When using de-icer / anti-ice products, environmental mitigation protocols as detailed in EOP 011 Airport Pollution Incident Response, EOP 057 Airport Pollution Prevention, EOP 007 Eastern Aeration Pond and Reed beds procedures, and EOP 009 South – Western Aeration Pond and Reed beds procedures must be followed rigorously.
 - 14.6 All chemicals used for de-icing / anti-icing purposes are to be logged daily and a copy is to be provided to POJGroupEngineeringManagers@ports.je This is required on a monthly basis for submission to the appropriate authorities in order to comply with the surface water Discharge Permit.
 - 14.7 At the discretion of the Aerodrome Authority, stand 12 may be closed so that vehicles and chemicals used for de-icing / anti-icing can be stored as close as possible to where they will be needed. Only approved aircraft de-icing products shall be used at Jersey Airport, the product currently in use by our Ground Handling Agent is **Kilfrost ABC-K Plus (SAE AMS 1428, Type II)**.
 - 14.8 The filling and storage of both the rigs and drums must be carried out within a bunded/protected area so that any spillages are prevented from entering the surface water drains.
 - 14.9 Areas used for the de-icing / anti-icing of aircraft shall be inspected by ARFFS prior to any subsequent aircraft use in order to ensure that any residual surfaces contaminant will not present any steering friction issues and slip/trip type hazards for passengers, crew and other personnel.

15 Use and Control of Surface Anti-Icing or De-Icer

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- 15.1 **Clearway** is used as both anti-icing and de-icing chemical.
- 15.2 The more viscous version of the liquid (**Clearway 3, DC3 or Safegrip +**) is recommended for our maritime environment as it suits the wet snow conditions experienced in the Channel Islands.
- 15.3 The use of Clearway as an anti-icing agent is key to both reducing operational delays and environmental damage as this tactic uses approximately half that needed for de-icing. It should not be used if it is likely to be diluted with rain prior to freezing as it is likely to cause a much bigger hazard. Its use prior to freezing should be the goal.
- 15.4 Before applying Clearway, the runway should be ploughed and swept to remove as much contamination as possible as this will prolong the effectiveness of the chemical. Once applied it should be retained in the grooves of the runway so additional sweeping may enhance its effect.
- 15.5 Please refer to the following EOP's on the Controlled Documents site:
- i. Pollution Incident Response (EOP-011);
 - ii. De-icing Fluid Management (EOP_40);
 - iii. Airside Pollution Prevention (EOP-057);
- 15.6 Suggested application rates can be found in Clearway tables. It is however important to take into consideration factors like surface material, surface structure, application-method and current weather situation when using the product. The application figures are therefore only a guide for application and must not be regarded as recommended dosage.
- 15.7 Suppliers will upon request give advice on application for the respective airport.
- 15.8 In the case of de-icing, the surface should be treated mechanically before applying Clearway. This will reduce the amount of liquid used, resulting in minimal environmental impact and lower cost of the de-icing operation.
- 15.9 In the event of freezing rain, a preventive treatment of runways, ramps and taxiways is highly recommended. Applying Clearway before the start of a light snow or ice event prevents frozen precipitation from accumulating.
- 15.10 Since Clearway is both an anti-icing agent as well as a de-icer, timely application of Clearway is essential to the continued use of operative surfaces.

15.11 Careful monitoring of meteorological conditions will keep you ahead of storm events and guide you in preventive application of the product.

15.12 Clearway is applied using conventional spraying equipment adjusted to ensure precise application rates.

16 Airfield Lighting

16.1 GTS Engineering will be responsible for exposing, clearing and checking the airfield lighting listed below in the following order: -

- i. Runway lighting
- ii. PAPI's (all units)
- iii. Threshold lights (both ends)
- iv. Runway end lights (both ends)
- v. Approach lighting (flush and close coupled)
- vi. Taxiway lighting
- vii. Apron lighting
- viii. Signs

16.2 All care must be exercised to avoid damaging Airfield Ground Lighting and other installations whilst snow clearing.

17 General

17.1 Permission to enter the Runway must be obtained from ATC during operational hours even when the runway is confirmed as being closed. ATC shall raise a blocking strip for all vehicles on the runway.

18 Event Log

18.1 It is important that an event log is opened and maintained both in the build up to clearance operations and until the conclusion of any clearing activity. The event log will be maintained by the Silver Command Office.

18.2 As a minimum the log shall contain the following information:

- i. Weather warnings
- ii. Decisions / actions from Winter Ops Planning Meeting
- iii. Equipment availability
- iv. Staff resource availability
- v. Time of activation of key events
- vi. Surface conditions
- vii. SNOWTAM or NOTAM issue
- viii. Clearance priority / plan
- ix. Key actions taken

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- x. Snowbanks
 - xi. Closure or opening of facilities
 - ix. Inspection observations
 - xii. Requests from airlines or ground handling agencies
 - xiii. Any other relevant information including any noted action points to be tabled at any de brief or follow up meeting.

18.3 Snow / Cold Weather Plan Report Log is available in appendix

19 Appendix A - Ice Warnings

- 19.1 Ice Warnings will be issued by the Jersey Meteorological Office using a colour code as shown below to give an indication of the level of confidence and severity of the weather expected within the next 12 to 24 hours.

Risk / Confidence	VERY LOW ($< 20\%$)	LOW ($\geq 20 < 40\%$)	MODERATE ($\geq 40 < 60\%$)	HIGH ($\geq 60 < 80\%$)	VERY HIGH ($\geq 80\%$)
Freezing PPN	Not Issued	unlikely to be prolonged	prolonged but of no great extent	prolonged and of great extent	Widespread
Ice Warning	Not Issued	Surface ice patches or airframe icing from rime or hoar frost	HOAR FROST	Wide Spread Icing	Wide Spread Icing
	Warning Cancellation	N/A	N/A	N/A	N/A

Figure 1 Colour matrix used to denote confidence levels in ice or freezing precipitation events.

Ice warnings are issued whenever the state of ground and forecast temperatures could produce icing on runways, taxiways etc. (See below for criteria). This includes the formation of hoar frost or rime on surfaces of parked aircraft and aerodrome facilities.

- 19.2 Warnings should be issued no later than 15:00 local to allow recipients time to action mitigation plans. However, should the situation unexpectedly change a warning should be issued regardless of the time of day. NB **Government of Jersey** ideally need to be informed prior to 13:00 local to organise their workforce and will often phone mid to late morning during a notable cold spell or following a snow alert. The text of the warning should be brief – further details can be provided in response to enquiries from recipients.

If freezing precipitation is expected to produce glazed ice surfaces this will be included in an Ice Warning and specifically mentioned.

- 19.3 Pro-forma is available on the “DPF”.

19.3.1 Ice Warnings will be disseminated using the “DPF” system. The duty forecaster must use his/her discretion as to whether the warning is disseminated beyond the airfield. The ‘comms monitor’ must be monitored and any non-delivered warnings resubmitted or passed to the recipients using alternative means.

- 19.4 Pro-forma is available on the “DPF”.

19.5 Hoar Frost

- 19.5.1 Jersey Airport recognises that hoar frost is a difficult phenomenon to predict and are quite happy to accept a 75% false alarm rate. The emphasis is on enabling the Airport, particularly Group Engineering to prepare for a possible problem in the morning rather than a definite problem. Group Engineering have the option of applying a de-icer to the runway and taxiways in the evening prior to an icing event. Once laid the de-icer can remain effective for two or three days providing there is no rain. In other words, "prevention" is preferable to "cure."

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- 19.5.2 If ice is expected to produce a significant hazard and the forecaster believes it best that organisations be informed, then the warning should be distributed more widely. Whenever possible consult with the Principle Meteorological Officer.
- 19.5.3 Recent experience suggests the following criteria are good guidelines in determining whether Hoar Frost is likely to form overnight:
- A good radiation night – less than 2/8 cloud cover.
 - 10 metre Wind – expected to be between 5 and 12 knots
 - Air temperature – expected to fall below 2 degrees Celsius
 - RH – greater than 80%
- 19.5.4 The road or runway surface needs to be below the dew point temperature for at least 6 hours before a large build-up of hoar frost occurs.
- 19.5.5 The saturation vapour pressure of water with respect to ice is lower than that with respect to water and as a consequence once ice has formed the air is effectively supersaturated with respect to an ice surface and water vapour will readily deposit on to the existing ice crystals.
- 19.5.6 When Hoar Frost is forming you are likely to see rapid fluctuations in air temperature (0.5 to 1.0 °C in periods as short as 5 to 10 minutes) due to the release of latent heat. Don't assume a rising air temperature will reduce the amount of frost – once the heat is dissipated through mixing in the boundary layer (hence the need for a light breeze), temperatures are likely to fall again allowing further deposition of ice.

20 Appendix B – Snow Alert and Snow Warnings

20.1 Snow Alert and Warnings will be issued using a colour code as shown below to give an indication of the level of confidence and severity of the weather expected.

	Risk / Confidence	VERY LOW (< 20%)	LOW (≥ 20 < 40%)	MODERATE (≥ 40 < 60%)	HIGH (≥ 60 < 80%)	VERY HIGH (≥ 80%)
SNOW WARNING	Snow Warning >2" and/or drifting expected	Warning of a possible heavy snow event with very low confidence	Warning of a heavy snow event	Warning of a heavy snow event with increased confidence	High degree of confidence or Blizzard conditions	Very high degree of confidence or Blizzard conditions
	Snow Warning <1" - no drifting expected	Not Issued	Warning of a specific event - higher prob of sleet than snow	Warning of a specific event with increased confidence	Warning with a high degree of confidence	Warning with a very high degree of confidence or very short lead time
SNOW ALERT	Snow Alert	Not Issued	Initial advisory of a potential snow situation	Initial advisory of a potential snow situation	Short term developments likely to lead to a light dusting of snow	Short term developments likely to lead to a light dusting of snow
	Cancellation	Alert / Warning Cancellation	N/A	N/A	N/A	N/A

20.2 Snow Alerts (Yellow/Orange) – 2 to 6-day lead time

Snow Alerts are advanced advice that a spell of cold weather is likely and snow of some type could be expected. They cover situations where snow or snow showers are expected or possible but with no strong indications of substantial snowfall. They also cover situations where the movement and activity of fronts and/or temperature are uncertain, so that a positive Snow Warning is not possible, but short-term developments may lead to this. Generally, Snow Alerts will be coded YELLOW except when unforeseen short-term developments may lead to a light dusting of snow in which case the Alert will be issued as ORANGE.

A Snow Alert is intended to draw the attention of the relevant authorities to the need to prepare for a snow situation, be it snow-clearing equipment, ensuring vehicles are capable of driving in snow, organising work/standby rosters etc. A Snow Alert may or may not be followed by a Snow Warning and will not be repeated unless a prolonged spell of milder weather has intervened, or a GREEN cancellation has been issued and preparations have been relaxed.

20.3 Snow Warnings (Yellow/Orange/Red) – 12 to 24-hour lead time

Snow Warnings are specific warnings that snow is expected in significant amounts. (i.e. accumulations of 1 inch or more or sufficient to cause disruption to traffic).

Snow Warnings cover all forms of continuous snow and frequent snow or sleet showers, especially if of moderate or heavy intensity. They will usually follow a Snow

Alert or update a previous Snow Warning, e.g. if a change in emphasis is required or further snow/snow showers not included in the previous warning are expected. YELLOW Snow Warnings are unlikely to be issued except when there are indications of snow at a particular time and the forecast confidence is low or there is a higher likelihood of sleet than snow. RED Snow warnings should only be used when there is high or very high confidence of the event and/or there is likely to be significant impact on Airfield Operations and the General Public or the lead time is less than 6 hours and no previous warnings have been issued. All other situations should be coded ORANGE. The table in 1.1 should be taken as a general guide to the colour state to issue.

20.4 Issuing Alerts and Warnings

Wherever possible Alerts and Warnings should be issued during working hours before 12:00z. This is to ensure Government of Jersey and the Airport Authorities have ample time to organize themselves. However, should the situation unexpectedly change a **SNOW WARNING** can be issued regardless of the time of day.

Be prepared for telephone calls from the Government of Jersey for updates, mid to late morning each day during notable cold spells. On a Friday, please consider the likely forecast and/or changes through the weekend to Monday morning.

Wording of Alerts and Warnings should be brief. Alerts are intended to give as much notice as possible of a risk of snow and should be issued 4 or where possible 6 days ahead of possible snow situations. Warnings are intended to give much more specific information about a more definite expectation of snow and will often be issued with only a few (12 to 24 hours) notice. Note our KPI and recommended lead time by ICAO and target in the SLAs with Jersey and Guernsey Airports is 12 hours.

Warnings will give advice on:

- i. Estimated time of arrival
- ii. The likely intensity
- iii. Whether drifting is expected
- iv. Whether dry or wet snow is more likely
- v. Temperature details with regard to the likelihood of slush and freezing or refreezing of lying snow.

During a cold spell snow warning may be upgraded or downgraded colour wise depending on the changing circumstances day to day. However, a GREEN cancellation should only be issued when it is clear that the cold conditions have ceased and a significant period of milder weather is expected and that halting standby preparations is justified.

Alerts and Warnings will be prepared using the standard alert and warning templates available on the NIMBUS Task launcher under the Warnings tab. They will be disseminated to priority 1 & 2 customers according to the dissemination lists held on the production and dissemination system. Backup copies of the dissemination lists are available on the Meteorological Intranet. Warnings only will be sent to the media at the forecaster's discretion – see general comments below.

20.5 General Comments

These warnings will only be issued when snow is expected to produce a significant hazard and the forecaster believes it to be best that organisations be informed. Whenever possible consult with the PMO. The forecaster should be prepared to discuss the situation in detail with Priority 1 customers.

The standard JEP, CTV and BBC forecasts can be issued to convey a degree of warning without any extra action. If additional action is taken via the JEP, CTV or BBC, in most cases this alerts other interested parties.

21 **Appendix C – Equipment and Personnel**

21.1 The following list of equipment is maintained by the Airport as part of its Cold Weather Operating procedures.

- i. Snow ploughs for: - 1 Ford Cargo Lorry, 1 Ford Skip Truck.
The Lorries are to be loaded with ballast if required.
- ii. Three x 4-wheel drive Tractors for use with the following:
 - 1 x Rear mounted de-icer
 - 1 x Snow Brush
 - 2 x Snow Ploughs
- iii. One Runway Sweeper with snowbrush fitted.
- iv. Five x 4-wheel drive vehicles:
 - 2 x VW Transporters
 - 2 x Skoda Yeti
 - 1 x Ford Ranger
- v. 30 x snow shovels
- vi. 30 x brushes
- vii. A minimum of 250kg of road salt for use landside.
- viii. A minimum of 250kg of road salt for use landside.
- ix. A minimum of 45,000L of Safegrip +, Clearway, DC3 de-icer liquid is to be kept in storage excluding that already loaded on the de-icer.
- x. 2 x Nap sack sprayers.
- xi. 2 x Ride on tractors with sprayers or ploughs.
- xiii. 2 x Motorised push along brushes / ploughs

21.2 Personnel Requirements

The following personnel are required to execute the Cold Weather Operating Procedures:

- i. A minimum of one Air Traffic Control Officer to ensure service provision overnight and early morning inspection as directed.
- ii. A minimum of one ARFFS for overnight airfield inspections.
- iii. Silver Commander
- iv. Group Engineering Duty Engineering Manager
- v. A minimum of two AMTs for de-icer operation.
- vi. A minimum of one electrician for AGL clearance and repair.

21.3 Control of Airport Vehicles

All airport vehicles (except ARFFS) shall be controlled by Group Engineering and use restricted for operational priorities.

All departmental vehicle (except ARFFS) tasking will be prioritised during Winter Ops meeting to ensure attendance of required personnel overnight.

21.4 Terminal based Cold Weather Equipment

Various Cold Weather resources are kept at strategic locations throughout the terminal.

Terminal Services Management and Staff are responsible for the resourcing, maintenance and application of these products/resources.

22 **Appendix D – Glossary of Abbreviations**

- APD - Airport Director
- ADE - Airport Duty Engineer
- AE – Airport Electricians
- Aero Club
- AGL - Airfield Ground Lighting.
- AID - Airport Information Desk
- AMT – Airfield Maintenance Technician.
- ARFFS – Airport Rescue and Fire Fighting
- ASM – Aviation Safety Manager
- ATC - Air Traffic Control.
- ATC-WM - Air Traffic Control Watch Manager
- GAMA – GAMA Aviation
- CAP - Civil Aviation Publication.
- PSA – Passenger Services Agent.
- DEO – Duty Executive Officer.
- POJL Security Night Guard
- GMCM – Group Marketing and Communication Manager.

[illegible]

24 **Appendix F – Treatment Priorities and Surface Clearance**

The following detailed below are the main priorities for clearance to ensure that business can operate as usual as far as is reasonably practicable and ensure the safety of staff, passengers and members of the general public.

Appropriate priority should be given to ensuring emergency access and egress is maintained from buildings where staff are present out of hours.

ATCC

- i. Access and Egress to ATCC building
- ii. Emergency Evacuation points on ground level

Terminal Building (Departures)

- i. Staff Car Park (including walkways to Terminal Building)
- ii. Main Car Park (including walkways to Terminal Building)
- iii. Access and Egress to Terminal Building
- iv. Minimum of 1 automatic door entrance to Check-In Area
- v. Emergency Exits at East end of JLFH including double door and staff entrance/exit)
- vi. Emergency Exit on 1st Floor of JLFH leading to Stand 12 (including Assembly area on Stand 12)
- vii. Emergency Exit from Atrium leading to Stand 12 (including Assembly area on Stand 12)
- viii. Emergency Exits at Jersey Pottery (including Assembly area in yard)
- ix. Emergency Exits just after Checkpoint 6 (including Assembly area in yard)
- x. Emergency Exit from passenger pier at gate 02, 07 and 12
- xi. Baggage make-up area
- xii. Checkpoint 4

Terminal Arrivals

- i. Short Stay Car Park outside arrivals
- ii. Access and Egress to Terminal Building
- iii. Entrance to trolley bay and access to Check Point 6 (includes staff walkway from staff car park)
- iv. Emergency Exit points (including Assembly area in car park)

Airport Authority Area (ARFFS)

- i. Access and Egress to ARFFS Building (includes walkway from staff car park and from Checkpoint 3 to ARFFS building)
- ii. Emergency Exit at (including assembly areas)
- iii. Clearance of contamination from in front of vehicle doors

Airport Authority Area (Hangar 4)

- i. Access and Egress to Hangar 4 (includes walkway from staff car park and from Checkpoint 3 to Hangar 4 – this includes landside and airside areas)
- ii. Emergency Exits (including assembly areas)
- iii. Clearance of contamination to ensure vehicles are available to exit building in both landside and airside areas.

Runway and Manoeuvring Areas

- i. Runway including Echo holding point
- ii. Taxiway (from Echo and across North Apron to Alpha 5)
- iii. Taxiway (from Alpha 5 to Juliet 3)
- iv. Taxiway (from Alpha 5 to Bravo 1)
- v. Taxiway (Delta)

Note: The Winter Operations Office will decide which of the above has priority based on information from business partners in regard to planned aircraft movements and their timings. To aid in this planning process an airfield map is included in Appendix I

Aircraft Stands

- i. As required for operation purposes.

Note: The Winter Operations Office will decide which stands have priority based on information from business partners in regard to planned aircraft movements and their timings.

Rendezvous Points

- ii. Rendezvous Point South including Checkpoint 8
- iii. Rendezvous Point Central from roundabout to Checkpoint 3

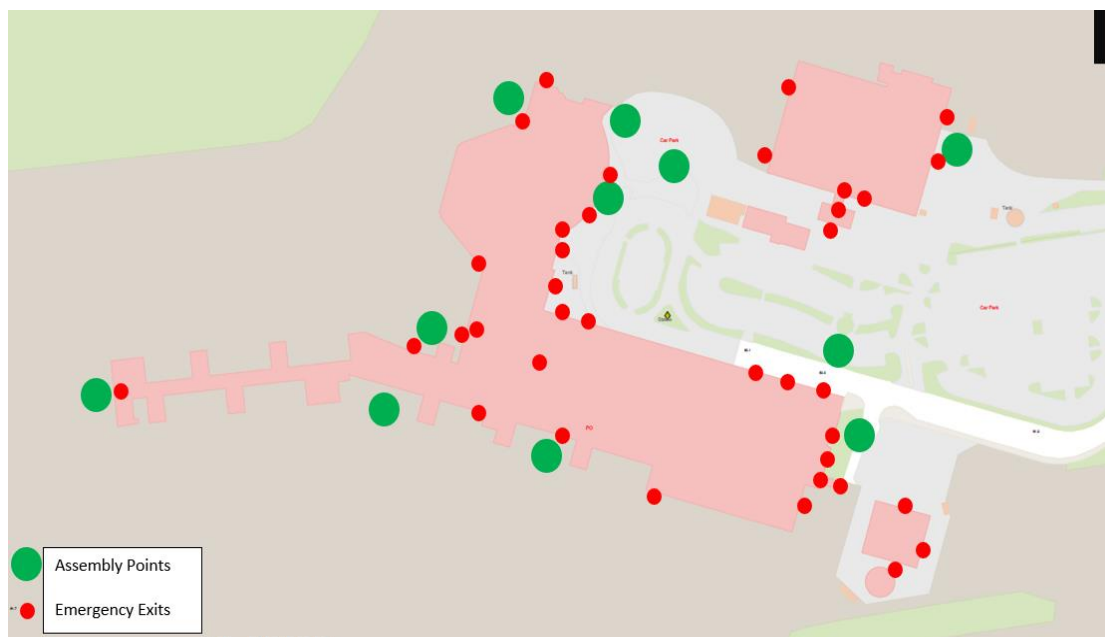
Alares House

- i. Emergency exits either side of building

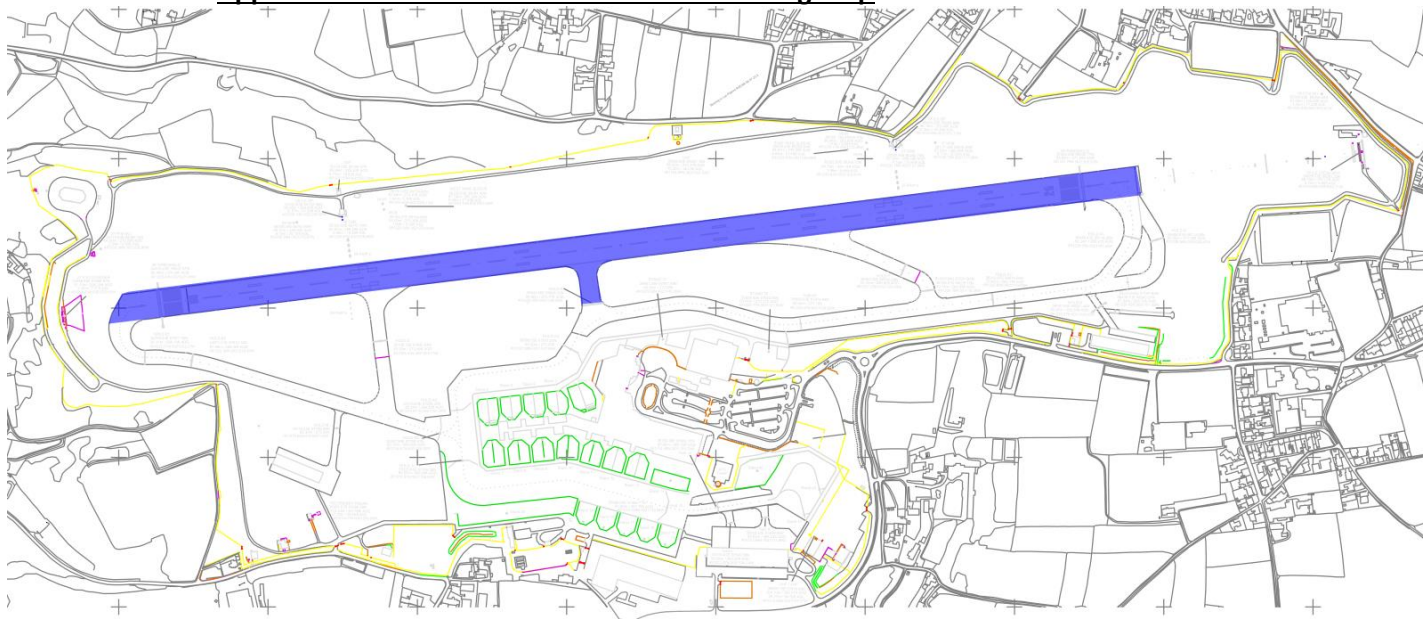
Emergency Exits and Assembly Points

All Emergency Exits and Assembly Points are detailed in Appendix H

25 Appendix G – Assembly Points and Emergency Exits Map



26 **Appendix H – Airfield Surface Clearance Planning Map**



The Runway and taxiway “echo” remain the initial priority for clearance on airfield. Considerations on further clearance will be made during the Winter Ops Planning meeting taking into account prevailing weather conditions and customer access requirements.

27 **Appendix I – Government of Jersey Met – Email Distribution List**
[Jersey Met Distribution List I1.xlsx \(sharepoint.com\)](#)

28 **Documents related to this AOP**

- AOP 46 Airfield Surface Inspections
- EOP 007 Eastern Aeration Pond and Reed Bed Procedures
- EOP 009 South - Western Aeration Pond and Reed Bed Procedures
- EOP 011 Airport Pollution Incident Response
- EOP 057 Airport Pollution Prevention
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